Private Equity Exits: An analysis of divestment process management in relation to leveraged buyouts

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St. Gallen, June 12, 2006

The President:

Prof. Ernst Mohr, PhD
Preface

In line with strong growth in Europe over the past years, private equity as a form of financial intermediation has become a focus area for academic research. However, only few scientific studies to date concentrate on the divestment stage of portfolio companies, the so-called ‘exit’ processes. My interest in this field has been stimulated through my professional experience as an investment banker advising private equity clients in Europe, recognising a lack of structured and pro-active approaches towards divestment of portfolio firms.

I am indebted to a number of people and institutions that contributed to the success of this project. First and foremost, I would like to offer many thanks to my academic supervisor Prof. Dr. Andreas Grünbichler for his commitment to this dissertation project as well as his responsiveness, instrumental guidance, and constructive feedback. I would also like to express great appreciation to my second academic supervisor Prof. Dr. Martin Hilb, for his support and valued input particularly in the area of corporate governance. Moreover, I owe thanks to Prof. Dr. Josh Lerner for his interest in this project and guidance offered during my research visit at the Harvard Business School.

The essential core of this dissertation relies upon detailed survey and interview feedback from almost 60 leading private equity firms operating in the European buyout market. I would like to thank all private equity professionals and institutions for having participated in this study and for their interest in supporting academic research in this field. Furthermore, I am grateful to Georges Noël from the European Private Equity and Venture Capital Association for supporting this study and his helpful input on the survey procedures. I am also grateful to Dr. Volker Kraft for his advice on designing a survey targeting private equity firms and to my friend and colleague Dr. Nicolaus Loos for his valuable recommendations in pursuing such a dissertation project. Moreover, special thanks are directed to my employer, JPMorgan, for having supported this project and for accommodating my commitment to these studies.

I owe deep gratitude to my wife Bianca for being a strong supporter and an inspiration throughout the project. Last but not least, I express great thanks to my parents for their continuous backing of my studies and for having greatly facilitated the freedom in pursuing my interests throughout my life.

Stefan Povaly,
London, August 2006
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Abstract

A key characteristic of private equity finance is that investors hold their investments only for a limited period of time. The common structure of private equity firms as funds with pre-determined lifespans of usually ten years requires a timely unwinding of the positions taken (i.e., GOMPERS and LERNER 1999a, 2004, NEUS and WALZ 2004).

The objective of this dissertation is to contribute to the understanding of private equity investors’ decisions, styles and preferences in relation to divestment processes. The focus of the analysis is set on private equity investments in mid-sized and large European companies, acquired through leveraged buyouts.

This research aims to complement the still thin layer of academic literature on private equity exits and it is also addressed to practitioners involved in exit processes. Representing the first detailed research on European buyout investment exits, this dissertation is designed to serve as a compendium of current scientific knowledge on this topic. The results of the largely survey-based empirical study underpinning this dissertation emphasise that buyout firms form a heterogeneous group of investors, whose investment behaviour and motivations exhibit significant differences compared to early-stage venture capitalists. Furthermore, the analysis demonstrates that the exit behaviour and process preferences of buyout investors can be systematically differentiated. Based on an analysis of the exit behaviour of hedge funds and ‘traditional’ private equity funds, the author suggests that a ‘convergence’ between these two fund types can be observed with regard to the type and structure of investments, while a harmonisation of the investment behaviour and the strategic approach concerning portfolio investments is still difficult to substantiate.

This work highlights the growing need for pro-active as well as thoroughly planned divestment strategies, efficient executions, and the importance of a balanced corporate governance approach for portfolio firms, paying attention to ‘non-equity’ stakeholders’ interests.
1 Introduction

In parallel with tremendous growth\textsuperscript{1}, particularly over the past 15 years, private equity as a form of financial intermediation has become a focus area for academic research. The term ‘private equity’ in its widest sense captures investments in companies that are not publicly quoted.\textsuperscript{2} Harvard professors GOMPERS and LERNER (2001, 2004) point out that despite the strong growth of the private equity industry and an increasing degree of academic attention, many questions about its functionings and features remain unanswered. The fact that private equity firms tend to avoid publicity about the transaction details and returns of their investments has been a barrier to extensive quantitative research. However, literature to date has elaborated in detail on aspects such as fundraising, contracts between private equity funds and investors, relationships between private equity providers and acquired companies, value creation and valuation, performance measures, to list only a few.

A key characteristic of private equity finance is that investors hold their investments only for a limited period of time. The common structure of private equity firms as funds with pre-determined lifespans of usually ten years requires a timely unwinding of the positions taken (i.e., GOMPERS and LERNER 1999a, 2004, NEUS and WALZ 2004).

There are several contributions to the analysis of options available to private equity firms when intending to sell or at least reduce exposure to an investment (a procedure usually referred to as ‘exit’, ‘divestment’ or ‘disinvestment’). LERNER and HARDYMON (2002, p. 7) underline that successful exits are critical for private equity funds to ensuring attractive returns for investors and also to raising additional capital. NEUS and WALZ (2004) enforce that exit processes are one of the most crucial determinants of a private equity investor’s success. However, as CUMMING and MACINTOSH (2003a, pp. 512-513) acknowledge, albeit the importance to the industry, there are very few publications focusing on the exit process and related decisions going beyond an analysis of individual exit options such as a sale of a portfolio company to a trade competitor, another private equity investor or alternatively pursuing a public stock exchange listing.\textsuperscript{3}

Furthermore, the majority of studies on private equity exits to date concentrate geographically on the United States as well as on the divestment actions by venture capital

\textsuperscript{1} Details regarding the history and evolution of the private equity market are set out in section 2.1.2.
\textsuperscript{2} For detailed definitions of the private equity industry, please refer to section 2.1.1.
firms undertaking investments in firms that are early on in their development process, requiring capital for initial product development or expansion. The analysis of exit processes in relation to European portfolio companies in general as well as investments in mature and often larger firms structured as leveraged buyouts in particular has not received great academic attention.

Given the substantial growth and the rapid evolution of the private equity market, an analysis of exit processes has to take into account several trends and circumstances altering the industry environment. Among trends fuelling competition in the private equity market, the emergence of hedge funds as direct competitors for private equity assets requires particular consideration. While recent articles proclaim a ‘convergence’ of hedge funds and private equity, some authors view hedge funds as having made more of an impact on the private equity market than vice versa (i.e., DEWSON 2005, pp. 14-15).

1.1 Framework and intent of the work

The objective of this dissertation is to contribute to the understanding of decisions, styles and preferences in relation to exit processes, concentrating on private equity investments in mid-sized and large European companies, acquired through leveraged buyouts. Smaller buyouts are not considered in the analysis, primarily as these transactions typically have a limited scope of divestment alternatives. Furthermore, in the author’s experience smaller transactions do not obtain sufficient and reliable coverage in transaction databases that represent an important information source for the empirical part supporting this study. The market for European buyout investments sets the framework for the analysis, taking a pan-European rather than a national perspective. This reflects that, although transaction details have to be structured differently across European jurisdictions, buyout funds are typically managed and raised on pan-European basis. Recent studies also advocate the application of a pan-European lens when examining buyout investment behaviour, including divestments (i.e., BOTAZZI, DA RIN and HELLMANN 2004, HUDSON 2005, pp. 5-11, EVCA 2005c, pp. 29-36).

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4 Please refer to section 2.2.1 for a detailed definition and description of leveraged buyouts.
5 The research focus of this study is limited to buyout firms undertaking mid-sized and large investments defined with a minimum transaction value of €100 million at the time of exit. While NVCA (2005a) classifies US mid-sized buyouts at a minimum transaction value of US$250 million, the lower €100 million threshold is not uncommon for the smaller European private equity market (i.e., EVCA 1998).
6 The definition encompasses financial investors conducting leveraged buyouts involving European target companies, and thus also captures investor firms not originating from Europe.
7 Please refer to section 2.2.4.2 for a discussion of the pan-European leveraged buyout market that forms the relevant research universe for the analysis throughout this work.
The scope of the analysis is geographically limited to Europe\(^8\) and does, in contrast to similar studies (i.e., SCHWIENBACHER 2002), not extend to a more global perspective, given that Europe provides an increasingly harmonised platform for buyout investments (BLAKE and WITNEY 2005, pp. 13-15) with distinct structural parameters compared to other regions such as the United States or Asian economies. Key examples are differences in the evolution and state of regional capital markets and interest rate environments, which are of fundamental importance in a buyout exit context. Due to these essential distinctions, the narrowed regional scope of the analysis is viewed as appropriate and even necessary.

A focus of the analysis is set on decision determinants regarding exit processes, critically evaluating concepts and theories established and proven in similar studies. These concepts and theories suggest the relevance of certain factors which will be assessed in the context of buyout exits. Additionally, relationships between buyout investors’ characteristics and their exit behaviour are being examined.

The objective of this work is to provide answers to a number of research questions, each of which concentrates on the exit process management of buyout investors:

1. Which factors are the key decision drivers regarding the timing of exits?
2. Which factors are the key decision drivers regarding the choice of exit route?
3. Which buyout investor characteristics explain differences in exit preferences and exit process management? What impact do corporate governance styles and involvement of portfolio companies’ executive management have on exit decisions?
4. Why and under which circumstances do buyout investors pursue more than one exit route in parallel and what are the downsides of such processes?
5. What impact did the change in the private equity environment over the past years including the entry of hedge funds in this market have on the exit behaviour of buyout investors?
6. How have the trends in buyout exits related to the evolution of buyout funds performance?

The author has identified three niches of contribution of this work to current literature on private equity exits:

1. **Focus on European leveraged buyouts**
   Existing studies discussing selected aspects of private equity exits focus almost exclusively on the Northern American market (i.e., CUMMING and MACINTOSH 2001, 2003a, 2003b, NAHATA 2004). Furthermore, these studies concentrate either on venture capital

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\(^8\) Covering European Union member states and all other Western and Northern European countries.
investments in relation to early stage investments or do not distinguish between types of private equity investors (i.e., SCHWIENBACHER 2002). The author could not identify a study capturing European portfolio firms, let alone research examining buyout investors, which constitute the research universe for this work.

2. Contrasting types of private equity investors in exit processes

Through the analysis of exit behaviour and preferences of a diverse set of investors, the study seeks to examine differences and commonalities. Most studies that are empirically exploring exit aspects ultimately do not discuss differences in investment behaviour, preferences and priorities of large versus smaller or young versus established private equity firms (i.e., SCHWIENBACHER 2002, CUMMING and MACINTOSH 2001, 2003a, 2003b) and do not include aspects of managerial involvement and corporate governance styles of investors in the analysis.9

Furthermore, the study will test theories and concepts that have been empirically tested and confirmed in the context of early stage venture capital exits and will demonstrate that some of these concepts seem valid for the assessment of buyout investors’ exit actions while others seem less appropriate.10 On the basis of the empirical analysis underlying this study, the author advocates a more serious separation between venture capital investors and later-stage buyout investors in private equity research. Although studies such as GOMPERS (1996) and GOMPERS and LERNER (2004) emphasise differences between venture capital and buyout firms, several research contributions on exits lump these private equity segments together in the datasets forming the basis for analysis (i.e., SCHWIENBACHER 2002, NAHATA 2004). The scarcity of available data appears to be a reason for samples comprising various types of private equity investors. The analysis in this dissertation strictly concentrates on buyout investments, aiming to support the validity of its findings relevant to this particular private equity investor segment.

Of particular interest in this context is an analysis of differences in the exit behaviour of ‘traditional’ private equity firms versus hedge funds that directly invest in private equity assets. This discussion will be underpinned by the question of whether the ‘traditional’ notion of longer-term ‘value-creation’ in buyout investments is still pre-dominant or is

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9 The importance of taking the characteristics of private equity firms into account when examining investment decision determinants is stressed for example by GOMPERS (1996), LIN and SMITH (1998), GOMPERS and LERNER (1999a, 2004) and NAHATA (2004).

10 While a number of decision parameters suggested by theories and established concepts may be relevant for all private equity segments, the weight of importance might be different between distinct private equity segments. A part of the empirical analysis underlying this study is designed to obtain rankings for determinants in order to assess and compare the relative weights of these factors.
being phased out in favour of a more aggressive short-term ‘value-finding’ investment style practiced by hedge funds.

Summarising this second point, the author believes that differences in the characteristics of private equity firms have been largely neglected in the analysis of exits. The research work underlying this dissertation attempts particularly to take buyout firms’ investor characteristics into account and differentiate between investor types.

3. Exit preferences and process management

It is a widely believed and accepted proposition in private equity literature that a public listing of a private equity portfolio company is the ultimate and most successful form of exit (i.e., GOMPERS 1996, GOMPERS and LERNER 1999a, 2001, 2004, NEUS and WALZ 2004). However, as RELANDER, SYRJANEN and MIETTINEN (1994) and WRIGHT and ROBBIE (1998, p. 551) demonstrate for European venture capital firms, public offerings are not the preferred divestment route. Given the less liquid European capital markets for high growth companies compared to the US, European venture capitalists have historically favoured a sale to competitor companies.\(^{11}\) The empirical part of this work will report on the exit route and process preferences of buyout investors active in Europe, which have not been discussed in academic literature to date.

Moreover, the management of exit processes with regard to the execution of either a single divestment option or two or more exit alternatives in parallel\(^{12}\) has not obtained academic attention in a European buyout context so far. This dissertation seeks to contribute to the understanding of why and in which circumstances buyout firms pursue processes entailing more than one exit route. The analysis will also attempt to critically evaluate such exit procedures.

This research aims to complement the still thin layer of academic literature on private equity exits, particularly on buyout investments. Moreover, this work is also addressed to practitioners involved in buyout exit processes. Findings might be of interest to investment bankers mandated to advise private equity houses in divestment processes. Having an independent perspective on the buyout industry’s priorities and preferences regarding exits as well as on its reaction towards competitive ‘multi-track’ sale procedures might be useful to anticipate clients’ needs and support proposed exit strategies. In addition, a clearer

\(^{11}\) EVCA (2005, p. 2) also reports that based on a survey among all types of private equity investors, trade sales have been the preferred type of exit.

\(^{12}\) These divestment processes are frequently called ‘dual-track’ or ‘multi-track’ exit processes.
understanding of how investor characteristics impact exit behaviour could be beneficial when analysing buyout firms’ portfolios in the pitching process for exit advisory mandates. Private equity firms might look at the findings to benchmark their exit process management to an industry perspective. The author also sees the potential value of the findings for any party interested in acquiring a portfolio company from a buyout investor, be it a competitor firm, another private equity investor or a hedge fund. Anticipating and understanding the needs and priorities of the selling party in a process can provide a considerable advantage in negotiations.13

This work highlights the growing need for pro-active as well as thoroughly planned divestment strategies, efficient executions, and the importance of paying attention also to other stakeholders’ interests. This work is designed to serve as a compendium of current scientific knowledge on this topic.

1.2 Research framework and approach

1.2.1 Research design framework

Taking into account the scope of the research questions to be addressed, the study involves an empirical analysis making use of both qualitative and quantitative data collection methods, in line with MILES and HUBERMAN (1994), who argue that a linkage of qualitative and quantitative data is beneficial, particularly for complex research objectives.14 The research design is in line with other recent studies in this field15, whereby mostly surveys have been conducted to collect the bulk of data, which form the base for statistical analysis.

The following exhibit sets out a schematic illustrating the applied research design, whereby a survey addressing buyout investors as well as database research represent the core data collection tools in stage two, which are supported by a qualitative data collection in step one. Expert interviews in step one help to identify and explore the parameters and relationships necessary to construct preliminary hypotheses and develop the survey questionnaire for step two. Lastly, feedback obtained in expert interviews is used to validate and deepen obtained findings.

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13 AIELLO and WATKINS (2000, pp. 100-107) provide a helpful guideline for the preparation of successful acquisition negotiations, supporting this argument.
14 RAGIN (2000, pp. 21-42) suggests that the benefit of a combination of both data types is to strike a balance between the complexity of qualitative analyses and the generality of findings from quantitative analyses.
The research design follows the principles of ‘triangulation’\textsuperscript{16}. As SCANDURA and WILLIAMS (2000, pp. 1249-1250) summarise, triangulation reduces trade-offs of individual research strategies and can strengthen the validity of a study.\textsuperscript{17}

This research design is very similar to the methodological approach applied by KRAFT (2001), who analysed turnaround investments by private equity investors.\textsuperscript{18}

\subsection*{1.2.2 Research approach and procedure}
As a first step in the research process, the author arranged 15 structured interviews with mostly senior representatives from buyout investors operating in Europe\textsuperscript{19}. These expert interviews were conducted over the period from February to April 2005. The core objective of this first research step has been to identify and confirm key variables and also to support the creation of a survey questionnaire applied in the second step. Initial hypotheses, developed on the basis of established theories and concepts proven in other private equity studies, were refined and adapted based on expert feedback, without leaving the ground of an academic, theoretical foundation. Arranging interviews, the sampling strategy has considered capturing both dynamics at investors focusing on the largest transactions in Europe as well as investor firms focusing on smaller transactions, which nevertheless still meet the specified critical size requirement. Decision processes at these private equity firms were expected to show similar overall dynamics but potentially placing different weight on various factors.

\begin{itemize}
\item \textsuperscript{16} The term ‘triangulation’ stems from navigation and military strategy where it means that several reference points are used to determine an object’s exact location (SCANDURA and WILLIAMS 2000, p. 1249).
\item \textsuperscript{17} The outlined research process supports triangulation with respect to data collection as qualitative interview data as well as quantitative survey questionnaire data are collected. In addition, triangulation with respect to the research strategy can be considered, as statistical examinations on a larger dataset which facilitate a generalisation of findings, and also an analysis of investor specific in-depth interview information have been performed.
\item \textsuperscript{18} KRAFT (2001) also used structured interviews to identify key parameters and conducted a survey that represented the core data source for subsequent statistical analysis.
\item \textsuperscript{19} A list of interview partners is provided as an appendix.
\end{itemize}
With regard to the style of the interviews, a structured guideline has been applied to direct
the discussion, which followed the flow of preliminary research questions and hypotheses. As the private equity industry tends to be very secretive and sensitive about leaking information, the interviews were not recorded in any form.

Building upon the insights obtained through structured interviews in the first stage, the author has developed a survey questionnaire, representing the core data collection method for the empirical analysis. The survey design process lasted three months from April to June 2005 and benefited from input provided by academic researchers, several private equity firms, and the ‘European Private Equity and Venture Capital Association’ (EVCA), which has been supporting the survey.

Before launching the survey at the end of June 2005, a pilot-test with 5 buyout investors was conducted in order to ensure the clarity and practicality of the questionnaire. Feedback from pre-tests resulted in a number of minor modifications of the survey before disseminating the questionnaire to the identified universe in the form of an internet-based survey.

The table in the exhibit below highlights that 316 buyout investors have been identified through ‘Mergermarket’ and ‘Thomson VentureXpert’. The search was limited to buyout investors active in Europe acquiring companies with a minimum transaction value of €50 million. Removing private equity funds with a pure real estate focus, funds that have not performed exits exceeding €100 million transaction value in the period from January 1998 to June 2005, as well as subsidiaries of other funds to avoid double counts leads to a total of 257 investors. When confirming and verifying contact details for each firm, the author had

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20 Principles recommended by MASON (1996, p. 42-47) were considered. She stresses the importance of prior preparation of the interview with regard to having a clear strategy as to what level of information is required already in light of subsequent data analysis.

21 HART (1991, pp. 192-195) discusses the steps in an interview process in detail and also highlights the obvious fact that tape recordings can rather harm the quality of information received if the respondent is expected to provide insights into facts that otherwise are not disclosed.

22 Similar surveys have been conducted successfully with private equity firms both in Europe (BOTTAZZI and DA RIN 2002, BOTTAZZI, DA RIN and HELLMANN 2004) as well as the United States (CUMMING and MACINTOSH 2001, 2003a, 2003b, KRAFT 2001).

23 ROSSI, WRIGHT and ANDERSON (1983, pp. 225-227) discuss the importance of pre-tests before launching surveys, setting out helpful guidelines to perform pre-tests.

24 KENT (2001, p. 8) outlines criteria for successful survey questions: “clear, understandable, unambiguous, specific, answerable/ testable, interconnected, relevant to the research problem and the research orientation.”

25 Exploring contemporary issues with internet-based survey questionnaires, TARNAI and MOORE (2004, pp. 323-325) highlight a list of potential pitfalls and flaws that require consideration and ought to be avoided when designing computer-based questionnaires. HANSEN and COUPER (2004, pp. 345-349) also stress the importance of extensive usability tests before starting computer based surveys, in order to ensure that there are no areas of technical errors (such as screen and system compatibility) that could also lead to low response rates as well as to ensure the high user friendliness and simplicity to answer questions and complete the questionnaire.
to remove 42 firms, for which no contact details could be obtained, resulting in an addressable universe of 215 buyout firms.

<table>
<thead>
<tr>
<th>Relevant Private Equity Firm Universe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total firms identified by MERGERMARKET database</td>
</tr>
<tr>
<td>European buyouts, &gt;€50 mm at acquisition</td>
</tr>
<tr>
<td>Additional firms through Thomson VentureXpert database</td>
</tr>
<tr>
<td><strong>Total universe of buyout investors</strong></td>
</tr>
<tr>
<td>Removal of real estate oriented funds</td>
</tr>
<tr>
<td>Removal of funds without exit transactions exceeding &gt;€100 mm</td>
</tr>
<tr>
<td>Removal of subsidiaries of other funds (double counts)</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
</tr>
<tr>
<td>Removal of firms where no working contacts could be obtained</td>
</tr>
<tr>
<td><strong>Total addressable universe</strong></td>
</tr>
</tbody>
</table>


The online distribution and accessibility of the survey allowed for respondents to be tracked, permitting the matching of information about their respective firms available in databases with questionnaire responses. Two months following the launch of the survey, after two rounds of reminders to those investors contacted, 56 buyout firms responded, returning completed questionnaires. This equals a response rate of 26.0%, which is slightly better than in comparable studies. The higher response rate could be potentially explained by the fact that each contact had been verified and confirmed prior to distributing questionnaires, while other surveys have often been circulated relying purely on database information.

Worth noting is that among the list of the top 50 buyout investors, 17 participated in the survey, resulting in a response rate of 34%, while out of the top 100 buyout investors, 27 returned a completed survey.

<table>
<thead>
<tr>
<th>Response rate analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms responded</td>
</tr>
<tr>
<td><strong>Response rate</strong></td>
</tr>
<tr>
<td>Responses in Top 50 List</td>
</tr>
<tr>
<td><strong>Response rate Top 50</strong></td>
</tr>
<tr>
<td>Responses in Top 100 List</td>
</tr>
<tr>
<td><strong>Response rate Top 100</strong></td>
</tr>
</tbody>
</table>

Exhibit 3. Analysis of addressable universe for survey. Source: Own analysis.

---

26 KRAFT (2001) received 46 responses at a response rate of 23%, SCHWIENBACHER (2002) obtained 66 European responses at a response rate of 18%, BOTTAZZI, DA RIN and HELLMANN (2004) received 150 responses at a response rate of 15%.

27 Top 50 and Top 100 ranking of relevant buyout investors is based upon MERGERMARKET (2005). Ranking according to realised exit volumes by investor.
The sample of participating firms obtained is diverse with regard to size measured in terms of capital under management, number of partners and employees, number of portfolio companies, as well as age. Furthermore, 6 hedge funds active in the European buyout segment participated in the survey.

1.3 Structure overview of the dissertation

This work is structured into 6 sections. Following this introduction part, section 2 sets out the background for this dissertation, providing definitions, descriptions and market details for the overall private equity market, the market for leveraged buyouts as well as an introduction on divestments. Subsequently, section 3 establishes a theoretical foundation for the research project and lays out a detailed review of relevant studies. This part concludes with a tabular summary of the studies most relevant to research on exit processes.

Building upon the previous introductory parts, section 4 explores each step of typical exit processes and provides a detailed analysis and assessment of different divestment options. Section 5 presents the empirical analysis underpinning this work. Lastly, section 6 offers conclusions and an outlook, discusses the relevance of the obtained findings and highlights several potential areas for related future research. The following exhibit illustrates the structure of this work.

28 Details regarding the characteristics of the sample will be discussed in the empirical analysis section 5.
29 A list of participating firms is provided as an appendix.
Exhibit 4. Structure overview of this work. Source: Own illustration.
2 Background

2.1 Private Equity

2.1.1 Definition

LERNER (1999) defines private equity organisations as partnerships specialising in venture capital, leveraged buyouts, mezzanine investments (which combine debt and equity contract characteristics), build-ups, distressed debt, and other related investments. Typically, the venture capital and leveraged buyout aspects are considered to represent the core nucleus of private equity activities. Private equity and venture capital firms are frequently labelled as ‘financial sponsors’. In contrast to public equity, private equity deals in general with companies that are not quoted on a public stock exchange.

In practitioner terms ‘venture capital’ is usually closely associated with the financing of young, newly founded companies, so-called ‘start-ups’ as well as growth financings for firms that are still in early stages of their corporate development. GOMPERS and LERNER (2001, p.146) define the core part of venture capital as “independent, professionally managed, dedicated pools of capital that focus on equity or equity-linked investments in privately held, high growth companies”. On the contrary, ‘private equity’ as a term is often associated with equity investments in more established companies, mostly structured in the form of leveraged buyouts.

FENN, LIANG and PROWSE (1995, p. 2) link the definition of private equity to the core activity of typical financial sponsors, acquiring large ownership stakes and taking an active role in monitoring and advising portfolio companies. The term ‘private equity market’ in a broader sense, however, captures more than the market relevant for this study namely the professional management of investments in unregistered securities of private and to a certain extent also public firms, which is often referred to as ‘organised’ private equity market. In principle, private equity also encompasses the market for ‘angel capital’ as well as the so-called ‘informal’ market for private equity, both of which are not relevant for this study.

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30 The market for angel capital represents investments in small, closely held companies by wealthy individuals, many of whom have experience in operating similar companies. Angel capitalists can have substantial ownership stakes and may be active in advising the company, but they are typically not as active as professional managers in monitoring the company and rarely exercise control. Angel investments are typically arranged by informal matchmakers, such as lawyers or accountants, who only occasionally put deals together and are not full-time agents (FENN et al. 1995, pp. 2-3).

31 The informal private equity market captures unregistered securities that are sold to institutional investors and accredited individuals, the number of investors in any one company typically is larger, and minimum investments smaller, than in either the organised private equity market or the angel capital market. Most important, ownership is not concentrated among outside investors, insiders still remain the largest and only concentrated group of shareholders.
As only the organised private equity market is of relevance for this study, the term private equity has to be understood in this narrow meaning throughout this work.

The overall principles and functionings of both private equity and venture capital are mostly the same or at least very similar. Academic literature frequently uses the terms interchangeably. The ‘European Private Equity & Venture Capital Association’ (EVCA), however, defines venture capital as a subset of private equity activity (EVCA 1998, p. 5):

“Private Equity provides equity capital to enterprises not quoted on a stock market. Private Equity can be used to develop new products and technologies, to expand working capital, to make acquisitions, or to strengthen a company’s balance sheet. It can also resolve ownership and management issues – a succession in family-owned companies, or the buyout or buyin of a business by experienced managers may be achieved using private equity.

Venture capital is, strictly speaking, a subset of private equity and refers to equity investments made for the launch, early development, or expansion of a business. Among different countries, there are variations in what is meant by venture capital and private equity. In Europe, these terms are generally used interchangeably and venture capital thus includes management buyouts and buyins (MBO/MBIs). This is in contrast to the US, where MBO/MBIs are not classified as venture capital.”

While this study has a clear focus on pure private equity activity (i.e., the investments in relation to established firms), it also applies the terms ‘venture capital’ or ‘venture capitalist’ in selected contexts.

Private equity has originally evolved as a means to finance young entrepreneurial firms, which require substantial capital to drive growth and innovation and lack sufficient funds. These enterprises are characterised by significant intangible but limited tangible assets, expect a period of negative earnings and have uncertain prospects. These characteristics make a debt financing difficult. Similarly, firms that find themselves in a troubled situation and need to undergo restructurings have typically difficulties to raise debt financing. Private equity organisations finance these high-risk situations and expect high rewards in return.

Also in contrast to the organised private equity market, there is no lead investor that takes an active role in negotiating the terms of the investment and following the acquisition in monitoring the firm. In the United States a legal framework governs the principles applicable to this market. Rule 144A, adopted in 1990 by the ‘Securities and Exchange Commission’ (SEC), establishes rules and conditions under which private (equity as well as debt) securities may be freely traded among certain classes of institutional investors. This rule has established a market for underwritten private equity offerings, which are largely bought by the public trading desks of institutional investors. (FENN et al. 1995, p. 3).
They protect the value of their equity investments by conducting careful and extensive due diligence before making an investment regarding business, financial, legal and regulatory, environmental issues relevant for the company in question. In addition, private equity funds firms retain powerful supervision and control rights once invested (BOTTAZZI and DARIN 2002, pp. 1-2). XU (2004) argues that the high level of involvement of venture capital funds in monitoring, strategic management, planning, and decision-making is necessary mainly due to a high level of information asymmetry between entrepreneurs and investors as investments are made in non-publicly traded companies, which are significantly less transparent than publicly listed firms.

Usually, private equity investors do not primarily invest their own capital, but rather raise the majority of their funds from institutions and high net worth individuals. Particularly large institutional investors such as pension funds are likely to want long run, relatively illiquid private equity investments in their portfolio, given high return expectations. These institutions often have not the professional staff nor the expertise to make such investments themselves and hence channel capital to private equity funds, which have developed the necessary expertise and resources (LERNER and HARDYMON 2002, pp. 1-2).

2.1.2 Evolution of the private equity market

The private equity industry has developed since World War II simultaneously in the United States and in Europe, however, the degree and pace of its development since then varied significantly on the two continents (BOQUIST and DAWSON 2004, p. 39). In the US the industry grew steadily and experienced rapid growth since the 1970s. The private equity industry in Europe, however, did not show substantial growth and development until the mid-1980s and early 1990s, when the United Kingdom under the leadership of Margaret Thatcher started to abolish historical barriers to stimulate private equity activity.

One can argue that the origins of the private equity industry lie in the family offices that managed the wealth of high net worth families and individuals in the United States in the last decades of the nineteenth century and the first decades of the twentieth century. Families such as the Rockefellers, Vanderbilts or Whitneys invested in a large number of businesses, including for example the predecessor entities to ‘AT&T’, ‘McDonald-Douglas’ or ‘Eastern Airlines’. With increasing wealth to be invested, these families began to involve outsiders to select and oversee these investments (LERNER and HARDYMON 2002, pp. 1-2).

32 The discussion about the evolution of the private equity industry focuses only on the United States and Europe, since are other regions are only of limited interest to this work.
The first formal private equity firm was established after the World War II in 1946 in the US. ARD committed equity to finance predominantly innovative and young firms. Only a small number of other private equity funds were established in the decade after its formation. The private equity industry in the US showed continuous growth since then, however annual flows of capital into new venture funds between 1946 and the beginning of the 1980s never exceeded a few hundred million dollars.

An important factor that fuelled capital inflows since the late 1970s was the amendment to the so-called ‘prudent man’ rule governing pension fund investments and also the lowering of capital gains tax rates in 1978. Prior to 1979, the ‘Employee Retirement Income Security Act’ (ERISA) limited pension funds from investing considerable amounts of money into venture capital or other high-risk asset classes. Further clarifications regarding the rule explicitly allowed pension managers to invest in high-risk assets, including venture capital. In 1978, $424 million was invested in new venture capital funds, with individuals accounting for 32%, the largest share, while pension funds only supplied 15%. In 1986, more than $4 billion was invested, whereby pension funds accounted for more than half of all contributions (GOMPERS and LERNER 2000, p. 285).

Together with growing capital inflows into the private equity industry, the number of private equity firms increased dramatically and firms began to specialise in the various aspects of private equity such as early stage venture capital, leveraged buyouts or mezzanine financing. Another important change in the private equity industry during this period was the rise of the limited partnership as the dominant organisational form. Most early funds had been structured as publicly traded closed-end funds (LERNER and HARDYMON 2002, p. 2). The first venture capital limited partnership, ‘Draper, Gaither, and Anderson’, was formed in 1958.

Following almost a decade of steady growth in commitments to the US venture capital industry, this trend was reversed in the late 1980s. Between 1978 and 1988, the number of active venture organisations increased by a factor of 4. As investors became disappointed with returns, they committed less capital to the industry. Annual commitments dropped by 68% between 1987 and 1991 (GOMPERS and LERNER 2000, p. 285). Particularly, the

33 ‘American Research and Development’ (ARD) was founded by Massachusetts-Institute-of-Technology president Karl Compton, Harvard professor Georges Doriot, and local business leaders.
34 Even though other firms soon followed, limited partnerships accounted for a small share of the venture pool during the 1960s and 1970s and grew its share dramatically only in the 1980s (LERNER 2002, p. F75).
35 Returns achieved by venture capital funds declined because of over-investment in various industries and also the entry of inexperienced venture capitalists.
36 Annual commitments are measured in terms of inflation adjusted dollars per December 2000.
strong public equity market environment in the mid- to late 1990s and the exit of many inexperienced venture capitalists led to an increase in the industry’s returns. New capital commitments rose again in response, increasing by a factor of more than 14 between 1991 and 1997. A factor that further stimulated capital inflows was the capital gains tax reduction in 1994 from 28% to 14% on investments in smaller firms held for longer than 5 years (GOMPERS and LERNER 1998a, p. 156).

Also in 1994, the ‘NASDAQ’ stock exchange opened, targeting small often unprofitable but high-growth companies and supporting the industry with further exit perspectives for portfolio firms. The exhibit below outlines the key milestones in the evolution of the US private equity market:

In contrast to the steady development of the private equity in the United States, the state of the industry in Europe was fairly stagnant from its beginnings after World War II until the
mid-1980s, when the United Kingdom government under Margaret Thatcher began to actively promote a pro-business environment and to incentivise venture capital activity.

The exhibit below outlines the key milestones in the evolution of the European private equity market:

Prior to the 1980s, there were several reasons why venture capital was not prevalent in Europe as it already had been in the US. The issues ranged from the business problems inherent in relatively underdeveloped and also fragmented markets to cultural obstacles such as higher risk averseness than the Americans and also the political environment where mainly socialist governments had created a harsher entrepreneurial climate compared to the US (BOQUIST and DAWSON 2004, p. 42). Individual European countries were often considered too small and fragmented, which limited the upside of venture investing, particularly as single countries did not offer wide opportunities for exits. Not only was there a lack of sufficiently liquid stock exchanges for smaller and medium-sized businesses, but also cross-border mergers and acquisition within Europe were not fairly developed in the period prior to the 1980s.

While expansion capital for established European firms was a domain of bank financing, the private equity industry prior to the 1980s almost exclusively concentrated on early stage and start-up financing.

Furthermore the political climate in the 1960s and 1970s discouraged entrepreneurship through high marginal tax rates on capital gains and bankruptcy codes favouring strongly creditors over debtors with the latter usually being held liable for losses or barred from future commercial activity. Being involved with firms that went bankrupt in Europe was and to a certain extent still is accompanied by shame and social embarrassment, stronger than experienced in the United States (BOQUIST and DAWSON 2004, p. 43).
In the early 1980s several changes occurred and helped to transform the European environment to a more attractive place for private equity investments. In November 1980, the ‘Unlisted Security Market’ (USM) was introduced in the United Kingdom, which was a secondary stock market for small and medium-sized innovative and expanding firms. In the first part of the 1980s, eight other European countries followed the example in Britain and introduced similar marketplaces: Belgium, Denmark, France, Holland, Norway, Spain, Sweden, and West Germany. Furthermore, governments started to gradually promote a more entrepreneurial culture by lowering marginal capital gains taxes and offering business start-up incentive schemes that encouraged stock ownership from outside investors by granting tax benefits for individuals investing in start-ups. In addition, a growing number of large privatisations and governments’ intention to stimulate public stock ownership also benefited a more entrepreneurial environment and a growing acceptance of equity ownership among the public.

Alongside these structural and regulatory changes to the environment, the growing internationalisation and sophistication of institutional investors such as mutual or pension funds or insurance companies, the demand to invest in private equity grew. With the US venture capital industry reporting attractive returns in the 1980s, the demand for similar investments in Europe increased.

Similar to the situation in the US, however, lagged for a few years, the trend towards a constantly growing private equity industry throughout the 1980s got reversed in the early 1990s, when Europe suffered from a recession. Since the late 1980s it can be argued that the US and the European market have become more interrelated with a lot of American private equity firms having established offices in Europe. In the United Kingdom, the largest single market for private equity in Europe measured in capital volumes terms, fundraising peaked at GBP 1.7 billion in 1989 and then declined rapidly to GBP 0.9 billion in 1990. Total capital raised in all European countries declined to about €3 billion in 1993 from levels of around €5 billion in the late 1980s, of which over 60% of the funds were raised and invested in Britain (EVCA, 2004).

Again in parallel to the US, the downward trend faded out in the mid 1990s. The dramatically increased attractiveness of private equity returns in Europe in the later 1990s is

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37 Again the United Kingdom was the first mover with other countries and also the European Community on a supranational level following. In 1985 the European Community introduced the ‘Venture Consort Scheme’ to stimulate cross-border syndication of European private equity firms in order to promote venture capital not only for small firms but also larger companies that required capital for innovation or expansion.

38 In the United Kingdom, stock ownership increased from 7% of the population in the early 1980s to 25% towards the end of this decade (BOQUIST and DAWSON 2004, p. 44).
attributed to a series of changes in the market. Not only the general upward trend in the economic cycle but also further government incentives and regulatory changes accelerated the evolution of the market in Europe.

From the mid-1990s governments across Europe began to consider entrepreneurial activity as an important factor for economic growth. Whereas in the 1980s such perceptions had largely been limited to Britain, also other European countries began to acknowledge the importance of economic growth driven by active and innovative entrepreneurs as a cure for an overbearing weight of social welfare and an aging population. Hence, each country strived to introduce a framework promoting entrepreneurial activities. For instance the German government introduced schemes providing entrepreneurs with attractively priced loans or even equity investments alongside those of venture capitalists. The French government provided generous grants particularly for life science and biotech start-ups.

In addition to the economic incentives the European governments provided, there were a number of legal and regulatory changes that stimulated venture capital. Unlike the changes in the 1980s that affected individual countries, the key changes in the 1990s were implemented on a pan-European basis. In 1992 the Treaty of Maastricht created the European Union from the European Community and formed the basis for Europe’s drive towards economic convergence and monetary union. The latter certainly was achieved with the introduction of the Euro on January 1, 1999. The treaty comprised provisions that moved decision making regarding many commercial, labour, and social issues to the supranational European level. As a result a steady flow of directives from Brussels gradually abolished internal barriers to trade and the free movement of goods and services (BOQUIST and DAWSON 2004, p. 48). The cumulative effect of these measures over the course of the decade clearly has improved cross-border transparency and removed apparent hurdles for those seeking to invest in a pan-European as opposed to a national environment.

Another crucial factor fostering growth of the European private equity industry was the increase in viable exit opportunities. In 1995 the London Stock Exchange (LSE) launched the ‘Alternative Investment Market’ (AIM). With less stringent listing requirements than the traditional exchange, AIM was targeted at smaller, high-growth, venture-backed companies. In March 1996, the ‘EASDAQ’ was launched in Brussels as the result of an initiative led by the ‘European Private Equity and Venture Capital Association’ (EVCA), imitating the characteristics of the NASDAQ stock exchange in the US and targeting non-profitable but high growth firms. The rival ‘Euro.NM’ was launched at the same time, which linked regional markets that cover Germany, France, Belgium, Holland, and Italy (BOTTAZZI and
The launch of each of these markets was followed by a series of highly publicised IPOs and significant increases in valuation. The prospect of potential exit routes and the apparent liquidity that they brought to the European market helped to mitigate the previous concerns of investors and stimulated further investments.

Following the strong growth over the late 1990s and attractive returns achieved in Europe, US buyout firms began to enter the European market much more aggressively than early stage venture capital funds did. US buyout firms were driven by a need to find outlets for their massive amounts of capital. They identified opportunities in Europe and aimed to leverage their sophistication and expertise in a market not as developed as in the US. With growing capital flows into US buyout funds, they struggled to find sufficiently large and attractive investment targets in the US.

Driven by such pressure to perform and excluded from early stage venture capital deals in the US, due to the sophistication of the existing specialised venture players, buyout firms started to consider an entry into the European market as a viable alternative. Given the relative lack of sophistication of the market and the non-existence of a clear-cut buyout/venture divide, these firms were able to present themselves as generalist players, investing in all types of private equity activities. Large US buyout firms began to penetrate the European market starting in 1997.

These moves were initially very lucrative. By 1999, the pooled IRR of buyout firms in Europe reached 65% (BOQUIST and DAWSON 2004, p. 51). However, like in the US where the market had become saturated by too much capital and not enough acquisition targets, the massive influx of capital destroyed returns and also ruined the European market. By 2000, pooled IRR for buyout firms already declined to 10.2% and crashed to negative 3.2% in 2002.

Following a dramatic increase in capital commitments to the European venture capital industry peaking at almost €50 billion in 2000, commitments almost halved from to 2000 to

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39 Between the start of 1997 and May 1998, the French ‘Nouveau Marché’ rose 61%, the German ‘Neuer Markt’ 131%, and the EASDAQ 112% (BOQUIST and DAWSON 2004, p. 49).
40 Venture capital funds consistently outperformed buyout funds in terms of reported returns. By 1998 buyout firms in the US returned 10.9% on average, compared with 17.2% returns for US early stage venture capital funds (BOQUIST and DAWSON 2004, p. 50).
42 IRR is the abbreviation for internal rate of return. For a further definition of private equity performance metrics please refer to section 2.1.8.2.
2002 in line with a sharp decline in achieved returns by private equity funds in general. The decline was also linked to the downturn in the stock market valuations especially for innovative high-growth firms in Europe as well as in the US.

Despite the significant capital inflows in recent years, outpacing the growth in the US, the development of private equity in Europe still lags behind the evolution in the United States despite ongoing substantial growth (LERNER and HARDYMON 2002, pp. 9-10). According to BOTTAZZI and DA RIN (2002) there is a broad consensus among economists, business leaders, and policy-makers that a functioning private equity and venture capital industry has been a key contributor to America’s leadership in the commercialisation of technological innovation. Policy-makers in several European countries have been inspired by the US example and have been striving to channel more funds into this form of financial intermediation. However, the recently re-emerging discussions about potential negative consequences of private equity actions for non-equity stakeholders (particularly the workforce of portfolio firms) of companies in relation to cost-cutting measures and restructuring actions has raised scepticism in several political circles in Europe.

The developments of the recent past have made it evident that the private equity industries in the US and in Europe have become fairly interrelated and can be considered almost as a common marketplace with regard to a lot of trends. Both the American as well as the European private equity market have experienced strong growth in line with the general recovery of the economic climate with significant, albeit lower than in the late 1990s, capital flows into the private equity industry.
As ANSON (2004, p. 84) puts forward there has been a substantial change in the nature of the private equity market. A previously segmented and inefficient marketplace has turned into an efficient and competitive environment.

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firms</td>
<td>404</td>
<td>557</td>
</tr>
<tr>
<td>Number of funds</td>
<td>637</td>
<td>998</td>
</tr>
<tr>
<td>Total committed equity capital</td>
<td>$187 billion</td>
<td>$450 billion</td>
</tr>
<tr>
<td>Average firm assets</td>
<td>$486 million</td>
<td>$807 million</td>
</tr>
<tr>
<td>Average fund size</td>
<td>$500 million</td>
<td>$352 million</td>
</tr>
<tr>
<td>Professionals</td>
<td>4,900</td>
<td>10,800</td>
</tr>
<tr>
<td>First time funds</td>
<td>19</td>
<td>36</td>
</tr>
<tr>
<td>Largest fund</td>
<td>$6 billion</td>
<td>$5.3 billion</td>
</tr>
</tbody>
</table>


Recent and projected trends very much reflect the overall maturation of the industry. The strong growth in the number of private equity firms (around 1,000 funds worldwide in 2003) and the sharp increase in the volume of capital committed to private equity funds ($450 billion in 2003) have transformed the marketplace to a more competitive environment. According to ANSON (2004), the global private equity industry is characterised by an overhang of $182 billion of committed and not yet invested capital accumulated from 1997 to 2003. Generalising the theory developed by GOMPERS and LERNER (2000), suggesting that significant fund inflows increase valuations for companies acquired and also lower expected private returns, this phenomenon could indeed lead to a lower performance of private equity as an asset class over the next years.

The private equity industry in the United States still sets most trends, however, fuelled by rapid growth in capital inflows, the European private equity market appears to follow closely. According to BOTTAZZI et al. (2004), the European venture capital and private equity industry is already much more integrated than historically as the majority of private equity providers operate on a pan-European basis and have gained expertise doing transactions in a number of European jurisdictions. They also conclude that European private equity funds typically have well established links to the United States and are increasingly adopting US investment and monitoring practices.

2.1.3 Stages of private equity financing

Both academic and practitioners’ private equity literature performed numerous attempts to categorise the types of private equity investments. Even though different approaches vary in terms of specific segment definition, most categorisations build upon the stage of corporate
development portfolio investments find themselves in. PRATT (1981) developed a segmentation of private equity activities into 6 steps, which has been widely used and formed the basis for further segmentation approaches and is thus summarised in the exhibit below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed financing</td>
<td>Providing small sums of capital necessary to develop a business idea</td>
</tr>
<tr>
<td>Start-up financing</td>
<td>Providing capital required for product development and initial marketing activities</td>
</tr>
<tr>
<td>First-stage financing</td>
<td>Financing the commercialisation and production of products</td>
</tr>
<tr>
<td>Second-stage financing</td>
<td>Providing working capital funding and required financing for young firms during a first growth period</td>
</tr>
<tr>
<td>Third-stage financing</td>
<td>Financing the expansion of growth companies</td>
</tr>
<tr>
<td>Bridge financing</td>
<td>Last financing round prior to an initial public offering of a company</td>
</tr>
</tbody>
</table>


SAHLMAN (1990, p. 479) offers a similar approach, which mainly concentrates on the traditional venture capital business and do not provide sufficient room for later stage private equity activity such as leveraged buyouts. Later approaches such as the one by FENN et al. (1995, pp. 17-21) highlight that private equity can provide financing solutions for all phases in a company’s development.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Early-stage new ventures</th>
<th>Later-stage new ventures</th>
<th>Middle-market private firms</th>
<th>Public and private firms in financial distress</th>
<th>Public buyouts</th>
<th>Other public firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Revenues between zero and $15 million</td>
<td>Revenues between $15 million and $50 million</td>
<td>Established, with stable cash flows between $25 million and $500 million</td>
<td>Any size</td>
<td>Any size</td>
<td>Any size</td>
</tr>
<tr>
<td>Financial attributes</td>
<td>High growth potential</td>
<td>High growth potential</td>
<td>Growth prospects vary widely</td>
<td>May be over-leveraged or have operating problems</td>
<td>Under-performing</td>
<td>High levels of free cash flow</td>
</tr>
<tr>
<td>Reason(s) for seeking private equity</td>
<td>To start operations</td>
<td>To expand plant and operations To cash out early-stage investors</td>
<td>To finance a required change in ownership or capital structure To expand by acquiring or purchasing new plant</td>
<td>To effect a turnaround</td>
<td>To finance a change in management or management incentives</td>
<td>To ensure confidentiality To issue a small offering For convenience Because industry is temporarily out of favor with public equity markets</td>
</tr>
<tr>
<td>Major source(s) of private equity</td>
<td>‘Angels’ Early-stage venture partnerships</td>
<td>Later-stage venture partnerships</td>
<td>Later-stage venture partnerships Non-venture partnerships</td>
<td>‘Turnaround’ partnerships</td>
<td>LBO and mezzanine debt partnerships</td>
<td>Non-venture partnerships</td>
</tr>
<tr>
<td>Extent of access to other financial markets</td>
<td>For more mature firms with collateral, limited access to bank loans</td>
<td>Access to bank loans to finance working capital</td>
<td>Access to bank loans For more mature, larger firms, access to private placement market</td>
<td>Very limited access</td>
<td>Generally, access to all public and private markets</td>
<td>Generally, access to all public and private markets</td>
</tr>
</tbody>
</table>


Linking the segmentation by PRATT (1981) and FENN et al. (1995) more specifically to a company’s life cycle, KRAFT (2001, p. 45) emphasises ‘turnaround’ investments as a core category. His approach is summarised graphically below.
KRAFT (2001) interprets venture capital as a sub-set of overall private equity activity, which is in line with the view of at least most American literature. The five financing stages appear similar to the approach by FENN et al. (1995). The key difference is that he does not differentiate between public and private firms in the later stages. He also ties company value as a binding characteristic for distinct financing stages. This has to be seen as an illustration, as for example buyouts are in practice also effected involving smaller firms in the context of management buyouts (MBOs). Nevertheless, KRAFT (2001) offers a simple and well-presented way to classify private equity activity, linking various segmentation approaches to concepts of corporate lifecycles.

2.1.4 Private equity market structure

The private equity market consists of three major categories of market participants (FENN et al. 1995, pp. 3-5): First, the ‘issuers’ of private equity, representing the firms private equity funds invest in. Second, the ‘intermediaries’ denoting the private equity organisations and third, the ‘investors’ contributing capital to the private equity firms.

In addition to this core layer of market actors there have evolved specialised advisers and agents for each of the three main market participants, which act as market facilitators with the aim to enhance market efficiency and transparency (i.e., LERNER and HARDYMON 2002, FENN et al. 1995). Placement agents for issuers aim to attract potential equity investors, while placement agents for private equity firms are looking for investors in their funds. Investment advisers to investors in private equity can assist in the evaluation of funds or also manage a portfolio of funds for investors, which is labelled as ‘fund-of-funds’ management. Given the growing importance of funds-of-funds, KRAFT (2001, p. 34) adds
them as a fourth core market participant group rather than viewing them as advisers or agents. However, their treatment in this work follows the approach by FENN et al. (1995) as funds-of-funds themselves play the role of an intermediary between investors and private equity partnerships and are not in a position to circumvent private equity houses in directly investing capital, that would potentially justify defining their role in importance equivalent to the other three core groups of market participants.

The following exhibit draws an overview of the private equity market structure. The subsequent discussion elaborates on each of the main market constituencies.


2.1.4.1 Issuers

Issuers in the private equity market have distinct characteristics. They vary significantly in size and stage of their corporate development. In line with different fundamental characteristics, the reason for their capital need varies. Despite the differences, issuers in the private equity market share a common trait: Issuers generally are firms in circumstances where financing in the debt market or the public equity market is not feasible. Private equity, typically representing the most expensive forms of finance, is often the only financing option for issuers. The lack of financing alternatives usually is in relation to
information gaps and high degrees of uncertainty with regard to the prospects of a firm (LERNER and HARDYMON 2002, pp. 1-2). The information gaps and uncertainty make it difficult for lenders to commit debt funding in traditional terms. The risk typically would not be outweighed by the return of a credit financing (HALL 2002, p. 6). Also from the capital seeking companies’ perspective there might be a lack of visibility of financial performance and cash flow generation necessary to service contractual interest and principal repayments, in which case equity financing might be preferable to classical debt financing.

Issuers are frequently segmented by their stage of development, from start-up or early stage firms, looking for seed capital, established companies aiming to expand in size, scope of product lines or geographical focus to mature companies, which need to restructure or otherwise change ownership (e.g. DUFFNER 2003, pp. 3-13). FENN et al. (1995) categorises issuers into three types, looking at the institutional nature of firms: ‘New ventures’, which are issuers of traditional early stage venture capital, ‘middle-market private companies’ intending to expand or change ownership or capital structure and lastly, ‘public companies’ being bought out or restructuring as a means to solve financial problems.

New venture issuers are young firms, often developing innovative technologies and projected to show very high growth rates in the future. Following the argumentation by LERNER (1999), BOTTAZZI and DA RIN (2002) point out that venture capital is considered to be the most appropriate form of financing for innovative firms in the high-tech sector.44 According to BOTTAZZI, DA RIN and HELLMANN (2004), 60% of European venture capital transactions in the past years have been start-up and early stage financings. Their study also reveals that based on a sample consisting of 1331 European venture capital transactions between 1998 and 2001, high-tech sectors such as software and internet as well as biotechnology and pharmaceuticals were targeted in 44% of all deals, as illustrated in the chart below:

44 These companies may be early-stage firms, those still in the research and development stage or the earliest stages of product or service commercialisation, or also later-stage companies, which that have several years of sales but are still attempting to grow rapidly (FENN et al. 1995, p. 3).
However, looking at the volumes of capital invested in 2003 in Europe, it becomes apparent that buyout financings of established companies represent by far the lion's share.

Middle-market companies, usually defined as companies with annual revenues of $25 or $50 million to $500 million, have become increasingly attractive to private equity investors, have outpaced investments in new ventures in the US, and are rapidly growing importance in Europe. Many of these companies are stable, profitable businesses in more or less mature segments such as manufacturing, distribution, services, and retail industries. Primary usages for private equity capital is to finance expansion either through new capital expenditures or acquisitions, as well as to effect changes in their capital structure and in ownership with the latter increasingly as the result of owners of private businesses reaching retirement age (FENN et al. 1995, p.3).

There are several reasons why the ‘middle market’ is attractive to buyout private equity firms. Apart from less structured and competitive processes when acquiring firms, this
market has experienced fast growth. Looking at the United States, this segment has more than doubled in the last decade from 35,000 companies in 1993 to 75,000 in 2003. Despite of the growth of the middle market, the traditional sources of financing for this market were declining. Regional banks, which have acted as the traditional lenders to the middle market declined by more than 50% from 15,000 in 1993 to 7,100 in 2003. Simultaneously, the high yield bond market, another traditional source of financing for middle market companies moved away to larger, more liquid offerings. With two key sources of funding gradually moving away from the middle market, private equity and in particular buyout firms have become increasingly important for this segment, as they can provide the flexible and long-term financing, which these firms need to grow and succeed (ANSON 2004, p. 89).

Lastly, public companies also are issuers in the private equity market. Public companies, which are acquired via share tender offers and subsequently are taken private, issue a combination of debt and private equity to finance a management buyout or leveraged buyout. FENN et al. (1995, p. 4) point out that between the mid- and late 1980s such transactions absorbed most new non-venture private equity capital. Public companies can also issue private equity in periods of financial distress to avoid the registration costs and public disclosures associated with public offerings.

2.1.4.2 Intermediaries - private equity firms
The second group of market participants and to a certain extent the nucleus of the market are the actual private equity organisations acting as sophisticated intermediaries between investors and firms seeking for equity funding.

Private equity firms have begun to specialise in various segments and niches in the 1980s. Private equity firms are typically segmented by the type of companies they invest in. Common labels for categorisations of private equity firms are: Early stage venture capital firms, development venture capital firms, buyout firms and generalist private equity providers (EVCA 2004). While the first three categories are fairly self-explanatory, the label generalist private equity providers denotes firms that are capable of providing equity capital as well as hybrid capital for a variety of companies in different stages of their development. Hybrid capital means forms of financing instruments that combine debt and equity features. The common term for hybrid capital in this context is ‘mezzanine’ capital46.

45 The average US leveraged loan size exceeded $250 million (ANSON 2004), the average European loan size amounted to more than £300 million (STANDARD and POORS 2005a, p. 2), which is obviously much larger than the needs for middle market companies.
46 Further details to mezzanine capital are provided in sections 2.2.3.1 and 2.2.4.4.
Alternatively, private equity organisations can be segmented into early stage, expansion stage and later stage venture capital firms as well as buyout firms and other providers of private equity or hybrid capital (e.g. DAS, JAGANNATHAN and SARIN 2003). Other studies only classify private equity organisations into venture capital funds, effectively comprising early to later stage venture capital in one segment, and buyout funds (KAPLAN and SCHOAR 2003).

Given the ongoing rapid growth in the number of active private equity firms stating exact numbers of funds has become difficult. Two prominent private equity organisations, the ‘National Venture Capital Association’ (NVCA) in the US and the ‘European Private Equity and Venture Capital Association’ (EVCA), however, claim that most active providers are in their membership lists.

By April 2005, EVCA counted 265 active private equity organisations in their membership list, while NVCA reported 454 members\(^7\). These figures cannot be simply added together to arrive at the number of firms acting in the US and Europe as a considerable number of firms are members of both organisations. Based on the ‘Venture Economics’ database and own research, ANSON (2004, p. 85) identified 557 firms in 2003, excluding corporate venture capital departments.

Looking at the European private equity market, the growth of buyout firms has outpaced other types of firms with regard to volumes of new funds raised. As depicted in the exhibit below, buyout funds accounted for 77% of all funds raised in Europe in 2003.

\(^{47}\) Figures for both EVCA and NVCA include both private equity funds as well as venture capital departments of corporations (43 for Europe, figure not available for the US).
Common to most types of private equity firms is their institutional legal establishment as limited partnerships. The limited partnership has evolved as dominant organisational form in the 1980s in the United States where it is estimated to represent more than 80% of all private equity funds to date (LERNER and HARDYMON 2002, p. 2). Limited partnerships are not only the most widely applied organisational form in the US but also on a global basis. The exhibit below summarises the structure of a limited partnership used by private equity firms.

Under a partnership arrangement, institutional investors are the limited partners and professional private equity managers (venture capitalists) serve as the general partners and control the fund’s activities (FENN et al. 1995, p. 3-5). The typical fund has between two and ten general partners. The investors serving as limited partners can monitor the fund’s progress, but cannot become involved in the fund’s day-to-day management, if they are to retain limited liability. Therefore, compensation is the most crucial contractual mechanism for aligning the interests of a venture capitalist and his investors (GOMPERS and LERNER 1999b, p. 6).

The limited partnership agreement usually explicitly specifies the terms that govern the venture capitalists’ compensation over the entire life of the fund upfront. It is very rare that these terms are renegotiated. The specified compensation typically takes a simple form: The venture capitalist receives an annual fixed fee, plus variable compensation that is a specified fraction of the fund’s profits. The fixed portion of the specified compensation is usually between 1.5% and 3% of the committed capital or net asset value. The variable portion is usually 20% of a fund’s profits, which is referred to as the ‘80/20’ profit-sharing rule (GOMPERS and LERNER 1999b, p. 6). ‘Carried interest’ is the term used to denote the
general partners’ share of the profits. This is the general partners’ remuneration for carrying the management responsibility plus all the liability and for providing the needed expertise to successfully manage the investment (EVCA 2004). General partners, particularly those of buyout funds, typically offer limited partners so-called priority returns of 5% to 10%. According to practitioners, most buyout funds offer priority returns of 8%. This provision requires that investors receive a return before the general partners begin to receive a share of the partnership’s profits. In most cases the general partners are associated with a private equity partnership management firm. Some of these management firms are affiliates of financial institutions such as insurance companies, bank holding companies or investment banks. Despite such an affiliation, these firms generally are structured, managed and their partners and professional staff are often compensated in the same way as independent partnership management firms (FENN et al 1995, p. 6).

Private equity partnerships have pre-determined, finite lifetimes, usually ten years, although extensions of between one and three years are often permitted. Most private equity firms raise funds by forming partnerships every two to five years. A typical fund makes one to two dozen investments over its entire life-span (GOMPERS and LERNER 1999b, p. 5-6).

Over the course of a fund’s lifetime, investors have virtually no control over the management of the partnership. This arrangement has the potential to result in conflicts between investors and the partnership managers. FENN et al. (1995, p. 4-5) note that particularly two features of partnerships serve to reduce these conflicts: If partnership managers aim to form new partnerships in the future, they must establish solid track records, and thus they need to deliver performance and act in the interest of investors. In addition, they receive a considerable portion of their compensation in the form of shares of the partnership’s profits, which aligns their interests to the ones of the investors’. GOMPERS and LERNER (1999b) show on the basis of evidence from 419 U.S. venture partnerships, formed between 1978 and 1992, that building up reputation is an important motivation for newly formed venture capital firms. The compensation of established funds is significantly more sensitive to performance and more variable than that of other funds. Older and larger firms usually have a lower base compensation.

Common to all types of private equity firms is the fact that they face uncertainty and high levels of performance risks, which typically decrease with the maturity of firms invested in.

48 In many cases, the general partners receive a fixed percentage of all returns in excess of the priority return, as mentioned up to 20% of the partnership’s cumulative profits (assuming an 80/20 profit sharing rule). The intention of this provision is that the general partners obtain gains only if the fund outperforms traditional investments (FENN et al. 1995, p. 40).
In order to be successful, private equity firms need to develop certain skills and expertise that allows them to identify attractive investment opportunities and assess the prospects of a business. Private equity investors aim to acquire as much information and knowledge about a company prior to investing in order to be comfortable with an assessment of a business plan on which basis the purchase price is determined.\footnote{Overcoming the so-called problem of ‘adverse selection’ (e.g. AKERLOF 1970, SPREMANN 1990, DUFFNER 2003), distinguishing good and bad investment candidates before having full inside access to a company is crucial to ensure success of a private equity firm. In order to ensure a careful assessment and evaluation of investment opportunities, private equity firms conduct careful due diligence processes prior to taking investment decisions (LERNER and HARDYMON 2002). These processes include the examination of a company’s market position and environment, technologies, assets and liabilities, potential threats and litigations, historical financial performance, and outlook.}

Many private equity firms, especially when investing in high growth companies, put the greatest emphasis on the experience and flexibility of the company’s management team and the size of the potential market. Even if the market does not develop as predicted, with a sophisticated team the company may be able to find an attractive alternative business opportunity (LERNER 2002, pp. F76-F77).

The decision to invest is frequently made conditional on the identification of a syndication partner, who agrees that an investment is attractive. Syndicating investments between a number of private equity houses has become very common both in the US and in Europe (LERNER and HARDYMON 2002). Through jointly investing in companies, private equity investors can spread risks and exposures in their portfolios and can invest in opportunities that otherwise would exceed exposure limits in their funds due to size.

In exchange for their capital, private equity investors typically demand preferred stock with numerous restrictive ‘covenants’\footnote{Covenants in the context of financing agreements are certain pre-specified conditions, breach of which typically triggers defined rights of the capital provider. A note on covenants as well as further references in connection with debt financing covenants are set out in section 2.2.3.1.} and representation on the board of directors. Once the decision to invest is made, private equity firms frequently disburse capital in stages (GOMPERS 1995). Managers of these venture-backed companies are forced to repeatedly return to their financiers for additional capital in order to ensure that the money is well spent. In addition, private equity investors intensively monitor managers, contacting portfolio firms on a daily or at least weekly basis and typically holding monthly board meetings, which entail extensive reviews of key aspects of the firm (LERNER 2002, F76-F77).
2.1.4.3 Other intermediaries

Intermediaries not structured as limited partnerships such as ‘Small Business Investment Companies’ (SBICs), publicly traded investment companies, and specialised units of larger companies have played a marginal role in the private equity market in recent years.

SBICs, established in the United States in 1958 as a means of encouraging investment in private equity, are designed to leverage private capital with loans from, or at least guaranteed by, the ‘Small Business Administration’. In the 1960s and 1970s they accounted for about one-third of private equity investment in the US, but today they account for less than 1% of the total market (LERNER 2002, p. F75). While investor demand for SBICs in the late 1960s until the early 1970s was strong, incentive problems ultimately led to the collapse of this segment subsequent to many investments in ineffective or corrupt firms.\(^51\)

Publicly traded investment companies played an important role in the past, however, since the mid-1990s fewer than a dozen of such companies are active in the United States (FENN et al. 1995, p. 4). There are a few of these companies operating in Europe, Middle-East and Asia with the most prominent examples including ‘Investcorp of Bahrein’ and ‘Eurazeo’ with headquarters in Paris. It has become clear that the long-term nature of the private equity business is not entirely compatible with the short-term investment horizons of research analysts and public investors.

Two other types of private equity firms are SBICs owned by bank holding companies as well as venture capital subsidiaries of non-financial corporations. Both organisation types were particularly important in the 1960s and still manage considerable amounts of private equity. However, these firms invest mainly exclusively their corporate parent’s capital and are thus not really an intermediary, but rather a vehicle for direct investments of their parents.

A type of private equity organisations used once again more widely in 2004 in the United States are ‘Business Development Companies’ (BDCs). Private equity investors are taking

\(^{51}\) Observers noted that SBIC managers’ incentives to screen and monitor portfolio companies was greatly reduced by the existence of government guarantees that limited their exposures to unsuccessful investments (FENN et al. 1995, p. 4, LERNER 2002, p. F75). Their reduced role has also resulted in part from their inability to make long-term equity commitments when they themselves are financed with debt, having to meet ongoing debt service requirements with constant sufficient cash flows.
advantage of the mutual fund laws to start BDCs as a way to raise and invest new funds. Recent filings for BDCs in 2003 and 2004 cumulatively exceeded fund volumes of $5 billion. BDCs were created by the ‘Small Business Investment Incentive Act of 1980’, which incorporates the set of laws regulating mutual funds in the United States. BDCs are a special type of closed-end mutual funds. These were originally established to stimulate investments in small private businesses (ANSON 2004, p. 88). Closed-end mutual funds cannot be redeemed by selling shares back to the mutual fund management company and have instead their shares traded on a stock exchange (mostly listed on the ‘New York Stock Exchange’ or NASDAQ).

2.1.4.4 Investors in private equity funds
As private equity managers typically do not provide the bulk of the capital for a fund from their own wealth, they approach institutions such as investment and pension funds, university endowments and wealthy individuals or families for capital. Particularly large institutional investors such as pension funds have become crucial providers of funds to the private equity industry. Within the group of pension funds, corporate and public pension funds represent the most important categories. In the United States, public pension funds have been the fastest growing group and overtook private pension funds in terms of the amount of private equity held in the mid-1990s (FENN et al. 1995, p. 5).

These institutions have often not the professional staff nor the expertise to make such investments themselves and hence channel capital to private equity funds, which have developed the necessary expertise and resources (LERNER and HARDYMON 2002, pp. 1-2). Insurance companies, investment banks, non-financial corporations, and foreign investors are the remaining core investor groups. Over the 1980s the scope of the investor base widened extensively, but still only small shares of institutions within each group (typically the larger institutions) invest in private equity.

Most institutional investors contribute capital to private equity funds for strictly financial reasons, predominantly because they expect the risk-adjusted returns on private equity to be higher than the risk-adjusted returns on other investments and because of the potential

52 Private equity BDCs are typically designed to invest in mezzanine capital and pure debt instruments as well as convertible bonds and preferred stock, with the aim to complement layers of equity in transactions. The fee structure of recent BDCs is similar to most private equity funds with a 2% management fee and a 20% share in realised profits as an incentive fee. While the key benefits to financial sponsors is that a BDC provides the private equity firm with a permanent non-redeemable capital base, there are several advantages for investors in BDCs (ANSON 2004, p. 89):
• Gaining access to the mezzanine debt market;
• Having liquidity in tradable shares;
• The ability to earn returns significantly in excess of traditional bonds.
benefits of diversification.\textsuperscript{53} Bank holding companies, investment banks, and non-financial corporations may also choose to invest in the private equity market to take advantage of economies of scope between private equity investing and their other activities (FENN et al. 1995, p. 5).

The subsequent exhibit demonstrates that banks and pension funds collectively represent the core investors for private equity in Europe, looking at new funds raised in 2003. It also shows that funds of funds have achieved substantial importance in Europe accounting for 16% of all funds channelled into private equity in 2003. Given the growing importance of fund-of-funds services, a separate sub-section is devoted to this investor group below.

\begin{center}
\begin{tikzpicture}
  \begin{pie}[inner sep=0pt, radius=2.5cm, text=inside]
    \pie{21\%}{Banks}
    \pie{19\%}{Pension Funds}
    \pie{16\%}{Funds of Funds}
    \pie{9\%}{Insurance Companies}
    \pie{7\%}{Government Agencies}
    \pie{5\%}{Corporate Investors}
    \pie{3\%}{Private Individuals}
    \pie{2\%}{Academic Institutions}
    \pie{18\%}{Other}
  \end{pie}
\end{tikzpicture}
\end{center}


In recent years a number of investors have begun to invest directly in private equity opportunities avoiding the route through an intermediary. Those investors extending their activities to direct investment usually do so by co-investing alongside private equity partnerships in order to gain experience in structuring, monitoring, and exiting transactions. Corporate pension funds and endowments, both among the first investors in limited partnerships in the United States, have evolved into large co-investors. Public pension funds, to date with relatively limited access to deal flow and insufficient transaction experience, are still unlikely to invest large sums directly.

General partners in limited partnerships consider corporate pension funds as valuable investors because their commitment to a partnership often signals a positive message about the quality of that partnership to other potential limited partners. This is why experienced corporate pension funds are sometimes well positioned to exploit their ‘lead’ investor status in a fund by negotiating slightly lower fees.

\textsuperscript{53} Risk-adjusted return comparisons between private equity investments and public equity indices are set forth in sections 2.1.8 and 2.2.6.
Another group of investors, which is also more and more often in direct competition with private equity firms when bidding for new acquisition targets, are hedge funds, for which further discussions are provided later on in section 2.1.6.

2.1.4.5 Advisers and agents

With a growing level of sophistication and the saturation of the private equity market, various groups of advisers and agents have developed aiming to support and assist market participants. Their formation has helped to raise the efficiency and transparency of the market (e.g. LERNER and HARDYMON 2002, pp. 9-10). These are the agents and advisers who place private equity, raise funds for private equity partnerships, and evaluate partnerships for potential investors. They have developed successfully because they reduce the costs associated with the information problems that arise in private equity investing. Agents facilitate the search by private companies for equity capital and the search by limited partnerships for institutional investors. Furthermore, they can advise on the structure, timing, and pricing of private equity issues and assist in negotiations. Advisers support the evaluation by institutional investors of limited partnerships in which to invest; they appear to be especially helpful for financial institutions that are unfamiliar with the workings of the private equity market (FENN et al. 1995, p. 5, p. 51).

The types of agents and advisers for the three main market participants are discussed henceforth:

a) Agents for Issuers:

Agents for potential issuers of private equity perform two functions. Firstly, they provide search and evaluation services, identifying firms that are potential candidates for a private equity investment, accumulate information and data about the firm, and distribute it to potential investors. Secondly, agents providing assistance in the assessment of terms and conditions in agreements with potential investors. They use their knowledge of current market conditions to obtain better terms in negotiations for their clients (FENN et al. 1995, p. 51). In line with the overall growing specialisation in the private equity industry also this group of agents has already specialised mainly with regard to focus on issuer types.

b) Agents for Limited Partnerships:

A different set of agents assists private equity firms to raise funds. Although most limited partnerships do not use agents to raise funds, those that are attempting to raise very large sums in excess of $1 billion, that have no track record, and that specialize in investments which are less known to institutional investors, frequently approach agents for help. Even a limited partnership that has experienced and well-respected general partners may prefer to
take advantage of an agent’s contacts and expertise in raising money from large pension funds rather than undertake the fund raising themselves, given the complex decision-making structures involving trustees and investment committees at large institutional investors. Some partnerships may also use agents for fund raising simply to avoid diverting the general partners’ time from investment activities, as on average, partnership funds take around nine months to raise (FENN et al. 1995, p. 54).

Agents for limited partnerships charge high fees, given the specialised nature of the task of raising money from public and corporate pension funds and also the still small number of agents that compete in this market. The typical rate charged is up to 2% of funds raised and sometimes even a carried interest in the partnership (FENN et al. 1995, p. 54). With more agents entering this market, fees are expected to decrease (LERNER and HARDYMON 2002, pp. 9-10).54

c) Advisers to institutional investors:
Advisers to institutional investors represent the third group of agents in the private equity market. These advisers evaluate, recommend partnership investments for institutional investors, and evaluate some co-investment opportunities in portfolio firms as well. The history of this group of advisers dates back to the early 1970s, with a considerable number of providers entering the market in the periods of high growth of the private equity industry in the 1980s and 1990s. Advisers’ major clients are pension funds (FENN et al. 1995, p. 55). Services range from independent advice to full-service money management with discretionary power over assets.

Increasingly, advisory firms operate as funds-of-funds in which advisers take the role of general partners of a limited partnership that invests in other limited partnerships. Because these advisers are particularly influential with regard to the direction of large amounts of money, they routinely receive a large number of offering memorandums from private partnerships that are in the process of raising funds. Given their growing importance in the private equity market (KRAFT 2001, p. 34), funds-of-funds are set out in more detail in the following sub-section.

2.1.4.6 Funds-of-funds
Funds-of-funds have experienced strong growth since the mid-1980s. According to EVCA (2002, p.3), private equity funds-of-funds globally raised more than €7 billion of capital in

54 Attracted by such returns, several investment banks have created fund-raising groups in the mid-1990s (FENN et al. 1995, pp. 54-55).
2002, with half of the amount stemming from European investors. In both the United States as well as Europe, funds-of-funds represent already the third largest source for capital commitments in private equity funds, following pension funds and financial institutions.

Funds-of-funds take equity positions in other private equity funds and are like private equity funds themselves held by management companies. They have like all other forms of agents specialised over time and can be divided in a number of categories, as illustrated in the exhibit below:

<table>
<thead>
<tr>
<th></th>
<th>Venture Capital</th>
<th>Buyout</th>
<th>Generalist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Secondary</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Primary and secondary</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Equity and mezzanine</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>


Funds-of-funds can have a focus on either early or later stage venture capital funds or buyout funds or alternatively invest in all types of private equity funds, which categorises them as a ‘generalist’ player. In addition, funds-of-funds can be differentiated by the type of securities the acquire. A primary fund-of-funds invests exclusively in new private equity funds, while a secondary fund-of-funds buys shares from investors in existing private equity funds. Some funds-of-funds might also combine commitments in primary and secondary positions (EVCA 2002, p. 4). Furthermore, some funds-of-funds invest in private equity funds as well as in specialised mezzanine funds, which provide private equity firms with an additional layer of financing for example in buyout capital structures. Most funds-of-funds in Europe adopt a generalist status investing in primary and secondary and sometimes also mezzanine positions across all types of private equity funds (EVCA 2002, p. 3). Some funds-of-funds enter into direct investments alongside experienced private equity firms in order to diversify their portfolio for specific needs (KRAFT 2001, p. 38).

The key advantages for investors to route private equity commitments through funds-of-funds rather than directly to private equity funds are the better diversification and the professional management of a private equity portfolio. The core disadvantage is that a
management fee and a performance linked incentive fee reduces the net return on the level of the fund-of-funds as well as the private equity funds themselves. This is why investments in funds-of-funds are attractive for institutional investors with a low private equity asset allocation (KRAFT 2001, p. 38). The emergence of publicly quoted funds-of-funds management companies in the late 1990s enabled the access to the private equity asset class for private investors. Given that private equity funds target typically 10 to 30 but at a maximum 50 limited partners (FENN et al. 1995, p. 29) in their funds, they require minimum investment amounts in excess of several millions of dollars, which discourages direct commitments from private investors.

Due to their growing importance in the private equity market, a critical discussion of a convergence of hedge funds and private equity activity suggested in recent literature is provided after a brief note on key trends changing the private equity market environment. These changes in the private equity industry have enabled and triggered the growing interrelations between hedge funds and private equity (ANSON 2004).

2.1.5 Market trends

Recent and projected trends are very much driven by the overall maturation of the industry. The strong growth in the number of private equity firms (around 1,000 funds worldwide in 2003) and the sharp increase in capital committed to private equity funds ($450 billion in 2003) have transformed the marketplace into a more competitive environment. According to ANSON (2004) the global private equity industry is characterised by an overhang of $182 billion of committed and not yet invested capital accumulated from 1997 to 2003. This massive capital overhang poses a threat to the private equity industry’s ability to deliver high returns GOMPERS and LERNER (2000).

The private equity industry in the United States still sets most trends, however, fuelled by rapid growth in capital inflows, the European private equity market appears to follow closely. According to BOTTAZZI et al. (2004), the European venture capital and private equity industry is already much more integrated than historically, as the majority of private equity providers operate on a pan-European basis and have gained expertise doing transactions in a number of European jurisdictions.

55 GOMPERS and LERNER (2000) prove that significant fund inflows increase the valuations for companies acquired and also lower expected private returns.
56 BOTTAZZI et al. (2004) also conclude that European private equity funds typically have well established links to the United States and are increasingly emulating US investment and monitoring practices.
Trends discussed in the academic literature relate particularly to the buyout segment thus a detailed discussion is provided in section 2.2.5. Key trends to be explored are: Acquisitions in auction processes, secondary buyouts, attractiveness of middle market transactions, growing transaction sizes, aggressive acquisition structures, dividend recapitalisations of portfolio firms, and ‘dual-track’ divestments.

2.1.6 Hedge funds and private equity

Fuelled by the changes in the overall private equity environment over the recent years, a number of inter-relations between hedge funds and the private equity industry have emerged and grown in intensity.

Although commitments to private equity and hedge funds have traditionally both been classified as ‘alternative’ investments, a somewhat clear distinction was perceived to exist between these types of funds. GRÜNBICHLER, GRAF and GRUBER (2001) provide a detailed differentiation framework of hedge funds and private equity funds but also flag commonalities, particularly the in-transparency to outside investors. While hedge funds have historically not been active in the private equity space, they have gradually evolved as a market participant investing directly in private equity opportunities. Over the course of the past years, hedge funds, also driven by large capital inflows, have begun to compete with private equity firms in the purchase of controlling stakes in companies. On the other hand, given the ongoing trends in the private equity industry with growing competition for target assets and resulting threats to returns and sources of income, several traditional private equity firms have broadened their scope and established their own hedge funds investing in non-private equity assets.

As illustrated in the exhibit below and mentioned before, three types of relations can be perceived:

1. Hedge funds competing with private equity firms for traditional private equity assets (e.g. controlling stakes in companies);
2. Private equity firms founding their own hedge fund businesses;
3. Private equity funds and hedge funds bidding and acquiring assets jointly.
2.1.6.1 Hedge funds bidding for private equity assets

The first element linking hedge funds and the private equity market, is the entry of hedge funds into the direct competition for private equity assets. A number of hedge funds has begun to participate in auctions for controlling stakes in companies. While already during the late 1990s hedge funds co-invested alongside private equity funds, several funds have started to acquire firms on their own.

Traditional private equity firms more and more strive to source target assets through ways other than structured auctions orchestrated by investment banks, however, hedge funds usually rely on these auction processes for their private equity deal origination. In most cases hedge funds lack the resources, expertise, and relationships required to pro-actively identify target companies.

Unlike the ‘traditional’ notion of private equity houses to acquire companies aiming to generate value through operational efficiency improvements, replacing or complementing managerial talent, etc., hedge funds, given their requirements and investment orientation tend to play a more passive and opportunistic role. In line with the generally shorter-term-

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58 The author tests empirically if private equity investing influenced by the market entry of hedge funds has been abandoning ‘traditional’ principles and is overall adopting a more short-term and opportunistic approach. This analysis will be presented in sections 4 and 5 below.
oriented perspective of hedge funds is the compensation scheme for their principals and partners. GOMPERS and LERNER (1999b) argue that partners’ compensation structure has significant influence onto a fund’s investment behaviour. While a significant portion of compensation in private equity funds is the form of carried interest, which is realised towards the end of a fund period (starting usually after the sixth year), hedge funds usually pay a substantial compensation annually (CAMPBELL and SPIEGEL 2005, p. 3).

With a more hands-on, strategic approach, private equity houses in theory should be in a position to pay more for assets than other financial buyers such as hedge funds. When hedge funds outbid private equity firms it becomes apparent that they get comfortable with lower expected rates of return (‘hurdle rates’). Hedge funds aim to outperform a benchmark interest rate (such as LIBOR\(^{59}\)) rather than setting themselves a given hurdle rate. Nevertheless, a valid question that is currently not sufficiently answered in academic literature is whether hedge funds overpay when acquiring private equity targets in auctions.

When hedge funds enter private equity investments, their focus typically lies either on established companies that do not require substantial managerial involvement, or quite the opposite, on companies facing financial distress. While the first type of investments are mainly structured as buyouts, the latter type usually involves investments in distressed debt instruments. KRAFT (2001, pp. 91-92) identified an obvious convergence of turnaround private equity investors and distressed assets hedge funds with regard to the types and structure of investments.

Given the investment flexibility of hedge funds, a variety of fund types could consider private equity investments. Nevertheless, event driven, distressed debt, and long/short equity-oriented funds are most likely to be active in private equity investments (i.e., GETMANSKY 2004).\(^{60}\)

### 2.1.6.2 Private equity firms launching hedge fund activities

Some private equity firms have begun a few years ago to establish hedge funds on their own or enter joint ventures with experienced hedge fund players.\(^{61}\) Traditional private equity

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\(^{59}\) LIBOR…London Interbank Offered Rate, which represents a daily quoted rate index for borrowings between banks.

\(^{60}\) A detailed overview of different hedge funds types can be found for example in GETMANSKY (2004) or AGARWAL AND NAiK (1999).

\(^{61}\) For example, the US private equity firm ‘Texas Pacific Group’ recently announced to start a new hedge fund labelled ‘TPG-Axon Capital’, planning to raise up to $3 billion capital. Another reputable private equity house, ‘Bain Capital’ has managed the ‘Brookside Capital’ hedge fund for several years with almost $4 billion of assets under management. Similarly, ‘The Blackstone Group’ has a successful fixed income arbitrage hedge fund called ‘Blackstone Bridge’ as well as a $9 billion hedge fund of funds business (ANSON 2004, p. 90).
businesses that are expanding towards hedge fund activities aim to diversify their source of income and to benefit from a number of aspects and characteristics (ANSON 2004, pp. 90-91):

- Hedge funds are another source of fund raising and fee generation;
- Hedge fund incentive fees are front-loaded rather than on a continuous basis in the case of private equity funds;
- Hedge fund incentive fees are based on changes in net asset value, not realised profits like private equity funds;
- Hedge fund incentive fees are collected on a regular basis, either quarterly or semi-annually;
- Investor capital does not need to be first returned to collect incentive fees;
- Management fees do not need to be recouped before incentive fees are paid;
- Hedge funds have no provisions for the clawback of management or incentive fees.

Summarising these points, the fee generation for a hedge fund is more favourable than that for private equity funds from a fund manager’s point of view. Another important consideration is that hedge funds have lower hurdle rates than private equity funds. While most private equity funds have targeted returns in the 20% range, hedge funds aim to outperform a cash interest index plus a certain premium (e.g. LIBOR + 6%). This provides hedge funds with a competitive advantage against private equity firms when bidding for target companies as lower hurdle rates allow hedge funds to bid more aggressively than traditional private equity houses (ANSON 2004, p. 91).

CAMPBELL and SPIEGEL (2005, pp. 18-19) discuss the potential advantages of private equity and hedge fund ‘cohabitation’ within the same firm. They emphasise the opportunity to leverage reputation with an existing client base and possibly circumvent some of the capital raising strains that a first time fund manager encounters. Depending on a fund’s industry focus, a manager also may be able to leverage its due diligence efforts within a particular industry. Furthermore, for a firm having the flexibility to structure transactions in different ways can be a considerable advantage, particularly when timing is tight. Hedge funds have the structural advantage of being able to move quickly because they do not need to arrange debt financing for each new transaction, as a private equity fund typically would have to.

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62 For example, a hedge fund’s extensive industry research might be useful when exploring private equity opportunities, which typically would be discarded by a firm that only houses hedge funds. They also argue that running a hedge fund under the same umbrella could facilitate the access to distressed debt investments. Investments in distressed debt can offer interesting opportunities for private equity funds, particularly when existing debt is converted to equity to avoid a bankruptcy scenario.
2.1.6.3 Hedge funds and private equity firms co-operating in auctions

Private equity funds have started to invite hedge funds to co-invest in transactions more than a decade ago. These co-investments were usually minority shares in the equity contribution for a specific transaction. However, over the recent years hedge funds have become a more active participant in the private equity market and have partly evolved into equal partners to private equity funds in bidding consortia.

Both types of funds are willing to jointly acquire companies, as they can complement each other. While hedge funds can benefit of private equity funds’ expertise to manage and actively create value in portfolio companies, they can provide financing very quickly and fill the gap of an equity commitment required for a transaction, even at a late stage in an acquisition process. Private equity firms can have a preference forming a consortium with hedge funds instead of other private equity funds, as in this case they have more freedom in pursuing their particular strategy with a portfolio company rather than having to negotiate with other private equity funds. Hedge funds have traditionally not interfered considerably in portfolio companies’ operational activities (CAMPBELL and SPIEGEL 2005).

With hedge funds increasingly hiring experienced private equity professionals aiming to establish a skill-set similar to private equity funds, the level of operational involvement of hedge funds in their portfolio companies might increase. There seems to be a tendency that funds seek to combine the advantages of both fund types.

2.1.6.4 Hedge funds and private equity convergence

Discussing the convergence of these historically fund types, CAMPBELL and SPIEGEL (2005, p. 19) suggest that there is a type of ‘new hybrid’ funds emerging. These funds have terms that combine classic private equity and hedge fund terms in one investment vehicle to enable long-term investing in illiquid securities while still offering more liquidity to investors than traditional private equity funds. Hybrid funds are designed to reduce overall risk while improving returns by deploying capital more diversely. However, they argue that these hybrid funds might face challenges in fund raising with investors who typically follow strict asset allocation guidelines, where funds would be usually classified in private equity and alternative investments categories. Hybrid funds sit in between and might be difficult to classify.

63 See also DEWSON (2005, pp. 14-15) for the benefits of co-operation between hedge funds and private equity firms.
Recently published practitioners’ literature discussing a ‘convergence’ of private equity and hedge funds argues that not only the types and structures of effected investments are starting to overlap but also that investment behaviour of the two types of funds is becoming more similar (CAMPBELL and SPIEGEL 2005). Particularly relevant to this dissertation, MOONEY and SCHOTTENSTEIN (2005) also suggest that traditional private equity houses focus more and more on what they denote ‘active portfolio management’ with the intention to shorten investment holding periods and exit investments faster than in the past, in line with hedge funds’ private equity commitments that also target a short investment duration. As hedge funds typically lack the experience of private equity houses with regard to managing and enhancing the operations of businesses they are focused on quickly and opportunistically exiting investments.

It is a valid question to ask if there even is a species of ‘traditional’ private equity investors sticking to the principles of more or less hands-on value creation, or if short-term, opportunistic investment actions and financial engineering start dominating the private equity industry. Based on an empirical analysis of the exit behaviour of hedge funds and ‘traditional’ private equity firms with a focus on investment duration64, the author advocates a careful application of the term ‘convergence’. While practitioner publications propose a broad definition (i.e., MOONEY and SCHOTTENSTEIN 2005), the author cautiously suggests that the term ‘convergence’ might be more applicable with regard to the type and structure of investments rather than already to the investment behaviour and the strategic approach concerning portfolio investments.

2.1.7 Corporate governance aspects
According to CADBURY (2002, p.1), corporate governance denotes the system “…by which companies are directed and controlled.” Another definition is provided by DEMB and NEUBAUER (1992, p. 187) explaining corporate governance as “…the process by which corporations are made responsive to the rights and wishes of stakeholders”. Going a step further, HILB (2005, p. 10) defines his ‘New Corporate Governance’ approach as a system “…by which companies are strategically directed, integratively managed and holistically controlled in an entrepreneurial and ethical way in accordance with a particular context.”

Given the active involvement of private equity firms in many distinct aspects of the governance of portfolio companies, HILB’s (2005) ‘New Corporate Governance’ approach

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64 The analysis of investment duration in buyout transactions by hedge funds and private equity firms will be set out in the empirical analysis section 5.
is used to underpin the subsequent discussion, as it unlike other concepts clearly differentiates between four key dimensions. HILB (2005) classifies corporate governance aspects, according to his ‘reverse KISS’ principle into: a) Situational implementation of a governance system adapted to a specific company’s characteristics needs and requirements; b) strategic direction meaning that a supervisory board should be closely involved in steering a business strategically; c) integrated board management asking for a combined approach for the nomination, assessment, remuneration and promotion of executive as well as supervisory board members; d) keeping control of a company in the sense of holistic monitoring going beyond pure financial monitoring and controlling, implementing a broad performance evaluation approach from the viewpoints of the shareholders, customers, employees and the public domain.

Summarising comments on the particular importance of corporate governance to private equity firms steering their portfolio businesses (i.e., SAHLMAN 1990, VAN DEN BERGHE and LEVRAU 2002, etc.), it appears that each of HILB’s (2005) four key dimensions are considered to be crucial in this context. Private equity firms are typically ‘active’ investors, working with the executive management of companies to maximise value often in a ‘hands-on’ way and are usually controlling the supervisory boards (i.e., SAHLMAN 1990). Private equity investors retain mostly a majority block of shares in companies, which allows them to control businesses holistically. They have frequently developed detailed monitoring mechanisms and governance principles that are implemented in new portfolio firms (VAN DEN BERGHE and LEVRAU 2002, p. 125). Private equity firms enforce their governance and monitoring rights through a set of contractual agreements with a portfolio company’s management and other shareholders. This will also be explored in further detail.

Despite the fact that most corporate governance literature concentrates on public companies (HILB 2005) it is not less important for private companies, especially for those reaching a large scale. Studies on governance in the context of private equity tend to focus on the characteristics of boards (i.e., ANDERS 1992, GERTNER and KAPLAN 1996, HOLMSTROM and KAPLAN 2001, BOURESILI, DAVIDSON and ABDULSALAM 2002, VAN DEN BERGHE and LEVRAU 2002), considering particularly the degree of independence of board members, which shall be discussed further later on.

HILB (2005) argues that a successful corporate governance system needs to take into account the interests and perspectives of all major stakeholders and not only shareholders. ANDERS (1992) already criticised leveraged buyout firms in the early 1990s for governing
portfolio firms in an uni-dimensional, shareholder-centred approach and highlighted that the interests and well-being of the employees of firms have often been neglected or downplayed. He stressed that this in a longer term harms private equity firms as they build up bad reputation with certain types of stakeholders which might make future acquisitions and transactions more difficult.

Analysing the link between board characteristics and performance of private equity portfolio firms, GERTNER and KAPLAN (1996) suggest that successful boards perform more than only controlling and monitoring functions. HILB (2005, p. 72) lists 6 core functions of boards:

1. Coaching function
2. Shaping or designing function
3. Know-how function
4. Controlling function
5. Networking function
6. Balancing function

In light of the research intent of this dissertation, the subsequent discussion is split into two parts. First, the governance of portfolio firms held by private equity investors and second, governance aspects of private equity firms. The focus is set on the first dimension.

2.1.7.1 Corporate governance of private equity portfolio firms

When the governance of portfolio firms is discussed in academic literature, arguments and concepts are frequently linked to agency theory. Without pre-empting a detailed discussion of agency conflicts in section 3, it seems crucial to note that governance structures put in place by private equity players are usually designed to cope with high levels of information asymmetries between a company’s executive management, who possess deep inside knowledge about the business, and the investors, who typically know less about the specifics of a company. As private equity investors are often very active investors, directly deciding about the directions a business is taking, overcoming information disadvantages appears to be of paramount importance (CUMMING and MACINTOSH 2003b).

Beyond an active and often controlling representation on the supervisory board level of portfolio companies, private equity investors aim to align the interests of executive management to their own, which is typically facilitated through a number of mostly contractual arrangements (i.e., SAHLMAN 1990, KAPLAN and STROEMBERG 2002, 2004, GOMPERS and LERNER 2004). A number of features, typical actions and
procedures that are designed to benefit an efficient governance and reduce problems arising from asymmetric information, are discussed in literature. These features are also of importance when analysing corporate governance considerations in divestment processes of portfolio firms:

a) Involvement in operational management
The level of direct involvement of private equity financiers in their portfolio companies differs considerably. While some investors advise executive management and only participate at regular board meetings, other private equity firms replace or add to existing management teams bringing in their own employees or affiliated managers. Regardless of the ultimate intensity of an involvement, compared to other institutional investors such as pension or investment funds, most private equity firms do not only control and monitor companies but direct in a number of formal and informal ways. As BOURESLI, DAVIDSON and ABDULSALAM (2002, p. 72) suggest, private equity investors get engaged in a variety of management aspects, including recruiting, compensation of key managers, key corporate decisions such as mergers and acquisitions and financing.

Driven by the objective to enhance transparency and reduce information asymmetries, private equity firms frequently introduce or enhance management information and reporting systems (VAN DEN BERGHE and LEVRAU 2002).

b) Compensation of executive management
In order to align the interests of executive management with those of private equity investors owning the business, a substantial portion of senior management compensation is normally structured performance-based (i.e., SAHLMAN 1990, GOMPERS and LERNER 1999b, 2004). In addition to performance related bonuses and stock options that vest upon exit, senior managers are often asked to invest a considerable part of their own wealth alongside a private equity investor.

c) Staging of capital commitments
Frequently used in circumstances of high information asymmetries is the right to stage capital commitments, meaning that upfront only a portion of the total equity financing is committed and a portfolio company needs to meet pre-specified milestones or performance hurdles before the investor provides further funds (SAHLMAN 1990, GOMPERS 1995,

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65 SAHLMAN (1990, p. 508) also adds that investors often try to leverage their contacts and relationships to attract customers or negotiate favourable terms with suppliers. Based on extensive survey research, he also found that well regarded private equity and venture capital firms can improve the image and reputation of portfolio firms.
BASCHA and WALZ 2001). Capital is committed in phases or stages. Staging is usually applied in venture capital financings, where companies or management have not established a credible track record yet. GOMPERS (1995, p. 1461) highlights that staging is most likely effected when agency costs are high, which is typical for early stage venture capital financings and investments in high-technology companies. An investor requires to be convinced about the performance trend of a venture in order to accept the risk of binding large sums of capital in risky projects.

From a governance perspective, staging requires executive management teams not only to meet certain performance targets but also to develop a transparent reporting discipline. Private equity houses need to obtain a high level of comfort about the quality and accuracy of a company’s reports.66

d) Agreements on liquidity
As mentioned above, management of portfolio companies are often incentivised by stock option plans. Furthermore, they are frequently required to invest some of their own wealth into a venture. Both private equity firms and management want eventually convert their illiquid holdings of a company into cash, however, they might disagree about the timing or method of exit (SAHLMAN 1990, p. 509).

Through shareholder agreements, private equity houses bind management to a certain extent to stay with a portfolio company for the duration of their holding. Stock-based compensation and the value of managements’ initial investments can only be realised once a private equity firms achieves a full or at least partial divestment, which meets a certain performance target. Incentive and compensation structure as well as shareholder agreements are usually designed to minimise tension with regard to an exit and to ensure executive management’s commitment and support for a divestment process.

e) Use of convertible preferred stock
When structuring the equity component for the financing of a transaction, private equity firms frequently arrange their capital contribution in the form of preferred stock or convertible preferred stock (SAHLMAN 1990, BASCHA and WALZ 2001).

66 Staging of capital is rarely applied in the context of buyouts, given the fact that all of the financing is usually required upfront at the closing of an acquisition. However, private equity houses do also phase capital infusions in the context of buyouts in case of add-on acquisitions or expansions.
Using preferred stock enables investors to receive constant dividends from a portfolio company, which reduces their capital exposed to a company over time. Receiving dividends enables investors to retrieve some returns even from investments of moderate success (SAHLMAN 1990, p. 509). Dividends are usually only structured if the recipients are tax-exempt entities, as normal dividend payments are non-tax deductible at the level of the paying company and represent a taxable income with many recipients.

Convertible securities and particularly convertible preferred stock are widely used by private equity investors to structure both their equity contribution as well as the investments by management teams. Financial sponsors mostly retain the right to alter the conversion price of these instruments according to the performance of a company. Flexible conversion terms alter the risk-and-reward-sharing scheme between investor and executive management. Major objective is to encourage management to provide reasonable projections at the time a company is acquired. Given that the projections developed by management have critical impact on the acquisition valuation of a company, private equity firms aim to prevent management from overstating the future prospects of a business through linking their compensation to a projected value target, expressed as conversion price of their equity holdings (SAHLMAN 1990, p. 510).

f) Use of debt
In addition to the control and monitoring mechanisms as well as the objective to align interests and thus to reduce agency costs, private equity houses, especially in the case of buyouts, finance acquisition of companies using high portions of debt, which are ultimately imposed on the acquired companies. As COTTER and PECK (1999) point out, the use of debt instruments forces companies to perform well and generate sufficient cash flows in order to fund interest and principal payments to lenders. JENSEN (1986, p. 324) argues that it is not the total amount of debt outstanding but rather the amount and schedule of debt service payments per period that motivates managers to work hard. Failing to meet contractual payments in connection with debt obligations could ultimately result in a bankruptcy scenario with serious consequences for all stakeholders.

When financing transactions, private equity firms frequently make use of both short term debt, such as credit lines provided by banks, and longer-term debt in the form of long-term loans or bonds. Particularly short-term bank debt requires borrowers to meet regularly

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67 BASCHA and WALZ (2001) provide a detailed analysis of convertible securities applied in private equity transactions. They also demonstrate that convertible securities reduce the risk of disagreements regarding the timing of exit of a portfolio company.
tested, pre-specified covenants\textsuperscript{68} and typically demands regular principal repayments starting shortly after the closing of a transaction. COTTER and PECK (1999, p. 1) summarise that a higher portion of debt with shorter maturity increases the required debt service payments by period and thus increases the motivation for managers to improve the value of the firm from the early stages of a buyout. However, they also flag that private equity firms need to take a conservative view when financing businesses building in some degree of downside protection cushion to avoid over-indebtedness and the risk of bankruptcy in times of cash-flow shortage. They also find that with private equity firms acting as active monitors the benefit of using debt to monitor managers declines.

Again, not only the motivation for managers to perform is crucial, but also the reporting requirements demanded by banks help to enhance transparency and reduce information asymmetries, which is important from a governance standpoint.

Besides the contractual features related to an efficient governance of portfolio firms, the characteristics of boards of private equity held companies are subject to academic discussion. The subsequent discussion of boards is split into three parts: The characteristics of boards, the independence of boards and levels of board involvement of private equity investors.

g) The characteristics of boards of portfolio firms
GERTNER and KAPLAN (1996) acknowledge that boards of directors play an important role in corporate governance in general and they suggest that the characteristics of a board and its individual directors should have a large impact on firm value and performance. They compare the characteristics and performance of firms that underwent a leveraged buyout to companies that are not held by private equity firms and are similar in size and industry. Overall they confirm a superior performance of private equity held firms. With regard to the characteristics of the boards, they find that private equity held firms have smaller boards (on average 8 versus 10 members) with younger directors, who meet less frequently and control larger equity stakes than in the case of other firms. Surprisingly they also find that boards of private equity affiliated companies are less diverse. COTTER and PECK (1999) also note that private equity held firms tend to have smaller boards than comparable other firms. GERTNER and KAPLAN (1996, p. 9) argue that

\textsuperscript{68} Covenants in the context of financing agreements are certain pre-specified conditions, breach of which typically triggers defined rights of the capital provider. A note on covenants as well as further references in connection with debt financing covenants are set out in section 2.2.3.1.
private equity firms aim to control companies by holding a large fraction of board seats which is facilitated by smaller boards.69

h) The independence of boards of portfolio firms
Related to the previous point is the controversial discussion of board independence. Especially in the light of a multi-stakeholder-oriented perspective, HILB (2005) advocates a high level of independence of board members. HILB (2005, pp. 62-64) summarises a variety of detailed definitions and requirements of independent board members. Important for this discussion is that independence does not only exclude any operational relationship with a company but also a representation of a major shareholder. In the case of private equity owned firms, directors on a supervisory board level affiliated to the private equity firm frequently hold the majority of board seats (VAN DEN BERGHE and LEVRAU 2002, p. 128).70 VAN DEN BERGHE and LEVRAU (2002, p. 133) discuss the issue of board independence in a private equity context and stress that there is no consensus as to how independent a private equity portfolio company’s board should be. Private equity investors often seek board dominance as they aim to drive value-maximisation through the pursuit of certain business strategies. Furthermore, delegates from private equity firms might have conflicts of interest as a consequence of several board mandates in the same or similar industry.

Even though there is substantial criticism about private equity firms forcing portfolio companies to pursue an often purely shareholder-value centred strategy and board leadership (i.e., ANDERS 1992), potentially resulting in an under-representation of interests of other stakeholders, especially the employees and minority shareholders, no trend of increasing board independence seems visible.

i) Levels of board involvement
Like for the level of operational involvement, the degree of supervisory board involvement differs dramatically among private equity investors. Common to most private equity investors is a higher level of involvement than institutional investors (SAHLMAN 1990). Underpinning the greater commitment is the objective to add-value to portfolio businesses and not only act as a financier to a company.

69 Also interesting to note is their finding that boards of private equity portfolio firms in their sample of 126 US firms met less often than boards of non private equity firms. They suggest that the number of meetings might be an inappropriate indicator as to how much work a board effects, proposing that informal communication between directors substitutes formal procedures.

70 Based on US venture capital data, KAPLAN and STROEMBERG (2002) report that directors directly affiliated to venture capital firms hold board seats in more than 40% of companies and hold the majority in 25% of all cases. GERTNER and KAPLAN (1996, p. 9) find that on average private equity fund managers hold 38% of board seats.
In addition to attending board meetings, private equity investors and their board delegates frequently visit the sites of the portfolio firms (VAN DEN BERGHE and LEVRAU 2002, p. 128). The amount of hours devoted to a portfolio company varies substantially with considerably more time spent in the US and the UK compared to other European countries.

### 2.1.7.2 Corporate governance of private equity firms

As most private equity funds are organised in the form of limited partnerships, institutionalised forms of corporate governance comparable to large public companies are rare, despite the large size of some private equity firms. The relationship between investors and managers of a private equity fund is ruled by a partnership agreement that spells out the rights and duties of each party (SAHLMAN 1990, p. 489). Given the legal structure as partnerships, most private equity firms do not have supervisory boards, however, more and more organisations adopt governance principles through establishing certain advisory and control committees, driven through pressure by influential institutional investors.

Key characteristics of partnership agreements relevant from a governance perspectives are discussed below.

a) Reporting and accounting policies

Most private equity firms agree to provide limited partners (their investors) with regular reports on the value and progress of portfolio investments as well as to host at least one annual meeting with the private equity fund managers and selected portfolio company management teams (SAHLMAN 1990, p. 492).

b) Advisory and control committees

A large number of private equity funds have established committees that offer advice to a fund’s management but also have to consent to critical decisions that go beyond the scope agreed upon in the initial partnership agreements (such as excess-exposure to a single company, where a larger than normally permitted equity contribution is necessary). Most of these committees require a limited-partner representation.

Advisory boards are often designed to provide senior contacts and access to deals or technical expertise, while control boards are generally structured like traditional supervisory boards, providing oversight and guidance (SAHLMAN 1990, GOMPERS and LERNER 2004).
c) Limited life of funds, staging and mandatory distribution policy

The vast majority of funds structured as limited partnerships have a pre-specified maturity, typically 10 years (i.e., SAHLMAN 1990, CUMMING and MACINTOSH 2003a, GOMPERS and LERNER 2004). Unlike some other fund types, private equity managers are obliged to return the total capital at a certain point. Investors can usually decide whether to roll over their capital commitments from one fund to a new fund by the same private equity firm or withdraw from further investments. Rolling over commitments from investors in previous funds is crucial for a successful fundraising process (GOMPERS and LERNER 1998a). This puts pressure on the private equity investors not only to achieve attractive performance but also satisfy investors with regard to reporting and risk-management standards.

Moreover, private equity managers are usually required to distribute capital achieved through a divestment of a portfolio company directly to investors, which means in the case of successful exits only a portion of the entire committed capital will be kept with the private equity fund for the entire lifespan. Should the private equity managers want to retain the capital for further investments, limited partners have to consent.

Typically only a portion of capital commitments are funded and invested at the beginning of a fund cycle. Remaining capital commitments are funded according to a so-called ‘take-down’ schedule. Related to the phased funding of capital to a private equity fund is another common condition that permits limited partners to withdraw from funding beyond their initial capital infusions subject to certain terms and also penalties (SAHLMAN 1990, p. 494).

d) Compensation scheme

Following the objective to reduce agency conflicts between investors and managers of private equity funds, the usual largely performance linked compensation structure for private equity professionals aims to align interests (GOMPERS and LERNER 1999b). A private equity firm generated most income from sharing in the overall capital gains distributed to investors as opposed to the fixed annual management fee related to the amount of capital under management.71

Although corporate governance of private equity firms themselves has not received much attention in the past, the current trends with the growing sophistication of institutional

71 The typical share of capital gains private equity firms are entitled to is 20% (i.e., GOMPERS and LERNER 1999b, 2004). Further details regarding private equity firm compensation are set out in section 2.1.4.2.
investors in private equity, the emergence of fund-of-funds and increased pressure and the mounting competition for private equity firms, the issue of transparency and governance obtains more and more consideration.

To conclude this part on corporate governance perspectives, the links between corporate governance aspects and the divestment process are discussed.

2.1.7.3 Corporate governance and the links to exits

Looking at divestment processes, corporate governance aspects at both the level of the portfolio companies as well as at the level of the private equity firms appear to be relevant. Nevertheless, given that most partnership agreements do not bind private equity managers to specific exit requirements or methods (i.e., LIEBER 2004), governance considerations at the partnership level do not seem of significant direct importance for exit decisions.

When portfolio firms are intended to be sold, a close and constructive co-operation between a company’s executive management and the private equity investors is required (RELANDER et al. 1994, SCHWIENBACHER 2002). However, as BASCHA and WALZ (2001) point out, an exit process can potentially lead to conflicts between an executive management team, which is supposed to stay with a business, and private equity investors, who want to end a relationship with a business. While a private equity firm, in many cases also dominating the board, strives to maximise value when selling a business, managers might have certain preferences regarding the timing or also choice of divestment mode. NEUS and WALZ (2004) find that executives as well as employees staying with a company often prefer a public market exit (initial public offering) to a sale to a competitor firm. Arguments such as prestige, fear of jobs cutting, personal career aspirations of senior managers and independence from a large corporate parent require consideration.72

Maintaining a balance between a variety of interests is a crucial function of a board and a corporate governance system (HILB 2005). As pointed out, private equity firms are criticised for pursuing a strictly shareholder-oriented approach (ANDERS 1992). For a long-term success, private equity investors are will have to take a more considered view with regard to other stakeholders’ interests.

72 Most academic publications on this topic often neglect such aspects arguing that conflicts can be avoided through incentive and compensation structuring (i.e., RELANDER et al. 1994, BASCHA and WALZ 2001), which does not seem to capture the whole range of important dimensions.
Corporate governance aspects and particularly the interaction between private equity investors and portfolio firm management are hypothesised to play an important role in exit processes and form a vital part of the empirical analysis in this dissertation presented later on in section 5.

In addition to governance aspects handling conflicts between different parties, efficient and reliable control and monitoring mechanisms must exist for financial sponsors to take successful exit decisions. Reporting systems and a profound understanding about current and expected business performance are necessary when planning effective divestments (CUMMING and MACINTOSH 2003b). Not only the accuracy and level of detail but also the timeliness of providing information are emphasised. This highlights that managements’ and board’s ability to introduce and monitor high quality reporting systems can have an impact on exit processes and divestment decisions.

With regard to corporate governance at the level of private equity partnerships, advisory committees, which have board-like character in many cases, are often consulted and potentially asked for a consent to exit decisions. One could also add that according to the ‘Resource Dependency Theory’, limited partners could provide valuable knowledge and contacts, which might have an impact on exit decisions (HILB 2005, p. 6). However, as the interaction between private equity managers and limited partners represented in committees depends on the specifics of partnership agreements and consistent data is virtually impossible to obtain for a large enough sample, governance aspects at the partnership level will not be considered in the empirical analysis presented later on.

2.1.8 Performance of private equity as an asset class

While the development of standardised methods for the quantitative evaluation of risk and return has made significant progress for other forms of ‘alternative’ investments including hedge funds, a globally accepted reporting standard of private equity returns has not yet been established. The lack of reliable performance data is often connected to the secretive nature of the industry with general partners trying to avoid publicity on their funds’ returns. This means that most performance reports mostly are based on incomplete data. However, with limited partners getting more sophisticated and funds-of-funds attracting a wider investor population the transparency of the market has begun to increase.

The difficulty to measure the risk and return profile of private equity as an asset class does not only stem from the lack of reported data but also the missing or highly imperfect secondary markets. As a consequence, for any single fund investment there are only a few
points in time for which transaction prices can be objectively observed – at the time of acquisition of an investment and at the time of an exit. As a result, no intermediate series of historical returns is available and, hence, the estimation of the performance of a private equity fund becomes complex (KASERER and DILLER 2004, p. 20).73

Several different methods taking distinct perspectives are used to report private equity performance. While this section cannot dwell into each risk/reward concept available in investment science, the methods most frequently applied in the private equity practice are being explored henceforth:

2.1.8.1 Dimensions of performance evaluation

Literature usually refers to three perspectives of private equity performance evaluation (i.e., BYGRAVE and TIMMONS 1992, KAPLAN and SCHOAR 2003, EVCA 2005a):

a) gross performance on the basis of realised investments;

b) gross performance on the basis of all investments, and

c) performance net of fees.

While the first two layers support an assessment from the perspective of private equity fund managers, the last dimension is from the viewpoint of an external investor into a fund.

a) Gross performance on the basis of realised investments
The first level of performance assessment captures only investments that were either fully divested or written-off the books. EVCA (2002, 2004) suggests only to include proceeds of partial divestments in case the realised amount exceeds 30% of the original investment. Performance evaluation on this level is effected on the basis of cash flows to the private equity fund, rather than its investors and hence does not take any fees into account.

b) Gross performance on the basis of all investments
While the perspective from a private equity fund management is unchanged compared to the first level, all rather than just realised investments are considered in the second dimension. In addition to the achieved cash flows, all portfolio investments are recorded on the basis of a net asset value (NAV). As the valuation of non-public companies is not only complex but also controversial, EVCA (1998, 2004) has provided a framework of guidelines

73 GRÜNBICHLER et al. (2001) provide a detailed framework for the assessment of private equity and hedge funds returns, acknowledging the difficulties posed particularly by the in-transparency of both investment classes.
recommending to differentiate the assessment of portfolio firms according to the type and purpose of private equity engagements.\textsuperscript{74}

Theses guidelines, however, appear very broad and leave a substantial room for interpretation. Given the lack of objectivity, which does not facilitate the comparability of funds’ performance, this performance assessment dimension finds limited application in practice (KRAFT 2001, pp. 291-292). The basic problem is that net asset values are subject to valuation biases and thus the returns estimated on this basis will be biased as well. A few studies in the early 1990s examined private equity performance on the basis of disclosed net asset values, probably most prominently BYGRAVE and TIMMONS (1992) finding an average internal rate of return of US venture capital funds of 13.5% over the period 1974-1989.

c) Performance net of fees
In the case of the third level, returns are computed on the basis of underlying actual cash flows to limited partners, which means that returns are ‘net to investors’, which means after deducting management fees and performance fees. Performance calculations on the basis of the cash flow stream to limited partners is regarded to be the most appropriate and reliable metric (i.e., LJUNGQUIST and RICHARDSON 2003, KAPLAN and SCHOAR 2003, KASERER and DILLER 2004).

Supporting this cash flow-based measurement approach, ‘Thomson Venture Economics’ has become the main data provider for private equity fund performance having started the coverage of venture capital funds in the early 1970s. This data provider still has a focus on the US, where it claims to cover 70% of all active private equity funds. Their coverage of the European market has strongly improved over the past decade. The ‘European Private Equity & Venture Capital Association’ (EVCA) also co-operates with this data provider for all industry performance reviews. Venture Economics obtain performance data from a large variety of limited partners (mainly large institutional investors) and also a number of general partners\textsuperscript{75}.

\textsuperscript{74} Early stage venture investments ought to be recorded at initial acquisition cost and a value correction can only take place in a limited number of circumstances. Later stage investments, including buyouts, should be valued periodically according to comparable companies, taking into consideration a liquidity discount compared to publicly traded firms and specific exit strategies that let anticipate a higher or lower valuation. Lastly, participations in portfolio firms that already went public have to be valued at actual stock value (EVCA 1998, 2004).

\textsuperscript{75} In the US the Venture Economics database captures information for about 1,750 private equity partnerships, in Europe for about 900 funds as per end of 2004 (NVCA 2005a, EVCA 2004).
Despite the wide acceptance of Venture Economics data, a number of academic authors question the quality of their dataset due to a number of potential biases. BAUER (2004, p. 14) warns that Venture Economics data likely suffers from selection bias, meaning that low performing funds try not to release their returns in order not to harm their reputation, as well as from survivorship bias. The latter bias results from the fact that performance data is computed on the basis of realised transactions, which result in cash flows to limited partners, while the impact of write-downs or write-offs tends to be delayed towards the end and liquidation of a fund rather than be reflected in a sort of a regular ‘mark-to-market’ effect. Similarly, COCHRANE (2005) argues that most aggregated performance data in the US, based on individual financing rounds, seems to be distorted by selection bias. He developed a theoretical approach to correct performance data for this bias by examining the historical probabilities of each exit route based on a comprehensive set of private equity transactions between 1987 and 2000 and subsequently adjusting reported performance data for write-offs and write-downs that are not captured in the performance computation. Doing so, he finds that returns obtained on the basis of individual transactions from a sample of private equity firms are typically overstated by more than 5% in terms of annual internal rate of return (IRR).

Before reviewing actual performance statistics of private equity in the United States and Europe, it is important to set out the basic concepts of risk and return assessments for this asset class.

2.1.8.2 Risk and return assessment methods for private equity investments

As investments in private equity can be effected either through a private equity partnership or directly, there are two main perspectives to measure performance from an investor standpoint: Either the risk and return characteristics of an investment in a private equity fund or the performance of an investment in a specific company. While the first perspective is relevant for all limited partners, the latter one is of importance for a general partner managing investments as well as limited partners committing to a co-investment. Given the relevance to most investors, performance measurement on a fund level is the more widely applied approach and thus supported by most information providers. Subsequently, three common performance measures that can accommodate both perspectives are discussed. Cash flows are the basis for performance assessment in each of these measures and both

76 Direct investments by limited partners are often structured in the form of ‘co-investments’ alongside the private equity fund. Limited partners conduct co-investments in case they would like to deliberately increase their exposure to a certain company or industry.
private equity fund managers’ as well as investors’ perspectives deducting fees and carried interest can be taken into account.

\textit{a) Investment multiples}

Given the long-term orientation and illiquid nature of private equity investments, a simple performance measure capturing the relation between capital invested and capital returned has emerged and is often used to complement other measures (BAKER and SMITH 1998). The Thomson Venture Economics database supports this approach, which is expressed as ‘\textit{Ratio of Distributions to Paid-in Capital}’ (‘RDPC’) and measures the proportion of the initially contributed capital that has already been returned to investors.

Following an exit of a portfolio company, this ratio is usually referred to as ‘\textit{investment multiple}’, indicating the multiple of the initially contributed capital returned to investors following a divestment. While multiples are normally used to represent a fund’s performance, this simple approach can also be used as a measure for an individual investment’s performance, as simply cash flows are aggregated and compared.

The multiples approach does not require complicated computations and allows easy interpretation. However, this approach lacks consideration of the time component as cash flows are not weighted or discounted according to time. This makes a comparison of different funds as well as the aggregation of several funds’ performances virtually impossible. The following two concepts offer solutions for this problem and have reached higher importance than the multiples approach particularly with regard to an industry-wide reporting of returns.

\textit{b) Cash flow-based IRR}

The internal rate of return (IRR) has evolved as the standard metric to measure private equity returns in terms of an individual investment’s, a fund’s as well as an industry-wide performance (i.e., BAKER and SMITH 1998, GOMPERS and LERNER 2004). The IRR denotes the discount rate that brings the present value of all cash flows equal to zero. Mathematically, the IRR can be expressed as the solution to the following equation, whereby $T$ represents the lifetime of the fund and $CF_t$ denotes the cash flow accrued over period $t$:

$$\sum_{t=0}^{T} CF_t (1 + IRR)^{-t} = 0$$
While the formula above only captures realised cash flows, the IRR computation might be extended for the net asset value of investments that are not realised yet, which would result in the subsequent formula:

\[ \sum_{t=0}^{T} CF_t (1 + IRR)^{-t} + NAV_T (1 + IRR)^{-T} = 0 \]

In order to obtain a performance measure for a fund rather than individual investments, there are a number of available methodologies for aggregation. To demonstrate the functionings and differences of four common aggregation approaches, GULL (1999, pp. 46-48) provides a set of helpful examples that will be used for illustration purposes.

The two most simple concepts are to compute the arithmetic or the capital weighted average of all individual investments’ IRRs.

<table>
<thead>
<tr>
<th>Cash flows</th>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment A</td>
<td>-50</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td></td>
<td></td>
<td>26.0%</td>
</tr>
<tr>
<td>Investment B</td>
<td>-50</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td></td>
<td>22.1%</td>
</tr>
<tr>
<td>Investment C</td>
<td>-25</td>
<td>-25</td>
<td>0</td>
<td>100</td>
<td></td>
<td></td>
<td>31.5%</td>
</tr>
<tr>
<td>Investment D</td>
<td>-100</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

| Arithmetic avg. | 44.9% |
| Capital weighted avg. | 55.9% |


The arithmetic average is the simplest form of aggregating IRR data, however, it does not take into account that investments differ in size of capital commitment and thus has very limited power. The capital weighted IRR approach avoids this problem. It results in a higher aggregated IRR in the example above, as emphasis is placed on the largest investment that also generated the highest individual IRR. However, the capital weighted IRR does not take different capital commitment periods into account, which means that shorter-term investments tend to be over-emphasised while longer-term investments tend to be under-emphasised.

A concept that provides a solution concerning this issue is the ‘pooled IRR’, which aggregates periodical cash flows from each underlying investment, on which basis an IRR is computed. This is illustrated in the following table:
The pooled IRR, compared to the two other measures presented before, leads to lower returns, which can be explained by the fact that the timing of investments is a relevant consideration. Investments conducted early on receive greater weight than later investments. This phenomenon that the sequence of investments is a crucial driver in pooled IRR calculation has lead to criticism in theory and practice (i.e., GULL 1999, KRAFT 2001), which has resulted in the development of a further concept.

The ‘composite IRR’, or also labelled ‘time zero IRR’, assumes that all investments are performed simultaneously in year 0. This avoids placing weight on the timing of the start of investments.

While on the one hand researchers argue that the composite IRR is superior to the pooled IRR computation as it does not discount fund managers for waiting for good investment opportunities (i.e., BADER 1996, p. 321), others firmly propose that the speed of investment and timely return of capital to investors has to be an important performance consideration (i.e., GULL 1999, LERNER and HARDYMON 2002). In light of the perception of private equity funds as active managers striving to create value, the latter standpoint certainly makes more sense. The pooled IRR method is indeed the most widely applied aggregation method and is supported by key performance data providers such as Thomson Venture Economics.

Generally speaking, the IRR is a value weighted return that is influenced by the time pattern of cash flows on which its calculation is based. This is in contrast to a time weighted return

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77 As a performance fee, the private equity fund management is assumed to be entitled to withhold 20% of realised gains (exit value minus original acquisition priced).
that is independent of this time pattern\(^7\). A private equity general partner has to a certain extent control over the time pattern of cash flows (i.e., determining timing of acquisitions and exits), thus KASERER and DILLER (2004, p. 21) argue that private equity performance should be measured on a value weighted basis. In contrast fund managers of open-end public market investment fund, will not have control over time patterns of cash flows and, hence their performance should be measured on the basis of a time weighted return, which is the common way in practice.

However, the deficiency of the cash flow-based IRR is that it is not a return measure, as it assumes that cash flows generated by a particular investment would be reinvested at the rate equivalent to the IRR, which is not an appropriate reinvestment assumption. This means that one fund may have a comparatively higher IRR than another fund but nevertheless at a given discount rate, more feasible than the IRR, a lower net present value. KAPLAN and SCHOAR (2003) and KASERER and DILLER (2004) argue that the limited partner may be more interested to know the terminal wealth of his investment relative to the terminal wealth of a risk equivalent public market investment, for which the IRR metric cannot be used.

A frequently used approach to link private equity performance to public markets is the excess-IRR, which stands for the difference between the IRR and the returns on a public investment, such as an investment in a stock or bond market index. However, the excess-IRR approach does still not avoid the problems in relation to the reinvestment assumption. The ‘public market equivalent’ (PME) approach offers a solution.

c) Cash flow-based PME return measure

KASERER and DILLER (2004, p. 22) explain the objectives of the PME approach in simple terms: “Given that the investor invests – in terms of present value – Euro 1 in a private equity fund, how many Euros would he have to invest in a given public market index in order to generate a cash flow equivalent investment and, hence, in order to end up with the same terminal wealth? The PME is exactly the answer to this question.” The PME stands for the ratio of the terminal wealth obtained when investing in a private equity fund and reinvesting intermediate cash flows in a certain public market benchmark compared to the terminal wealth obtained when investing the same amount of money in the benchmark, which permits a complete performance ranking of all available funds by circumventing the IRR reinvestment problems. Mathematically, the PME is expressed below, whereby $R_{lt}$ is

\[^7\] A time weighted return over a period of length $T$ is the geometric mean of the single period return realisations; a value-weighted return can be regarded as a weighted average of these returns (KASERER and DILLER 2004, p. 21).
the net return of a public market index in the period \( t \), while \( c_{fi} \) is the normalised positive cash flow of the private equity fund in period \( t \):

\[
PME = \frac{\sum_{i=1}^{T} c_{fi} \prod_{i=t+1}^{T} (1 + R_b)}{\prod_{i=1}^{T} (1 + R_b)}
\]

In order to correctly compare private equity fund returns to public market returns, one would need to adjust public market returns for management fees charged by public fund managers, as private equity cash flows are also net of fees. Should the private equity fund outperform a public market fund the PME ratio will obviously exceed 1.

A potential out- or under-performance of private equity can alternatively be calculated as the average of a return difference, in which case the average performance of all the funds to be compared are computed on the basis of their terminal wealth. KASERER and DILLER (2004, p. 23) mention that the ranking obtained through this method might potentially differ from the PME result, due to the fact that the PME is an average return ratio while the second method corresponds to an average return difference.

While the PME approach is particularly suited to compare fund returns, it can also be used for a performance assessment of individual investments. As opposed to fund returns in IRR terms, the PME concept has not been taken up yet by the key data providers and the large venture capital and private equity associations.

2.1.8.3 Risk characteristics of cash flow-based returns

Despite an increasing number of private equity performance studies, the element of risk measurement has not received equally strong attention. KRAFT (2001, p. 302) suggests that risk measurement techniques from other types of investments cannot be easily transformed to private equity investments. The absence of liquid secondary markets providing regular market values and the aspect that private equity returns are not normally distributed (i.e., KRAFT 2001, KAPLAN and SCHOAR 2003) do not facilitate the implementation of risk quantification methods. Nevertheless, several concepts are often used and briefly discussed henceforth:

a) Standard deviation

Despite the absence of liquid secondary markets for investments in private equity and the resulting lack of regularly reported market values, the calculation of distributional parameters, first and foremost the standard deviation is applied in the context of private equity (i.e., BAUER 2004, KASERER and DILLER 2004).
The application of standard deviations of returns as a risk measure dates back to MARKOWITZ (1952), who linked the risk of an investment to the probabilities and extent of its return deviations. He formulated the portfolio problem as a choice of the mean and variance of a portfolio of assets. Furthermore, he proved the fundamental theorem of mean variance portfolio theory: Holding constant variance maximise expected return, and holding constant expected return minimise variance. These two principles led to the formulation of an efficient frontier from which the investor could choose a preferred portfolio, depending on individual risk return preferences (ELTON and GRUBER 1997, pp. 1744).

Key criticism of standard deviation as an appropriate risk measure circles around the problem that private equity returns are not following a normal distribution, which is a required assumption for the standard deviation measure to be of value (MARKOWITZ 1952, pp. 77-91).

KRAFT (2001, pp. 303-304) summarises that the individual fund returns are typically highly volatile over time as most performance profiles follow a ‘J-curve’, with negative returns upfront given complexities in relation to the costs in relation to effecting first acquisitions as well as loss realisations early in the fund’s lifecycle, while significant profits are typically only realised after a few years. However, BADER (1996, p. 189) showed that measurement problems of the standard deviation of private equity funds can be reduced through the aggregation of a larger number of funds, as the J-curve effect is smoothed out in a large enough sample. Even though he argues that the standard deviation might be a less appropriate measure for risk of early stage venture capital funds, as the returns in these funds showed a considerably higher volatility than in later stage funds, which is intuitive.

\[b) \text{ Beta coefficient}\]

The development of modern portfolio theory and the capital asset pricing model (CAPM) in the mid 1960s lead to the evolution of a new risk assessment approach.\(^79\) The underlying concept is that the risk of an investment can be split into a systematic and unsystematic part. While the systematic risk part relates to factors that affect the return profile of the entire asset category, the relevant market, the unsystematic risk part relates to factors that are specific to the investment in question. In an optimally diversified portfolio, systematic and unsystematic risk would neutralise each other.

---

\(^79\) ELTON and GRUBER (1997, pp. 1743-1759) provide a detailed discussion of the evolution of modern portfolio theory and the CAPM.
The beta coefficient\textsuperscript{80} (beta) measures the systematic risk of an investment in relation to a relevant market portfolio of investments. Beta indicates by what percentage an investment’s return is affected should the return of the market portfolio move by 1%.

While beta is a widely used risk measurement, its applications to private equity returns are cast with doubt. Similarly to the argumentation of the limitations of using standard deviation, the lack of regular market values poses a problem for the application of beta as well. GOMPERS and LERNER (1997) stress that the infrequent re-valuation of portfolio firms results in a systematic under-estimation of beta values in a private equity context. Valuation of portfolio firms typically does only reflect market movements on a lagged basis.\textsuperscript{81} Their analysis demonstrates that a beta computed on the basis of data provided by private equity firms has to be regarded with great caution.

c) **Sharpe ratio**

An important standardised risk-adjusted measure, that is more and more used to benchmark private equity industry performance vis-à-vis other investment categories should also has to be mentioned at this point, the ‘Sharpe ratio’\textsuperscript{82} (SHARPE 1966, 1975, 1994). This ratio is calculated using standard deviation and excess return to determine reward per unit of risk (BAUER 2004).

The higher the Sharpe ratio\textsuperscript{83}, the better a fund’s historical risk-adjusted performance. The Sharpe ratio is easy to interpret and permits risk/ reward comparisons of private equity investments to other types of investments. Due to its popularity, the key providers of private equity performance report Sharpe ratios on a regular basis. However, as this measure relates to standard deviation, this concept applied for private equity investments has to be viewed in the context of the limitations addressed above.

\textsuperscript{80} Beta results as the product of the correlation between the investment’s and the market portfolio’s returns and the standard deviation of the investment, divided by the standard deviation of the market portfolio’s returns.

\textsuperscript{81} GOMPERS and LERNER (1997) examine the portfolio of the private equity firm ‘E.M. Warburg, Pincus & Co.’ and arrive at a beta of 1.08. Through an ex-post value adjustment of investment to market values, the beta increases to 1.44.

\textsuperscript{82} Particularly SHARPE (1994) is recommended for a good overview about the underlying assumptions and the interpretation of the Sharpe ratio as a risk/ reward metric.

\textsuperscript{83} Mathematically expressed the Sharpe ratio is defined below, whereby $r_i$ represents the average monthly return of fund $i$, $r_f$ represents the equivalent return for a risk free alternative, and $\sigma_i$ denotes the monthly standard deviation of fund $i$.

$$S_i = \frac{r_i - r_f}{\sigma_i}$$
d) Risk measures in practice

As each of the above discussed risk measures faces substantial limitations in a private equity context, none of these concepts are widely used in practice (KRAFT 2001, p. 307). In performance discussions, private equity managers tend to concentrate on performance aspects and analyse risk in terms of a relationship between successfully completed deals versus failures (REYES 1990, p.25). This relationship is expressed in a ‘win-loss-ratio’.

The distribution of returns from individual investments is considered as crucial in a performance evaluation. Funds that record a high number of failures and achieve returns through a small number of highly successful deals are classified as being more risky than funds achieving similar returns with a more balanced portfolio. This is why early stage venture capital funds are usually considered to be more risky than buyout funds.

A further risk indicator helpful to compare different private equity funds is each fund’s required rate of return (‘hurdle rate’) as these rates account for expected losses (KRAFT 2001, p. 308). Venture capital funds anticipate a higher proportion of failing investments compared to later stage financiers and thus set substantially higher hurdle rates (up to 50% IRR) compared to around 20% for buyout investors (i.e., BOTAZZI and DARIN 2002, LERNER and HARDYMON 2002).

Summarising the discussion on performance and risk metrics available to assess private equity performance, one can conclude that the application of traditional and accepted methods requires critical consideration and caution. Particularly the lack of regular reported market values make performance judgements and comparisons to other investment categories difficult. REYES (1999, p. 510) maintains: “It is imperative that any asset classes being compared on the same basis: the same time period, the same frequency, the same concept of valuation. Market prices for private venture partnerships don’t exist...Therefore, objective comparisons of risk and return relative to other public markets are difficult to justify.”

Based on increasing return disclosure, fuelled by the emergence of funds-of-funds and a growing cooperation with data providers and private equity associations, the author suggests that the quality of reported performance data is increasing. Furthermore, there is a clear trend towards cash flow-based pooled IRRs net of fees to become a global reporting standard, which will facilitate the comparison of private equity funds and segments. However, the field of private equity risk measurement still seems to lack necessary attention.
After introducing a few concepts crucial to interpret the reported private equity returns, historical performance of private equity is discussed separately for the US and European private equity markets.

2.1.8.4 Historical private equity performance in the United States

In the United States, Venture Economics began to track private equity performance in the 1970s in a way that is consistent until today, capturing buyout funds from the early 1980s. Based on Venture Economics data, the ‘National Venture Capital Association’ (NVCA) publishes the ‘US Private Equity Performance Index’ (PEPI) on a quarterly basis, setting out 1, 3, 5, 10 and 20 year horizon cash flow-based IRRs for various segments of private equity funds. The computation of returns is based on cash flows to limited partners on a fund level, net of fees and carried interest. The exhibit below sets out the PEPI statistics published in early 2005:

<table>
<thead>
<tr>
<th>Fund Type (returns in %)</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>20 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early/ Seed Venture Capital</td>
<td>-1.9</td>
<td>-11.8</td>
<td>16.6</td>
<td>41.5</td>
<td>19.3</td>
</tr>
<tr>
<td>Balanced Venture Capital</td>
<td>17.7</td>
<td>-4.6</td>
<td>11.1</td>
<td>21.3</td>
<td>13.7</td>
</tr>
<tr>
<td>Later Stage Venture Capital</td>
<td>12.9</td>
<td>-3.0</td>
<td>2.5</td>
<td>15.9</td>
<td>13.7</td>
</tr>
<tr>
<td><strong>All Venture Capital</strong></td>
<td><strong>8.9</strong></td>
<td><strong>-7.4</strong></td>
<td><strong>10.5</strong></td>
<td><strong>26.9</strong></td>
<td><strong>15.8</strong></td>
</tr>
<tr>
<td>Small Buyouts</td>
<td>30.6</td>
<td>1.8</td>
<td>1.3</td>
<td>8.6</td>
<td>27.9</td>
</tr>
<tr>
<td>Medium Buyouts</td>
<td>14.6</td>
<td>-0.2</td>
<td>1.0</td>
<td>9.2</td>
<td>17.3</td>
</tr>
<tr>
<td>Large Buyouts</td>
<td>17.7</td>
<td>6.6</td>
<td>4.0</td>
<td>11.2</td>
<td>14.7</td>
</tr>
<tr>
<td>Mega Buyouts</td>
<td>17.0</td>
<td>5.8</td>
<td>2.6</td>
<td>6.7</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>All Buyouts</strong></td>
<td><strong>17.3</strong></td>
<td><strong>5.2</strong></td>
<td><strong>2.7</strong></td>
<td><strong>8.1</strong></td>
<td><strong>12.5</strong></td>
</tr>
<tr>
<td>Mezzanine</td>
<td>11.8</td>
<td>1.8</td>
<td>4.4</td>
<td>7.4</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>All Private Equity</strong></td>
<td><strong>15.0</strong></td>
<td><strong>1.3</strong></td>
<td><strong>4.7</strong></td>
<td><strong>12.5</strong></td>
<td><strong>13.7</strong></td>
</tr>
<tr>
<td>NASDAQ</td>
<td>6.2</td>
<td>8.2</td>
<td>-7.1</td>
<td>9.5</td>
<td>12.1</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.9</td>
<td>2.3</td>
<td>-2.8</td>
<td>9.2</td>
<td>12.4</td>
</tr>
</tbody>
</table>


The recent PEPI statistics suggest that buyout funds outperformed venture capital funds over the past 3 years, while venture capital historically achieved superior returns over longer horizons. The table also provides a comparison of private equity funds to public equity indices, the NASDAQ and the S&P 500 stock indices.

KAPLAN and SCHOAR (2003) report that cash flow-based IRRs averaged 18% among the 746 mature private equity funds raised between 1980 and 1995. They find that average fund returns net of fees and compensation for the private equity investors are by about 5% lower than the reported IRRs, thus approximately 13% which is roughly equal to those of the S&P 500 stock index over the period of consideration (1980-1997). This is broadly in line with the PEPI statistics presented above. Weighted by committed capital, venture funds

84 NVCA (2005a) defines buyout funds sizes as follows: Small: 0-$250 million; medium: $250-$500 million; large: $500 million -$1 billion; mega: in excess of $1 billion.
outperformed the S&P 500 while buyout funds did not. They compute PME ratios between 0.96 and 0.97, depending on types of private equity funds, which suggests a slight under-performance of private equity to public market equivalent investments. However this gap would narrow, when taking into account management fees for public equity fund managers.

Overall their results are in line with LJUNGQUIST and RICHARDSON (2003), who compute average internal rate of returns of 18.1% gross of fees per annum for the period 1981 to 2001 based upon a proprietary dataset capturing 73 later stage and buyout private equity funds in the United States. Both their results are roughly in line with data by the NVCA that confirms that over the past 20 years overall private equity performance net of fees was similar to returns of the S&P 500 index.85 Examining the risk and return profile of private equity compared to public stock indices, BAUER (2004, pp. 12-13) reveals on the basis of Venture Economics data for the period from 1990 to 2003 that private equity returns on aggregate only showed marginal higher standard deviation than the S&P 500 index and demonstrated higher Sharpe ratios, as illustrated in the exhibit below:

<table>
<thead>
<tr>
<th>Period: 1990-2003</th>
<th>Annual return (IRR %)</th>
<th>Standard deviation (%)</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Venture Capital</td>
<td>21.2</td>
<td>41.4</td>
<td>0.41</td>
</tr>
<tr>
<td>US Buyout</td>
<td>12.8</td>
<td>11.1</td>
<td>0.75</td>
</tr>
<tr>
<td>US All Private Equity</td>
<td>15.9</td>
<td>18.6</td>
<td>0.62</td>
</tr>
<tr>
<td>NASDAQ</td>
<td>14.7</td>
<td>30.5</td>
<td>0.34</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.2</td>
<td>16.3</td>
<td>0.42</td>
</tr>
</tbody>
</table>


BAUER (2004, p. 11) also refers to a survey conducted by the investment bank ‘Goldman Sachs’ regarding US private equity returns for the period 1992 to 2002, resulting in 15% net IRR return, yielding a 3-5% excess return compared to risk equivalent investments. COCHRANE (2005) examines private equity performance on the individual investment level, based on an extensive sample of more than 7,000 transactions in the period from 1987 to 2000, and also achieves returns adjusted for selection bias of around 15%.

2.1.8.5 Historical private equity performance in Europe

Like in the US, Venture Economics is the most widely used performance data provider in Europe. Based on their data, EVCA publishes a detailed performance review once a year. Return computations follow the same principles as the NVCA’s PEPI calculations. The EVCA performance review includes more detail than its US counterpart with respect to a segmentation of funds into performance quartiles. In addition to 1, 3, 5 and 10 year horizon cash flow-based IRRs, EVCA also provides details for the average IRR since inception of

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85 Arguing that investments in private equity have a higher risk profile compared to investments in companies quoted in the S&P 500 index, these results would suggest that private equity delivered inferior results on a risk adjusted basis.

<table>
<thead>
<tr>
<th>Fund Type (returns in %)</th>
<th>Funds</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Stage Venture Capital</td>
<td>229</td>
<td>-13.1</td>
<td>-11.1</td>
<td>-1.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Development Venture Capital</td>
<td>161</td>
<td>-7.2</td>
<td>-4.8</td>
<td>4.6</td>
<td>10.7</td>
</tr>
<tr>
<td>Balanced Venture Capital</td>
<td>125</td>
<td>-5.4</td>
<td>-10.2</td>
<td>4.2</td>
<td>12.3</td>
</tr>
<tr>
<td>All Venture Capital</td>
<td>515</td>
<td>-7.5</td>
<td>-9.0</td>
<td>2.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Buyout</td>
<td>292</td>
<td>1.6</td>
<td>1.0</td>
<td>9.6</td>
<td>12.7</td>
</tr>
<tr>
<td>Generalist funds</td>
<td>74</td>
<td>2.4</td>
<td>-10.7</td>
<td>7.8</td>
<td>14.6</td>
</tr>
<tr>
<td>All Private Equity</td>
<td>881</td>
<td>-0.6</td>
<td>-3.8</td>
<td>7.3</td>
<td>11.9</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Fund Type (returns in %)</th>
<th>Funds</th>
<th>IRR (%) since inception of fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Stage Venture Capital</td>
<td>229</td>
<td>1.9</td>
</tr>
<tr>
<td>Development Venture Capital</td>
<td>161</td>
<td>9.0</td>
</tr>
<tr>
<td>Balanced Venture Capital</td>
<td>125</td>
<td>9.0</td>
</tr>
<tr>
<td>All Venture Capital</td>
<td>515</td>
<td>7.2</td>
</tr>
<tr>
<td>Buyout</td>
<td>292</td>
<td>12.2</td>
</tr>
<tr>
<td>Generalist funds</td>
<td>74</td>
<td>9.1</td>
</tr>
<tr>
<td>All Private Equity</td>
<td>881</td>
<td>9.9</td>
</tr>
</tbody>
</table>


Overall, the statistics suggest that European private equity has underperformed compared to the US private equity results and that within Europe buyout funds have consistently outperformed venture capital funds.

Looking at a sample of 200 European funds, which were either already liquidated or had a small residual net asset value, KASERER and DILLER (2004) computed European private equity performance over the period from 1980 to 2003 using various metrics, based on a Venture Economics dataset. They document a cash flow-based IRR of 12.7% and an average excess-IRR of 4.5% relative to the MSCI Europe equity index. Furthermore, they computed an average PME of 0.96, similar to the US PME results calculated by KAPLAN and SCHOAR (2003). As a benchmark index for the PME computations, they use the MSCI Europe equity index as well as the ‘JPMorgan Government Bond Index’ and demonstrate that over the period 1980-2003 private equity funds generated an out-performance with respect to the bond index and an underperformance with respect to the equity index. Also examining the risk and return profile of European private equity compared to public stock indices, BAUER (2004, pp. 12-13) reveals on the basis of Venture Economics data for the period from 1990 to 2003 that European private equity returns on aggregate did also show a similar standard deviation as the S&P 500 index and that buyout funds demonstrated higher Sharpe ratios, as illustrated in the exhibit below:

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86 While most fund segments are in line with previous definitions, EVCA (2004a) defines ‘balanced’ venture capital funds as funds focusing on both early stage and expansion financings. ‘Generalist’ funds represent funds investing across the spectrum from early stage to buyout financings.
<table>
<thead>
<tr>
<th>Period: 1990-2003</th>
<th>Annual return (IRR %)</th>
<th>Standard deviation (%)</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Venture Capital</td>
<td>10.3</td>
<td>19.9</td>
<td>0.30</td>
</tr>
<tr>
<td>European Buyout</td>
<td>14.2</td>
<td>15.7</td>
<td>0.63</td>
</tr>
<tr>
<td>NASDAQ</td>
<td>14.7</td>
<td>30.5</td>
<td>0.34</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.2</td>
<td>16.3</td>
<td>0.42</td>
</tr>
</tbody>
</table>


A specific discussion of buyout funds’ returns is provided in section 2.2.6.2.

2.2 Leveraged Buyouts

2.2.1 Definition and reasons

Leveraged buyouts (henceforth abbreviated as ‘LBOs’) represent an important activity of private equity funds. LBOs involve the acquisition of businesses (whole companies or business units), either public or private companies, financed through a significant amount of debt (often up to 80% financed with debt, with the remaining consideration funded through equity). Usually managers from acquired businesses are involved in the buyout, owning a portion of the equity and continuing to lead the operations. Regardless of management’s involvement in the transaction, a private equity house is the driving force, contributes the majority of equity capital and typically acts as an active monitor of the company following the LBO. High leverage, management ownership, active corporate governance, and a loss of investors’ access to liquid public equity markets distinguish a LBO target company from a typical public corporation (PALEPU 1990, pp. 247-248).

Motivations for companies to undergo buyouts can be explained by evidence from capital markets demonstrating that corporate managers do not always take value-maximising decisions. Leveraged buyouts have been a response to this phenomenon (SAHLMAN 1990, p. 516). The reallocation of equity to management and the imposition of substantial debt burdens can be viewed as a direct reaction to the agency problems inherent in corporations (JENSEN 1989). Following a LBO, managers have greater incentives to create value than they did when they had little or even no equity participation in the business. Moreover, because of the significant debt burdens and usually high annual debt service requirements (covering both interest as well as principal payment obligations), there is very limited discretionary cash flow, which could be used for negative-net-present-value investments, including perquisites for management (JENSEN 1989).

Proponents of leveraged buyouts (i.e., JENSEN 1989, KAPLAN 1991) suggest that the transactions create wealth by enhancing managerial incentives and ensuring the efficient usage of excessive free cash flows, which otherwise would be spent unwisely. On the other hand, critical voices remark that most of the gains to equity holders arise because of tax
savings (considerable interest payments corresponding to the high portion of debt financing provide a tax shield) and the expropriation of ‘non-equity’ stakeholders, such as employees, debt lenders and governments (i.e., PALEPU 1990, FOX and MARCUS 1992, OPLER and TITMAN 1993).\textsuperscript{87}

There is an array of potential motives to conduct LBOs from a private equity investor perspective. LOH (1992, p. 241) argues that potential value creation from undertaking restructurings and related efficiency opportunities are an important motivation. He also finds that firms that have gone through a LBO have higher operating efficiency than comparable companies. LBOs as a form of organisational change and restructuring and its empirically confirmed effects on efficiency and profitability will be explored later on. KOSEDAG and LANE (2002) examine the reasons why investors conduct buyouts and identify tax savings as well as the intention to use the target’s future cash flows to ‘self-finance’ the majority of purchase consideration as key motives. Underlying principle to the latter motivation is the goal to decrease the debt portion in the capital structure through repayments using the generated free cash flow, which even at no growth and constant value of the firm will increase the value of equity capital.\textsuperscript{88}

Researchers have documented that firms involved in LBOs typically have high free cash profiles, low growth opportunities, and subsequent to a buyout achieve an increase in the firm’s operating efficiency and profitability benefiting from a lower tax burden as a consequence of debt interest tax shields (i.e., GILBERT 1978, BAKER and WRUCK 1989, JENSEN 1989, MUSCARELLA and VETSUYPENS 1990, KAPLAN 1991, OPLER and TITMAN 1993, KOSEDAG and LANE 2002, PECK 2004).

FRANKFURTER and KOSEDAG (1996) discuss a special form of buyouts, the ‘Management Buyout’ (MBO). These are buyouts, following the same principles as LBOs, but are driven by existing management of a company holding the substantial part of the equity capital\textsuperscript{89}. A MBO also benefits when taking the characteristics of a LBO, which means taking on higher than average levels of debt, due to increased tax efficiency as well

\textsuperscript{87} OPLER and TITMAN (1993, p. 1985) also report concern about the effect of potential financial distress on the ability of LBO firms to sustain competitiveness in the event of economic downturns. Ten years later, ASGHARIAN (2003) demonstrated that highly leveraged firms are not less able to sustain profitability than other firms, however, they face a greater decline in revenues, as managers might focus actively on more lucrative cash generative parts of the business in order to comply with debt service requirements.

\textsuperscript{88} Firm value or enterprise value consists of the market value of equity plus the market value of debt. Hence, the equity value represents the remainder in the firm value equation and can be expressed as:

\[
Value_{\text{Equity}} = Value_{\text{Firm}} - Value_{\text{Debt}}
\]

\textsuperscript{89} See also WRIGHT and ROBBIE (1996, pp. 691-701) for a detailed explanation of MBOs, its history and principles and concerns.
as a higher incentive to maintain high cash flows and hence high operating efficiency (FRANKFURTER and KOSEDAG 1996, pp. 197-199).

Given the private equity orientation of this study, the subsequent discussion will concentrate on LBOs and will not elaborate on specifics of management driven buyout transactions.

### 2.2.2 The role of the interest rate environment for leveraged buyouts

As already indicated and to be further discussed in the subsequent section, leveraged buyouts heavily rely on the availability of attractive acquisition debt financing. Given the dependence on the debt markets, the interest environment plays an important role as a motivator for leveraged buyout transactions (i.e., ARZAC 1992, BAKER and SMITH 1998, LJUNGQUIST and RICHARDSON 2003\(^90\)).

The charts in the following exhibits plot the development of relevant long- and short-term interest rates over the period from January 1998 to January 2005, as well as the spread between long- and short-term interest rates\(^91\), and the annual number and volume of European leveraged buyouts. The charts depict a relatively constant number of European leveraged buyouts across the years, however, growing volumes of buyouts in line with the interest rate environment becoming more favourable in recent years since mid-2001, with stable spreads between long- and short-term interests around 2%.

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\(^{90}\) LJUNGQUIST and RICHARDSON (2003) empirically prove the relationship between the interest evolution for US high yield bonds and US buyout investment behaviour.

\(^{91}\) The long-term interest rates are expressed as yield to investors in a German 10 year ‘Bund’ government bond.
The following charts relate the number and volumes of European leveraged buyouts to the interest evolution of European high yield bonds, a type of debt that is frequently used in such transactions. Similarly, the charts present declining interest rates in the European high yield markets with blended yields to investors in a pool of high yield issuers captured in the widely used ‘JPMORGAN European High Yield Index’ at lows of around 7% in 2004. The low pricing environment for such debt facilities certainly stimulated the European buyout market resulting in record transaction volumes exceeding €80 billion in 2004.
As demonstrated, the interest environment represents a key parameter for the feasibility and the attractiveness of leveraged buyouts to private equity investors. However, a number of other aspects and factors are crucial for an understanding of the reasons for and the functioning of such transactions. These are explored in the subsequent parts of this section.

2.2.3 Leveraged buyout principles and consequences

2.2.3.1 LBO principles

The exhibit below, presents a simplified functioning of a LBO acquisition, illustrating that the majority of the required acquisition price is financed by debt, the private equity house provides the biggest part of the required equity contribution and that the, mostly incumbent, target company management team commits equity capital, investing a part of their own wealth. In return for investing capital, equity investors obtain ownership of the target, while debt lenders are usually granted with pledges and security over a company’s assets.
The debt financing, representing typically up to 80% of the capital structure at the time of the acquisition, is mostly borrowed against the target’s future cash flows (ARZAC 1992, p. 16) and only to a limited extent borrowed on an asset-backed basis such as mortgages for property, etc. Nevertheless, lenders typically demand pledges and security mainly over the target’s tangible assets (i.e., properties, plants and equipment, trade receivables, inventories, etc.), a sale of which could be enforced in a scenario of default, should the target be unable to meet contractually set debt service requirements (BAKER and SMITH 1998, pp. 62-64).

The debt package in LBO transactions usually consists of a number of debt instruments differing in maturity, repayment profile, interest and seniority. Debt financing is split into so-called ‘tranches’. A typical transaction of size contains various tranches of bank debt with tenors between 5 and 9 years, which are mostly priced on a floating basis as a spread over a benchmark rate (i.e., EURIBOR or LIBOR⁹², etc.). Often transactions also contain portions of debt with longer-dated tenors and a ‘sub-ordinated’ ranking relative to ‘senior’ debt⁹³. In case of bankruptcy of the target, these instruments would be paid off only after the claims of senior debt lenders are fully satisfied⁹⁴. Given the higher risk profile, not only due

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⁹² EURIBOR…European Interbank Offer Rate; LIBOR…London Interbank Offered Rate; both represent daily quoted rate indices for borrowings between banks.

⁹³ Senior debt can also be structured in the form of bonds or other instruments and do not necessarily have to take the form of bank loans or credit lines.

⁹⁴ Please refer to DIAMOND (1993) for a comprehensive analysis of types of debt contracts applied in LBOs and considerations in liquidation scenarios.
to the sub-ordinated nature but also the longer tenors (often 10 years or more), these instruments are being charged higher interests either on a fixed or floating basis relative to a benchmark rate.

In addition, unlike senior debt instruments such as bank loans or credit lines, which impose a set of regular tested ‘covenants’ on a borrower, sub-ordinated debt instruments often have more lenient conditions and do not entitle the lenders to proclaim a default in case of temporary performance difficulties, except the mandatory interest cannot be paid. Covenants\(^{95}\) in the context of senior debt financing are regularly tested (typically quarterly) financial thresholds regarding leverage (comparing total or senior debt outstanding to current profitability or cash flows, typically the EBITDA\(^{96}\) measure is taken), the borrower’s ability to cover debt service payments, etc. Should a borrower not be able to meet certain covenants at a given point, lenders usually have the right to proclaim a default under the loan or credit agreements and thus can demand repayment of their committed facilities, which practically could trigger a liquidation of the borrowing company. This is why buyout specialists are focused to arrange together with their lenders a well-balanced financing package with a tranching structure accommodating periodical downturns. While senior debt is the cheapest form of external financing used in LBOs, it also has the most restrictive conditions and often requires principal repayments starting soon after closing an acquisition. Structuring an appropriate mix of shorter term senior debt facilities and longer term, more expensive but less restrictive sub-ordinated debt according to a conservatively projected and sensitised cash flow profile is crucial (COTTER and PECK 1999).

Sub-ordinated debt tranches are frequently structured in the form of high-yield bonds (also referred to as ‘junk-bonds’) or alternatively as ‘mezzanine’ debt. Mezzanine represents a type of financing instruments combining both debt and equity characteristics. These instruments are often structured with partly accruing interest, meaning that only a portion of the interest charge has to be paid in cash on a periodical basis with the remainder being rolled-up and payable at the maturity. Additionally, ‘warrants\(^{97}\) or ‘equity kickers’ might be included as a form of risk reward (ARZAC 1992, pp. 20-21), meaning that the lenders of this tranche are being granted options in the target’s equity (BAKER and SMITH 1998, pp. 62-63).

\(^{95}\) ASQUITH and WIZMAN (1990) provide a detailed analysis of debt covenants in LBOs, concentrating on bond covenants.

\(^{96}\) EBITDA represents earnings before interest, taxes, depreciation and amortisation.

\(^{97}\) STANDARD and POORS (2005b, p. 12) report that warrants have been structured in 41.4% of all mezzanine deals arranged in 2004.
The exhibit below sets out the evolution of pricing of mezzanine loans in Europe, splitting cash pay and accrued interest.

Exhibit 32. European mezzanine loan pricing, expressed as margins above LIBOR. Source: STANDARD and POORS (2005a, p. 10).

In some cases, specific parts of the target’s assets might be carved out of the security package for senior debt and might be used for asset-backed tranches of debt (WEIL, GOTSHAL and MANGES 2004). This process is referred to as ‘securitisation’, where lenders are provided with a direct claim against individual asset classes (i.e., trade receivables), which results in a reduced credit risk profile for this debt tranche. This results in a lower interest charged compared to other debt instruments. However, lenders of other debt tranches typically have to consent to such a ‘carve-out’ financing, as they have to give up a part of their security package, which normally would comprise the specific assets in question.

The basic general concept of leveraged buyouts is to use future cash flows generated by the acquired company to service interest and pay down debt, taken on to acquire the company initially. As highlighted, the reduction in debt over time increases the residual equity value, even assuming no growth in the target’s free cash flows through either sales growth or an enhanced cost structure and a firm value remaining constant over time. The schematic below illustrates that this concept takes the simplistic assumptions that all excessive cash flows available after mandatory interest payments are used to repay principal debt and that no dividends are paid to shareholders, which is a realistic assumption at least for the first years following a LBO.

Free cash flows in this graph are defined as generated excess cash flow after capital expenditure, working capital cash flows, tax payments before interest and debt principal payments. As the cash flow definition does not include any payments to either debt or
equity holders, these cash flows can also be defined as ‘capital cash flows’ (KAPLAN and RUBACK 1995, pp. 1062-1063).

With regard to the structure of the equity component in the capital structure, many private equity firms use preferred equity or convertible preferred equity components, rather than a pure common equity block. Underlying reasons include tax considerations and an increased flexibility relating to compensation schemes for executive managers, who own a portion of the equity (SAHLMAN 1990, BASCHA AND WALZ 2001).

Structuring the equity contribution is in many cases very specific to a fund’s location of incorporation and to tax, regulatory, and legal requirements for its limited partners (COTTER AND PECK 1999). Noteworthy at this point is that participating managers and private equity funds often inject equity into separate legal entities, which jointly hold the equity interest in the operating target business. This is done to differentiate shares into distinct voting right classes or for example to allow for a different treatment of managers and private equity investors when distributing dividends.
In addition to their initial equity contribution, executive managers and other key personnel are frequently incentivised by performance-based options, similar to stock options at public companies. These options typically only vest at a successful exit of the private equity fund and dilute the ownership proportion of the private equity fund.\footnote{Based on a sample of 763 US buyouts completed during 1984 and 1989, PECK (2004) shows that management and key employees including their options own on average 20% of companies’ equity at time of exit. The median in her sample, however, is substantially lower at 7%.

2.2.3.2 LBO consequences and value creation

Both theoretical as well as empirical studies confirm that leveraged buyout targets have comparatively higher cash flows than other firms already prior to a buyout (i.e., JENSEN 1989, LOH 1992, TITMAN and OPLER 1993, BAE and JO 2002). LOH (1992) also reports that firms that are subject to a LBO often had experience with levels of debt higher than industry average also prior to a buyout.
Having established the characteristics of buyout candidate firms, the question is, what are the consequences to firms that actually have been acquired via a LBO. As to be explored in detail later on in sections 4 and 5, the actions taken and the performance achieved following a LBO have a gating influence on exit processes.

Literature is divided at this point ranging from studies arguing about post-LBO value creation, efficiency enhancements and overall positive effects on society and economies to studies providing harsh criticism on short-sighted, purely shareholder-oriented practices driven by greed with negative results for other stakeholders, particularly the employees of LBO target firms. The objective of the subsequent discussion is to report key findings from a variety of studies on the consequences of buyouts, aiming to balance the widely diverging statements.

Intending to ‘rehabilitating’ the image of buyouts and private equity firms in the mid-1990s, KESTER and LUEHRMAN (1995) argue that buyouts can promote corporate renewal and help companies to grow further. Incentivisation of management paired with the control function of debt are prone to make executives rethink existing business models and inspire them for new ideas. Looking closely at the actions of one US buyout firm, ‘Clayton, Dubilier and Rice’, they state that buyout investors do not necessarily force firms to rigorous cost cutting and a reduction in capital expenditure but can also stimulate management for further strategic add-on acquisitions or for the launch of new, higher margin products or markets. Their argumentation supports JENSEN’s (1989) theoretical suggestion that organisational change, which leads to improvements in companies’ operating and investment actions, is the main source of wealth gains from LBOs.

KAPLAN (1989) examined the post-buyout operating performance of 48 LBOs completed during the period from 1980 to 1986. His results show that, in comparison with the year before the buyout, operating income have increased by 42% over a three-year period after the buyout and the ratio of operating income to sales has increased by 19%.99

Commenting on the findings suggested in these empirical studies, PALEPU (1990) critically remarks that performance improvements could have been independent of buyouts. However,  

99 LICHTENBERG and SIEGEL (1990) took a different approach, not analysing the firm- but rather the plant level of companies. They found that the productivity in the LBO plants in their sample, on average, was higher than that in non-LBO plants in the five years before and three years after a buyout and that there is a significant increase in productivity in the LBO plants in first two years following the buyout. Interesting is also their finding that the employment and compensation of white-collar workers have declined following buyouts, but those of blue-collar workers have remained un-changed, which would confirm the notion that buyout investors tend to cut costs at headquarters and administrative levels rather than at the actual operations.
considering the samples used in the studies as well as further research conducted on a case-study basis, PALEPU (1990, p. 252) acknowledges that evidence indicates that post-buyout performance effects are attributable to the buyouts themselves, not merely to pre-buyout undervaluation.

One of the case studies referred to was conducted by BAKER and WRUCK (1989) who examined post-LBO value creation at ‘O.M. Scott & Sons Company’ (Scotts’), a buyout performed by ‘Clayton, Dubilier and Rice’ in late 1986. Their findings confirm the results of the large-sample studies, that the pressure of servicing a high debt load and management equity ownership lead to improved performance. They attributed the enhancements in operating performance after Scott’s leveraged buyout to changes in the incentive, monitoring, and governance structure of the firm, all mechanisms introduced by the LBO investors.

In line with BAKER and WRUCK (1989), DENIS (1994) stated that the improved incentive structure and increased monitoring provided by the private equity investors were key reasons for value creation in buyouts, more important than the role of leverage on its own.

Restructurings, in the sense of reorganisation or reconfiguration of corporate operations, are frequently associated with LBOs for two reasons. First, when selling off businesses as part of an organisational restructuring, large corporations often sell business units to buyout investors. Second, following the acquisition of companies, private equity firms jointly with management teams develop and implement cost cutting and efficiency improvement plans or even firm-wide restructurings in order to drive value creation.

Restructurings at companies following a LBO is an area of intense criticism regarding the approach and actions adopted by buyout funds.

100 Building on these results, DENIS (1994) conducted two case studies aiming to separate the performance effects of just high levels of debt imposed on a company from the value-adding actions buyout investors in his analysis. He examined the case of ‘Kroger Co.’, where a company effected a high leverage recapitalisation and the leveraged buyout of ‘Safeway Stores’ by the private equity group ‘Kohlberg, Kravis and Roberts’ (KKR). While in both transactions debt leverage was dramatically increased, KKR in the case of Safeway also introduced managerial ownership, changed board composition, and executive compensation. In the case of Kroger no organisational changes happened. He found substantial performance improvements at Safeway and rather steady performance at Kroger and suggested that the differences in organisational form lead to large differences in value creation.

101 LIEBESKIND, WIERSEMA and HANSEN (1992) compared a sample of 33 US buyout firms with comparable companies in order to check if restructuring measures were more likely and more intense at buyout target companies than at other firms. They considered following dimensions: Downsizing, refocusing of operations, portfolio reorganisation measured in terms of sold, terminated, and added business lines. They found that managers of LBO firms conducted more downsizings paired with headcount reductions and showed a lower propensity to expand business lines.
Severely criticising restructuring actions stimulated by buyout firms, IPPOLITO and JAMES (1992) examined a ‘transfer-theory’, meaning that LBOs do not achieve a value creation but only a wealth transfer from other stakeholders (mainly the workforce) to equity owners. They compared 220 LBOs completed in the period from 1980 to 1987 to similar companies with regard to employee pension plan terminations and reduction in pension benefits. Based on their sample, they could not provide clear support for the transfer-theory and moderated that workforce related restructuring actions are not purely a measure of wealth transfer to shareholders. Acknowledging the complexity of post-LBO value creation, FOX and MARCUS (1992) proposed that the purpose of LBOs might have been to raise efficiency, which has to be considered positively, however, the efficiency improvements may at least in part take place at the expense of other stakeholders such as bondholders, the government (lower tax income through interest tax shields), employees, and society.

The need for restructuring that exceeds sensible efficiency improvement objectives seems to be related to overly aggressive financing structures, with massive debt burdens requiring high periodical debt service payments using up substantial cash flows.  

Balancing the disparity in findings and views about buyouts, one could argue that both wealth creation arguments and negatively connoted wealth transfer statements find justification and require consideration. While value-enhancement approaches differ widely in the private equity industry, it seems apparent that disadvantageous consequences for non-equity holding stakeholders come in line with highly aggressive and risky financing arrangements for buyout acquisitions, involving high levels of debt and relatively low equity contributions.

The ongoing trend to highly leveraged acquisition structures of LBOs and recapitalisations increasing debt burdens on portfolio firms raises concerns and could be interpreted that the private equity firms under the pressure of growing competition are prepared to pursue a purely shareholder-oriented approach.

\[102\] The threat of a default under debt agreements can make equity holders pushing for severe cost cutting plans that come at the expense of employees. The statement that excessive leverage is prone to cause severe detrimental effects for a variety of stakeholders including the society as such has been raised in the literature (e.g. WRIGHT, WILSON, ROBBIE and ENNEW 1994). With the findings of his study on the sensitivity of highly leveraged firms to economic recessions, ASGHARIAN (2003) addressed concerns about the risk of corporate failure which implies substantial disadvantages for all stakeholders. He demonstrated that firms with highly leveraged capital structures showed a higher sales decline in times of economic downturn but not a higher decline in profitability than other firms. This confirms a strict cost focus of LBO firms particularly in difficult periods and thus a higher propensity towards restructurings.

\[103\] Trends in the buyout industry will be discussed in further detail in section 2.2.5.
2.2.4 Market overview and history

This market overview concentrates deliberately on the acquisition part of the buyout business and not on divestment aspects. Exit market aspects will be explored in detail in section 4.4 of this dissertation.

2.2.4.1 The evolution of the leveraged buyout market

The heritage of the leveraged buyout industry dates back to the very beginning of the 20th century, when US financiers such as J.P. Morgan or Nicholas Biddle used enormous quantities of debt for the acquisition of troubled corporations and inefficient rail networks, aiming to reap large profits from consolidation. From 1916 onwards their transactions grew bigger and bigger, with banks and the growing bond market being prepared to finance substantial deals with limited equity contributed. This active period ended in the aftermath of the stock market crash in 1929, when lenders became much more stringent and conservative and lost appetite to get involved in highly leveraged ventures (BAKER and SMITH 1998, pp. 1-15).


It was not until the 1960s that financiers and investors remembered the old concept of acquiring firms largely with debt. Slowly a number of investment banks and mergers and acquisitions (‘M&A’) specialists began to adopt these principles and acquired small enterprises often family businesses troubled by succession problems with high levels of debt.

Up until the late 1970s the market experienced steady but rather unspectacular growth. Having observed an increasing receptiveness of debt lenders for more aggressive financing structures and an array of investment opportunities, three investment bankers from *Bear,
Stearns & Co.’ founded the buyout partnership ‘Kohlberg, Kravis, Roberts & Co.’ (KKR) in 1976, to evolved into one of the most prominent buyout firms globally (BAKER and SMITH 1998, pp. 18-22). KKR’s business model was to acquire well-established, privately controlled firms with predictable streams of revenues and cash flows. Transactions should be financed with minimal equity contribution, which should be shared with management teams operating portfolio companies, and mostly through debt. Shortly after KKR’s market entry other partnerships followed including ‘Clayton, Dubilier & Rice’ (CD&R) and ‘Forstmann, Little’.

In line with a dramatic increase of M&A activity in the US starting in the early 1980s, the number and size of leveraged buyouts grew considerably.104

As illustrated in the exhibit below, the market reached its peak in early 1989, when KKR conducted the largest ever LBO in the history of the buyout industry since, the $31 billion acquisition of the food and tobacco conglomerate ‘RJR Nabisco’. In the same year, several bankruptcies105 of larger buyouts began to disturb the industry and particularly the debt lenders to this market. Concerns about the threat of over-leveraging to corporations and society launched a wide political debate, that resulted in a change of law.

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104 The strong appetite of the debt capital market, especially the rapidly growing high yield bond market in the first half of the 1980s facilitated LBO transaction sizes growing from several hundred million dollars to multi-billion dollars deals. A prominent role in this market was played by Michael Milken, the later convicted head of the high yield bond unit at investment bank ‘Drexel, Burnham and Lambert’, a firm that was crucial party to the majority of large buyouts in this period.

outstanding loans and demanded a reduction in high yield debt holdings by institutions (BAKER and SMITH 1998, pp. 41-42). This act had a dramatic impact on the high yield market and ultimately drove the leading arranger of high yield securities, ‘Drexel, Burnham and Lambert’ into bankruptcy as soon as early 1990.

While the US market did not demonstrate clear recovery in the first part of the 1990s, the growth in the buyout market came from an increasing number and volumes of transactions mainly in Europe and also in Asia. The graph below presents global M&A volumes and the portion of LBO activity. Global LBO volumes showed constant growth in absolute terms from 1994 to 2000. In this period LBOs became a more global than only a US phenomenon. Up until the 1990s, substantial buyouts had been relatively limited to the US and the United Kingdom (WRIGHT and ROBBIE 1996). Growth in European LBO volumes were further stimulated by US buyout firms opening European offices looking for buyout targets outside the US.106


Global market growth continued until the year 2000. Unlike other segments of the private equity industry, the buyout market, due to its orientation to mostly established and mature businesses, was not affected as severely by the technology stock market crisis in 2000 and 2001. Absolute volumes of LBO transactions declined in 2001 and already recovered in 2002.

The share of LBO transactions of overall M&A deal value has doubled from 4% in 2001 to 8% in 2004 (VENTURE ECONOMICS 2005).

106 WRIGHT and ROBBIE (1996) describe the evolution of the buyout market particularly in the UK. Further details to US private equity firms entering Europe have been laid out above in section 2.1.2.
Since the end of 2003, the leveraged buyout market in all key regions, US, Europe and Asia has experienced strong further growth. Driven by large capital inflows to buyout funds, transaction sizes have increased with financing structures becoming more aggressive. The more recent evolutions in the buyout market and trends will be explored in the following sub-sections.

2.2.4.2 The pan-European leveraged buyout market as a framework

While the growth of the European buyout market historically was impeded by a fragmentation of national legal and tax laws, posing obstacles to investors acting across Europe (EVCA 2004, pp. 1-5), the situation has improved substantially over the past years.

Given the typical scale of buyout investments, frequently involving international portfolio firms, the buyout segment gradually has adopted a pan-European perspective. Most buyout firms opened offices in several European countries aiming to be close to individual national markets and to build up local expertise, which is still very much necessary for the successful completion of transactions. However, mirroring buyout firms’ approach in the United States, the objective of many European buyout firms has been to manage overall funds on a pan-European level in order to realise efficiency gains, leverage expertise widely and to better diversify risk (HUDSON 2005, pp. 5-11, EVCA 2005c, pp. 29-36).

The still ongoing harmonisation of national corporate and tax laws across the European Union has helped private equity investors to better manage and raise funds on a wider scope rather than on a national basis (BLAKE and WITNEY 2005, pp. 13-15).107 As BORDEWICH (1999, pp. 29-30) highlights, unlike the rather homogeneous US market landscape, private equity investments are still subject to distinct national jurisdictions, which especially affects the legal and tax structuring of buyout transactions. HUDSON (2005, pp. 6-7) also confirms the validity of a pan-European perspective for buyout exits, demonstrating that the majority of recent buyout divestments involves parties originating in different predominantly European countries.108 His analysis indicates that exit process management of European buyout investors should be examined also on a pan-European scale, which is the approach used as a framework for the analysis throughout this work.


108 Several other studies also indicate that buyout exits should be analysed on a pan-European rather than a national basis (i.e., WALL and SMITH 1997, BOTTAZZI and DA RIN 2002, LESCHKE 2003).
2.2.4.3 Present state of the leveraged buyout market

The volume of completed LBO transactions in 2004 has been estimated in the region of $200 billion\textsuperscript{109}, which only includes new investments, excluding deals involving existing portfolio firms (VENTURE ECONOMICS 2005). The exhibit below demonstrates the sharp growth in the number of LBO funds that manage more than $1 billion equity capital. The number has multiplied by the factor of 17 from 1989 to 2003. In addition, the growing entry of hedge funds into the private equity industry has also to be taken into account, whereby it is difficult to quantify a portion of the overall hedge fund universe\textsuperscript{110} participating in the buyout market. Due to the investment flexibility of hedge funds, a vast variety of fund types are in a position to perform LBO investments.

![Exhibit 38. Number of $1bn+ LBO funds 1989 to 2003. Source: SECURITIES REGULATION INSTITUTE (2005).](image)

According to MERGERMARKET (2005) and the Thomson ‘VentureXpert’ database\textsuperscript{111}, there are 316 firms world-wide that perform larger buyout investments\textsuperscript{112} in Europe. Based on own analysis, removing firms without exit track record and firms with a pure real estate investment focus as well as double entries of different funds managed by the same private equity firm, this number falls to 257 per mid 2005.

This number has grown substantially in the last five years, with many US buyout firms expanding to Europe. The list of firms include also a growing number of hedge funds pursuing buyout opportunities, even though their share of the market is still estimated to be below 10%, measured in terms of involvement in new buyouts.

\textsuperscript{109} There is a large number of providers of buyout market estimates. Mainly due to different market definition approaches, estimates tend to differ. Thomson Financial with its ‘Venture Economics’ services as well as Standard & Poors particularly on a global and Deloitte’s LBO market notes that are issued in co-operation with the ‘European Private Equity and Venture Capital Association’ (EVCA) are widely regarded and accepted data providers.

\textsuperscript{110} SECURITIES REGULATION INSTITUTE (2005) estimates that globally more than 6,000 hedge funds in 2003 and more than 8,000 hedge funds by the end of 2004 have been active.

\textsuperscript{111} Database information retrieved on 25 June 2005.

\textsuperscript{112} Defined as buyout investments with transaction values exceeding €100 million.
Given not only the focus of this dissertation, but also the fact that a large part of current growth in the buyout industry stems from Europe, the subsequent discussion of the current state of the market adopts a predominantly European point of view.

The European buyout market has experienced tremendous growth in recent years. 2004 and also the first half of 2005 were record breaking periods with regard to LBO volumes and also the amount of debt placed in relation to buyout financings (DELOITTE 2005, STANDARD and POORS 2005a). In 2004 1,272 deals accounted for a transaction volume of €80.2 billion, at an average deal value of €63 million (DELOITTE 2005, p. 2), representing about half of global LBO volumes. Interesting to note is that 89% of the aggregate transaction value was in relation to only 17% of deals. Within the first half of 2005, STANDARD and POORS (2005a) estimates that completed transactions have already amounted to a total volume of approximately €42 billion, which lets experts anticipate an equally strong year as 2004.

While the United Kingdom has been a well-established market for buyouts for more than a decade (WRIGHT and ROBBIE 1996), the substantial growth in European LBO volumes stems from continental Europe, where total deal volumes exceeded the €50 billion mark in 2004 for the first time (DELOITTE 2005, pp. 1-3). Since 1995, the buyout volumes in continental Europe have outgrown the UK market with a compound annual growth rate of 26.0% compared to 20.3% in the UK, as highlighted in the exhibit below.

<table>
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<td>47</td>
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<td>414</td>
<td>823</td>
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<td>337</td>
<td>1,744</td>
<td>517</td>
<td>1,448</td>
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<tr>
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<td>388</td>
<td>263</td>
<td>269</td>
<td>2,165</td>
<td>1,313</td>
<td>498</td>
<td>1,391</td>
<td>848</td>
<td>335</td>
<td></td>
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<tr>
<td>Finland</td>
<td>189</td>
<td>723</td>
<td>455</td>
<td>559</td>
<td>1,085</td>
<td>675</td>
<td>1,047</td>
<td>460</td>
<td>1,039</td>
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<td>2,189</td>
<td>5,250</td>
<td>6,198</td>
<td>8,375</td>
<td>6,448</td>
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<td>15,550</td>
<td>8,768</td>
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<td>1,704</td>
<td>3,523</td>
<td>5,313</td>
<td>4,660</td>
<td>15,076</td>
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<td>6,121</td>
<td>11,578</td>
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<td>172</td>
<td>116</td>
<td>97</td>
<td>258</td>
<td>1,475</td>
<td>259</td>
<td>5,021</td>
<td>4,918</td>
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<td>3,115</td>
<td>695</td>
<td>2,714</td>
<td>2,550</td>
<td>737</td>
<td>3,428</td>
<td>7,770</td>
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<td>988</td>
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<td>3,435</td>
<td>2,901</td>
<td>1,739</td>
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<td>1,793</td>
<td>4,958</td>
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<td>316</td>
<td>181</td>
<td>23</td>
<td>226</td>
<td>1,004</td>
<td>1,371</td>
<td>142</td>
<td>301</td>
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<td>154</td>
<td>64</td>
<td>84</td>
<td>206</td>
<td>83</td>
<td>2</td>
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<td>Spain</td>
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<td>970</td>
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<td>700</td>
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<td>928</td>
<td>2,926</td>
<td>3,164</td>
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<td>1,116</td>
<td>2,223</td>
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<td>2,426</td>
<td>3,137</td>
<td>1,013</td>
<td>1,772</td>
<td>715</td>
<td>2,764</td>
<td>863</td>
<td>1,327</td>
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</tr>
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<td>Total (CE)</td>
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<td>10,111</td>
<td>18,900</td>
<td>20,888</td>
<td>32,734</td>
<td>36,098</td>
<td>34,045</td>
<td>42,445</td>
<td>41,902</td>
<td>50,165</td>
<td></td>
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<tr>
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<td>9,012</td>
<td>12,602</td>
<td>17,109</td>
<td>23,265</td>
<td>26,750</td>
<td>38,339</td>
<td>31,334</td>
<td>24,823</td>
<td>23,518</td>
<td>30,072</td>
<td></td>
</tr>
<tr>
<td>Total (inc UK)</td>
<td>15,257</td>
<td>22,713</td>
<td>36,009</td>
<td>44,153</td>
<td>59,484</td>
<td>74,437</td>
<td>65,379</td>
<td>67,268</td>
<td>65,420</td>
<td>80,237</td>
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</table>


On average buyouts in continental European countries are larger than in the UK, with 76% of transactions exceeding a value of €250 million. Germany, France and the Netherlands evolved into the three largest markets after the UK.
Leaving the regional perspective and looking at transaction characteristics reveals interesting results. Purchase price multiples paid in buyouts have reached similar or even higher levels than in the boom period prior to the year 2000, as depicted in the exhibit below.

An explanation of the higher purchase price multiples relative to the EBITDA of target businesses in LBOs needs to include a comment on the debt financing. Given the typical high leverage in buyout capital structures, the availability of attractively priced debt is a key value driver for buyout investors and has an impact on valuations paid as mentioned in section 2.2.2. The attractiveness of the leveraged finance market, providing private equity firms with buyout financing, can be read in several dimensions: The cost of debt, the leverage lenders are prepared to accept, and the proportion of equity that debt providers require buyout firms to inject to deals. Through requiring a minimum portion of equity commitment, banks aim to align the interests of the buyout investors with their own, making
buyout firms and management working hard to avoid a bankruptcy scenario, in which obviously the sponsor’s equity would be lost first.

While purchase price multiples are certainly very transaction specific and depend on the general economic state and numerous other factors, the three above mentioned parameters have an impact in buyout acquisitions (i.e., GOMPERS and LERNER 2004). A hypothesis could be that the cheaper the cost of debt, the lower the required equity contribution and the higher the available leverage, the more could a buyout investor theoretically pay for a given target, holding IRR return expectations constant. Clearly, lenders on the other hand will demand a compensation for accepting the higher risk attached to higher leverage ratios in the form of higher pricing, higher equity contributions and other conditions.

Not dwelling into detailed statistical analysis, the exhibits below draw indeed a picture of higher leverage in transactions supporting the increasing purchase price multiples presented above. Leverage levels in recent periods are similar to levels recorded prior to 2001.

Equity contributions in Europe have traditionally ranged between 30% and 40%. As demonstrated in the following exhibit, equity contributions reached a low point close to 30% in the beginning of 2004 and increased sharply until January 2005 broadly in line with leverage levels reaching high points in the second half of 2004. By early 2005, equity contributions declined again to levels between 32% and 34%.
The pricing of senior debt (mainly bank loans and credit lines) has been fairly static and standardised, often set independent of deal specifics (STANDARD and POORS 2005a). Fairly independent of more aggressive debt structures at high leverage, the cost of senior debt remained fairly stable to slightly increasing, as demonstrated in the first graph below.

The cost of high yield bonds declined substantially and reached lows in March 2005. Unlike the fairly static evolution of senior debt pricing, the exhibit below charting the ‘JPMORGAN’ high yield bond indices for Europe and global issuers, sets out a more volatile pattern. High yield bond pricing declined from a peak in October 2001 until March 2005, when a temporary market correction took place, which was again largely compensated in June 2005.
Summarising the information presented above, the leveraged finance market particularly in Europe has experienced strong growth fuelled by high capital inflows into buyout funds as well as a strong appetite by lenders to provide debt financing at attractive terms and pricing, despite high leverage ratios. The European market has matured and adopted US standards and procedures in many respects, particularly with regard to debt financing (BOTTAZZI and DA RIN 2004).

2.2.4.4 Sources of debt financing\textsuperscript{113}

Debt financing is of crucial importance to buyouts, typically representing more than two thirds of capital structures arranged to acquire target companies.

\textsuperscript{113} FULLER, BEVAN and ABBONDANTE (2000) provide a detailed review of debt facilities available to finance buyouts, their characteristics and structuring requirements.
The exhibit above presents the average capital structure applied in European buyouts in 2003 and 2004. In both years, the equity contribution to a transaction was below 40% with the remainder largely being financed with bank debt and to a lesser extent with other debt facilities. Bank debt is a standard feature in buyout capitalisations. The category bank debt contains loans and credit and overdraft lines used to cover working capital requirements. Despite its label, bank debt is not only provided by banks but also institutional investors such as mutual and investment funds. As leveraged finance debt receives greater reward compared to lower risk corporate debt, institutional investors are attracted to committing to such transactions in a growing number. STANDARD and POORS (2005a) reports that the share of institutional investors in the leveraged loan market, typically committing to the longer dated and higher priced tranches in the bank debt package, has increased and reached 25.2% in 2004.

The market for LBO loans\textsuperscript{114} has grown significantly over the past years in line with the growth in buyout activity. Sizeable leveraged loans (i.e., exceeding volumes of €100 million) are usually arranged by a number of banks directly mandated by private equity firms. These banks, often classified as ‘mandated arrangers’ or ‘bookrunners’, distribute or ‘syndicate’ loans subsequently to a number of other banks in order to collectively share the credit risk attached to a borrower.

In the first half of 2005, LBO loans reached a volume of €53.1 billion from 107 deals, exceeding a total volume of €43.8 billion from 134 deals for the whole of 2004. Out of all LBO loan transactions in the first half of 2005, 36.4% have been arranged for recapitalisations allowing buyout houses to finance dividends to themselves.

\textsuperscript{114} Defining the market for LBO loans, one does not only capture loans arranged in connection with new buyouts but all loans arranged in relation to highly leveraged firms for the purpose of a refinancing, funding of add-on acquisitions, etc. (STANDARD and POORS 2005a).
As illustrated in the exhibit comparing acquisition capitalisations in 2003 and 2004, the proportion of bank debt is declining in favour of other sources of debt financing, such as mezzanine debt and the public market for high yield bonds. Both types of debt financing have already been introduced.

Annual volumes of mezzanine raised have almost trebled from €1.7 billion in the year 2000 to €5.0 billion arranged in 2004 (STANDARD and POORS 2005b, p. 5). Also in parallel with growing demand and attractive pricing for new issuers, the role of the high yield bond market in Europe has become more prominent. The high yield market is not only a debt provider to the LBO market but to a greater extent to corporate borrowers with ‘sub-investment grade’ credit ratings\textsuperscript{115}. These companies are assessed by rating agencies and are considered to have a comparatively higher credit risk either due to their business profile, leverage, location of operations or a variety of other factors. 2004 represented a very strong year for the European high yield bond market with new issuance volumes totalling $21.6 billion, compared to $11.9 billion in 2003. Issuance volume for the first half of 2005 amounted to $11.3 billion compared to $14.2 billion in the same period in 2004 (JPMORGAN 2005).

\textsuperscript{115} All three prominent rating agencies publish useful guidelines regarding rating assessment on their websites: www.standardandpoors.com, www.moodys.com and www.fitchratings.com
2.2.5 Buyout market trends

As demonstrated, the LBO industry has been subject to particularly strong growth in the period since the technology stock market crisis in 2000 and 2001. Substantial flows of capital into buyout funds has led to an altered, more competitive environment both in the US and in Europe (ANSON 2004). The European buyout market has quickly adapted to the well established and more aggressive American private equity investment style.

The subsequent discussion of trends is provided in three parts: ‘Buyside’ trends in relation to new acquisitions, ‘sell-side’ trends capturing exit aspects as well as ‘transaction financing’ trends.

2.2.5.1 Buyside trends

a) Auction market

The significant capital flows into a growing number of private equity funds especially over the past 5 years lead to an increasingly competitive environment in the bidding for companies. The traditional model of private equity had the goal that a single financial sponsor approached a public company about going private or suggested the spin-off of a subsidiary. Typical transaction processes usually took several months to a year. Driven by an increasing demand for investment targets by a widening universe of potential buyers, this type of transaction process became unusual especially for leveraged buyouts (ANSON 2004, pp. 84-85).

The typical process framework, private equity firms have to operate in when aiming to acquire businesses, are multi-round auctions administrated by investment banks advising the seller of a business. In these auctions, potential buyers are forced to bid for companies in a compressed process timeframe. An auction process involves usually up to three rounds of biddings, where potential buyers’ offer prices and demanded conditionality of a purchase contract are comparatively assessed. Over a period of two to three months, bidders have the opportunity to conduct their required due diligence, have limited access to the company’s facilities and management, and finally need to submit a firm offer at the end of the process.116

ANSON (2004) argues that this type of auction process is detrimental to private equity funds’ returns as it leaves less room for negotiation of favourable terms from the buyer’s standpoint and also results in typically less due diligence conducted, which leaves the buyer with higher uncertainty about the prospects of the acquired business. He expects that

116 For further details regarding M&A auction processes please refer to section 4.3.1.1.
financial sponsors who used to target returns of 20%\textsuperscript{117} per annum, will bring their hurdle rates down to reflect the new environment.

In addition, given the short timeframe available for due diligence, private equity investors often need to outsource more to consultants and advisers which increases execution costs and hence leaves the investor with a burden of costs, in case the outcome of the auction is not successful. However, LERNER and HARDYMON (2002, pp. 8-9) pointed out that the efficiency of the private equity process overall has been enhanced by the emergence of other intermediaries familiar with its requirements. The growing expertise among lawyers, accountants and advisers has lowered transaction costs over the past years.

b) Secondary buyouts

Also a function of the growing volumes of assets held by private equity firms is the tendency that portfolio companies are sold from one financial sponsor to another. ANSON (2004, p. 86) summarises: “Rather than find new deals, private equity firms are looking at existing private deals—another potential symptom of too much capital in the private equity industry. This is in contrast to the traditional exit strategies...”

The concept is that another private equity house acquires a company, again structured as a leveraged buyout, once again increasing the debt portion in the capital structure of a company that has already reduced outstanding debt over time under previous private equity ownership. LERNER and HARDYMON (2002, pp. 5-8) also mention the growing importance of private equity firms as buyers of assets from other financial sponsors. Historically, secondary buyouts or ‘private to private’ transactions were rare. Private equity firms were reluctant to sell portfolio companies to other private equity firms in private-to-private deals. ANSON (2004) argues there existed a stigma of failure associated with not being able to take a company public or sell it to a strategic buyer.

Given the increased buying power of financial investors, this perception has changed. In 2003, total secondary buyouts accounted for $18 billion of transaction value and are estimated to have reached $36 billion in 2004, representing 12% of total private equity M&A activity in 2004 (ANSON 2004, pp. 84-85).

\textsuperscript{117} Typically measured as ‘internal rate of return’ or ‘IRR’ on an annual basis from the date of the investment to completion of the exit. Please refer to section 2.1.8 for further details.
c) **Growing attractiveness of middle market targets**

In order to avoid some of the process disadvantages typical for large and highly contested transactions, buyout firms have started to intensify their focus again on middle market buyouts as opposed to only concentrating on large-scale opportunities. The decreasing average fund size from $500 million in 1997 to $352 million in 2003 (ANSON 2004, p. 84) demonstrates that private equity firms set up more funds focusing on middle size target investments.

The middle market is characterised by a strong growth of companies, traditionally defined as businesses with revenues of between $50 million and $500 million. Over the past decade (1993 to 2003), the number of those companies increased from 35,000 to 75,000 in the United States alone.

According to ANSON (2004) there are two major reasons why middle market deals have become attractive for private equity firms: The first point is that smaller firms can be acquired avoiding a time compressed and competitive auction process. The second argument is that, as two key sources of financing of middle sized companies – the leveraged loan and high yield bond market - evolved away to finance larger companies\(^\text{118}\), entrepreneurs or families owning businesses are more likely to accept the involvement of private equity investors and thus create a more investor friendly environment.

d) **Large transactions are growing bigger**

Even though more and more buyout firms start to focus on middle market buyouts, the size of large buyouts is growing bigger, particularly in Europe. It became common that various private equity funds form consortia in order to be able to bid for large transactions for which they otherwise would not have sufficient capital or resources. Joint acquisitions of companies enabled the private equity industry to expand its role for multi billion dollar M&A transactions.

Prominent examples of private equity consortia acquiring large companies in 2004 are the $5 billion acquisition of the satellite communications and media provider ‘Intelsat’ by ‘Apollo Management’, ‘Madison Dearborn Partners’, ‘Apax Partners’ and ‘Permira’ and the $4.8 billion (€3.7 billion) buyout of the electronics supply distributor ‘Rexel’ from ‘Pinault Printemps Redoute’ by ‘Clayton, Dubilier & Rice’ as well as ‘Eurazeo’ and

\(^{118}\) Note: ANSON (2004, p. 88) mentions that the average leverage loan size in the US exceeds $250 million, STANDARD and POORS (2005a, p. 2) estimates the average European leverage loan size at €319 million in 2004.
‘Merrill Lynch Private Equity’. This transaction comprised the largest equity commitment by private equity firms for a single transaction in Europe to date.\textsuperscript{119}

2.2.5.2 Sellside - exit trends
Apart from the phenomenon of secondary buyouts that is relevant to both the discussions of buyside as well as sellside trends, the execution of so-called ‘multi-track’ or ‘dual track’ exit processes in the divestment phase for large portfolio companies has become more widely applied.

e) Dual- or multi-track exit processes
The term ‘dual track’ or ‘multi-track’ exit process means that two or more potential exit routes are pursued at the same time. In such case, a private equity firm divesting a business conducts for example a public listing process at the same time as running an auction involving both potential strategic trade buyers and other financial sponsors.

Despite higher transaction costs and incremental preparation time required, dual track processes are believed by practitioners to generate extra value for a vendor of a company, as it first can enhance the competitive dynamics in an auction process and second maintains an option to execute the exit route that generates higher value until the last moment.

Dual-track exits will be discussed in more detail in sections 4.2.5 and 5.7.

f) Sale to financial buyers – secondary buyout
The augmented importance of financial investors holding corporate assets does not only increase the significance of their role as providers of targets in selling processes but likewise as potential buyers of portfolio companies.

As to be demonstrated in section 5.7, buyout investors’ returns are increasingly exposed to the completion of secondary buyouts, which raises concerns about the sustainability of current performance levels.

2.2.5.3 Transaction financing trends
g) Deal structure and leverage
Facilitated by receptive debt capital markets for leveraged buyout loans and bonds, transaction structures have become more aggressive, particularly in Europe (STANDARD

\textsuperscript{119} Source: DEALOGIC corporate finance databases (12 January 2005).
and POORS 2005a). Exhibits 42. und 43. in section 2.2.4.2 above provide evidence for both increased leverage levels as well as recently low equity contributions.

\( h) \) Dividend recapitalisations

Conducting recapitalisations of existing portfolio firms has become a widely used method for buyout firms to generate incremental returns. The principle of dividend recapitalisations is to re-leverage firms that have already repaid a portion of the debt burden, originally incurred at the time of the buyout, and that typically have demonstrated solid financial performance since the initial deal.

The exhibit below illustrates this concept on the basis of a simple example. In this case leverage, measured as debt balance divided by EBITDA, has been decreased from initially 5.0x to 3.0x before the recapitalisation is effected. The assumption is that the portfolio company performed well since the buyout, repaid a quarter of the original debt and managed to increase EBITDA from $200 to $250.

In the example set out below, the recapitalisation brings the company’s leverage to the same level as per the initial LBO, 5.0x. The proceeds of the incremental debt portion are typically used to distribute a substantial extraordinary dividend to shareholders\(^{120}\) and to pay fees and expenses incurred in connection with the recapitalisation arrangement. Alternatively, proceeds may be used to remain inside the company for the purpose of an acquisition or expansion financing.

\(^{120}\) While usually dividends are distributed to all eligible shareholders, certain classes of shareholders in the context of LBO recapitalisations are frequently treated differently. For instance, the private equity owner might want to pay a different portion to a company’s executive management for specific compensation and reward purposes.
Simplified example assuming $1,000 of initial debt balance and $200 of EBITDA at the time of LBO. In period n EBITDA has been increased to $250, while $250 of initial debt has been repaid.

Exhibit 48. Dividend recapitalisation example. Source: Own illustration.

STANDARD and POORS (2005a) report that recapitalisations have rapidly grown in number and volume, estimating that 36.4% of all new leveraged loans in the first half of 2005 have been arranged for the purpose of recapitalisations. Furthermore, they present that the total volumes of dividends to buyout firms are at a historic peak, as depicted in the exhibit below.

Retrieving significant dividends from portfolio companies does not only reduce equity exposure to an investment as a part or even 100% of the original equity contribution is repaid but also benefits IRR returns\textsuperscript{121}. In case of a dividend recapitalisation, shareholders

\textsuperscript{121} Please refer to section 2.1.8.2 for a discussion of common private equity performance metrics.
receive a significant cash flow already before an exit. Due to the time factor relevant to cash flow-based IRR returns, recapitalisations can have a positive performance impact.

2.2.6 Performance of the leveraged buyout market
The purpose of this part is to expand on the general private equity performance discussion in section 2.1.8, providing specific LBO return statistics and positioning leveraged buyout returns within the overall private equity spectrum.

2.2.6.1 LBO performance data
The following exhibits present performance statistics, introduced in section 2.1.8.4, capturing cash flow-based IRRs for buyout segments of private equity funds. The exhibits below suggest that overall the US buyout market throughout most horizons outperformed public equity indices such as the S&P 500 and the NASDAQ. However, it is important to flag that these returns have to be regarded with caution and under consideration of a number of limitations discussed in section 2.1.8. COCHRANE (2005) explicitly warns that reported performance data is usually biased, as failed investments are often not taken into account. In the context of several considerations it is doubtful that the buyout market has achieved superior returns.

<table>
<thead>
<tr>
<th>Fund Type (returns in %)</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>20 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Buyouts</td>
<td>30.6</td>
<td>1.8</td>
<td>1.3</td>
<td>8.6</td>
<td>27.9</td>
</tr>
<tr>
<td>Medium Buyouts</td>
<td>14.6</td>
<td>-0.2</td>
<td>1.0</td>
<td>9.2</td>
<td>17.3</td>
</tr>
<tr>
<td>Large Buyouts</td>
<td>17.7</td>
<td>6.6</td>
<td>4.0</td>
<td>11.2</td>
<td>14.7</td>
</tr>
<tr>
<td>Mega Buyouts</td>
<td>17.0</td>
<td>5.8</td>
<td>2.6</td>
<td>6.7</td>
<td>8.7</td>
</tr>
<tr>
<td>All US Buyouts</td>
<td>17.3</td>
<td>5.2</td>
<td>2.7</td>
<td>8.1</td>
<td>12.5</td>
</tr>
<tr>
<td>NASDAQ</td>
<td>6.2</td>
<td>8.2</td>
<td>-7.1</td>
<td>9.5</td>
<td>12.1</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.9</td>
<td>2.3</td>
<td>-2.8</td>
<td>9.2</td>
<td>12.4</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Period: 1990-2003</th>
<th>Annual return (IRR %)</th>
<th>Standard deviation (%)</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Buyouts</td>
<td>12.8</td>
<td>11.1</td>
<td>0.75</td>
</tr>
<tr>
<td>NASDAQ</td>
<td>14.7</td>
<td>30.5</td>
<td>0.34</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.2</td>
<td>16.3</td>
<td>0.42</td>
</tr>
</tbody>
</table>


Similarly, an analysis of the performance delivered by the European buyout market on the basis of reported data suggests a solid performance vis-à-vis public equity markets. However, given the similarities in compensation and fee structure of funds operating in Europe compared to the US, the limitations mentioned above are also likely to reduce ‘real’ returns to investors in buyout funds.

122 NVCA (2005) defines buyout funds sizes as follows: Small: 0-$250 million; medium: $250-$500 million; large: $500 million -$1 billion; mega: in excess of $1 billion.
Overall, the longer-term return statistics suggest that European buyout segment has outperformed the US buyout market, however it had a less favourable risk-return profile expressed in a lower Sharpe ratio (0.63 compared to 0.75 for the US).


<table>
<thead>
<tr>
<th>Period: 1990-2003</th>
<th>Annual return (IRR %)</th>
<th>Standard deviation (%)</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Buyouts</td>
<td>14.2</td>
<td>15.7</td>
<td>0.63</td>
</tr>
<tr>
<td>NASDAQ</td>
<td>14.7</td>
<td>30.5</td>
<td>0.34</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>11.2</td>
<td>16.3</td>
<td>0.42</td>
</tr>
</tbody>
</table>

2.2.6.2 LBO performance in the context of the private equity industry

The performance statistics presented above as well as in section 2.1.8 suggest that the buyout segment performed well throughout most periods and horizons compared to other segments, particularly venture capital funds.

The summary table in the exhibit below compares reported annual returns of US and European venture capital funds (US VC and EU VC) as well as US and European buyout funds (US BO and EU BO). The analysis is based on Thomson Venture Economics data, which is used for official performance reports published by the NVCA as well as the EVCA.


<table>
<thead>
<tr>
<th>Fund Type</th>
<th>Funds</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyouts</td>
<td>292</td>
<td>1.6</td>
<td>1.0</td>
<td>9.6</td>
<td>12.7</td>
</tr>
</tbody>
</table>

### Exhibit 54. Annual returns by fund region and category. Source: PARTNERS GROUP (2005), analysis based on VENTURE ECONOMICS (2005).

The chart suggests that although buyout funds never reached annual peak performance rates of venture capital funds, annual returns of buyout funds displayed a more consistent positive pattern and have outperformed venture funds, especially since the technology stock market crisis in 2000 and 2001. Moreover, the chart confirms that in all years except 2003, European buyout funds outperformed their US peers.

To conclude this discussion, one has to be conscious about the limitations and also the deficiencies of reported return data when analysing data and in particular when comparing private equity returns to public market securities. Key considerations include bias concerns.
as well as the fact that private equity fees and performance shares often are not deducted and thus overstate returns.

Prominent studies such as LJUNGQUIST and RICHARDSON (2003), KAPLAN and SCHOAR (2003) and COCHRANE (2005) seriously question the claim that private equity as an investment class has managed to outperform public equity market indices on a sustained basis. Overall the author agrees that the myth of private equity generating superior returns cannot be fully confirmed.

2.3 Divestments of portfolio companies

2.3.1 Exit phase in the ‘Venture Capital Cycle’

The term ‘exit’ in this context can be interchangeably labelled as ‘divestment’ or ‘disinvestment’ and means that a private equity investor or venture capitalist sells its stake of a portfolio company in full or in part, aiming to reduce exposure. GOMPERS and LERNER (2001, p. 159) summarise: “To make money on their investments, venture capitalists need to turn illiquid stakes in private companies into realized return.”

Private equity investments represent illiquid investments, which cannot be sold as easily and quickly as shareholdings in public equity via stock exchanges. Whilst venture capital funds concentrating on start-up and early stage investments have a typical investment horizon of seven to ten years, private equity or buyout funds have horizons of 3 to 5 years (XU 2004, p. 76). GOMPERS and LERNER (1998a) underline that successful exits are not only crucial to ensuring attractive returns for investors but also to raising additional capital.

A main characteristic of private equity finance, which enforces the critical nature of exits, is the limited investment period\(^\text{123}\). Over the past decades, driven by the example of the United States, the limited partnership emerged as the dominant organisational form of venture capital and private equity funds. Limited partnerships usually have pre-determined lifetimes of usually ten years, although extensions of up to 3 years are often permitted. These type of partnerships have grown from a percentage of 40% of all active venture capital funds in 1980 to 80% in 1998 (GOMPERS and LERNER 2000, p. 285).

The closed-end nature of most private equity funds, not only in the US but also in Europe and the rest of the world, is often interpreted as an instrument, applied by limited partners to

\(^{123}\) A further discussion of fund periods can be found in section 2.1.4.2.
control the managers of the venture capital organisation in order to ensure the eventual redemption of their capital and investment returns (NEUS and WALZ 2004, pp. 1-2).\(^{124}\)

Given the outlined constraints on the investment period, venture capital firms have to terminate the financial relationship with a portfolio firm after a more or less given period of time (BASCHA and WALZ 2001, p. 286). In this sense, private equity investors are forced to exit investments at some point.

### 2.3.2 Potential divestment routes

According to the definition of most authors in this field including practitioners, there are five main types of private equity portfolio company exits: Trade sales, secondary buyouts, initial public offerings (IPOs), buy-backs and write-offs (i.e., WRIGHT and ROBBIE 1998, GOMPERS and LERNER 1999a, CUMMING and MACINTOSH 2001, 2003a, 2003b). Furthermore, the extent of exit can vary. One differentiates between full and partial exits, which are both theoretically possible for each of the five main types, as summarised in the exhibit below.

<table>
<thead>
<tr>
<th>Type of Exit</th>
<th>Full exit</th>
<th>Partial exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade sale</td>
<td>✓</td>
<td>✓ (trade sales tend to be full exits)</td>
</tr>
<tr>
<td>Secondary buyout</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IPO</td>
<td>✓</td>
<td>✓ (immediate full exit at IPO unlikely)</td>
</tr>
<tr>
<td>Buy-back</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Write-off</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Exhibit 55. Types of exits. Own chart following: CUMMING and MACINTOSH (2003a, pp. 513-516).

In addition to the above mentioned types of exits, some authors name recapitalisations frequently as a form of partial exits (i.e., ANSON 2004, KUSHNER 2004). However, recapitalisations do not change the ownership structure of a company and thus are not really an exit in a narrow sense. Nevertheless, recapitalisations are a means for venture capitalists

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\(^{124}\) Even if funds are not formally closed-end, investors also preserve the right not to invest in any future fund managed by the same venture capitalist, if funds are not liquidated and rather rolled-over into a so-called follow-on fund. See also section 2.1.7.2 for a discussion of corporate governance aspects regarding private equity partnerships.
to reduce their equity exposure to a company and hence have an objective similar to the other channels of divestments mentioned above.

The process for each of these alternatives is different and has distinct requirements with regard to size and characteristics of a portfolio company, execution timing, costs, public disclosure requirements, tax impact, etc. While the specific process differences and requirements and relative market importance will be analysed in section 4, basic concepts and characteristics underlying each of main exit alternatives will be introduced at this point as these seem fundamental for the subsequent review of theoretical frameworks and existing studies.

**2.3.2.1 Trade sale**

The sale of a portfolio company to a third party such as an industry peer or competitor of the firm is the most common exit channel for the European venture capital and private equity industry (WRIGHT, ROBBIE, ROMANET, THOMPSON, JOACHIMSSON, BRUINING and HERST 1993, RELANDER, SYRJANEN and MIETTINEN 1994, BIENZ 2004). The sale to a third party is frequently referred to as ‘mergers or acquisitions exit’ or ‘M&A’ exit. However, applying M&A exit as a synonym for only trade sales does not take into account that a company might be sold to a third party financial investor. In this perspective such an exit is a broader term and also captures secondary buyouts.

Trade sales tend to be full exits, typically effecting the sale of the entire company for a cash consideration. Partial trade sale exits tend to be rare. In such case, the selling venture capitalist would typically receive (often illiquid) shares in the acquirer company instead of cash (CUMMING and MACINTOSH 2003a, p. 514).

The buyer of a company in a trade sale typically is a strategic acquirer, which means that a firm in the same or a related industry buys a company in order to integrate the target’s products or technologies with its own (either vertically or horizontally). Strategic acquisitions can also involve the merger of two corporations with some prior contractual relationship, such as the supply of inputs or the licensing of a particular technology (CUMMING and MACINTOSH 2003a, pp. 513-514).125

125 Subsequent to the acquisition, the acquiror might leave the target firm as a wholly owned subsidiary or as a separate division, in order to preserve the management/entrepreneurial team that was responsible for the firm in the period prior to the acquisition. Alternatively, it may integrate the company’s technology with its own.
By virtue of operating in the same business, strategic acquirors are best positioned to evaluate the prospects of a business which is assumed to result in their capability to estimate the true and fair value of a business better than other types of purchasers.126 Strategic buyers are often believed to be able to pay a premium for companies due to strategic fit and potential synergies. However, this does not necessarily mean in practice that there exists a strategic fit in every case. Taking the example of corporate venture capital departments of large US enterprises, GOMPERS and LERNER (2004) demonstrate that the closeness of fit between the activities and strategy of the acquiror and the target companies varies significantly and that it is are particularly low for acquisition departments which lack a strong strategic focus for the integration of specific technologies.

Even acknowledging that there is not always a strategic fit, particularly when corporate venture capital departments acquire young firms, the purchase of a company by a strategic buyer results in the realisation of transaction synergies127, which can be the core motivation for many acquisitions in the first place. The decision to purchase a firm might sometimes reflect the outcome of a ‘make or buy’ decision, where a company needs to develop a specific product or technology to complete or complement existing product lines. Rather than developing the product or technology itself, it identifies and buys a firm that possesses the technology it needs.

An acquiror’s anticipation of the achievement of transaction synergies affects its willingness to pay for a target (BIENZ 2004, p. 16). Depending on the relative bargaining power of acquiror and seller and on the information they possess and the extent to which the seller is aware of the magnitude of the potential synergy gains available to the buyer, the synergistic gains are split between buyer and seller through the negotiations of the purchase price (CUMMING and MACINTOSH 2003b, p. 146).

126 Also because of their bargaining power, strategic acquirors are in a position to ask for and receive access to inside information about the firm, probably more than other types of purchasers such as financial investors. In a sale process with a number of potential purchasers, strategic buyers frequently set the valuation benchmark, which provides an offer orientation for other bidders.

127 Acquisitions can also be inspired by the desire to capture the human capital of a target company. Since human capital often has its highest value when members of the target’s entrepreneurial group are kept together as a team, the best way to acquire the target’s human capital is to buy the entire firm. This argument is mainly of relevance for the acquisition of smaller firms that complement certain activities of a larger acquiror. Acquisitions might also be motivated by a desire to capture intellectual property rights held by a target. The target may possess patents, that will assist the acquiror in defending intellectual property rights against challenges from other competitors – perhaps even from the target itself. Synergies can also be achieved by acquiring a target firm’s customer base, providing new distribution channels for current and anticipated products or services (CUMMING and MACINTOSH 2003b, pp. 145-146).
2.3.2.2 Secondary sale and secondary buyout

The literature differentiates between secondary sales and secondary buyouts. A secondary sale is an acquisition exit, whereby the key difference to a trade sale is that only the private equity fund sells its interest to a third party, while the entrepreneur or management and other investors retain their stakes in the company. Purchasers in secondary sales are usually strategic acquirors. However, the purchaser of a secondary block usually lacks the bargaining power of a 100% acquiror to obtain full inside information. (CUMMING and MACINTOSH 2003b, p. 107). Also transaction synergies are far less likely to be achieved in the case of secondary sales compared to trade sales, mainly due to the fact that buyers are typically unable to integrate and combine their targets’ assets with their own. Given these considerations, secondary sales tend to achieve lower relative purchase prices and thus often generate lower returns than trade sales. Secondary sales represent a relatively rare exit modality in the private equity market and thus are not a key focus in this study.

In contrast, secondary buyouts denote transactions where a company is sold from one financial sponsor to another. Secondary buyouts are a growing phenomenon in the private equity market fuelled by the growing volumes of assets held by private equity firms.128

2.3.2.3 Initial Public Offering

In an ‘Initial Public Offering’ (IPO) a company sells (typically only a portion of) its shares to public investors. IPOs are in most cases (but not always) accompanied by a listing on a stock exchange. Of the different exit channels, only an IPO provides a company with an infusion of fresh capital and its new owner(s) of a firm with a high degree of liquidity. Shares of a public firm potentially can be sold freely into the public market at or close to the last transaction price in a short period of time relative to the sale of shares of a private company (CUMMING and MACINTOSH 2003b, p. 134).

For reasons further explored in section 4.3.2, private equity funds do not sell all (or frequently not even a part of) its shares into the public market right at the time of the public offering but rather have to undertake a ‘lock-up’ agreement with the investment bank underwriting the offering in which they commit themselves not to sell shares for a period of typically 6 to 12 months129 following the IPO (GOMPERS and LERNER 1998b, p. 2164). Subsequent to the lock-up period, securities are either sold into the market or distributed to investors over a period of months or even years following the public offering.

128 Further details on secondary buyouts are provided in section 2.2.5.1.
129 Lock-up periods can, however, last up to 2 years, particularly for IPOs backed by young venture capital firms that have not yet established a reputation in the public equity markets (LIN and SMITH 1998, p. 245).
The exhibit below highlights that effecting an IPO does not constitute an exit action itself. However, by common convention IPOs are classified as a form of exit, as they usually both precede and also facilitate a later exit of private equity investor (CUMMING and MACINTOSH 2003b, p. 106).

It is in the mutual interest of the private equity firm and an underwriter that the exiting investor does not sell shares into an IPO directly. Sale of shares might trigger a signal that the financial sponsor has doubts in the prospects of the firm and/or believes that the sale price is too high. Moreover, if the private equity house departs from the firm at the time of the IPO, public investors will lose out on the benefit of the financial sponsor’s continued monitoring of management right away (CUMMING and MACINTOSH 2003b, p. 135). However, measures and systems that reduce the difficulties for public investors to monitor a company such as research analysts’ coverage build up over time and not immediately following an IPO.

Buyers of public shares including institutional investors are frequently characterised by a lack of sophistication with regard to the assessment of a firm’s prospects given specific technologies and the resulting estimation of a fair valuation for a firm. The main mitigant to the lack of sophistication of public buyers is that the skill and knowledge deficit is abridged by investment bankers, lawyers, accountants, and other market professionals involved in the IPO process undertaking detailed due diligence and ensuring that a new issue is correctly priced (e.g. LERNER and HARDYMON 2002, pp. 337-339).\textsuperscript{130} The certification role played by investment intermediaries has been subject to several empirical studies. MEGGINSON and WEISS (1991) show the more reputable the investment bank

\textsuperscript{130} These intermediaries are repeat players in the capital markets and are thus worried about their reputations with respect to every new issue brought to market, which leads to an incentive to price new issues appropriately (CUMMING and MACINTOSH 2003b, pp. 116-117).
underwriting an IPO the less extreme the short-term underpricing of the issue. This means the stronger the signal of quality the less the need to under-price an issue in order to attract purchasers. The certification role extends to venture capitalists as well. Reputation of a venture capital firm has an impact particularly on the timing of IPOs and the degree of underpricing (i.e., GOMPER 1996, MEGGINSON and WEISS 1991). This area is discussed in more detail in section 3.4.2 of this study.

One of the core disadvantages of IPOs are the extent of transaction costs occurring, which will be discussed in detail in section 4.3.2.2.

2.3.2.4 Buy-back
In a buy-back transaction, a private equity fund sells its shares back to the company or entrepreneur that sold the shares originally. Buy-backs are of greater relevance for early stage investments with relatively low valuations.131 This type of exit is perceived to be a route of divestment for portfolio investments of limited success.

Particularly in cases of early stage ventures, the buy-back is triggered by the exercise of contractual rights arranged by the venture capitalist at the time of initial investment. These rights often include, for instance, the venture capitalist’s ability to ‘put’ or sell back its shares to an entrepreneur when a stated time period has elapsed, when the company has failed to achieve performance targets, or when the company has failed to go public (CUMMING and MACINTOSH 2003b, p. 125).

In order to be able to finance a buy-back, the entrepreneur and/or firm usually have to borrow money which substantially increases the debt burden on the business. Resulting high fixed payments of interest and principal can discipline a management team.

2.3.2.5 Recapitalisation132
Recapitalisations are not a true form of exits, as these transactions do not reduce a venture capitalists ownership stake in a business. However, a financial investor’s equity exposure is reduced through redeeming capital typically through a extraordinary dividend financed by incremental debt.

131 In cases of a buy-back, the venture capitalist will likely have a clear preference for a full exit in light of otherwise arising conflicts of interest following the financial investor losing control over a company. However, consistent with the theory that these transactions involve firms that are only modestly successful and thus have limited ability to generate sufficient cash flows for debt service, the entrepreneur (with or without external borrowing) may not have the resources to effect a full buyout (CUMMING and MACINTOSH 2003a, p. 524).
132 Dividend recapitalisations have been explored further in section 2.2.5.3.
The idea is to increase the debt burden on a portfolio firm that has already repaid a portion of the debt initially raised at the time of the acquisition. While recapitalisations are applied in connection with firms at every step of their development (early stage to established companies), these sort of transactions are commonly applied for leveraged buyouts. Companies that underwent a LBO, meaning that the initial acquisition was already financed mostly through debt instruments, have the systems and experience to operate with a focus to generate sufficient cash flows to service debt appropriately.

Commenting on developments in the exit markets in 2003, KUSHNER (2004, p. 97) states: “In this challenging climate, partial exits through leveraged recapitalizations increased in popularity and often provided what many viewed as the sole source of liquidity and return of capital for private equity funds, and thus their limited partners, in a marketplace where IPOs were rare, strategic buyers were scarce and acquisition financing was available only episodically.”

2.3.2.6 Liquidation: Writing off a failed investment
A ‘write-off’ occurs when a venture capitalist walks away from its investment, not able to realise initially expected returns. While a write-off often involves the failure of the company, a financial investor might also continue to hold shares in an enterprise that is marginally profitable. This may involve a so-called ‘lifestyle’ company that generates returns sufficient to support the entrepreneur in relative comfort but lacks sufficient upside potential to maintain the VC’s active involvement (CUMMING and MACINTOSH 2003b, p. 108).

A write-down is effected as a form of partial value-correction, where the financial sponsor recognises that the investment still has some value, but lacks the originally anticipated upside potential that inspired the initial acquisition. When a write-down occurs, the financial investor will in all likelihood spend very limited or no further effort in restructuring or enhancing the investment. In the jargon of the private equity industry, companies associated with a write-off or write-down are labelled as ‘living dead’ or ‘walking wounded’ investments. A write-down or partial write-off signals that the venture capital firm has a poor quality company remaining in its portfolio.
3 Theoretical foundation and literature review

Over the past decade, a scientific coverage of various aspects in relation to potential exit channels for private equity portfolio companies has emerged. A few important examples of recent contributions touching on divestment considerations are by: GOMPERS and LERNER (2003), who focus on the performance of public stock exchange listings; CUMMING and MACINTOSH (2003a, 2003b), who analyse full versus partial divestments and venture capital exit choices; BOTTAZZI and DA RIN (2002), discussing the role of functioning public equity markets for the European private equity and venture capital industry; BASCHA and WALZ (2001), examining potential applications of convertible securities in exit transactions; GOMPERS and LERNER (2001), reviewing existing knowledge about public listings of portfolio companies; GOMPERS and LERNER (2000), analysing valuation aspects in the context of a company sales to private equity investors; or LIN and SMITH (1998), who analyse insider reputation aspects in the context of private equity driven public stock exchange listings.

In their paper ‘The Venture Capital Revolution’ GOMPERS and LERNER (2001) review the status of the current scientific knowledge about various aspects of the venture capital and private equity industry. Summarising prevailing relevant academic literature, they confirm that the scientific community working on private equity matters has elaborated almost exclusively on specific transaction types, thereof mainly IPOs. They also conclude that more recent research in this area has examined the timing of the private equity investor’s decision to take firms public and the timing of the decision to liquidate specific investments, which frequently occurs well after the initial public offering. Similarly, CUMMING and MACINTOSH (2003a) provide a comprehensive review of literature on venture capital exits and indicate that the areas of exit choices and processes are still under-researched.

Worth mentioning is the work by CUMMING and MACINTOSH (2003b), where factors influencing exit choices are examined conceptually and empirically. Their analysis focuses on the ultimate choice of divestment route for venture capital portfolio companies in the United States and Canada. Even though there are similarities in the research objective of this work and their paper, the core differences are manifested in the regional market focus (Europe versus Canada and the US), the market segment concentration (sizeable leveraged buyouts versus a much broader venture capital classification), a focus on exploring the decisions relevant for the exit design process and not only the type of execution. They argue that exit choices are influenced by the quality of the entrepreneurial venture, the nature of its
assets, and the duration of venture capital investment. Similarly, SCHWIENBACHER (2002) examines exit decision patterns in the context of the venture capital financing in the US and in Europe. Nevertheless, neither of the studies critically prioritise or evaluate the decision determinants, which have been examined. Despite the different objectives, both contributions are helpful for this dissertation and provide a framework for the formulation of hypotheses as well as the identification and instrumentalisation of the analysed variables.

According to GOMPERS and LERNER (2004, p. 350), the divestment aspect of private equity investments has attracted very limited theoretical attention. There are not a lot of widely established theories, which that have been used to explain the motivation to exit portfolio investments. However, there is a number of theoretical concepts that contribute to the explanation of various relevant aspects in relation to exits, most importantly for this dissertation, the timing of divestments as well as the choice of exit route. These are important theoretical constructs provide a foundation to the empirical study underlying this work and are thus discussed henceforth.

3.1 Agency theory as an overall framework for private equity exits

A concept that is frequently applied in a private equity context is the phenomenon of information asymmetry between private equity investors and the entrepreneurs or managers of an acquired company. This points to agency theory, which recognises that there is a separation of ownership and managerial control in modern firms (BERLE and MEANS 1932) such that the principal (the owner) bears the overall risk but the agent (management) directs the functions of the firm. In order to align the agent’s interest with their own interest, private equity companies incentivise management of an acquired company with ownership schemes and high portions of performance based variable income. KAPLAN and STROEMBERG (2004) point out that agency problems are very important to the contract design governing the relationship between private equity investor and entrepreneur. NEUS and WALZ (2004) emphasise the relevance of agency theory for the understanding of private equity investors’ divestment behaviour.

CUMMING and MACINTOSH (2003b, pp. 102-103) summarise existing literature on agency issues in a venture capital context and suggest that three types of relationships have been explored. First, venture-capital firms have incentives to prioritise their own interests

133 DUFFNER (2003, p. 34) sets out the basic characteristics of agency problems suggesting that assuming independent maximisation of respective utilities, the agent, who is closer to the operative business and therefore better informed, will use this superior information to maximise his own utility often leaving the principal worse off. This is referred to as opportunistic behaviour, which means that the agent passes over obligations due to contracts, laws or moral standards in case he cannot be sufficiently sanctioned.
over those of their investors and thus can be viewed as agents of the investors. Second, the entrepreneur has an incentive to favour his/her interests over those of the venture capitalist and hence can be considered to be an agent of the venture capital firm. Third, a venture-capital firm sometimes has an incentive to act at the best interests of the entrepreneur and thus may be characterised as an agent of the entrepreneur. The three relationships are summarised in the exhibit below.

<table>
<thead>
<tr>
<th>VC agent of investors</th>
<th>1. VC agent of investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture Capitalist</td>
<td>2. Entrepreneur agent of VC</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>3. VC agent of entrepreneur</td>
</tr>
</tbody>
</table>

Exhibit 57. Three types of agency relationships.
Source: Own chart based on CUMMING and MACINTOSH (2003b, pp. 102-103).

SPREMANN (1990, pp. 565-572) classifies agency problems in three main categories:

1. *Moral Hazard*
   Moral Hazard describes circumstances, in which the agent either uses information not observable by the principal (hidden information) or undertakes actions not observable by the principal (hidden action) in order to increase his own utility against the principal’s best interest. The investor as the principal can only observe the final company success but he cannot fully observe the agent’s behaviour.

2. *Holdup*
   Holdup refers to situations in which the agent systematically uses gaps or deficiencies in incomplete contracts, where not every future state is pre-specified, in his favour. After the closing of the contract and after certain investments have been made and sunk costs have been incurred by the principal, the agent reveals his previously hidden intentions and forces the principal into renegotiations (i.e., SPREMANN 1990, pp. 568-570, DUFFNER 2003, pp. 34-35).

3. *Adverse Selection*
   Adverse Selection is a problem that appears in markets where one party cannot discriminate between good and bad quality of the other party, i.e. the other party has hidden characteristics (e.g. AKERLOF 1970). The literature in this context frequently refers to
AKERLOF’s (1970) ‘lemons’\(^{134}\) market problem setting out an example of the market for used cars in the United States. The buyers’ price judgement based on an assumed average quality can induce good quality suppliers to leave the market and can ultimately cause a market breakdown. Even though this is not explicitly a hierarchical relationship, it is often denoted as an agency problem. The company seeking investment has an information advantage and is seen as the agent, the investor is seen as the principal (DUFFNER 2003, p. 35). The further discussion on this topic concentrates on agency aspects that specifically are relevant for the exit process of portfolio firms.

BRUTON, KEELS and SCIFRES (2002, pp. 710-712) emphasise the critical nature of managerial ownership to the performance of buyout transactions. Discussing the divestment phase, they argue that the agency conflict typically increases towards the point of an exit. Taking the example of a public stock exchange listing where only a part of the investment is being sold, they explain that managers are likely to receive a share of the proceeds thus reducing their ownership and economic interest in the company. Following agency theory, the resulting increase in the goal conflict between owner and management would suggest that private equity houses should seek to exit in full shortly after a partial divestment. This is somewhat supported by an empirical analysis by LIN and SMITH (1998) demonstrating that most transactions are fully exited within 3 years following the first partial exit.

The uncertainties and information asymmetries an investor faces not only before entering an investment but also over the entire investment horizon contribute to agency problems (KAPLAN and STROEMBERG 2004). Also in connection to the divestment process and in relation to agency theory, literature refers to the above mentioned moral hazard issues (i.e., CUMMING and MACINTOSH 2003a, CUMMING 2004, KAPLAN and STROEMBERG 2004, CUMMING 2005). CUMMING (2004) argues that the returns of a venture are exposed to bilateral moral hazard as its success depends on both the entrepreneur’s and the private equity investor’s efforts. However, parties to these issues are not only the private equity investor and the entrepreneur or management but also future potential buyers of the private equity investor’s stake in a business. Due to their ‘insider’ status, private equity owners could be tempted to sell a portfolio business opportunistically. The private equity investor, benefiting from an information advantage, could misrepresent the value to potential acquirors or shareholders. However, it is interesting to note that BRAV and GOMPERS (1997) argue that venture capital or private equity-backed stock exchange listings yield higher returns in the first five years after a listing than other IPOs. This

\(^{134}\) Colloquial American English refers to ‘lemons’ as an expression for used automobiles of doubtful quality and condition.
suggests that private equity divestments via a public stock exchange listing are not unfavourably overpriced compared to other non-private equity related issuances but rather underpriced.

In this context, LIN and SMITH (1998) emphasise the necessity for private equity and venture capital investors to establish reputation as they approach stock markets repeatedly. Similarly, NEUS and WALZ (2004) view underpricing as reputational device that particularly describes the behaviour of young venture capitalists and propose that it is less likely for transaction pricing by venture capitalists that have already established reputation. GOMPERS (1996) demonstrates that based on evidence of a sample of more than 400 IPOs, young venture capitalists also exit portfolio companies earlier than established firms in order to build up a track record of successfully completed exits. He refers to this phenomenon as ‘grandstanding’. He also finds that the time of IPOs of companies held by newly established venture capital firms precedes or coincides with the same firm raising follow-on funds. This finding is important as it highlights a potential relationship between divestments and fundraising requirements of private equity firms.

3.2 Underlying theoretical approaches – timing of exits

3.2.1 Value-add and monitoring cost concept

In order to determine the optimal point in time to divest a portfolio company, CUMMING and MACINTOSH (2001, 2003b) argue that a venture capitalist would weigh the ‘marginal value-add’ of his efforts against the marginal cost of these efforts. While other authors also indicate that the relationship between adding value to a business and related costs is a likely factor in exit decisions (i.e., GIFFORD 1997135, LERNER 1999, GOMPERS and LERNER 2001, TYKVOVA 2003a), CUMMING and MACINTOSH (2003b) provide an elaborate conceptual framework. By ‘value-add efforts’ they mean all measures an active financial investor can take in order to enhance the value of a business such as offering expert advice, replacing or adding to management, providing useful contacts, etc. They define ‘cost’ as all direct and overhead costs associated with creating value and also the opportunity cost associated with alternative deployments of capital. An investor is anticipated to exit when the projected marginal value added is less than or equal the projected marginal costs. This theoretical approach is to a certain extent arising from agency theory as monitoring requirements are in relation to information asymmetries, which cause agency problems.

135 GIFFORD (1997) developed a model regarding the optimal allocation of a venture capitalist’s time between monitoring existing portfolio companies and acquiring new investments. The timing of exits in her concept is similarly to CUMMING and MACINTOSH (2001, 2003b) influenced by the relationship of benefits keeping an investment and opportunity costs (time).
In their general and simplified theory, they propose that an exit is triggered by one of three types of events (CUMMING and MACINTOSH 2003b, pp. 110-111):

1. The marginal value and maintenance cost curves cross

The potential for value-add provided by venture capitalists is expected to decline over time. Value added is greatest at the start of an investment relationship, when venture capitalists are usually able to bring managerial and financial discipline to an enterprise, can help to identify and also implement product development strategies and potentially introduce enhanced legal, accounting, and marketing expertise, etc. As the portfolio company matures, the ability to add value declines over time as management becomes more experienced, the most crucial product development and marketing issues have been mastered, and the firm’s various business contacts (including legal, accounting, investment banking, marketing channels, suppliers, and customers) have been established.

Similarly, maintenance costs are expected to decrease over time, because the enhancement measures taken by venture capitalists’ tend to be skewed towards the front-end and lead to costs in the first periods of the investment. In addition, CUMMING and MACINTOSH (2003b) argue that that maintenance costs contain a significant fixed cost portion, since an investor must perform some baseline level of monitoring of each investments. Hence, the maintenance costs curve declines more slowly than the marginal value curve. At some point in time, then, the two functions cross, at which point the venture capitalist is unable to add further value to the enterprise and exits the investment, which is outlined in the chart below. The chart also displays that there might be shifts of the location of each of the function curves, which are explained by the following two events.

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136 BOTTAZZI and DA RIN (2002, pp. 235-238) highlight that the level of value-add provided by a venture capital firm depends on the stage of the portfolio company. Opportunities for adding value tend to be greater for younger firms compared to more established portfolio companies.
2. **Internal or external shocks change the location of the marginal value added curve and/or the maintenance cost curve**

Instead of being of static nature, CUMMING and MACINTOSH (2003b) posit that a variety of internal or external shocks can shift either the marginal value-add curve, the maintenance costs curve, or both. For example, if a firm’s technology proves unworkable or not practical for commercial exploitation, this is likely to relocate the marginal value added curve. Other events that may relocate either or both of the curves include a firm’s technology being rendered obsolete by external technological developments, a recession resulting in reduced demand for a firm’s product or alternatively the value of a firm’s technology increasing greatly as a result of complementary technological developments in the marketplace.

3. **A venture capitalist receives new information about the location of the marginal value-add curve or the maintenance cost curve**

Somewhat related to the previous point, CUMMING and MACINTOSH (2003b) add that the marginal value-add and maintenance cost curves, drawn at the time of the initial investment might have been based on incorrect or incomplete information. For instance, the location of the maintenance cost curve might be redrawn, if the portfolio company turns out to be difficult to deal with, for example requiring more of the investor’s time for monitoring progress in restructuring activity. The incremental time required for a specific investment would increase opportunity costs as time could be spent on other value adding activities.

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137 Legend to the chart: PMC denotes projected marginal cost, PMVA denotes projected marginal value add. The sub-letters 0 and 1 represent time periods.
Once re-drawn, the curves may intersect at a new location, satisfying the exit condition at a different point in time.

CUMMING and MACINTOSH (2003b, p. 109) emphasise that this theory is highly simplified and that it is based on a number of unrealistic assumptions such as an indefinite life-span of venture capital funds, that a portfolio firm can be sold at its true value estimate at any point in time and that the exit price is not dependent on the type of exit, etc.138

3.2.2 Asymmetric information and certification
Several authors discuss a variety of issues raised by asymmetric information between a venture capitalist owning a portfolio company and prospective buyers for that firm (i.e., TRESTER 1998, LIN and SMITH 1998, BASCHA and WALZ 2001, KAPLAN and STROEMBERG 2004, etc.). CUMMING and MACINTOSH (2001, 2003a, 2003b) and NEUS and WALZ (2004) use asymmetric information phenomena for the explanation of exit timing.

In the context of exits through IPOs, NEUS and WALZ (2004) argue that although information asymmetries between venture capitalist and potential buyers of shares exist at the time of the IPO, these reduce over time. Research reports on the company and other information becomes available to the public domain in the months following the IPO. They argue that information asymmetries influence the timing of divestments due to its impact on the potential valuation achieved for a portfolio company. While late exits are associated with large opportunity costs, elapsing time following an IPO helps to overcome information costs that would lead to a low price for such ventures. They suggest that this trade-off leads to the possibility of an equilibrium with late exits for the most profitable firms.

In order to reduce the detrimental effects of information asymmetry on the selling price, CUMMING and MACINTOSH (2003a) suggest that a venture capitalist can effect partial exits. They argue that an investor might prefer a partial exit to a full exit in order to signal the quality of the company with the aim sell further shares at a value closer to the company’s true value at a later stage. The positive effect of ‘signalling’ quality is anticipated to increase with the level of information asymmetry.

CUMMING and MACINTOSH (2001, 2003b) also indicate that a longer duration of venture capital ownership prior to an exit can potentially reduce information asymmetries,

138 By extending their theory for aspects of other concepts, such as asymmetric information, they are able to relax some of those assumptions and prove the practical validity of their approach.
as a venture capital investor’s reputation can ‘certify’ the quality of a company. This suggests that heightened degrees of information asymmetries will be associated with longer investment duration. They hypothesise that the longer the duration of an investment, the greater is the venture capitalist’s ability to effect a comparatively high-value form of exit. Also other authors put forward that the longer the investment duration the greater the ‘certification’ effect (i.e., BARRY et al. 1990, MEGGINSON and WEISS 1991).

3.2.3 Grandstanding
GOMPERS (1996) developed a model highlighting the impact of a venture capitalist’s reputation onto the timing of exits. He shows that young venture capital firms are willing to incur costs by taking companies public earlier than optimal from a return perspective and also earlier than established investors. He demonstrates the critical nature of successful exits and particularly the importance of IPOs, representing the most publicised type of exits, for future fundraising of new venture capital firms. Building a track record of being able to divest portfolio companies via the public market is perceived to be essential for obtaining investors’ trust and continued sponsorship.

He christens this phenomenon ‘grandstanding’, expressing the desire of young venture firms to establish fame and reputation. The grandstanding hypothesis predicts that the relationship between successful IPOs and future fundraising is stronger for young investors. Each incremental IPO of a young venture firm attracts more capital for follow-on funds compared to an incremental IPO of an established firm. The hypothesis also predicts that due to the more limited impact, a more established firm should have less incentive to raise funds immediately following an IPO. He demonstrates that young venture capitalists raise funds sooner than older peers.
Old venture capitalists with good reputations do not need to signal performance, as investors have evaluated their returns over years and believe in their high abilities. GOMPERS (1996) also demonstrates that younger venture capital firms tend to invest in companies at earlier development stages compared to more established investors. His study reveals that new venture capitalists bring less mature firms to the public stock markets and also that issues backed by young venture capitalists are more under-priced compared to established venture capitalists. The latter finding is confirmed by an extensive empirical study performed by LEE and WAHAL (2004).

3.2.4 Resource dependence

A further theoretical approach that appears relevant for the analysis of exit processes is the resource dependence perspective, whereby the resources of the private equity investor such as contacts and access to information networks can represent factors influencing exit processes and decisions. Private equity ownership in leveraged buyouts typically involves not only majority economic ownership but also board control\textsuperscript{139}. HILLMAN and DALZIEL (2003) link agency theory and resource dependence theory and emphasise the positive effect of an equity interest held by board with regard to both of these perspectives. The board of a company held by private equity owners is likely to have a strong equity interest which following their analysis would not only lead to enhanced monitoring of the company’s performance and activities but also stimulate board members leveraging their resources for

\textsuperscript{139} A more detailed elaboration on board characteristics of private equity portfolio firms is provided in section 2.1.7.1.
the benefit of the company. It seems plausible that the resources of the board, whereby mostly the private equity firm dominates a board, are likely to impact exit decisions. Private equity firms establish valuable contacts to parties involved in exit processes such as investment banks and lawyers and other advisors. GOMPERS and LERNER (2004) note that through their repeated involvement in transactions they are more likely to attract attention of high quality advisors, which can have an impact on the type, and success of a divestment.

The theoretical concept of resource dependence is not widely explored in a venture capital or private equity context but might be an area for further research.

3.3 Underlying theoretical approaches – choice of exit route

Theoretical concepts that are used to explain timing decisions are also relevant for the analysis of the choice of an exit route. Agency considerations, information asymmetry problems as well as signalling and grandstanding phenomena are of particular relevance.

3.3.1 Agency theory

It is particularly the agency relationship between an entrepreneur or the management team of a portfolio company on the one hand as the agent and the venture capital investor on the other hand as the principal that is supposed to influence the choice of exit routes. BASCHA and WALZ (2001) demonstrate that the portfolio company management is incentivised to undertake efforts to achieve an IPO exit rather than a trade sale. In case of a public listing the shareholder base gets more dispersed. Following the venture capitalist’s IPO exit, it is far less likely to have a single controlling shareholder compared to a trade sale option. Gaining control over a company following an IPO exit represents a non-monetary benefit for an entrepreneur or the management, respectively.

There is a consensus among authors in this field that IPOs are the most successful exits for well performing portfolio companies (i.e., WRIGHT and ROBBIE 1998, GOMPERS and LERNER 1999a, 2004). At first glance, the incentive to strive for a public listing rather than other exit options does not seem to raise an issue. However, as BASCHA and WALZ (2001) show, it very much does raise concerns. IPOs do not constitute the most appropriate and highest value creating exit option for all portfolio companies. Jeopardising individual exit routes in favour of others, does represent a conflict of interest between agents and principal.
In order to mitigate agency problems between an entrepreneur or the portfolio company management and the financial investor, authors highlight the importance of contract design (e.g. KAPLAN and STROEMBERG 2004) and in particular managerial compensation. CUMMING and MACINTOSH (2003b) argue that IPO exits permit types of managerial compensation that reduces agency costs. Exits effected through IPOs allow companies to reward managers by means of stock options or other incentive devices linked to a public stock market price which helps to align the managers’ and the investors’ interest. This can lead to lower agency costs than other forms of exit, which in turn is predicted to be reflected in higher prices for the venture capitalist’s investments. Taking firms public exposes companies’ management to the market for corporate control, also mitigating agency costs.

3.3.2 Asymmetric information

Exit processes are also characterised by information asymmetry between the seller (the private equity investor) and the purchasers of a portfolio company. The seller naturally has greater access to information about the company and has an enhanced ability to evaluate that information due to a lengthy involvement with the firm and/or a superior understanding of portfolio firm’s business. This information asymmetry can potentially impact the price at which the private equity fund’s interest in the business is sold. Different exit routes target different types of buyers, some of whom are less well positioned than others to resolve information asymmetries. Greater information risk leads to a heavier discounting of a company’s expected future cash flows (i.e., risk is interpreted as a cost factor). Buyers who are less able to resolve information asymmetries and value the firm accordingly will pay less for a stake in the firm than buyers who are better positioned to do so. Hence, the venture capital firm acting as vendor is assumed to choose the type of exit that results in a sale to the buyer(s) that are best capable to resolve information asymmetries (CUMMING and MACINTOSH 2003b, pp. 103-104).

Leaving aside certification phenomena, which suggest that a private equity firm’s reputation or the quality of an underwriting investment bank can mitigate information asymmetries (i.e., BARRY et al. 1990, MEGGINSON and WEISS 1991, GOMPERS 1996), exit routes can be ranked for portfolio companies with high levels of information asymmetry, such as high-technology businesses.

CUMMING and MACINTOSH (2003b, pp. 104-105) hypothesise that in circumstances of high information asymmetries the exit route preferences from a value maximisation standpoint would be ranked as follows: Buybacks, trade sales, secondary buyouts and finally IPOs. While the former owners of the business are expected to resolve asymmetries
best, public investors typically are least well positioned to do so. As noted beforehand, information asymmetries can be mitigated by investment duration. Thus, it is predicted that companies characterised by high information asymmetries are divested through IPOs and are held longest in the portfolio while those sold via buybacks are kept shortest. Following their theory write-offs would be held even shorter than buy-backs.

<table>
<thead>
<tr>
<th>Ability to resolve information asymmetries</th>
<th>Investment Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

**Exhibit 60. Exit types and information asymmetries. Own chart following: CUMMING and MACINTOSH (2003b), pp. 104-105.**

### 3.3.3 Grandstanding

The need for investors to establish reputation, in order to secure the future of the firm and the attraction of sufficient capital for follow-on funds also impacts the choice of exits. It is widely acknowledged in academia as well as by practitioners that IPOs contribute most to an investor’s image and reputation and are superior to all other exit types in this respect (i.e., MEGGINSON and WEISS 1991, GOMPERS 1996, LIN and SMITH 1998, GOMPERS and LERNER 1999a).

As mentioned before, the ‘grandstanding’ hypothesis developed by GOMPERS (1996) predicts that the need to conduct successful exits and preferably IPOs is stronger for young venture capitalists compared to already well established peers. Even though GOMPERS (1996) did not discuss other forms of exits specifically, there is no reason why this theory would not be applicable for other exit routes (CUMMING and MACINTOSH 2003b, p. 162).

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140 IPOs are perceived to be the most successful exits on average. Recent studies such as COCHRANE (2005), BIENZ (2004) or DAS, JAGANNATHAN and SARIN (2003) confirm that overall IPOs generate the highest returns for investors compared to all other types of exits. However, one has to caveat that this certainly does not hold true for all types of investments and industries.
In addition, IPOs receive more widespread coverage in the press and media than other exit types and attract the interest of a broad spectrum of investors who might also become investors in a venture capitalist’s future funds offerings. This publicity extends beyond the exit as publicly traded firms that perform well continue to attract the interest of the financial press, analysts, and investors long after the IPO is concluded. In contrast, publicity on acquisition transactions disappears quite quickly. All these considerations might lead venture capitalists to prefer an IPO exit even in cases where an acquisition exit would result in a higher individual investment return. Following these arguments, one can hypothesise that grandstanding will bias exit decisions in favour of IPO exits, particularly in an attractive market environment that provides for IPO valuations (CUMMING and MACINTOSH 2003b, p.162).

In contrast to IPOs and to a lesser extent trade sales, buybacks are generally not associated with very high returns (i.e., DAS et al. 2003, CUMMING and MACINTOSH 2001, 2003b). Thus it seems unlikely that the grandstanding hypothesis would lead to exits effected through this channel.

3.4 Existing studies on portfolio company exits

The chart below sets out the structure of the literature review section.

Several studies describe the phase of portfolio company divestments in the context of the overall private equity activity. These studies are referred to as ‘framework literature’ as they set the stage for further discussions on exits and contribute to the understanding of the crucial importance of portfolio company divestments to private equity firms.

The review of literature concentrating on exits is divided into three focus areas:
1. Analysis of aspects in relation to specific exit routes, whereby the predominant focus of existing research is set on IPOs;
2. Analysis of aspects in relation to the timing of exits, exit route choice and process;
3. Studies providing theoretical concepts for the explanation of portfolio company divestments.

In addition, there is an array of other contributions in the field of venture capital and private equity research that has relevance to exit considerations.

### 3.4.1 Framework literature

One of the most widely cited concepts in the field of venture capital and private equity research is the ‘Venture Capital Cycle’ framework, developed by Harvard Business School professors GOMPERS and LERNER (1999a, 2004). They argue that in order to understand the functionings of venture capital and private equity investors, one has to grasp each of the steps that are inherent to the nature of this business. These steps are depicted in the exhibit below: Fundraising, investing, monitoring investments, adding value to portfolio companies and exiting investments.

As private equity investors typically do not provide the bulk of the capital for a fund from their own wealth, they seek to attract capital from institutions such as investment and pension funds, university endowments, and wealthy individuals or families for funds.\(^{141}\)

The second stage in the cycle is the ‘investing’ step. Private equity investors have to review and assess potential investments, conduct due diligence about the prospects of a target company, judge valuation and execute the acquisition of companies deemed as appropriate.

\(^{141}\)Details on fundraising and structures of funds as partnerships have been laid out in section 2.1.4.2.
and attractive. It is common that private equity firms only invest in a tiny number of reviewed candidates.

Once the investment decision is taken, private equity investors will structure their equity stake using preferred stock with numerous restrictive covenants and also require a representation on the board of directors in order to monitor and assess management’s actions, hence the label ‘monitoring’ phase. Related to this phase is the ‘adding value’ stage. Even though the level of involvement of investors in the management of a firm varies, there is a common intent of private equity investors to add value to an acquired business. This can be through providing expert advice strategic, managerial and financing issues together with putting in place incentives for entrepreneurs to perform well (BOTTAZZI and DA RIN, 2002). Private equity investors often tend to invest in a limited number of industries and sectors where they might have built up experience and have established valuable networks among potential suppliers, customers and advisers.142

Finally, a private equity investor needs to manage the divestment of portfolio companies in the ‘exiting’ stage. The need to ultimately exit investments shapes all other aspects of the venture capital cycle from raising funds to investing. If private equity investors cannot foresee that a company will be mature enough to be taken public or sold towards the end of a funds’ life, they are unlikely to invest in the business in the first place (GOMPERS and LERNER, 1999a).

Two other prominent studies review the established scientific knowledge in the private equity field, segregating aspects in patterns similar to the venture capital cycle framework. Both WRIGHT and ROBBIE (1998) and GOMPERS and LERNER (2001) critically review existing studies on private equity and identify gaps in scientific understanding.

WRIGHT and ROBBIE (1998) categorise private equity activity in more stages and confirm that these phases have been identified through direct observation of investors’ actions. Unlike the more simplified venture capital cycle approach, their framework does not only divide activities into more steps but also captures the post-exit component as well as the role of entrepreneurs (which would be represented by a portfolio company’s management in buyout transactions) that have received financing from the investor for future deal generation. They also argue that venture capital investors and an entrepreneur (or management) are potentially not exiting at the same time, which is an important

142 HSU (2004) points out that the investment experience in a specific sector has to be an important consideration on the part of the entrepreneur searching for capital.
consideration in the contractual arrangement of exits. Stronger than in the venture capital cycle framework, they stress the dynamic nature of the overall process and the ongoing interaction between all parties involved. While contributors of capital to the private equity fund demand periodical reports on the performance of portfolio investments and potentially even some involvement in the governance of the portfolio firm, entrepreneurs or the company’s management can be instrumental for future deal generation. The schematic below sets out their concept of venture capital functioning.

Similar to GOMPERS and LERNER (1999a, 2004), they also emphasise the critical nature of successful exits for venture capital investors and state that divestment arrangements will be largely influenced by the relative bargaining power between an investor and the entrepreneur or the portfolio firm’s management team. In this respect, they mention that an investor’s desire to exit may influence the nature of the corporate governance in order to achieve a timely exit. BARRY, MUSCARELLA, PEAVY and VETSUYPENS (1990) indicate that investors have a number of mechanisms to ensure portfolio firms go public at times perceived to be optimal, including board representation and informal advice provided to the entrepreneur or management. One could add that private equity investors usually try
to align managements’ interest with their own by putting compensation or ownership incentive schemes in place.\textsuperscript{143}

In their comprehensive review of the US private equity market, FENN, LIANG and PROWSE (1995) set out their concept to distinguish several steps of private equity activity. They separate the transaction process into four main steps, as illustrated in the chart below. The overall concept is similar to the approaches set out above, however, they emphasise two sub-steps that have not been captured to this extent in the other concepts. First, the ‘syndication’ of an investment. They argue that investments frequently are made jointly by two or more private equity investors, forming consortia particularly when bidding for sizeable target companies. Second, the ‘managerial incentives’ part of structuring investments. They stress the importance of aligning management’s or entrepreneur’s interest with those of investors which involves the appropriate determination and negotiation of incentives such as managerial stock ownership plans. This aspect also includes the structuring of the equity capital structure with regard to instruments used (convertible instruments, common equity, etc.), compensation contracts, board representation and the allocation of voting rights.

With regard to the relative importance of each exit route, despite the literature’s focus on IPOs, investors maintain a flexible approach to the timing and form of exit. A sale of a portfolio company to a third party is in practice the most common and preferred type of divestments, either because a size threshold for IPOs is not met or because an attractive but

\textsuperscript{143} WRIGHT and ROBBIE (1998) add that in order to achieve timely exits, investors are likely to engage in closer monitoring of their portfolio firms and introduce exit related compensation for management.
unforeseen acquisition proposal is received (WRIGHT and ROBBIE 1998, p. 551). RELANDER, SYRJANEN and MIETTINEN (1994), based on European transaction evidence, conclude that although IPO exits might be preferred in principle, trade sale divestments are more common. The author’s own survey results confirm that trade sales are the most preferred form of exit of buyout firms in Europe. A reason could be that trade sales unlike IPOs achieve an immediate full divestment and cash proceeds.

Three years after WRIGHT and ROBBIE (1998), GOMPERS and LERNER (2001) analysed the state of established scientific knowledge in the field of venture capital and private equity research in their paper ‘The Venture Capital Revolution’. Following the steps in their venture capital cycle, they summarise relevant key studies and identify research gaps. They also indicate that there is wide scope of research on the going public exit process, nonetheless, there is less depth in research on aspects such as the timing of exits.

CUMMING and MACINTOSH (2003a) classify divestments into full and partial exits. They differentiate between exits where an investor sells its entire stake in a portfolio company for example via a trade sale or a secondary sale, and divestments where only a part is sold. Key example for the latter category are IPOs, in which typically only a portion of the private equity firm’s stake is sold to the public market, with the remaining portion being subject to so-called lock-up restrictions binding a private equity owner to retain ownership for a certain period. These considerations will be further explored below.

3.4.2 Studies on IPO exits

Within literature on portfolio company divestments, the area of IPOs exits has received the greatest academic attention. Studies cover a wide range of related aspects such as the performance of IPOs, the pricing of IPOs, the relationship between capital markets and exit arrangements, the timing of IPOs, and the cost of going public, to name a few. Many studies refer to IPOs of private equity-backed companies as ‘Reverse Leveraged Buyouts’, as a company that has been taken private before goes public again.

BLACK and GILSON (1998, p. 258) highlight the necessity of liquid stock markets, receptive for new listings, for the development of an active private equity market. Focusing on the financing of small and medium sized firms, HALL (2002) questions the meaningful role of venture capital in countries with under-developed stock markets. Building up a

\[^{144}\text{GOMPERS and LERNER (2001) highlight that areas such as the risk and reward relationship for private equity investment, the impact of internationalisation of private equity firms on their investment behaviour and the decision making structures within investor firms would be fruitful grounds for further research.}\]
theoretical modelling approach, he argues that the venture capital sector requires good long-term performance in order to persist. Furthermore, he suggests that successful long-term performance requires well-established stock market segments for small and new firms such as the NASDAQ exchange.

LERNER and HARDYMON (2002, pp. 334-336) emphasise the critical relationship between taking firms public and the sustained success of the private equity industry. GOMPERS and LERNER (1999a, pp. 213-237) examine the relationship of public capital market conditions and the decision to go public conducting an extensive empirical analysis using a sample of 350 privately held biotechnology firms financed by venture capital and private equity firms between 1978 and 1992. They find that private equity investors take firms public during times of market peaks and rely on private financings (such as trade sales, etc.) when public equity market valuations are lower. Moreover, they conclude that experienced investors are more proficient regarding the timing of IPOs. The public stock markets’ appetite and receptiveness for new issues varies dramatically which strongly influences the valuation of a potential IPO exit (GOMPERS and LERNER, 1999a). BARRY et al. (1990) stress that the successful timing of IPOs provides a significant benefit to the private equity investors, even though they rarely sell shares at the time of the IPO. Taking companies public when equity values are high reduces the dilution of their ownership. GOMPERS and LERNER (1998b) analyse a dataset of more than 700 transactions by 135 venture capital and private equity investors in the United States and show that even after the expiry of the lock-up period, private equity firms do not sell stock but rather distribute shares to their own investors, typically the limited partners in the funds. Their empirical evidence suggests that share prices drop by 2% in the days following the distribution which is due to outside investors’ reaction to announcements of secondary stock sales by limited partners even though the distribution has not been announced.

BARRY et al. (1990) and MEGGINSON and WEISS (1991) provide evidence that venture capital-backed firms go public earlier than other firms, because the venture capitalist is in a position to certify the quality of offerings. This is because private equity and venture capital firms repeatedly bring companies to the public stock markets and cannot afford to offer overpriced issues in light of maintaining an established reputation. GOMPERS’ (1996) ‘grandstanding’ concept provides confirmation, predicting that young venture capitalist firms have an incentive to incur the costs of an early IPO because their fundraising is significantly more sensitive to realised performance than for an established firm. Based on a

145 The motivations for distributions have been set out in section 2.3.2.3.
sample of 433 IPO transactions in the United States over the period 1978 to 1987, he also suggests that IPOs by younger venture capital investors are more underpriced than the ones by established firms, which he also explains with the need to establish reputation in the market. He argues that ‘signalling’ success to the market by rushing portfolio firms to the public stock market at underpriced valuations seems to cause real wealth losses, which largely limited partners of funds bear. It is important also for the discussion of exit timing that GOMPERS (1996) identifies a fund’s sequence number as a potentially important factor in the exit decision, with first-time funds having an incentive to take companies public too early. Analysing an extensive sample of European IPO transactions, BOTAZZI and DA RIN (2002), however, could not confirm that venture capital-backed firms go public earlier than other firms.

BRAV and GOMPERS (1997) compare underpricing of venture capital-backed versus non-venture capital-backed IPOs, using an exhaustive sample of more than 4,000 transactions in the period from 1972 to 1992 in the United States. They find that venture capital-backed IPOs are more underpriced and thus outperform other issues.\(^{146}\) FRANZKE (2001) conducted a similar analysis on the basis of a German sample comprising 160 non venture capital and about 80 venture capital-backed IPOs, effected over the period March 1997 to March 2001. In line with US results, she shows that venture capital-backed IPOs are more underpriced than other IPOs. It is interesting that she finds that the involvement of a reputable venture capitalist leads to a higher underpricing, which is in contrast to GOMPERS (1996) and BRAV and GOMPERS (1997). She stresses that the underpricing behaviour has to be regarded in the context of venture capitalists only selling about 20% of their pre-IPO equity stake at the time of the IPO, which makes their exit strategy following an IPOs crucial.

Also comparing venture capital-backed IPOs and other IPO transactions, MEGGINSON and WEISS (1991) find that IPOs by venture capitalists are able to attract higher quality underwriters and auditors than other listings. For the purpose of their analysis they match a sample of 320 venture capital-backed IPOs with 320 non-venture capital-backed IPOs in the same industry and with a similar offering size.\(^{147}\) They claim that the quality certification by

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\(^{146}\) This is confirmed by a study by LEE and WAHAL (2004) that shows that venture capital-backed IPOs are more underpriced than other IPOs, which they also explain by the grandstanding argument. Their dataset include more than 6,000 IPO transactions in the United States over the period 1980 to 2000. The return differential ranges from 5.0% to 10.3% over the entire sample period. During the internet bubble period of 1999–2000, the differential is even larger (up to 25.0%).

\(^{147}\) TYKVOVA (2003b) examines the differences between IPOs backed by German and IPOs backed by foreign venture capitalists on the ‘Neuer Markt’ segment of the German stock exchange. She concludes that the grandstanding, the value-added, the certification and signalling hypotheses provide hints for the explanation of some of these differences in the investment patterns between German and non-German venture capital investors. JELIC, SAADOUNI and WRIGHT
a venture capital firm reduces information asymmetry between the issuing firm and the underwriters and auditors which facilitates a reduction of the overall costs of going public. They also find evidence for lower underpricing for venture-backed IPOs which stands in particular contrast to the findings by LEE and WAHAL (2004).

With regard to the cost of IPOs, ANG and BRAU (2002) also demonstrate, based on evidence of a sample comprising more than 300 transactions, that more transparent firms pay less issuance cost, which they divide in four components: Initial underpricing, underwriting fee and other expenses, which comprises legal and administrative fees, as well as overallotment costs. They also find that firms pay higher costs in all components of the issuance cost, if they have to pay more in any one component. Their results are in accordance with LEE and WAHAL’s (2004) argument that venture capital-backed firms face lower costs when doing an IPO than non-venture-backed firms. FIELDS, FRASER and BHARGAVA (2003) compare the underwriting costs in IPOs led by investment versus commercial banks and find that overall underwriting costs (including underpricing) are lower for commercial banks led IPOs, mainly due to significantly lower underpricing.148

Other studies concentrate on corporate governance aspects and the role of private equity investors during IPOs. Working with a sample of about 300 IPO transactions, BOURESLI, DAVIDSON and ABDULSALAM (2002) analyse both the changes to boards of directors that occur in companies that go public and whether the involvement of venture capital firms affects the pre-and post-IPO governance structure. They find that in both time periods fewer inside directors and affiliated outsiders occupy board seats when venture capitalists are financing a company. Venture capitalists tend to occupy board seats when they provide capital, hence it is apparent that they take a direct governance role. Analysing a sample of mainly US and Belgian transactions, VAN DEN BERGHE and LEVRAU (2002) argue that the strong interest of venture capitalists in monitoring a company’s performance is the key driver for corporate governance structures. They question the ‘real’ independence of independent directors on boards of portfolio companies, as these are typically appointed by

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148 Average initial returns are 12.31% for the issues with underwriter warrants, versus 6.35% for the issues without underwriter warrants (BARRY, MUSCARELLA and VETSUYPENS, 1991). BARRY, MUSCARELLA and VETSUYPENS (1991) examine the use of warrants as a part of the compensation for underwriters in IPOs. They explain that warrants provide a mechanism for circumventing regulatory constraints, enabling issuers to offer additional compensation for underwriters of particularly risky offerings. With regard to the characteristics of warrants they find that these typically have a five year live and an exercise price of 120% of the offer price, at which the underwriter acquired the warrants for. Issuers that grant underwriter warrants tend to be younger than firms that do not grant warrants in connection with IPOs. They also find that issues with warrants are more underpriced.
the venture capital firm. They also conclude that the level of involvement of venture capital investors on the board varies considerably from investor to investor, but is also dependent on the characteristics of the portfolio firms.

Analysing trends in the way private equity firms conduct business in Europe, BOTAZZI et al. (2004) argue that European private equity investors tend to follow US examples and have started to direct companies more ‘hands on’ which means they are playing a more and more active role in the governance of their portfolio firms.

3.4.3 Other forms of exit
Analysing trade sales as an exit route for US venture capitalists, PETTY, BYGRAVE and SHULMAN (1994) find that although trade sales can provide immediate and full liquidity of an investment, which is valued highly by financial sponsors, the objectives of the entrepreneur or an executive management team may not be satisfied. This refers to the discussion of IPO motivations provided by LERNER and HARDYMON (2002) mentioned above. Not only do executives usually retain more managerial freedom and flexibility with a well diversified shareholder base rather than with a large majority owner but an IPO can also enhance their image profile and status perception of a company particularly vis-à-vis stakeholders such as customers and suppliers.

Analysing the European market with regard to exits for early stage investments, MURRAY (1994), based on surveys and interviews, finds that venture capitalists rank trade sale as their preferred route of divestments ranking ahead of IPOs. He raises the concern that young and growing European firms may face an ‘equity gap’, arguing that the nature of the stock market environment in Europe and a lack of interest in smaller firms by corporate acquirors may make exits difficult. He argues, however, that larger companies might find these firms attractive if these provide them with access to new technology or product innovations.  

Other literature relevant for trade sales does not specifically concentrate on transactions involving private equity firms as seller, but rather on the analysis of corporate mergers and acquisitions where there is clearly a vast range of research and a literature review would go beyond the scope of this work.  

\[\text{In contrary to MURRAY (1994), ISAKSSON (2000) looking at the example of Sweden concludes that while trade sale exits have been the most common type of exit, IPO exits are the most preferred exit mechanism by the Swedish venture capital firms. His analysis is based on a survey circulated among venture capitalists operating in Sweden.}\]

\[\text{The author recommends a paper by LODERER and MARTIN (1990) that represents a good entry point into these considerations. They provide an extensive literature review and analyse the impact of mergers and acquisitions on the shareholder value of listed companies. Their analysis is based on an empirical examination of M&A transactions by more than 1,500 firms over a period from 1966 to 1984. Among other findings, they support the claim that shareholders}\]
WRIGHT, ROBBIE and ALBRIGHTON (2000) explore secondary buyouts in detail using a dataset of more than 180 transaction in the UK from 1980 to 2000. In addition, they conducted 13 case studies of UK transactions to examine the rationale for secondary buyouts. They argue that secondary buyouts are likely to involve mature companies in traditional industries. Moreover, they suggest that secondary buyouts rarely have been considered as a exit route planned from the beginning and rather have been used as a divestment method for venture capitalists require an exit within certain time limitations and in the absence of other feasible exit channels.

Examining trends in the private equity business, ANSON (2004) emphasises the growing importance of secondary buyouts as an exit route. Mainly on the basis of a series of interviews and the analysis of industry data, he elaborates on trends in the environment for private equity transactions. He argues that secondary buyouts are a function of growing volumes of capital inflows into private equity. LERNER and HARDYMON (2002, pp. 5-8) also mention the increasing relevance of private equity firms as buyers of assets from other financial sponsors.151

With regard to other forms of exit, there is very limited coverage apart from studies on leveraged recapitalisations. However, these studies do not discuss recapitalisations purely as a means for private equity investors to reduce equity exposure but rather from a general corporate finance perspective.152 Regarding buybacks by entrepreneurs, CUMMING and MACINTOSH (2003a, p. 524) argue that buybacks are an inferior form of exit applied cases in which the investment is a ‘living dead’ or ‘lifestyle’ company that satisfies the entrepreneur’s desire for profit but has virtually no significant potential. They further expand that buybacks put a large strain on the firm’s and/or entrepreneur’s cash resources and hence will probably not involve companies with high valuations. Also analysing write-offs of portfolio companies, CUMMING and MACINTOSH (2003a) find that that investments with a longer duration are more likely to be written down in part rather than completely written off the books. They explain this by the fact that an investment of longer

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151 Historically, secondary buyouts or ‘private to private’ transactions were rare. Now the market for secondary buyouts is well established. In 2003, total secondary buyouts accounted for reached $36 billion of transaction value in 2004, representing 12% of total private equity M&A activity in 2004 (ANSON 2004, pp. 84-85).

152 WALKER (1998) discusses recapitalisations as means to discipline inefficient managers. He examines a sample of 37 leveraged recapitalisations by public firms over the period 1985 to 1989 and finds that shareholders typically earn large positive abnormal returns following such transaction. Contrary to his expectations he finds that operating efficiency following a recapitalisation does not enhance and that the efficiency of management does not rise either. HANDA and RADHAKRISHNAN (2001) analyse leveraged recapitalisations and related special dividends to shareholders. Their analysis confirms the claim that recapitalisations contribute positively to shareholder wealth. They find positive abnormal stock price returns following the transactions, which they explain mainly by the market reaction to the proposed cash payout financed through a recapitalisation.
duration has survived more periodic profitability evaluations than an investment of shorter duration and that the worst investments are typically written off quickly in order not to tie up monitoring capacity disproportionally.

3.4.4 Exit timing and process

With regard to the timing of exits, GOMPERS and LERNER (1999a, p. 246) show, based on a sample of 433 venture capital transactions that went public in the United States, that the typical investment duration ranges between 2 and 4 years. This is in line with findings by other authors, whereby the general consensus is that most investors hold portfolio companies for 3 to 5 years (i.e., LERNER and HARDYMON 2002, BOTTAZZI and DARI 2002, GIOT and SCHWIENBACHER 2003).153

Developing a model for optimal exit timing decisions, NEUS and WALZ (2004) stress the relevance of information asymmetries for the timing of exits in the course of IPOs. Most private equity investors do not exit right at the time of an IPO, due to reasons such as contractual lock-up periods, etc. They argue that optimal timing for exits requires a balance between opportunity costs and the degree of information asymmetries. Late divestments typically bear high opportunity costs, for example as the investor’s time could be used to acquire new businesses rather than monitoring existing portfolio companies. On the other hand early divestments can bear high information asymmetry costs, which typically results in lower achieved valuation. They propose that the level of information costs declines over time as more information about the prospects of the company becomes available in the public domain. The paper by NEUS and WALZ (2004) builds upon findings by LIN and SMITH (1998), who argue that optimal exit timing decisions in course of IPOs need to balance costs of monitoring and adverse market reaction following a private equity investor’s exit.154 Both concepts appear similar. Based on a sample of approximately 500 venture capital-backed IPO transactions in the period from 1979 to 1990, LIN and SMITH (1998) find that most investors retain a share within the first year following the IPO, while virtually all investors exit in full within 3 years.

153 GIOT and SCHWIENBACHER (2003) analyse the time to IPO, trade sale and write-off for about 6,000 venture-backed firms. Across all transactions in their sample they describe following investment durations for the types of exits analysed: 3.4 years for IPOs, 4.6 years for trade sales and 3.3 years for write-offs. They emphasise that the type of industry matters. Biotech and internet firms demonstrated the fastest IPO exits, internet firms are also the fastest to liquidate, while biotech firms are the slowest.

154 Also relating to concepts by LIN and SMITH (1998) is a study by TYKVOVA (2003a), who modelled timing decisions in venture capital-backed IPOs. She differentiates in her model between high and low quality firms as well as firms that require a high versus low level of consultancy input. The model is mainly driven by value-add and certification hypotheses and implies that firms with more consulting intensive projects will be financed longer by venture capital than firms with less consulting intensive projects. The quality of young firms with a short venture capital financing period will be signalled through a lock-up period. With regard to predicting the length of lock-up periods, she argues the higher the opacity of the firm and the greater the uncertainty, the longer the contracted lock-up period.
CUMMING and MACINTOSH (2001) examine the duration of venture capital investments on the basis of survey data from 35 venture capital firms capturing 246 exit transactions in the United States and in Canada over the period 1992 to 1995. While their underlying framework resembles LIN and SMITH’s (1998) approach, they add capital inflows into private equity funds as an explanatory component. They find statistically significant evidence in the US data that the availability of capital to the venture capital industry has an impact on the average duration of investments, with greater capital available resulting in a shorter duration. They argue that this supports the view that managerial talent within the venture capital industry is limited in the short run, resulting in re-deployment of managerial resources from old to new investments in order to enable the creation of new funds. In times of rapid expansion of available capital, investors appear to exit their investments with the intention to focus more on new acquisitions in a follow-on-fund in order to attract new investors and increase their total compensation. Furthermore, they add that their findings are consistent with GOPMERS (1996) explanation of grandstanding. Similarly, LJUNGQUIST and RICHARDSON (2003), based on an exceptionally detailed proprietary dataset made available by a large institutional investors in private equity, show that overall market environment and the level of competition among funds is an important determinant in the timing of exits. They argue that holding periods are shorter and the corresponding success rates are higher following improvements in the availability of investment opportunities. Investments are held for longer and are less successful when there is high competition for deal flow.

WRIGHT, ROBBIE, ROMANET, THOMPSON, JOACHIMSSON, BRUINING and HERST (1993) elaborated on the considerations influencing exit timing in management buyouts. Their analysis is based upon survey results and information from various databases covering MBO exit transactions in the period from 1981 to 1990 for the four countries UK, Holland, Sweden and France. They demonstrate that MBO transactions are typically held

155 CUMMING and MACINTOSH (2001) find that in the US, the duration was longest for secondary sale exits (average 6.3 years) and shortest for buy-back exits (average of 4.0 years) and other forms of exits (average of 2.8 years). In Canada, the average duration for IPO exits was 5.9 years compared to 4.7 years for IPO divestments in the US.

156 Their results concur with GIFFORD (1997) who developed a model demonstrating that resource allocation within private equity and venture capital firms are a factor in the determination of exit timing.

157 More specifically LJUNGQUIST and RICHARDSON (2003) demonstrate that funds exit faster, the cheaper high-yield debt becomes, with one-standard deviation change leading to a reduction of exit timing from the average 4.7 years to 2.2 years, and that early stage venture capital funds return capital faster, the higher the returns on the NASDAQ Composite Index, reducing average timing from 4.7 years to 3.5 years. Furthermore, they argue that timing for buyout funds exits is influenced by the state of the M&A market, with a one-standard deviation change leading to a reduction of exit timing from the average 4.7 years to 2.8 years. They also show that one-standard-deviation increases in the amount of capital available to same-vintage-year funds increase the duration of an investment by about 1.4 years. Lastly, the find that larger investments are typically sold more than half a year earlier than smaller portfolio investments, which suggests that investors focus their attention on those investments that have the largest impact on their fund returns.
longer than other types of investments. Taking the example of the UK, which accounts for 77% of all MBO transactions in these four countries, after 7 years investment duration only 40% of transactions in the sample have been divested. With regard to the other countries in consideration, they argue that the tendency to late exits of MBOs is even stronger. A significant portion of the sample has not been exited at the time of their study in 1993. Trade sales represented the most widely used exit route in their sample overall.

SCHWIENBACHER (2002) studies the differences in exit decision patterns between US and European venture capitalists.\textsuperscript{158} He finds considerable differences between the US and Europe: US venture capitalists tend to replace the entrepreneur more often with new management and also tend to exit between half a year and a full year earlier than their European peers. He argues, that a number of these differences result from the fact that European venture capitalists face less liquid capital markets. In addition, he confirms findings by MURRAY (1994) suggesting that trade sale are the preferred exit route by European venture capitalists, although they believe that going public may provide them with significant reputation benefits (in case the IPO is successful).

Concerning exit process design there is again less depth in existing research. CUMMING and MACINTOSH (2003a) analyse an investor’s choice of full versus partial exits for each of their five exit alternatives (outlined in section 2.3.2). It is their core hypothesis that the key factor driving this choice is the degree of information asymmetry between the selling venture capitalist and the purchaser of the portfolio company. They argue that if the degree of information asymmetry is high, a venture capitalist can maximise the overall proceeds of disposition by initially conducting a partial exit because ownership retention constitutes a credible signal for a high quality of the company. They also find that IPOs and secondary sales are likely to be effected through partial exits and that trade sales can involve partial exit components in industries with high information asymmetries such as high technology sectors.

\textsuperscript{158} Underlying empirical evidence is drawn from about 170 survey responses, of which 66 stem from European venture capitalists. Variables he considers include the investment duration, the stage of investment, the use of convertible securities, the extent of syndication of the committed venture capital, the board representation, the number of performance reports requested by the venture capitalist per year and lastly if an entrepreneur has been replaced by a new management team.
Drawing a link between contract design and exit decisions, BASCHA and WALZ (2001) develop a conceptual framework that suggests that the use of convertible securities\textsuperscript{159}, debt securities with an option to be converted into equity, is superior to a pure mix of debt and equity in a portfolio firm’s capital structure and leads to optimal exit decisions. They argue that convertible securities minimise conflicts of interest between the venture capitalist and the entrepreneur or management of the company. Their work builds upon the more comprehensive but unpublished analysis of convertible securities’ impact onto the requirements for clauses in contracts in relation to exit mechanics by BASCHA (1998).

On the basis of an experiment involving 50 venture capital firms in Australia, SHEPHERD, ZACHARAKIS and BARON (2003) analyse the relationship of venture capitalists’ experience and the quality of their decision making processes (including exit decisions). The results of their study suggest that experience is related to the quality of venture capitalists decision processes. They argue that inexperienced venture capitalists as well as highly experienced investors seem to make decisions in less reliable or effective ways than moderately experienced investors, acknowledging that the reasons for the comparatively poor performance may vary between the two groups. They suggest that for inexperienced investors the unfamiliarity with the decision structure contributes to errors in judgement. Conversely, highly experienced investors have streamlined their decision process to the point where it is highly automatic and driven by intuition and heuristic processing. As a result, the decisions of highly experienced investors may be susceptible to various forms of bias and error.

In one of their recent contributions, CUMMING and MACINTOSH (2003b) examine factors influencing the choice of exits again on the basis of the sample comprising 246 US and Canadian companies. Based on the results from this dataset, they argue that the quality of the entrepreneurial venture (which they measure in terms of market-to-book value ratio of the exit transaction), the fact if a company is operating in a high technology environment or not, and the duration of venture capital investment are gating factors for the choice of exit routes. They also provide a comprehensive analysis of advantages and disadvantages of the various exit channels.

\textsuperscript{159} In an analysis of more than 12,000 venture capital financings in the US and Canada between 1991 and 2003, CUMMING (2003) reveals that convertible preferred equity has never been the most frequently used instrument for either US or Canadian venture capitalists financing Canadian entrepreneurial firms. He criticises previous research on this topic and questions the robustness of earlier studies on the choice of venture capital contracts. He finds that the choice of contract is significantly influenced by expected agency costs, taxation as well as current market conditions for venture financings.
Also studying the choice of exit channels\textsuperscript{160}, NAHATA (2004) examines a sample of more than 2,800 exit transactions by venture capitalists in the US in the period from 1991 to 2001. He only differentiates between three types of exits, IPOs, acquisitions and write-offs and argues that the choice of an exit vehicle is governed by both firm-specific and venture capitalist-specific factors\textsuperscript{161}. He finds that better performing portfolio companies do not only achieve more successful types of exits (IPOs or acquisitions), but even among those two exit routes better performers are more likely to be taken public than sold to an acquirer. His results also suggest a positive impact of venture capitalists’ reputation onto the profitability of portfolio company exits. On average, companies that are written-off are led by the least reputable venture investors, whereas those taken public are led by the most reputable investors. Early stage companies are more likely to be acquired than taken public. Moreover, he shows that a significant portion of investment bank’s portfolio company investments are write-offs (about 40%), which raises questions about the ability of investment banks to reap significant returns in the private equity market. The evidence also suggests that corporate venture capitalists, which make strategic investments, generally find their investments to be either very successful, resulting in IPOs, or unsuccessful followed by write-offs. Finally, for both IPOs and acquisitions, the achieved exit valuation for portfolio companies is significantly positively related to the size of the venture capitalist’s investment, the venture capitalist’s reputation and prior industry returns.

CUMMING, FLEMING and SCHWIENBACHER (2005) argue that the quality of a country’s legal system is more directly connected to facilitating venture capital-backed IPOs than the size of a country’s stock market. Their analysis is based on a sample of 468 portfolio companies in 12 Asian-Pacific countries as well as investments in the US by funds that originate in these 12 countries. They argue that legal standards are necessary to mitigate agency costs efficiently. Their findings are not in contrast to the widely accepted notion that stock markets are crucial for the existence of venture capital and private equity (i.e., BLACK and GILSON 1998, HALL 2002). The argue that there is a correlation between the quality of a nation’s legal system and its stock market. They suggest that countries with

\textsuperscript{160} WANG and SIM (2001) analyse exit choices in Singapore, but concentrate on IPO exit strategies. Their work is based on a case study and 21 survey responses, which limits the study’s external validity to a certain extent. The variables in their analysis are the nature of the industry, sales and profitability of the portfolio company, age of the portfolio company, number of financing rounds prior to exit, ownership (family owned or not), and the total amount of equity committed by a venture capitalist. Their evidence suggests that companies in the family-owned, high-technology industries tend to exit via IPOs. In addition, the IPO exit route is positively related to the total amount of venture financing and company total sales. However, the level of equity valuation is shown to be independent of the likelihood that investors will exit via IPO, which means that the highest valuations are not necessarily achieved through going public.

\textsuperscript{161} The key factors in NAHATA’s (2004) analysis are the company’s financial performance, its stage of development, industry conditions, venture capitalist reputation, and the presence of corporate venture capitalists or investment banks in the investor syndicate.
higher quality legal environments usually have bigger stock markets as better shareholder rights are instrumental to attract more capital to a public equity market.\textsuperscript{162}

In his article reviewing portfolio management strategies by private equity firms, LIEBER (2004) stresses the importance of exit strategy planning already when acquiring a new firm. His analysis is based on several case studies and particularly highlights the necessary cooperation between private equity investors and portfolio company management teams, as an in-depth understanding of the companies’ current financial performance as well as the short term outlook is crucial to achieve optimal exit timing. Along similar lines, MCKASKILL, WEAVER and DICKSON (2004) developed the concept of an ‘exit readiness index’ for the identification of exit candidates in a venture capital portfolio, based mainly on interviews with business angels and venture capitalists. More like a score-card, the index contains a number of variables such as the quality of a company’s reporting and its accounts, the performance compared to the business plan, etc. The paper proposes that the ‘exit readiness index’ should be tested on longitudinal panels of start-up and nascent firms in various countries in order to determine its predictive ability.

3.4.5 Theoretical approaches relevant for exits

There is an array of studies providing theoretical approaches to private equity phenomena. Even though the divestment aspect of private equity investments has attracted very limited theoretical attention. As noted before, there are not a lot of widely established theories that have been used to explain the motivation for portfolio investments exits (GOMPERS and LERNER 2004, p. 350). Some of the studies have been mentioned already in the discussion above. Several studies expand on theoretical facets of aspects and concepts that have been highlighted.

TRESTER (1998) developed a model to demonstrate the rationale for the common use of preferred equity and convertible securities in venture capital contracts. He argues that the entrepreneur has an incentive to behave opportunistically under asymmetric information to the detriment of the venture capitalist. Furthermore he suggests that in case the probability of asymmetric information is high, preferred equity may be desirable because the entrepreneur is not pushed into behaving opportunistically and the venture capitalist may receive some positive return, rather then a total loss. This analysis is in line with the

\textsuperscript{162} KUMAR and ORLECK (2002) study determinants influencing the development of private equity markets in eight European countries and the US. They consider a number of mostly macro-economic variables but also the nature of each country’s capital market characteristics. In line with HALL (2002), they emphasise the importance of liquid stock markets and the existence of profitable exit mechanisms for the successful development of a private equity market. Other significant factors in their model are cost of capital and legal systems, as also highlighted by CUMMING, FLEMING and SCHWIENBACHER (2005).
argumentation by BASCHA and WALZ (2001). Similarly, KAPLAN and STROEMBERG (2004) emphasise the importance of initial contract design to reduce information asymmetries and to ensure the success of a venture investment. They highlight and discuss a number of potential aspects of agency problems and demonstrate that a number of contractual covenants, frequently used in practice, are directly applied in order to mitigate agency concerns. They also find that preferred equity as well as convertible debt instruments represent the most efficient contractual structure especially involving companies with high information asymmetries, such as biotechnology or information technology firms. In his comprehensive study on agency conflict aspects in the venture capital business, DUFFNER (2003) also emphasises the use of convertible instruments as a mitigant to agency concerns and also stresses monitoring as a means to minimise moral hazard.

BERGEMANN and HEGE (1998) analyse the dynamic nature in the relationship between venture capitalist and entrepreneur or management. In addition to agency cost considerations, they argue that learning might have an influence on the relationship and contractual requirements. They argue that the optimal contract is a time-varying share contract, which adapts risk-sharing between venture capitalist and entrepreneur depending on the varying needs. They also suggest that monitoring and the occasional replacement of the management improves the efficiency of the financial contracting. WANG and ZHOU (2004) build to a certain extent on BERGEMANN and HEGE’s (1998) work and add the consideration that staged financing can help to reduce agency problems, particularly moral hazard issues and raise the efficiency of relationships between venture capitalists and entrepreneurs. Their study draws a link to GOMPERS (1995), who analyses a sample of more than 2000 funding rounds for almost 800 portfolio companies and finds that monitoring and also staging of capital commitments increase with information asymmetry and expected agency costs. Furthermore, he suggests that agency costs increase with declining asset tangibility, increasing growth options and degree of asset specificity.163 Similarly, a higher dependence on the growth prospects of a company rather than on already existing business represents higher uncertainty for the investor. Lastly, the degree of asset specificity is negatively related to the liquidation value of a company, as highly specific assets, such as machinery or appliances for the chemical industry, cannot be sold easily.

163 Asset tangibility is positively related to the liquidation value of a company, because tangible assets such as machines or plants are easier to sell than intangible assets. Low expected liquidation values represent higher risk to the venture capitalist and thus raise agency costs (GOMPERS 1995).
SHEPHERD, ARMSTRONG and LEVESQUE (2005) build on GIFFORD (1997) and relate to CUMMING and MACINTOSH (2001, 2003b), developing a model for the optimal allocation of attention within venture capital firms. They differentiate between attention on pre- and post-investment activities, which means the time and resources spent in order to undertake new investments versus the time and resources required for the monitoring of existing portfolio companies. They find that investors who typically apply a balanced allocation act in the best interests of all parties involved. However, the entrepreneurs and executive management teams of portfolio firms may prefer the investors focusing more on pre-investment activities. They highlight potential areas of conflicting preferences of involved parties, examining both financial compensation as well as personal motives drivers.

HELLMANN (2002) expands the discussion about agency conflicts in venture capital and private equity situations, providing a theoretical analysis of investments jointly performed by an independent venture capitalist as well as a strategic provider of venture capital, which he refers to as ‘syndicated finance’. He shows that if the strategic investor and the venture capitalist have very distinct abilities, then it is possible to have syndicated finance where both types of investors hold board seats and actively provide support. With regard to relative valuation, he argues that if the new venture is a complement to the strategic investor’s activity portfolio and the entrepreneur has a lot of bargaining power, then the strategic investor would pay a higher valuation. Otherwise the strategic investor would pay less compared to an independent venture capitalist. If the new venture is a substitute, then the strategic investor always pays a higher valuation, regardless of bargaining power. Moreover he puts forward that syndicated financing typically commands a higher valuation than purely independent venture capital financing.

Theoretically analysing the optimal choice for venture capital exits, BIENZ (2004) provides a model based on moral hazard and governance considerations. His model only distinguishes between trade sales and IPOs and shows that highly profitable companies that need few oversight will go public, while less profitable companies that require more control will be sold. In drawing conclusions his approach ultimately goes back to concepts already developed by LIN and SMITH (1998) or BASCHA and WALZ (2001) where information asymmetries are a key determinant in exit choice decisions. 164 SCHWIENBACHER (2001) developed a model explaining the choice of exits with product market characteristics in the

164 In addition, based on a sample of more than 500 exit transaction in Europe in the period from 1971 to 2003, BIENZ (2004) shows that IRRs for IPOs (58%) have been higher than for acquisition exits (18%), which lets him confirm that there is a 'pecking order' with IPOs representing the superior exit route.
context of innovative early stage venture capital portfolio companies. His model shows that
highly innovative and profitable companies are more likely to go public than companies
running imitator projects. Furthermore, he proposes that a greater consumer heterogeneity
lowers the threshold level of innovation to pursue IPOs. His conceptual approach takes into
account agency theory including private and reputational benefits for the venture capitalist
and entrepreneur, capital markets, and product market aspects.

Unlike most of the other studies presented, BRUTON, KEELS and SCIFRES (2002) focus
in their research on leveraged buyouts of established companies. They address questions
with regard to the dynamic nature of agency problems over the complete buyout cycle from
the initial transaction until the exit, whereby the focus is set on going public divestments.
Similar to other research in this field\textsuperscript{165}, their focus is on aspects important to minimise
agency costs between investors and management. Based on a sample of 39 transactions,
they argue that agency cost explanations appear valid. In accordance with authors such as
BERGEMANN and HEGE (1998) or TRESTER (1998) they also emphasise the critical
importance of contract structuring and management incentivisation for these type of
transactions.\textsuperscript{166}

\subsection*{3.4.6 Other aspects related to private equity research}
In contrast to most studies in this field, XU (2004) analyses private equity activity and
performance from the perspectives of limited partners that are investing in private equity.
He compares US private equity and venture capital industry performance to US public
equity returns and finds that on average, the pooled venture capital quarterly return is 4.89%
between 1986 and 2001, which compares to average returns on the NASDAQ composite
index (3.68%), the S&P 500 index (2.84%) and the Dow Jones Industrial Average index
(3.06%). The pooled quarterly returns for buyout funds for the same period is 4.24%\textsuperscript{167}
He argues that the pooled returns method implicitly creates an investment-weighted return,
which most closely matches the method many investors use for measuring the returns on
their portfolios. In line with LERNER and HARDYMON (2002), he stresses the dominant

\textsuperscript{165} An important study in this field is contributed by REID (1999), who analyses key features in contracts between
entrepreneurs and investors necessary to minimise agency conflicts. The feature of contract optimality that was
perceived to be most important was the capital structure of transactions. Capital structure, particularly with regard to the
specifics of its equity components, establishes ownership entitlement and can create incentives for effort on the sides of
both the entrepreneur as well as the venture capital firm. Debt instruments in this context play an important role as
service requirements with regard to interest and principal payments have to be met in order not to provoke a default.
Lastly, capital structure is crucial to apportion risk efficiently between all parties including the entrepreneur, the venture
capitalist and outside debt financiers.

\textsuperscript{166} BRUTON et al. (2002) also examine the post-exit performance of companies and find that performance declines
associated with agency cost of public ownership typically take place during 3 years following the exit. In their sample
profit margins decreased by about 25\% over 3 years following the firm going public.

\textsuperscript{167} See section 2.1.8.2 for a discussion of return computation methods.
importance of exits to the venture capital and private equity industry and highlights the illiquidity of investments in this asset class as key consideration when comparatively assessing its return profile.

KAPLAN and SCHOAR (2003) report that cash flow IRRs averaged 18% among the 746 private equity funds raised between 1980 and 1995. It is interesting that they note that average fund returns net of fees and compensation for the private equity investors are by about 5% lower than the reported IRRs, thus approximately 13% which is roughly equal to those of the S&P 500 stock index over the same period.\textsuperscript{168} Performance increases with fund size and with the partnership’s experience. They also document a relation of performance with fund size that is concave, suggesting decreasing returns to scale.\textsuperscript{169} DAS, JAGANNATHAN and SARIN (2003) examine the realised multiples of money invested in IPO and trade sale exits. Their analysis rests upon a dataset of transactions for more than 20,000 portfolio firms with exits completed between 1984 and 2000. Their data source is the Venture Economics database. They reveal that, as expected, IPOs return the highest multiples.\textsuperscript{170}

HEGE and SCHWIENBACHER (2003) analyse the success determinants and performance of European venture capital firms compared to the US. Their study is based upon a survey questionnaire sample of more than 170 venture capital investors from six European countries (66 responses) and the US (140 responses) as well as data from various databases. They show that the US venture capital industry outperformed the European one over the period from January 1997 to June 2003, with excess returns\textsuperscript{171} of 5.9% versus 1.1% of European venture capitalists. Based on these results, they argue that US venture capitalists apply convertible equity instruments as incentive components more efficiently and have a superior ability to screen potential target companies before investing.

\textsuperscript{168} COCHRANE (2005) has been presented in section 2.1.8. He finds that average adjusted returns of about 15% are in line with returns public equity markets, looking at annual returns of 15.9% of the S&P 500 stock index.

\textsuperscript{169} Overall their results are in line with LJUNGQUIST and RICHARDSON (2003), who compute average internal rate of returns of 18.1% per annum for the period 1981 to 2001 based upon a proprietary dataset capturing 73 private equity funds in the United States.

\textsuperscript{170} IPO multiples are highest for early-stage companies (21.0 times the initial investment), lower for expansion-stage firms (7.9 times), and are lowest for later-stage companies (4.0 times). Multiples for trade sales are lower for the early stage investments than those for IPOs of these firms. However, they show that multiples are higher in the case of later stage investments and leveraged buyouts, which is interesting. Average multiples range from about 10.0 for early-stage firms to about 4.6 for later-stage companies (DAS, JAGANNATHAN and SARIN, 2003). It is important to caveat that their results have to be looked at carefully as the samples for IPOs and trade sales have distinct industry compositions which might distort a clean comparison of average multiples realised.

\textsuperscript{171} Excess returns measured as IRR (internal rate of return) in comparison to the annualised return of the NASDAQ stock exchange over the same period.
VAN OSNABRUGGE and ROBINSON (2001) examine the influence of a venture capitalist’s source of funds onto investment behaviour, including divestments. Their analysis utilises information from 15 expert interviews and 92 survey responses from venture capital investors active in the UK. Their empirical results confirm that a venture capital firm’s source of funds may have some degree of influence over the operations of a venture capital firm. They differentiate between captive funds that obtain capital from a parent such as a bank or large corporation and independent funds. With regard to the timing of exits, they argue that although past research has shown that independents may have more pressure to exit investments sooner these differences were not supported in the quantitative results of their study. Furthermore, they suggest that due to different levels of agency pressures, independent funds operate more thorough, conducting more due diligence, having greater concern for expected rates of return, gaining more contractual control, and claiming to conduct slightly more post-investment monitoring of their investments.

On the topic of illiquidity of investments in the venture capital and private equity asset class, LERNER and SCHOAR (2004) elaborate on the role of transfer restrictions of limited partnership stakes. The explain the transfer restrictions as a tool to screen for investors with long investment horizons, who have a low likelihood of facing a liquidity shock requiring them to withdraw funds. The key contribution of their model is that they regard illiquidity as a choice variable, which can be influenced by the manager of the fund and allows to select the composition of investors.172 Their work is particularly important in the light of discussions that a liquid secondary market for stakes in private equity funds might become reality in the near term.

Another area of relevant research interest is the valuation of venture capital and private equity investments. SEPPÄ and LAAMANEN (2001) and SEPPÄ (2003) discuss the complexities in valuing companies with high degrees of uncertainty, such as technology start-ups173. They test valuation of more than 400 venture capital investments in the United States applying option value techniques. Their work is the first empirical test of real option models in the field of venture capital. Based on their analysis they argue that even a simple binomial pricing model provides a feasible methodology to analyse the risk-return profile of

172 Unlike other literature in this field, illiquidity here is not the symptom of an underlying asymmetric information problem. They find that funds managed by private equity firms with an established track record are less affected by information asymmetries and have fewer transfer constraints. Screening for long term stable investors appears to be more critical for young private equity firms. Moreover, funds that operate in industries with longer investment cycles have more constraints.

173 KAPLAN and RUBACK (1995) provide a detailed note on technical aspects valuing highly leveraged companies.
venture investments. Also in relation to the entry valuation of investments, GOMPERS and LERNER (2000) are analysing the impact of capital inflows into the venture capital and private equity industry onto valuation of new investments. Based upon a dataset of more than 4,000 venture capital investments in the United States between 1987 and 1995, they find that capital inflows have a positive impact on relative valuation. As they mention, the relevance of the analysis has to be seen in the context of new capital commitments having increased by more than fourteen-fold between 1991 and 1997 (GOMPERS and LERNER 2000, p. 286). They show that a doubling of inflows into venture funds led to increases in valuation levels between 7% and 21%, depending on specific industry and region.

CUMMING, FLEMING and SUCHARD (2005) examine the impact of exit choices on fundraising for follow-on funds. The basis for their analysis is a dataset comprising Australian transactions over the period from 1999 to 2001. A surprising result is that venture capital funds with IPO exits raised less capital commitments relative to the prior year compared to funds that pursued other exit routes such as trade sales. They suggest that their evidence highlights the negative impact of excessive IPO lock-up periods on capital commitments to venture funds. Furthermore, they find that funds with higher IRR performance received greater capital commitments (a 10% higher IRR is associated with 12.8-22.8% more of new capital, depending on type of fund). Their work builds upon the extensive analysis of fundraising drivers by GOMPERS and LERNER (1998a), who emphasise that successful exits are crucial to establish the reputation that is required to ensure a sufficient raising of capital for follow-on funds. Besides exit track record considerations, GOMPERS and LERNER (1998a) also point out the importance of regulatory and tax parameters, particularly capital gains tax and the tax-exempt status of certain institutional investors such as pension funds.

174 They find that risk neutral binomial models have higher predictive power than traditional models that use risk adjusted rate of returns and actual success probabilities. However, they flag that the variance of estimation errors in this models is large, whereby they argue that this is consistent with ‘common sense’ observations that outcomes of venture capital investments tend to be extreme, either highly successful or failing. They also acknowledge that their binomial approach seems too simplistic for a sophisticated analysis of investments.

175 GOMPERS and LERNER (2000) rigorously prove the robustness of their findings and argue that the impact of venture capital inflows on prices is greatest in states (California, Massachusetts) with the most venture capital activity and segments with the greatest growth in venture inflows.

176 MARTI and BALBOA (2000) also analyse fundraising in 16 European countries and confirm the significance of completed exits, particularly trade sales and IPOs, onto fundraising.

177 This result is not intuitive, which they explain by a potential dislike of investors of a mandatory 2-year lock-up period (which has been in place until 2002) in Australia for venture capitalists in IPO transactions. In contrast, trade sales were a more liquid form of exit and enabled institutional investors to access capital commitments sooner than an in case of IPO exits.

178 KEUSCHNIGG (2004) conceptually examines the impact of taxation on the monitoring and consulting behaviour of venture capitalists. He proposes that a capital gains tax on funds is harmful as it tends to impair the incentives for advice and also leads to smaller portfolios. He argues that the optimal tax policy would be a performance related revenue subsidy, or negative capital gains tax, combined with a non-performance related tax on start-up investment cost. The revenue subsidy incentivises giving advice but, at the same time, expands portfolio size and thereby reducing advice per
Somewhat in relation to fundraising and the contracts between limited partners and private equity firms is a study by GOMPERS and LERNER (1999b), which examines the compensation of private equity firms based on a sample of more than 400 US funds. They find that the compensation of new and smaller funds shows considerably less sensitivity to performance and less variation than that of other funds. Also, the fixed base component of compensation is higher for younger and smaller firms. They argue that their findings are consistent with the notion of a learning model that the pay of new venture capitalists is less sensitive to performance because reputational concerns induce them to work hard.

FRANKFURTER and KOSEDAG (1996) provide an analysis of leveraged buyouts from the perspective of a portfolio company’s management. Their analysis is based upon a survey addressing a sample of 567 companies that have gone through a LBO or MBO in the period from 1980 to 1995 in the United States. While most of their findings are in line with agency theory propositions, one of their findings is particularly interesting. They argue that the performance of companies that underwent a buyout performed better than their peer group in the year preceding a transaction. This is in contrast to the common view that mostly underperforming companies represent buyout targets. They also suggest that information asymmetries lead to undervaluation of firms which mainly triggers buyout activity. Last but not least, they indicate that management involved in the buyout of a company tend to have a strong preference of collaborating with an established, high-reputation private equity provider. Also discussing reputation of investors from a capital-seeking entrepreneur’s perspective, HSU (2004) argues that early stage and start-up entrepreneurs typically accept a 10%-14% discount on the entry valuation, if the investor has a high reputation and established track record. His analysis is based on survey results involving 249 financings to about 150 ventures. He proposes that venture capitalists often tend to invest in industries and sectors where they have established specific expertise and valuable networks. He also points out that the investment experience in a specific sector has to be an important consideration on the part of the entrepreneur searching for capital. The literature refers to the fact that venture capitalists and private equity investors provide expert advice and contacts as the ‘soft’ side, as opposed to the pure financing or ‘hard’ side of venture capital.

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179 GOMPERS and LERNER (1999b) do not observe a significant relation between incentive compensation and performance across all types of funds. However, successful venture capitalists tend to increase their compensation as they typically attract more capital for follow-on funds which increases the quantum of the fixed fees that are structured as percentage of capital commitments.

180 FRANKFURTER and KOSEDAG (1996) achieved a response rate of 23%, or 131 responses.
Another ‘soft’ side elaborated on in the literature is the concept of ‘reputation capital’. BOTTAZZI and DA RIN (2002, p. 236) explain: “Venture Capitalists also provide ‘reputation capital’ by allowing firms to boast being venture-backed so as to lure top-fly executives or to obtain new contracts”. Summarising a number of the ‘soft’ factors they conclude that a combination of these attractive benefits paired with strict monitoring and incentives for entrepreneurs to perform provides venture-backed start-ups with an advantage over other firms, since it should increase the chances of survival, and help to attract further funding as these companies expand. MANIGART, BAEYENS and VAN HYFTE (2002) study the survival of Belgian venture capital-backed companies, compared to companies that did not receive venture capital. They analyse the survival of a sample of 565 Belgian venture capital portfolio companies and 565 comparable non-venture-backed companies. Contrary to BOTTAZZI and DA RIN (2002), they argue that venture capital-backed companies do not have a higher probability of surviving than comparable other companies. The propose that not necessarily the pure backing by venture capital but rather the quality of the venture capitalist can enhance survival chances.

Linked to the concept of reputation capital, BRAV and GOMPERS (1997) and GOMPERS and LERNER (1999) emphasise that a venture capital or private equity firm’s reputation are crucial to attract higher quality underwriters and auditors, thus decreasing information asymmetries to the public market, which ultimately benefits in lower levels of underpricing.

The review of existing literature relevant for private equity exits demonstrates that some of the empirical results of similar studies exhibit substantial variations and partly suggest contradicting findings. This might be a function of studies’ distinct geographical or sector focus but also has to be understood in the context of private equity research as a relatively new academic field of interest with still limited scope and depth of scientific analysis.

3.5 Tabular summary of existing studies

The following tables summarise particularly relevant studies that concentrate on the choice of private equity or venture capital divestment routes, the duration of investments and the exit process. These are the key areas of focus of this research. The tables disclose information about a study’s research focus, its methodological approach, the characteristics of a dataset used as well as its key findings. Even though some studies have been named in other segments related to divestments, they still have relevant findings for the three core aspects choice of exit, timing and process.
### 3.5.1 Key studies on the choice of exit routes

<table>
<thead>
<tr>
<th>Study</th>
<th>Research focus</th>
<th>Market segment</th>
<th>Methodology</th>
<th>Data</th>
<th>Market region</th>
<th>Source</th>
<th>Key findings</th>
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<tbody>
<tr>
<td>CUMMING, FLEMING and SCHWIENBACHER (2005)</td>
<td>Impact of legal systems on exit choices</td>
<td>VC⁵¹⁸¹</td>
<td>Statistical analysis of data: Regressions, multinomial logit models</td>
<td>468 VC portfolio companies</td>
<td>12 Asian-Pacific countries</td>
<td>Wilshire Associates (fund-of-funds manager)</td>
<td>Legal systems in a country are more directly connected to facilitating VC-backed IPOs in a country than the size of its stock market. Typically countries with high quality, well developed legal systems have bigger stock markets.</td>
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<tr>
<td>CUMMING, FLEMING and SUCHARD (2005)</td>
<td>Relation between fundraising and exits</td>
<td>VC and PE (buyouts)</td>
<td>Statistical analysis of survey data: Regressions, cross-sectional econometrics</td>
<td>127 VC funds and 651 portfolio companies</td>
<td>Australia</td>
<td>Australian Bureau of Statistics</td>
<td>Venture capital funds with IPO exits raised less capital commitments relative to the prior year compared to funds that pursued other exit routes such as trade sales. This result is not intuitive, which they explain by a potential dislike of investors of a mandatory 2-year lock-up period (which has been in place until 2002) in Australia.</td>
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<tr>
<td>BIENZ (2004)</td>
<td>Choice between IPO and trade sale exits</td>
<td>VC</td>
<td>Conceptual model approach: Agency theory derived model. Descriptive analysis of data</td>
<td>Model approach. 423 acquisition exits and 108 IPOs. Period: 1971-2003</td>
<td>Europe</td>
<td>Centre for Private Equity Research Frankfurt</td>
<td>IRRs for IPOs (58%) higher than for acquisition exits (18%). The study only distinguishes between acquisition exits and IPOs and shows that highly profitable companies, which need limited oversight will go public, while less profitable companies, which require more control, will be sold</td>
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⁵¹⁸¹ Glossary: VC denotes venture capital firms or venture capitalists, PE denotes later stage private equity firms (buyout firms are specified separately in parentheses).
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<th>Study</th>
<th>Research focus</th>
<th>Methodology</th>
<th>Data</th>
<th>Key findings</th>
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<tr>
<td>NAHATA (2004)</td>
<td>Determinants for choice of exit VC</td>
<td>Statistical analysis of data: Probit analysis, regressions</td>
<td>1,502 IPO exits and 1,366 acquisition exits. Period: 1991-2001 US VentureXpert database, Compustat. Source for write-off exits unclear.</td>
<td>Differentiates between choices for three types of exits: IPOs, acquisitions and write-offs. Choice of exit vehicle is governed by both firm-specific and VC-specific factors: Company’s financial performance, its stage of development, industry conditions, VC reputation, and the presence of corporate venture capitalists or investment banks in the investor syndicate. Best performers are more likely to be taken public than sold. Companies that are written-off are led by the least reputable venture investors, whereas those taken public are led by the most reputable investors. Early stage companies are more likely to be acquired than taken public.</td>
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<tr>
<td>ANSON (2004)</td>
<td>Trends in private equity, secondary buyouts PE</td>
<td>Interview and case study analysis, analysis of industry data</td>
<td>Undisclosed number of interviews US and Europe Interviews with private equity fund managers and investors in private funds, Thomson Venture Economics</td>
<td>Private equity market becomes more competitive and is characterised by a capital overhang of at least $180 billion of committed equity capital not invested to date. This is why private equity firms need to consider other financial investors more and more when planning divestments. Transactions where one private equity firm sells portfolio companies to another one represented about $36 billion of aggregate transaction volume in 2004.</td>
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<td>Study</td>
<td>Research focus</td>
<td>Methodology</td>
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<td>CUMMING and MACINTOSH (2003b)</td>
<td>Choice of exit routes and characteristics of various exit channels VC</td>
<td>Statistical analysis of survey data: Regressions, multinomial logit models</td>
<td>35 Venture capitalists, 246 portfolio company exits. Period: 1992-1995 US and Canada Own surveys</td>
<td>Choice of exit channel relates to the quality of a portfolio company (reflected in market-to-book value at the time of transaction), the duration of an investment and the type of industry a company is operating in. Higher quality portfolio companies are likely to be exited via (in order of probability): IPOs, trade sale, secondary sale, buyback and write-off. Information asymmetry concepts are valid in the explanation of exit route choices.</td>
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<tr>
<td>SCHWIENBACHER (2002)</td>
<td>Differences in exit behaviour between US and European venture capitalists VC and PE</td>
<td>Statistical analysis of data: Regressions</td>
<td>170 survey responses (66 from Europe, 104 from US) US and Europe Own survey</td>
<td>Variables considered include investment duration, stage of investment, use of convertible securities, extent of syndication of the committed venture capital, board representation, number of performance reports requested by the venture capitalist per year and lastly if an entrepreneur has been replaced by a new management team. Considerable differences between the US and Europe: US venture capitalists tend to replace the entrepreneur more often with new management and tend to exit between half a year and a full year earlier than their European peers. Differences result from the fact that European venture capitalists face less liquid capital markets.</td>
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<tr>
<td>Study</td>
<td>Research focus (Market segment)</td>
<td>Methodology</td>
<td>Data (Market region Source)</td>
<td>Key findings</td>
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| WANG and SIM (2001)          | Exit choices in Singapore. IPO exit strategy | Analysis of survey data: Regressions | 21 survey responses Singapore Own survey | The variables analysed are the nature of the industry, sales, profitability, age of the portfolio company, number of financing rounds prior to exit, ownership (family owned or not), and the total amount of equity committed by the venture capitalist.  
The likelihood for an IPO exit route is positively related to the total amount of venture financing and company total sales. Not necessarily the highest valuations are achieved through IPOs. Younger venture capital investors do not perform more IPO-exits than their older counterparts. External validity has to be questioned given the low number of data points examined. |
| MURRAY (1994)                | Exit route preferences VC (early stage) | Statistical analysis of survey data: Regressions | Survey responses and interview data with a focus on UK early stage venture capitalists Europe Own survey and interviews | Early stage venture capitalists rank trade sale as their preferred route of divestments ranking ahead of IPOs.  
 Raises the concern that young, growing, European firms may face a ‘equity gap’, as the stock market environment in Europe on the one hand and a potential lack of interest by corporate acquirors may make exits difficult. |
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<tr>
<td>WRIGHT, ROBBIE, ROMANET, JOACHIMSSON, BRUINING and HERST (1993)</td>
<td>Exit timing in MBOs VC</td>
<td>Descriptive statistics, statistical analysis of survey data</td>
<td>Interviews and 158 survey responses covering MBOs. Period: 1981-1990 UK, France, Holland, Sweden Own surveys and interviews</td>
<td>Attitude towards exit routes differs across Europe. In the UK (77% of all MBO transactions in these four countries), after 7 years investment duration only 40% of transactions in the sample have been divested. In the other countries the tendency to late exits is even stronger. Trade sales represented the most widely used exit route in their sample overall.</td>
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### 3.5.2 Key studies on timing of exits

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<th>Research focus</th>
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<th>Key findings</th>
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<tr>
<td>NEUS and WALZ (2004)</td>
<td>Exit timing in course of IPOs PE and VC</td>
<td>Conceptual modelling: Repeated, reputational game framework – venture capitalist as repeated market participant in IPO markets</td>
<td>No empirical testing</td>
<td>Optimal timing for exits requires a balance between opportunity costs and the degree of information asymmetries. Late divestments bear high opportunity costs. On the other hand early divestments can bear high information asymmetry costs, which typically results in lower achieved valuation.</td>
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<td>Study</td>
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<tr>
<td>Giot and Schwenbacher (2003)</td>
<td>Exit timing VC and PE</td>
<td>Statistical analysis of data: Survival and risk models</td>
<td>22,042 investment rounds for 5,817 venture-backed companies. Period: Not disclosed US VentureXpert databases</td>
<td>Across all transactions following investment durations for the types of exits analysed: 3.4 years for IPOs, 4.6 years for trade sales and 3.3 years for write-offs. Type of industry matters. Biotech and internet firms demonstrated the fastest IPO exits in the sample. Regarding write-offs, internet firms are also the fastest to liquidate, while biotech firms are the slowest.</td>
</tr>
<tr>
<td>Ljungquist and Richardson (2003)</td>
<td>Behaviour of US private equity fund managers PE and VC</td>
<td>Statistical analysis of data: Regressions</td>
<td>3,800 portfolio companies, 73 US private equity funds. Period: 1981-2001 US Undisclosed institutional investor in private equity funds, Thomson Venture Economics</td>
<td>Overall market environment and the level of competition among funds is an important determinant in the timing of exits. Funds exit faster the cheaper high-yield debt becomes with one-standard deviation change reducing holding periods from the average 4.7 years to 2.2 years. Timing for buyout funds exits is also influenced by the state of the M&amp;A market. Larger investments are sold more than half a year earlier than smaller investments.</td>
</tr>
<tr>
<td>Botazzi and da Rin (2002)</td>
<td>Venture capital for innovative European businesses and the need for appropriate stock market segments VC</td>
<td>Statistical analysis of publicly available data: Regressions</td>
<td>511 public companies, listed on new market segments of various European stock exchanges ‘Euro.nm’ Europe Public data, EVCA</td>
<td>The study could not support that VC-backed companies go public earlier than non-VC-backed companies. VC-backed companies have a higher chance of surviving due to stricter monitoring and expert advice as well as reputation of venture capitalists.</td>
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<tr>
<td>Study</td>
<td>Research focus</td>
<td>Methodology</td>
<td>Data</td>
<td>Key findings</td>
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<tr>
<td>CUMMING and MACINTOSH (2001)</td>
<td>Duration of venture investments VC</td>
<td>Statistical analysis of survey data:</td>
<td>35 Venture capitalists, 246 portfolio company exits. Period: 1992-1995</td>
<td>US: Duration was longest for secondary sale exits (average 6.3 years) and shortest for buy-back exits (average of 4.0 years) and other forms of exits (average of 2.8 years). Canada: Average duration for IPO exits was 5.9 years compared to 4.7 years for IPO divestments in the US.</td>
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<td>Regressions</td>
<td>US and Canada Own surveys</td>
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<tr>
<td>LIN and SMITH (1998)</td>
<td>Timing of IPO exits VC</td>
<td>Statistical analysis of data:</td>
<td>479 portfolio exits through IPOs. Period: 1979 to 1995 US</td>
<td>While most investors are governed by lock-up periods in the first year following IPOs, they fully exit within 3 years. Typical ownership of individual venture capital investors is reduced from 12.1% immediately after the IPO to 1.4% 3 years after IPO.</td>
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<td>Regressions</td>
<td>US Public data, Thomson Venture Economics, etc.</td>
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<tr>
<td>GIFFORD (1997)</td>
<td>Exit timing in context of scarce resources at the venture capitalist VC</td>
<td>Conceptual modelling based on</td>
<td>No empirical testing</td>
<td>Monitoring requirements for existing portfolio investments represent opportunity costs and have to be balanced off with the benefits keeping the investment rather than selling it. A private equity investor is better off divesting a portfolio company as soon as the time spent on new investments yields higher expected returns than the time necessary to supervise and monitor an existing investment.</td>
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<td>resource restraints at the investor. Allocation problem.</td>
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<tr>
<td>Study</td>
<td>Research focus</td>
<td>Methodology</td>
<td>Data</td>
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<tr>
<td>GOMPERS (1996)</td>
<td>Impact of reputation of a VC investor on IPO exit timing</td>
<td>Statistical analysis of data: Regressions</td>
<td>433 VC-backed IPO exits. Period: 1978-1987 US Two investment advisers, various databases including Thomson Venture Economics</td>
<td>Young venture capitalists exit portfolio companies earlier than established firms in order to build a track record of successfully completed exits, which he christens as ‘grandstanding’. The time of IPOs particularly by young venture capitalists precedes or coincides with raising funds for a follow-on fund by the same firm.</td>
</tr>
<tr>
<td>MEGGINSON and WEISS (1991)</td>
<td>Difference between VC-backed and non-VC-backed IPOs</td>
<td>Statistical analysis of data: Tests of differences, regressions</td>
<td>320 VC-backed and 320 non-VC-backed IPOs, matched by industry and size. Period: 1983-1987 US Investment Dealers’ Digest Corporate Database</td>
<td>VC-backed firms go public earlier than non-VC-backed companies. Venture capitalist’s reputation can ‘certify’ the quality of an offering, reducing information asymmetries and attract higher quality underwriters and auditors 43% of venture capitalists sell shares immediately at IPO. On average 7% of the offering is composed of venture capitalists sales.</td>
</tr>
<tr>
<td>BARRY, MUSCARELLA, PEAVY and VETSUYPENS (1990)</td>
<td>Difference between VC-backed and non-VC-backed IPOs</td>
<td>Statistical analysis of data: Regressions</td>
<td>433 IPOs. Period : 1978-1987 US Venture Economics databases, Venture Capital Journal, etc.</td>
<td>VC-backed firms go public earlier than non-VC-backed companies. Investors have a number of mechanisms to ensure portfolio firms go public at times perceived to be optimal, including board representation and informal advice to the entrepreneur or management.</td>
</tr>
</tbody>
</table>
### 3.5.3 Studies on exit process

<table>
<thead>
<tr>
<th>Study</th>
<th>Research focus Market segment</th>
<th>Methodology</th>
<th>Data Market region Source</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIEBER (2004)</td>
<td>Portfolio management of private equity firms PE</td>
<td>Case studies</td>
<td>3 case studies US Own case study research</td>
<td>Proactive exit process planning is crucial from the time of the acquisition onwards. Standardised score-card tools facilitate a systematic approach to exits. Co-operation between private equity investors and portfolio company management is necessary to ensure an overall process success.</td>
</tr>
<tr>
<td>MCKASKILL et al. (2004)</td>
<td>Exit readiness index for trade sale exits for early stage portfolio companies VC</td>
<td>Case studies, interpretation of interview information</td>
<td>Interviews with venture capitalists and business angels US and Europe Own interviews and case studies</td>
<td>Exit readiness index for trade sales that can be used to identify firms that are exit ready and demonstrate to entrepreneurs what is required to build a viable exit strategy. The index contains a variables such as the quality of company’s reporting and accounts, performance compared to business plan, etc.</td>
</tr>
<tr>
<td>CUMMING and MACINTOSH (2003a)</td>
<td>Full versus partial exits VC</td>
<td>Statistical analysis of survey data: Regressions, multinomial logit models</td>
<td>35 Venture capitalists, 246 portfolio company exits. Period: 1992-1995 US and Canada Own surveys</td>
<td>Link between information asymmetry and not only choice of exit but also the degree of the divestment. IPOs and secondary sales are more likely to be effected as partial exits in Canada, however, this is not the case in the US.</td>
</tr>
<tr>
<td>Study</td>
<td>Research focus</td>
<td>Methodology</td>
<td>Data</td>
<td>Key findings</td>
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<tr>
<td>SHEPHERD, ZACHARAKIS and BARON (2003)</td>
<td>The impact of experience of venture capitalists on the quality of their decisions</td>
<td>Experiment analysis, statistical analysis of survey data: Regressions</td>
<td>47 VC firms, Australia Own surveys and decision experiments</td>
<td>Inexperienced investors’ unfamiliarity with the decision structure contributes to errors in judgement. Highly experienced investors are often driven by intuition and heuristic processing which makes decisions susceptible to forms of bias and error.</td>
</tr>
<tr>
<td>BASCHA and WALZ (2001)</td>
<td>Use of convertible securities and its impact on exit decisions</td>
<td>Conceptual modelling: 2 stage investments involving entrepreneur and venture capitalist</td>
<td>No own empirical testing</td>
<td>Convertible securities, debt securities with an option to be converted into equity, is superior to a pure mix of debt and equity in a portfolio firm’s capital structure and leads to optimal exit decisions. Convertible securities minimize conflicts of interest between the venture capitalist and the entrepreneur or management of the company.</td>
</tr>
<tr>
<td>GOMPERS and LERNER (1998b)</td>
<td>Exit process following IPOs: Share sales and distributions</td>
<td>Statistical analysis of data: Regressions</td>
<td>135 VC funds, 731 transactions of 259 portfolio companies. Period: 1978-1993 US Shott Capital Management</td>
<td>In order to maximise stated returns, private equity firms distribute shares of portfolio companies following IPOs to their investors rather than selling shares themselves. Private equity firms prefer distributions which allow them to lock-in stated returns which are relevant for their compensation before negative impact on stock prices occur.</td>
</tr>
</tbody>
</table>
4 The Exit process: Reducing exposure to a portfolio company

“Don't congratulate me when I buy it, congratulate me when I sell it.”

Henry Kravis, co-founder of ‘Kohlberg, Kravis, Roberts & Co.’ (KKR)

As emphasised already in the introductory sections, due to the structural set-up of most private equity investors as closed-end funds, their investments have limited holding periods and thus require more or less timely exits. Whilst venture capital funds, which concentrate on start-up and early stage investments, have a typical investment horizon of seven to ten years, buyout funds target holding periods of 3 to 5 years (i.e., XU 2004, p. 76).

Given the illiquid nature of private equity investments, exits imperative for funds’ profit realisation. The exit phase marks a crucial transaction aspect for all parties involved in a private equity financing. Private equity firms require timely and profitable exits not only to redeem capital and returns to their investors and themselves but also to establish and maintain their reputations, which in turn enable them to raise again capital for future funds from their existing and new limited partners. In turn, limited partners rely on exits for a realisation of gains on the capital commitments that they have entrusted to a fund. For a portfolio company the exit is also of tremendous importance as it marks a new stage, in which the company may either rely on public market financing or may operate under the governance of a new strategic or financial owner or alternatively might be managed as a business unit acquired by a larger company.

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182 Widely quoted saying by Henry Kravis, co-founder of ‘Kohlberg, Kravis, Roberts & Co.’ (KKR), when being offered congratulations by advisers when closing an acquisition of a new portfolio firm.
183 Please also refer to the introduction to private equity divestments in section 2.3.
184 Drawing parallels to the necessity of exits in a private equity context, DRANIKOFF, KOLLER and SCHNEIDER (2002) analyse the need for corporate divestiture. These spin-offs of larger companies are in turn an important source of investment targets for buyout investors.
185 Please refer to section 2.1.4.2 for a discussion about the contractual relationship between private equity fund managers and their investors, usually limited partners to their funds. This part includes a review of typical minimum return requirements demanded by limited partners as well as common compensation structures of fund managers.
186 SINHA, GONZALES and AASE (2005) p. 41 briefly highlight the importance of exits to each of the above mentioned parties. GOMPERS and LERNER (1998a) and LERNER and HARDYMON (2002) stress the importance of successful exits for follow-on fundraisings.
The crucial nature of exits can be highlighted by the fact that without successful divestments, a sustainable private equity industry would cease to exist. In other words, functioning exit markets pose a ‘conditio-sine-qua-non’ for private equity investing. CUMMING and MACINTOSH (2003b, pp.101-102) find that the visibility of potential exit alternatives has indeed an important impact on private equity funds deciding whether or not to undertake an investment in the first place.

This section builds upon the introductory sections and intends to examine aspects relating to exit processes and to provide a comparative evaluation of exit routes available to financial sponsors. This section will set the stage for the empirical analysis laid out in the subsequent part, section 5 of this work.

4.1 Exit process overview

While scholarly literature on private equity exits has elaborated on various aspects\textsuperscript{187}, the actual process of divesting portfolio firms itself has not obtained great academic attention. In order to establish a framework for further discussion, the author synthesised a number of literature contributions\textsuperscript{188} by both scholars and practitioners as well as feedback received in expert interviews, which have been conducted as a part of the empirical study underlying this work. As a result, the author proposes a ten step divestment process, illustrated in the exhibit below. The suggested framework is segregated intentionally in a large number of steps, as each phase appears important to the private equity practice and is thus explored further in this part of the dissertation. This process framework is designed to be general, independent of specific exit routes and strategy executed. While the author took specifically requirements of buyout exits into account, this procedural framework could also be applied for exits of other private equity investments, given the same process objectives and similarity of potential exit channels.

\textsuperscript{187} Please refer particularly to section 3.4 for a detailed review of existing studies on private equity exits.

\textsuperscript{188} Worth highlighting are particularly LERNER and HARDYMON (2002, pp. 305-339) describing an exit process on the basis of the case study on ‘Investitori Associati: Exiting the Savio LBO’; CUMMING and MACINTOSH (2003b, pp. 106-169), analysing a variety of exit options and requirements, LIEBER (2004, pp. 73-80), focusing on portfolio management aspects preceding the execution of exits and SINHA, GONZALES and AASE (2005, pp. 41-51), concentrating on IPO exits and other divestment alternatives.
5. Preparations for exit process

4. Assigning roles, incentive negotiation

3. Designing exit process, mandate to advisers

2. Evaluation of portfolio firm/exit routes

1. Identification of exit opportunity

10. Ex-post review

9. Transaction closing

8. Evaluation of exit options/offers

7. Conduct process, negotiations

6. Launch process

Exhibit 65. Exit process steps.

Step 1: Identification of exit opportunity
At the very starting point of each exit process is the identification of an exit opportunity. LIEBER (2004, pp. 72-74) stresses that regular and structured portfolio reviews are necessary to identify exit opportunities. Thus, portfolio reviews should encompass not only reporting on the standings and evolution of portfolio companies but also the perspectives on the exit environment for each portfolio firm.189

Step 2: Evaluation of portfolio firm and exit routes
The second step in the exit process framework is the detailed evaluation of the portfolio company in question as well as possible exit routes. While step 1 already involves an examination of portfolio firm and exit environment, the analysis is deepened and confirmed in the second stage. Private equity firms at this point might already invite professional advisers and investment banks to support an assessment. Advisers and investment banks are typically not mandated at this stage yet by the private equity firm, but rather demonstrate commitment to an exit idea, positioning themselves for a mandate at a subsequent stage.190

Step 3: Designing exit process and mandating advisers
Having firmed up the analysis of an exit candidate, private equity fund managers usually approach a portfolio company’s board, which is often majority-controlled by themselves,

189 LIEBER (2004), a principal at a New York based private equity firm, suggests a framework for ‘pro-active’ portfolio management for private equity firms. He argues that successful exits require timely preparation and that exit strategies ought to be formed as early as possible, ideally even before effecting investments. His article on portfolio management has found positive recognition in the private equity community and is further discussed in section 4.2.1 of this work.
190 DA SILVA ROSA, LEE, SKOTT and WALTER (2004) analyse competition in the market for M&A advisers, explaining that increasing competition for mandates leads advisers to provide more service already before having received formal mandates.
and only top executive management\textsuperscript{191}. Private equity fund managers collectively with top management typically appoint advisers focusing on diverse aspects such as legal, tax as well as commercial issues and often one or more investment banks to run the day-to-day execution of an exiting process and to support the evaluation of exit options throughout the process.

Jointly with advisers a detailed exit plan has to be designed, already considering which exit routes are opted to be pursued. LIEBER (2004, pp. 73-75) suggests that a realistic, detailed, up-front design of an exit process is crucial for a successful execution of a divestment.

**Step 4: Assigning roles and responsibilities, negotiating incentives**

While responsibilities and roles among the parties involved in the process so far are typically already assigned in step 3, the planned divestment has to be communicated to a wider group of executives within the portfolio company. The preparation required before being able to launch an exit process typically ties up a lot of human resources and tends to distract management from leading daily operations. A careful allocation of tasks and responsibilities is necessary and thus requires the involvement of a wider group of people ultimately involved in the divestment process.

While incentives and compensation for top executives are typically already structured at the time of the initial acquisition by the private equity firm with the intention to align executives’ and owners’ interests for a successful exit, incentives might be renegotiated or extended to individuals in the company that are regarded as essential for the divestment process and previously have not been granted such incentives\textsuperscript{192}.

**Step 5: Preparations before launch of exit process**

Prior to be able to start an exit process, a large extent of preparations is required for example in connection to the creation of marketing materials, legal, pension and environmental documentation, historical financial reports and business plan projections, which form the basis for assessing the value of a portfolio company. In most cases, site visits enabling potential buyers of a company to inspect production and administrative facilities also need preparation and instructions. Depending on the size of the firm, the scope and complexity of

\textsuperscript{191} For confidentiality reasons about a potential divestment process, it is in the strong interest of a private equity firm to limit communication on an executive management level first only to the CEO and the CFO, who both are instrumental to a divestment process.

\textsuperscript{192} An example are employees in finance divisions, whose commitment is required for a timely completion of financial reports or selling memoranda, etc. Please refer to section 2.1.7 for a note on executives’ compensation.
its activities, the state of its existing reporting systems, and its culture this step might take between several weeks to more than half a year.\textsuperscript{193}

\textbf{Step 6: Launch exit process}
Following a period of preparations and an analysis of a potential buyer or investor universe, either a formal or informal exit process can be launched, supplying potential bidders with a prepared information package. As to be discussed later on in this section, when launching a process, confidentiality is a key issue, which requires potential buyers of the firm to be legally bound by non-disclosure agreements prior to receiving any information. Also, in case of ‘\textit{multi-track}’ processes where more than one exit route is pursued, invited bidders are often not informed about all exit routes initially.

\textbf{Step 7: Conduct exit process, negotiations with bidders}
Having launched the process, bidders and their respective advisers have to be supplied with additionally requested information and they have to be granted select access to the company’s executive management team. The execution of a divestment as well as the process styles vary widely and are examined in further detail later on in this section.

\textbf{Step 8: Evaluation of exit options and offers}
After having received offers from interested bidders, the private equity firm and its advisers have to evaluate possible exit options and different offers. This step might take up to several weeks, before bidders might be challenged and asked to re-bid on the basis of adapted terms.

\textbf{Step 9: Transaction closing}
Following several rounds of detailed negotiations of a so-called ‘\textit{sale and purchase agreement}’ (SPA), an exit transaction can be completed, resulting in a change of legal ownership of the company.

\textbf{Step 10: Ex-post review}
In the light of accumulating transaction experience beneficial for future exit transactions, an ex-post review of the completed divestment process is recommended by practitioners.

\textsuperscript{193} HUNTER and JAGTIANI (2003) prove empirically that the quality of advisers is important to the speed of execution of an M&A process. Processes involving higher-tier advisers are completed in less time than lower-tier advisers.
Particularly the co-ordination of tasks among parties involved and the strategic roll-out of an exit strategy deserve attention.\textsuperscript{194}

\textbf{4.2 Process initiation and design}

The subsequent discussion of process initiation and design considerations elaborates on aspects relevant for the first five steps of the exit process framework set out above. The focus in this part is set on elements to be considered prior to launching an exit process. As process steps following the launch of divestment process (steps 6 to 10) differ substantially depending on the type and number of exit channels chosen, an analysis of these exit execution steps is set forth in section 4.3, where each major exit route is examined separately.

\textbf{4.2.1 ‘Pro-active’ portfolio management}

There is a consensus among researchers and practitioners that an efficient portfolio management is a key contributor to successful exits (i.e., CUMMING and MACINTOSH 2003b, LENOIR 2003, LESCHKE 2003, LIEBER 2004). Nevertheless, many private equity firms perform, apart from regular but frequently unstructured portfolio reviews, a largely opportunistic approach towards portfolio management.\textsuperscript{195} LIEBER (2004, p. 73) warns quite clearly: “...the ad-hoc portfolio management process used by most firms often can lead to unintended consequences, including: delayed action by management or shareholders; lack of timely or quality information for decision-making; inappropriate staffing, potentially tasking professionals without the skills or mindset to be effective; and misguided effort, due to lack of focus on critical opportunities or risks.”

For the subsequent note on portfolio management and its link to exit processes, the author synthesises recommendations and conceptual propositions by LENOIR (2003), LESCHKE (2003), and mainly by LIEBER (2004) under the consideration of feedback obtained in own expert interviews.\textsuperscript{196}

\textsuperscript{194} LIEBER (2004, pp. 73-80) highlights that leveraging transaction experience accumulated by private equity fund managers is valuable for exit processes. Involving experienced individuals in the design of the divestment process, even if they are not involved with a particular portfolio firm, is recommended.

\textsuperscript{195} The expert interviews conducted by the author in connection with the empirical research supporting this study also confirm that many private equity firms, smaller as well as larger fund managers, do not use formal portfolio review processes.

\textsuperscript{196} While LIEBER (2004) sets out clear recommendations for an efficient portfolio management in the light of planning exits, LENOIR (2003) concentrates on exit planning as a simultaneous process to the monitoring and value creation phase of an investment. LESCHKE (2003) comments on the importance and requirements of exit strategy planning at an early stage of an investment.
4.2.1.1 Scope of portfolio management activities
Having acquired a majority stake of a company, a private equity house will most likely implement a style of governance placing an emphasis on closely monitoring the activities and managerial decisions of a firm. The underlying objective is mainly to enhance the performance of a firm and to increase its value, which should be realised at an exit at a later stage. GOMPERS and LERNER (2004) within their famous ‘Venture Capital Cycle’ concept define this stage as the ‘monitoring’ and ‘adding-value’ phases of a private equity investment.

During these phases that transition ultimately into the ‘Exiting’ stage, the scope of portfolio management activities is wide. LIEBER (2004, pp. 73-74) suggests that private equity managers can effect change in portfolio companies and create value through following activities: ”

- Governing through the board of directors, including the activities of the board’s audit, governance, and compensation committees;
- Recruiting and hiring key executives;
- Monitoring financial performance and key performance indicators (KPIs);
- Reviewing and refining business strategies;
- Obtaining access to equity and debt financing;
- Working on corporate development initiatives, such as partner development and M&A activity;
- Participating in major operating initiatives (e.g., restructuring, geographic expansion, new business launch);
- Providing a sounding board to company management; and
- Monitoring and reacting to major industry trends.”

Adding a perspective, implied by BOTTAZZI and DA RIN (2002, p. 236), portfolio management and value creation is facilitated when executive management and private equity managers work collectively. This means that executive management should be involved in reviewing portfolio firms instead of only providing the private equity owner with reports. LENOIR (2003, p. 242) clearly supports this proposition, highlighting that executive management are of great importance for the identification of exit opportunities.197

4.2.1.2 From portfolio management to exit planning
Given that an exit represents the ultimate goal of an investment, a portfolio management and review approach needs to be oriented towards supporting the exit planning. LIEBER

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197 As KRAFT (2001, pp. 266-267) points out, the majority of trade sales involve either competitors, suppliers or customers of the portfolio firm. This means that often management has a closer relationship with these parties than the private equity firm and is thus frequently to well-positioned to originate a divestment. This is why management has to contribute also to a portfolio review regarding exit environment.
(2004, pp. 73-75) goes further arguing that an investment exit plan should serve as framework for all portfolio management activities. His proposed portfolio management approach is set out in the exhibit below:

This proposed portfolio management process starts with an annually revised investment exit plan that maps out key parameters of a divestment process such as potential buyers, the desired timeline to exit, the targeted valuation and importantly also the key drivers impacting the targeted valuation of a portfolio firm. While LIEBER (2004) does not specify when the set-up of an investment exit plan should be started, LESCHKE (2003, p. 250) argues that a well thought through exit plan should be drafted even before the acquisition of a company. LENOIR (2003, pp. 241-242) concurs that funds should develop an exit concept before closing an acquisition considering ideally several exit scenarios with a timing horizon of three to five years.

An exit plan should be developed for each individual portfolio investment, however, it also needs to consider timing and performance requirements of the whole fund. LENOIR (2003, p. 242) expands that successful exit plans take a company’s development stage into account and analyse exit routes and a universe of potential buyers in detail. Exit plans have a substantial impact on a company’s strategy. While a business strategy for a company that

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198 Key value drivers include for example market factors such as the competitive environment, the degree of consolidation in an industry, the interest rate environment; the company’s revenues and cost factors such as market share, product mix, sales channel mix, fixed versus variable costs; and exit value factors such as the value of the residual and comparable valuations of similar firms in private transactions or on public equity markets.

199 GOMPERS and LERNER (1998a) stressed the importance of successful exits for raising follow-on funds.
is intended to be brought public could emphasise on autonomy and growth, a strategy of a company that is likely to be sold to an identified competitor will likely focus on creating a strategic fit. In case of a targeted sale to another financial investor in form of a secondary buyout, intentional room for further growth and profitability enhancements should be left following an exit.\footnote{200}

The investment exit plan is initially crafted by the private equity managers involved in the acquisition, normally referred to as the ‘deal team’ (LIEBER 2004, p.74). This deal team ideally covers the portfolio company from acquisition through to the finalisation of an exit (LENOIR 2003, p. 242).\footnote{201} When regularly updating the exit plan, a company’s executive management should be involved, especially contributing to potential buyer analysis.

Based on the objectives and considerations resulting in the exit plan, the deal team needs to develop a framework that provides for a regular assessment of the risks and opportunities attached to a portfolio investment. LIEBER (2004, pp. 76-77) suggests that evaluation aspects can be segmented into four categories: Management, operations, strategy, and transaction. He recommends that the private equity deal team assesses the investment’s status with regard to a set of standardised questions and criteria for each of these categories and assigns grades or labels to each point, in order to classify the risk each individual aspect could have on the ability to realise an exit plan. An example of such an assessment scorecard, which can be on a rather high and superficial level, is provided below:

<table>
<thead>
<tr>
<th>Assessment category</th>
<th>Assessment label</th>
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<tbody>
<tr>
<td>Management</td>
<td></td>
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<tr>
<td>Quality of management and key staff</td>
<td>Caution</td>
</tr>
<tr>
<td>Planning and accountability</td>
<td>On Track</td>
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<tr>
<td>Compensation</td>
<td>On Track</td>
</tr>
<tr>
<td>Information management and reporting</td>
<td>Caution</td>
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<tr>
<td>Operations</td>
<td></td>
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<tr>
<td>Revenue/ profitability plan</td>
<td>On Track</td>
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<td>Expense management</td>
<td>On Track</td>
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<td>Operational plans</td>
<td>On Track</td>
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<td>Process quality and efficiency</td>
<td>On Track</td>
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<td>Strategy</td>
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<td>Market trends</td>
<td>On Track</td>
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<td>Competitive position</td>
<td>On Track</td>
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<td>Growth strategy</td>
<td>Critical</td>
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<td>Customer management</td>
<td>Opportunity</td>
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</table>

(\textit{table to be continued on next page})

\footnote{200} Feedback received in expert interviews reveals that despite its increasing importance as an exit route, few buyout investors actively target secondary buyouts when designing an exit plan around the time of an acquisition. IPOs and trade sales represent the exit routes initially envisaged. Please refer to ANSON (2004, pp. 85-87) for a note on the growing significance of secondary buyouts.

\footnote{201} LENOIR (2003, p. 242) adds that the stability of deal teams and the fact that the responsibility for a portfolio company remains with the team that has acquired a firm is important and valued by limited partners investing in private equity funds.
Following the identification of elements posing potential risks to an achievement of an investment exit plan, the private equity deal teams are recommended to develop a detailed action plan tackling these identified risks, involving a company’s executive management in various aspects and to a certain extent also directly communicating to the board of directors. Similarly, potential opportunities should be analysed further and find consideration in an action plan. An example of a summary action plan report is set out below:

<table>
<thead>
<tr>
<th>Assessment category</th>
<th>Assessment</th>
<th>Action</th>
<th>Owner</th>
<th>Status</th>
<th>Expected date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of management and key staff</strong></td>
<td>Caution</td>
<td>Add competitive update to monthly review package and push for action</td>
<td>AB</td>
<td>In process</td>
<td>Q4 2005</td>
</tr>
</tbody>
</table>
| - CEO/ top executives do no have a good handle on growth strategy:  
  - Weak relationship with sales-force                      | Caution    | Begin quiet search for possible replacement in event progress does not improve               | AB    | In process | Q4 2005       |
| - Show response to competitive moves                       | Caution    | Assess consumer sales head for core skills                                                      | AB    | In process | Q4 2005       |
| - Failure to execute on defined initiatives                | Caution    |                                                                                                  | AB    | In process | Q4 2005       |
| **Information management and reporting**                  | Caution    | Establish metrics for key growth initiatives and include in monthly review package               | BC    | Not started | Q1 2006       |
| - Sales plans are not well defined or measured            | Caution    | Company to develop product planning and profitability worksheet to be used by sales             | BC    | DONE       | Q1 2005       |
| - Product profitability not used by field sales in pricing | Caution    |                                                                                                  | BC    | DONE       | Q1 2005       |
| **Growth strategy**                                       | Critical   | Work with company to develop clearly defined sales strategy as part of 2006 budget process     | BC, AB| In process | Q4 2005       |
| **Customer management**                                   | Opportunity| Introduce company to fund’s LPs with products and facilitate pilot tests                          | AB    | Not started | Q1 2006       |
| **Add-on acquisitions**                                   | Opportunity| Monitor company’s acquisition program                                                              | AB    | Ongoing    | N/A           |
| **Exit**                                                  | On Track   | Identify and meet with industry players                                                            | AB    | Ongoing    | Q4 2006       |


202 Due to the sensitive nature of assessing the performance of management and potentially seeking for replacement, executive management often is only selectively involved in such aspects.
Not only to monitor the status and development of a portfolio investment, but also to ensure a high quality of the portfolio management process itself, LIEBER (2004, pp. 79-81) argues that a regular peer review is of paramount importance. Being exposed to the scrutiny of other professionals in the private equity firm as well as being assessed by committees often involving representatives of limited partners investing in a fund, can motivate deal team members to perform their tasks more carefully with a stronger commitment, but also allows them to capitalise on experience through receiving considered input from parties that are not directly involved with a specific investment. Based on feedback from expert interviews, the author adds that peer review processes can also help to ensure that standardised portfolio management processes, like the one outlined here, are maintained and pursued across all transactions of a private equity firm, particularly through requiring common reporting and monitoring standards.

In order to effectively implement such a portfolio management process, it is important to establish appropriate communication channels between the private equity deal team, a company’s board and the executive management team, as LENOIR (2003), LESCHKE(2003) and LIEBER (2004) point out. LIEBER (2004, p. 81) summarises: “The successful implementation of a portfolio management process...adapts to a firm’s culture and focuses on ‘controllable’ decisions. Controllable in this case refers to the private equity firm’s ability to influence the outcome of portfolio investment.” The three authors also imply that it is important for private equity firms to strike a balance between sufficient oversight and granting enough flexibility to executives of a portfolio firm to be motivated for an inspired and fully committed management of the company.203

4.2.2 Process objectives

Not necessarily at the point when an initial exit plan is drafted, but certainly once concrete exit opportunities are visible and a divestment process is being designed, several key objectives require consideration. While the over-riding goal of most private equity investors is to maximise value and return from investments, a number of parameters need to be taken into account in the context of the strategy for a specific portfolio company as well as overall fund management requirements.

The subsequent discussion explores gating decisions to be taken and factors to be considered, typically prior to start the detailed planning of an investment process, such as:

203 In an interesting article, HILL and GAMBACCINI (2003, pp. 37-40) outline the circumstances when too close monitoring of a portfolio firm can show detrimental rather than positive effects.
The extent and type of exits\textsuperscript{204}, strategic timing of divestment, execution certainty and timeline, capacity of human resources involved, costs of execution\textsuperscript{205}, and publicity impact. Before dwelling into these aspects, it seems important to flag that the discussion covers key considerations that arise on the part of buyout investors, who own and control the majority of companies. It is the clear preference of buyout investors to acquire entire companies or at least a controlling stake in firms, avoiding minority shareholders being able to block substantial decisions (FENN et al. 1995, pp. 14-15)\textsuperscript{206}. However, in some cases joint ventures with other parties are undertaken. A typical example are families selling a considerable portion of their business to buyout firms, nevertheless wanting to retain a say in the business for a certain period. In such circumstances, other shareholders may have an impact on the exit process. For instance, a limitation of potential exit options, such as the sale to long-standing competitors, might be a condition in the agreements for an initial acquisition.\textsuperscript{207} Another scenario is a joint acquisition by a corporation and a private equity firm, where the corporate partner could reserve the right to purchase the share of the private equity investor under certain conditions and therefore limit the scope for exit strategies.\textsuperscript{208}

Nevertheless, given the fact that the majority of leveraged buyouts are effected on the basis of a private firm obtaining control over companies with minority shareholders hardly in the position to influence strategic moves, the below analysis adopts the viewpoint of private equity firms as the core decision makers.\textsuperscript{209}

4.2.2.1 The extent and type of exits
Before having to decide about which exit routes to be pursued, the extent and type of divestment has to be defined. While a write-down and a write-off mark the failure of an investment, the other three options, laid out in the exhibit below according to their ability to provide a private equity firm with immediate cash proceeds, have to be considered in light of the investment strategy for the specific portfolio firm as well as an overall fund’s requirements.

\textsuperscript{204} As opposed to the specific exit routes.
\textsuperscript{205} Related to the cost of exit execution is the use of professional advisers, which is discussed in the next section 4.2.3.
\textsuperscript{206} Already the definition of private equity captured the nature of the performed investments as controlling stakes in companies. See also BOTTAZZI and DARIN (2002, pp. 1-2) and LERNER and HARDYMON (2002, pp. 1-4).
\textsuperscript{207} Based on feedback obtained in expert interviews.
\textsuperscript{208} The joint acquisition of ‘MGM Mirage’ by ‘Sony Corporation’ and ‘Providence Private Equity’ serves as a recent example in the United States.
\textsuperscript{209} The involvement of executive management of portfolio companies in planning exit processes significantly varies in practice. While in some cases top management is actively consulted and included in the decision making process, other buyout investors involve management only on a limited basis, particularly for the preparation of marketing materials and company presentations.
A recapitalisation\textsuperscript{210} facilitates an exposure reduction of an investor’s originally contributed equity capital through financing an extra-ordinary dividend, while not changing the equity ownership structure. In this case the portfolio firm is purely re-leveraged. As MEEK (2005, pp. 23-25) points out, recapitalisations are not a real form of exit, as private equity owners purely receive a dividend rather than effecting a sale of shares in a company.\textsuperscript{211} Recapitalisations are a popular way to extract cash from investments, giving the flexibility to wait and prepare for a potentially more attractive exit later on. These transactions are frequently undertaken as a ‘\textit{prelude}’ to an exit not only to relieve execution pressure from the divestment process, in case the fund requires cash flows for different purposes\textsuperscript{212}, but also to further establish the name of a company in the capital markets. Borrowers in the market for leveraged debt with an established a track record of successfully completed financings, so-called ‘\textit{seasoned}’ borrowers, frequently benefit from superior terms. Particularly when an exit to another financial investor is likely, this might have a positive impact on a divestment process with interested buyout firms potentially receiving debt financing at more attractive terms paired with lower due diligence requirements demanded by debt lenders, who are already familiar to the firm\textsuperscript{213}. Given the strong link between recapitalisations and divestments, several authors still regard these transactions if not as an exit route then at least as a temporary alternative to exits (i.e., LERNER and HARDYMOM 2002, KUSHNER 2004).

When a change of equity ownership is targeted, a private equity investor can decide whether to sell all immediately or only a part of the investment with the remainder being sold in sequential steps. While trade sales or also buy-back exits\textsuperscript{214} are typically performed as full exits, IPOs only provide for a partial immediate exit. In a detailed analysis of full and partial exits, CUMMING and MACINTOSH (2003a) argue that partial exits can signal the quality

\textsuperscript{210} The functionings of dividend recapitalisations are described in section 2.2.5.3.
\textsuperscript{211} CUMMING and MACINTOSH (2003b) also consider recapitalisations only as a form of financing rather than a divestment type.
\textsuperscript{212} These might include performance measurement aspects, reputation building for fundraising, etc.
\textsuperscript{213} Based on MEEK (2005, pp. 23-25) and expert interview feedback.
\textsuperscript{214} CUMMING and MACINTOSH (2003a, p. 524) argue that private equity firms have a clear preference of effecting full buy-back exits. However, as buy-backs are largely associated with less successful investments, the buyers often lack financial resources and sufficient financing to acquire 100%. This is why in practice partial buy-backs still take place.
of an investment to potential buyers that do not have the same information as the selling investor. Retaining a share in an investment can be interpreted as a sign of quality, which might be a relevant option for complex companies where high informational asymmetries exist between owners and potential purchasers. Partly for similar reasons, but also to retain the potential for further valuation upside, private equity funds do not sell all (or frequently not even a part of) its shares into the public market right at the time of the public offering but rather have to undertake a ‘lock-up’ agreement with the investment bank, which underwrites the offering, in which they commit themselves not to sell shares for typically 6 to 12 months\textsuperscript{215} following the IPO (GOMPERS and LERNER 1998b, p. 2164). Subsequent to the lock-up period, securities are either sold into the market or distributed to investors over a period of months or even years following the public offering.

The decision whether to strive for a full or partial exit has to take into account fund requirements as well as the outlook of an investment balanced with expected opportunity costs of remaining attached with a portfolio firm.\textsuperscript{216}

4.2.2.2 Strategic timing of exits

A fundamental factor to be considered is the strategic timing of exits. Building up a profile both with limited partners on the one hand as well as investment targets on the other hand, typical investment horizons are an important factor. While most private equity investors target an investment duration of 3 to 5 years (XU 2004, p. 76), some funds sell portfolio companies opportunistically after a period of less than one year. Exit timing decisions, as to be further examined in this work, are made in the context of a portfolio management process whereby an investor has to notice the impacts on perception by current and potential future stakeholders. Particularly, target portfolio firms potentially dislike to become a mere opportunistic investment to be sold again at the soonest possible and lucrative point in time, representing in industry jargon a ‘quick flip’.\textsuperscript{217}

The cycle of the fund certainly plays an important role in determining the timing of exits (GOMPERS and LERNER 1998a, 2004). Investors pay particular attention to making use of exit opportunities in the last few years of a fund’s lifetime, in order to avoid roll-overs of investments into follow-on funds, even though such transactions are conducted in practice.

\textsuperscript{215} Lock-up periods can, however, last up to 2 years, particularly for IPOs backed by young venture capital firms that have not yet established a reputation in the public equity markets (LIN and SMITH 1998, p. 245).

\textsuperscript{216} Please refer particularly to the ‘value-add and monitoring cost concept’ by CUMMING and MACINTOSH (2001, 2003b) explored in section 3.2.1.

\textsuperscript{217} Based on expert interview feedback.
Linking back to academic theory, BARRY et al. (1990), MEGGINSON and WEISS (1991), CUMMING and MACINTOSH (2001, 2003b), and NEUS and WALZ (2004) suggest that investment duration can also certify the quality of an investment. CUMMING and MACINTOSH (2001, 2003b) indicate that a longer duration of ownership can potentially reduce information asymmetries, as a private equity investor’s reputation can ‘certify’ the quality of a company. Like in their analysis of partial exits mentioned before, this effect is expected to be more relevant with portfolio firms where high levels of information asymmetries between potential buyers and the seller exist. Based on their studies’ empirical results, they demonstrate that this form of quality signalling prevails in practice.

4.2.2.3 Execution aspects: Resource capacity, certainty, timeline and costs

Also prior to launching an exit process, several issues regarding the execution of a process ought to be assessed. LENOIR (2003, p. 244) indicates the intensity and high workload an exit process imposes on parties involved. Particularly, the requirement of key tasks to be performed by a portfolio firm’s executives additionally to their management duties can not only disrupt a divestment process but also have detrimental temporary effects on the businesses’ operations. Hence, the careful allocation of responsibilities and consideration of management’s, key staff’s, and the private equity professionals’ capacity to pursue an exit process is of paramount importance. Based on an evaluation of the capacity of human resources, the use of professional advisers to support the process needs to be discussed.

Expectations about the certainty and risk of an execution are usually considered very important by private equity firms. When designing an exit process, several procedures can be followed in order to reduce execution risk. However, these measures are often associated with higher execution costs, a longer timeline, and a higher workload for most parties involved in the process. Leading a competitive auction process, as opposed to only negotiating with one or a few bidders, or pursuing more than one exit route in parallel are examples of more and more used techniques to reduce execution risk but also to enforce the competitive dynamics of a divestment process. Striking a balance between the advantages and disadvantages of such procedures is necessary before starting the process and mandating advisers.

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218 In this context, CUMMING and MACINTOSH (2003a, p. 526) also suggest that longer investment duration mitigates certification effects from partial exits.

219 Please refer to section 3.2 for a more detailed review of theories relating to the timing of exits.

220 Given the importance to exit process design, these considerations will be explored separately in sections 4.2.3 and 4.2.4.

221 The author’s own empirical research strongly supports this proposition. Please refer to sections 5.7.5 and 5.11 for further details.
As obvious from the last paragraph, considerations about the overall timeline of a process and expected execution costs are intertwined in the assessment of the aspects laid out above. Particularly the use of investment banks and other advisers can on the one hand shorten the process timeline but also substantially increase the cost burden (LENOIR 2003, p. 244).

However, looking at single divestment routes, the execution costs of distinct exit channels typically varies quite dramatically, with public listings representing the most expensive process type (LESCHKE 2003, pp. 250-251).222

4.2.2.4 Publicity aspects
Another factor to be considered and matched with the profile of the private equity firm is that different exit processes obtain different levels of publicity. While some investors strive for high profile IPO exits to build up reputation and fame (i.e., GOMPERS 1996, LERNER and HARDYMON 2002, LESCHKE 2003), other private equity firms deliberately avoid such publicity. Trade sales and other divestment types typically only receive public attention for a short-while compared to IPOs.

Discussions with experts revealed that particularly investors targeting family owned businesses tend to shy open publicity. Moreover, the nature, profile, and composition of a fund’s limited partners are significant factors impacting a private equity house’s desire to obtain public coverage. Just to list a few examples for better illustration: High net worth individuals or families investing in private equity funds might dislike to become openly associated with a particular company, pension funds or endowments might not want to appear in the press for investing in a private equity fund that has successfully completed an IPO in certain industries such as the gaming, tobacco or alcohol and spirits.223

4.2.3 Role of investment banks and advisers
Investment banks and professional advisers can facilitate a divestment process, relieve pressure from executive management and private equity managers and thus their involvement can speed up a process considerably (LENOIR 2003, p. 245).

In most large and complex transactions, investment banks play a crucial role (DA SILVA ROSA, LEE, SKOTT and WALTER 2004, p. 75). The exhibit below provides an overview of professional advisers usually involved in exit processes, their main roles and contributions to the process as well as their respective compensation modalities.

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222 An analysis of typical execution costs for each major form of exit will be provided in section 4.3.
223 Based on expert interview feedback.
Academic research proved empirically that investment banks play a particularly important role in transactions altering the ownership structure of companies, with their appointment enhancing the chances for a successful deal completion (SERVAES and ZENNER 1996, HUNTER and JAGTIANI 2003). Furthermore, HUNTER and JAGTIANI (2003) find that top-tier advisers are more likely to complete transactions and to complete them in less time than lower-tier advisers. They also find that transaction contingent fees play a significant role in expediting the deal completion. MCLAUGHLIN (1990) investigates the fee structure in investment bank contracts in a sample of 195 tender offers, reporting that in 94% of the transactions fees were structured dependent on the success of deals. Acknowledging the positive impact on deal completion, authors also flag potential conflicts of interest between banker and client, as advisers are tempted to force clients into unfavourable deals (MCLAUGHLIN 1990, RAU 2000, HUNTER and JAGTIANI 2003, DA SILVA ROSA et al. 2004). Addressing this concern, MCLAUGHLIN (1990) suggests that investment bank reputation serves as an important mitigant for these conflicts of interest. With regard to the other advisers relevant for exit processes, ANGWIN (2001) studies the role of company internal and external legal, financial and commercial advisers supporting the execution and due diligence processes in M&A transactions. He finds that

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225 DA SILVA ROSA et al. (2004) argue that adviser league tables constructed on the basis of market share are unreliable tools to capture investment banks’ performance. They argue that the quality of advisers should not purely be assessed on the number and type of deal completions but ideally on the basis of value creation achieved through transactions. Nevertheless, HUNTER and JAGTIANI (2003), ranked investment banks and other M&A advisers according to deal completion volumes over the period 1995 to 2000.  
226 This argument is confirmed by BOWERS and MILLER (1990), who find that the involvement of first-tier investment banks in a transaction leads to superior wealth creation for both acquiror and target shareholders. However, the findings by HUNTER and JAGTIANI (2003) dissent this view. They argue that the involvement of top-tier advisers results in lower post merger-synergy gains.
cultural differences between countries result in a different allocation of roles and responsibilities in these processes.\textsuperscript{227}

After this brief literature summary, the roles, scope of activities and compensation of the key groups of advisers are being discussed further.

\textbf{4.2.3.1 Corporate finance advisers: Investment banks}

Corporate finance advisers perform a crucial role in exit processes. While in larger and complex transactions investment banks typically perform this role, other corporate finance advisers such as units of large audit firms or specialised ‘M&A boutiques’ often fulfill this role in smaller and medium-sized transactions (DA SILVA ROSA et al. 2004, p. 75).

Given the focus of this dissertation on sizeable transactions, the scope of activities of investment banks in divestment processes are being explored henceforth. Starting well before launching an exit process, investment banks frequently screen private equity firms’ portfolios and conduct own research on divestment opportunities. These ideas are presented to financial sponsors aiming to originate a transaction and to be well positioned for a related advisory mandate.\textsuperscript{228}

Following the receipt of a mandate\textsuperscript{229}, investment banks assist a vendor in the planning of an exit process, refine considerations about the anticipated valuation, and take on a major part of the work in connection with the preparation of a process. Apart from drafting marketing materials, such as information memoranda and presentations, preparations carried out by investment banks include the set-up of data rooms\textsuperscript{230}, the detailed analysis of potential buyers in the light of an M&A exit or capital market analyses for a prospective IPO as well as the coaching of executive management with regard to presenting the company to potential buyers or institutional investors. An important viewpoint for appointing investment banks advising on divestments is that they can add a valuable network of contacts to the process (ANGWIN 2001, p. 49).\textsuperscript{231}

\textsuperscript{227} The author has only found limited scientific coverage of aspects relating to transaction advisers other than corporate finance and financial advisers.

\textsuperscript{228} DA SILVA ROSA et al. (2004, pp. 62-63) suggest that the justification of investment banks as intermediaries lies in their ability to reduce transaction costs mainly in large and complex transactions.

\textsuperscript{229} BENNETT (2005, pp. 63-64) provides a note about the selection process of investment banks comparing clients’ behaviour in the United States and Europe.

\textsuperscript{230} A data room gives potential buyers the opportunity to look into detailed, confidential information that cannot be handed out.

\textsuperscript{231} This seems to be a key reason why existing top-tier investment banks receive the majority of mandates in connection with large transactions. Not only because they are believed to possess superior execution and technical capabilities but also as they are expected to possess more valuable contacts to potential buyers of a business, potentially having dealt with them in prior transactions (i.e., HUNTER and JAGTIANI 2003, DA SILVA ROSA et al. 2004).
of contacts held by corporate finance advisers can also speed up a divestment process, as firms can potentially be approached by investment banks in a less formal and less bureaucratic way.\textsuperscript{232}

The other core functions performed by investment banks in divestment processes relate to their capital market and financing capabilities. They prepare, handle and price public equity offerings. Following an issuance, investment banks often act as a ‘stabilisation agent’, ensuring that the price of newly traded shares does not immediately decline after the IPO.\textsuperscript{233} Furthermore, in order to facilitate the liquid trading of a newly listed stock, investment banks typically provide research coverage, publishing regular reports on the developments and outlook of the company paired with a investment recommendation.

With most major investment banks housing leveraged finance units, offering attractive financing for potential buyers is another important aspect. Aiming to increase interest in the first stages of an exit process as well as to ensure high valuations offered, investment banks have begun to offer fully structured financing packages being made quickly available to a number of interested buyer candidates.\textsuperscript{234} This means that mainly financial investors participating in auctions do not have to be concerned as much about securing financing in a short period of time. A financial investor relying on such a financing can use the typically short time period between receiving initial information and the first bid deadline for own due diligence, not having to engage in negotiations with other debt lenders, while still benefiting from usually attractive financing terms and conditions.\textsuperscript{235}

As mentioned, investment banks are mostly compensated through fees contingent upon the satisfactory completion of a deal, usually representing more than three quarters of overall fees paid (MCLAUGHLIN 1990). This means that in case a transaction is not completed, investment banks only receive a small fee as a reward for the preparation work. The structure and extent of fees is usually negotiated on a deal-by-deal basis and strongly depends on the prior relationship with a vendor and anticipated future transactions. Given the fact that private equity investors frequently appoint investment banks, they tend to pay comparatively lower transaction fees than other types of clients.\textsuperscript{236}

\textsuperscript{232} HUNTER and JAGTIANI (2003) find that transaction processes involving top-tier advisers are completed quicker than deals with other advisers. However, this can certainly not be purely attributed to a superior network of contacts.

\textsuperscript{233} A detailed description of the IPO process and related aspects is provided in section 4.3.2.

\textsuperscript{234} Such financing packages are in industry jargon referred to as ‘stapled financing’ (VON WERDER and PAUL 2005, pp. 25-28) as figuratively several bidders can staple the same financing proposal to their submitted bid letters.

\textsuperscript{235} Investment banks are willing to offer such financings, as it potentially increases overall income generated from a transactions: Incrementally to the fee received by a vendor, the buyers using an offered debt package pay financing fees.

\textsuperscript{236} Based on expert interview feedback.
4.2.3.2 Legal advisers

Legal advisers form an integral part of every transaction process. In most large exit processes, international law firms are appointed to capture the breadth of legal issues to be considered in such a process but also to provide local expertise, as most large divestment processes deal with operations in more than one jurisdiction.237

Law firms are not only advising on the legal structuring of a sale, analysing technical legal and regulatory aspects, and performing the extensive documentation required, but also offer crucial support in the vendor’s negotiations about the sale and purchase agreements and other necessary arrangements with potential buyers or the underwriters of an IPO. Furthermore, lawyers typically negotiate confidentiality agreements with interested parties prior to them receiving any confidential materials about the company and frequently work with investment banks to set-up data rooms (COFFEY, GARROW and HOLBECHE 2002, pp. 86-87).

In order to assist a quick and efficient due diligence process by interested bidders, law firms appointed by the vendor often prepare due diligence reports capturing a wide range of legal and litigation issues of the portfolio company.

Unlike investment banks, law firms are usually compensated according to man-hours committed to an exit process, independent of a successful completion.

4.2.3.3 Accountants and auditors

Financial statements and detailed audits form an essential requirement for a divestment process.238 Potential buyers demand reliable historical financial statements ratified by audit firms. Accountants and auditors prepare and audit historical financial statements of a company and often produce detailed due diligence reports describing a firm’s historical and current financial performance. In many cases private equity firms tend to use the firm that already has worked with the company and provided annual audits in order to leverage

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237 BORDEWICH (1999, pp. 29-31) summarises that M&A transactions especially in Europe require local legal expertise. Local tax law know-how is of fundamental importance. As tax regulation differs in most European nations, usually complex group structures are required to minimise tax withholdings. This means that not only the availability of relevant expertise in an appointed law firm, but also the seamless teamwork between lawyers is necessary.

238 ANGWIN (2001, pp. 54-55) finds that accountants’ work dominates the due diligence process in Anglo-American transactions, while also other due diligence such as legal, strategic and technical aspects are strongly weighted in European deal processes.

239 So-called ‘vendor due diligence reports’ typically cover all items in a company’s financial statements, providing significant details for the past 3 to 5 years and frequently offering an outlook for 1 to 2 years. Often not only consolidated group financials, but also performance on a business unit level or financials broken down by each relevant geography are being analysed. In some cases, these reports also discuss the assumptions underlying a company’s business plan that might comprise financial projections of up to 10 years.
existing knowledge and to ensure an efficient delivery of reports for the divestment process. During the execution phase of an exit process, accountants and auditors are typically available to meet with potential buyers to answer detailed questions about the business they have audited or the reports they have issued.

With regard to the compensation, fees are often largely contingent on transaction completion, however, potentially with a fixed fee portion, independent of deal outcome, that is higher compared to the fixed rewards for investment banks.

### 4.2.3.4 Commercial and strategic advisers

A company’s business plan forms a fundamental basis for its valuation. In order to solidify and refine a company’s medium to long-run (3 to 10 years) financial projections, business consultants are frequently invited to review management’s key assumptions. Besides scrutinising management’s plans, consultants can assist to purify top executives’ thoughts on the strategy for the firm. Sessions with experienced consultants are set-up to coach and prepare management for company presentations to prospective buyers.

With the intention to relieve pressure from management having to explain a business plan, consultants are often appointed to issue a business and market report, detailing key drivers which impact the financial performance of a company. Furthermore, guiding bidders in their interpretation of projections, consultants frequently include upside and downside scenarios to the management’s business plan in their reports.

Consultants are usually rewarded per man-hour, similar to legal advisers. However, flat fees agreed upfront are not uncommon, particularly for the production of reports.

### 4.2.3.5 Special advisers

Depending on the nature of the business in question, private equity firms might appoint advisers specialising in various aspects important to a company and its operations. Key examples are environmental consultants issuing an assessment note to potential buyers; technical experts reviewing machinery or production processes; property surveyors; insurance brokers evaluating the adequacy of a firm’s insurance covers; information technology consultants offering an opinion about a company’s computer systems, both hard- and software; or human resource consultants or actuaries commenting on employee benefit

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240 Based on feedback from expert meetings.
241 Based on feedback from expert interviews.
and pension schemes or on the execution of planned redundancy plans (WHALEY and SEMLER 2002, p. 400).

Compensation of these advisers varies and depends on the scope of mandated tasks and prior interactions with a company. However, compared to the cost associated with a mandate to one of the four groups of advisers discussed before, fees to special advisers usually play a minor role.242

4.2.4 Allocation of roles and tasks – relationship of parties involved

Given the intensity of exit processes, workload, roles and responsibilities require careful allocation. LENOIR (2003, pp. 244-245) warns not to put excessive pressure on a portfolio company’s management. Every exit process causes distractions for top executives from their managerial duties, however, in order to minimise negative effects the use of professional advisers is recommended. Advisers can lift pressure from management and can also assist to compress the overall divestment process timeframe. The illustration set out in the exhibit below aims to demonstrate a typical responsibility allocation in an exit process.243

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242 Commenting on the increasing sophistication and competition among lawyers and other advisers appointed by private equity firms, LERNER and HARDYMONE (2002, p. 9) report that fees to advisers have decreased in the recent past and are expected to continue to decrease.

243 The illustration specifies ‘potential buyers’ as being relevant for M&A exits. The label of this box could as well be replaced with ‘capital market’, for the illustration to represent the case of a public listing process.
The private equity firm and a mandated investment bank\textsuperscript{244} jointly coordinate the overall divestment process. Typically the financial sponsor delegates a major part of the execution and process handling to the investment bank. The investment bank will invite potential buyers to the process, provide information materials and overall manage the collaboration of all parties involved. Their duty is to ensure a smooth and efficient process in light of value maximisation, and to manage confidentiality and selected windows for publicity. Private equity firms get particularly involved once the process reached an advanced stage and negotiations with potential buyers or detailed negotiations with the investment bank about the terms of a public listing start.

Advisers play several roles. Firstly, they prepare information materials, particularly vendor due diligence reports, based on their own research and management information. These materials are distributed through the investment bank to interested parties, assisting them in their due diligence efforts. In addition, advisers might participate in a limited number of direct meetings with potential buyers, answering questions about the company and their reports. Secondly, advisers coach and support top management in their preparation for an exit process, help to crystallise thoughts on the business strategy underlying a business plan. Last but not least, particularly legal advisers support the private equity firm in the negotiations and fulfill tasks such as documentation, etc., as outlined in section 4.2.3.2 before. Both lawyers and the investment bank facilitate a careful assessment of the offers received, with regard to legal terms and conditions as well as valuation aspects\textsuperscript{245}

The co-ordination with a portfolio company’s top management requires utmost attention as an unnecessary usage of top executives’ capacity can have detrimental effects on the current performance of underlying operations due to a lack of management focus and also stretch out the process timeline (LENOIR 2003, pp. 244-245). The key roles of management in an exit process can be limited to provide information about the business, appointing competent point persons in their organisation responsible to support advisers in their production of financial audits and due diligence reports, and to present and explain the business to potential buyers or capital market participants, respectively\textsuperscript{246}. Depending on the

\textsuperscript{244} Especially in very large exit transactions the appointment of more than one investment bank is common in practice.

\textsuperscript{245} WHALEY and SEMLER (2002, pp. 395-398) discuss the importance of detailed due diligence and the scope of effective legal due diligence. COFFEY, GARROW and HOLBECHE (2002, pp. 88-92) provide a guideline for items to be covered in commercial and legal due diligence.

\textsuperscript{246} The members of the management team typically required for the marketing phase of an exit process include a company’s chief executive officer, chief financial officer and selected senior operative managers. Selected meetings with other managers such as chief technology officers, human resource directors, etc. can be arranged if requested by interested bidders.
governance style of the private equity firm and the targeted exit route, top executives might be involved in direct negotiations with potential buyers (LENOIR 2003, p. 244).

An important task for management is the careful communication of an upcoming divestment by existing shareholders within their organisation (LESCHKE 2003, pp. 249-256). Adverse reactions such as strikes by the workforce in the fear of job losses or a deterioration of the terms of work require careful prevention, strict confidentiality of the process, and the involvement of human resource managers.

4.2.5 Single route or ‘multi-track’ process

Prior to engaging in the detailed planning of an exit process, a decision should be taken whether one specific exit route or a divestment process capturing more than one channel, a so-called ‘dual-track’ or ‘multi-track’ exit will be pursued. As the preparation and execution of more than a single track adds incremental intensity and workload to a process, a substantial outsourcing of tasks to professional advisers needs to be considered. This is why a decision regarding the scope of exit options to be covered in a process ought to be taken early on in a process, ideally before appointing professional advisers. What has to be noticed, though, is that not all exit routes achieve the same purpose. While a trade sale often accomplishes a full immediate exit, an IPO is really only a step towards a series of sequential, partial exits, as only a small portion of the financial sponsor’s shares can be sold immediately (GOMPERS and LERNER 1998b, p. 2164).247

The most frequent dual-track processes involve the preparation of an M&A auction and an IPO process in parallel.248 Additionally, private equity firms could pursue a dividend recapitalisation process, should a ‘real’ exit option be unattractive to still be able to retrieve cash proceeds from an investment without changing its ownership structure.249 Several considerations arguing for and against the pursuit of dual- or multi-track divestment processes need to be taken into account. These aspects are discussed and assessed in the empirical results section 5.7.

Following the decision as regarding which routes to be covered, the further concrete preparations of an exit process are largely specific to each individual exit channel with distinct requirements and process details. The specifics and characteristics of the major

247 Private equity funds cannot sell all (or frequently not even a part of) its shares into the public market right at the time of the public offering. They are rather required to undertake a ‘lock-up’ agreement with the investment bank underwriting the offering.

248 While there exist several articles and notes about dual-track exit processes by practitioners, investment banks and law firms, the author has not found academic contributions exploring these processes.

249 Detailed process step descriptions for each individual exit route will be provided in section 4.3.
divestment alternatives, trade sale and secondary buyout, both usually organised in a joint M&A process targeting both strategic and financial buyers, a public listing, a recapitalisation as well as write-offs for failing investments are explored in the subsequent section.

4.3 Comparative characteristics of exit options

Beyond the fundamental process design aspects outlined above, each type of exit has its individual execution procedures, specific requirements and advantages as well as disadvantages to be aware of. Buy-backs and write-downs usually mark moderate investment success or even failure and are only undertaken when other lucrative forms of exits are not feasible (i.e., CUMMING and MACINTOSH 2003b, p. 125, LESCHKE 2003, p. 249). For successful investments, private equity firms can contemplate striving for an M&A sale or a public listing. Additionally, a recapitalisation process could be considered in order to relieve pressure for a quick execution, should a fund require cash proceeds for certain purposes.

Before embarking on an exit route, a detailed analysis is necessary matching process requirements and the capacity and availability of resources, capturing the realistic timeline for the completion of a divestment, and reflecting fund particularities (LENOIR 2003, pp. 242-244). The following critical review of the major exit routes relevant for buyout investments discusses the process characteristics, advantages and disadvantages that demand reflection.

Despite the wide-spread proposition in private equity literature that a public listing of a private equity portfolio company is the ultimate and most successful form of exit (i.e., GOMPERS 1996, GOMPERS and LERNER 1999a, 2001, 2004, NEUS and WALZ 2004), other exit routes might represent superior alternatives in certain circumstances and conditions. RELANDER, SYRJANEN and MIETTINEN (1994) and WRIGHT and ROBBIE (1998, p. 551) also demonstrate for European venture capital firms that public offerings are not the preferred divestment route. Given the less liquid European capital markets for high growth companies compared to the US, European venture capitalists have historically favoured a sale to competitor companies.

250 Write-offs or write-downs constitute reactions to poor performance outcomes of investments rather than representing planned divestment alternatives, such as other exit routes, and are hence not discussed in detail in this section.
251 As LENOIR (2003, p. 242) indicates, the viability of individual exit routes depends strongly on the company’s stage of development, its outlook and the potential buyer universe.
252 EVCA (2005a, p. 2) also reports that based on a recent survey among all types of private equity investors, trade sales have been the preferred type of exit.
4.3.1 Trade sale and secondary buyout – M&A exits

Selling a portfolio company through a sale to either a strategic buyer, such as competitors or business partners, or alternatively to financial investors has been the most widely used route to effect divestments of European buyout investments (EVCA 2005a, p. 2). When planning to sell a company via such a transaction, a number of strategies for the handling of an M&A sale process can be considered:

4.3.1.1 Type of sale process: Auction versus private processes

A starting point in the structuring of an M&A process is the identification and closer analysis of potential buyers, the so-called ‘bidder universe’. Although well functioning portfolio management procedures253 should regularly observe the environment of potentially interested parties, the bidder universe analysis requires further depth.

Appointed investment banks usually perform a detailed screening of potential bidders, comprising firms competing in the same or related industries, suppliers or large clients of the portfolio firms as well as conglomerates that have indicated a desire to diversify into a relevant segment. These purchaser candidates are referred to as potential ‘trade’ or ‘strategic’ buyers as their motivation to acquire the company goes beyond pure financial interests and rather contains a certain strategic element (CUMMING and MACINTOSH 2003b, p. 117). Furthermore, the screening might include financial buyers such as other buyout investors, hedge funds, industrial investment holdings and other investment vehicles that have a track record in undertaking similar acquisitions. The group of these purchaser candidates, given their nature and objectives, is labelled as potential ‘financial’ buyers.

Depending on the scope of the resulting bidder universe, a number of M&A process styles can be considered. Each of these approaches accomplishes different objectives. The diagram set out in the exhibit below attempts to summarise key considerations marking each of these process styles:

253 See LIEBER (2004, pp. 73-74) and LENOIR (2003, pp. 241-242) for comments on the importance of regularly screening the environment of potential buyers. LENOIR (2003) particularly highlights that executive management should be involved in examining potential buyers, due to their superior knowledge of the industry environment.
1. Pre-emptive bid
In the scenario of a pre-emptive bid, only one likely buyer of the firm is approached directly, before a wider exit process even starts. On the one hand, such approach is quick, well controllable and maintains a high level of confidentiality due to the limited number of parties involved. On the other hand, due to negotiations with only one potential buyer, no competitive tension builds up for the company which would be expected to favour a value maximisation. However, given the confidential nature of this approach, should the negotiations not lead to a satisfactory outcome, another approach can be pursued consequently.

As it is likely that the potential purchaser has a solid understanding and knowledge about the business in question, no formal memoranda or data-packs need to be created. Data and information supply are managed on a request basis.

2. Targeted solicitation
As soon as no single obvious buyer can be identified, a more wide-spread approach needs to be pursued. In a targeted solicitation only a small number of likely purchaser candidates are approached, often in a confidential and informal way either by the appointed investment bank, the buyout investor or also the executive management team, depending on established contacts.
Following feedback from interested parties, separate bi-lateral negotiations can be held in order to identify the most attractive bidder. Typically, targeted solicitations do not seek to aggressively enforce the competitiveness for value maximisation through strict and time compressed process handling. This procedure is particularly sensible if only a limited number of trade buyers, which are sensitive to publicity and would abstain from auction processes as a matter of principle, submit bids for a company. This process can still be executed in a relatively confidential manner and hence does not provoke a considerable business disruption.254

With regard to information preparation, the compilation of detailed data-packages and granting access to a data room are sufficient to support this process.

3. Managed auction255

A managed or ‘controlled’ auction seeks to increase the competitive dynamics in the process through imposing a tight process timeline and limited opportunities to conduct due diligence on bidders. Aiming to create competitive tension, the invited set of bidders does not only include potential strategic but typically also financial buyers. The disadvantage of including financial sponsors in such an auction are the more onerous due diligence requirements, as financial investors cannot be assumed to have an equally established understanding of the business as trade buyers. On the other hand, the involvement of financial investors favours execution certainty at a potentially attractive valuation, given that buyout investors can support high valuations through the use of financial leverage.256

Despite the involvement of more bidders257, typically up to 15, confidentiality remains a key focus, even though information leakage about the process to the public domain often cannot be entirely prevented. A managed auction procedure requires more preparation and a more detailed process design than both a pre-emptive bid and a targeted solicitation. Process details are intentionally kept confidential by the parties involved, however according to a sample of 15 expert interviews conducted by the author in course of this study, controlled auctions, involving at least two bidding rounds structured in a rather time compressed process, supported by a detailed information memorandum and comprehensive vendor due diligence.

254 Based on feedback obtained in expert interviews. Likely examples for business disruption caused in publicised exit processes are workforce strikes, supplier and clients raising concerns about the continuity of the business, potentially halting business relationships.
255 VON WERDER and PAUL (2005, pp. 25-28) label these processes ‘organised limited’ auctions.
256 Please refer to section 2.2.2 for a conceptual analysis of leveraged buyouts.
257 RELANDER, SYRJANEN and MIETTINEN (1994, p. 149) recommend that private equity managers should try to identify and build up relationships with a number of likely buyers for a portfolio company well before launching an exit process.
diligence reports have evolved to standard market practice for the divestment of sizeable buyout investments through M&A processes.258

The table presented in the exhibit below summarises key process considerations when conducting managed auctions:

<table>
<thead>
<tr>
<th>Managed auction: Process design questions</th>
<th>Options</th>
<th>Advantages</th>
<th>Concerns and issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process timeline</td>
<td>Short timing</td>
<td>Reduces time the firm is distracted from exit</td>
<td>High intensity, strain on executive management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enforces competitive tension</td>
<td>Participants unwilling to bid due to due diligence constraints</td>
</tr>
<tr>
<td></td>
<td>Generous timing</td>
<td>Receiving ‘better’ informed bids with fewer conditions in offers</td>
<td>Maintaining process momentum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potentially better and more accurate presentation of the company</td>
<td>Higher risk of unexpected events disrupting process</td>
</tr>
<tr>
<td>Include or exclude financial investors?</td>
<td>Include</td>
<td>Increases competitive tension</td>
<td>Financing based on current financial performance, rather than on historical financials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces risk of aborted process</td>
<td>More onerous due diligence requirements</td>
</tr>
<tr>
<td></td>
<td>Exclude</td>
<td>Favours speed/efficiency of process</td>
<td>Limits buyer universe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces strain on management</td>
<td>Risk of loss of competitive tension</td>
</tr>
<tr>
<td></td>
<td>One round</td>
<td>Favours speed/efficiency of process</td>
<td>Risk of missing bidders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-emptive value captured</td>
<td>Limits ability to manage information flow</td>
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<tr>
<td></td>
<td></td>
<td>Confidentiality maximised</td>
<td>Constraints on getting financed bids with limited conditionality</td>
</tr>
<tr>
<td></td>
<td>Two rounds</td>
<td>Maximises competitive tension</td>
<td>Time consuming</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ability to screen buyers in detail</td>
<td>Risk of ‘tactical’ first round bids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information flow more effectively controllable</td>
<td></td>
</tr>
<tr>
<td>Information Memorandum or Data-package</td>
<td>Information</td>
<td>Optimal positioning of investment thesis</td>
<td>Greater information disclosure</td>
</tr>
<tr>
<td></td>
<td>Memorandum</td>
<td>Comprehensive description helpful particularly for financial bidders</td>
<td>Time consuming to prepare</td>
</tr>
<tr>
<td></td>
<td>Data-package</td>
<td>Can pre-empt potential issues and concerns</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limits information disclosure and time for preparation</td>
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<tr>
<td></td>
<td></td>
<td>Useful in quick strategic buyer-only processes</td>
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<td></td>
<td></td>
<td>Possible use in pre-emptive process prior to full sale process</td>
<td></td>
</tr>
</tbody>
</table>

Exhibit 73. Managed auctions design considerations.

Following a period of typically four to six weeks after the initial invitation of bidders, allowing bidders to conduct analyses, valuations and due diligence on the basis of an encompassing set of marketing and information materials, first round bids come due. M&A auctions can be classified as ‘first-price sealed bid’ procedures (KLEMPERER 1999, p. 229)259, which means that each bidder submits a bid detailing offer price, expected

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258 Depending on the nature and stage of development of the firm as well as the specifics of the buyer universe, other approaches such as a targeted solicitation are also pursued in practice.
259 KLEMPERER (1999) and ROTHKOPF and PARK (2001) provide interesting introductions into auction processes, each offering detailed literature reviews. KLEMPERER (2002) discusses the potential complexities in auctions, particularly the difficulties in relation to the comparison of bids if price is not the only determinant, such as in the case of M&A auctions, where demanded conditionality and limitations require particular considerations. KLEMPERER (1999, p. 229) classifies four basic types of auctions: 1) The ‘ascending-bid’, also ‘open-bid, oral’ or ‘English’ auction, where the price is successively raised until only one bidder remains; 2) the ‘descending-bid’, or
conditionality, as well as often a strong indication as to how to finance the acquisition, not knowing about the bids of other participants. Not only corporate finance advisers, but also other auctioneers often do not communicate to potential buyers who the other bidders are, depending on the need to enforce competitive tension (ROTHKOPF and PARK 2001, pp. 90-91). In a multi-round auction process, the first round bids are typically used to screen bidders’ interest in detail, being able to limit the disclosure of highly confidential information in the second round to only seriously committed bidders. ROTHKOPF and PARK (2001, pp. 85-86) highlight that multi-round auctions can increase competitive dynamics, but also face a higher risk of conspiracies by bidders collectively agreeing to bid at lower levels.

Following a detailed evaluation of submitted offers and the resulting decision which bidders remain included after the first bid260, the second stage of the auction process starts.

In addition to the materials provided before the first bid date, the due diligence process of bidders in the second round is facilitated by granting access to a data room, offering company presentations held by top executives, and site tours giving the opportunity to inspect a company’s operations and production facilities. Selectively, and often on a request basis, expert meetings with operational managers and consultants who have drafted the vendor due diligence reports can be offered. Following a period of typically six to eight weeks, second-round bids, or so-called ‘binding’ or ‘firm’ bids come due, when bidders are expected to submit offer letters detailing key offer terms including offer price but also the intended strategy with the firm post acquisition261. VON WERDER and PAUL (2005, pp. 25-28) indicate the importance that these bids include committed and approved acquisition financing packages in order to be properly compared and assessed.262 The assessment of

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260 VON WERDER and PAUL (2005, pp. 25-28) also indicate that investment banks organising auctions often seek to include both trade and financial investors towards the end of a process in order to maintain optimal competitive tension.
261 DRANIKOFF et al. (2002, pp. 80-83) suggest that in the interest of an efficient divestiture process, the future strategy of potential buyers requires reflection in the evaluation of offers. Particularly top executives who remain with the firm following an exit are an important factor, influencing the value of a business. A scenario, where the top management team feels uncomfortable with strategic objectives of a bidder and hence consider to leave the firm would in all likelihood result in a sub-optimal valuation.
262 VON WERDER and PAUL (2005, pp. 25-28) summarise legal considerations regarding acquisition financing arrangements. HANTON (2005, pp. 66-68) discusses considerations in relation to the assessment of bids submitted by financial investors, also highlighting the importance to evaluate debt financing packages when evaluating bids. For the purpose of a firm bid, debt agreements should ideally mirror contractual limitations and conditionality set out in a submitted sale and purchase agreement draft, rather than add incremental conditions.
binding offers involves detailed analyses by the private equity firm supported by the investment bank, discussions with executive management, legal reviews and can take from a few days to several weeks, depending on the number of bidders, the complexity of the proposed transactions, etc.\textsuperscript{263} Instead of naming a winner following firm bids, a so-called ‘exclusivity period’ of a few weeks is usually granted to the bidder submitting the most attractive offer. Within this period, this bidder has the opportunity to clarify outstanding due diligence requirements in order to be able to provide an unconditional offer including a signed sale and purchase agreement, a fully committed financing agreements and other documents, necessary to effect the completion of such M&A transaction. As soon as this bidder is able to submit a satisfactory offer package within this period, he is communicated as winner of the process, formally declaring the end of the auction. However, should this bidder not be able to provide a satisfactory offer or on the basis of major due diligence findings not be willing to offer the previously indicated terms, other bidders might be invited to re-submit offers and an exclusivity period might be granted to another party.\textsuperscript{264}

The timeline diagram provided in the exhibit below aims to visualise a typical controlled auction procedure for buyout investments.

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\textsuperscript{263} The evaluation of offers from a valuation perspective will be addressed in section 4.5. VON WERDER and PAUL (2005) give insights about relevant legal considerations.

\textsuperscript{264} Based on expert interview feedback and VON WERDER and PAUL (2005, pp. 25-28).
preparation of materials and documents prior to launching transactions and the due diligence
performed by bidders is becoming more intense and comprehensive (LENOIR 2003, pp.
242-243, BURR 2004, p. 72). Increasing due diligence requirements with regard to
commercial, market and legal aspects can overall demand longer preparation periods
before launching an exit process. Similarly, complex legal and taxation structuring
necessities can cause delays to achieve the completion of a transaction.

4. Public auction
All three M&A procedures, discussed so far, have in common that one or more potential
bidders are identified, analysed, and selectively invited to a sale process. However, if the
identification of likely bidders is not possible or the risk of missing out potential buyers is
significant, a wide-spread public auction approach can be considered.

In a public auction, the sale process is disclosed in relevant media that might target certain
types of buyers. Despite the label ‘public’ auction, an investment bank can require
feedback from interested bidders and screen them with regard to their financial capabilities,
etc. before granting admission to the auction. After having confirmed admitted bidders, the
process might be managed in a similar manner as applied in controlled auction processes.

Given the high disclosure requirements that pose a substantial risk of business disruption,
public auctions are rarely conducted. While in theory, public auction procedures should lead
to the highest level of competitive tension, ROTHKOPF and PARK (2001, p. 85) warn that
seemingly separate bidders might act as ‘hidden’ joint-venture and thereby reducing
effective competition. Taking also into account that an abortion of highly publicised exit
process can have severe detrimental effects onto the reputation of a company, the
advantages of a public compared to a managed auction process do rarely suffice to justify an
open invitation of bidders.

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265 BURR (2004, p. 72) emphasises that particularly requirements for legal due diligence on behalf of the buyer have
increased in recent years, following corporate scandals and the implementation of the US ‘Sarbanes-Oxley Act’ that
specifies personal liability of directors in certain circumstances. This rule is not only applicable for all United States
incorporated public firms but also for all firms that issue registered securities in the United States. Thus this rule is
relevant to European firms that raise acquisition financing on the US capital market, which is frequently the case for
large transactions involving a US dollar bond tranche in the financing package.

266 BORDEWICH (1999, pp. 29-30) summarises on the basis of feedback by legal and M&A experts that the cross-
border nature of most large transactions adds complexities impacting the tax efficient set-up of acquisitions. VON
WERDER and PAUL (2005, pp. 25-28) stress that tax structures need to accomplish that all interests and fees payable
in relation to acquisition financing are fully tax deductible.

267 I.e., industry journals, practitioners’ magazines, financial news services, etc.

268 Based on feedback from expert interviews.
4.3.1.2 Legal structuring of a transaction

From a legal structuring perspective, a sale of a portfolio company can be effected either through a ‘share deal’, as an ‘asset deal’ or alternatively a sale to a strategic acquiror could take the form of a merger (CUMMING and MACINTOSH 2003b, p. 106). The selection of the legal structuring type depends foremost on the requirements of the buyer, however, the seller has to consider implications regarding potential claims and contingencies that might be enforced after the completion of an exit (BEGG 1985, pp. 26-27).269

1. Share deal

Through the completion of a share deal, the buyer becomes the ‘universal legal successor’ of the selling buyout investor. All rights and duties of the exiting private equity firm are transferred to the buyer. As BEGG (1985, p.27) illustrates: “When a purchaser buys shares in a company, he takes on that company with all its ‘warts’ and liabilities.”

While the ownership structure changes, there is no need to re-allocate assets or liabilities of the firm.270 Given the encompassing nature of the legal succession, the risk of facing claims in relation with a portfolio company after a full divestment is typically limited. As a share deal can effect a clear ending to the relationship to a portfolio company and ongoing monitoring of the firm’s activities can be avoided, this type of transaction is strongly preferred by private equity firms.271

The principle ‘caveat emptor’ (buyer beware) puts the duty on the purchaser to conduct comprehensive due diligence in order to identify and reduce risk in relation to a transaction (WHALEY and SEMLER 2002, p. 395). Despite due diligence efforts, authors acknowledge that purchasers have to rely on the accuracy and completeness of information provided by the seller. Thus, purchasers will typically demand a set of ‘warranties’ and ‘indemnities’ as instruments of legal protection, should the seller fall short of disclosing issues that have existed or have its origin before the completion of the transaction (KRIEGER, ANTHONY, GREENSTONE, KHARAGAT and SHEPLEY 1994, pp. 118-119). Additionally, warranties will be requested for areas where no meaningful due

269 COFFEY, GARROW and HOLBECHE (2002, pp. 83-100) provide a helpful overview of the legal aspects to be considered in the structuring and execution of an acquisition process. KRIEGER, ANTHONY, GREENSTONE, KHARAGAT and SHEPLEY (1994, pp. 76-150) provide a detailed review of corporation and taxation law aspects in buyout transactions.

270 WHALEY and SEMLER (2002, p. 400) highlight that purchasers in a share deal usually also inherit the company’s tax position with potential tax liabilities, which should also be a focus in the due diligence.

271 The ‘value-add and monitoring cost concept’, as developed and discussed by GIFFORD (1997) and expanded by CUMMING and MACINTOSH (2001, 2003b) also favours a clear-cut terminations of legal relationships to portfolio firms. In the interest of an efficient allocation of scarce time of private equity professionals, past investments should not distract fund managers from creating value through monitoring existing portfolio companies and acquiring new investments.
diligence can be performed.\textsuperscript{272} While a warranty guarantees that the information provided is correct or confirms that there are no pending problems concerning certain aspects\textsuperscript{273}, an indemnity is a financial guarantee that if a specific liability arises, the seller will meet these obligations (COFFEY, GARROW and HOLBECHE 2002, p. 92).\textsuperscript{274}

However, over the past 20 years, the market practice has developed that European leveraged buyout houses tend not to give representations, warranties or indemnities on a sale (HANTON 2005, pp. 66-68).\textsuperscript{275} WHALEY and SEMLER (2002, pp. 396-397) justifies that private equity investors often do not possess the same in-depth knowledge about businesses as management and therefore are not in position to grant warranties.

However, this is not an approach that trade buyers are entirely comfortable with. In order to close an agreement with a strategic buyer insisting on specific warranties and indemnities, private equity firms more and more frequently put a ‘warranty and indemnity insurance cover’ in place (HANTON 2005, pp. 66-68), covering the selling private equity firm in case of any claims subsequent to a divestment.\textsuperscript{276}

Financial buyers tend to accept the position to obtain only limited warranties\textsuperscript{277}, as they firstly cannot argue against what would be their own position and secondly should have gained comfort that the company has been exposed to extensive due diligence twice (at the time of the original buyout and the sale process). Nevertheless, they are likely to seek warranties from the continuing management regarding the business. Their purpose is not to provide full cover but to ensure management disclose any issues.\textsuperscript{278}

\textsuperscript{272} WHALEY and SEMLER (2002, p. 396) argue that due diligence and warranties serve as complements in a transaction. The objective of due diligence is to identify and quantify risks, while warranties seek to allocate responsibility for risks, which are often unidentified. Due-diligence is an active process, whereas warranties constitute a re-active protection of the purchaser.

\textsuperscript{273} Typically warranties are divided into nine groups, capturing the corporate nature of the target company, its accounts, finance, taxation, trading and contracts, real property, environmental issues, employees and assets (KRIEGER et al. 1994, p. 125).

\textsuperscript{274} KRIEGER et al. 1994, pp. 124-129 can be referred to for a useful introduction to warranties and indemnities in acquisition contracts.

\textsuperscript{275} This reinforces the private equity investors’ objective to terminate all legal duties connected to a portfolio investment at the time of exit completion.

\textsuperscript{276} WHALEY and SEMLER (2002, pp. 396-397) suggest that in acquisitions from divesting private equity firms it has become common that due diligence and reliance on warranty insurance represent the only forms of buyer’s protection.

\textsuperscript{277} KRIEGER et al. (1994, p. 124) stress that the scope of required warranties and indemnities is often governed by the institutional demand of financiers or shareholders of the purchaser.

\textsuperscript{278} As such, HANTON (2005, pp. 67-86) explains that it is becoming market practice that these warranties are qualified by reference to management’s knowledge and that the maximum of management’s liability is a proportion between around 40% and 100% of cash proceeds management receive as part of their compensation package contingent on exit, after taking account of reinvestments.
2. Asset deal

The core difference between a share deal and an asset deal is that in the latter case the purchaser is able to select certain rights and assets and leave behind obligations and liabilities (KRIEGER et al. 1994, p. 121).\textsuperscript{279} This means that a seller of a business will sell parts of a business attractive to a purchaser, while at the same time retaining liabilities attached to assets sold.

This structuring approach is often applied in connection with corporate divisional spin-offs or restructurings\textsuperscript{280} (BEGG 1985, p. 27, KRIEGER et al. 1994, pp. 121-122), however asset deals are unlikely to be pursued in private equity divestments. Nevertheless, private equity firms could contemplate an asset sale if the ‘going-concern’ value of a firm is lower than the value of individual assets less attached liabilities.\textsuperscript{281}

A further reason why asset deals in a private equity context are rare is the problem of double taxation. Gains are taxable when the assets are sold at the level of the operating legal entity effecting the sale and the proceeds have to be taxed when distributed to the shareholder, the fund (KRIEGER et al. 1994, p. 121).\textsuperscript{282}

From the viewpoint of a buyer, the level of protection required in an asset purchase is considerably less than in a share deal, as the purchaser does only become legal successor of identified, defined and evaluated assets and liabilities (BEGG 1985, pp. 27-28, KRIEGER et al. 1994, p. 120).

3. Merger

In addition to share and asset transactions, CUMMING and MACINTOSH (2003b, p. 106) also name mergers as a structural device to effect an M&A exit. From the seller’s perspective these transactions will strongly resemble to either share or asset deals. Key difference, is that the business will be directly integrated with another entity, potentially with the intent to reap synergy benefits.\textsuperscript{283}

\textsuperscript{279} KRAFT (2001, p. 210) labels this asset selection as ‘cherry-picking’, but moderates that usually obligations cannot be fully left behind.

\textsuperscript{280} BEGG (1985, p. 27) and COFFEY et al. (2002, p. 93) suggest that asset deals can potentially allow for more flexibility in restructurings involving workforce reductions. COFFEY et al. (2002, pp. 93.97) discuss human resource aspects in acquisitions.

\textsuperscript{281} These transactions, in industry jargon titled ‘asset stripping’ deals, are unlikely for successful buyouts and have been rare in the European buyout market.

\textsuperscript{282} Circumventing the double taxation problem in asset sales requires complex structuring and depends on the relevant jurisdictions governing the transaction and assets in question.

\textsuperscript{283} STAHL and MENDENHALL (2005, pp. 183-201) provide a detailed elaboration on merger integration aspects, differentiating mergers from acquisitions. HUBBARD (2001) also sets out an analysis of merger integration and post merger synergy implementation.
Due to the planned integration in a merger, the requirement for warranties and indemnities might be different compared to other structures. Particular consideration from the buyer’s perspective should be devoted to contract due diligence, human resource aspects and antitrust concerns (WHALEY and SEMLER 2002, pp. 395-400).\textsuperscript{284}

Having established several key characteristics of structural options for M&A divestments, further legal and taxation aspects are briefly outlined below.

4.3.1.3 Legal and taxation considerations
The following discussion aims to briefly highlight several legal and taxation considerations complementing the introduction to structural aspects described above.\textsuperscript{285}

1. Major legal aspects
The corporate law and regulatory requirements differ from one jurisdiction to another, however, certain standards have evolved, which are widely respected and codified. Moreover, due to the longstanding culture of mergers and acquisitions in the Anglo-American countries and the well-established legal framework, many acquisition contracts opt to be governed according to US or English law, even if involving firms incorporated in different countries. Practitioners value the simplicity of these laws, the fact that their rules are widely understood and practiced, and that due to the long experience of dealing with acquisitions in these legal frameworks outcomes of conflicts are better predictable and thus often preventable. The application of US or UK laws, nevertheless, do not prevent the need for side-contracts and agreements in relevant local jurisdictions (BORDEWICH 1999, pp. 29-30).

A number of key legal elements to be considered in an M&A exit process by the seller are concisely discussed henceforth.

\textsuperscript{284} Given the limited importance of mergers as structuring option for private equity firms, a detailed discussion of aspects would exceed the scope of this section. However, the author recommends PECK and TEMPLE (2002) for an extensive compilation of scientific articles on merger aspects, CHILD, FAULKNER and PITKETHLY (2001) for a discussion of post-merger management considerations, and MCDONAGH BENGSTSSON (1992) for a general practical guide through commercial, financial and legal aspects throughout an M&A process.

\textsuperscript{285} There is a wide range of literature regarding legal and fiscal aspects of corporate M&A transactions. A widely used point of reference is the comprehensive compilation of articles and legal notes, edited by GILSON and BLACK (1995), including a detailed corporate merger law review (pp. 639-1471) and an introduction to related taxation issues (pp. 454-506). FELDMAN and MEISEL (1996) offer a detailed review of relevant legal literature, including detailed notes on the fundamentals in European jurisdictions. STEDMAN (1993) introduces legal frameworks, with a United Kingdom focus, in a non-legalistic and easily understandable way. BURGESS (1992) similarly provides an introduction into law affecting corporate finance transactions, with a particular concentration on the United Kingdom. The legal discussion provided by KRIEGER et al. (2002, pp. 76-150) comprises updates and a discussion of more recent developments of relevant US law and an emphasis on buyout transactions.
a) Confidentiality and disclosure
As highlighted throughout this section, confidentiality is a key consideration in an exit process. Before providing potential buyers with sensitive information, a set of confidentiality agreements requires signing. COFFEY et al. (2002, p. 87) specify that these agreements normally rule that the potential purchaser must:

- Not disclose the information to any other party;
- Not use the information other than for the proposed acquisition;
- Return or destroy the information on request;
- Keep confidential the negotiations and discussions taking place;
- Not make copies of specified information;
- Keep the information at a particular location;
- Not store or transmit information electronically;
- Ensure that all employees receiving the information sign the confidentiality agreements;
- Not compete with the seller or solicit the seller’s customers, suppliers or employees for a period during and after a breakdown of negotiations.

Following again the maxim of ‘caveat emptor’, the onus is on the purchaser to ask for the information needed to make a true and fair assessment of the business and the purchase price to be offered (COFFEY et al. 2002, p. 87). Pro-active disclosure of information by the seller assists in limiting warranties and indemnities (WHALEY and SEMLER 2002, p. 396). Particularly in multi-round auction processes, highly sensitive information is ideally disclosed only as the negotiations progress towards the end (COFFEY et al. 1994, p. 87).

b) Offer letters
Expressing interest in acquiring a company, bidders in most process forms are requested to submit offer letters. These letters constitute an offer to buy the target company at a certain price\(^{286}\) subject to a list of conditions and assumptions. Depending on the stage of a process and the scope and level of due diligence already performed and information received, these conditions can vary in number and specificity. COFFEY et al. (1994, pp. 88-91) lists several key areas of conditions in offer letters:

- Completion of due diligence (might be specified in detail);
- Completion of legal documentation;
- Key staff remaining with the business;
- Structural issues;
- Financial assumptions, current actual financial performance of the firm;
- Other conditions such as pension liability, ownership of intellectual property;
- Various restrictive covenants.

\(^{286}\) Early on in M&A sale processes, offer letters usually mention a price range rather than a fixed price.
Other conditions are in relation to obtaining appropriate financing for the acquisition and so-called ‘material adverse change’ (MAC) clauses, whereby an offer becomes obsolete should unexpected material events or circumstances either affect the potential buyer’s business, the target company or the overall economic environment (VON WERDER and PAUL 2005, pp. 26-27).

Related to conditions, offer letters and later on sale and purchase price agreements might detail specific ‘purchase price adjustments’. Depending on the outcome of defined circumstances, these adjustment mechanisms can alter the purchase price after the completion of a transaction. Purchase price mechanics are often tied to achieved financial performance or outcomes of pending litigations, etc.

c) Sale and purchase agreement

The ‘sale and purchase agreement’ is the central document in the acquisition process governing all aspects of the transaction (COFFEY et al. 2002, p. 97).

The sale and purchase agreement is an extensive legal document specifying all details and terms in relation to an M&A transaction. KRIEGER et al. (1994, p. 118) outline that this document typically captures eight elements:

- The agreement for sale;
- The initial purchase price, adjustments to it and the calculation and payment of any deferred consideration;
- Any conditions relating to the completion of the agreement;
- The retention of any part of the purchase price;
- The completion mechanism;
- Warranties and indemnities;
- Specific provisions relating to pensions;
- The protection of the purchaser from unfair competition.

The sale and purchase agreement typically refers to a list of supplemental agreements, which have to be approved prior to the execution of the sale and purchase agreement. CANON (2001, p. 8A) mentions four key categories of supplemental agreements:

- Employment agreements for key members of management, consulting agreements, and agreements with management not to move to a competitor firm in a given timeframe;
- Financing agreements, ensuring the sufficient funding for the acquisition;
- Leases, in case the buyer opts to lease real estate and buildings from the seller287;
- Licenses, trademarks, and patents.

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287 Private equity firms are unlikely to agree to offering lease properties to a buyer, as a retention of real estate would not comply with their objectives of achieving an exit. However, buyers of firms holding valuable real estate can also effect sale and lease-back transactions with third parties in order to reduce the upfront financing requirement to meet a purchase price.
Key conditions documented in sale and purchase agreements do not only include the approval of third parties such as government, industry regulators and antitrust authorities but also potentially suppliers and customers. MAC clauses, as often codified already in offer letters, have also relevance in sale and purchase agreements (VON WERDER and PAUL 2005, pp.26-27).

The list of major legal aspects gets longer when taking the viewpoint of the buyer. Legal due diligence, including the review of key contracts for ‘change of control’ provisions and antitrust considerations need to be taken into account.

2) Taxation aspects
Even more diverse than the legal framework, tax regulation is different in each country. Commenting on the situation in Europe, BORDEWICH (2005, p. 30) notes that there are as many tax laws as there are European countries. However, several general aspects are applicable in many jurisdictions. Tax implications of share deals are in general different from those of asset deals. Sellers will likely be taxed capital gains tax once in case of a share deal, while asset deals can result in double taxation problems.

From the viewpoint of buyers, several general aspects can be taken into account. Firstly, buyers in share deal are usually entitled to carry forward existing tax losses, however, also to take on existing tax liabilities, unless otherwise agreed. Buyers in asset deals usually do not take on a company’s existing tax status (BEGG 1985, pp. 27-28, KRIEGER et al. 1994, pp. 125-126).

Buyers in share deals cannot obtain tax relief on the consideration paid, while buyers in asset deals potentially can do so (BEGG 1985, pp. 27-28). Purchased assets, which qualify

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289 COFFEY et al. (2002, pp. 88-92) suggest a detailed list of standard legal and commercial due diligence items, WHALEY and SEMLER (2002, pp. 395-401) provide a guideline for the legal due diligence process and analyse the link between due diligence and warranties and indemnities.
290 A purchaser should examine major contracts and ensure their continuation. Contracts with change of control clauses require renewal or ‘novation’ following a change in ownership. While the renewal of contracts is likely to be necessary in share deals, also asset deals can trigger change of control situations (BEGG 1985, pp. 27-28). KRIEGER et al. (1994, p. 122) note that especially finance leases or hire purchase agreements need to be reviewed carefully.
291 Antitrust regulation demand consideration if a company is sold to a competitor company. Disapproval of antitrust regulators can prevent the successful completion of a transaction and thus antitrust concerns should be considered by the seller. An article by POLITO (1991, pp. 4-13) serves as helpful introductory note to European antitrust regulation. ANDENAS and PAPADOPOULOS (2002, pp. 193-216) can be recommended for a more recent review of international antitrust legislation. FORSTINGER (2002) provides a comprehensive comparative analysis between US and European takeover law.
292 Gains are taxable when the assets are sold at the level of the operating legal entity effecting the sale and the proceeds have to be taxed when distributed to the shareholder, the fund (KRIEGER et al. 1994, p. 121).
for capitalisation, can normally be depreciated on a tax-deductible basis over specified periods. Another general consideration to be made from the buyer’s perspective is the different stamp duty treatment of share versus asset transactions. KRIEGER et al. (1994, p. 122) note that in many tax regimes the transfer of assets is taxed at higher rates than the transfer of shares.

Efficient tax structuring of M&A transactions, particularly cross-border deals, is a highly complex field (BORDEWICH 2005, pp. 29-30). Substantial challenges arise both for sellers as well as buyers. Depending on the nature of a transaction and the number of jurisdictions involved, legal and tax advisers usually develop legal and tax structures over several weeks or months prior to the completion of a transaction.293

4.3.1.4 Comparative assessment of M&A exits

The sale of a portfolio company either to a strategic or a financial buyer is the most frequently used and overall preferred exit channel for European buyout investments (EVCA 2005a).294 M&A divestments can accomplish a full exit with immediate cash proceeds for private equity investors. Summarising academic and practitioners’ literature as well as feedback obtained through the author’s own research process, several advantages and disadvantages compared to other exit routes can be contrasted:

292 A detailed review of relevant tax aspects can be found in WHALEY and SEMLER (2002), who analyse legal and tax aspects comprehensively for more than 20 major countries, GILSON and BLACK (1995, pp. 454-506) discussing tax considerations in international M&A transactions or COOKE and FOX (1986) as an entry point setting forth the principles of tax structuring, which seem helpful on a conceptual level. Furthermore, MAYDEW, SCHIPPER and VINCENT (1999) examine tax effects in corporate divestitures and the impact on the type of divestment method chosen by US firms. BÜNNING (2002) offers a helpful summary of taxation aspects for private equity funds operating in Germany.

294 Please also refer to section 5.6.1 for a confirmation of a clear preference for trade sales by the sample of buyout investors responding to the survey.
**Advantages of M&A exits**

<table>
<thead>
<tr>
<th>a) Immediate, full cash exit and certainty</th>
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<tr>
<td>M&amp;A exits are usually the only exit route that achieve an immediate divestment of a private equity firm's investment.</td>
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<tr>
<th>b) Potential for high valuation</th>
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<tr>
<td>Successful M&amp;A exit transactions might even achieve better valuations than IPO exits:</td>
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<tr>
<td>1. Strategic buyers might be willing to pay a premium for companies, due to the expectation of synergies, to expand market share or to get access to a new market.</td>
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<td>2. Strategic buyers do normally have strong insights into the company’s business, requiring a lower risk premium than the capital market (CUMMING and MACINTOSH 2003a, pp. 520-522).</td>
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<td>3. Strategic buyers acquiring the majority stake in a business are often prepared to pay a 'control premium' of often more than 20% of the firm's value (KRAFT 2001, p. 267).</td>
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<tr>
<td>4. Financial buyers might be in a position to pay high valuations, benefiting from a considerable leverage effect, which depends, however, on the state of the debt capital markets.</td>
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<th>c) Faster and simpler execution process</th>
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<tr>
<td>Compared to IPO processes, M&amp;A exits are said to require less preparation than IPO exits and to demand less of managements’ time (LESCHKE 2003, p. 251). While certainly less time for the drafting of marketing materials and for the formal due diligence performed by advisers is needed, a successful M&amp;A process still requires substantial planning and preparation. WALL and SMITH (1997, p. 18) highlight: “…trade sales should often be regarded as equal or preferable to IPOs, but that they require the same degree of planning”. Nevertheless, trade sales can potentially be executed quicker than IPOs, depending on the process style chosen.</td>
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<th>d) More flexible, less regulated process than IPO</th>
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<td>Somewhat related to the previous point, trade sales per se are not regulated processes as are IPOs and thus do not have to be organised around specified dates and time periods. Mandatory process timelines set out by stock exchanges or listing regulators can potentially result in execution delays (BAKER and MCKENZIE 2005, p. 11).</td>
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**Disadvantages of M&A exits**

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<th>a) Often opposed by management</th>
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<td>Management frequently oppose M&amp;A processes, fearing the loss of independence following an acquisition by another company (WALL and SMITH 1997, p. 9). Not only do executives usually retain more managerial freedom and flexibility with a well diversified shareholder base rather than with a large majority owner, an IPO can also enhance the image profile and status perception of a company and its management particularly vis-à-vis stakeholders such as customers and suppliers.</td>
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<th>b) Less attractive for employees</th>
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<td>Not only from the viewpoint of a company's management, but also from employees’ perspective an M&amp;A exit can seem less attractive than a public floating. While in case of IPOs, employees are frequently offered to participate in share- and stock-option compensation schemes, acquisition exits do not facilitate such incentives (LESCHKE 2003, p. 251). Furthermore, trade sales can lead to a de-motivation of staff due to uncertainty about individual careers within a business that is sold and potentially integrated into a larger group.</td>
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<tr>
<th>c) Potentially limited number of trade buyers</th>
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<td>Another consideration when targeting strategic buyers in an M&amp;A process is that particularly in concentrated industries there might only exist a restricted number of potential buyers. This exposes the private equity investor to substantial execution risk, if none of these buyers is prepared or able to pay an attractive price (WALL and SMITH 1997, p. 9).</td>
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<tr>
<th>d) Cyclical nature of financial buyers’ demand</th>
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<tr>
<td>Financial investors’ appetite for assets and their ability to pay premium prices depends strongly on the state of debt financing markets, which show a cyclical pattern.295 While in periods when cheap debt funding at aggressive leverage ratios is available, financial investors are even able to pay higher valuations than strategic buyers, in periods when debt lenders are more cautious they might not be able to commit appealing valuations.</td>
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295 Please refer to section 2.2.4.4 for a historical review of the market for leveraged finance, both leveraged loans and high yield bonds, confirming substantial swings in the attractiveness of financing available to buyout investors.
## Advantages of M&A exits

<table>
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<th>e) Less cyclical exit route compared to IPOs</th>
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<td>The potential for successful public listings depends on the appetite of investors for new stock issues. LERNER, SHANE and TSAI (2003) prove empirically that new issuance activity in the public equity markets tends to be clustered in periods, so-called ‘market windows’. The market reception and capacity for trade sales, despite certain documented links to public equity markets (LESCHKE 2003, p. 251), tends to be more stable. In times, when public equity markets would not enable attractively priced IPOs, trade sales at high valuations might still be possible.</td>
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<tr>
<th>e) Loyalty concerns of management in secondary buyouts</th>
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<tr>
<td>In a sale process from one financial investor to another, WALL and SMITH (1997, p. 9) warn that management is likely to show divided loyalty, as they benefit on the one hand from a successful exit by the exiting investor but also get granted an incentive package tied to further value creation from the buying investor. The objective to strive for value maximisation at the time of exit contradicts the consideration that a lower entry valuation of a buyer enables easier value growth that is driving managements’ future performance linked compensation.</td>
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<th>f) Lower transaction costs compared to IPO</th>
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<tr>
<td>M&amp;A exit processes typically cause substantially less transaction costs than IPOs (WALL and SMITH 1997, p. 9, LESCHKE 2003, p. 251). Preparation and execution often demands less work carried out by professional advisers and investment banks charge typically lower fees for M&amp;A exits than for IPOs.296 Moreover does the costly ‘underpricing’ phenomenon297, which causes a substantial part of IPO transaction costs, not apply to M&amp;A exits.</td>
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<th>f) Less reputational benefit than IPOs</th>
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<tr>
<td>Lastly, M&amp;A divestment types typically only receive public attention for a short-while compared to IPOs. Private equity firms with need and desire to establish reputation will prefer an IPO (i.e., GOMPERS 1996), which generates substantially more publicity than other exit types.</td>
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<th>g) Need to convince only one buyer, rather than a whole market</th>
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<td>In order to achieve an attractive valuation in an M&amp;A process, ultimately only one buyer needs to be convinced about the quality and the outlook of the business. Conversely, in an IPO numerous investors need to be motivated and inspired to make a transaction successful, which is a considerably more difficult task (WALL and SMITH 1997, p. 9).</td>
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<th>h) Less disclosure, higher confidentiality</th>
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<td>Depending on the process style pursued, M&amp;A exits can be organised and executed in a confidential way and require significantly less disclosure of sensitive data and information as well as cause less publicity than IPO processes (BAKER and MCKENZIE 2005, pp. 11-12).</td>
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<th>i) Lower risk attached to process cancellation</th>
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<tr>
<td>In relation to the previous point, due to the lower degree of publicity in an M&amp;A process, there is lower risk of business disruption and the negative implications on the reputation of all parties involved in case of a process abortion are more limited than in case of cancelling a already widely publicised IPO process (BAKER and MCKENZIE 2005, p. 16).</td>
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<th>j) Individual parts of companies can be sold separately</th>
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<tr>
<td>A further advantage of M&amp;A exits is that parts of the business can be sold separately (LESCHKE 2003, p. 251). This can benefit a successful overall valuation, if an acquisition of only distinct parts can create high strategic value for different buyers. However, one needs to flag that a splitting of businesses needs planning well ahead of an exit process and is often very difficult, due to common shared infrastructure and head office functions.</td>
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### 4.3.2 Initial Public Offering – stock exchange listing

Not only as an exit route for private equity investors but as a general option to raise finance, IPOs have received great academic attention. Most of the scholarly studies on IPOs focus

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296 Details about IPO fees and process transaction costs will be set forth in the subsequent section 4.3.2.

297 Please refer to section 2.3.2.3 for an explanation and empirical results of underpricing IPOs.
either on the well-recognised phenomenon of underpricing, where the price shortly after an IPO increases to significantly higher levels compared to the initially set IPO price, or on the long-term underperformance of IPOs (GALBRAITH, DE NOBLE, STILES and MERRILL 2003, pp. 31-32).298

Despite the marked breadth of research and publications in this field, only a few contributions describe and analyse the IPO process holistically.299 The intention of this section is to summarise key process steps and set forth important aspects to be taken into account in IPO exits. Furthermore, the advantages and disadvantages of IPOs compared to other exit routes will be analysed.

### 4.3.2.1 IPO process steps

The execution of successful IPO exits requires careful planning, an intense due diligence process as well as extensive preparation work, and a lot of managements’ time (LESCHKE 2003, p. 250). The flow-chart, set out in the exhibit below, depicts an IPO process consisting of 9 major steps. Linking this illustration to the general exit process concept depicted in section 4.1 of this dissertation, the chart below starts after the exit opportunity has been identified and analysed in detail, core advisers have been appointed, and the incentive structure with management has been confirmed.

With regard to the overall process timeline, experiences seem to differ substantially. Authors acknowledge that processes can particularly vary dramatically in the early steps prior to launching an offering in public, depending on the scope and quality of existing reporting and information as well as a company’s capital market experience and track record (i.e., ELLIS et al. 1999, p. 9, JENKINSON and LJUNGQUIST 2001, pp. 8-12). Execution timetables for the steps after filing a listing application are largely governed by rules and regulations.300

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298 Please refer to section 3.4.2 for a review of relevant academic studies on IPOs.

299 Particularly JENKINSON and LJUNGQUIST (2001) provide an excellent discussion of IPO process steps and considerations as an introduction to their review of empirical studies on public listings. They set out process aspects universal to IPOs rather than specific for listing procedures in certain countries or on specific market places (pp. 9-28). ELLIS, MICHAELY and O’HARA (1999) provide a useful, but less detailed guide to IPO processes, particularly highlighting the co-ordination and legal relationship between the issuing company and the underwriting investment banks.

300 According to feedback from expert interviews, most European buyout IPOs are completed within a four to six months timeline.
1. Agreement with investment bank and core advisers
Before starting an IPO preparation process, a preliminary agreement with an investment bank that will perform underwriting functions for the issue has to be secured. While at this stage professional advisers might already be appointed, a firm ‘letter of intent’ confirming an investment banks willingness to underwrite a company’s stock issue is required before embarking onto further steps. This letter of intent, albeit being tied to a list of conditions and caveats, solidifies the relationship between investment bank and issuer and sets a strong impetus for the preparation process (ELLIS et al. 1999, pp. 1-2).

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301 Regarding the appointment of investment banks for IPO processes, ELLIS et al. (1999, p. 1) propose that the selection process should consider an investment bank’s reputation, expertise as well as the quality of research coverage in the relevant industry sector. They acknowledge that prior relationships between the issuer and the private equity firm and investment banks play a crucial role in mandating decisions.

302 Issuers might have appointed a specific IPO process adviser, who is coordinating the process and acts as a source of independent advice. An IPO adviser’s consent about the role of an investment bank and the proposed letter of intent might be required before proceeding further. See GEHSMANN (2005) for a note on the role and benefits of independent IPO advisers.
The letter of intent fulfils a number of functions:

- Documents an investment bank’s commitment to the process;
- Governs the investment bank’s compensation and expense cover;
- Captures an agreement by the issuing company to cooperate in all due diligence efforts;
- Frequently documents a commitment by the company to grant an overallotment option of up to 15% to the underwriter.

The letter of intent typically already specifies the type of underwriting commitment to be provided. Two levels of underwriting agreements can be differentiated: Underwriting arrangements on a ‘best-efforts’ or on a ‘firm commitment’ basis (JENKINSON and LJUNGQUIST 2001, pp. 23-25, ELLIS et al. 1999, pp. 1-3). The investment bank acting as an underwriter on a firm commitment basis is obliged to purchase the entire issuance of securities from the issuer and then attempts to resell the shares to institutional and retail investors. Conversely, the underwriter on a best efforts basis is only obliged to perform all tasks and actions necessary to facilitate an issuance without having to guarantee its successful completion. In both cases, however, underwriters do not specify a targeted price per share as the letter of intent is issued several months prior to the effective launch of an IPO and the market conditions can change dramatically in this period.

Furthermore, the letter of intent documents the fee structure and the expense cover for the investment bank. Expenses, such as travel costs or research costs incurred by the investment bank during the process are typically reimbursed even in case of a process cancellation (ELLIS et al. 1999, p. 3). Underwriting fees are tied to a successful issuance, usually structured as a percentage of the ‘gross spread’. The gross spread is the difference between the price achieved for shares sold in the capital market ($P_M$) and the underwriting price paid per share by the investment bank ($P_{UW}$) times the number of shares issued ($N_s$), as expressed in the simple equation below:

$$GrossSpread = (P_M - P_{UW}) N_s$$

HANSEN (2001) confirms empirically that in the US market, gross spreads typically equate to approximately 7% of the issue volume. ELLIS et al. (1999, pp.2-4) points out that a ‘soft’ standard for the apportionment of fees has evolved: The lead underwriter typically receives

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303 Overallotment options are a provision in an underwriting agreement which allows the underwriting banks to sell additional shares at the original price. This provision is frequently labelled ‘Green Shoe’ option. The name comes from the fact that ‘Green Shoe Company’ was the first to grant such an option to underwriters. Underwriters exercise the overallotment provision in the event of exceptional public demand, which nevertheless triggers an incremental cost to the company selling shares as it gives up more shares than planned at typically a discount to the estimated ‘fair’ value. The investment bank commits to buy back these incrementally issued shares in order to stabilise the share price in case this should be necessary in a short period subsequent to the offering. See LERNER and HARDYMON (2002, p. 338) for a more detailed note.
20% of the gross spread as underwriting fee, further 60% are usually so-called ‘selling concessions’ compensating lead and later appointed co-lead underwriters for placing the securities in the market, stabilising the stock price in the period following the IPO and to establish research coverage. These aspects will be explored in the description of later steps in the process. The remaining 20% are used to cover expenses incurred during the due diligence and roadshow process.

Lastly, the letter of intent does require the company’s and often also specifically the private equity investor’s commitment to the due diligence and marketing process.

2. Feasibility analysis and choice of listing location
Following the initial negotiations with a lead underwriter, the issuing company’s ability to meet regulatory requirements, particularly the ability to create public standard financial statements for usually the past 5 years as well as going forward. Besides pure compliance to required rules, potential negative implications of comprehensive disclosure needs careful assessment (BAKER and MCKENZIE 2005, p. 12)\textsuperscript{304}. For instance, detailed disclosure of a company’s historical profitability by division or even by product line might be required. This could constitute valuable information for competitors that might use a better understanding of a firm’s cost structure to enforce competition selectively.

Regulatory requirements can differ substantially from country to country. However, as JENKINSON and LJUNGQUIST (2001, pp. 10-11) note, there is a clear trend of stock exchanges and regulatory bodies across the globe adopting more harmonised rules for the admission of companies to ‘official’ markets.\textsuperscript{305}

The choice of one or more stock exchanges for a listing has been traditionally characterised by a home bias. Issuers tended to list on domestic marketplaces. This phenomenon became weaker in recent years in line with the institutional investor community favouring international diversification of their portfolios at low transaction costs (JENKINSON and LJUNGQUIST (2001, pp. 10-11). Additionally, listing requirements across Europe became

\textsuperscript{304} LERNER and HARDYMON (2002, p. 337) highlight that the extent of disclosure required can vary with the size of the offering and the firm. Many nations have provisions for simplified filings and lower disclosure requirements for smaller firms or those listing on smaller exchanges.

\textsuperscript{305} JENKINSON and LJUNGQUIST (2001, p. 11) note as an example that the ‘Financial Service Authority’ (FSA) in the UK has already implemented a large number of rules and guidelines specified by the US ‘Securities and Exchange Commission’ (SEC) with regard to new issuance. They also flag that other major European exchanges have followed the FSA’s approach.
more transparent and unified, enabling companies to issue stock in different countries. While historically the choice of a stock exchange has often not been devoted an encompassing analysis, a selection process of a domestic and/or foreign stock market nowadays has to consider the overall market liquidity, the scope and depth of a reachable investor universe, mandatory requirements and transaction costs (upfront and going forward), listing location of firms operating in the same industry, etc.

3. Preparation

Having accomplished the first two fundamental steps, the actual preparation of an IPO process can begin. Authors concur that IPOs demand extensive and time-consuming due diligence and preparation work that can take several months (i.e., JENKINSON and LJUNGQUIST 2001, pp. 12-13, WHALEY and SEMLER 2001, p. 400, LENOIR 2003, pp. 241-244, LESCHKE 2003, p. 250).

The preparation process has to capture several major aspects:

• Due diligence: legal, financial, commercial and other matters;
• Drafting of a prospectus;
• Refining business plan and valuation of a company;
• Creation of roadshow materials;
• Production of research reports;
• Appointment of co-lead underwriters.

Due diligence forms the starting point in an IPO preparation phase. Given the strict disclosure requirements in most countries but also the reputational as well as legal risk for an issuing company’s directors and underwriting investment banks, a detailed and broad due diligence effort is indispensable. WHALEY and SEMLER (2001, p. 400) argue that IPO due diligence needs to be even more detailed than the due diligence for M&A transactions, capturing legal, financial and commercial aspects of the business, to serve two main purposes: Firstly, “the verification of statements made by the company or its promoters”, and secondly, “the identification of any matters which should be drawn to the attention of investors if the company or its promoters are to satisfy statutory disclosure tests.” The due

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306 BOTTAZZI and DA RIN (2002, pp. 246-251) provide an interesting note on the emergence of the European stock markets for young, high growth firms and their listing requirements. They also draw comparisons to the US stock markets, particularly to the NASDAQ stock exchange.

307 JENKINSON and LJUNGQUIST (2001, pp. 9-11) stress that the choice of stock markets is usually not longer strictly constrained by national boundaries and thus should entail a number of rational considerations. They also argue that the emerging competition between stock markets for new issues favours decreasing transaction costs related to the IPO, both in terms of fees as well as costs arising from the fulfilment and maintenance of rules and requirements.

308 COFFEY et al. (2002, pp. 88-92) provide a guideline for items to be covered in detailed commercial and legal due diligence.
diligence process involves all advisers supporting the IPO process as well as the portfolio firm’s executive management and often lasts up until the official filing of a listing request.

The further elements in the preparation process build upon insights obtained through these due diligence efforts. The production of a comprehensive offering prospectus describing a company’s businesses, operations, financials, strategy, risks, and the offering structure is in most cases mandatory. A well advanced draft of such a prospectus is typically already required by stock exchanges or regulators when submitting a formal listing request (JENKINSON and LJUNGQUIST 2001, pp. 12-13). In an introductory note to IPO processes, law firm LANG MICHENER (2005, p. 2) explains that “a prospectus must provide what is called ‘full, true and plain disclosure’ of all material facts relating to the securities proposed to be offered in public.” Under most securities laws, an issuer and its directors are legally liable for misrepresentations in a prospectus. Prospectuses, however, are not only produced to satisfy regulations but also serve as a crucial marketing instrument, being later on circulated to potential investors.

Also benefiting from the scrutiny applied during a due diligence process, an investment bank and consultants might advise executive management to modify and further detail the company’s business plan. The investment bank’s initial valuation analysis is refined and extended in parallel.

Two other preparation items, which require information established in the due diligence process, are the creation of marketing materials for ‘roadshow’ presentations and reports drafted by research analysts. Marketing presentations, ultimately held by senior managers, introduce the company, highlighting its strengths and opportunities. These presentations are typically prepared by the investment bank and consultants with senior management being asked to review and to confirm content. In order to facilitate the set-up of research coverage, crucial to stimulate liquidity of a company’s stock following an IPO, investment banks provide their research analysts with information that will be disclosed to the public domain later on and often arrange meetings with their analysts and executive management. Important to note is the fact that in contrast to investment bankers coordinating the process,

309 BAGHERI and NAKAJIMA (2001) provide an interesting comparative review of securities laws, emphasising the differences in the relevance of public versus private laws.
310 GALBRAITH et al. (2003, pp. 31-36) analyse the influence of strategic information included in prospectuses onto the ultimate pricing of issues.
311 An offering prospectuses in US terminology often is referred to as ‘offering circular’ (OC) or as ‘offering memorandum’ (OM).
312 KIM and RITTER (1999) contributed an extensive study on valuing IPOs, which is recommended for further reference.
research analysts are so-called ‘outsiders’, who can only have access to public information and particularly cannot be given access to a company’s projected business plan.\(^{313}\)

Lastly, towards the end of a preparation process, the lead underwriters often jointly with the issuing firm and the financial sponsor appoint a number of ‘co-lead’ underwriters. These banks are asked to support the marketing efforts of an IPO on a broader basis. While most frequently large, mainly US-based investment banks lead substantial securities issues, regional banks with access to particularly interested institutional and retail investors are mandated as co-lead underwriters (ELLIS et al. 1999, pp. 2-3). Each co-lead underwriter is incentivised with a selling concession linked to the proportion of the issue sold to its customers.

4. Filing of listing request
Subsequent to extensive due diligence, a listing application is filed either with a stock exchange or a regulatory authority. In most cases a detailed ‘registration statement’ has to be filed, which is most likely a modified and extended version of a prospectus draft. Going beyond the information that is disclosed to the public, a registration statement often entails sensitive information, which does not need to be included in a prospectus but is made available for public inspection by a regulator (ELLIS et al. 1999, p. 4).

The general purpose of the registration statement is to ensure that the public has adequate and reliable information regarding securities that are offered for sale. To enforce this objective, the underwriter has the duty to conduct due diligence, investigating the company and validating the information it provides about the company to investors. Like the ‘Securities Act of 1933’ in the US, securities laws in many countries require that the registration statement has to be signed by the directors and principal officers of the issuer as well as the underwriters, accountants, appraisers and other experts who assisted in the preparation of the registration statement. Any purchaser of the securities who is damaged as a result of a misstatement or omission of a material fact in the registration statement may consequently sue these signatories (ELLIS et al. 1999, p. 5).\(^{314}\)

\(^{313}\) In practice, research analysts frequently are given access to ‘inside’ information on a temporary basis. These procedures are labelled ‘wall-crossings’, as outsiders are literally brought over an investment bank’s ‘chinese wall’. As a consequence, most securities laws restrict analysts that have received inside information to publish reports for up to 6 months following the IPO. LERNER and HARDYMON (2002, pp. 334-339) comment further on the role of research analysts in IPOs.

\(^{314}\) JENKINSON and LJUNGQUIST (2001, pp. 10-11) argue that registration and disclosure requirements vary in Europe. Furthermore, the segmentation of stock markets in Europe and the emergence of smaller stock markets for young enterprises has led to differences in requirements and formalities.
Following the submission of the listing request and required statements, a stock exchange or responsible regulatory body may take three to four weeks to review the information and to approve an issue.\textsuperscript{315} Within this period, preparation work has to be finalised and especially the transaction structure has to be completed.

5. Offer structure completion

Prior to launching the marketing phase of an IPO, when receiving a regulator’s approval, several structural aspects of the offering need to be negotiated. Arrangements between the issuing company and the underwriting investment banks require confirmation and agreement. Terms and pricing indication for a firm commitment or alternatively a best efforts transaction need to be agreed.\textsuperscript{316} Furthermore, the lock-up conditions have to be discussed. Such conditions prevent private equity investors from selling shares for typically 6 to 12 months\textsuperscript{317} following the IPO (GOMPERS and LERNER 1998b, p. 2164). Subsequent to the lock-up period, securities can either be sold into the market or can be distributed to investors over a period of months or even years following the public offering. Lock-up restrictions assist to signal the quality of an issue, with buying investors acknowledging the continued commitment of a private equity firm to a company (CUMMING and MACINTOSH 2003a, pp. 517-519).\textsuperscript{318}

Another structural aspect that requires agreement is the split of ‘primary’ and ‘secondary’ shares offered to the public. While primary shares are newly created shares resulting in new proceeds to the issuing company, secondary shares are existing shares, ownership of which changes in an IPO. Overall, typically less than 25\% of a company’s total volume of shares are being sold at the time of an IPO. Given the agreement of lock-up arrangements in most private equity-backed IPOs, the portion of secondary shares sold immediately tends to be minor (HUYGHEBAERT and VAN HULLE 2005, pp. 2-4).\textsuperscript{319}

\textsuperscript{315} Please refer to ELLIS et al. (1999, p. 4-6) for a detailed note on requirements and process in relation to filing a formal listing application in the US. Also refer to SHEARMAN and STERLING (1990, pp. 1-6) for an introduction to US securities laws governing the registration of securities. MILLERCHIP (2000) discusses legal and regulatory requirements of equity issues in Europe, concentrating on the UK.

\textsuperscript{316} For further reference, the author recommends DUNBAR (1998), who provides a detailed analysis supporting the choice between firm commitment and best efforts offering methods.

\textsuperscript{317} Lock-up periods can, however, last up to 2 years, particularly for IPOs backed by young venture capital firms that have not yet established a reputation in the public equity markets (LIN and SMITH 1998, p. 245).

\textsuperscript{318} Continued monitoring of a firm by a private equity investor is typically regarded as beneficial by buying investors. Please refer to CUMMING and MACINTOSH (2003a, pp. 517-521) for a note on quality certification in IPOs.

\textsuperscript{319} HUYGHEBAERT and VAN HULLE (2005) discuss the structuring of IPOs with an emphasis on the mix of primary and secondary share portions. They perform an empirical analysis of European IPOs and find that IPOs in ‘hot issue’ market periods comprise a higher portion of primary shares, while only IPOs of non-venture backed, established firms entail substantial portions of secondary shares.
6. Marketing phase
Following the receipt of a formal approval by a stock exchange or a regulator, the issue is declared effective and a marketing campaign to potential investors can be launched. Marketing efforts can take a variety of forms.

Marketing usually starts with the circulation of the prospectus to the investment banks’ equity sales force as well as a wide scope of institutional investors. As the prospectus normally does not specify a final offer price and some other terms and conditions might not be finalised at this point, the prospectus is referred to as ‘preliminary’.

In order to raise the profile of an offering with investors, most issuers are encouraged by their investment banks to undertake ‘roadshows’, whereby senior executives make a number of presentations in several locations, which exhibit a high concentration of relevant institutional investors. JENKINSON and LJUNGQUIST (2001, pp. 13-14) give an example of a roadshow procedure typical for sizeable offerings: “...when Germany’s telecommunications company Debitel prepared to go public in 1999, two separate road show teams, led by the CEO and the CFO, respectively, made presentations to institutional investors in 20 cities in nine countries, including Frankfurt, London, Milan, Paris, Zurich, New York, and Boston, over a twelve-day period.” However, depending on senior managements’ availability, roadshows can be stretched over three to four weeks (ELLIS et al. 1999, p. 6). The preference points to shorter and intense procedures to maintain optimal momentum throughout the marketing process. The intention of roadshows is not to provide investors with additional information, going beyond the disclosure in the prospectus, but rather to convince investors about the quality and attraction of an offering. In turn, road shows enable investment bankers to gather information from investors about their views of the company and its valuation (JENKINSON and LJUNGQUIST 2001, p. 14).

In addition to roadshow presentations, investment banks’ sales force contact their investor clients and discuss the offering. Other important forms of marketing can include press briefings, which are of significant importance when the interest of retail investors should be stimulated, internet alerting services, and advertising in various forms of media (JENKINSON and LJUNGQUIST 2001, p. 14).

320 In practice an investment bank already conducts what is called ‘pre-marketing’ with selected institutional investors, presenting the company and key selling considerations without the presence of company representatives (JENKINSON and LJUNGQUIST 2001, pp. 14-15).
321 Exceptions are so-called ‘fixed price’ offerings, which will be eluded on in the next sub-section.
7. Pricing and allocation
Having completed marketing efforts and obtaining interest from investors, the underwriters need to determine the pricing and allocation of shares, in consultation with the issuer and its existing shareholders.

To accomplish the pricing and allocation, three main techniques have to be distinguished:

a) Fixed price offerings
In offerings where the price is fixed upfront, the only decision subsequent to the receipt of orders is how to allocate shares. If the total volume of orders is lower than the targeted issue volume, the offering is referred to as ‘under-subscribed’, in which case all orders can be met in full. Conversely, should the volume of orders exceed the targeted issue volume, the offering is referred to as ‘over-subscribed’, in which case an allocation rule has to be applied to satisfy demand. Even though many countries have implemented ‘fair’ allocation rules, which require all bids to be scaled down pro rata until supply equals demand, these rules are not considered efficient, due to the likely phenomenon of ‘strategic overbidding’ (JENKINSON and LJUNGQUIST 2001, p. 16).

Fixed price methods continue to be applied, however, lost its popularity in larger transactions, where a clear trend towards techniques that set the price only after obtaining expressions of demand by investors (CORNELLI and GOLDREICH 2003, pp. 1415-1417).

b) Book-building
The ‘book-building’ approach has become the most frequently applied method for pricing and allocating shares in IPOs (JENKINSON and LJUNGQUIST 2001, pp. 16-17, CORNELLI and GOLDREICH 2003, pp. 1415-1416, BUSABA 2005, pp. 1-2).

Book-building is a dynamic process and consists of three main steps: Firstly, an underwriter needs to decide which investors to be included in the process. Normally retail investors are not included in the book-building procedure, although they might have the opportunity to purchase shares from a reserved tranche, paying the price resulting from the book-building exercise (JENKINSON and LJUNGQUIST 2001, p. 17).

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323 ELLIS et al. (1999, p. 7) mention that IPOs in order to be regarded as successful by practitioners have to be at least two times oversubscribed.
324 Please refer to JENKINSON and LJUNGQUIST (2001, pp. 15-17) for a more detailed review of pricing and allocation in fixed price equity offerings.
Secondly, investors admitted to such a process are invited to submit indications of a demand, whereby three types of bids are possible: The ‘strike bid’ is the least informative bid for an underwriter as it indicates that an investor is prepared to purchase a given number of shares at any price within a price range. ‘Limit bids’ reveal more information as an investor specifies a price-quantity combination. Investors might also submit ‘step bids’ with increasing order volumes at decreasing price (CORNELLI and GOLDREICH 2003, p. 1418). Investors can normally submit bids, alter or even cancel bids until the end of the book-building process, which normally lasts up to ten business days.

At the end of the book-building process a lead-underwriter has obtained a demand curve for the offering. In the third step of the process pricing and allocation is determined. An issue price is set that accomplishes both an attractive valuation for the issuer as well as modest short-term returns for investors. Subsequently, the allocation of shares is effected. Authors acknowledge that underwriters keep their records about the allocation of shares in a book-building process firmly closed. It is known that investment banks retain a significant portion of discretion in allocating shares. Relationships with institutional investors are regarded as an important factor impacting the allocation (JENKINSON and LJUNGQUIST 2001, p. 18).

c) Formal auctions
An alternative method to determine the pricing and allocation of an issue are formal auctions. Despite the similarities of the book-building process to auctions, where price is set according to indications of demand, there are substantial differences. Book-building is an intermediated process, leaving room for discretion of an investment bank. In contrast, auctions are disintermediated procedures, where rules can be set in advance and an execution can be at least facilitated electronically. Two auction categories find application: ‘Single-price’ auctions, where each successful bidder pays the same price, or ‘discriminatory’ auctions, where each successful bidder pays his offered price (JENKINSON and LJUNGQUIST 2001, pp. 19-20).

Auction procedures were widely used IPOs in the UK until the mid-1980s. The reasons for the fall in popularity of auctions for European IPOs is not entirely clear (JENKINSON and LJUNGQUIST 2001, p. 20), however, the objective of investment banks to ‘optimise’ the

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325 This phenomenon is widely known as ‘underpricing’ and covered extensively by academic literature (i.e., BARRY et al. 1990, MEGGINSON and WEISS 1991, GOMPERS 1996, BRAV and GOMPERS 1997, JENKINSON and LJUNGQUIST 2001, pp. 16-17, LERNER and HARDYMON 2002, CORNELLI and GOLDREICH 2003, LERNER et al. 2003). Please refer to section 3.4.2 for a review of selected studies relating to the underpricing phenomenon of IPOs.

326 For further details on the book-building process, CORNELLI and GOLDREICH 2003, pp. 1415-1437 and BUSABA 2005, pp. 1-5 introduce basic concepts and provide extensive literature reviews on this topic.
outcome of an offering through interacting in the process might be a reason. Auctions are
still applied in several countries such as Japan or France, but also for issues of technology
firms in the US.\textsuperscript{327} HENSEL (2005) compares auctions that are conducted online to book-
building processes and summarises: “The online auction process is full of advantages and
disadvantages from the perspective of the issuing company. On the one hand, it increases
the ability of small investors to participate in the IPO process, and minimizes the traditional
dominance of larger institutional investors who were lucrative clients of the underwriting
investment bank. On the other hand, small investors may lack the ability to efficiently price
an IPO due to lack of information.”

8. Transaction closing and trading start
Once the pricing of the issue is accepted by the issuing company, and in a private equity exit
particularly by the financial sponsor, and final terms are negotiated, the underwriter and the
issuer execute the ‘underwriting agreement’. The prospectus has to be updated for the set
offer price and the final terms and is subsequently printed and distributed to investors as
‘final prospectus’. Moreover, the underwriter files a ‘price amendment’ with the stock
exchange or regulatory body after signing of the underwriting agreement (ELLIS et al.
1999, pp. 8-9). Once approved, the distribution of the stock begins and the public trading of
the company’s shares opens for the first time, typically two to three days following pricing
(JENKINSON and LJUNGQUIST 2001, p. 21).

The closing of the transaction occurs usually three days later, when the company delivers its
stock and the underwriter deposits the net proceeds from the IPO into the issuer’s account.

9. After-market
Once the issue is brought to market, the underwriter typically has a number of additional
roles to fulfill. These include the after-market ‘stabilisation’, the provision of research
coverage as well as analyst recommendations, and ‘market making’ for the stock to facilitate
liquid trading (JENKINSON and LJUNGQUIST 2001, p. 21, LERNER and HARYMON

The stabilisation activities require the underwriter to support the stock by buying shares, if
order imbalances arise. This price support can be done only at or below the offering price
and it is limited to a relatively short period of time after the stock has began trading. During

\textsuperscript{327} The high profile IPO of US internet company ‘Google’ in 2004 serves as an example of a highly successful IPO
execution with pricing and allocation performed via an auction procedure. Please refer to HENSEL (2005) for a detailed
review of this transaction.
this period, the standard prohibitions against price manipulation do commonly not apply to
the underwriter and he is free to trade and influence the price of stock. (ELLIS et al. 1999,
p. 8). In order to be able to perform stabilisation, underwriters typically make use of the
overallotment option, selling up to 15% more stock at the IPO, in order to be able to buy
back these 15% in the after-market, in case prices fall shortly after the IPO.

Offering research coverage and publishing analyst recommendations as well as ‘market
making’, which means actively trading the stock in the months and years following the
offering, helps to guarantee the liquidity to investors and thus again enhances demand for
the shares.

While the active IPO process for investment bankers and advisers ends at this point, an
issuing company has to continuously maintain standards and requirements for public
companies, including frequent audited financial reporting and the disclosure of material
events.328

The successful completion of an IPO does, as explained, not constitute a substantial exit yet,
but rather enables a sequential exit following the expiry of a lock-up period (CUMMING
and MACINTOSH 2003a, pp. 517-521).329

4.3.2.2 Costs of IPOs
IPO exits are associated with high transaction costs, typically exceeding costs arising in
connection with any other exit route (i.e., METTLER 1990, p. 302, WALL and SMITH

ANG and BRAU (2002) split IPO transaction costs into four components: Initial
underpricing, underwriting fee, overallotment costs, and other expenses, which comprises
legal and administrative fees. CUMMING and MACINTOSH (2003b, pp. 129-130) argue
that a sale of shares in a public company entails three forms of transaction costs: the cost of
brokerage, the cost of price pressure on the price received for the shares, and the cost of any
signalling effect on the price of the shares. The sum of these costs can vary enormously.
While brokerage costs are comparatively low, price pressure and signalling costs can be
substantial. Defining the cost components, they put forward that price pressure results when
a seller’s broker must lower a price below the posted market price to attract enough buyers

328 LANG MICHENER (2005) provide a helpful introduction to the ongoing duties of public firms.
329 LIN and SMITH (1998) demonstrate that most portfolio companies that underwent an IPO are fully exited within 3
years following the IPO.
to be able to clear the seller’s holdings. The magnitude and likelihood of price pressure depends on the size of the block being liquidated relative to the public float of shares. Signalling costs occur when the market attributes informational content to a sale of shares by an insider, such as the market believes that the insider is selling because it is in possession of negative information, which lowers the price at which purchasers are willing to buy.

Providing a more complete list of the transaction costs, CUMMING and MACINTOSH (2003b, pp. 129-130) argue that a number of direct as well as indirect costs have to be taken into account:

a) Underwriter’s commission, usually 4% to 8%330 of the issue proceeds;
b) Accounting costs necessary to bring the firm’s information systems a level suitable for public market reporting;
c) Legal, accounting, printing, and other associated costs of producing the registration statement and other documents required by securities regulators;
d) Cost of marketing the issue;
e) Listing fees charged by stock exchanges;
f) Indirect cost that results from underpricing of the issue, which averages 15.3% in the US, 9.3% in Canada; and 10.8% for a large sample of European transactions331;
g) Set-up cost of hiring new staff to deal with public company requirements, such as compliance with continuous disclosure requirements, investor relations, etc.;
h) Opportunity cost that arises as a result of the diversion of management and other personnel away from business matters, including time spent meeting with lawyers, accountants, and others to assist in the preparation of the registration statement, participating in road shows, etc.

Overall, it is apparent that the execution of an IPO is a highly costly process. All-in transaction costs including underpricing can exceed 20% of the offering volume.332

4.3.2.3 Legal and structuring considerations: Alternative IPO methods
Like in the structuring of trade sale transactions where basic principles of corporate law are applied in numerous jurisdictions, many stock exchanges and regulators across the globe have implemented similar rules, guidelines and requirements for listings. While the core objective of these regulations shares a common trait, namely to ensure fair, complete and

330 Please refer to JENKINSON and LJUNGQUIST (2001, pp. 25-28) for a review of empirical results regarding underwriting commissions.
331 Source: Own analysis based on JENKINSON and LJUNGQUIST (2001, p. 38) including a total of 1,073 transactions from 1970 to 2000 in Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Switzerland. Including Spain and Sweden, both countries with exceptionally high levels of underpricing at 35.4% and 39.0%, respectively, the pan-European average increases to 15.7%.
332 JENKINSON and LJUNGQUIST (2001, p. 27) also note that dual-listings typically increase transaction costs by more than 1% of the offering volume. They also mention that book-building processes are on average more expensive than fixed-price offerings.
accurate disclosure and practices for the benefit of investors, applicable securities laws are still far from unified. Furthermore, the bodies in charge of securities regulation differ across countries, also in a European context (JENKINSON and LJUNGQUIST 2001, p. 11). Hence, the aim of this discussion is not to explore specifics of securities laws333, but rather to demonstrate general structural alternatives to the type of IPOs laid out in detail in section 4.3.2.1.

a) Placements and accelerated IPOs
An alternative to offering shares to the public are ‘private placements’, whereby shares are sold to a small number of institutional investors.334 Such transactions have been traditionally limited to small companies (MILLERCHIP 2000 p. 3), however, transaction sizes are increasing. Nevertheless, private placements do still not represent a viable option for most sizeable buyout exits.

Private placements avoid the need for a widespread disclosure, the production of filing statements and a prospectus and are not as tightly regulated as normal IPOs. Given the private nature of a placement, its set-up resembles an acquisition transaction rather than a public securities deal. Particularly placements to existing stakeholders of a company, such as employees, customers, suppliers, distributors, etc. are often structured as ‘direct public offerings’ (DPOs)335. These placements can be attractive, given that affinity groups with a vested interest in a business might be willing to pay premium prices (SINHA et al. 2005, pp. 44-45). Also given the low informational asymmetry between buyers and sellers of shares, transaction costs and the need for extensive due diligence and external advisers can be minimised.

Another form of private placements, where the target company is shortly after the transaction converted to a listed company, is the so-called ‘accelerated IPO’ (JENKINSON 2004). The essential feature of accelerated IPOs (aIPOs) is that institutional investors form syndicates to bid for an entire offering and subsequently pursue an immediate public listing. JENKINSON (2004, p. 3) suggests that a syndicate of institutional investors can participate

334 MILLERCHIP (2000, pp. 3-4) demonstrates that UK securities laws require private placements to be offered to not more than 50, only professional, investors. The offer has to be made by a private company (Regulation 7 of the ‘Public Offers of Securities Regulations 1995’).
335 In a DPO, shares are still officially registered and then sold to directly to investors, thereby making the company public. SINHA et al. (2005, pp. 44-46) provide a review of the functionings of DPO transactions.
In an M&A auction process and following the win of a target company conduct an IPO. Institutional investors would only participate in such a transaction, if they obtain clear visibility to be able to effect a public listing in very short time, hence the label ‘accelerated IPO’. The viability of such an approach depends very much on the listing regulations of relevant stock exchange market segments.336

While both private placements and accelerated IPOs are alternatives to traditional IPOs that obtain increasing attention by practitioners and researchers, alike, neither is a suitable option yet for sizeable buyout exits. The author views that private placements could evolve into a sensible alternative also for larger exits, given the increasing comfort and appetite of wide groups of professional investors, particularly hedge funds, to hold majority stakes in companies. Conversely, alternative IPO approaches are unlikely to become viable for large buyout exits. Securities regulations have the objective to protect investors, whereby the larger the offering or the firm the tighter the applicable rules and requirements. Thus, it seems unlikely that the circumvention of normal listing procedures, which is what an accelerated IPO process does, will be feasible for large offerings in the future.

b) Reverse Mergers

Reverse mergers have been a well known concept for decades, meaning that a public company with typically little to no operating assets (a so-called ‘shell’ company) buys a private company, thereby making the private company public (Sinha et al. 2005, p. 46). In order to finance the acquisition, the shell company issues shares publicly.

Reverse mergers deliver a number of benefits to exiting private equity investors compared to traditional IPOs. Firstly, full immediate liquidity can be achieved if the shell company purchases the whole portfolio company. In IPOs an immediate substantial exit of a private equity firm is unlikely. Secondly, transaction costs tend to be substantially lower and the timeline to execution can be shorter compared to IPO processes. However, as Sinha et al. (2005, p. 47) warn, there are also severe downsides of such an approach. First, the private company might face the risk of assuming outstanding liabilities of the shell, hence careful due diligence of the shell vehicle is required. Second, reverse mergers results usually in a dilution for existing shareholders of 10% to 20%. Third, as available shell companies are very likely to be traded on small stock market segments, few institutional investors with a long-term strategic interest in a business will buy shares. Forth, reverse mergers are often

336 Jenkinson (2004, pp. 2-31) acknowledges that very few market places facilitate these processes, but demonstrates that a winning syndicate can take advantage of the rules of the ‘Alternative Investment Market’ (AIM) segment of the ‘London Stock Exchange’, which allows companies to be admitted very rapidly. An IPO at the AIM can be conducted within a few days of the final bid being accepted and the syndicate of investors can receive publicly traded very quickly.
priced at discounts by investors that otherwise would have expected a proper IPO execution, where they can rely on extensive due diligence and a stronger commitment of underwriters, which ensures the ongoing trading liquidity in a stock. Lastly, reverse mergers often fail to secure appropriate research analyst coverage, which again weakens the liquidity profile of a stock and in turn results in reduced interest by institutional investors.337

Summarising, reverse mergers represent an alternative to IPOs worth considering, realistically however, only for smaller companies. Arguments about low transaction costs need to be carefully balanced with likely discounts in achieved valuation. In the author’s view, reverse mergers could be considered in case traditional IPOs are not feasible, due to timing or regulatory constraints that could be solved with such an approach. Nevertheless, reverse mergers certainly do not convince as superior method of bringing companies public.

4.3.2.4 Comparative assessment of IPO exits338
IPOs are regarded as the private equity industry’s ‘holy grail’, seen as an ultimate form of exit, to which all aspire (WALL and SMITH 1997, p. 8). There is a consensus among authors that IPOs are the most successful exits for well performing portfolio companies (i.e., WRIGHT and ROBBIE 1998, GOMPERS and LERNER 1999a, 2004). However, one needs to caution that an IPO does not represent a sensible option for all portfolio companies.

Summarising academic and practitioners’ literature as well as feedback obtained through the author’s own research process, several advantages and disadvantages compared to other exit routes can be contrasted:

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337 Please refer to SINHA et al. (2005, pp. 46-54) for a detailed analysis of reverse mergers and an empirical proof that these transactions, despite downside aspects, can achieve attractive performance.

338 The subsequent evaluation of IPOs is limited to exit aspects, which are considered relevant by private equity investors. A general assessment of IPOs can be found in METTLER (1990, pp. 299-305). Additionally, STORY (2004) provides a note on the numerous ongoing requirements and duties of public firms following an IPO, which have to be considered in an assessment of IPOs from the viewpoint of management and staff remaining with the business following a private equity exit.
<table>
<thead>
<tr>
<th>Advantages of IPO exits</th>
<th>Disadvantages of IPO exits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Potential for highest price</strong>&lt;br&gt;IPOs have historically often achieved attractive valuations for portfolio firms, superior to other forms of exit (WALL and SMITH 1997, p. 8, LESCHKE 2003, p. 250). METTLER (1990, p. 301) indicates that investors buying public shares in a company are prepared to a pay a premium for liquidity that might exceed an overall control premium paid by purchasers in an acquisition exit.</td>
<td><strong>a) High transaction costs</strong>&lt;br&gt;Overall transaction costs including the underpricing of an issue of 20% of the issue volume(^{339}) are not uncommon, while typical M&amp;A exits for large buyout investments result in transaction costs of 3% to 5% of the transaction volume.</td>
</tr>
<tr>
<td><strong>b) Favoured by management</strong>&lt;br&gt;Not only do executives retain more managerial freedom and flexibility with a well diversified shareholder base rather than with a large majority owner, an IPO can also enhance the image profile and status perception of a company and its management particularly vis-à-vis stakeholders such as customers and suppliers.</td>
<td><strong>b) Extensive preparation required, intense execution process</strong>&lt;br&gt;Particularly for the due diligence process, the drafting of a prospectus and also the marketing campaign a lot of commitment, time, and resources from senior management, staff, private equity managers, and all advisers are required. A due diligence examination might stretch over months. Although extensive due diligence is also required for M&amp;A sales, the standards are even higher in case of public listings (WHALEY and SEMLER 2001, p. 400).</td>
</tr>
<tr>
<td><strong>c) Share participations: Stakeholder incentives</strong>&lt;br&gt;Following a public listing, share participation or stock-option schemes can be offered as a complementary and highly effective form of employee incentives (METTLER 1990, p. 300). Moreover, other stakeholders such as customers, suppliers or strategic partners can be invited to acquire shares in the business to solidify commercial relationships.</td>
<td><strong>c) Only partial immediate exit – lock-up conditions</strong>&lt;br&gt;Due to the usual lock-up restrictions imposed by underwriters, private equity firms can only sell a small proportion of their stake immediately at the IPO.(^{340}) A full exit can only be achieved following the expiry of a lock-up period, typically between 6 and 24 months after an IPO (LIN and SMITH 1998, p. 245). A continued shareholding in a public company carries the risk of still having to monitor.</td>
</tr>
<tr>
<td><strong>d) Publicity, reputation and image</strong>&lt;br&gt;IPOs are highly publicised processes (LERNER and HARDYMON 2002, p. 335). A listed company might project an image of stability and dependability to customers, suppliers and joint venture partners (LERNER and HARDYMON 2002, p. 335) and benefit from an improved reputation in the recruitment markets for key personnel (METTLER 1990, p. 300).</td>
<td><strong>d) Risk of illiquid stock markets</strong>&lt;br&gt;Contractual lock-up periods also leave the private equity investor exposed longer to the risk of stock market downturns and a lack of market liquidity (WALL and SMITH 1997, p. 8). To be able to sell substantial blocks of shares at attractive price levels, sufficient liquidity in the stock is necessary (LESCHKE 2003, p. 250).</td>
</tr>
<tr>
<td><strong>e) Provoking M&amp;A bids</strong>&lt;br&gt;The high publicity of an IPO process frequently triggers interest by M&amp;A buyers, provoking bids at attractive levels (LESCHKE 2003, p. 250). A credible IPO processes signals a high quality to potential purchasers, which might satisfy them with lower due diligence requirements in the interest of a quick transaction process.</td>
<td><strong>e) Need to convince a large number of investors</strong>&lt;br&gt;Unlike in the case of M&amp;A exits, where only one buyer needs to be convinced about the quality and future outlook of a business, a large number of investors need to be attracted to a business for a successful IPO completion (LESCHKE 2003, p. 250).</td>
</tr>
</tbody>
</table>

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\(^{339}\) Note that IPOs typically involve a sale of 25% or less of a company’s total volume of shares. Thus transaction cost percentages for IPOs relate to a different base than relative costs for M&A exits, which relate to the total transaction value.

\(^{340}\) Based on a survey with European private equity firms, WALL and SMITH (1997, p. 8) find that typically 10% to 20% of portfolio companies’ shares are sold immediately at the time of an IPO.
<table>
<thead>
<tr>
<th>Advantages of IPO exits</th>
<th>Disadvantages of IPO exits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>f) Retaining future upside potential</strong></td>
<td><strong>f) High, often short-term-oriented, performance pressure</strong></td>
</tr>
<tr>
<td>IPOs do not enable full immediate exits. However, the private equity investor is able to retain a stake in the business, sharing potential profits of future growth of a business (WALL and SMITH 1997, p. 8).</td>
<td>METTLER (1990, p. 302) warns that performance pressure due to continuous expectations by institutional investors can over time alter a previously longer-term-oriented management style to a strive for short-term goals, and thus limiting management’s flexibility in pursuing strategic objectives. Downturns in a company’s stock prices can also have a negative impact on a business, such as a loss of reputation with customers, suppliers and employees.</td>
</tr>
<tr>
<td><strong>g) Source of financing</strong></td>
<td><strong>g) High disclosure requirements</strong></td>
</tr>
<tr>
<td>Most IPO exits issue to the largest extent new, primary shares. Proceeds for these primary shares are typically retained in a company as a source of funds for future investments or acquisitions (METTLER 1990, p. 300). Other exits, with the exception of recapitalisations, do not provide new financing to a company.</td>
<td>Public listings are not only highly publicised processes, they do also require comprehensive disclosure of commercially sensitive information, such as the divisional cost structure or operational data (BAKER and MCKENZIE 2005, p. 12). Disclosure of sensitive information might be used by competitors to the detriment of the company.</td>
</tr>
<tr>
<td><strong>h) Substantial risk attached to process withdrawal</strong></td>
<td></td>
</tr>
<tr>
<td>Given the high publicity associated with IPO processes, the risks attached to a withdrawal of an IPO are more significant than in case of a cancellation of other exit routes (BAKER and MCKENZIE 2005, p. 16). Companies that cancel IPOs might have severe problems accessing public capital markets again, as investors may be reluctant to re-consider an investment, presuming the company has withdrawn an IPO due to a fundamental business problem.</td>
<td></td>
</tr>
<tr>
<td><strong>i) Only for sizeable companies with attractive projected growth profile</strong></td>
<td></td>
</tr>
<tr>
<td>Successful IPOs usually require a company’s business plan to credibly demonstrate a growth pattern and the ability to generate attractive returns for expansion capital (LESCHKE 2003, p. 250). Moreover, IPO exits typically require a minimum issue size, as otherwise institutional investors are unlikely to commit to transactions (WALL and SMITH 1997, pp. 8-9).</td>
<td></td>
</tr>
</tbody>
</table>

Taking into account both sides of IPO exits, the widespread claim of IPOs as the universally ideal and ultimate form of exit has to be moderated in a European buyout context. The preference of many European buyout investors for M&A exits becomes understandable. Nevertheless, IPOs will continue to play a crucial role for the continued success of the

341 Industry jargon refers to firms that establish a negative track record in public capital markets as ‘tainted’ (LERNER and HARDYMON 2002, p. 336).
342 Based on the author’s survey research and CUMMING and MACINTOSH (2003a) and EVCA (2005a).
private equity industry and can be expected to remain the most favoured exit route by many
stakeholders of portfolio firms.343

4.3.3 Buy-back
In a buy-back transaction, a private equity fund sells its shares back to the entrepreneur or
the company that sold the shares originally. While buybacks can exist in the context of
leveraged buyouts, such transactions are rare (EVCA 2005a, pp. 1-4). Buy-backs are of
greater relevance for early stage investments with relatively low valuations. This type of
exit is generally perceived to be a exit route for investments of limited success.

Particularly in cases of early stage ventures, the buy-back is triggered by the exercise of
contractual rights arranged by the venture capitalist at the time of initial investment. These
rights often include, for instance, the venture capitalist’s ability to ‘put’ or sell back its
shares to an entrepreneur when stated time periods have elapsed, when the company has
failed to achieve performance targets, or when the company has failed to go public
(CUMMING and MACINTOSH 2003b, p. 125).

From a process perspective, buy-backs are very transaction specific and are thus not
explored in detail. A buy-back process resembles to a pre-emptive bid approach, where only
one potential buyer is approached and negotiated with.344 Given the previous owners’
superior knowledge and understanding of a company compared to other buyers, less due
diligence and fewer negotiations about warranties and indemnity provisions are required345,
which facilitates quicker executions. Buy-backs can be completed within several weeks,
while other M&A sale procedures often take several months.

Given buy-backs’ limited relevance for the buyout market, no further process discussion is
provided.346

4.3.4 Recapitalisation
Although recapitalisations347 only provide for an exposure reduction of an investor’s
originally contributed equity capital through financing an extra-ordinary dividend, such
transactions are often applied either as a ‘prelude’ to a later exit or as a temporary

343 METTLER (1990, p. 303) reports that based on a survey of 65 European IPOs, firms that underwent successful
public listings believe that advantages exceed negative aspects of such transactions.
344 Please refer to section 4.3.1.1 for a review of pre-emptive bid sale processes.
345 For a discussion of warranty and indemnity provisions in M&A exits, please refer to section 4.3.1.3.
346 For further reference on buy-back transactions please refer to CUMMING and MACINTOSH (2003a, p. 524; 2003b,
pp. 118-164).
347 The functionings of dividend recapitalisations are described in section 2.2.5.3.
alternative to a divestment (i.e., LERNER and HARDYMON 2002, KUSHNER 2004). Recapitalisations are a popular method to extract cash from investments, having the flexibility to wait and prepare for a potentially more attractive exit later on. Due to the availability of attractive leveraged finance, a growing number of buyout investors perform recapitalisations\(^{348}\) (MEEK 2005, pp. 23-25), some of which finance dividends that exceed the total equity contributed to a portfolio company.\(^{349}\)

Due to the increasing popularity of recapitalisations performed either instead of other exit modes or as a ‘back-up’ alternative in parallel to other exit routes, a brief process discussion is set forth below.

### 4.3.4.1 Recapitalisation process

Due the fact that existing portfolio firms have raised debt finance at the time of the original buyout, they have established a profile and relationships with lenders, which simplifies further access to financing. This means that lenders tend to be satisfied with less onerous due diligence requirements and often demand less strict conditions and covenants\(^{350}\) than at the initial round of financing. Depending on the complexity of a transaction, the time period that has elapsed since the last financing round and the lenders’ appetite to increase their exposure to a company, recapitalisations can be completed in timeframes between several weeks and three months.\(^{351}\)

While most recapitalisations of European buyouts involve loans, high yield bonds are also increasingly issued to finance dividend recapitalisations (STANDARD and POORS 2005a, pp. 43-49).

The exhibit below demonstrates the generic major steps to be taken in a recapitalisation:

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\(^{348}\) Out of all LBO loan transactions in the first half of 2005 36.4% have been arranged for recapitalisations allowing buyout houses to finance dividends to themselves (STANDARD and POORS 2005a, p. 2).

\(^{349}\) These transactions are frequently undertaken prior to a ‘real’ exit, not only to relieve execution pressure from the divestment process, in case the fund requires cash flows for different purposes such as performance measurement aspects, reputation building for fundraising, but also to further establish the name of a company in the capital markets. Borrowers in the market for leveraged debt that have established a track record of successfully completed financings, so-called ‘seasoned’ borrowers, frequently benefit from superior terms. See MEEK (2005, pp. 23-25) for a note on motivations for recapitalisations.

\(^{350}\) Covenants in the context of financing agreements are certain pre-specified conditions, breach of which typically triggers defined rights of the capital provider. A note on covenants as well as further references in connection with debt financing covenants are set out in section 2.2.3.1.

\(^{351}\) Based on feedback obtained in expert interviews.
Prior to launching a recapitalisation process, one or several banks need to be appointed to arrange the transaction. In order to save costs and time, banks that are already familiar with the company’s credit profile are appointed (BENNETT 2005, p. 63). These are in many cases banks that have arranged the financing for the initial buyout. Furthermore, in order to facilitate the due diligence and legal documentation process, accountants, lawyers and business consultants need to be mandated. Similarly, mostly professional advisers who have worked on the initial acquisition are appointed to leverage existing knowledge and facilitate a quick and efficient process.

2. Preparation and due diligence

Compared to ‘true’ exit routes such as M&A auctions or IPOs, recapitalisations require substantially less preparation work, which can be almost exclusively carried out by banks and advisers. For most recapitalisations existing marketing materials such as information memoranda and presentations to lenders are purely updated for new information with detailed reports only concentrating on the development of a company since the initial buyout. Similarly, due diligence materials are only updated with only addendum reports capturing recent events and performance being produced. If the recapitalisation process serves as a backup option to other exit routes, due diligence materials produced for other exit routes tend to be fully sufficient for the recapitalisation process.

Bond recapitalisations require the production of an offering prospectus, which that has to comply with similar standards as IPO prospectuses including audited financial statements. Given the more extensive due diligence requirements and the necessity to produce a detailed prospectus as well as a number of comprehensive legal documents, preparation processes

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352 In case a recapitalisation is pursued in parallel to other exit routes, the investment bank and professional advisers working on other exit tracks are usually mandated to advise on a recapitalisation in order to minimise transaction costs.
353 Based on feedback obtained in expert interviews.
354 Please refer to section 4.3.2.1 for a discussion of prospectus requirements. SHEARMAN and STERLING (1990, pp. 1-6) provide a useful introduction to US securities laws governing the registration of securities, which is relevant for high yield bond issues. Given the established and predictable nature of US securities laws, most underwriters demand US law also to govern European high yield bond offerings.
for bond offerings tend to last longer, usually at least two to three months. This process can be shorter for portfolio firms that already have issued a high yield bond at the time of financing the original buyout. In this case, documentation and due diligence is only updated rather than effected from scratch.

3. Negotiations and structuring
Prior to launching the transaction marketing phase, terms and conditions\textsuperscript{355} of the financing have to be agreed. Arranging banks usually underwrite the financing and reserve the right to syndicate debt facilities. Bond issues are often underwritten on a firmly committed basis before marketing a transaction with debt investors.\textsuperscript{356} Fees to arranging banks vary, depending on the type of the debt facilities, leverage and offered pricing, and market conditions.\textsuperscript{357}

4. Syndication/transaction marketing
Following the preparation of marketing and due diligence materials and the agreement on the structure and terms of a recapitalisation, the marketing phase of a transaction can be launched. Loan recapitalisations usually entail the distribution of an updated information memorandum and due diligence reports to members of the syndicate holding debt facilities arranged for the initial buyout as well as a number of selected other banks and investors.\textsuperscript{358} Furthermore, presentations held by senior management and potentially site visits are being offered during the marketing phase. Typically two to four weeks after a management presentation, invited banks and investors are required to submit commitment indications\textsuperscript{359} subject to a review of the proposed credit agreement and documents. Final commitments are usually due one to two weeks following the receipt of the legal documentation, which means that an overall transaction marketing or syndication phase can last between four to seven weeks.\textsuperscript{360}

\textsuperscript{355} Please refer to section 2.2.4.4 for a further discussion of debt facilities and key terms used in leveraged transactions.
\textsuperscript{356} Despite firmly committing and underwriting a transaction at certain terms and conditions, arranging banks usually reserve themselves the right to alter terms such as pricing in case of a failing syndication to other banks and debt investors. In industry jargon, these rights are referred to as ‘market flex provisions’.
\textsuperscript{357} Depending on the type of loan recapitalisation executions, underwriting fees vary between less than 1\% for a pure amendment and releveraging under existing credit agreements to about 2.25\% for new arrangements. High yield bond underwriting fees tend to range between 2\% and 4\%. Please refer to the weekly published ‘International Finance Review’ (IFR), online under www.ifrmagazine.com for commentary on leveraged finance transactions including pricing and fee information.
\textsuperscript{358} STANDARD and POORS (2005a) reports that the share of institutional investors in the leveraged loan market, typically committing to the longer dated and higher priced tranches in the bank debt package, is increasing and reached 25.2\% in 2004.
\textsuperscript{359} Commitment indications express a bank’s or investor’s offer to lend certain amounts of capital to a company under the key terms presented, however, subject to a review of conditions set out in the credit agreement, which governs the rights and duties of the borrower and all lenders participating in the transaction as a syndicate.
\textsuperscript{360} Based on feedback obtained in expert interviews.
Marketing of high yield bond recapitalisations starts with a widespread circulation of a prospectus and can also entail a short roadshow, where the company’s senior management meets a number of institutional investors in different locations within several days. Most high yield bond transactions are priced and allocated in a book-building process as applied in IPO processes. The marketing phase of a high yield offering through to pricing and allocation typically lasts less than two weeks, which is considerably quicker than syndication phase for loan arrangements.

5. Closing and funding
Following a successful marketing of a transaction and the receipt of firm commitments by lenders, the legal documentation can be finalised and funds can be transferred to the portfolio company and further to its shareholders. Closing and funding typically takes place about one week following final commitments in loan transactions and one week subsequent to pricing in high yield bond offerings.

4.3.4.2 Comparative assessment of recapitalisations
Conducting recapitalisations as temporary alternative to other exit alternatives has several advantages that, however, need to be contrasted with a number negative aspects:

<table>
<thead>
<tr>
<th>Advantages of recapitalisations</th>
<th>Disadvantages of recapitalisations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Substantial cash proceeds without change in ownership</strong></td>
<td><strong>a) No ‘real’ exit</strong></td>
</tr>
<tr>
<td>Recapitalisations can finance considerable cash dividends to buyout investors without having to sell a stake in the business. MEEK (2005, pp. 24-25) finds that dividend recapitalisations in recent times have enabled financial sponsors to extract cash amounts exceeding their initial equity contributions. Equity exposure to a portfolio company can be substantially reduced or even eliminated while still retaining ownership.</td>
<td>While enabling a buyout investor to reduce exposure to a portfolio firm, a recapitalisation does not change ownership and thus cannot reduce an owner’s responsibility. Moreover, buyout investors are expected by limited partners to find suitable exits for each portfolio investments, recapitalisations do not more than justifying a temporary delay of an exit (MEEK 2005, p. 24-25).</td>
</tr>
<tr>
<td><strong>b) Relieve exit pressure</strong></td>
<td><strong>b) Incremental strain on management</strong></td>
</tr>
<tr>
<td>In times when neither public equity markets nor M&amp;A environment permit attractive exits, a buyout investor can still conduct a recapitalisation, which enables the distribution of cash to limited partners and to allows a financial sponsors to demonstrate investment success. Early or rushed exits only for reputation purposes tend to result in sub-optimal performance (GOMPERS 1996). Recapitalisations in this context are an efficient method to relieve pressure to realise investments for performance demonstration.</td>
<td>Although a recapitalisation process is less intense and strenuous for a portfolio company’s management team, it still causes temporary distraction from their managerial and operational duties.</td>
</tr>
</tbody>
</table>

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361 For a note on pricing and allocation of securities in book-building processes, please refer to section 4.3.2.1.
362 Please refer to section 2.2.5.3 for a note on the functioning of dividend recapitalisations.
## Advantages of recapitalisations

| c) Establishes track record in capital markets |
| As a further interaction of a portfolio company with capital markets, recapitalisations can help to establish a company’s profile with lenders and investors. Establishing a track record can be beneficial and result in more favourable terms for future financings. Particularly, financial investors buying companies value an established history and a company’s expertise to raise funds in capital markets. |

| Disadvantages of recapitalisations |
| c) New covenants can limit flexibility |
| Following the releveraging of a company, lenders demand covenants and conditions that are usually more restrictive than the covenants applicable in the company’s state prior to increasing its debt burden once again. These covenants can limit the flexibility to pursue strategic objectives such as add-on acquisitions or further continued dividend payments to the private equity firm and restrict capital expenditure and, etc. |

| d) Backup solution should other exit routes fail |
| Preparations for a recapitalisation are increasingly taken in parallel to other exit processes. Leveraging work and materials produced for other processes, recapitalisations can serve as a fallback option that can be executed quickly, should other divestment channels not lead to a satisfactory outcome (MEEK 2005, p. 23). |

| d) Transaction costs |
| Including underwriting fees, compensation of professional advisers, legal expenses, and other charges, transaction costs for recapitalisations range between 2% and 5% of the issued debt facilities. Particularly when recapitalisations are conducted as a prelude to a subsequent exit, the necessity of such a transaction has to be assessed in light of incremental transaction costs. |

| e) Limited distraction of management |
| Given the quick execution process and relatively modest preparatory requirements, a portfolio company’s management team is distracted only for a short period of time, when presentations to banks and other lenders or meetings with institutional investors are held. Most preparations can be carried out by arranging banks and professional advisers. |

| f) Continued incentive for management to perform |
| Recapitalisations, not only in a private equity context, are associated as a method to discipline management to perform well (i.e., WALKER 1998, HANDA and RADHAKRISHNAN 2001). Through releveraging a company, incentives to work hard in order to meet performance covenants and to be able to service debt interest and principal repayments are reinforced once again. |

### 4.4 Relative importance of exit options

#### 4.4.1 Review of transactions by exit alternative

Trade sale exits are the most preferred and also the most common type of completed private equity exits in Europe (EVCA 2005a, p. 2). The two subsequent exhibits plot the relative importance of exit channels as well as absolute divested volumes through the various exit routes since the year 2000.

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363 Transaction costs involving forms of subordinated high yield bonds or mezzanine debt can exceed 5%. Based on feedback obtained in expert interviews and regular commentary in IFR (online: www.ifrmagazine.com).

364 While exit statistics only capturing the buyout market are not available to date, the relative importance of exit routes is viewed to be representative for the buyout market, which represents more than 70% of the overall European private equity market measured in terms of investments (EVCA 2005c, p. 51). HUDSON (2005, pp. 5-7) estimates that buyouts even contribute a larger share of total exit values.
The share of trade sales of overall divestments has declined below the 30% since 2003, with sales to financial investors, mostly structured as secondary buyouts, and recapitalisations increasing in importance. IPOs combined with sales of listed equity subsequent to a lock-up period has been stable at around 11% to 12%. Noteworthy is that in 2001, following the technology stock market crisis, only 2% stemmed from secondary share sales at IPOs with 9% being contributed by sale of listed equity (EVCA 2005b). Write-off levels reached peaks in 2001 and 2002, returning to typical levels of around 10% (EVCA 2005b).

Exit values increased substantially, following a decline in 2002. While in the exhibit below exit value is measured at initial acquisition cost, HUDSON (2005, p. 7) estimates that European buyout exit values measured at actual valuation doubled from €25 billion in 2003 to over €50 billion in 2004.\(^{367}\)

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365 This data supports a claim by LERNER et al. (2003) that private equity-backed IPOs tend to be executed only in times permitting attractive valuations, so-called ‘market windows’.

366 Note that the write-off levels in this statistic are estimated based on survey feedback, which is likely to underestimate write-offs as financial sponsors tend to avoid the open disclosure of failing investments.

367 As a note of caution it should be flagged that these numbers, in the absence of firm statistics, constitute estimates that are based on public disclosure and thus rely on potentially incomplete datasets.
4.4.2 European stock exchange environment for IPOs

The fragmented and less established European capital market environment has often been blamed to as a reason for a slower development of the private equity industry compared to the United States (i.e., HALL 2002, BOTTAZZI and DARIN 2002). As demonstrated above, stock market exits in total have represented an average of 12.1% of exit volumes in the European private equity market from 2000 to 2004. To put stock market’s relative weight for European exits in perspective, a comparison to the United States private equity market appears helpful.

While IPOs have been performed for 21% of the total value of all US private equity divestments in 2004, this high percentage has to viewed cautiously in the context of the last years following the technology stock crisis in 2000 and 2001, when IPOs represented less than 15% of overall divested volumes, which is comparable to European levels (SCM 2005). SCM (2005) argue that the European stock market environment for sizeable buyouts is structurally not less favourable than US markets. However, they argue that European

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368 EVCA (2005) measures exit values at initial acquisition costs rather than exit valuation achieved, as private equity firms often tend to avoid disclosing actual achieved exit values. HUDSON (2005, pp. 6-7) estimates the total divested value of European buyouts measured at actual achieved valuation.

369 European private equity portfolio firms undergoing IPOs are almost exclusively placed through European stock exchanges, even dual listings outside Europe where a company is quoted additionally for example on a US stock exchange are very rare, as JENKINSON and LJUNGQUIST (2001, pp. 9-12) indicate.
stock markets are still not capable to provide consistent exit opportunities for early stage venture capital investments, which is a key difference to the US situation.\footnote{This argumentation is in line with HALL (2002) who identifies a ‘funding gap’ for young innovative European companies experiencing difficulties to access public equity markets, which potentially discourages venture capital investments in the first place due to a lack of exit visibility.}

Not intending to dwell into a detailed discussion of European stock markets\footnote{For a relevant literature overview and a discussion of the European stock markets environment for young firms and venture capital portfolio companies, please refer to BOTTAZZI and DARIN (2002, pp. 244-263).}, a number of statistics about the overall IPO markets in Europe and the US are still worth highlighting. The exhibits below draw comparisons regarding the European and US IPO\footnote{Data captures all IPOs, including non-private equity related transactions.} environment, demonstrating that IPOs in Europe have outnumbered those completed in the US. Between the first quarter of 2001 and the third quarter of 2005, 1420 IPOs have been completed in Europe compared to 625 completed on the two key US stock markets, ‘New York Stock Exchange’ (NYSE) and ‘NASDAQ’.\footnote{Statistics presented are based on own analysis of quarterly published ‘IPO watch’ reports by ‘PriceWaterhouseCoopers’, online: www.ukmediacentre.pwc.com, accessed between 12. and 15. October 2005. Data for US stock markets were confirmed and completed through NASDAQ’s online statistics archive, accessed through www.nasdaq.com between 13. and 15. October 2005.}
However, IPOs completed in the US raised €137.0 billion compared to €99.7 billion in Europe. Overall, these statistics emphasise that Europe’s stock markets have developed and already demonstrate the capacity to raise substantial values of equity financing for new issues, similar to the US stock markets.

Looking at the contribution of individual stock markets to the consolidated European IPO statistics, 63% of the entire capital raised in European IPOs between 2001 and the third quarter of 2005 has been placed through the ‘London Stock Exchange’ (LSE) and ‘Euronext’, the association of stock exchanges in Paris, Brussels and Amsterdam. German, Italian, Swiss, Spanish, and remarkably Polish stock markets collectively placed 28% of total IPO values. The exhibit below illustrates the relative weight of individual stock exchanges in the context of the European IPO market.

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375 In terms of number of transactions, 76% of all European IPOs have been completed on the LSE and Euronext.
Overall, the European stock markets have demonstrated the capacity necessary to serve as a platform for buyout exits. The fact that only 12% of exit value has been achieved from 2000 to 2004 have been completed via public equity markets (EVCA 2005b), seems to be a consequence of other exit channels permitting more attractive valuations and leaner execution processes rather than a result of a structural deficiency of the European stock markets environment.\footnote{IPO exits such as ‘Kohlberg, Kravis and Roberts’ (KKR) exit of German cash machine manufacturer ‘Wincor Nixdorf’, placed at Frankfurt’s ‘Deutsche Börse’ in 2004 or ‘BC Partners’ IPO of Irish beverage and snacks producer ‘Cantrell & Cochrane’ placed at stock exchanges in Dublin and London in 2004 serve as examples of European stock markets being receptive for large buyout exits at valuation levels perceived as attractive.}

### 4.5 Evaluation of exit options

The assessment of exit options prior to firmly commit to a divestment of a portfolio firm is a complex task, demands careful analysis, and the involvement of other stakeholders, particularly a company’s senior management team.

While not only value maximisation ought to be strived for, strategic and process objectives need to be considered. These include the extent and timing of an exit, publicity aspects and the capacity of resources necessary for particular exit executions. Going beyond these parameters, this section intends to outline aspects regarding the analysis of exit options, providing a note on valuation techniques, followed by discussions about the type of price consideration to be received, and potential conditions that might be enforced in periods after transaction closing. The section closes with a remark on the need to consider interests of
other stakeholders when evaluating ultimate exit alternatives, which serves as a transition to this part’s final section on the role of management in the exit process.

4.5.1 A note on valuation methods
Given the wide scope and depth of literature available on valuation techniques, this note will not discuss detailed valuation mechanics but rather provide a brief overview of techniques relevant to the context of this dissertation, offering references to relevant sources and studies as well as setting out a ranking of the different valuation approaches’ relevance in the context of the private equity practice.

DAMODARAN (2002, pp. 11-24) distinguishes three fundamental categories of modern business valuation methods: Firstly, ‘discounted cash flow’ techniques that also serve as a foundation to most other valuation methods; secondly, ‘relative’ or ‘market-oriented’ valuation and thirdly ‘option pricing-based’ valuation. HITCHNER (2003, pp. 85-183) also adds valuation on the basis of ‘historical asset values’ as a category.

1. Discounted cash flows method
The discounted cash flows approach builds upon the present value concept, where the value of any asset is the present value of expected future cash flows on it. Valuing an entire business, usually all expected cash flows prior to paying interest to debt holders and dividends to equity owners, but taking into account tax benefits on the payment of debt related interest are being discounted at a ‘weighted average cost of capital’ (WACC). The circumstance that a businesses’ cash flows cannot be indefinitely projected leads to the requirement of assessing a so-called ‘terminal value’, which measures the value of a company at the end of a projections horizon either assuming a steady and indefinite stream of cash flows or assuming a liquidation of a firm. The equation below summarises the computation following this approach, whereby \( CF_t \) denotes cash flows to the firm for

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377 COPELAND, KOLLER and MURRIN (2000, pp. 224-327) and DAMODARAN (2002, pp. 351-574) provide detailed explanations and guidelines for the correct application of discounted cash flow techniques.
378 KAPLAN and RUBACK (1995, pp. 1062-1063) define this type of cash flows used for firm valuations as ‘capital cash flows’. A so-called ‘adjusted present value’ approach leads to broadly the same result, whereby in a first step a company is valued assuming that is has no debt outstanding. Subsequently, the valuation is modified taking into account tax savings generated by paying debt interest as well as considering the impact of debt onto the probability of a company going bankrupt. Please refer to DAMODARAN (2002, pp. 400-413) for an introduction in capital cash flow and adjusted present value methods and to KAPLAN and RUBACK (1995, pp. 1070-1078) for empirical results comparing these two techniques.
379 DAMODARAN (2002, pp. 154-166) provides a detailed framework to compute an appropriate WACC for corporate valuation purposes.
periods \( t \) from 1 to the end of the projections horizon\(^{380} \), period \( N \). \( TV_N \) represents the projected terminal value of the business at period \( N \).

\[
FirmValue = \sum_{t=1}^{N} \frac{CF_t}{(1 + WACC)^t} + \frac{TV_N}{(1 + WACC)^N}
\]

Determining an appropriate weighted average cost of capital is in practice more complex than the simplicity of its theoretical formula would suggest (KAPLAN and RUBACK 1995, pp. 1064-1066), where \( c_D \) and \( c_E \) denote the cost of debt and equity, respectively, \( t \) represents the marginal tax rate and \( Value_D \) and \( Value_E \) denote the market value of a company’s debt and equity, combined totalling to a company’s firm value:

\[
WACC = c_D(1-t) \left( \frac{Value_D}{FirmValue} \right) + c_E \left( \frac{Value_E}{FirmValue} \right)
\]

While the discussion does not advance in further computational mechanics, HITCHNER (2003, pp. 85-183) is recommended for further reference providing encompassing theoretical explanations and useful guidelines for discounted cash flow models.\(^{381} \)

2. Relative or market-oriented methods

Most valuations done in practice value assets on a relative basis to similar assets priced in the market place (DAMODARAN 2002, p. 11). In relative or market-oriented valuations, a valuation of an asset is derived from the pricing of comparable assets, typically standardised using a common variable such as earnings\(^{382} \), cash flows, book value, revenues or industry specific operational metrics. Valuation is expressed as a multiple of a selected common variable:

\[
FirmValue = CommonVariable \times MarketMultiple
\]

While relative valuations appear to be fairly simple, the selection and verification of comparable companies and also the standardisation of the chosen common variables across companies requires care and diligence (KAPLAN and RUBACK 1995, p. 1067, KIM and RITTER 1999, pp. 410-418).

Valuations of M&A transactions should encompass both a ‘trading multiples’ approach that derives valuation from comparisons to publicly traded companies and a ‘transaction multiples’ approach that derives valuation from comparisons to actual M&A transactions.

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\(^{380}\) Most long term valuation projection models in practice apply a projections horizon of 10 years.

\(^{381}\) DAMODARAN (2002, pp. 690-728) provides further helpful guidelines for the application of discounted cash flow computations in acquisitions and takeovers.

\(^{382}\) EBITDA representing earnings before interest, taxes, depreciation and amortisation has evolved into a widely used common variable in market oriented valuations (KAPLAN and RUBACK 1995, pp. 1066-1067).
These two methods can lead to substantially different results. Trading multiples implicitly capture a so-called ‘liquidity premium’, given the increased liquidity of investments in publicly quoted firms compared to privately held firms. Conversely, transaction multiples comprise a so-called ‘control premium’ reflecting buyers’ willingness to pay extra to obtain a controlling stake in firms. On the other hand, these multiples might include discounts for a lack of marketability of illiquid controlling stakes (HITCHNER 2003, pp. 272-288). Furthermore, transaction multiples might contain premiums for anticipated synergies in case of mergers between companies.\footnote{Please refer to HITCHNER (2003, pp. 272-323) for a comprehensive analysis and guidelines regarding the use of premiums and discounts in corporate valuation, as well as a literature overview and review of empirical results. DAMODARAN (2002, pp. 690-728) also provides a detailed discussion of premiums and discounts relevant in takeover and acquisition transactions.}

3. Option pricing-based methods
In some cases, the notion that an asset’s value might exceed the present value of its expected cash flows if these cash flows are contingent on the occurrence or non-occurrence of an event, found acceptance in recent years (DAMODARAN 2002, p. 22).

Option pricing-based models in the context of company valuations can serve as a complement to discounted cash flows and market-oriented valuation approaches, valuing specific assets such as patents or attaching value to upcoming regulatory or strategic decisions.\footnote{For an introduction to option pricing based valuation methods, please refer to DAMODARAN (2002, pp. 22-26).} In the context of buyout transactions, BALDI (2004, p. 67) argues that option-based valuation techniques can be used to expand discounted cash flow models, in order to capture a buyout investor’s flexibility of managerial actions that can be performed in order to influence the dynamics of the firm value.\footnote{BALDI (2004) is recommended for further reference on option pricing based valuation in M&A transactions, particularly buyout transactions. KRAFT (2001, pp. 195-198) can be referred to for a note on the applicability of option based valuation for turnaround private equity investments.}

4. Historical asset value methods
Approaches deriving valuation from historical asset values are rarely used in transactions relevant for buyout exits. However, KRAFT (2001, pp. 179-182) establishes the relevance of such methods for valuations of turnaround investments, where a company’s assets are valued prior to restructuring liabilities, equity and debt capital structure. Within this category, two major valuation methods can be distinguished:

First, ‘going concern’ or ‘replacement cost’ asset value methods take into account market values\footnote{Market values are typically replacement values adjusted for depreciation reflecting assets’ age.} of a company’s assets assuming a continuation of the company’s activities. This
approach is often interpreted as ‘valuation ceiling’ in turnaround investments, as it yields the total cost to build an identical company from scratch.

Second, ‘liquidation’ asset value approaches assume the sale of individual assets in a liquidation process. In order to arrive at a total asset value, costs to pursue and administrate a liquidation process have to be deducted from the cumulative liquidation value of all identified assets. In contrast to a firm’s assets going concern value, liquidation value is often viewed to represent a ‘valuation floor’, used by turnaround investors in acquisition negotiations to justify a lower purchase price (KRAFT 2001, p. 181).

Overall historical asset value approaches are rarely used in corporate valuations other than those involving turnaround candidates.387

Summarising the overview of major company valuation techniques, the practical importance of individual methods in a private equity context should be emphasised. The table presented below demonstrates that market-oriented valuation approaches and discounted cash flow analyses have been perceived to be the most crucial valuation tools influencing investment decisions. Earlier responses by potential transaction counterparts and historic asset value approaches have been viewed to be of lesser importance. Option pricing-based approaches did not even get ranked in this study carried out by the ‘University of Nottingham’ in 1999.

Based on a survey among turnaround private equity investors, KRAFT (2001, p. 201) arrived at similar results as to the order of importance of valuation methods in practice. Option-based methods are viewed as the least appropriate method category by his sample of investors.

387 In an extensive review of valuation methods, HITCHNER (2003, pp. 85-183) also discusses historical asset value techniques in detail.
4.5.2 Type of consideration received

A key consideration when assessing exit options is the type and mode of payment to be received. The clear preference of most private equity investors is a full and immediate cash consideration (CUMMING and MACINTOSH 2003b, p. 134). However, in order to achieve a higher valuation, financial sponsors might accept portions of the agreed price to be paid on a deferred or non-cash basis.

Apart from immediate cash proceeds and the possibility to distribute shares to limited partners in a private equity fund in case of IPO exits389, three major payment alternatives are frequently used in buyout exits:

1. Payment in shares

In case of share payments, the buyer grants a portion of the acquired shares back to the seller of the business and offers the seller at the same time an option to buy these shares back under certain conditions.390 Private equity investors typically dislike payment in shares, as this type of consideration exposes their overall investment return to the future performance of the business without being able to actively monitor and steer its activities any more (LESCHKE 2003, p. 251). Share payments, however, might be considered as an appropriate payment method in case the portfolio firm is sold to a liquidly trading public

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388 Operational metrics are industry specific and might include for example the number of customers, average revenue by customer, etc.
389 Please refer to section 3.4.2 and particularly GOMPERS and LERNER (1998b) for a discussion of share distributions as an alternative to distribute cash to limited partners.
390 The seller of the business is compensated in shares with relating ‘put-options’, providing the seller with certainty to be able to liquidate the share position under specified conditions (CUMMING and MACINTOSH 2003b, p. 102).
company, where the public company’s shares represent the non-cash portion of the consideration offered (CUMMING and MACINTOSH 2003b, p. 138)

2. Deferred consideration plans
Another alternative, should the buyer not be able to raise sufficient funding for an immediate cash consideration, is to agree upon a deferral of part of the purchase price payment.391 The deferred payment is mostly in cash. This might be used in case a buyer faces a timing gap between the closing of an acquisition and receiving substantial funds for already completed business or transactions. In this case a private equity firm selling a portfolio company can legally take direct title of the funds to be received by the buyer and thus obtain comfort about the certainty of receiving a portion of the agreed transaction price on a deferred basis. Alternatively, the buyer’s financing banks can provide guarantees for deferred payments.

3. Vendor loans
A structure frequently used in large European buyouts, but admittedly less so in buyout exits, are so-called ‘vendor loans’. This means that a seller of a business grants an interest bearing loan to the buyer of this business in order to have sufficient funding for an agreed purchase price, as illustrated in the exhibit below:

Exhibit 84. Vendor loan structure. Source: Own illustration.

These loans, typically secured against the acquired shares (CUMMING and MACINTOSH 2003b, p. 150), bear interest pricing that exceeds the pricing of bank loans, given the nature and purpose of this facilities and its subordinated ranking compared to debt facilities.392

391 As an alternative to a deferred consideration, the buyer could seek so-called ‘bridge financing’ by lenders, providing further loans for an interim period that are structured against defined claims of certain funds to be received in the near future. Bridge facilities typically expire in less than 12 months. Please refer to HARRIS (2002) for more details on such financings.

392 For a discussion of financing instruments in leveraged buyouts and related structural considerations, please refer to section 2.2.4.4.
When assessing exit offers involving non-cash payment, careful analysis is required particularly when comparing such options to exit offers with full and immediate cash considerations. The impact of a delayed receipt of payments onto investment returns and the risk attached to non-cash payments need detailed diligence.

4.5.3 Post-closing conditions: Warranties and indemnities

The legal relationship between a financial sponsor and an portfolio company does not necessarily terminate at the completion of an exit. Particularly in the case of trade sales, strategic buyers might request a series of warranties and indemnities from the selling buyout investor, as instruments of legal protection, should the seller fall short of disclosing issues that have existed or have its origin before the completion of the transaction (KRIEGER, ANTHONY, GREENSTONE, KHARAGAT and SHEPLEY 1994, pp. 118-119). Additionally, warranties will be requested for areas where no meaningful due diligence can be performed. While a warranty guarantees that the information provided is correct or confirms that there are no pending problems concerning certain aspects, an indemnity is a financial guarantee that if a specific liability arises, the seller will meet these obligations (COFFEY, GARROW and HOLBECHE 2002, p. 92).393

Private equity firms in general dislike granting warranties and indemnities and prefer exit options with limited need to do so. That is why a sale to another financial investor is often perceived as appealing, given the traditionally low warranty and indemnity requirements demanded by such buyers (HANTON 2005, pp. 66-68). If buyers insist on extensive aspects being covered by warranties and indemnities, exiting private equity firms need to in place appropriate insurance cover. In this case ongoing insurance costs subsequent to the completion of buyout exits need to be taken into account.

4.5.4 Other stakeholders’ interests

As demonstrated in this section, an exit of a private equity firm has an impact on many stakeholders. A company’s senior management team staying with the business subsequent to an exit, employees and work force, suppliers, customers, debt lenders, governments and the society are stakeholders to a business, who are all impacted by a change in ownership.

While private equity investors have to strive for value maximisation in order to provide their shareholders with appropriate returns as a compensation for their risk commitment, interests particularly of stakeholders very close to the business, such as management and staff,

393 KRIEGER et al. 1994, pp. 124-129 can be referred to for a comprehensive description of warranties and indemnities in acquisition contracts. Please also refer to section 4.3.1.3 for a further discussion of warranties and liabilities.
should be considered prior to committing to a divestment of a business (i.e., IPPOLITO and JAMES 1992, FOX and MARCUS 1992).

In the context of critical remarks on the investment behaviour of buyout investors, following the ‘transfer-theory’ (FOX and MARCUS 1992, ASGHARIAN 2003), meaning that LBOs do not achieve value creation but only a wealth transfer from other stakeholders to equity owners, the author suggests that a more balanced consideration of value maximisation and potentially conflicting stakeholders’ interests in buyout exits is a necessity for a continued long-term success of the buyout industry. Disrespecting serious interests by other stakeholders can gradually harm the overall environment private equity investors have to manoeuvre within. As an example, bad publicity and trade union actions due to job losses and plant closures subsequent to private equity transactions can be used as a justification by governments and regulators to alter the legal environment and restrict investors’ flexibility in the future.

4.6 The importance of executive management in the exit process

The last section in this part on exit processes is devoted on the role of management, which tends to be under-emphasised in prevailing literature. Executive management teams of portfolio companies are not only crucial to drive operational and financial performance in an investment, their commitment and co-operation is also of paramount importance for any divestment process (LENOIR 2003, p. 244).

The major tasks and responsibilities of portfolio firms’ senior management teams have been discussed in section 4.2.4. The purpose of this note is to emphasise the need for clear and appropriate incentive structures and an early involvement of management in divestment processes in order to reduce imminent conflicts of interest that could detrimentally impact the outcome of exit processes.

A well-functioning co-operation between executive management and private equity investors can undoubtedly add value throughout the holding period of an investment. Concentrating on the divestment phase, several aspects have to be taken into account.

Management should be involved throughout the investment cycle in regular portfolio reviews (LIEBER 2004, pp. 73-75). They are closest to the industry, typically have an established network of contacts, which are often beneficial to provoke bids by trade buyers.

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395 Please refer to section 4.2.1 for a discussion of portfolio management by private equity firms.
RELANDER et al. (1994, p. 149) propose that private equity investors should combine management’s and own contacts for an active networking to create interest in a business and thus establish an ‘exit flow’. In regular reviews, management can contribute a sophisticated opinion about the state of the industry, relevant market issues and competitors, which in turn helps private equity managers to assess the feasibility of potential exit routes.

Critical to ensure an alignment of interests between management and financial sponsors is the arrangement of an exit-oriented incentive scheme for senior managers, ideally agreed as early as the closing of the initial buyout acquisition. To be effective, such incentive schemes should tie substantial portions of senior managers’ compensation to the valuation realised in an exit or the investment return achieved by a financial sponsor (KRAFT 2001, p. 274). Convertible securities 396 and particularly convertible preferred stock are widely used by private equity investors to structure both their equity contribution as well as the investments by management teams. Private equity firms mostly retain the right to alter the conversion price of these instruments according to the performance of a company (SAHLMAN 1990, p. 510). 397

Once a portfolio company is identified as an exit candidate and the preparations of an exit process can be launched, management has the crucial task to support due diligence efforts driven by professional advisers, designate point persons within the organisation to provide advisers with detailed data and information and carefully communicate the upcoming divestment process to the staff, in order to avoid adverse effects on the business (LESCHKE 2003, pp. 249-256). 398

During the marketing and execution phase of a divestment process, senior managers have the important role to present the company to potential buyers or investors, convincing them about the quality and outlook of a business. Particularly in this stage, the commitment and performance of management can have a tremendous impact onto the success of a transaction. Proactive handling and caution to avoid conflicts of interest are required particularly in case of multi-track exit options where management could likely prefer an

396 BASCHA and WALZ (2001) provide a detailed analysis of convertible securities applied in private equity transactions. They also demonstrate that convertible securities reduce the risk of disagreements regarding the timing of exit of a portfolio company.
397 For a more detailed discussion of incentive structuring as a means to reduce agency conflicts, please refer to section 2.1.7.1.
398 Adverse reactions such as strikes by the workforce in the fear of job losses or a deterioration of the terms of work require careful prevention, strict confidentiality of the process and the involvement of human resource managers.
IPO option or a sale to another financial investor and deliberately discourage trade buyers from submitting attractive offers.399

In sale processes to financial investors another concern has to be considered. WALL and SMITH (1997, p. 9) warn that management is likely to show divided loyalty, as they benefit on the one hand from a successful exit by the exiting investor but also get granted an incentive package tied to further value creation from the buying investor. The objective to strive for value maximisation at the time of exit contradicts the consideration that a lower entry valuation of a buyer enables easier value growth achievement, which is driving managements’ future performance linked compensation.

Overall there are many aspects of potential conflicts of interest private equity houses have to be aware of when selling businesses. As a perfect alignment of interests between management and financial investor is rarely achievable, caution and proactive communication have to be applied throughout the investment cycle. Incentive structures can reduce conflicts and mitigate concerns, however, senior management might also place value on aspects affecting their careers following an exit (NEUS and WALZ 2004). In this sense, management teams should be viewed as partners in an exit process, being involved from early stages in a divestment process.

To ensure a smooth and successful exit process, buyout investors need to factor in the interests and aspirations of executive management teams to obtain their commitment and support for a divestment strategy.

399 Based on feedback obtained in expert interviews.
5 Empirical analysis

“Our companies are always for sale - price dependent.”
Quote of a senior private equity professional, in : WALL and SMITH (1997, p. 12)

Having discussed the various steps of an exit process and relating considerations in the previous section, this part elaborates on the empirical study underpinning this dissertation.

5.1 Research objectives

This work aims to contribute to the scientific understanding of decisions, preferences and styles in relation to exit processes, concentrating on private equity investments in mid-sized and large European companies, acquired through leveraged buyouts.

A focus of the analysis is set on decision determinants regarding exit processes, critically evaluating concepts and theories established and proven in similar studies. These concepts and theories suggest the relevance of certain factors, which will be assessed in the context of buyout exits. Additionally, relationships between buyout investors’ characteristics and their exit behaviour are being examined. The exhibit below attempts to illustrate the research focus as a crossing-line between a dimension of buyout exit decision aspects embedded in an overall private equity setting assessed through application of prevailing concepts.

The objective of this work is to provide answers to a number of research questions, each of which concentrates on the exit process management of buyout investors:
1. Which factors are the key decision drivers regarding the timing of exits?
2. Which factors are the key decision drivers regarding choice of exit route?
3. Which buyout investor characteristics explain differences in exit preferences and exit process management? What impact do corporate governance styles and involvement of portfolio companies’ executive management have on exit decisions?
4. Why and under which circumstances do buyout investors pursue more than one exit route in parallel and what are the downsides of such processes?
5. What impact did the change in the private equity environment over the past years including the entry of hedge funds in this market have on the exit behaviour of buyout investors?

400 The research focus of this study is limited to buyout firms undertaking mid-sized and large investments defined with a minimum transaction value of €100 million at the time of exit. While NVCA (2005a) classifies US mid-sized buyouts at a minimum transaction value of US$250 million, the lower €100 million threshold is not uncommon for the smaller European private equity market (EVCA 1998).
6. How have the trends in buyout exits related to the evolution of buyout funds performance?

The author believes that the differences in the characteristics of private equity firms have been largely neglected in previous studies on exits. The research work underlying this dissertation attempts to take investor characteristics into account and differentiate between types of buyout investors.

5.2 Research methods rationale

While an overview of the pursued research process has been provided in section 1.2, this note aims to briefly outline the rationale for applied methods.

Prior to selecting the statistical analysis of survey data and database information, combined with qualitative validation through a series of structured expert interviews, several other research methodologies, potentially viable for such a study, have been considered and assessed. The list of evaluated methodological alternatives included: Data analysis of large industry datasets, time series analysis on the quantitative side as well as case study research and action research on the qualitative side. These alternatives are being evaluated briefly below:

a) Multivariate data analysis of a large amount of industry data

The analysis in several private equity studies relies on a large amount of data provided by venture capital associations or specialised consulting firms. GOMPERS and LERNER (2000) and COCHRANE (2005) serve as prominent examples. Looking at such vast data certainly facilitates a generalisation of findings but on the contrary dilutes the ability to analyse relationships of variables in-depth. The above-mentioned studies both concentrate on relationships that are easy to measure. In question is either the valuation of transactions or the performance of venture funds. However, this study requires a more granular level of detail compared to what is available in large databases. Databases do not contain information necessary to fully understand the reasons for a transaction, but rather the facts of a transaction. Nevertheless, industry and transaction data has been used to complement the dataset obtained from survey questionnaire responses.

\[\text{\small Footnotes:}\]
\[\text{\small 401} \quad \text{GOMPERS and LERNER (2000) examine a dataset of 4000 venture investments from a database by the consulting firm ‘VentureOne’ with regard to transaction valuation. COCHRANE (2005) analyses more than 16,000 financing rounds for venture investments also based upon a dataset provided by ‘VentureOne’}.\]
\[\text{\small 402} \quad \text{For the purpose of a study on private equity divestments, a model taking into account a number of variables with available data such as company size, profitability, industry sectors or date of acquisition to explain exit behaviour could be used. However, such model would not enable the assessment of a variety of other aspects underlying divestment decisions.}\]
b) Time series analysis
In addition to a cross-sectional quantitative analysis of large datasets, transactions could be analysed applying time series analysis. This would assume that exit decisions change following time patterns. Although, much more rarely used in this field, there are examples for time series analyses. Again, GOMPERS and LERNER (2000) looked at time series econometrics when analysing the valuation of early-stage versus later-stage private equity investments. There are clearly shifts in the relative importance of various exit channels. The IPO divestment route is very much dependent on liquid stock markets, which have to be receptive for new issues. A time series analysis could help to identify the relationship of the state of the capital markets and the number of private equity driven IPO exits. However, as the key focus of the research is set on the process before the actual divestment transaction is completed, time series analysis would likely fail to provide sufficient insights due to a lack of appropriate data. Furthermore cross-sectional statistical analysis seems to be of greater relevance as transactions’ properties are typically governed by specific characteristics such as financial performance, industry segment, and company size rather than time series data.

c) Case study research
Case study research is a rarely applied methodology in private equity research. Even though a number of excellent case studies are written, these have mostly a teaching rather than a pure research purpose. Nevertheless, case studies are used as a means to validate findings from other methods and to deepen knowledge in specific areas. However, given the tendency of private equity firms to withhold detailed information about transactions, reliable and comprehensive case data can often not be obtained. As experienced by the author, particularly in the case of realisations of an investment, private equity firms are typically not willing to disclose details going beyond information that already prevails in the public domain.

d) Participatory action research
A form of field research that also permits deep insights into specific situations is action research, whereby the researcher gets directly involved in the examined process. Action research would certainly have its merits in order to fully understand the entire exit decision process. However, as a matter of policy, private equity firms will not allow a third party to be closely involved in such a process as concerns about information confidentiality would be too substantial. Reviewing current literature, the author could not find any scientific

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403 See LERNER and HARDYMON (2002) for a number comprehensive case studies capturing several aspects of the private equity business.
404 KRAFT (2001) conducts a limited number of case studies of private equity transactions in order to explore the investment decision approach from private equity firms in detail and to facilitate the interpretation of his survey results.
studies based upon participatory action research, which confirms that this approach has limited viability for this area of research.

Given the research orientation and the feasibility to obtain access to appropriate data, the author has conducted structured expert interviews and created a dataset comprising information from survey questionnaire responses and database information, which forms the basis for the subsequent statistical analysis. This approach has proven to be well-suited to this field of research in similar studies such as KRAFT (2001), CUMMING and MACINTOSH (2001, 2003a, 2003b), and SCHWIENBACHER (2002). Private equity firms have demonstrated more willingness to provide information about their procedures and investment behaviour in surveys, which treat obtained information confidentially and on an anonymous basis, rather than for specific case studies or databases, which tie data to identified private equity firms.

Overall the research design follows the principles of triangulation\textsuperscript{405}. The outlined research process supports triangulation with respect to data collection as qualitative interview data as well as quantitative survey questionnaire information have been collected. In addition, triangulation with respect to the research strategy can be considered, as both a dataset from survey questionnaire responses and database information, potentially facilitating a generalisation of findings, and specific in-depth data obtained in expert interviews have been analysed.

\textbf{5.3 Data description}

Building upon the insights obtained through structured interviews in the first stage of the research process, the author developed a survey questionnaire. Survey responses together with database information were used to establish a dataset for the empirical analysis underlying this study.\textsuperscript{406}

\textbf{5.3.1 Survey design and other data sources}

When developing the survey questionnaire, a number of existing studies have served as important reference points. Pursuing the objective to keep the questionnaire brief, included

\textsuperscript{405} The term ‘\textit{triangulation}’ stems from navigation and military strategy where it means that several reference points are used to determine an object’s exact location. As SCANDURA and WILLIAMS (2000, pp. 1249-1250) summarise, triangulation reduces trade-offs of individual research strategies and can strengthen the validity of a study.

\textsuperscript{406} The survey design process lasted three months from April to June 2005 and benefited from input provided by experienced academic researchers, a number of private equity firms, and the ‘\textit{European Private Equity and Venture Capital Association}’ (EVCA), which has been supporting the survey. Similar surveys have been conducted successfully with private equity firms both in Europe (BOTTAZZI and DA RIN 2002, BOTTAZZI, DA RIN and HELLMANN 2004) and the United States (CUMMING and MACINTOSH 2001, 2003a, 2003b, KRAFT 2001).
questions only focused on information that could not be obtained in databases or through other sources, such as the private equity firms’ respective websites.

The questionnaire used by SCHWIENBACHER (2002) in his empirical analysis of venture capital exits in Europe and the US was the starting point for drafting the survey. The questions used to classify private equity firms with regard to fund types, corporate governance style, degree of operational involvement, and exit route preferences in the survey reflect formulations and scales applied by SCHWIENBACHER (2002) either directly or in slightly modified form.407

The research by CUMMING and MACINTOSH (2001, 2003b) on the timing of exits as well as the choice of exits has been another crucial point of orientation. Also their work is in the context of early to mid-stage venture capitalists. Their research is exclusively based on survey questionnaires and expert interviews in the US and in Canada and provided a foundation for the question blocks with regard to the decision determinants for exit timing and process design – the nucleus of the survey (questions 11 and 12). However, the questions asking for a ranking of determinants by CUMMING and MACINTOSH (2001, 2003b) concentrated almost exclusively on factors directly in relation to portfolio companies and their management. However, they acknowledge that external factors such as the capital market environment and also financial as well as human resource requirements might play critical roles. In line with comments by GOMPERS and LERNER (2004, 2001, 1998) and GOMPERS (1996), NAHATA (2004) establishes the importance of these other factors, which are not directly related to the portfolio company, in his study on the choice of exit routes by US venture capital investors. Taking these considerations into account, the author has expanded the list of determinants examined. Each of the factors relies on established theoretical foundations in the context of exit timing or exit route choice, respectively. Furthermore, the relevance of each of the listed factors has been confirmed in structured expert interviews.

In addition, a question has been added to examine the approach in exit planning of private equity firms which has crystallised as a differentiator among leveraged buyout private equity firms in expert interviews (question 14). The suggested arguments have been developed on the basis of interview feedback and are in line with the research and suggestions regarding exit preparations by MCKASKILL, WEAVER and DICKSON.

407 These are questions 1 to 10 and 13 in the questionnaire that is set out in an appendix to this work. It is important to note that SCHWIENBACHER (2002) had a different research target group in mind – early- to mid-stage venture capitalists and not buyout firms. Despite the different type of recipients, the questions included from his survey seem still highly relevant as they primarily serve to categorise private equity investors.

The last block of questions (questions 15 to 17) intends to explore the considerations underlying a decision to enforce the competitiveness of an exit process through pursuing at least two distinct divestment routes in parallel. The factors listed are based upon expert feedback obtained in structured interviews. The last question (17) has the objective to check upon a claim that overly competitive sale processes might make potential buyers (strategic and financial alike) abstain from a process, which potentially weakens the competitive dynamics in a sale process later on. Based on an extensive literature review and comments by LIAN (2005, pp. 1-3), there is no scientific research available focusing on aspects in relation to dual track private equity exit processes.

In order to complement the dataset for private equity firms’ characteristics, two widely used and accepted databases ‘Mergermarket’ and ‘Thomson VentureXpert’ have been used. Details about individual buyout firms such as volume under management, individual fund sizes, average number of portfolio companies, year of foundation, number of professionals and partners as well as number of completed exits by divestment route could be retrieved for all participating investors.

### 5.3.2 Target universe

The table in the exhibit below highlights that 316 buyout investors have been identified through ‘Mergermarket’ and ‘Thomson VentureXpert’. The search was limited to buyout investors active in Europe acquiring companies with a minimum transaction value of €50 million. Removing private equity funds with a pure real estate focus, funds that have not performed exits exceeding €100 million transaction value in the period from January 1998 to June 2005, as well as subsidiaries of other funds to avoid double counts leads to a total of 257 investors. When confirming and verifying contact details for each firm, the author had to remove 42 firms, for which no contact details could be obtained, resulting in an addressable universe of 215 buyout firms.
 Relevant Private Equity Firm Universe

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total firms identified by MERGERMARKET database</td>
<td></td>
</tr>
<tr>
<td>European buyouts, &gt;€50 mm at acquisition</td>
<td>302</td>
</tr>
<tr>
<td>Additional firms through Thomson VentureXpert database</td>
<td>14</td>
</tr>
</tbody>
</table>

**Total universe of buyout investors** | 316   |

- Removal of real estate oriented funds | 9     |
- Removal of funds without exit transactions exceeding >€100 mm | 31    |
- Removal of subsidiaries of other funds (double counts) | 19    |

**Sub-Total** | 257   |

- Removal of firms where no working contacts could be obtained | 42    |

**Total addressable universe** | 215   |

Exhibit 85. Analysis of addressable universe for survey. Source: Own analysis.

The online distribution and accessibility of the survey allowed for respondents to be tracked, permitting the matching of information about their respective firms available in databases with questionnaire responses.

Two months following the launch of the survey, after two rounds of reminders to those investors contacted, 56 buyout firms responded, returning completed questionnaires. This equals a response rate of 26.0%, which is slightly better than in comparable studies. The higher response rate could be potentially explained by the fact that each contact had been verified and confirmed prior to distributing questionnaires, while other surveys have often been circulated relying purely on database information.

Worth noting is that among the list of the top 50 buyout investors, 17 participated in the survey, resulting in a response rate of 34%, while out of the top 100 buyout investors, 27 returned a completed survey.

**Response rate analysis**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms responded</td>
<td>56</td>
</tr>
<tr>
<td>Response rate</td>
<td>26.0%</td>
</tr>
</tbody>
</table>

- Responses in Top 50 List | 17    |
- Response rate Top 50      | 34.0% |

- Responses in Top 100 List  | 27    |
- Response rate Top 100      | 27.0% |

Exhibit 86. Response rate analysis. Source: Own analysis.

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408 KRAFT (2001) received 46 responses at a response rate of 23%, SCHWIENBACHER (2002) obtained 66 European responses at a response rate of 18%, BOTTAZZI, DA RIN and HELLMANN (2004) received 150 responses at a response rate of 15%.

409 Top 50 and Top 100 ranking of relevant buyout investors is based upon MERGERMARKET (2005). Ranking according to realised exit volumes by investor.
5.3.3 Characteristics of participating buyout investors

The obtained sample of participating firms is diverse with regard to size measured in terms of capital under management, number of partners and employees, number of portfolio companies, as well as age. Furthermore, 6 hedge funds active in the European buyout segment participated in the survey.410 The charts set forth in the exhibits below describe the nature of the obtained sample of 56 buyout investors, breaking down the number of participating firms based on various measures and detailing respective means, medians and standard deviation411.

410 A list of participating firms is provided as an appendix.
411 Standard deviation is abbreviated as ‘StDev’ in the exhibits below.
Exhibit 87. Sample characteristics. Source: Own analysis of survey data (N=56).

Summarising the sample profile looking at respective medians, the average participating buyout investor has €1.7 billion of capital management, an average individual fund size of €0.6 billion, 18 professionals and 5 partners, and has completed 13.5 divestments since its foundation in 1992. The standard deviations set out for each measure highlight that firms
differ widely, particularly with regard to capital under management, ranging from below about €100 million to over €41 billion, and fund sizes ranging from €80 million to €6.7 billion. With regard to the number of professionals and partners, firms range from below 5 professionals and 1 partner to more than 130 professional and 25 partners active in the European buyout business.

The vast majority of firms are independent, dedicated buyout firms (67.8%), with the balance consisting of subsidiaries of financial institutions such as insurance groups or banks (21.4%) and hedge funds (10.7%). This split seems to reflect the overall buyout market structure in Europe well (EVCA 2005c, pp. 29-57). Also in line with the market structure in Europe as well as the United States is the fact that 89.2% of participating firms organise funds in the form of closed-end partnerships with a typical fund maturity of 10 years. Only 10.8% of firms are organised in the form of public or privately held investment holdings with no defined expiry.

Overall the 56 private equity firms captured in the sample have completed 1,295 exit transactions since its establishment. The chart laid out in the exhibit below splits up the number of exits into four exit routes:

![Exhibit 88. Total number of exits completed by the sample split by routes. Source: Own analysis.](image)

The participating buyout investors have conducted 473 trade sales, representing 36.5% of all exit routes, 401 sales to other financial investors (31.0%), mostly in the form of secondary buyouts, and 333 IPOs (25.7%). The buyout investors in total disclosed 88 portfolio

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412 Gompers and Lerner (2000, p. 285) confirm that in 1998 more than 80% of all private equity funds operating in the United States have been organised in form of limited, closed-end partnerships. Please refer to section 2.1.4.2 for further details on fund characteristics.

413 Note that 14 participating buyout firms have been operating for longer than 20 years.
investments where write-downs or write-offs had to be effected. This last figure is likely to underestimate the ‘real’ number of write-downs and write-offs given the industry’s tendency to be less transparent on investments of limited success. It has to be cautioned that although the data about completed divestments of these firms has been retrieved and verified through two independent databases, websites and press-searches, it is still unlikely that all exits are reflected. While both ‘Thomson VentureXpert’ and ‘Mergermarket’ provide good coverage for transactions since the early- or mid-1990s, records of earlier transactions appear less complete.

Analysing the sample in the context of the overall European market for buyout exits, the author views that the sample provides a fair reflection of the buyout firm universe. The firms participating in the survey have completed 422 M&A exits totalling a value of €29 billion between January 1998 and July 2005. According to MERGERMARKET (2005) this represents 27% of the total number of all relevant exits, and 30% of the total value realised in exits over this period. The exhibits below categorises participating buyout firms by ranking in the European private equity investor league table measured in terms of total realised deal value through M&A exits since January 1998 provided by ‘Mergermarket’.414

<table>
<thead>
<tr>
<th>Ranking class</th>
<th>Number of firms in sample</th>
<th>Proportion of firms in sample</th>
<th>Realised M&amp;A deal value (€bn)</th>
<th>Proportion of total deal value</th>
<th>Number of deals</th>
<th>Proportion of total number of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 50</td>
<td>19</td>
<td>33.9%</td>
<td>640</td>
<td>68.3%</td>
<td>863</td>
<td>56.2%</td>
</tr>
<tr>
<td>51 to 100</td>
<td>8</td>
<td>14.3%</td>
<td>156</td>
<td>16.6%</td>
<td>223</td>
<td>14.5%</td>
</tr>
<tr>
<td>101 to 150</td>
<td>6</td>
<td>10.7%</td>
<td>59</td>
<td>6.3%</td>
<td>122</td>
<td>7.9%</td>
</tr>
<tr>
<td>151 to 200</td>
<td>5</td>
<td>8.9%</td>
<td>32</td>
<td>3.4%</td>
<td>97</td>
<td>6.3%</td>
</tr>
<tr>
<td>201 to 250</td>
<td>6</td>
<td>10.7%</td>
<td>20</td>
<td>2.1%</td>
<td>71</td>
<td>4.6%</td>
</tr>
<tr>
<td>251 to 300</td>
<td>6</td>
<td>10.7%</td>
<td>14</td>
<td>1.5%</td>
<td>58</td>
<td>3.8%</td>
</tr>
<tr>
<td>301 to 350</td>
<td>1</td>
<td>1.8%</td>
<td>9</td>
<td>1.0%</td>
<td>51</td>
<td>3.3%</td>
</tr>
<tr>
<td>351 to 400</td>
<td>5</td>
<td>8.9%</td>
<td>7</td>
<td>0.7%</td>
<td>50</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>937</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>1535</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Exhibit 89. Table: Sample by ranking categories compared to overall buyout market.
Source: Own analysis based on data provided by MERGERMARKET (2005).

It is apparent that the largest portion of firms in the sample take ranking positions between 1 and 50, with the second largest group of firms ranking between 51 and 100. However, the sample’s skewness towards top 100 private equity firms could be justified with the top 100 firms’ high contribution to the overall number and volumes of European buyout exits. The table above demonstrates that the class consisting of top 1 to 50 firms contribute 68.3% of total M&A exit value realised between January 1998 and July 2005 as well as 56.2% of all deals completed. The comparatively high proportion of top 50 firms in the sample (33.9%) can be viewed as valuable as these investors can be assumed to have accumulated the most

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414 The league table captures M&A exit transactions between January 1998 and July 2005 and has been retrieved from the Mergermarket database on 15 September 2005. The author could not obtain consistent data for total IPO exit values. However, although the data does not comprise IPO exits, the author believes that the ranking used is broadly representative for the overall European exit market. Including IPO exits the author expects that even more weight would have to be placed on the top 100 private equity firms.
experience exiting buyout investments through completing by far the largest number of transactions.

As the exhibit below illustrates, the number of firms positioned in other ranking classes is well diversified, generally in line with each ranking classes’ contribution to overall exit deal volumes and number of transactions.

Exhibit 90. Sample by ranking categories compared to overall buyout market.
Source: Own analysis based on data provided by MERGERMARKET (2005).

5.3.4 Variables for statistical analysis
Through survey questionnaire responses, extensive database research and the consultation of the buyout firms’ respective websites, a dataset comprising a number of variables has been compiled. The parameters that have been used for statistical analysis will be briefly defined henceforth.415 The evaluated factors driving various decision aspects in exit processes will be defined and discussed in separate sections below.

415 Please note that other variables have been retrieved from survey questionnaire responses but are only used for descriptive statistics and hence do not require explicit definition of variables for further statistical analysis.
Corporate governance characteristics

1. Degree of operational involvement (MGTINV)
The level of typical involvement of buyout investors in the operative management of their portfolio companies. The variable is designed as numerical score\(^{416}\) allowing for three possible outcomes: High (1), meaning that members of the private equity firm assume executive management positions in portfolio firms; medium (2), expressing that a buyout investor conducts regular monitoring and frequent board meetings; low (3) meaning that the degree of monitoring of portfolio firms by buyout investors is comparable to the supervisory board control of public firms.

2. Typical proportion of independent directors on portfolio companies’ boards, not affiliated with the private equity investor (INDDIR)\(^{417}\)
The typical percentage of independent directors on boards of portfolio firms.

3. Typical frequency of board meetings (BOARDMTGS)
The Interval between board meetings in full or fraction of months.

4. Tendency to replace senior management (MGTREPLACE)
The percentage of exited transactions where either the CEO or CFO of a portfolio firm has been changed during the investment holding period, prior to an exit.

Exit process aspects

5. Holding period following IPOs (HOLDIPO)
The average period in months for which a buyout investor retains an ownership stake in a portfolio firm following the completion of an IPO, including contractually set lock-up periods.

6. Duration of exit processes (PROCTIME)
The average duration of exit processes from initial preparations to transaction completion in months.

\(^{416}\) FINK (2003, p. 79) sets out considerations for the application of numerical score variables in statistical analysis such as multiple regressions.

\(^{417}\) The question formulation and scaling relating to variables 2 to 7 is based on SCHWIENBACHER (2002).
7. Degree that investors consider executive managements’ aspirations in exit processes (MGTONS)
The percentage of exited transactions where the goals and aspirations of executive top management affected the final choice of exit route.

8. Degree of pro-active exit planning (PLANNING)
A numerical score expressing the level of pro-active planning of exit processes at buyout investors. Equal weight is placed on each of five statements that have been developed on the basis of interview feedback and are in line with the research and suggestions regarding exit preparations by MCKASKILL, WEAVER and DICKSON (2004) and the guidelines on pro-active private equity portfolio management by LIEBER (2004):

- Exit strategy is already planned at the time of an acquisition
- Firms’ information systems and reporting standards are brought to public market standards prior to the exit stage
- Each portfolio review involves an analysis of exit opportunities, potential buyers and/or public equity markets
- Portfolio companies’ strategy is likely to be steered actively in a direction that suits potential exit opportunities
- Advisers are involved or at least provide information regularly when reviewing exit opportunities

Ticking each one of these arguments is associated with the numerical value 1, otherwise a 0 for an argument is marked. The sum of all ticked arguments constitutes a score, ranging from 0 to 5.  

9. Tendency to conduct dual or multi-track exit processes (DUALTRACK)
The percentage of completed exit processes where more than one divestment channel has been pursued in parallel.  

Private equity firm characteristics

10. Firm type (FIRMTYPE)
A categorical variable dividing participating buyout investors into hedge funds and ‘traditional’ private equity investors.

11. Independent or subsidiary (SUBSD)
A categorical variable expressing whether a private equity firm is independent or forms part of a larger institution, such as commercial banks, investment banks or insurance groups.

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418 The design and coding of this variable as a sum of numerical scores has considered the principles set out in FINK (2003, pp. 78-87) and FINK and KOSECOFF (1998, pp. 60-77).
419 Please refer to section 4.2.5 for a discussion of dual- and multi-track divestment processes.
420 Categorical variables are frequently labelled as ‘dummy’ variables, as they can only take the binary values 0 and 1, expressing whether a qualitative characteristic is applicable or not. Please refer to FINK (2003, pp. 28-29) or FIELD (2005, pp. 199-201) for an introductory note on dummy variables, or GUJARATI (1995, pp. 499-539) for a discussion of the application of dummy variables in regressions.
12. Nature of funds \((FUNDTYPE)\)
A categorical variable expressing whether a private equity firm is organised in closed-end funds or in form of a investment holding without specified maturity date.

13. Year of establishment \((ESTY)\)
The year in which a buyout investor firm was founded originally.

14. Average number of portfolio companies \((PORTCOMP)\)
The average number of portfolio firms held by a private equity investor at a time.

15. Average number of portfolio companies per professional \((COPERST)\)
The average number of portfolio firms held by a private equity firm at a time, divided by the number of professionals working for a buyout firm.

16. Average number of portfolio companies per partner \((COPERPA)\)
The average number of portfolio firms held by a private equity firm at a time, divided by the number of partners, who represent the key decision takers in a buyout firm.

17. Total volume of capital under management \((VOLMGT)\)
The total volume of capital under management by a buyout investor firm, in € million.

18. Average size of funds \((FUNDSIZE)\)
The average size of individual funds managed by a buyout investor firm, in € million.

19. Frequency of investments in a syndicate, alongside other investors \((SYND)\) \(^{421}\)
The frequency of participating in or leading a syndicate of financial investors investing in firms, rather than investing on its own, measured as percentage of exited transactions.

20. Number of exits \((NOEXITS)\)
The number of completed exit transactions of a buyout investor firm since its establishment.

21. Proportion of IPOs in number of exits \((PROPIPO)\)
The percentage of IPOs in a buyout investor firm’s total number of completed exits.

22. Proportion of trade sales in number of exits \((PROPTS)\)
The percentage of trade sales in a buyout investor firm’s total number of completed exits.

\(^{421}\) The formulation and scaling for this question has been based on SCHWIENBACHER (2002).
23. Proportion of sales to other financial investors in number of exits (PROP2BO)
The percentage of sales to other financial investors, typically in the form of secondary buyouts, in a private equity firm’s total number of completed exits.

24. Tendency to abstain from Dual-track processes as a bidder (DTABST)
A binary question whether a private equity firm has abstained from bidding for a portfolio firm that is sold via a dual-track process in a strong public equity environment, due to the highly competitive nature of the process, where it otherwise would have proceeded.

5.4 Timing of portfolio company exits
Deciding the timing of divestments is a fundamental task for any private equity investor. As discussed in sections 3.2 and 3.4.4, exit timing aspects have been subject to extensive research and theoretical modelling. However, while other studies relate the timing of private equity divestments either to a variety of empirically observable factors such as the stock market environment (LERNER et al. 2003) or evaluate a number of factors based on survey feedback (CUMMING and MACINTOSH 2001), none of the studies attempt to prioritise individual decision drivers. Furthermore, none of these studies focuses on the buyout market.

In the survey supporting the empirical analysis of this work, buyout investors were asked to rank the importance of a number of factors, which were hypothesised to impact the timing decision of exits. While in reality a complex network of a multitude of determinants and aspects might be relevant, a list of nine key factors has been selected and tested. Each of these factors is underpinned either by an established theoretical concept relating to divestment decisions or by empirical findings proving its relevance in this context. In contrast to other research, this study combines the assessment of factors relating to portfolio company characteristics, needs and requirements of buyout firms as well as market factors.422 In this sense, this study liaises the scope of factors considered by CUMMING (2001) and also NAHATA (2004), who concentrated primarily on portfolio company and private equity firm parameters, and the empirical proof about the relevance of the capital market environment for exit timing provided by LERNER et al. (2003). Furthermore, the survey findings by WALL and SMITH (1997) with regard to the crucial nature of performance requirements on an individual investment as well as on a fund level for

422 NAHATA (2004) argues that both portfolio firm specific and private equity investor specific aspects require consideration when analysing exit decisions.
divestments as well as GOMPERS’ (1996) ‘grandstanding’ theory linking reputation aspects to exit timing and choice, have been considered when selecting the tested factors. In a series of expert interviews the practical relevance of the chosen factors was critically questioned and confirmed, prior to the launch of the survey.

The underlying rationale for selecting each of the nine factors will be discussed henceforth.

### 5.4.1 Tested decision factors

#### a) State of capital market environment

As already mentioned, in an empirical study examining the timing of US IPOs, LERNER et al. (2003) demonstrated that the state of the capital market for new public equity issues plays a crucial role for the timing of such transactions. NAHATA (2004, pp. 15-16) in line with comments by DIAMOND (1993, pp. 341-344) suggests that not only public equity capital markets but also debt capital markets, particular the markets for acquisition financing and high yield bond issues, are relevant for an understanding of divestment decisions. Availability of attractive debt financing for the acquisition of companies is a key driver for both trade and financial buyers’ demand and thus can not only impact the choice but also the timing of exits. Hence, following their line of argumentation the definition of this tested factor explicitly captures both equity as well as debt capital markets.

#### b) Portfolio company performance

A key value driver of any buyout investment is the financial and operational performance of the underlying portfolio company. KRAFT (2001, p. 287) demonstrates that an increase of a portfolio firm’s profitability followed by a firm’s revenue growth are generally the key value drivers of private equity investments in recent times. WALL and SMITH (1997, pp. 12-13) and LENOIR (2003, p. 242) concur about the importance of portfolio firms’ performance for any exit decision. Similarly, NAHATA (2004) emphasises the relevance of portfolio firms’ financial performance for exit decisions. Not only the historical

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423 Please refer to section 3.2.3 for a detailed review of GOMPERS’ (1996) ‘grandstanding’ theory and related empirical findings.
424 LERNER et al. (2003) prove empirically that new issuance activity in the public equity markets tends to be clustered in periods, so-called ‘market windows’.
425 Please refer to section 2.2.4.4 for a discussion of debt financing instruments typically used for leveraged buyout acquisitions.
426 Practitioners in expert interviews highlighted that besides the capital market environment, the industry or business segment specific M&A market environment has a considerable impact on divestment decisions, particularly on the choice of exit routes but also on exit timing. This has also been confirmed in a number of additional comments in survey responses. However, given the mostly niche- and potentially also regional relevance of this aspect, it has not been included in studies to date. Given the buyout market’s preference for trade sale exits, the author has included these industry characteristics as a factor in the test regarding choice of exits in section 5.5.
427 CUMMING and MACINTOSH (2003b) also indicate that the performance and development of the underlying portfolio firms are key determinants affecting exit decisions.
performance but also the outlook for future performance has to be taken into account (LENOIR 2003, p. 242). Following CUMMING and MACINTOSH (2001), particularly the anticipated future performance requires consideration, as investors balance incremental benefits of holding investments to arising opportunity costs, having to spend time on monitoring an existing portfolio firm rather than being able to devote capacity on the acquisition of new companies. This argument introduces the next factor:

c) Monitoring requirements for a portfolio company
In order to determine the optimal point in time to divest a portfolio company, CUMMING and MACINTOSH (2001, 2003b) argue that a venture capitalist is likely to weigh marginal value-add of his efforts against the marginal cost of these efforts. By ‘value-add efforts’ they mean all measures an active financial investor can take in order to enhance the value of a business, such as offering expert advice, replacing or adding to management, providing useful contacts, etc. They define ‘cost’ as all direct and overhead costs associated with creating value and also the opportunity cost associated with alternative deployments of capital. An investor is anticipated to exit when the projected marginal value added is less than or equal to the projected marginal costs. Empirical relevance of this framework, often titled as ‘value-add, monitoring cost’ concept, has been proven in the context of predominantly early stage venture capitalist firms but has not been tested in a buyout investor context so far. Crucial, especially for assessing marginal costs for a private equity firm, are human resource considerations, namely the capacity of private equity professionals to monitor firms and acquire new investments but also the capacity and availability of portfolio companies’ management to support an exit process (GIFFORD 1997), which both constitute separately tested factors:

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428 Historical performance is an important consideration as it credibly helps demonstrating the quality of business to potential buyers (NAHATA 2004, p. 22). A private equity investor is likely to consider waiting for a period of successful financial performance, on which basis potential buyers of the company are potentially paying a higher consideration. NEUS and WALZ (2004) explain this as a reduction in information asymmetry between current and future owner of a company. They argue that a later divestment following positive financial performance can help to overcome high information costs and can lead to higher price achieved.

429 Please refer to KRAFT (2001, pp. 280-289) for an interesting discussion and analysis of value drivers in private equity investments.

430 GIFFORD (1997) also developed a model regarding the optimal allocation of a venture capitalist’s time between monitoring existing portfolio companies and acquiring new investments. The timing of exits in her concept is, similarly to CUMMING and MACINTOSH (2001, 2003b), influenced by the relationship of benefits keeping an investment and opportunity costs (time).

431 Other authors also indicate the relationship between adding value to a business and related forms of cost as a factor in exit decisions (i.e., LERNER 1999, GOMPERS and LERNER 2001, TYKVOVA 2003a). Please refer to section 3.2.1 for a more detailed discussion of this concept.
d) Capacity of private equity professionals

Following the concepts set out by GIFFORD (1997) and CUMMING and MACINTOSH (2001, 2003b), the scarcity of private equity professionals and particularly partners’ time and capacity acts as a constraint forcing private equity firms to allocate human resources efficiently and decide upon the timing new acquisitions and divestments of existing portfolio firms.

e) Capacity of portfolio company executive management

Similarly, the availability and capacity of senior executive management of portfolio firms is anticipated to be a gating factor impacting exit timing decisions. WALL and SMITH (1997, p. 15) and LENOIR (2003, p. 244) stress the importance of executive managements’ availability and commitment to exit processes. They indicate the necessity to take managements’ capacity into account before embarking on any divestment process.

f) Performance requirements of overall fund

It is the objective of private equity funds to achieve returns to reward its investors’ risk commitment. LERNER and HARDYMON (2002, p.7) emphasise the critical nature to realise returns through exits in order to ensure a persistence of the private equity firm and to facilitate raising of new capital. This argument suggests that decisions about the timing of exits are prone to reflect the need to achieve realised returns and to redeem capital to investors prior to expiry of a fund. Although the fulfilment of performance requirements is often intertwined with arguments to establish reputation for further fundraising (GOMPERS 1996, CUMMING and MACINTOSH 2003b), overall fund performance is also an important determinant of private equity professionals’ and partners’ compensation. Thus, partners in private equity firms acting as key investment decision takers are anticipated to consider the impact onto an overall fund’s return when deciding about divestments.

g) Performance requirements of individual investment

Investors in private equity funds do not only demand overall attractive returns but also successful exits of individual investments in light of their own reporting requirements given the long term nature of their commitments to private equity funds (LERNER and HARDYMON 2002, pp. 1-2). WALL and SMITH (1997, pp. 7-11) indicate that an investment’s individual returns are considered of greatest importance by practitioners. Similarly to the overall fund performance, the compensation structure, particularly for partners in private equity firms, ties a substantial part of incentive remuneration directly to

432 This is particularly relevant for institutional investors such as pension funds, which have to regularly report and justify their investment performance.
the performance of specific investments, which contributes to the anticipated importance of this factor for exit decisions.433

h) Fundraising requirements
GOMPERS (1996) introduced the ‘grandstanding’ theory, arguing that private equity investors’ exit behaviour is impacted by fundraising needs. He provided empirical support in the context of the US venture capital industry.434 This concept has received widespread academic acceptance435 but has not been evaluated in the context of buyout investors.

i) Investment duration limits
The common structure of private equity firms as funds with pre-determined lifespans of usually ten years requires a timely unwinding of the positions taken (i.e., GOMPERS and LERNER 1999a, 2004, NEUS and WALZ 2004). GOMPERS and LERNER (1999b) suggest that the private equity managers’ return maximising objective incorporates the goal to maximise each individual asset’s return constrained by the objective to minimise the timeframe of each investment commitment in order to allow for further transactions in a limited timeframe. Based on feedback obtained in expert interviews, several private equity firms even operate policies requiring professionals to actively launch exit processes after a certain targeted holding period (typically 3 to 5 years) has elapsed. Formally specified or informal investment duration limits represent the last tested factor in the evaluation.

5.4.2 Hypotheses
Overall it is hypothesised that each of the nine factors discussed above, underpinned by concepts that have received empirical proof mostly in the context of the US venture capital industry, is perceived as relevant by European buyout investors. The formulated hypotheses below aim to assess established concepts and theories in the context of the European buyout market:

Based on the findings in studies by WALL and SMITH (1997, pp. 12-13), LENOIR (2003, p. 242) and NAHATA (2004), which stress the importance of portfolio firm performance for exit decisions, following hypothesis has been established:

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433 Please refer to section 2.1.4.2 for an overview of private equity firm types and common compensation structures. Alternatively GOMPERS and LERNER (1999b) provide a detailed review of private equity compensation arrangements.
434 Please refer to section 3.2.3 for a discussion of this concept. Alternatively, please refer to GOMPERS (1996) for a detailed elaboration and empirical support for this theory.
H1a: The historical and expected financial performance of a portfolio company is a key decision factor for the exit timing of European buyout investments.

Given that feedback obtained in expert interviews suggests that buyout investors often apply an ‘opportunistic’ approach to exits and also taking into account findings by LERNER et al. (2003), NAHATA (2004, pp. 15-16) and DIAMOND (1993, pp. 341-344), which demonstrate the importance of the capital market environment for both equity and debt, following hypothesis has been formed:

H1b: The state of the capital market environment for both public equity and debt is a key factor for the exit timing of European buyout investments.

Furthermore, another objective is the applicability of the ‘value-add and monitoring cost concept’ by GIFFORD (1997) and CUMMING and MACINTOSH (2001, 2003b) to the European buyout industry. Hence following test hypothesis has been proposed:

H1c: Monitoring requirements for a portfolio firm and the capacity of private equity professionals are considered as highly relevant in decisions about the exit timing of European buyout investments.

Lastly, GOMPERS’ (1996) concept about the link between fundraising and timing of exits, forms the basis for the forth hypothesis posed in this part of the empirical analysis:

H1d: Fundraising requirements are considered as highly relevant in decisions about the exit timing of European buyout investments.

5.4.3 Empirical results

As demonstrated in the summary chart below, company performance is clearly considered the single most important determinant of exit timing decisions of European buyout investments, which clearly confirms hypothesis H1a. On the scale ranging from 0 (irrelevant) to 4 (highly important), company performance is rated at a mean of 3.6 and a median of 4.0. Worth noting is the low standard deviation of 0.6 in the sample of 50 buyout investors, that provided complete answers to this part of the survey. 64% of responding firms attributed the highest rank of importance (4) to this factor, 34% marked the second highest rank (3).

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436 The quantitative statistical analysis has been performed with the statistical software packages SPSS, version 13.0 and SSP 2.80.
With regard to the second hypothesis, the state of the capital market environment has been rated as second most important decision determinant, with a mean of 2.9, a median of 3.0 and a standard deviation of 0.9. This result provides support for the second hypothesis $H1b$. 94% of the sample consider this factor at least as relevant to a exit timing decision, whereby 73% consider it as important or even as highly important. The exhibit below, plots the distribution of assigned ranks to each of the nine tested factors.
Furthermore, 69% of the sample consider the performance of individual investments at least as a relevant decision determinant in exit timing decisions, with a mean rank of 2.1, a median of 2.0 and a standard deviation of 1.1. Similarly, 62% of the sample mark overall fund performance requirements at least as relevant, with a mean rank of 1.9, a median of 2.0 and a standard deviation of 1.2.

Buyout investors attribute higher importance to the availability and capacity of portfolio companies’ executive management than their own capacity when determining exit timing. 52% of the sample consider the capacity of portfolio firm executives at least as relevant, marking a mean rank of 1.8, a median of 2.0 and a standard deviation of 1.2.

Less clear support can be obtained for the other two hypotheses in this part. The results do not permit a clear support of the ‘value-add and monitoring cost’ concept, given that both the capacity of private equity professionals and the intensity of monitoring requirements were assigned the lowest ranks of importance by the sample firms. Only 30% of the sample considered the capacity of private equity staff as relevant or important, with a mean rank of 1.0, a median of 1.0 and a standard deviation of 1.0, while 31% marked monitoring
requirements at least as relevant, with a mean rank of 1.0, a median of 1.0 and a standard deviation of 1.1.\textsuperscript{437} Hence, based on these results, hypothesis $H_{1c}$ has to be rejected.

Fundraising requirements are considered at least as relevant by 62\% of the sample with a mean rank of 1.7, a median of 2.0 and a standard deviation of 1.1. Also based on feedback obtained in expert interviews, fundraising requirements are certainly at least considered when determining the timing of divestments. Based on these results and the statistical link\textsuperscript{438} to fund performance aspects also indicated by GOMPERS (1996), hypothesis $H_{1d}$ is accepted.

Lastly, investment duration limits are only considered as relevant and important by 43\% of the sample, with a mean rank of 1.2, a median of 1.0 and a standard deviation of 1.2.

Given that standard deviations exceed 1.0 for all factors except company performance and the state of the capital markets, a systematic segmentation of the sample based on correlations between factor ranks and the parameters and characteristics defined in section 5.3.4 has been attempted. However, no significant correlations between the nine tested factors and any of these variables could be obtained.\textsuperscript{439}

5.4.4 Summary and discussion

The results provide clear confirmation of the paramount importance of portfolio companies’ historical and expected performance as a key factor impacting exit timing decisions. Similarly, the significance of the state of the capital market environment for both public equity and debt has been strongly confirmed. These results are in line with other studies concentrating on the North American venture capital market (CUMMING and MACINTOSH 2001, 2003b, NAHATA 2004). The series of 15 expert interviews conducted by the author prior to the launch of the survey also suggested a strong confirmation of the crucial nature of these factors for the timing of divestments.

\textsuperscript{437} Performing a correlation analysis of the ranks between the capacity of private equity professionals and monitoring requirements leads to a correlation coefficient $r$ of 0.52 with a $r^2$ of 28.9\%, which a Spearman’s rank correlation test confirms as significant. For a discussion and guidelines to conduct rank correlation analysis, please refer to GUJARATI (1995, pp. 372-374) or FINK (2003, pp. 56-61). No other pair of factors exhibits a significant correlation exceeding a $r^2$ of 25\%, which indicates that a principal component factor analysis is unnecessary (KIRCHHOFF, KUHNT, LIPP and SCHLAWIN 2003, pp. 81-93), particularly as other factors have been intentionally selected to cover separate aspects. One further exception could have been fundraising requirements and overall fund performance, which exhibit a $r^2$ of 19.3\%.

\textsuperscript{438} The ranks of importance assigned to fundraising requirements are positively correlated to the ranks attributed to overall fund performance aspects at a correlation coefficient $r$ of 0.44 and $r^2$ of 19.3\%. This positive correlation and the ranks assigned to the importance of fund performance support the significance of fundraising aspects as a determinant for exit timing of buyout investments.

\textsuperscript{439} Examining correlations between ranks and numerical values also the principles of Spearman’s rank correlation test find application (FINK 2003, pp. 60-61).
Conversely to other studies (Gifford 1997, Cumming and Macintosh 2001) which are also in the context of North American venture capital market, the survey sample rejected the significance of the ‘value-add and monitoring cost’ concept, arguing that the scarcity of private equity professionals’ time and capacity is not a key constraint impacting exit timing decisions. With regard to fundraising requirements, the survey sample acknowledges its importance for exit timing decisions, in line with research by Gompers (1996) and Lee and Wahal (2004), which both provide empirical proof by testing US venture capital transactions. Based on feedback obtained in expert interviews, the author suspects that the importance of fundraising requirements for exit decisions might even be systematically underrated in the survey given that private equity investors tend to argue that they are acting purely in the best interest of each fund’s limited partners rather than taking sub-optimal investment decisions in favour of their own well-being and the future of the firm (i.e., Gompers 1996, Gompers and Lerner 1998a).

As a closing remark, it is interesting to note that given the lack of significant correlations between the assigned ranks for the tested factors and the private equity firm characteristics defined in section 5.3.4, a segmentation of the sample according to characteristics does not contribute to meaningful explanation of differences in the ranking of the tested factors.

5.5 Choice of exit route

Similar to the question of exit timing, several studies have examined the factors impacting the choice of a divestment routes mainly in the context of the North American venture capital market (i.e., Cumming and Macintosh 2003a, 2003b, Nahata 2004). The survey research conducted by Schwiembacher (2002) has served as a strong reference point for this part of the study. However, going beyond the scope of other studies, the objective of this study is to prioritise decision factors in the setting of the European buyout market. The research design and approach is identical with the one described in the previous section 5.4, which therefore will not be discussed at this point. However, the selection of the tested factors differs with respect to several determinants, which will be discussed henceforth.

5.5.1 Tested decision factors

a) State of the capital market environment

As mentioned in the previous section, Nahata (2004, pp. 15-16) and Diamond (1993, pp. 341-344) suggest that a consideration of the public equity and debt capital markets is

\[440\] Parameters and characteristics of participating buyout investors such as capital under management, fund size, number of completed exits, etc. Please refer to section 5.3.4 for the full list of variables.
relevant to the understanding of divestment decisions in general. Availability of attractive debt financing for the acquisition of companies is a key driver for both trade and financial buyers’ demand while a favourable public equity market environment can provide for lucrative IPOs. Thus, the state of the capital market environment is anticipated to have a crucial impact on the choice of exit routes. Again, the definition of the tested factor explicitly captures both equity as well as debt capital markets.

b) Industry characteristics – industry specific M&A environment
As mentioned before, practitioners in expert interviews have highlighted that besides the capital market environment the industry or business segment specific M&A market environment has a considerable impact on divestment decisions. This has also been confirmed in a number of additional comments in survey responses. Given the mostly niche- and potentially also regional relevance of this aspect and the difficulties to measure this factor (MORELLEC and ZDAHNOV 2005), it has not been included in studies to date. However, in the light of the European buyout market’s preference for trade sale exits, this determinant, has been included in the list of tested factors.

c) Portfolio company size
Literature concurs that the range of exit options for venture capitalists tends to be limited for portfolio companies which fail to meet certain size thresholds (i.e., RELANDER, SYRJANEN and MIETTINEN 1994, WRIGHT and ROBBIE 1998, HALL 2002). Particularly for IPOs, typically a minimum issue size is required. The rationale for including the portfolio company size as tested factor is to examine if size is still an important consideration with buyout firms in investing in firms larger than typical venture capital investments, which the above mentioned studies concentrated on. CUMMING and MACINTOSH (2003a) stress the relation between information asymmetries and the size of a firm, finding that larger portfolio firms are often characterised by lower information asymmetries. They expand that portfolio companies which involve a low degree of information asymmetry between current and potential future owners are more likely to be sold via IPOs than others.

441 Findings by MORELLEC and ZDAHNOV (2005) also indicate that companies’ appetite for acquisitions varies in industry specific patterns and correlates with the industries’ average stock market valuations.
442 Please refer to section 5.6 for a review of exit route preferences of European buyout investors.
443 Please refer to section 4.3.2.1 for a note on the requirements for IPOs. Especially institutional investors demand a minimum issue size, only willing to invest in liquid stocks, that are supported by professional research coverage, which is more likely with larger issues.
d) Portfolio company performance
As mentioned in the previous sections, the financial and operational performance of the underlying portfolio company is a key value driver for any buyout investment is (KRAFT 2001, pp. 286-288). WALL and SMITH (1997, pp. 12-13) and LENOIR (2003, p. 242) concur about the importance of portfolio firms’ performance for any exit decision.\textsuperscript{444} When considering aspects affecting the choice of exit routes, not only the historical performance but particularly the outlook for future performance has to be taken into account. LENOIR (2003, p. 242) indicates that the short- to medium term prospects of a portfolio company with regard to expected revenues, profitability and cash flows are of crucial importance when determining how a divestment is being pursued. While a stock market listing often requires a credible and visible growth story, trade or financial buyers are likely to be receptive for companies demonstrating a stable and sustainable outlook.\textsuperscript{445}

e) Capacity of private equity professionals
As set out in section 4.3 of this work, the scope and intensity of required preparation work and tasks in relation to the execution of a divestment vary substantially between exit channels. IPO exits are commonly associated with the most intense and time consuming preparation processes, which given the legally binding representations to be made about a company in listing prospectuses demand a close involvement of private equity owners (LESCHKE 2003, p. 250). Divestments effected through M&A auctions also require significant and lengthy preparations (WALL and SMITH 1997, p. 20), however, a significant share of the preparation work can be outsourced to external professional advisers. Similar to the analysis of decision determinants impacting exit timing, the objective is to examine whether the scarcity of private equity professionals and particularly partners’ time and capacity acts as a constraint when deciding about exit routes to be pursued.

\textsuperscript{444} NAHATA (2004) emphasises the relevance of portfolio firms’ financial performance for exit decisions. CUMMING and MACINTOSH (2003b) also indicate that the performance and development of the underlying portfolio firms are key determinants affecting exit decisions.

\textsuperscript{445} Please also refer to LESCHKE (2003, pp. 249-251) for comments on the importance of financial performance in this context.
f) Capacity of portfolio company executive management
The availability and capacity of senior management of portfolio firms is also analysed in the context of exit processes varying substantially with regard to the intensity and the extent of preparatory requirements and the necessary involvement of executive management. WALL and SMITH (1997, p. 15) and LENOIR (2003, p. 244) stress the importance of executive managements’ availability and commitment to exit processes. Therefore, a consideration of managements’ capacity when launching an exit process is assumed to be essential.

g) Certainty of execution
Particularly in the context of IPO exit processes, practitioners argue that due to the length of an exit preparation process spanning over several months, divestments typically face execution risk. The capital market environment particularly for public equity issues tends to change periodically. LERNER et al. (2003) empirically prove this phenomenon and find that attractive IPOs are placed in time clusters, so-called ‘market-windows’, leading prospective issuers to withdraw an IPO process in times of less receptive public equity markets. Despite some correlation between the market for M&A transactions and public equity markets (LESCHKE 2003, p. 251), divestments through M&A deals face a lower market related execution risk. Aiming to enhance the execution certainty, private equity buyers increasingly pursue dual- and multi-track exit processes. Having to plan cash distributions to limited partners on an overall fund level, private equity firms are expected to place value on the certainty and predictability of a divestment execution.

h) Transaction costs
Overall transaction costs vary substantially between various exit routes, as highlighted in section 4.3. IPO exits are associated with high transaction costs, typically exceeding costs arising in connection with any other exit route (i.e., METTLER 1990, p. 302, WALL and SMITH 1997, p. 8, JENKINSON and LJUNGQUIST 2001, p. 25-28, LESCHKE 2003, p. 250). Studies concentrating on the exit preference of venture capitalists suggest that transaction costs are an important factor taken into account when choosing exit routes (i.e., WALL and SMITH 1997, p. 8, LESCHKE 2003, p. 250). It is an objective to assess how important transaction costs are in the setting of the European buyout exit market.

i) Fundraising requirements
Lastly, GOMPERS’ (1996) ‘grandstanding’ theory, suggests that IPOs are regarded as the most prestigious form of exit, most beneficial for a private equity firm’s reputation (LENER and HARDYMON 2002, p. 335). He implies that fundraising requirements do

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446 Please refer to section 4.3.2.2 for a detailed discussion of costs associated with IPO processes.
not only impact the timing, which has been the centre point of his research, but also the choice of exit routes, ultimately favouring IPOs over other divestment channels. Although this concept has received widespread academic acceptance, it has not been evaluated in the context of exit route choice decisions.

5.5.2 Hypotheses

As in the previous section, it is hypothesised that each of the nine factors discussed above, underpinned either by concepts that have received empirical proof mainly in the context of the venture capital industry or by consistent practitioners’ comments in industry publications and expert interviews, is perceived relevant by European buyout investors. The five specifically formulated hypotheses below aim again to assess established concepts and theories in the context of the European buyout market:

Given the findings by LERNER et al. (2003), NAHATA (2004, pp. 15-16) and DIAMOND (1993, pp. 341-344) suggesting the importance of the capital market environment for both equity and debt onto private equity investors choice of exit routes, following hypothesis has been formed:

\[ H2a: \text{The state of the capital market environment for both public equity and debt is a key factor for the choice of exit routes for European buyout investments.} \]

Intending to assess the applicability of findings by RELANDER, SYRJANEN and MIETTINEN 1994, WRIGHT and ROBBIE 1998, HALL 2002 about portfolio company size\(^{447}\) as a relevant constraint in exit choice decisions for venture capitalists to the European buyout market, following hypothesis has been formed:

\[ H2b: \text{Portfolio company size is a key decision factor for the choice of exit routes for European buyout investments.} \]

Like in the previous analysis of exit timing, based on studies by WALL and SMITH (1997, pp. 12-13), LENOIR (2003, p. 242) and NAHATA (2004), which stress the importance of portfolio firm performance for exit decisions, following hypothesis has been established:

\[ H2c: \text{Historical and expected portfolio company financial performance is a key decision factor for the choice of exit routes for European buyout investments.} \]

Findings suggesting that venture capitalists consider transaction costs as an important factor when choosing exit routes (i.e., WALL and SMITH 1997, p. 8, LESCHKE 2003, p. 250), inspired following hypothesis:

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\(^{447}\) Portfolio company size in an exit context is usually defined on the basis of firm valuation.
H2d: Transaction costs are a key decision determinant for the choice of exit routes for European buyout investments.

Lastly, GOMPERS’ (1996) implications on the link between fundraising and a preference for IPO exits in light of reputation gains, forms the basis for the last hypothesis posed in this part of the empirical analysis:

H2e: Fundraising requirements are considered as highly relevant in decisions about the choice of exit routes for European buyout investments.

5.5.3 Empirical results

The exhibit below highlights that the state of the capital market environment is overall considered the single most important determinant of the choice of exit routes of European buyout investments, which clearly confirms hypothesis H2a. 100% of the sample consider this factor as relevant, 83% mark it at least as important. On the scale ranging from 0 (irrelevant) to 4 (highly important), the state of the capital market environment is rated at a mean of 3.2 and a median of 3.0. Worth noting is the low standard deviation of 0.7 in the sample of 48 buyout investors, that provided complete answers to this part in the survey.
The factor marked with the second highest rank of importance is the certainty of execution with a mean of 3.1, a median of 3.0 and also a comparatively low standard deviation of 0.7. 98% of the sample consider this determinant as relevant, 75% mark it as important or highly important. This clearly confirms feedback received in expert interviews conducted prior to the launch of the survey.

The results also support selected practitioners’ comments about the relevance of the industry specific M&A environment, whereby 89% of the sample acknowledge this factor as relevant for decisions about the choice of exit routes, 70% consider it at least as important. This determinant obtains a mean rank of importance of 2.9, a median of 3.0 at a standard deviation of 1.1. This result can be explained with the dominant importance and also clear preference for trade sales in the market for European buyout investments.

Like in the case of timing decisions, company performance is considered as an important decision determinant with a mean rank of 2.9, a median of 3.0 and a modest standard
deviation of 0.8. 98% of the sample acknowledge company performance as a relevant decision factor, 65% mark it at least as important, which provides support for the acceptance of hypothesis \( H2c \).

With regard to the second hypothesis, portfolio company size has been rated lower than the factors discussed before. Nevertheless, it has been acknowledged as an important decision determinant, with a mean of 2.5, a median of 3.0 and a standard deviation of 1.0. 83% of the sample consider this factor at least as relevant to a exit route choice decision, whereby 65% consider it as important or highly important, which provides support for the second hypothesis \( H2b \). The exhibit below, plots the distribution of assigned ranks to each of the nine tested factors.

![Survey results – rank distribution of factors impacting decisions on choice of exit routes](image)

Exhibit 94. Survey results – rank distribution of factors impacting decisions on choice of exit routes.

Source: Own analysis based on survey data.

Furthermore, 62% of the sample acknowledge the capacity of the portfolio firm’s executive management as a relevant decision determinant in decisions about the choice of exits, although only 36% consider it as important or as highly important. The sample marks this factor with a mean rank of 1.9, a median of 2.0 and a standard deviation of 1.2. Similarly, 62% of the sample mark overall fund performance requirements at least as relevant, with a mean rank of 1.9, a median of 2.0 and a standard deviation of 1.2.

Compared to the first three hypotheses in this part, less clear support can be obtained for the remaining two hypotheses. The results do not permit confirmation of the importance of
transaction costs in determining the choice of exit routes, with only 27% of the sample considering this factor as relevant attributing a mean rank of 1.1, a median of 1.0 and a standard deviation of 1.0. Based on these results, hypothesis \( H1d \) is rejected. The sample did not strongly consider fundraising requirements as a relevant factor. 40% of the sample considered the capacity of private equity staff as relevant, only 14% marked this determinant as important. This factor received a mean rank of 1.2, a median of 1.0 and a standard deviation of 1.1. Hence, based on these results, hypothesis \( H1e \) is rejected.

Lastly, the capacity of private equity professionals is only considered as relevant by 28% of the sample, only 9% mark this factor as important, with a mean rank of 1.0, a median of 1.0 and also a standard deviation of 1.0.

Similarly to the analysis on factors relevant for exit timing decisions in section 5.4.3, a systematic segmentation of the sample based on correlations between factor ranks and the parameters and characteristics defined in section 5.3.4 has been attempted. As in the previous section, no significant correlations between the nine tested factors and any of these variables could be obtained.\(^{448}\) Worth noting, however, is that a correlation analysis between the ranks assigned to the factors that have been tested for both its relevance to timing and choice decisions, significant positive correlations were obtained for several determinants.\(^{449}\)

### 5.5.4 Summary and discussion

The survey results offer clear confirmation of the great importance of the capital market environment for the decision about exit routes. This result acknowledges that capital markets play a crucial role also for a private equity market that has historically exhibited and is still demonstrating a strong focus on trade sales with a lower orientation towards the public equity markets compared to the United States. In the author’s view, this supports particularly comments about the importance of debt capital markets for private equity exits (DIAMOND 1989, 1993). Both trade buyers and financial buyers typically require attractive debt funding for acquisitions at valuations appealing to an exiting buyout investor. Sizeable financings necessary for the acquisition of typical buyout investments tend to be syndicated in the debt capital market rather than being provided and held only by mandated lenders.

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\(^{448}\) Examining correlations between ranks and numerical values also the principals of Spearman’s rank correlation test can serve to confirm the significance of correlations (FINK 2003, pp. 60-61).

\(^{449}\) Correlation between the same factors for both its impact on timing and choice decisions:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank correlation coefficient ( r )</th>
<th>Coefficient of determination ( r^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of the capital markets environment</td>
<td>0.54</td>
<td>29.0%</td>
</tr>
<tr>
<td>Capacity of portfolio firm executives</td>
<td>0.62</td>
<td>38.8%</td>
</tr>
<tr>
<td>Capacity of private equity professionals</td>
<td>0.66</td>
<td>43.4%</td>
</tr>
<tr>
<td>Fundraising requirements</td>
<td>0.62</td>
<td>38.2%</td>
</tr>
</tbody>
</table>
The sample overall places the second highest importance on certainty of exit executions aspects. Given the ongoing trend to dual- or multi-track exits (BAKER and MCKENZIE 2005) in the European buyout market, following the example of the US market (LIAN 2005, pp. 3-4), this result is in line with recent private equity industry reports (SCM 2005) and feedback obtained in expert interviews. The increased importance of execution certainty could also partly be explained by the increasing level of competition in the European buyout market, with limited partners’ sophistication and expertise growing. These investors in private equity funds place a strong weight on the predictability of returns and cash distributions as a criterion to remain committed to a private equity firm also for follow-on funds. The pressure to retain an existing base of limited partners puts a strong emphasis on reduced execution risk of divestments.

Also of great importance to the choice of exit type for European buyout investments is the industry specific M&A environment for a portfolio firm. This result is not surprising, given the strong preference of European buyout investors for trade sales450. This finding speaks in favour of a close involvement of portfolio firms’ senior executive management in the early stages of an exit opportunity identification and preparations, as they are closest to the specific industry and typically have valuable contacts to other firms in the segment, as LENOIR (2003, p. 242-244) argues.

The relevance of a portfolio company’s historical and expected performance as well as its size are confirmed, supporting the wider validity of results of studies examining these aspects in the context of the venture capital market (i.e., WALL and SMITH 1997, LENOIR 2003, RELANDER, SYRJANEN and MIETTINEN 1994, WRIGHT and ROBBIE 1998, HALL 2002).

Worth remarking is that a similar rank of importance is placed on the capacity of a portfolio company’s executive management in both tests regarding timing and choice of exit types. A significant correlation between ranks assigned to this factor in the two tests, suggest that buyout investors recognise the importance of management involvement in exit processes, however do not over-emphasise a dependence on them.451 This is generally in line with comments on the importance of executive management teams provided by WALL and SMITH (1997, p. 15) and LENOIR (2003, p. 244). Similar to results obtained in the

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450 Please refer to the subsequent section 5.6 for a discussion of the survey’s findings regarding exit route preferences of European buyout investors.
451 As to be demonstrated in the subsequent section 5.6, a significant portion of buyout investors tend to replace senior management following an acquisition, aiming to build a strong and committed management team that ultimately will support an exit process.
previous section, the capacity of private equity professionals is not considered a relevant constraint in the decision how and when a divestment is pursued. Ranks assigned are also highly correlated between the two tests. This suggests that human resource capacity constraints are more relevant in a venture capital context (CUMMING and MACINTOSH 2001, 2003b), where professionals have to assess more new investment candidates and often deal with larger portfolios per professional given the necessity to spread risk wider than buyout investors with holdings in more established and stable firms.

Fundraising requirements are not considered to be of great relevance for the decisions about the choice of exits. In the European buyout market, which has exhibited a clear orientation towards trade sales, IPOs are not viewed to deliver superior reputation benefits. In contrast, feedback obtained in expert interviews suggests that many limited partners in Europe even prefer trade sales or secondary buyouts, due to the immediate receipt of substantial cash flows and, interestingly, lower publicity. Many large European investors in the private equity market such as pension funds or insurance groups still seem to shy from being associated with large buyouts that are frequently linked to adverse effects on non-equity stakeholders such as restructurings and job-cuts.452

In contrast to other studies (i.e., WALL and SMITH 1997, LESCHKE 2003), which emphasise transaction costs as an important consideration of venture capitalists when deciding about exit routes, the sample disregarded the relevance of transaction costs in a European buyout exit context. Given the larger transaction volumes in this private equity segment, fixed parts of transaction costs such as legal fees or consultants work can be spread over larger transaction proceeds compared to smaller venture capital exits. Albeit IPO exits typically cause the highest transaction costs, particularly established buyout investors with strong relationships to professional advisers and investment banks as ‘repeat clients’ are in a position to negotiate lower fees with the most part structured as incentive compensation regardless of the type of exit route pursued.

Like in the previous section on exit timing decisions, it is important to mention that also due to the lack of significant correlations between the assigned ranks for the tested factors and the private equity firm characteristics defined in section 5.3.4, a segmentation of the sample according to characteristics453 does not contribute to meaningful explanation of differences in the ranking of the tested factors. An explanation could be that overall buyout investors regardless of size, age and other characteristics tend to follow similar principles. Decision

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452 Please refer to section 2.2.3.2 for a discussion of consequences and value creation through leveraged buyouts.
453 Parameters and characteristics of participating buyout investors such as capital under management, fund size, number of completed exits, etc. Please refer to section 5.3.4 for the full list of variables.
takers in the industry, principals and partners with buyout funds, move regularly between firms taking established transaction knowledge with them and in this way harmonising the industry’s approaches to a certain degree.

5.6 Investor characteristics, exit preferences and process management styles

Previous research on divestment styles and preferences considered the applied samples of private equity firms as coherent type of investors with homogeneous needs and orientations (i.e., WALL and SMITH 1997, CUMMING and MACINTOSH 2001, 2003a, 2003b, SCHWIENBACHER 2002, NAHATA 2004). In contrast, this analysis aims to differentiate investors, examining the relationship between buyout investors’ characteristics and exit preferences and process styles.

Analysing the dataset capturing the range of variables defined in section 5.3.4 for the 56 responding buyout firms, six parameters describing private equity investors’ divestment behaviour were in the centre point of the examinations:

- The duration of exit processes (PROCTIME);
- The tendency to conduct dual- or multi-track exit processes (DUALTRACK), which will be discussed separately in section 5.7;
- The level of consideration of executive management’s aspirations in exit processes (MGTCONS);
- The proportion of IPOs in number of exits (PROPIPO);
- The proportion of trade sales in number of exits (PROPTS);
- The proportion of sales to other financial investors in number of exits (PROP2BO).

These parameters, which serve as dependent variables\(^\text{454}\) in the analysis, were related to all other variables defined in section 5.3.4 used as independent or explanatory variables. The diagram provided in the exhibit below summarises the scope of analysis:

\(^{454}\) Individual variables are also tested as independent variables for the explanation of other parameters listed as dependent variables.
The list of explanatory variables, as illustrated above, can be segmented into five categories covering different aspects about buyout investors: Size; level of experience; approach towards planning; type of buyout firm and set-up of its funds; and, corporate governance aspects.

Rather than the hypothesis driven research procedure applied for the first two parts of the empirical analysis underlying this dissertation, the examinations in this section take more of an exploratory approach, identifying potential relationships between the variables available in the dataset. Each of the dependent variables were related to all other available numerical and categorical variables\(^{455}\) in multiple regressions\(^{456}\). Based on the principles of sequential

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\(^{455}\) Prior to being included in the initial regression models, all independent variables were tested for perfect multicollinearity, which has to be avoided in regression models (FIELD 2005, p. 170).

\(^{456}\) Multiple regressions are expressed in linear equations such as:

\[Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_j X_j\]

where \(Y\) represents the dependent variable, \(\beta_0\) is the intercept, \(\beta_1\) to \(\beta_j\) are coefficients to the explanatory variables \(X_1\) to \(X_j\). Like in simple regression models, the equation is iteratively solved through the reduction of the residual sum of squares not explained by the model. Please refer to BACKHAUS, ERICHSON, PLINKE and WEIBER (2003, pp. 60-111) for a comprehensive and user-friendly introduction to multiple regression modelling. GLANTZ and SLINKER (2001) discuss more advanced issues in the application of regression techniques. FINK (2003, pp. 61-80) summarises relevant issues when applying regression models for the analysis of survey data. He flags that regression models that comprise numerical scores primarily should be used to analyse...
variable selection in multiple regressions set out in GLANTZ and SLINKER (2001, pp. 263-273), resulting regression models were formed using a backward elimination procedure.457

Some of the variables in the dataset are numerical scores, for which coding principles in light of their application in multiple regressions provided by FINK and KOSECOFF (1998, pp. 75-77) have been taken into account. Several variables are categorical, thus expressed as binary dummy variables in the regressions following the guidelines by GUJARATI (1995, pp. 499-539) and FIELD (2005, pp. 199-201).

Before dwelling into the further analysis about the listed dependent variables, exit channel preferences of buyout investors are briefly reviewed:

5.6.1 Exit route preferences
The buyout firms participating in the survey clearly confirmed a strong preference for trade sale exits, which is in line with findings about divestment preferences of European venture capital investors (i.e., RELANDER et al. 1994, WRIGHT and ROBBIE 1998, EVCA 2005a).

66% of responding firms expressed a preference for trade sales, while another 25% marked that no single divestment channel would be preferred over others. It is interesting that only one firm expressed a preference for IPOs which is in contrast to the US private equity market, where IPOs are still believed to be private equity investors’ ultimate goal (i.e., GOMPERS and LERNER 2004).

relationships rather than predicting future outcomes. HANSEN, HURWITZ and MADOW (1993, pp. 56-92) highlight potential pitfalls and biases when testing survey data with regression models and other statistical methods.
457 Backward elimination means that in an initial regression equation all potential independent variables are included. In iterative steps the variables that contribute least to the overall explanatory power of the model are eliminated, looking at each variable’s impact on the residual sum of squares of a model. Please refer to GLANTZ and SLINKER (2001, pp. 263-273) or to RENCHER (2002, pp. 351-358) for further details on sequential variable selection algorithms.
Asking buyout investors, which single exit route has delivered the highest returns justifies the preference for trade sale exits. As set out in the exhibit below, 44% of investors marked trade sales as the divestment route that has historically generated the highest returns. Interesting is that still 12 firms or 21% of the sample responded that IPO exits have achieved the highest returns. In this context, the comparatively low preference for IPOs might be explained with an overall preference of European buyout investors for full and immediate cash exits.  

Albeit its growing importance, sales to other financial investors are still not a widely desired type of exits. Buyout firms acknowledge that the demand and ability of financial investors to pay high valuations is exposed to the availability of attractive debt funding. Historically, the availability and pricing of debt financing for leveraged buyouts has experienced considerable fluctuations, which casts doubt as to the sustainability of secondary buyouts as lucrative exit option.

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458 Based on feedback obtained in expert interviews.
459 Please refer to section 2.2.4.4 for a discussion of debt financing for leveraged buyouts and the historical evolution of pricing and key terms.
### 5.6.2 Exit process duration

Survey responses about the typical exit process duration varied widely from 3 to 24 months, with a mean of 8.2 months, a median of 6 months and a standard deviation of 4.0 months. The distribution of responses is illustrated in the exhibit below.

The analytical procedure outlined above results in the following regression model:
The resulting multiple regression results for exit process duration. Source: Own analysis based on survey data.

The resulting multiple regression includes 7 independent variables, which are all significant at least at a 10% level, whereby 5 are significant at a 5% level. The model achieves a coefficient of determination $R^2$ of 36.4%, with a $R^2$ adjusted for degrees of freedom of 21.5%. The overall model results are significant at a 15% level, as demonstrated in the summary table above.

The results are interesting, even though not all indicated relations are intuitive. The significant negative relationship of process time to the proportion of indirect directors, not affiliated to the buyout investor ($INDDIR$), is difficult to interpret. The result suggests, the higher the proportion of indirect directors on a portfolio firm’s board the quicker exit processes are completed. This appears counter-intuitive as one would have thought that external directors demand extra comfort and due diligence confirming that an envisaged exit is compatible with the longer-term interest of a business and its other stakeholders. The opposite is proposed which could express that a higher proportion of independent directors facilitates consensus finding among various stakeholders and reduces disruptions and process delays throughout the execution of a process.

Along similar lines, the model suggests that the higher involvement and consideration of executives aspirations the quicker divestments are completed. This is in line with expectations that the role of senior management in an exit process is crucial (i.e., WALL and SMITH 1997, p. 15, LENOIR 2003, p. 244) and their commitment contributes to an efficient execution process.

The negative relationship to the dummy variable, $FIRMTYPE$, suggests that hedge funds typically need approximately 4 months longer to complete an exit than ‘traditional’ buyout investors, which might be a function of less transaction experience in this segment on their part. However, given that only a small number of hedge funds are included in the survey sample, this result has to be regarded cautiously.
A result that is rather intuitive, is that the larger the number of already completed exits the quicker the divestment executions. This suggests that experienced buyout investors with a track record of completed exits handle divestment execution processes more efficient and achieve quicker completion.

Also interesting and in line with expectations are the positive relationship to the proportion of IPO exits and the negative relationship to the proportion of trade sale exits. This confirms that IPO exit processes take longer than trade sale processes. Lastly, the positive relationship to the average number of portfolio companies by partner suggests that firms where partners have to cover more companies need longer to execute exit completions. Their increased monitoring duties for more portfolio firms might explain that divestment processes take longer, as partners, the key decision makers, can devote less time to individual portfolio investments, thus forming a bottleneck for exit processes.

5.6.3 Consideration of executives’ aspirations – the impact of management
The importance of portfolio companies’ executive management for buyout firms throughout the holding period of an investment is undoubted, certainly also during the exit phase (i.e., WALL and SMITH 1997, p. 15, LENOIR 2003, p. 244).460 Buyout investors in the survey have been asked in what percentage of completed exits, the aspirations and preferences of top level executives affected the final choice of exit route.461 Despite the undisputed necessity of a committed management team for an exit process, 38% of responding buyout investors marked that managements’ aspirations impacted the choice of exit route in less than 25% of completed exits. Cumulatively 66% of buyout firms responded that in 50% or less of completed divestments considerations of executive management teams had an impact.

460 The role of executive management and its importance has been emphasised in section 4.6.
461 SCHWIENBACHER (2002) used the same question in a survey addressed to venture capitalists.
Pursuing the analytical regression procedure explained before results in the following regression model:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Relation</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>2.193</td>
<td>2.10</td>
<td>Observations: 47</td>
</tr>
<tr>
<td>MGTINV</td>
<td>-</td>
<td>-0.495</td>
<td>**1.43</td>
<td>R²: 31.83%</td>
</tr>
<tr>
<td>PROCTIME</td>
<td>-</td>
<td>-0.068</td>
<td>***1.80</td>
<td>Adjusted R²: 19.59%</td>
</tr>
<tr>
<td>PLANNING</td>
<td>+</td>
<td>0.305</td>
<td>***2.35</td>
<td>F value: 2.60**</td>
</tr>
<tr>
<td>FIRMTYPE</td>
<td>-</td>
<td>-1.064</td>
<td>***1.97</td>
<td>F critical (10%): 2.54</td>
</tr>
<tr>
<td>NOEXITS</td>
<td>-</td>
<td>-0.010</td>
<td>**1.58</td>
<td></td>
</tr>
<tr>
<td>PROPTS</td>
<td>-</td>
<td>-0.008</td>
<td>***1.38</td>
<td></td>
</tr>
<tr>
<td>COPERST</td>
<td>+</td>
<td>0.002</td>
<td>****1.76</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance levels are denoted by: * for 15%, ** for 10%, *** for 5%.

Exhibit 101. Multiple regression results for the impact of management on the choice of exit routes.
Source: Own analysis based on survey data.

The resulting multiple regression includes 7 independent variables, which are significant at least at a 10% level, whereby 4 are significant at a 5% level. The model achieves a coefficient of determination $R^2$ of 31.8%, with a $R^2$ adjusted for degrees of freedom of 19.6%. The overall model results are significant at a 10% level, as demonstrated in the summary table above.

The significant negative relationship of the level of involvement of buyout investors in the management of their portfolio companies to the degree of managements’ impact on the choice of exit route is not surprising. The more buyout investors are involved in the leadership of their portfolio firms, the less dependent they are on executive management’s commitment and support for a divestment execution.

The negative relationship to the exit process duration, which suggests that buyout firms that on average complete exits in a shorter period tend to place more weight on the aspirations of
management teams when determining how a portfolio firm is divested, has already been revealed in the analysis in the previous section 5.6.2.

Interesting is the confirmation of a significant positive relationship to the degree of pro-active planning applied by buyout investors. This supports views expressed by LIEBER (2004) that comprehensive pro-active exit planning requires close involvement of management teams. Investors who are focused on pro-actively managing their portfolios towards divestment, tend to involve executive management of their portfolio firms in review and exit preparation processes (LIEBER 2004) and, as the presented results propose, tend to take managements’ aspirations more into account when choosing exit channels. LIEBER (2004) argued that, given the maturation of the private equity industry, pro-active and well-structured portfolio management is getting increasingly important and a growing number of private equity funds are establishing relevant policies and internal guidelines. 462

The negative relationship to the dummy variable, *FIRMTYPE*, suggests that hedge funds typically place more weight on managements’ preferences when selling investments than ‘*traditional*’ buyout firms, which again might be a function of less transaction experience in this segment on their part. 463 The lower degree of exit transaction experience might explain a higher dependence on management in divestment processes. 464 The negative relationship to the number of completed exits (*NOEXITS*) confirms that investors with more divestment execution experience tend to be put less weight on the preferences and aspirations of portfolio firm executives.

The survey responses support comments by WALL and SMITH (1997), LESCHKE (2003) and NEUS and WALZ (2004) that executive management teams often dislike trade sales, in the expectation of a loss of managerial flexibility and prestige when the business is acquired by a competitor or larger firm. The results confirm that buyout firms that divest a large proportion of their investments through trade sales do not let management impact their exit decisions.

Lastly, the regression model also demonstrates a significant positive relationship between managements’ impact on the exit route choice and the average number of portfolio companies by private equity professional. This finding suggests that buyout firms where

462 Please refer to section 4.2.1 for a discussion of pro-active and exit-oriented portfolio management.
463 While hedge funds in the sample have completed on average 16.6 exits, other buyout investors have on average completed 24.3 exits.
464 However again as a note of caution, given that only a small number of hedge funds are included in the survey sample, this result has to be regarded very carefully.
professionals cover more portfolio firms tend to place greater weight on managements’ preferences. This could also be explained with a greater dependence on management for the execution of an exit as their increased monitoring duties for more portfolio firms mean that private equity managers can devote less time to individual portfolio investments and thus need to rely more on portfolio firm executives to drive divestment processes forward.

5.6.4 Relative proportion of exit routes
Looking at private equity firms’ pool of completed divestments, the proportion of each of the three major exit options for successful buyout investments, IPOs, trade sales and secondary buyouts, serves as a strong indicator for investors’ exit preferences. Out of the 1,295 divestment transactions completed and disclosed by the 56 buyout investors participating in the survey, 473 or 36.5% were trade sales, 401 or 31.0% were sales to other financial investors while 333 IPOs were performed, representing 25.7%. The remaining 88 divestments are disclosed full or partial write-downs.465

The research goal of this part of the empirical analysis has been to explore which of and how the variables defined in section 5.3.4 serve to explain exit preferences and styles by buyout investors active in Europe. Adopting the same statistical approach as for the other exit aspects examined in this section, the relative proportion of trade sales, secondary buyouts and IPOs within the buyout firms’ pool of divestments is analysed henceforth.

a) Proportion of trade sales
The analytical procedure applied throughout this part results in the following regression model for the proportion of trade sales as dependent variable:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Relation</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>0.9565</td>
<td>3.68</td>
<td>Observations 51</td>
</tr>
<tr>
<td>MGTINV</td>
<td>+</td>
<td>0.1651</td>
<td>**1.94</td>
<td>R² 38.59%</td>
</tr>
<tr>
<td>MGTREPLACE</td>
<td>-</td>
<td>-0.0839</td>
<td>**1.91</td>
<td>Adjusted R² 26.90%</td>
</tr>
<tr>
<td>PROCTIME</td>
<td>-</td>
<td>-0.0144</td>
<td>**1.48</td>
<td>F value 3.30***</td>
</tr>
<tr>
<td>FIRMTYPE</td>
<td>-</td>
<td>-0.2592</td>
<td>**2.16</td>
<td>F critical (5%)  3.02</td>
</tr>
<tr>
<td>FUNDTYPE</td>
<td>+</td>
<td>0.2546</td>
<td>**1.84</td>
<td></td>
</tr>
<tr>
<td>VOLMGT</td>
<td>-</td>
<td>-0.0026</td>
<td>**2.27</td>
<td></td>
</tr>
<tr>
<td>FUNDSIZE</td>
<td>+</td>
<td>0.0002</td>
<td>**3.37</td>
<td></td>
</tr>
<tr>
<td>NOEXITS</td>
<td>-</td>
<td>-0.0027</td>
<td>**1.84</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance levels are denoted by: * for 15%, ** for 10%, *** for 5%.

Exhibit 102. Multiple regression results for the proportion of trade sales.
Source: Own analysis based on survey data.

The resulting multiple regression includes 8 independent variables, which are all significant at a 5% level with the exception of the exit process duration (PROCTIME) being significant

465 Please also refer to section 5.3.3 for a note on the characteristics and type of exits of the buyout investors in the sample.
466 The relative proportions of the exit channels are expressed in percentage terms.
at a 10% level. The model achieves a coefficient of determination $R^2$ of 38.6%, with a $R^2$ adjusted for degrees of freedom of 26.9%. The overall model results are significant at a 5% level, as demonstrated in the summary table above.

The obtained positive relationship to the variable $MGTINV$ suggests that buyout firms which are more involved in the strategic and operative management of their portfolio companies are prone to sell investments via trade sales. Following the argumentation provided for the negative significant relationship between $MGTINV$ and $MGTCNS$ in the previous sub-section 5.6.3, this result is in line with expectations that a lower dependence on portfolio companies’ management for the execution of an exit process reduces weight placed on considerations that executives often dislike trade sales and favour other alternatives.

On the other hand, investors that frequently replace senior management of portfolio firms prior to an exit use trade sales less often. Private equity firms frequently replace CEOs and CFOs of portfolio firms prior to IPOs and also secondary buyouts, given the particular scrutiny of professional investors as to the profile and skillset of an issuers leadership team.\footnote{Based on feedback obtained in expert interviews.} According to practitioner comments and LENOIR (2003, pp. 242-244), trade sales often rely on experienced incumbent executives that have accumulated in-depth knowledge of the business over time and are capable to present the specifics of a company to industry experts rather than the capital market. In this context, this result is intuitive.

In line with comments by LESCHKE (2003, pp. 250-251), there is a significant negative relationship between the exit process duration and trade sales, confirming that trade sales are usually quicker completed than IPOs and also secondary buyouts, mainly due to the fact that strategic buyers have a superior understanding of the business.

Despite the highly significant nature of the relationships to the dummy variables $FIRMTYPE$ and $FUNDTYPE$, these results are not straightforward to interpret. The regression suggests that hedge funds have applied more trade sales than other buyout firms. However, this finding has to be seen in the context of limitations already flagged before, namely the small number of hedge funds in the sample. Similarly, the positive relationship to the dummy variable $FUNDTYPE$, which that distinguishes firms with closed-end funds from firms operating open-end investment holdings, has to be viewed with caution.\footnote{Although the categorical variables in this context are difficult to interpret as smaller subsets of firms in the sample are differentiated from a majority, their application is still sensible. As GUJARATI (2003, pp. 297-303) points out, the application of dummy variables is still a valid approach in these circumstances, provided they contribute to the overall}
the result suggests that private equity investors managing closed-end funds use trade sales more often than other types of investors, it has to be moderated as only a small number of the latter type of investors are represented in the sample.

The results of the remaining three explanatory variables in the regression are more meaningful. The negative relationship to the variables $VOLMGT$ and $NOEXITS$ suggests that buyout firms with large quantities of capital under management and substantial exit transaction experience, measured by the number of completed exits, have a lower tendency to trade sales. An interpretation can be that larger and more established buyout firms have easier access to high quality intermediaries, professional advisers and potentially institutional investors, which might facilitate other types of exits such as IPOs or secondary buyouts. Interesting, however, is the contrasting positive and also highly significant relationship to $FUNDSIZE$, which proposes that firms with larger individual funds are more inclined to pursue trade sales. This finding does not contradict the negative relationship to the overall capital under management and should in the author’s opinion not be over-interpreted. Given the high capital inflows to the buyout market in recent years, even newly established private equity firms were able to set up large funds, often comprising their entire capital under management.\textsuperscript{469} Taking this into account, the total capital under management ($VOLMGT$) seems to be a more appropriate indicator for a buyout investors’ size than individual fund volumes.

b) Proportion of secondary buyouts
Pursuing the analytical procedure applied throughout this part of the empirical analysis leads to the following regression model for the proportion of secondary buyouts as dependent variable. The resulting multiple regression comprises 9 independent variables, of which 5 are significant at a 5% level. The model achieves a coefficient of determination $R^2$ of 53.3\%, with a $R^2$ adjusted for degrees of freedom of 39.2\%. The overall model results are significant at a 5\% level, as demonstrated in the summary table below.

\textsuperscript{469} Please refer to ANSON (2004) for a relevant note on trends in the private equity market and statistics about capital commitments to the industry. Also refer to section 2.2.5 for a discussion of industry trends.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Relation</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>-14.7766</td>
<td>1.78</td>
<td>Observations 40</td>
</tr>
<tr>
<td>MGTINV</td>
<td>-</td>
<td>-0.2910</td>
<td>***3.34</td>
<td>R² 53.25%</td>
</tr>
<tr>
<td>MGTREPLACE</td>
<td>+</td>
<td>0.0603</td>
<td>*1.25</td>
<td>Adjusted R² 39.23%</td>
</tr>
<tr>
<td>PLANNING</td>
<td>-</td>
<td>-0.0763</td>
<td>***2.71</td>
<td>F value 3.80***</td>
</tr>
<tr>
<td>DUALTRACK</td>
<td>+</td>
<td>0.1039</td>
<td>***2.50</td>
<td>F critical (5%) 2.90</td>
</tr>
<tr>
<td>FIRMTYPE</td>
<td>+</td>
<td>0.2616</td>
<td>***2.31</td>
<td></td>
</tr>
<tr>
<td>ESTY</td>
<td>+</td>
<td>0.0072</td>
<td>***1.75</td>
<td></td>
</tr>
<tr>
<td>SYND</td>
<td>-</td>
<td>-0.0530</td>
<td>**1.62</td>
<td></td>
</tr>
<tr>
<td>VOLMGT</td>
<td>+</td>
<td>0.0001</td>
<td>**1.66</td>
<td></td>
</tr>
<tr>
<td>FUNDSIZE</td>
<td>-</td>
<td>-0.0001</td>
<td>**1.35</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance levels are denoted by: * for 15%, ** for 10%, *** for 5%.

Exhibit 103. Multiple regression results for the proportion of sales to financial investors.
Source: Own analysis based on survey data.

Remarkable is the highly significant negative relationship to MGTINV, suggesting that buyout investors with a high degree of managerial involvement in a portfolio company are less inclined to conduct secondary buyouts. Several explanations for this result seem sensible. First, buyout firms that are very actively involved in the leadership of their portfolio firms are typically either preparing companies for the requirements of stock markets or restructuring firms striving for higher profitability and output or modifying the business mix prior to effecting a sale to a ‘logical’ strategic buyer.470

The model also suggests that buyout investors with a high tendency to replace senior management (MGTREPLACE) often dispose of their investments through a sale to another financial investor. The fact that in these cases senior management may not have been able to accumulate as much knowledge about the specifics and details about a business potentially complicates a sale to trade buyers.

Of particular interest is the confirmation of a negative relationship to the degree of pro-active exit planning applied by buyout investors. This suggests that secondary buyouts are still a form of opportunistic divestments that given the cyclical demand patterns of financial buyers and their high exposure to the availability of debt finance cannot be relied on as a steady exit alternative.

The positive significant relationship to the tendency of buyout firms to conduct dual-track exit processes provides support for a statement by BAKER and MCKENZIE (2005, pp. 15-18) that most dual-track divestment procedures result in an M&A transaction rather than an IPO. Furthermore, dual-track processes are typically run when significant interest by

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470 Please refer to LENOIR (2003, p. 242-244) for brief comments on the different managerial strategies necessary to facilitate different exit routes. WALL and SMITH (1997, p. 9) list several comments by practitioners indicating that private equity investors are particularly sceptical to buy assets from other investors when already comprehensive restructuring measures have been taken by the previous financial owner.
financial investors has been expressed, while on the other hand these processes are rarely performed when primarily strategic buyers are targeted.

While the result for the dummy variable \textit{FIRMTYPE} has to be seen in the context of the limitations highlighted before, the relationship to the age of buyout firms, expressed in \textit{ESTY} is interesting. The model suggests that younger firms are more often selling portfolio investments to other financial investors than older, more established firms. This could mean that older firms still regard secondary buyouts as an inferior type of exits (WALL and SMITH 1997, p. 9) and, therefore, rather strive for trade sales or IPOs. In the context of secondary buyouts becoming a more and more accepted exit type (ANSON 2004), the author expects this relationship to weaken in the future, while on the other hand the long-term sustainability of secondary buyouts as a lucrative exit form is questionable.

The results for the three remaining variables are somewhat difficult to interpret. The negative relationship to the frequency buyout firms invest in a syndicate (\textit{SYND}) rather than on a sole basis suggests that in cases where already a number of financial investors are involved in a company, a sale to a further financial buyer is less likely. Given the expectation that several private equity investors are likely to explore more performance or value enhancing mechanisms rather than only one investor, potential financial buyers are likely to cast doubts as to the remaining future upside potential of a firm. Applying such point of view, this finding seems intuitive.

The results for \textit{VOLMGT} and \textit{FUNDSIZE} exactly revert its relationships to the proportion of trade sales discussed before. Again these findings are difficult to read. The model proposes that buyout firms with substantial capital under management are more likely to sell investments via secondary buyouts, while on the other hand firms with large individual funds are less likely to do so. These results have to be seen in the context of the sample characteristics where the fact that several of the largest mainly US controlled buyout firms conducted a high number of sales to financial investors but also a substantial number of IPOs, while operating comparatively smaller individual funds than other firms in the sample.

c) Proportion of IPOs
Performing again the statistical procedure applied throughout this part of the empirical analysis, results in the following regression model for the proportion of IPOs as dependent variable:
## Exhibit 104. Multiple regression results for the proportion of IPOs.
Source: Own analysis based on survey data.

The resulting multiple regression includes 7 independent variables, of which 4 are significant at a 5% level. The model achieves a coefficient of determination $R^2$ of 36.0%, with an adjusted $R^2$ of 24.54%. The overall model results are significant at a 10% level, as demonstrated in the summary table above.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Relation</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>12.9510</td>
<td>2.46</td>
<td>Observations</td>
</tr>
<tr>
<td>BOARDMTGS</td>
<td>+</td>
<td>0.0261</td>
<td>**1.51</td>
<td>$R^2$</td>
</tr>
<tr>
<td>PROCTIME</td>
<td>+</td>
<td>0.0070</td>
<td>*1.27</td>
<td>Adjusted $R^2$</td>
</tr>
<tr>
<td>MGTCONS</td>
<td>+</td>
<td>0.0244</td>
<td>*1.07</td>
<td>F value</td>
</tr>
<tr>
<td>FUNDTYPE</td>
<td>-</td>
<td>0.1860</td>
<td>****2.45</td>
<td>F critical (10%)</td>
</tr>
<tr>
<td>ESTY</td>
<td>-</td>
<td>-0.0064</td>
<td>****2.42</td>
<td></td>
</tr>
<tr>
<td>FUNDSIZE</td>
<td>-</td>
<td>-0.0001</td>
<td>****2.82</td>
<td></td>
</tr>
<tr>
<td>NOEXITS</td>
<td>+</td>
<td>0.0019</td>
<td>****2.16</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance levels are denoted by: * for 15%, ** for 10%, *** for 5%.

While the positive relationships to the exit process duration ($PROCTIME$) and the degree of consideration of executives’ aspirations ($MGTCONS$) are in line with expectations, the results for other variables are more difficult to interpret. The regression confirms that IPO exits typically require lengthy preparation and execution processes and that a great weight placed on managements’ preferences favours IPOs especially over trade sales. These are findings that have been discussed before. However, the positive relationship to the interval between board meetings is not straightforward. This means that buyout firms which frequently conduct IPO exits tend to perform less board meetings than others. While this questions arguments about the particularly important role of the board prior to and during an IPO (i.e., VAN DEN BERGHE and LEVRAU 2002), this result has to be viewed in light a study by GERTNER and KAPLAN (1996), which suggests that the number of meetings might be an inappropriate indicator as to how much work a board effects. They argue that informal communication between directors substitutes formal procedures. Practitioners confirm that particularly in times where a high intensity of board involvement is required, such as during exit processes, a large portion of the communication to and among board members takes places informally rather than in formal board meetings.\footnote{Based on feedback obtained in expert interviews.} In this sense the relationship is not emphasised as crucial.

Of particular relevance are the highly significant relationships to the year of establishment of buyout firms ($ESTY$) and the number of completed exits of individual buyout firms ($NOEXITS$). These results provide support for the notion that older firms with a strong track record of many completed divestments are more likely to be able to access public stock markets than younger and less established buyout investors. This is in line with comments...
by MURRAY (1994) and HALL (2002) that public capital market access is more difficult for smaller and younger venture capitalists rather than for established market participants.

The results for the variables FUNDTYPE and FUNDSIZE have to be regarded in the context of the limitations within the sample addressed before472.

5.6.5 The significance of corporate governance aspects

The findings of this part of the empirical analysis have provided support for the relevance of corporate governance aspects as factors contributing to an explanation of exit behaviour. Based on the research by SCHWIENBACHER (2002) four explicit corporate governance related aspects were tested in the survey: The level of operational involvement of buyout investors in the leadership of their portfolio firms (MGTINV); the proportion of independent directors not affiliated to the private equity firm on the boards of portfolio companies (INDDIR); the interval between board meetings (BOARDMTGS); and the tendency to replace CEOs or CFOs at portfolio firms prior to a divestment (MGTREPLACE). Furthermore, the extent at which exit route choice decisions are impacted by the preferences of executive management (MGTCONS) has been tested in the survey, which also relates to the corporate governance for portfolio firms.

The results demonstrate that particularly the level of involvement in the operational rather than just strategic leadership of portfolio companies (MGTINV) serves as a highly significant indicator for several tested exit aspects.473 The level of operational involvement has a substantial impact on the risk allocation between private equity investor and executive management in the context of agency theory (i.e., KAPLAN and STROEMBERG 2002, 2004).474 As BOURESLI, DAVIDSON and ABDULSALAM (2002, p. 72) suggest, private equity investors can get engaged in a variety of aspects of operational leadership which lowers informational asymmetries vis-à-vis executive management of a portfolio company.475

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472 As mentioned before, several of the largest mainly US controlled buyout firms conducted a high number of sales to financial investors but also a substantial number of IPOs, while operating comparatively smaller individual funds than other firms in the sample. When analysing the dummy variable FUNDTYPE it has to be considered that only 6 buyout firms operate open-end investment holdings, while the remaining 50 firms manage closed-end funds. Despite the statistical significance of the dummy variable which justifies its inclusion in the regression model any interpretation has to be moderated in the light of the limitation that the vast majority of the sample belongs to a single category.
473 MGTINV is a significant independent variable at least at 10% level for regressions on following dependent variables: MGTCONS, PROPTS, PROP2BO.
474 For a note on the involvement in operational management, please refer to section 2.1.7.1.
475 Please also refer to SAHLMAN (1990) for an extensive discussion of private equity corporate governance aspects.
Related to this measure as to how involved private equity investors get in their portfolio firms is the extent by which financial sponsors replace existing management following the acquisition of a majority stake in a firm (MGTREPLACE).\textsuperscript{476} The replacement of incumbent senior executives with affiliated and well trusted managers or even own employees also serves to reduce agency risks, through minimising information asymmetries and gaining comfort about the alignment of interests prior to an exit. The empirical results confirmed that MGTREPLACE is a significant explanatory factor for the choice of exit routes, suggesting that the aspirations and preferences of management teams that have been brought in by buyout investors following an acquisitions find more consideration than those of incumbent senior executives.

The results further suggest, that the higher the proportion of indirect directors on a portfolio firm’s board (INDDIR) the quicker exit processes are completed, which could express that a higher proportion of independent directors facilitates consensus finding among various stakeholders and reduces disruptions and process delays throughout the execution of a process. This argument highlights potential advantages of independent directorship also in private equity owned companies, as the consideration and reflection of viewpoints by other stakeholders can minimise exit process execution risks.\textsuperscript{477} Along similar lines, the results suggest that the involvement and consideration of executives’ aspirations (MGTCONS) has a positive impact on the speed of an exit execution. This finding once again stresses the importance of open communication and involvement of portfolio firms’ management teams in regular portfolio reviews and from the early stages of an exit opportunity identification through to the completion of a transaction.

Based on the empirical results, the author concurs with comments by GERTNER and KAPLAN (1996), who argue that the number of meetings might be an inappropriate indicator as to how much work a board performs. The relevance of the variable BOARDMTGS has only received very limited confirmation in the statistical analysis.

Overall, the findings for the corporate governance aspects, included in this test, suggest that the consideration of other stakeholders’ perspectives and particularly that the involvement

\textsuperscript{476} See also BOURESLI, DAVIDSON and ABDULSALAM (2002, p. 71-81) for a detailed discussion of possible measures and actions taken by private equity firms to reduce information asymmetries and agency risks.

\textsuperscript{477} HILB (2005) argues that a successful corporate governance system needs to take into account the interests and perspectives of all major stakeholders and not only shareholders. ANDERS (1992) already criticised leveraged buyout firms in the early 1990s for governing portfolio firms in an uni-dimensional, shareholder-centred approach and highlighted that the interests and well-being of the employees of firms have often been neglected or downplayed. He stressed that this in a longer term harms private equity firms as they build up bad reputation with certain types of stakeholders which might make future acquisitions and transactions more difficult.
of portfolio companies management teams in an exit process favour an efficient and successful divestment execution by minimising tensions between different interest groups, while also leveraging the available industry contacts and knowledge of executive resources. The results provide further support for arguments presented by LIEBER (2004) that exit-oriented and pro-active portfolio management, which becomes increasingly important for the maturing private equity industry, requires the early involvement of top level executives and appropriate incentive schemes.

Buyout investors should be aware that the perfect alignment of executives’ and their own interests is very difficult or even impossible to achieve, which enforces the relevance of these recommendations.

5.6.6 Summary and discussion
This section has concentrated on assessing buyout investors’ exit route preferences, confirming a clear preference for trade sales and exploring the relationship between the variables available in the dataset and several aspects in relation to divestment characteristics and process styles: The duration of exit processes (PROCTIME); the level of consideration of executive management’s aspirations in exit processes (MGTCONS); and the relative proportion of trade sales, secondary buyouts and IPOs in the total number of exits by individual buyout investors (PROPTS; PROP2BO; PROIPO). The following separate section 5.7 is devoted on another important aspect, the tendency to conduct dual or even multi-track exit processes.

For the empirical analysis underlying this part, a multiple regression approach with sequential independent variable selection has been pursued, taking into account the exploratory nature of the research goals in this part. Regression models with overall significant explanatory power have been obtained for all dependent variables in question, whereby particularly significant models were obtained for the proportion of trade sales (PROPTS) and secondary buyouts (PROP2BO).

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478 The regression models include a number of categorical or dummy variables. In this context one needs to caution that as these dummy variables are introduced to distinguish smaller subsets of firms from the majority of buyout firms captured in the sample resulting coefficients of determination might be inflated. Nevertheless, as GUJARATI (1995, pp. 297-303) points out, the application of dummy variables also if only for a smaller subset of the sample is a valid approach. It is important to state that the dummy variables in this analysis have no considerable influence on the overall direction of the results.

479 Model results for PROPTS: Coefficient of determination $R^2$ of 38.6%, a $R^2$ adjusted for degrees of freedom of 26.9% and significance at the 5% level. Model results for PROP2BO: $R^2$ of 53.3%, with a $R^2$ adjusted for degrees of freedom of 39.2% and significance at the 5% level.
Besides the explanatory power of corporate governance aspects highlighted above, several key findings should be noted. The results support that experienced buyout investors with a track record of completed exits handle divestment execution processes more efficient and achieve a quicker completion. In addition, the findings suggest that overall IPO exit process take longer than trade sale processes.

Furthermore, the positive relationship to the average number of portfolio companies by partner, proposes that firms where partners have to cover more companies need longer to execute exit completions, thus emphasising partners’ scarce time as a bottleneck for divestment transactions.

Based on resulting regression models for both PROPTS and PROPIPO, buyout firms with large quantities of capital under management and substantial exit transaction experience, are more likely to exit investments via IPOs or secondary buyouts, compared to smaller investors.

As a last key result to be emphasised at this point, the study provides support for a statement by BAKER and MCKENZIE (2005, pp. 15-18) that most dual-track divestment procedures result in an M&A transaction rather than an IPO.

Overall, the analysis demonstrates the heterogeneity of buyout investors in the European market and shows that several observable parameters contribute to the understanding of exit behaviour and preferences of this private equity segment.

5.7 ‘Multi-track’ exit processes

While traditionally exit processes entailed the preparation and execution of one divestment route, typically chosen and agreed upon prior to launching the process, an increasing number of private equity firms prepare exit candidates in their portfolio for two or more exit channels simultaneously.

Considerations about dual- or multi-track exit processes have been introduced in section 4.2.5. The purpose of this part is to discuss primarily the analysis as to which buyout firms are likely to run such processes and to explore key factors underlying buyout investors’ decision to pursue more than one exit route at the same time. Lastly, a note on the downsides of such procedures is provided, flagging the risk of discouraging potential bidders from participating in a highly competitive sale process.
Despite its growing importance to the private equity industry, as LIAN (2005, p. 2) confirms, very limited academic literature on this field is available to date. Dual-track divestment procedures are particularly relevant for the buyout segment that in general deals with comparatively larger portfolio firms than other private equity segments.\footnote{Due to the high overall transaction costs of dual-track divestment processes, such procedures are rarely applied in the context of smaller portfolio firms. Moreover, as in most dual-track exits, an IPO is prepared as one of the divestment channels, portfolio companies typically have to exceed a certain size threshold for a feasible public listing (i.e., WRIGHT and ROBBIE 1998, p. 551).}

As illustrated in the exhibit below, 26 buyout investors or 56.5\% of the relevant sample responded in the survey that they have already conducted dual-track processes in at least 25\% of completed divestments, which supports the relevance of the subsequent analysis of this topic.

![Exhibit 105. Distribution of responses about the proportion of dual-track exit processes in buyout investors’ pool of completed divestments (N=46). Source: Own chart based on survey data.]

### 5.7.1 Assessment of multi-track exit processes

An evaluation of the advantages and potential pitfalls of multi-track processes is necessary for buyout investors prior to embarking on such intense divestment procedure. Before dwelling into the empirical results on this topic, key aspects framing such an exit decision are contrasted henceforth.

#### 5.7.1.1 Advantages of multi-track processes

Practitioners argue that dual- or multi-track processes have the potential to generate extra value for a vendor of a company, as it can enhance the competitive dynamics in an auction process. Seriously interested bidders in an auction, knowing about a credible public listing
alternative, can thus be motivated to submit an attractive offer in order to remain in the auction process.\footnote{The effectiveness of dual-track mechanisms for value maximisation has to the author’s knowledge not been tested empirically yet.}

Furthermore pursuing more than one route, maintains the flexibility to execute the exit alternative that generates the highest value until close before a transaction completion. Particularly in the context of volatile public equity markets where windows for attractive new issuances open and close quickly\footnote{LERNER, SHANE and TSAI (2003) prove empirically that new issuance activity in the public equity markets tends to be clustered in periods, so-called ‘hot market’ phases when comparatively attractive valuations are achieved. CHIANG and HARIKUMAR (2004) also prove the presence of ‘market windows’ in the US stock markets empirically.}, having the option to sell a company at a reasonable price through a trade sale can be valuable.

An analysis by law firm BAKER and MCKENZIE (2005, pp. 6-8) suggests that synergy effects between trade sale and IPO preparations can be realised. Marketing materials can be drafted to serve the purpose of both information memoranda for M&A auction processes and an offering prospectus in modified form. Also the work by accountants and commercial advisers can be utilised for both processes.

5.7.1.2 Disadvantages and potential pitfalls of multi-track processes

The arguments in favour pointed out, however, need to be balanced with several considerations. BAKER and MCKENZIE (2005, pp. 9-16) have identified a list of potential drawbacks and pitfalls:

- Conflicts of interest of investment banks;
- Higher transaction costs;
- High workload imposed on management and risk of a time delay;
- Complexity of legal structuring;
- IPO track limiting the flexibility of M&A process
- Excessive disclosure and publicity;
- Difficult timing to disclose dual-track nature of the process.

An appointment of only one investment bank to advise on both an M&A process and a public listing can cause conflicts of interest, unless a compensation structure, independent of the exit route ultimately executed is agreed. In practice, private equity firms often mandate different investment banks for an M&A sale and IPO process as they want independent teams pursuing each track fast and efficiently. Investment banks, as mentioned in section 4.2.3, are largely rewarded on a deal contingent basis. In case of a dual track process, each
of the banks mandated is exposed to a higher risk to loose out on lucrative fee income in the event the track they advise on does not get executed. This is why investment banks in such circumstances will demand a considerable fee, payable in case the exit option they are not working on is successfully completed. Overall, pursuing dual track processes with two separate investment banks results in higher transaction costs.

Not necessarily during the preparation process, but certainly during an exit execution process, the parallel pursuit of routes imposes a substantial incremental workload on management. Executives have to both conduct meetings with potential trade or financial buyers and participate in ‘roadshows’ meeting institutional investors for a public listing. Capacity constraints of top executives can potentially lead to time delays and require planning and consideration. Moreover, BAKER and MCKENZIE (2005, p. 10) flag that the uncertainty whether to become part of large trade buyer or to become a listed company can have detrimental effects on managements’ motivation and commitment to the process. As NEUS and WALZ (2004) argue, management teams who want to remain with the company following an exit tend to prefer IPOs over trade sales for image reasons and due to the expectation to retain more managerial flexibility. This likely preference in a process needs to be carefully observed and managed by the private equity managers.

A technical issue, which needs to be taken into account, is that a company needs to be established as a public corporation in a form suitable for specific jurisdictions and according to the applicable listing rules for an IPO process, while typically the existing legal form is sufficient to effect a trade sale. The co-ordination and timely switching between legal entity forms add additional complexity and transaction costs (BAKER and MCKENZIE 2005, p. 14).

Another consideration to be considered, is that an IPO process is highly governed by mandatory rules and regulations. From the point of filing an IPO with a stock exchange, the potential issuance process is subject to a specified timeline. The timing requirements of a listing procedure do not only restrain the flexibility of an M&A process, but also insider trading and ad-hoc publicity rules apply from the point of filing a listing application.

As far as disclosure is concerned, an IPO process demands a high level of transparency and an extensive explanation of the risks attached to a business. Conversely, in a trade sale

\[483\] With regard to the disclosure requirements in public offering prospectuses (under US regulation so-called ‘Forms S-1’), the rules specified by the US ‘Securities and Exchange Commission’ (SEC) have largely evolved to market standard also for European new issues. These requirements were initially specified in the ‘Securities Act of 1933’ and the ‘Securities Exchange Act of 1934’ and have been regularly updated and complemented in several rules of
process rather than to emphasise potential concerns it is aimed to disclose selected information, though without hiding major issues. Moreover, an IPO process necessarily seeks widespread publicity not only to attract institutional fund managers’ but maybe also retail investors’ interest. Contrary to this, a trade sale process is sensitive to publicity, whereby investment banks and all parties involved usually act very careful in order not to leak unnecessary information to the public domain. Given this fundamental disparity in the manner of information handling, unwanted effects mainly caused by information spill-over from the IPO process to the detriment of the trade sale process are challenging to avoid. BAKER and MCKENZIE (2005, p.16) warn specifically about severe negative process effects in case of cancelling an IPO. They argue that both private equity firm and its portfolio company suffer image losses, a further attempt to launch an IPO process will be challenging, and importantly bidders in a trade sale process are likely to reduce their offer valuations knowing about weak demand in the public equity market.

In this context, it becomes obvious that the timing of revealing the dual- or multi-track nature of the process to both capital market and potential M&A bidders is difficult but of extreme importance. While an early communication to M&A bidders favours the competitive dynamics of the process, doubts could be raised as to how serious an M&A or an IPO is, if another exit option is required as a back-up alternative. These arguments might lead to a lack of interest of M&A bidders because competition is considered to be excessively enforced through a likely IPO exit. Alternatively low valuations might be offered as the interest in the company is anticipated to be weak by bidders. The flexibility of timing this disclosure is limited by the publicity requirements of listing processes. Of similar importance is the decision when to abandon an exit option and pursuing only one route to completion. Deliberate offer price reductions of final bidders following the stop of an IPO process should to be contractually prohibited.

The subsequent discussion of the empirical analysis of multi-track exits provides further substance to the arguments presented above.

5.7.2 Tendency to conduct dual- or multi-track exit processes
As mentioned in section 5.6, the tendency of buyout investors to pursue dual-track divestment processes has also been subject to multiple regression analysis attempting to identify statistically significant relationships to the list of independent variables set out in regulations ‘S’ to ‘K’ of the SEC. The online version of the ‘Securities Lawyer’s Deskbook’ published by ‘The University of Cincinnati, College of Law’ provides a review of the relevant provisions and their history (http://www.law.uc.edu/CCL/regS-K/).
section 5.3.4. In this analysis, the proportion of divestments that involved a dual- or multi-track exit process out of the total pool of completed divestments of individual buyout investors (DUALTRACK) served as dependent variable.

Applying the same analytical approach as pursued throughout the previous part of the empirical analysis results in following regression model for the proportion of dual-track exits:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Relation</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Model statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>0.8973</td>
<td>2.01</td>
<td>Observations: 40</td>
</tr>
<tr>
<td>MGTREPLACE</td>
<td>+</td>
<td>0.4684</td>
<td>**3.19</td>
<td>R^2: 45.55%</td>
</tr>
<tr>
<td>SYND</td>
<td>+</td>
<td>0.2425</td>
<td>**2.21</td>
<td>Adjusted R^2: 37.54%</td>
</tr>
<tr>
<td>VOLMGT</td>
<td>-</td>
<td>-0.0001</td>
<td>**1.70</td>
<td>F value: 5.68***</td>
</tr>
<tr>
<td>FUNDSIZE</td>
<td>+</td>
<td>0.0004</td>
<td>**2.46</td>
<td>F critical (5%): 4.48</td>
</tr>
<tr>
<td>PROPTS</td>
<td>-</td>
<td>-0.0128</td>
<td>**2.75</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance levels are denoted by: * for 15%, ** for 10%, *** for 5%.

Exhibit 106. Multiple regression results for the proportion of dual-track exits.
Source: Own analysis based on survey data.

The resulting multiple regression includes 5 independent variables, each significant at a 5% level. The model achieves a coefficient of determination \( R^2 \) of 45.6%, with a \( R^2 \) adjusted for degrees of freedom of 37.5%. The overall model results are significant at a 5% level, as demonstrated in the summary table above.

The results demonstrate a significant positive relationship to buyout investors’ tendency to replace portfolio companies executives, suggesting that firms, which frequently change senior management prior to an exit are prone to conduct dual-track procedures. As argued and empirically supported before, the replacement of executives tends to be associated with buyout firms that frequently perform secondary buyouts and IPOs exits rather than trade sales. Given that in most dual-track exit processes an IPO is one of the divestment alternatives to be prepared, private equity investors pay great attention to the profile and skill sets of executives in light of anticipated institutional investors’ scrutiny and demands. The negative relationship to the proportion of trade sale exits in buyout firms’ pool of completed exits (PROPTS) further reinforces this argument.

Interesting is the positive relationship to the tendency of buyout firms to invest in a syndicate alongside other investors (SYND), rather than on their own. This finding suggests that a group of private equity firms are even more concentrated on value maximisation and competitive dynamics in a sale process than buyout investors acting alone.

The contrasting direction of the relationships to VOLMGT and FUNDSIZE are again difficult to interpret. The model proposes that buyout firms with substantial capital under
management are less likely to run dual- or multi-track exit processes, while on the other hand firms with large individual funds are more likely to do so. These results have to be seen in the context of the sample characteristics explained before.\textsuperscript{484} The positive relationship to $FUNDSIZE$ is intuitive, as large fund sizes are associated with larger portfolio investments for which an IPO option might be more feasible than for smaller portfolio firms. As LIAN (2005, pp. 2-3) indicates in the context of non-private equity specific IPO processes, due to the substantial execution risk of public offerings relating to capital market movements, more and more issuer candidates prepare M&A processes simultaneously. From this perspective, one could have expected a significant positive relationship between $DUALTRACK$ and the proportion of IPO exits ($PROP IPO$), which could not be confirmed. BAKER and MCKENZIE’s (2005) finding that most dual-track procedures ultimately result in M&A transactions provides an explanation.

5.7.3 Key determinants underlying decisions for multi-track exits

Unlike the hypothesis driven research approach for the assessment of factors impacting decisions as to the timing of divestments and the choice of exit routes, this analysis again adopts an exploratory lens, given the lack of scientific concepts relevant to dual-track exits. Buyout firms were asked in the survey to evaluate the importance of seven factors that were implied by BAKER and MCKENZIE (2005), LIAN (2005) and confirmed by practitioners in a series of expert interviews as relevant for decisions to pursue more exit than just one divestment routes in parallel.\textsuperscript{485}

The list of determinants captures the two key advantages of dual-track processes, the value generation through reinforcing competitive dynamics in a sale process and an enhanced execution certainty when more than one exit channel are prepared and pursued until close to the eventual completion of a transaction. Furthermore, the profile of likely bidders is included as a tested factor. Based on feedback obtained in expert interviews, the bidder universe requires careful assessment prior to launching and particularly communicating a dual-track process. Especially strategic buyers are often unwilling to commit necessary resources to highly competitive sale processes, which could cause detrimental effects on the competitive dynamics in the process. In addition, a widespread set of interested potential buyers might make a public listing process unnecessary, as the scope of the bidder universe might suffice to create appropriate competitive tension. Beyond the two key advantages and

\textsuperscript{484} Several of the largest mainly US controlled buyout firms conducted a high number of sales to financial investors but also a substantial number of IPOs in single-track processes, while operating comparatively smaller individual funds than other firms in the sample.

\textsuperscript{485} It is important to mention that also due the lack of significant correlations between the assigned ranks for the tested factors and the private equity firm characteristics defined in section 5.3.4, a segmentation of the sample according to characteristics does not contribute to meaningful explanation of differences in the ranking of the tested factors.
the consideration of the profile of the bidder universe, the list of factors includes four key disadvantages: The incremental usage of portfolio companies’ executives time, incremental overall time requirements for the preparation and execution of a dual-track process, incremental transaction costs and lastly, the risk of discouraging potential buyers to bid in a highly competitive process, a consideration that relates to a certain extent to the profile of bidders.

It is also important to note that the determinants confirmed as relevant for decisions about the choice of exit route and process are also directly relevant to this area of research, which is an extension to questions about the choice of divestment alternatives. Survey responses and expert interviews have confirmed the particular importance of the state of the capital market environment for dual-track exit processes. This seems intuitive, given that at least one alternative in multi-track exit processes tends to relate to either equity (IPO) or debt capital markets (recapitalisation).

Summarising the results, the exhibit below highlights that the two key advantages are regarded as crucial for decisions to pursue a dual- or multi-track process. 91% of the sample consider value generation through reinforcing competitive dynamics as important or even highly important considerations. On the scale ranging from 0 (irrelevant) to 4 (highly important), this factor is rated at a mean of 3.3 and a median of 3.0. Worth noting is the low standard deviation of 0.7 in the sample of 46 buyout investors, who provided complete answers to this part in the survey. 76% mark the enhancement of execution certainty at least as important at a mean rank of 3.0, a median of 3.0 and a standard deviation of 0.9. In line with expectations, the relevance of the bidder profile has been confirmed with 71% of responding buyout firms acknowledging this consideration at least as relevant at a mean rank of importance of 2.3, a median of 2.0 and a standard deviation of 1.1.

486 Please refer to section 5.5 for a discussion of and empirical results for determinants impacting decisions about the choice of exit routes and process styles.
Conversely to the clear support for the first three tested factors, the four key disadvantages were assigned lower ranks of importance. Both the effect of a dual-track process on the overall exit process duration and the incremental requirements for portfolio firms’ managements’ time are considered as relevant aspects at mean ranks of 1.8, medians at 2.0 and standard deviations of 1.0 and 1.2, respectively. Practitioners argue that the overall duration of exit processes is especially relevant in the context of execution certainty as shorter intervals from divestment process launch to completion benefit in better visibility of the capital market and M&A environment. Private equity firms can be understood to be willing to accept a trade-off between increased execution certainty due to the retention of more than one exit channel until close before transaction completion on the one hand and a longer process duration on the other hand.
In line with the low results for the importance of transaction costs in decisions on the choice of exit routes presented in section 5.5.3, only 40% of the buyout investors sample in consider incremental transaction costs in relation to dual-track exit procedures as relevant. This factor receives a mean rank of 1.3, a median of 1.0 at a standard deviation of 1.0.

60% of investors in the sample acknowledge that the risk of discouraging bidders given the highly competitive nature of dual-track processes is at least relevant, however only 20% consider it as important or highly important. This factor is assessed at a mean rank of 1.7, a median of 2.0 and a standard deviation of 1.0. This aspect has been further examined, which will be discussed henceforth.

5.7.4 A note on the downsides – the risk of discouraging bidders
The risk of discouraging bidders has been further explored, asking the sample of buyout investors whether they have abstained from bidding in dual-track processes, hosted by other financial investors in the past, solely due the highly competitive nature of dual-track processes in times when capital markets would credibly provide for an attractive exit alternative. The relevance of this test has to be viewed in the context of the importance of secondary buyouts in recent years. Financial sponsors themselves have evolved to key

487 Please refer to section 2.2.5.1 for a introductory discussion of secondary buyouts.
buyers of already private equity owned companies and thus require careful consideration when planning divestments.

The results stress the critical nature of this aspect, as 47% of the buyout investors responding to this question answered that they have abstained from bidding for private equity owned assets which were sold in dual-track exit procedures, particularly due to the competitive tension in such processes.

![Bar chart](image)

Exhibit 109. Distribution of responses whether buyout investors have in the past abstained from bidding in dual-track exits of other financial investors, due to the highly competitive nature of these processes (N=38).

Source: Own chart based on survey data.

Linking back to the factor assessment presented before, this suggests that buyout investors underestimate the risk of discouraging potential bidders from participating in such sale processes, which might compromise the positive effects on value maximisation. The highly competitive nature, which is aimed for in dual-track processes, leads to a lower likelihood of a successful purchase completion anticipated by individual bidders. As a participation in any auction process for a majority stake in a company is expensive and arising costs are not refundable, potential buyers might not be willing to commit to a process, if they expect the risk of a failing bid is not outweighed by the probability adjusted potential benefits of a successful acquisition.

While a generalisation of this finding to the overall risk of discouraging any type of potential buyers through the reinforced competitive dynamics of dual- and multi-track exit

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488 Due to the time-compressed nature of most organised auction processes, bidders are often required to outsource substantial parts of necessary due diligence. Professional advisers, lawyers and consultants supporting bidders’ efforts prior to submitting an offer for a company are frequently remunerated unconditional of the outcome of such bid. Please refer to section 4.2.3 for a discussion of the role of professional advisers in exit processes and their typical fee and compensation structure.
processes seems difficult, the result highlights that this concern should at least be taken seriously and accounted for prior to embarking on such processes.

5.7.4.1 Success factors of dual track exits
The results presented above and the discussion provided in section 4.2.5 have already demonstrated that to be able to reap advantages of dual- and multi-track divestment processes several potential traps and pitfalls demand attention and management. BAKER and MCKENZIE (2005, p. 18) suggest that firstly, the timing of communicating the dual-track nature of the process to capital market and M&A bidders and secondly, the timing of abandoning a track to only pursue with a one track strategy to deal completion requires utmost attention and diligent planning.

As figuratively depicted in the exhibit below, balancing the requirements of an IPO and a trade sale process, respectively, can be considered as a key to achieve a successful divestment in dual-track procedures. Of special importance is the protection of the company’s and the vendor’s interest throughout the process, as well as the provision of protection arrangements tackling the risks attached to the abortion of a highly publicised IPO process.

Exhibit 110. Managing successful dual track exit processes.
Source: Own illustration based on BAKER and MCKENZIE (2005, p. 18).

An examination of several large exit executions in Europe reveals that ‘secret’ or ‘hidden’ dual-track processes are often pursued. This means that the parallel preparation of an IPO process is not communicated to bidders. Necessary requirements of a public listing,
particularly public standard audited financial statements and large parts of an offering prospectus are being prepared, however, a formal listing application with a stock exchange or regulatory body is not filed initially. In this scenario, the IPO track does not serve the purpose of increasing competitive dynamics in an auction, but rather represents a fall-back solution, which could be quickly executed in case all M&A offers are unsatisfactory and the public equity markets permit attractive valuations. Even though such procedures are easier to manage as regulatory requirements governing IPOs do not influence the whole process, keeping the preparations of a listing in the dark demands care.489

5.7.5 Summary and discussion

Pursuing more than one exit route when planning to divest an investment has gradually become a popular practice with European buyout investors, in line with strengthening public equity markets and favourable debt capital markets conditions in recent years. Particularly for the buyout segment, dealing with comparatively larger portfolio firms, the approach to conduct preparations for an IPO and/ or a dividend recapitalisation simultaneously to an M&A auction process has been applied by a growing number of investors. 57% of buyout investors responding in the survey marked that they have already conducted dual-track processes in at least 25% of past exits.490 Despite the growing importance of dual-track divestment processes not only to the private equity industry but also corporations selling businesses or divisions, this field still lacks academic focus (LIAN 2005, pp. 2-3).

A statistical analysis relating buyout investors’ tendency to perform a dual- or multi-track approach to the parameters and characteristics available in the dataset491 detects significant relationships to a number of variables. Particularly conclusive are positive relationships to the tendency to replace senior executive management at portfolio firms prior to an exit (MGTREPLACE), the frequency that buyout firms invest in syndicates (SYND), and the average size of individual funds (FUNDSIZE). Interesting is also the negative relationship to the proportion of trade sales in buyout investors’ pool of completed exits (PROPTS), suggesting that firms that historically sold most of investments through trade sales are less likely to commit to dual-track procedures. This argument supports comments by LENOIR (2003, pp. 242-244) that the operational strategy pursued with a portfolio company typically

489 Based on feedback from expert interviews.
490 BAKER and MCKENZIE (2005, p. 15) argue that the timing of communication of the dual-track nature of a process to bidders is highly critical. Practitioners in expert interviews admitted that many exit processes start off as secret dual-track procedures, whereby bidders in an M&A process are not informed that another exit channel process is pursued in parallel, in order to minimise the risk of discouraging bidders. Frequently preparations of alternative divestment tracks can be stopped following firm indications of attractive offers by M&A bidders, ideally prior to the need for the disclosure of the dual-track nature of the sale process. However, legal disclosure requirements in connection with a public listing can impose the necessity for an upfront communication to bidders.
491 Variables in the dataset are listed and defined in section 5.3.4.
has to be adapted early on in an investment accordingly whether a sale to a strategic buyer or an IPO is intended to be pursued. This implies that the chances for a clear trade sale and IPOs are often mutually exclusive, which can make a dual-track process unnecessary due to a lack of credibility.

Survey results regarding the importance of considerations underpinning a decision for a dual-track approach confirm that aspects of value generation through reinforcing competitive tensions and the enhancement of execution certainty are key motivations. In contrast, disadvantages and obstacles of dual-processes are overall considered less important, although implications on process duration and time requirements are acknowledged as relevant aspects. Also considered as relevant is the risk of discouraging potential bidders due to the highly competitive nature of such a process.

Given the growing importance of secondary buyouts, where buyout firms act as purchasers of already private equity owned assets, the survey asked whether buyout firms have in the past abstained from bidding in competitive dual-track processes. 47% of respondents replied that they have already withheld from participating in such processes, solely due the high competitive tension and the reduced likelihood to achieve a successful completion at attractive terms. This result implies that the pursuit of a dual-track approach reduces the chances for a secondary buyout. While the findings cannot easily be generalised for a wider scope of bidders, the results highlight that the increased competitive dynamics aimed for in such a process can also be excessive and might even cause detrimental effects in case of a resulting weak participation in a sale process.

These analyses aimed to contribute a few elements for a better understanding of dual-track exit processes. However, still a lot of aspects in this field still require detailed examination. Given its importance to a wide range of sellers of businesses, an empirical analysis about the value generation effects of such approaches appear highly relevant. In a buyout market context, the difficulty to obtain data particularly about the value of realised investments poses an obstacle to such an analysis. With the maturation of the industry and an increasing willingness of large investors in private equity funds and also funds-of-funds to disclose details about individual funds’ performance such examination might be feasible in the nearer future.
5.8 Changes in the private equity environment and exit behaviour

Recently published practitioners’ literature discussing a ‘convergence’ of private equity and hedge funds argues that not only the types and structures of effected investments are starting to overlap, but also that investment behaviour of the two types of funds is becoming more similar (CAMPBELL and SPIEGEL 2005). MOONEY and SCHOTTENSTEIN (2005) also suggest that traditional private equity houses focus more and more on efficient portfolio management with the intention to shorten investment holding periods and exit investments faster than in the past, in line with private equity commitments by hedge funds’, which also target a short investment duration. As hedge funds typically lack the experience of private equity houses with regard to managing and enhancing the operations of businesses, they are assumed to focus on quickly and opportunistically exiting investments.

5.8.1 Research rationale and hypotheses

The core objective of the analysis in this part is to evaluate the claim that holding periods of private equity investments are getting shorter reflecting on the one hand the entrance of hedge funds in the private equity market and on the other hand the above mentioned trend that private equity funds adopt a more ‘pro-active’ portfolio management approach aiming to reduce investment periods.492

In accordance with the overall focus of this dissertation, the analysis is concentrating on holding periods of leveraged buyout transactions with a minimum transaction value of €100 million that have been exited over the course of the 7.5 year period from January 1998 to June 2005. Furthermore, the influence of portfolio company size on holding periods is being assessed following the notion that larger transactions tend to attract more interest of hedge funds that strive for quick exits and also private equity funds would focus on faster divestments of large transactions, given the high importance of large deals to the overall fund performance and reputation building for follow-on funds (LJUNGQUIST and RICHARDSON 2003).

As practitioners comment that the private equity industry has been impacted by hedge funds particularly after the technology stock market crisis in 2000 / 2001, comparisons of transactions in the years 1998 to 2001 and 2002 to 2005 have been performed.

Based on the arguments above, three hypotheses have been developed and form the frame of the analysis:

492 Please refer to section 4.2.1 for a discussion of ‘pro-active’ portfolio management for private equity firms. Also refer to LIEBER (2004) for a comprehensive note on this topic.
**H3a:** Average holding periods of buyout private equity investments have declined over the past eight years.

**H3b:** Holding periods of buyout private equity investments have been shorter following the technology stock market crisis (January 2002 to June 2005) than they have been before (January 1998 to December 2001).

**H3c:** There is a significant negative relationship between the size of a portfolio company (measured in value terms at time of exit) and the holding period.

### 5.8.2 Data sources and procedure
The underlying data basis for this analysis differs from the dataset used for the other parts of the empirical analysis and stems from the ‘Mergermarket’ and ‘VentureXpert’ databases.

Over the period from 1 January 1998 to 15 June 2005, MERGER MARKET (2005) lists a total of 434 exit transactions of leveraged buyouts exceeding a transaction value of €100 million, of which 332 took place from the beginning of 2002 until June 2005. All transactions have a European angle involving either a European portfolio company or a European buyer or seller of the company. The Mergermarket database does not cover exit transactions prior to 1998. The VentureXpert database provides information about the initial investments of leveraged buyout transactions acquired prior to 1998, necessary to compute holding periods. Combined both databases provide consistent details regarding initial investment date, exit completion date and exit transaction value for 210 transactions, of which 52 were exited in the years from 1998 to 2001 and 158 in the period from 2002 to June 2005. Overall 13 portfolio companies were sold by hedge funds. The characteristics of the analysed transactions are summarised below.

### 5.8.3 Data characteristics
The sample consists of 210 exit transactions. The subsequent table sets forth a breakdown of transactions by years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Exits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>9</td>
</tr>
<tr>
<td>1999</td>
<td>10</td>
</tr>
<tr>
<td>2000</td>
<td>18</td>
</tr>
<tr>
<td>2001</td>
<td>15</td>
</tr>
<tr>
<td>2002</td>
<td>24</td>
</tr>
<tr>
<td>2003</td>
<td>32</td>
</tr>
<tr>
<td>2004</td>
<td>66</td>
</tr>
<tr>
<td>2005</td>
<td>36</td>
</tr>
</tbody>
</table>

Exhibit 111. Exit transactions by years. Source: Own analysis.

As illustrated in the exhibit below, the size of the transactions in the sample varies substantially in a range between €100 million and €3.5 billion. The average across the years, however, meanders around or below the €0.5 billion mark. Further details regarding holding periods will be presented in the following sub-section.
5.8.4 Analytical assessment
a) Hypothesis $H3a$

In order to assess the claims established in the first two hypotheses, a simple statistical analysis of holding periods appears to be helpful. As the exhibit below plots clearly, there does not seem to be a trend of a shortening in investment holding periods. Both the mean as well as the median curve in the centre of the chart depict rather an upwards trend in the length of holding periods.

Average holding periods in the sample have increased from 1998 to 2001, decreased in 2002 and again increased in the years thereafter. On the basis of the sample data, $H3a$ is rejected. Given that there is clearly no trend of declining holding periods visible, no further statistical tests are deemed necessary to assess this claim.

Exhibit 112. Transaction value statistics. Source: Own chart.
b) Hypothesis $H3b$

For the purpose of assessing $H3b$, the sample is divided into two groups, one block comprising the 52 transactions exited between January 1998 and December 2001 and one block including the 158 transactions divested in the period between January 2002 and June 2005. As demonstrated in the exhibit below, transactions included in group 2 (2002 to 2005) are characterised by longer rather than shorter holding periods as suggested in $H3b$. On the basis of this analysis $H3b$ is rejected.

<table>
<thead>
<tr>
<th></th>
<th>Group 1 1998-2001</th>
<th>Group 2 2002-2005</th>
<th>Difference Group 2 - 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of exits</td>
<td>52</td>
<td>158</td>
<td></td>
</tr>
<tr>
<td>Holding period means (years)</td>
<td>2.76</td>
<td>3.53</td>
<td>0.78</td>
</tr>
<tr>
<td>Holding period medians (years)</td>
<td>2.44</td>
<td>3.36</td>
<td>0.93</td>
</tr>
<tr>
<td>Maximum holding period (years)</td>
<td>6.95</td>
<td>14.45</td>
<td>7.50</td>
</tr>
<tr>
<td>Minimum holding period (years)</td>
<td>0.62</td>
<td>0.39</td>
<td>-0.23</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>1.61</td>
<td>1.84</td>
<td>0.23</td>
</tr>
<tr>
<td>Sum of variances</td>
<td>132.35</td>
<td>530.92</td>
<td>398.57</td>
</tr>
</tbody>
</table>

Exhibit 114. Transaction group comparison. Source: Own chart.

c) Hypothesis $H3c$

In order to assess a potential relationship of the portfolio company size in value terms and investment holding period, the principles of a linear regression have been applied. $^493$

$^493$ The simple regression model is set forth in the subsequent equation:

$$H_i = \alpha + \beta V_i + u_i.$$  

In this regression model, the dependent variable $H_i$ denotes the holding period in years, with $i$ indicating data points from 1 to 210 for the 7.5 years period from January 1998 to June 2005.
When plotting holding periods against deal value on a chart, it becomes apparent that a high explanatory power for holding periods of a simple regression model only involving deal value as independent variable is unlikely. The following exhibit provides these charts for the two distinct periods analysed.

Exhibit 115. Deal value and holding period relationship. Source: Own chart.

Results of separate regressions for the two groups as well as a regression capturing all data points reveal that the explanatory power of deal value for holding periods is indeed limited. The summary results of these three regression models are presented below.

1. Regression comprising the whole dataset. 210 transactions from 1998 to 2005:
   \[ H_i = 3.4156 - 0.0003273 \times V_i + u \]
   \[ R^2: 0.01\% \quad t: 0.144 \text{ (not significant)} \]

2. Regression comprising the dataset of group 1. 52 transactions from 1998 to 2001:
   \[ H_i = 2.6029 + 0.0004828 \times V_i + u \]
   \[ R^2: 4.01\% \quad t: 1.260 \text{ (significant at 99% confidence interval)} \]

3. Regression comprising the dataset of group 2. 158 transactions from January 2002 to June 2005:
   \[ H_i = 3.6706 - 0.0002603 \times V_i + u \]
   \[ R^2: 0.57\% \quad t: 0.947 \text{ (significant at 95% confidence interval)} \]

As each of the three regressions lack significant explanatory power, \( H3c \) cannot be supported. Nevertheless, regressions 2 and 3 detect a significant relationship between deal value and holding period. Worth noting, however, is the fact that the direction of the

\( V_i \) represents the achieved transaction value at the time of exit of a portfolio company expressed in Euro millions. The term \( u \) represents a disturbance term, meaning the difference between predicted and empirical values that cannot be explained by the model. The term \( \alpha \) represents an intercept or constant, \( \beta_i \) is the regressor coefficient of the model.

The computations for the analysis in this part have been performed with the statistical software packages SPSS, version 13.0 and SimStat.
relationship in regressions 1 and 3 is as proposed in H3c, while it is the opposite in regression 2. This means that the significant negative relationship between deal value and holding periods cannot be confirmed.

### 5.8.5 Discussion of findings

Overall, the analysis rejects each of the three hypotheses. Based on the dataset of 210 leveraged buyout transactions that have been exited in the 7.5 year period from January 1998 to June 2005, a trend towards shorter holding periods cannot be confirmed.

The analysis regarding the evolution of holding periods also suggests that there is no structural decrease in investment holding periods after the technology stock market crisis in 2000/2001. Holding periods were shorter in the late 1990s which could be explained by private equity investors selling off portfolio companies opportunistically, benefiting from favourable stock market and M&A environment conditions. Holding periods have increased since 2002 to 3 to 4 years on average, which is in line with the 3 to 5 year horizon most leveraged buyout private equity investors target (i.e., GOMPERS and LERNER 2004).

This does not suggest that increased competition with hedge funds has materially altered the exit behaviour of European private equity investors. With hedge funds growing their share in private equity investments this picture might change. Nevertheless, the analysis, that still has to be viewed cautiously in the light of several limitations, proposes that the core notion and also distinction of private equity funds – ‘creating’ rather than just ‘finding’ value still takes time, irrespectively of the role of hedge funds in this industry.

As far as the relationship between deal value and holding period is concerned, only the significance of a relationship can cautiously be supported, nevertheless the direction of the relationship is not entirely clear. While the regression model for transactions between 1998 and 2001 suggest a positive relationship, the model for transactions between 2002 and June 2005 confirms the expected negative relationship. This suggests that at least in recent years larger investments have been exited faster. The analysis again has to be strongly moderated in the context of overall insignificant regression model results and a low representation of hedge funds exiting private equity firms in the sample.

With more hedge funds getting actively involved in buyout transactions, also their share in exits will increase. The author expects that in line with an increased share of private equity assets held by hedge funds that feel particularly attracted by large scale investments in mature firms, the negative

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494 Only in 6% of the transactions in the sample hedge funds acted as sellers. The author believes that this proportion is not sample specific for the period analysed but probably reflects the overall exit environment in these years.
relationship between portfolio company size (in value terms) and investment duration might become stronger.

Overall, the results seem to suggest that traditional private equity players do not fully throw all their principles over board, despite increased competition linked to hedge funds on two levels. Based on the findings, the author advocates a careful application of the term ‘convergence’. While recent practitioner publications propose a broad definition (i.e., MOONEY and SCHOTTENSTEIN 2005), the author cautiously suggests that the term ‘convergence’ might be more applicable with regard to the type and structure of investments rather than already to the investment behaviour and the strategic approach concerning portfolio investments.

5.8.6 Specific limitations
In the author’s opinion there are several limitations specifically to this part of the study. First, the analysis is done on the basis of a sample comprising 210 transactions over 7.5 years. While practitioners perceive the MERGERMARKET and VentureXpert transaction databases as a reliable tools to track completed transactions, the database only provided consistent detailed data for about 50% of all listed transactions. Also the sample is skewed towards the recent past. There are 3 times as many transactions in the sample conducted in the past 3.5 years than in the period from 1998 to 2001. Even though it is difficult to firmly judge if the sample used is representative, the author believes that due to the fact that two distinct databases have been used to cross-check and confirm the validity of data and the nature of the transactions is diverse with regard to size, exit type and holding period, the sample should permit an appropriate reflection of the leveraged buyout exit market with a focus on Europe. Both data sources are widely used and accepted by practitioners and the academic community.

When looking at private equity exits on a completed transaction basis, like in this study, the analysis is likely to suffer from survivorship bias. Portfolio investments that fail in performance and are written off or kept in the portfolio as ‘living deads’ (CUMMING and MACINTOSH 2003) are not recorded in transaction databases. This means for instance that the average holding periods reported in this study most likely underestimate the holding periods including less successful investments. This is a well known phenomenon also in the context of assessing private equity industry performance and there is limited scope to adjust

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495 First, in bidding for assets and second in attracting new capital from investors allocating funds to ‘alternative’ asset classes, whereby hedge funds and private equity funds set themselves return benchmarks to be met. Please refer to section 2.1.6 for a discussion of inter-relations between private equity and hedge funds.
for this issue (LJUNGQUIST and RICHARDSON 2003). However, one has to be aware of this concern.

Third, the provided interpretation and generalisation of the results obtained might not capture all factors of relevance. However, the author believes that a justifiable, logical reasoning has been provided.

5.9 Exit trends in the context of recent buyout funds performance

As highlighted in section 2.2.5, the private equity industry and the buyout segment in particular has been subject to substantial change in the past years. A number of key trends alter the industry’s environment through growing competition in light of a rapid maturation. Thus, any analysis in this field has to take into account the highly dynamic nature of this market, for example through relating obtained findings to evolving performance data.

Given the still high in-transparency of the industry and buyout firms’ attitudes and policies not to openly disclose returns, makes it at this point in time virtually impossible to obtain consistent and reliable performance data for each of the investors that have participated in the survey. However, in order to bring the provided analysis about exit characteristics and preferences into a dynamic context, the author has compiled aggregated performance data for the European buyout market for the 10 year period 1995 through to 2004.496

As the charts set out in the exhibits below illustrate, the European buyout segment presented sharply declining annual returns497 following a peak in 1999. One year returns declined to a 10 year low in 2002 of –3.2% and showed steep recovery to 27.8% in 2004. However, given the long-term nature of investors’ commitments to private equity funds and the illiquidity of portfolio assets held by buyout investors, buyout funds’ performance is usually measured by 5 years rolling average IRRs or by cumulative IRR returns since the inception of funds, also plotted in the charts below.498

496 Performance data has been compiled from annual performance review notes published by the ‘European Private Equity and Venture Capital Association’ (EVCA) for the period from 1995 to 2004. The performance review reports have been accessed online under: http://www.evca.com/html/investors/inv_performance.asp on 2 December 2005.
497 Returns presented throughout this section are defined as cash flow based returns to investors of private equity funds net of fees. Please refer to section 2.1.8.2 for a detailed discussion of risk and return metrics relevant to assess private equity performance.
498 The full summary performance table based on annual performance reviews published by EVCA is set out below:
Both the 5 year rolling IRR curve and the line representing the pooled IRR since inception of funds demonstrate that longer term returns of European buyout investors are still well below the 15% to 20% annual rate of return that has been traditionally expected from limited partners.
Similarly, looking at the evolution of fund values yields similar results. The exhibit below depicts funds’ performance splitting the achieved value into the percentage of capital that has already been returned to funds’ investors and the value of the funds’ actual investments relative to the initially committed capital.

The charts underline that European buyout investors are under pressure to enhance returns to meet their capital contributors’ expectations and to be able to guarantee future fundraisings, which are crucial for their continued existence. Due to this pressure, which is reinforced by increased competition for new investments that ultimately leads to more
expensive acquisitions (GOMPERS and LERNER 2000), buyout investors are forced to concentrate on value generation not only through enhancing portfolio firms’ profitability and performance but also to optimise exit processes.

The results of this study stress that buyout investors are increasingly focused on improving and securing divestment success. The high ranks of importance attributed to execution certainty aspects and the high proportion of investors that are already pursuing dual-track approaches in order to spark competitive dynamics in a sale process and reduce the risk of failing executions are indicators supporting the relevance of this trend.

Furthermore, with a progressing maturation of the industry and a growing sophistication of investors in private equity funds, buyout investors are required to deliver more predictable and constant returns, which demands more structured, ‘pro-active’ and exit-oriented approaches towards portfolio management. Many practitioners still acknowledge a lack of structured portfolio management but also see the critical need for improvement in light of industry environment and performance evolution.

5.10 Limitations of analysis

The obtained and derived findings presented throughout this section have to be viewed in the context of several limitations. Given that a substantial part of the dataset has been obtained through survey questionnaire responses, a number of considerations need to be taken into account.

The survey sample results might be subject to biases. While sample biases pose a threat to the validity of any survey-based analysis, the author views that the obtained sample of 56 buyout investors provides a fair reflection of the buyout firm universe, capturing more than quarter of all relevant exit transactions in the past eight years. Nevertheless, it needs to be acknowledged that the survey sample only captures still active buyout firms, reflecting a certain degree of survivorship bias, as investors that have conducted relevant divestment transactions but failed or disappeared from the marketplace are not included. However,

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499 Please also refer to section 2.1.6 for a discussion of the increasing inter-relations between hedge funds and private equity markets. Furthermore, section 2.2.5 comments on the trends the buyout market is facing, ultimately putting pressure on the sustainability of the industry’s returns.

500 Please refer to HANSEN, HURWITZ and MADOW (1993. pp. 56-92) for a detailed discussion of potential biases and errors in survey sample results.

501 Also in this context are potential selection biases for the sample of structured expert interviews that were conducted prior to designing the survey. Arranging interviews, the sampling strategy has considered to capture both dynamics at investors focusing on the largest transactions in Europe as well as investors focusing on smaller transactions. which still meet a critical size requirement. Decision processes at both types of private equity firms were expected to show similar overall dynamics but potentially placing different weight on various factors.
given the orientation of the analysis towards successful exit management, the author does not regard survivorship bias as a relevant limitation to this study.

A much more applicable aspect is the fact that survey responses do not necessarily reflect reality, as participants might idealise their behaviour and orientations, which forms part of a group of possible response errors in surveys (HANSEN et al. 1993, pp. 82-92). The author acknowledges this aspect as a potential limitation to the findings and also regards the sample size, which is in line with or exceeds similar studies (i.e., KRAFT 2001, SCHWIENBACHER 2002, NAHATA 2004), as a mitigant to this concern. Moreover, other potential response errors, for example, due to misinterpretations or misunderstandings of questions in the survey, are regarded as unlikely due to pilot-testing of the survey questionnaire and feedback from participants. In addition, the survey responses reflect the judgement and views of individual private equity professionals and do not necessarily represent institutional standpoints of the firms they are affiliated with. This consideration adds a potential limitation to the analysis linking exit process styles and preferences to buyout firms’ characteristics.

Also in relation to the data collection, the analyses rely to a large extent on database information, mainly provided by ‘VentureXpert’ and ‘Mergermarket’. While both database providers are well-regarded by both academic researchers and practitioners, the author cannot warrant the accuracy and completeness of data supplied by these sources.

With regard to the data analysis, the author has applied a research approach that reflects the experience and recommendations of researchers who have contributed similar studies (i.e., CUMMING and MACINTOSH 2001, 2003b, SCHWIENBACHER 2002). While several statistical procedures were used to verify and confirm findings and conclusions, not all potentially viable research approaches have been pursued\textsuperscript{502}. This could have resulted in missing findings that could have been derived through other methods. Furthermore, the author views that the analysis of a number of case studies could have benefited the interpretation of results. However, given buyout investors’ preference not to disclose transaction-specific detailed information, which would have been necessary to deepen the findings, such an approach could not be pursued.

5.11 Summary and discussion

The empirical analysis has covered a number of aspects in relation to exit processes. The results confirmed several concepts and theories established in the context of the venture

\textsuperscript{502} Please refer to section 5.2 for a review of potentially viable alternative research approaches and methods.
capital industry, such as the importance of fundraising requirements for the timing of divestments (GOMPERS 1996) or the relevance of portfolio companies’ size for the choice of exit routes (RELANDER, SYRJANEN and MIETTINEN 1994, WRIGHT and ROBBIE 1998, HALL 2002). Conversely, the findings rejected the relevance of other venture capital-related concepts to the European buyout sector, such as the ‘value-add and monitoring cost’ concept, according to which resource constraints at private equity firms can trigger divestments (GIFFORD 1997, CUMMING and MACINTOSH 2001, 2003b), and transaction costs as a decision factor regarding the choice of exits channels (WALL and SMITH 1997, LESCHKE 2003). Results underline the importance of capital markets (both equity and debt capital markets) for investors and also stress the relevance of sector specific M&A environments when deciding how a portfolio firm should be divested.

Interesting is the strong execution risk-aversion indicated by buyout investors in the survey but also reflected in a clear preference of trade sales versus IPOs as well as a growing application of dual- or multi-track exit approaches. In contrast to survey results among US private equity investors, 48% of buyout investors in the sample mark that they have achieved the highest individual investment returns in their portfolio through trade sale rather than IPO exits.

Another key finding is that the close and early involvement of portfolio firms’ management teams has a positive impact on the speed and efficiency of a divestment execution. In this context, the results also demonstrate that the less buyout firms are involved hands-on in the operational and strategic leadership of their portfolio companies the stronger seems to be the dependence on executive management teams to achieve successful exits, which increases the likelihood for an IPO or sale to another financial investor rather than for a trade sale. This provides support for findings by NEUS and WALZ (2004).

Similarly, the results show that a higher proportion of truly independent directors, not affiliated with private equity owners, on portfolio firms’ boards facilitates quicker exit executions. This suggests that a broader representation of stakeholder interests on boards potentially can reduce delays in divestment processes due to negative reactions of non-equity stakeholders including strikes. Moreover, the results confirm comments by GERTNER and KAPLAN (1996), who argue that the number of meetings might be an inappropriate indicator as to how much work a board performs. Most communication prior to and during exit processes appears to take place informally and outside scheduled meetings. The results emphasise the significance of the link between corporate governance styles implemented by buyout firms for their portfolio companies and their exit behaviour.
Not surprising are the findings that more experienced buyout firms accomplish exits in a shorter period and find better access to the equity capital markets for listings of their portfolio firms. In addition, trade sale exits are completed in less time than IPO exits, confirming comments by WALL and SMITH (1997) and LESCHKE (2003). Worth highlighting is that the average number of portfolio companies covered by a partner in a buyout firm (COPERPA) has a significant influence on the speed of execution of divestments. Buyout firms with less firms covered by individual partners achieve quicker exit completions.

With regard to dual- and multi-track exit processes, an area that has not obtained academic attention yet, the results demonstrate that a large number of European buyout firms has already pursued such approaches, however mostly in secret, in order to avoid a number of disadvantages. This means that IPO or recapitalisation processes are pursued simultaneously to an M&A process, however, this is not communicated to M&A bidders initially. The alternative exit tracks are often abandoned without having been disclosed to bidders when serious and attractive offers are received. However, M&A bidders are informed about the fact that other exit options are pursued in case sparking competitive tension is deemed as necessary. Key motivations for such processes are the potential incremental value generation through reinforced competitive dynamics as well as an enhancement of execution certainty through maintaining flexibility as to how a divestment is effected up until a late stage in a process. Furthermore, when buyout firms invest in a syndicate of investors, dual- or multi-track exit processes are likely to be pursued.

Generally underestimated by buyout firms seems to be the risk of discouraging potential bidders from an expensive participation in auctions where a dual-track process is openly communicated, particularly because of IPO disclosure requirements. 47% of the buyout investors in the sample answered that they have abstained from bidding for firms that are sold by other financial investors in dual-track processes, explicitly due to the lower chances to complete an attractive acquisition given the high competitive tensions. This result suggests that the application of dual- or multi-track exit processes reduces the likelihood of a divestment through a secondary buyout.

Lastly, the empirical study examining the impact of market trends and the entry of hedge funds in the buyout market onto buyout investors’ exit behaviour demonstrates that the average investment holding period in the past years was rather constant, ranging between 3

503 Please refer to section 5.7.1.2 for a discussion of disadvantages and potential pitfalls in connection with dual- or multi-track divestment processes.
and 4 years. Based on a sample of 210 buyouts, divested in the period from January 1998 to June 2005, a transition from ‘traditional’ mid-term buyout investment behaviour to a short-term-oriented and purely opportunistic approach as often adopted by hedge funds in this private segment cannot be confirmed.

The findings confirm that European buyout firms are a heterogeneous class of investors, whose exit behaviour exhibits considerable differences to that of venture capitalists. The various statistical analyses applied for this study express systematic differences in relation to divestment preferences and styles within this private equity segment. A more comprehensive comparison between ‘traditional’ buyout investors and the growing number of hedge funds that is already active in this segment will be possible in the near future, once more data points about hedge funds’ exits of portfolio investments become available.
6 Conclusion

The objective of this work is to contribute to the understanding of decisions, styles and preferences in relation to exit processes for European buyout investments. A focus of the analysis has been set on decision determinants regarding exit processes, critically evaluating concepts and theories established and proven in studies which concentrate almost exclusively on the Northern American venture capital market. Additionally, relationships between the characteristics of buyout investors and their exit behaviour have been examined. While section 2 provided an introduction to the private equity industry, the leveraged buyout segment and also outlined basics about divestments, section 3 established the theoretical foundation for the empirical analysis and laid out a detailed review of relevant scientific studies. Section 4 dwelled into aspects to be considered at the various stages of typical exit processes and comparatively assessed different divestment alternatives such as trade sales and secondary buyouts, IPOs, buybacks, and recapitalisations. Building upon the first four sections, part 5 presented the empirical study, which is mainly based on a detailed dataset for a sample of 56 buyout investors.

Many parts of the analysis highlighted the dynamic nature of the buyout segment and argued that findings have to be interpreted in the context of rapid industry change and maturation, growing competition, and a pressure on returns. With investors in buyout funds becoming more and more sophisticated and demanding as far as the performance achieved vis-à-vis other alternative investment classes such as hedge funds is concerned, buyout firms have to transition from an often ‘opportunistic’ approach to a more structured, pro-active, and exit-oriented portfolio management to be able to guarantee optimal value generation in divestments. The results emphasise that an efficient exit candidate identification requires the close involvement of a portfolio company’s executive management team as their industry expertise and networks of contacts can contribute substantial value to a sale process. The findings also suggest that buyout investors who take into account other stakeholders’ interests, particularly the aspirations of management and staff, achieve quicker and more efficient exit completions. The commitment and support of portfolio companies’ management teams is indispensable for a successful exit. An implied conclusion is that a more balanced stakeholder approach has to be pursued by financial sponsors to ensure the long-term success of the private equity industry. The author supports comments expressed by CHAMBERS (2004, p. 4) that investor groups have to act

504 As mentioned in section 2.1.4.4. investors in buyout funds are typically limited partners in closed-end partnership funds.
505 Pro-active and exit-oriented portfolio management has been discussed in section 4.2.1.
following the maxim to enhance rather than to jeopardise the long-term prospects of their portfolio companies in order for the private equity industry to prosper and to find wider acceptance in Europe.

The results stress the critical role of the capital markets and industry specific M&A environment as well as portfolio companies’ historical and predicted financial performance as key value drivers for the buyout industry and as significant determinants for exit decisions.

Crucial for the success of a divestment is also a careful outsourcing of tasks to investment banks and professional advisers to limit the potential distraction of executives from their managerial duties to the marketing and execution phases of a divestment process. In addition, the careful communication to bidders as well as a portfolio firm’s other stakeholders, particularly employees, suppliers, and customers is of paramount importance for a successful exit. Moreover, the allocation of leadership responsibilities for a portfolio firm between buyout fund managers and executive management and other corporate governance aspects play a key role for the exit process management styles and divestment route preferences.

Fuelled by performance pressure, buyout investors exhibit a high degree of execution risk-aversion, which is also expressed in a clear preference of M&A exits, especially trade sales, to IPOs and a clear tendency to conduct dual- or multi-track exit processes to both optimise value generation through increasing competitive tensions and to enhance execution certainty. Financial sponsors acknowledge that the withdrawal of any exit process and particularly a cancellation of a publicly communicated IPO process can have substantial negative implications on another exit pursuit with the affected portfolio firm as well as their own reputation. The results reveal that many buyout investors organise secret dual-track approaches, initially not communicating the process style to M&A bidders in order to minimise the considerable disadvantages of such an approach. Buyout investors tend to underestimate the risk of discouraging bidders from a participation in auctions for portfolio companies which are divested through dual-track exit processes. The obtained findings argue that hosting an openly-communicated dual-track approach lowers the likelihood for a secondary buyout divestment. In order to achieve an optimal outcome with such a divestment strategy, a reinforcement of competitive dynamics should not compromise the scope and quality of a bidder universe. Dividend recapitalisations are increasingly pursued to relieve pressure for a timely exit and to set the stage for a subsequent divestment,
providing select publicity and testing a portfolio company’s appeal to the capital market and to lenders.

The empirical results emphasise that buyout firms form a heterogeneous group of investors, whose investment behaviour and motivations exhibit significant differences compared to early-stage-oriented venture capitalists. Although a number of concepts established and proven in a venture capital context are confirmed by this study506, several other key theories cannot be supported507. Based on these results, the author argues for a clearer separation of venture capitalists and buyout investors in academic studies. Furthermore, the analysis has demonstrated that the exit behaviour and process preferences of buyout investors can be systematically differentiated, based on various characteristics. Particularly profound results have been obtained for investors’ inclination to particular exit routes, their tendency to pursue a dual-track approach and the average duration of their divestment processes. Frequently neglected in previous studies, the source of funds managed by buyout investors also requires consideration when analysing exit behaviour.508

Moreover, based on an empirical analysis of the exit behaviour of hedge funds and ‘traditional’ private equity firms with a focus on investment duration509, the author advocates a careful application of the term ‘convergence’. While recent practitioner publications propose a broad definition (i.e., MOONEY and SCHOTTENSTEIN 2005), the author cautiously suggests that the term might be more applicable with regard to the type and structure of investments rather than already to the investment behaviour and the strategic approach concerning portfolio investments.

Although the results and interpretations are specific for the European buyout market, the author contends that the overall conclusions are also applicable to the US buyout market, which also faces substantial performance pressure and increasing competition, particularly from hedge funds directly investing in buyout assets. However, particularly in light of the

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506 Examples for venture capital concepts and findings that are confirmed by the results of this study include GOMPERS’ (1996) ‘grandstanding’ theory, which suggests a link between exits and fundraising requirements, and the relevance of portfolio company size as a determinant of exit route choice. indicated by WALL and SMITH (1997).

507 Examples for venture capital concepts and findings that cannot be supported by the results of this study include the ‘value-add and monitoring cost’ concept, according to which resource constraints at private equity firms can trigger divestments (GIFFORD 1997. CUMMING and MACINTOSH 2001. 2003b) and transaction costs as a decision factor regarding the choice of exits channel (WALL and SMITH 1997. LESCHKE 2003)

508 Several buyout funds which predominantly manage contributions from family trusts or pension funds stressed avoiding IPO exits for publicity reasons. deliberately keeping a low profile in the public domain. This indicates the scepticism and limited acceptance in the public domain that the European private equity industry faces. as important capital contributors still seek to avoid a public association with private equity funds.

509 The analysis of investment duration in buyout transactions by hedge funds and private equity firms has been set out in the section 5.8.
limitations to the empirical study outlined in section 5.10, the application of specific findings and obtained models to a different geographical context seems inappropriate.

This research aims to complement the still thin layer of academic literature on private equity exits, particularly on buyout investments. Moreover, this work is addressed to practitioners involved in buyout exit processes. Findings might be of interest to investment bankers mandated to advise private equity houses in divestment processes. Substantiating an independent perspective on the buyout industry’s priorities and preferences regarding exits as well as on its reaction towards competitive ‘multi-track’ sale procedures might be valuable for anticipating clients’ needs and for developing a sound argumentation backing exit strategy recommendations. In addition, a clearer understanding of how investor characteristics impact exit behaviour could be beneficial when analysing buyout firms’ portfolios in the pitching process for exit advisory mandates. Private equity firms might use the findings to benchmark their exit process management to an industry perspective. The author also sees the potential value of the findings for any party interested in acquiring a portfolio company from a buyout investor, be it a competitor firm, another private equity investor or a hedge fund. Anticipating and understanding the needs and priorities of the selling party in a process can provide a considerable advantage in negotiations.510

This study represents the first detailed analysis of European buyout exit process management and as such does not claim full coverage of all relevant issues. In the author’s opinion, several related aspects would represent fruitful areas for further research: First, linking buyout investors’ exit behaviour to their performance would substantially contribute to the understanding of exits and permit profound recommendations. However, such analysis is dependent on the access to performance data for each of the funds examined, which has proven to be virtually impossible at this point in time. However, with large limited partners and especially funds-of-funds striving for transparency in the private equity industry and increasingly welcoming external research, this might be possible in the near future. Second, a more detailed comparison of hedge funds and ‘traditional’ private equity firms’ exit behaviour would be interesting once hedge funds’ have further expanded into the buyout segment and have completed a larger number of divestments, compared to the still small number of their exits to date. This would enhance the significance of a ‘convergence’ analysis with regard to exit behaviour and process management styles. Third, this empirical analysis has examined the relevance of decision determinants for exit route choices in general and leaves room for further studies concentrating on decision patterns for specific

510 AIELLO and WATKINS (2000. pp. 100-107) provide a helpful guideline for the preparation of successful acquisition negotiations. supporting this argument.
exit channels. Moreover, the field of multi-track exit processes is clearly under-researched to date, opening up a forth area for future studies. An evaluation of the incremental value generation through the pursuit of more than one divestment route simultaneously would be of great interest to academic research and practitioners alike. The fact that dual-track processes are not always openly disclosed and the difficulty obtaining detailed process and valuation information pose obstacles, rendering such examination problematic. Fifth, a wide-spread review of portfolio companies’ financial performance during exit processes could help to validate concerns about the impact of a distraction of executive management from their managerial duties during times of a divestment. Lastly, a detailed comparison of the European and the US buyout market regarding exit process management would clarify the external validity and the potential to generalise more broadly from the European findings set out in this work.

Concluding this work with an outlook, the ongoing trends will likely drive a growing sophistication of buyout investors regarding their portfolio management practices and force fund managers to pursue more structured procedures identifying exit opportunities. There are clear signs indicating a rapid maturation of the buyout market. The significant change in the industry’s environment and the sharply rising influence of funds-of-funds⁵¹¹, already contributing a substantial share of capital to European buyout funds, are expected to lead to an increasing transparency of the industry and a more open disclosure of investment actions and performance. With increasing competition for buyout target companies and mounting pressure on returns, buyout firms need to optimise value generation not only through operative and strategic measures for their portfolio firms but also through enhancing their exit process management. The industry’s current high dependence on secondary buyouts, as confirmed by the sample used for the empirical analysis, raises further concerns regarding the medium- and longer-term sustainability of targeted returns.

Representing the first detailed research on European buyout investment exits, this work is designed to serve as a compendium of current scientific knowledge on this topic. Underpinned by empirical results, this work highlights the growing need for pro-active as well as thoroughly planned divestment strategies, efficient executions, and the importance of paying attention also to other stakeholders’ interests.

⁵¹¹ Funds-of-funds strongly demand a tradability of investments in private equity funds that is already gradually resulting in a ‘secondary market’ for shares in private equity funds (EVCA 2005c. pp. 17-21). This is expected to reinforce the trends to a more open disclosure of transaction details and individual funds’ performance data.
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List of abbreviations

AIM Alternative Investment Market
BDC Business development company
CAPM Capital asset pricing model
CEO Chief executive officer
CFO Chief financial officer
EASDAQ European Association of Securities Dealers Automated Quotation
EBITDA Earnings before interest, taxes, depreciation, and amortisation
et al. Et alii
etc. Et cetera
ERISA Employee Retirement Income Security Act (United States regulation)
EU European Union
EURIBOR European inter-bank offered rate
EVCA European Private Equity and Venture Capital Association
FIRREA Financial Institutions Reforms, Recovery and Enforcement Act (United States regulation)
FSA Financial Services Authority (United Kingdom regulator)
IPO Initial public offering
IRR Internal rate of return
LBO Leveraged buyout
LIBOR London inter-bank offered rate
LSE London Stock Exchange
M&A Mergers and acquisitions
MBO Management buyout
MBI Management buyin
NASDAQ National Association of Securities Dealers Automated Quotation
NVCA National Venture Capital Association
NYSE New York Stock Exchange
p.a. Per annum
PEPI Private Equity Performance Index
PIK Payment-in-kind
PME Public market equivalent
RDPC Ratio of distributions to paid-in capital
SEC Securities and Exchange Commission (United States regulator)
S&P Standard and Poor’s (rating agency)
<table>
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>SPA</td>
<td>Sale and purchase agreement</td>
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<td>StDev</td>
<td>Standard deviation</td>
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<td>US</td>
<td>United States of America</td>
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<tr>
<td>USM</td>
<td>Unlisted Securities Market</td>
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<td>VC</td>
<td>Venture capital</td>
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<tr>
<td>WACC</td>
<td>Weighted average cost of capital</td>
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Survey questionnaire

Private equity firm and exit characteristics

1. Please indicate the typical level of involvement and interaction of members of your firm in the activities of portfolio companies:
   - High (i.e. members directly involved in the management of a portfolio firm, operating partners, etc.)
   - Medium (i.e. regular monitoring, frequent board meetings, etc.)
   - Low (i.e. levels monitoring compared to supervisory board control of public firms)

2. Typical proportion of independent directors, not affiliated to your private equity firm, on portfolio company boards (in percent):______

3. Typical frequency of board meetings of portfolio companies:
   - Semi-annually
   - Quarterly
   - Monthly

4. How frequent have either the CEO or the CFO been changed during the investment holding period prior to exit historically (in percent of exited transactions):______

5. In general, what is your single preferred exit route to which your firm usually tends towards a priori:
   - Initial public offering
   - Recapitalization
   - Trade sale
   - No preferred single route
   - Sale to a financial investor (secondary buyout)
   - No opinion
   - Buyback of original owners

6. Which exit route has led to the highest individual returns historically in your portfolio:
   - Initial public offering
   - Recapitalization
   - Trade sale
   - No preferred route
   - Sale to a financial investor (secondary buyout)
   - No opinion
   - Buyback of original owners

7. In case of initial public offerings (should you have completed some) how many months on average did your organization retain an ownership stake in the portfolio company (including contractual lock-up periods):______

8. Assessing performance of individual investments and the overall fund, is there a focus on a particular metric:
   - Internal rate of return (IRR)
   - No preferred metric
   - Capital gain
   - No opinion
   - Money multiple of originally contributed capital

9. In your past exits, how long did the exit stage typically last (in months – starting when concrete exit process preparations begin):______

10. In your past exits, how often did you either lead or participate in a syndicate of private equity investors (in percent of exited transactions):______

Exit planning and process design

11. How did the factors listed below influence your decision on the timing of exits:
    Scale: From 1..highly important to 5 irrelevant.
### Degree of importance to timing decision

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<td>Investment duration limits</td>
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12. How did the factors listed below influence your decision regarding the choice of exit routes and the pursued exit process design (i.e. single or several exit routes prepared in parallel):

Scale: From 1..highly important to 5 irrelevant.

### Degree of importance to exit process decisions

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<td>Fundraising requirements – reputation building</td>
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<td>Other factors not listed:</td>
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13. In your past exits, to which extent did the goals and aspirations of portfolio companies’ management affect the final choice of exit route (in percent of exited transactions):

14. What statements apply usually to your organization with regard to planning exits and identifying exit opportunities:

- ☐ Exit strategy is already planned at time of acquisition
- ☐ Firms’ information systems and reporting standards are brought to public market standards prior to exit stage
- ☐ Each portfolio review involves an analysis of exit opportunities, potential buyers and/or public equity markets
- ☐ Portfolio companies’ strategy is likely to be steered actively in a direction that suit potential exit opportunities
- ☐ Advisers are involved or at least provide information regularly when reviewing exit opportunities
15. In your past exits, how often did you conduct processes preparing companies for at least two different potential exit options (i.e. sellside M&A process and IPO or recapitalization process), (in percent of exited transactions): ______

16. How do the listed factors and arguments influence the decision to conduct processes for several exit routes in parallel as opposed to only pursuing one exit track:
Scale: From 1..highly important to 5 irrelevant.

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<td>Enhanced execution certainty</td>
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<td>Profile of potential bidders</td>
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<td>Incremental usage of portfolio companies’ management time</td>
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<td>Incremental process time requirements</td>
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17. Has your firm abstained as a bidder from an auction process that is reinforced by a parallel IPO process in a strong public equity environment, due a highly competitive selling process, where it otherwise would have proceeded?
☐ Yes
☐ No
☐ No opinion
## List of interview partners

<table>
<thead>
<tr>
<th>Name</th>
<th>Firm</th>
<th>Position</th>
<th><strong>Location, Date</strong></th>
<th><strong>Duration</strong></th>
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<td>London, 8. Mar 2005</td>
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<td>Munich, 10. Mar 2005</td>
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<td></td>
<td></td>
<td></td>
<td>and phone interview 23. Mar 2005</td>
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<td>London, 15. Mar 2005</td>
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<td>Munich, 10. Mar 2005</td>
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<td>London, 22. Mar 2005</td>
<td>1.5 h</td>
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<td>London, 17. Mar</td>
<td>1.5 h</td>
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<td>London, 20. Feb 2005</td>
<td>2 h</td>
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<td>2 h</td>
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<td></td>
<td>Phone interview, 24. Mar 2005</td>
<td>0.5 h</td>
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*Note that details of interview partners have been redacted due to confidentiality issues.*
**List of buyout firms participating in survey**

<table>
<thead>
<tr>
<th>Firm Name</th>
<th>Firm Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>3TS Venture Partners</td>
<td>GMT Partners</td>
</tr>
<tr>
<td>Advent International</td>
<td>Hastings Fund Management (HFM)</td>
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<tr>
<td>Afinum</td>
<td>Hermes PE</td>
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<tr>
<td>Ahlstrom Capital</td>
<td>Innova Capital</td>
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<tr>
<td>Allianz Capital Partners</td>
<td>Investcorp</td>
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<td>Alpinvest</td>
<td>Investitori Associati</td>
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<tr>
<td>Andlinger Capital</td>
<td>IRRfc</td>
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<td>Apollo Capital Management</td>
<td>JPMorgan Partners</td>
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<tr>
<td>AXA Private Equity</td>
<td>Monitor Clipper Partners</td>
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<tr>
<td>Banca Intesa PE</td>
<td>Montagu Private Equity</td>
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<tr>
<td>BC Partners</td>
<td>Permira</td>
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<tr>
<td>The Blackstone Group</td>
<td>Platinum Capital</td>
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<tr>
<td>Blackstone Hedge Funds</td>
<td>Polaris</td>
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<tr>
<td>Bridgepoint Capital (formerly NatWest Partners)</td>
<td>PPMV</td>
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<tr>
<td>BS Private Equity</td>
<td>Questor Partners</td>
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<tr>
<td>CAI Funds</td>
<td>Residex Ventures</td>
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<td>Candover</td>
<td>Rhone Capital</td>
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<tr>
<td>Capvis</td>
<td>Sawmill Capital</td>
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<tr>
<td>Clayton, Dubilier &amp; Rice</td>
<td>Soros</td>
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<tr>
<td>Cerberus Capital Management</td>
<td>Star Capital</td>
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<td>Cinven</td>
<td>Vestar Partners</td>
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<td>Wyser Pratte &amp; Co.</td>
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<td>Cobalt Capital</td>
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<td>Crescent Europe</td>
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<td>Dinamia Capital</td>
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<td>Doughty Hanson</td>
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<td>ECI Partners</td>
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<td>Egeria Partners</td>
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<td>Enterprise Investors</td>
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<td>Fox Paine</td>
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<td>General Atlantic Partners</td>
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</table>
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Biography

Stefan Povaly, born in Austria, 1979, graduated at the University of Vienna with a Master of Science in business studies (Magister rer.soc.oec.) in 2001, having majored in corporate finance and capital markets. Subsequent to graduation, he joined JPMorgan investment banking in London concentrating on leveraged buyouts. Stefan Povaly started doctoral studies at the University of St. Gallen in autumn 2004 and conducted a research stay at the Harvard Business School in 2005, where he also completed an executive programme in finance. Beginning of 2006, he re-joined JPMorgan investment banking in London.