Nils Hoffmann

German Buyouts Adopting a Buy and Build Strategy

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Nils Hoffmann

German Buyouts Adopting a Buy and Build Strategy

Key Characteristics, Value Creation and Success Factors

With a foreword by Prof. Dr. Reinhart Schmidt

GABLER EDITION WISSENSCHAFT

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Foreword

Problems of buyouts on the one side and M&A on the other side have been often treated by the literature from theoretical and empirical view. But there is comparatively little knowledge concerning a new practice where investors combine buyouts with M&A via a so-called buy-and-build strategy. In Germany such strategies have been pursued from about 1998, since then the growth of private equity has pushed the interest in these strategies.

The author's professional experience and the access to special data resources have made possible investigating the phenomenon of buy-and-build strategies not only theoretically but also empirically. Until the end of 2003 the author has found 21 cases of buy-and-build strategies with a German platform company. The cases differ with respect to financing and capital structure, type of the buyer, and the buyer's motives. Moreover, there are different parties concerned like investors, funds of funds, private equity enterprises, and target companies. Thus, one can imagine the plurality of possible species.

The author has combined his expert knowledge with great effort, opening a new and sensible area for research in business administration. By applying case study research, the development of propositions, and the evaluation of a questionnaire the author was able to get interesting empirical results.

The identified key characteristics, the sources of value creation, and the derived success factors are of special importance for those who are dealing with buy-and-build strategies. I hope and wish that Nils Hoffmann's investigation will be useful for practitioners and stimulate empirical research on corporate strategy, as well.

Reinhart Schmidt

Preface

The completion of this dissertational thesis would not have been possible without the generous help of many people.

In particular, I owe a great debt to my supervisor Professor Dr Reinhart Schmidt for supervising my research project. His invaluable scientific advice and also his inspiring personal support significantly helped me in designing and compiling my work. Furthermore, I am very grateful that Professor Dr Gerhard Kraft and Professor Dr Müller-Stevens accepted to take on the role as co-assessors.

I would also like to thank all the private equity managers who provided valuable insights in personal discussions and took the time to participate at the case studies and/or questionnaire-based survey. Their contribution was a key prerequisite for the completion of my research project.

Furthermore, I benefited greatly from constructive ideas and personal support from my co-researchers, in particular Dr Achim Berg and Dr Christian Kühn. Special thanks go to Dr Klaus Mark und Dr Sven Pfleging for their critical feedback. Additionally, I cannot sufficiently acknowledge the generous support I have received from my employer McKinsey & Company, Inc.

Finally, I would like to express my gratitude to my parents for their enduring care, strong encouragement, and generous support during the course of my education.

Nils Hoffmann

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List of abbreviations

ARD	American Research and Development Corporation
BIMBO	Buyin Management Buyout
Bn	Billion
BVK	Bundesverband deutscher Kapitalbeteiligungsgesellschaften e.V.
CAGR	Compounded Annual Growth Rate
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
CMBOR	Centre for Management Buy-out Research
Co.	Company
CSF	Critical Success Factor
DCF	Discounted Cash Flow
Dipl.-Kfm.	Diplomkaufmann
EBIT	Earning Before Interest and Taxes
EBITDA	Earning Before Interest, Taxes, Depreciation, and Amortisation
EBO	Employee Buyout
e.g.	exempli gratia [for example]
et al.	Et alii [and others]
EUR	Euro
EVCA	European Private Equity and Venture Capital Association
FDIC	Federal Depository Insurance Corporation
FTC	Federal Trade Commission
GBP	British Pound
GNP	Gross National Product
HLTs	Highly Leveraged Transactions
IBO	Investor-led Buyout
i.e.	id est [that is]
IPO	Initial Public Offering

IRR	Internal Rate of Return
KKR	Kohlberg Kravis Roberts & Co.
LBO	Leveraged Buyout
LIBOR	London Inter-Bank Offered Rate
LMBO	Leveraged Management Buyout
LSE	London Stock Exchange
M	Million
M&A	Mergers & Acquisition(s)
MBI	Management Buyin
MBO	Management Buyout
MM	Modigliani/Miller
MLBO	Management Leveraged Buyout
NAV	Net Asset Value
NewCo	New Company
NPV	Net Present Value
NVCA	National Venture Capital Association
OBO	Owner Buyout
PE	Private Equity
SF	Success Factor
S&P 500	Standard & Poor's 500
SVA	Shareholder Value Approach
UK	United Kingdom
USA	United States of Americas
USD	United States Dollar
USM	Unlisted Securities Market
WACC	Weighted Average Cost of Capital

1. Introduction

1.1. Context of research topic

In recent years, the German market for whole company acquisitions by managers and/or private equity firms (so-called 'buyouts'[1]) has become much more developed. The total volume and the number of completed transactions have increased significantly (see table 1).

Table 1: Development of German buyout market, 1990-2002

	1990	1994	1998	2002	CAGR**
Total volume (EUR bn)	0.5	1.4	5.5	7.1	25%
Number of transactions*	37	87	86	96	8%

* Does not include privatisation buyouts in the eastern part of Germany after reunification
** Compounded Annual Growth Rate
Source: Author based on CMBOR (2003), p. 92.

Since the number of private equity firms has also gone up (mainly due to the market entry of international players), the intensity of competition has grown contemporaneously. As a consequence, private equity firms frequently face intense bidding competition for attractive target companies which has in turn led to higher acquisition prices. The utilisation of 'traditional' value drivers, such as financial engineering, organic growth, or improved operating profit margin, is sometimes no longer sufficient to get both the bid accepted and to achieve attractive returns.

This situation forces private equity firms to look for new value creation opportunities. One possible solution is the adoption of a so-called 'buy-and-build strategy'[2] which aims to generate additional value, resulting especially from synergies through the merger of two or more companies. At first glance, buy-and-build strategies appear relatively easy to realise. However, given that mergers and acquisitions (M&A) of so-called 'strategic buyers' (i.e., corporations) have a disappointing track record with respect to value creation, the risk of failure in buy-and-build strategies must not be underestimated.

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[1] For a definition, see 2.1.1.
[2] For a definition, see 3.1.1.

1.2. Research gaps and objective

The review of existing research reveals that the phenomenon of buy-and-build strategies in private equity is currently relatively undiscovered both in Germany and abroad. To the best knowledge of the author of this research project, none of the existing research contributions is based on a broad empirical study. Three areas represent the main focus of existing research: background information on the emergence of buy-and-build strategies in private equity[3], key characteristics of buy-and-build strategies[4] (e.g., relevant market, platform/target company, investment horizon, capital structure), and a brief outline of case examples[5]. Only very few researchers provide some insights into value creation[6], success factors[7], and risks[8]. For a condensed overview of existing research on buy-and-build strategies, see **appendix 1**. Among the more advanced research existing, the areas of buyouts and M&A are most closely related to the phenomenon of buy-and-build strategies (see chapters 2 and 3).

The main objective of this research project is to develop an in-depth understanding of the buy-and-build phenomenon. Therefore, the following research questions should be answered based on the results of an empirical study:

1. What are the key characteristics of buy-and-build strategies?

2a. Do private equity firms on average manage to create value through adopting a buy-and-build strategy?

2b. What are the key prerequisites for successful value creation in buy-and-build strategies?

2c. What value drivers do private equity firms typically use to create value?

3. What are the key success factors for value creation in buyouts adopting a buy-and-build strategy?

---

[3] Allen, J.R. (1999); Leeuw, D. de (1993); Fordyce, J.H./Stewart, S. (1994); Trottier, R. (1995).

[4] Allen, J.R. (1999); Burge, S.W. (1994); Leeuw, D. de (1993); Fordyce, J.H./Stewart, S. (1994); Niederdrenk, R./Karbenk, C. (2002); O'Donnell, M. (2001); Smit, H.T. (2001).

[5] Burge, S.W. (1994); Leeuw, D. de (1993); Niederdrenk, R./Karbenk, C. (2002); O'Donnell, M. (2001); Smit, H.T. (2001); Zengerling, K. (2003).

[6] Smit, H.T. (2001). See also Allen, J.R. (1999); Fordyce, J.H./Stewart, S. (1994); Niederdrenk, R./Karbenk, C. (2002); Zengerling, K. (2003).

[7] Fordyce, J.H./Stewart, S. (1994); Niederdrenk, R./Karbenk, C. (2002).

[8] Fordyce, J.H./Stewart, S. (1994). See also Trottier, R. (1995).

1.3. Research approach

As a matter of principle, private equity firms are bound to strict confidentiality agreements which restrict the availability of information on the private equity industry. Nevertheless, private equity firms typically receive numerous questionnaires and requests for interviews. For these two reasons, empirical research in the private equity industry has become extremely difficult. Therefore in the course of this research project, the author has allocated significant time and effort to establish personal relationships with relevant private equity managers. The assurance of strict confidentiality has also helped to facilitate the collection of relevant data.

In addition, general conditions in buyout markets across different countries are quite diverse (see 2.3.) and, as aforementioned, buy-and-build strategies represent a relatively new phenomenon in academic research. As a consequence, the author of this research project has decided to limit the research focus. The **object of research** includes only buy-and-build strategies with a so-called 'platform company'[9] located in Germany. Further, the research project exclusively considers buy-and-build transactions which were completed before 2004. This restriction of the time frame is necessary because the relevant information (especially indication of success or failure) is not available for recent transactions. In total, the sample consists of 21 relevant buy-and-build strategies.

Two basic types of **research method** can be distinguished: exploratory research[10] (i.e., theory building) and confirmatory research (i.e., theory testing).[11] This research project follows a confirmatory research method and combines two **research strategies**[12]: case study research and a questionnaire-based survey. The **research process** consists of three distinct steps. First, six case studies are conducted to collect relevant qualitative information based on accessible external information and personal one-hour interviews with the private equity managers responsible along a semi-structured interview guide. Secondly, propositions about key characteristics, value creation, and success factors of buy-and-build strategies are derived based on existing theory and empirical research (especially from the field of buyouts and M&A). The research results of the six case

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9 For a definition, see 3.1.1.

10 Key supporters of exploratory research are GLASER and STRAUSS who developed the so-called 'Grounded Theory', Glaser, B.G./Strauss, A.L. (1967).

11 For a delineation of 'theory building' and 'theory testing', see Vaus, D.A. de (2001), pp. 5-8. See also Chmielewicz, K. (1994), p. 37. The distinction between inductive and deductive research is first introduced by TUKEY, Tukey, J.W. (1977). The advantages and drawbacks of these different methods are controversially discussed among researchers, see e.g., Diekmann, A. (2004), pp. 151 et seqq.

12 For an overview of different research strategies, see e.g., Yin, R.K. (1994), p. 17.

studies serve to refine and supplement the initial propositions.[13] Thirdly, a survey is executed based on a questionnaire to collect relevant quantitative data which represents the basis for testing the propositions derived.

The combination of qualitative (i.e., case study interviews) and quantitative (i.e., questionnaire) methods of data collection is referred to as 'triangulation'[14].

Section 4.1. provides a more detailed outline of the object of research, the research method and research process, and also the research strategies.

1.4. Structure of document

Chapter 2 provides an introduction to buyouts. After a definition of the term 'buyout', different types of buyouts are delineated along the criteria of financing, buyer, and deal source. Further, the role and also the specific goals of the different parties in the buyout market (i.e., investors, funds of funds, private equity firms, and target companies), as well as their interaction, are presented. Finally, chapter 2 gives a brief overview of the historic development of different buyout markets (the United States of America (USA), the United Kingdom (UK), and Germany). A comparison, which involves the three aforementioned countries and also other European countries, reveals the diversity of these buyout markets in terms of size and maturity.

Chapter 3 outlines the relevant theoretical background of buy-and-build strategies. After a definition of the term 'buy-and-build strategy', its key characteristics are described. Further, different buy-and-build strategies are delineated. Chapter 3 also contains a definition and supporting prequisites of value creation, as well as relevant value drivers in both stand-alone buyouts[15] and M&A transactions. Finally, it gives an overview of success factor research in business science and existing empirical findings on relevant success factors in stand-alone buyouts and M&A transactions.

Chapter 4 presents a detailed description of the research approach of this research project including the object of research, the research method and research process, and the research strategies. Besides the derivation of propositions, it also outlines the individual reports of the six case studies, as well as the results of the cross-case study analysis. In addition, chapter 4 includes the empirical results of the questionnaire-based survey.

---

13 KAPLAN states that 'case studies […] provide a firmer basis for […] theory-building and hypothesis-formulation activities', Kaplan, R.S. (1986), p. 445.

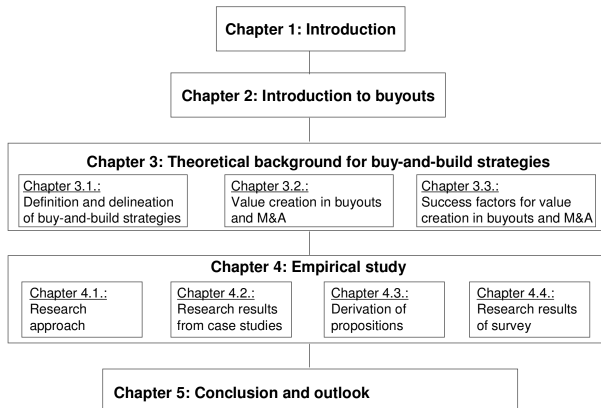
14 Denzin, N.K. (1978), p. 302.

15 For a definition, see 3.2.3.1.

Finally, chapter 5 draws a conclusion based on the key findings of this research project. It also outlines an outlook on future research activities.

Figure 1 shows a comprehensive overview of the different chapters.

Figure 1: Structure of research document



2. Introduction to buyouts

This chapter provides a summary of key information about the buyout phenomenon. It contains a definition and a delineation of different types of buyouts, an overview of key participants in the buyout market, and also an outline of the historic development in relevant buyout markets.

2.1. Definition and delineation of different types of buyouts

Based on a review of existing buyout research, this section outlines a definition of the term 'buyout'. Further, it delineates different types of buyouts.

2.1.1. Definition

In academic literature so far, no common definition of the term 'buyout' and also no clear criteria for the delineation of different types of buyouts exist.[16] For the purpose of this research work the term 'buyout', which first appeared in 1974,[17] is defined as follows:

Buyout is a generic term for the acquisition of a company, both public and private, or a division of a company[18] by managers, private equity firms, and/or other third parties. Typically, a new company (a so-called 'NewCo') is created and funded in order to buy out the target company.[19]

2.1.2. Delineation of different types of buyouts

The following subsections give an overview of the different types of buyouts along three delineation criteria: types of financing, types of buyer, and types of deal source.

2.1.2.1. Types of financing

The structure of the liabilities' side of the balance sheet represents one relevant delineation criterion since different designs of the capital structure have been observed in buyout transactions. This subsection provides a review of the most relevant theory about the impact of the capital structure on the cost of capital[20] and the company value.

---

16 Forst, M. (1992), pp. 5-6; Forst, M. (1993), p. 5; Hoffmann, P./Ramke, R. (1992), p. 22; Honert, J. (1995), pp. 7-8; Huydts, H.J. (1992), p. 19; Luippold, T.L. (1991), p. 9; Neukirchen, D. (1996), pp. 4 and 6; Schmid, H. (1994), p. 5.

17 Schmid, H. (1994), p. 9.

18 Arbeitskreis Finanzierung der Schmalenbach-Gesellschaft (1990), pp. 831-832.

19 Forst, M. (1993), p. 6; Neukirchen, D. (1996), pp. 5 and 13-17; Schmid, H. (1994), p. 21. In Germany, the NewCo typically has the legal form of a 'Gesellschaft mit beschränkter Haftung (GmbH)', Schmid, H. (1994), p. 128.

20 The cost of capital reflects the expected minimum rate of return (discount rate) to capital providers in the market, which is necessary to attract funds to a particular investment, Breuer, W. (1994), p. 819.

Further, it outlines the relevance of the capital structure in buyouts and also the key characteristics of the different financial instruments from which the capital structure is composed.

2.1.2.1.1. Review of theory on the optimal leverage of the capital structure

Existing research controversially discusses the optimal degree of leverage of the capital structure. The optimal leverage is the capital structure which is associated with the minimum weighted average cost of capital (WACC)[21] and the maximum market value of the company's equity and debt.[22] Different approaches exist which are briefly introduced in the following paragraphs: the leverage effect, the traditional view, the neo-classical view, and the neo-institutional view.

The concept of the so-called '**leverage effect**' assumes that the return on equity (r_{equity}) can be improved by increasing the share of debt in the capital structure as long as the cost of debt (r_{debt}) is below the return on the total capital employed ($r_{capital\ employed}$). If, however, this prerequisite is not fulfilled, the return on equity decreases (the so-called 'leverage risk').[23]

$$r_{equity} = r_{capital\ employed} + \frac{debt}{equity} * (r_{capital\ employed} - r_{debt})$$

The **traditional view** makes two assumptions. First, it assumes that the cost of debt is cheaper than the cost of equity. Hence, an increase of the share of debt results in a decrease of the WACC. Second, it presumes that the cost of capital both for equity and for debt rises with an increase of the leverage, due to the higher risk of bankruptcy. When the degree of leverage is relatively low, an increase of debt has no or only a small effect on the risk of bankruptcy. If, however, the leverage of the capital structure is relatively high, any increase of debt leads to a disproportionate rise in the risk of bankruptcy and, hence, also in the cost of capital. Based on these two assumptions, the substitution of equity by debt only reduces the WACC up to a certain point (i.e., optimal degree of leverage). Thereafter, the WACC starts to increase (see figure 2, I).[24] The advantage of the traditional view is the (visual) clarity of the leverage and its impact on the cost of capital. However, critics argue that it does not specify its premises, especially the preferences of the parties involved. As a consequence, the

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21 The weighted average cost of capital (WACC) is the average cost of capital of all firm's securities. The weights are determined by the relative proportions of the different securities in a firm's capital structure, Breuer, W. (1998), p. 56.

22 Breuer, W. (1998), p. 44; Schmid, H. (1994), p. 187.

23 Gerke, W./Steiner, M. (2001), pp. 1323-1324.

24 Gutenberg, E. (1987), pp. 208 et seqq. See also Bühner, R. (1990a), pp. 149-152.

impact of the leverage on the cost of capital cannot be quantified. In order to overcome this shortcoming, the capital market context has to be taken into account.[25]

In 1958, MODIGLIANI/MILLER (MM) made an important research contribution, which is considered as the starting point of the **neo-classical view**. Assuming perfect capital markets[26], including tax neutrality, MM established two propositions. Proposition I concludes that 'the market value of any firm is independent of its capital structure and is given by capitalizing its expected return at the rate p_k appropriate to its class'. Proposition II implies that with an increasing leverage, equity investors demand a higher rate of return on their investment to compensate for the higher volatility and risk. Since the cost of debt is assumed to be constant (i.e., independent of the degree of leverage) and also cheaper than the cost of equity, the company's WACC is independent of the leverage of the capital structure (see figure 2, II).[27]

In 1963, MM extended their theorem by incorporating the impact of taxation. Since interest payments for debt facilities are tax deductible (the so-called 'interest shield'), an increase in the leverage of the capital structure results in a reduction of the WACC (see figure 2, III).[28] Following this approach, ideally 99.9% of the capital structure should be debt-financed which, however, is only possible in theory.[29]

Besides taxation, the cost of bankruptcy, both direct (e.g., legal charges) and indirect (e.g., loss of reputation)[30], has to be taken into account. This approach is different from the traditional view which only considers the probability of default. The trade-off between the present value of taxes and the present value of cost of bankruptcy represents the so-called 'static trade-off theory', which is an important model in the academic finance literature (see figure 2, IV).[31] However, some researchers criticise the lack of theoretical and empirical proof of the relevance of taxation and cost of

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25 Breuer, W. (1998), pp. 58-59; Kim, E.H. (1978), p. 45.

26 For an overview of explicit and implicit assumptions, see e.g., Copeland, T.E./Weston, J.F. (1992), p. 439.

27 Modigliani, F./Miller, M.H. (1958), pp. 261-297. Several authors have confirmed the MM no-tax theorem, see e.g., Baron, D.P. (1974); Hamada, R.S. (1969); Stiglitz, J.E. (1969, 1974); Rubinstein, M.E. (1973). However, the assumption of constant (i.e., risk independent) cost of capital for debt by MM has been questioned by critics. STIGLITZ and RUBINSTEIN prove that even taking into account that the cost of debt rises with increasing leverage, the assumption of constant WACC by MM still holds true, Rubinstein, M.E. (1973); Stiglitz, J.E. (1969).

28 Modigliani, F./Miller, M.H. (1963), pp. 433-443.

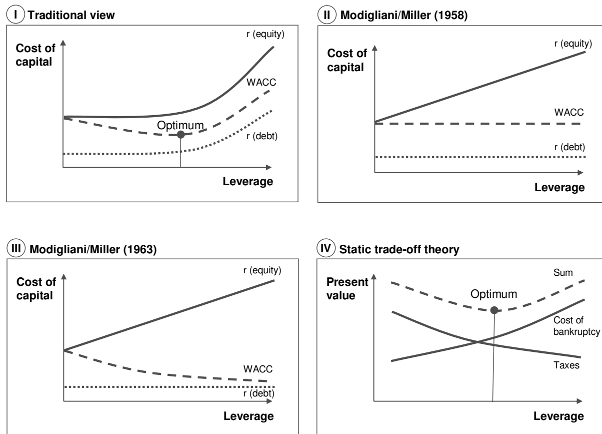
29 Baxter, N.D. (1967), p. 395. DeANGELO/MASULIS analyse the impact of corporate and personal taxation on the capital structure. They conclude that 'each firm has a unique interior optimum leverage decision due solely to the interaction of personal and corporate tax treatment of debt and equity', see DeAngelo, H./Masulis, R.W. (1980), p. 27.

30 For various direct and indirect costs, see e.g., Franke, G./Hax, H. (2003), p. 11.

31 Hirshleifer, J. (1970), p. 264; Kraus, A./Litzenberger, R.H. (1973), pp. 911-922; Robichek, A.A./Myers, S.C. (1965), pp. 20-22.

bankruptcy as the two key influencing factors on the optimal leverage of the capital structure.[32]

Figure 2: Leverage of capital structure and cost of capital



The **neo-institutional view** builds on the fact that, in reality, capital markets are not perfect.[33] For example, market participants do not always possess the same information (so-called 'information asymmetry').[34] Therefore, the neo-institutional view is centred on the issue of how the capital structure can be used to mitigate problems arising from information asymmetry. Key contributions in existing theory are 'hidden information' and 'hidden action' (see 3.2.2.1.), 'allocation of property rights'[35], and 'pecking order'[36].

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32 Breuer, W. (1998), pp. 109-112; Fama, E.F./French, K.R. (2004); Frank, M.Z./Goyal, V.K. (2003); Haugen, R.A./Senbet, L.W. (1978); Long, M.S./Malitz, E.B. (1985); Titman, S./Wessels, R. (1988).

33 For more detailed information on the efficiency of capital markets, see Fama, E.F. (1970).

34 Breuer, W. (1998), pp. 119-120

35 For a detailed overview, see e.g., Breuer, W. (1998), pp. 212-234; Hart, O. (2001).

36 Pecking-order theory states that companies have a preferred hierarchy for financing sources. They prefer internal financing (retained earnings and the effects of depreciation) before they draw on any form of external funds. If a company must use external funds, the order of preference is the following: debt, convertible securities, preferred stock, and common stock, Myers, S.C. (1984).

2.1.2.1.2. Relevance of capital structure in buyouts

A buyout, which is financed with a significant share of debt, is called a leveraged buyout (LBO).[37] As a result of the increased leverage, the required equity investment is reduced. However, 'significant' is not clearly defined in absolute terms.[38] SCHMID suggests applying the definition of 'highly leveraged transactions' (HLTs) by the US supervisory authorities[39] in 1989 as an appropriate analogy for a definition of a LBO. Following the definition of HLTs, the amount of debt must be increased by at least 50% to result in a total share of debt of more than 50%. Alternatively, the total share of debt must be above 75%, independent of the debt increase.[40]

However, a buyout company cannot choose the leverage of the capital structure independent of its assets and expected future cash flows.[41] On the one hand, the value of the company assets determines the maximum value of the debt collaterals. On the other hand, the cash flows represent an indicator for the financial strength of a company.[42] The term 'cash flow' can be defined as the net inflow of cash during a specific period of time.[43] Therefore, the cash flows determine the company's ability to pay interests and amortise its liabilities.

2.1.2.1.3. Key characteristics of financial instruments in buyouts

In buyouts, the liabilities' side of the balance sheet typically comprises of multiple financial instruments, particularly senior debt, mezzanine, and equity. They particularly differ by maturity, type of interest payment and amortisation, seniority, cost of capital, provider of funds, and share of capital structure.

Senior debt can be structured as medium- and long-term liability according to the financing needs of the company with typically regular interest payments and amortisation. Interest rates can be fixed or variable. In buyouts, senior debt is typically granted as unsecured senior debt. The maximum amount is based on the worst case

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37 Arbeitskreis Finanzierung der Schmalenbach-Gesellschaft (1990), p. 832; Baker, G.P./Montgomery, C.A. (1994), p. 1; Birley, S. (1984), p. 33; Honert, J. (1995), p. 32; Huydts, H.J. (1992), p. 22; Then Bergh, F. (1998), p. 8.

38 Forst, M. (1993), pp. 6-7; Hatzig, C. (1995), p. 23; Luippold, T.L. (1991), p. 9; Schmid, H. (1994), p. 41; Then Bergh, F. (1998), p. 9.

39 Federal Reserve Board, Federal Deposit Insurance Corporation (FDIC), and Comptroller of the Currency.

40 Schmid, H. (1994), p. 42. The term 'debt' includes senior and also subordinated/junior debt.

41 Berger, M. (1993), pp. 6 and 19; Grundfest, J.A. (1989), p. 255; Honert, J. (1995), p. 34; McNeill Stancill, J. (1988), p. 18; Luippold, T.L. (1991), p. 11.

42 Küting, K./Weber, C.-P. (1999), pp. 136-137.

43 E.g., Schmidt, R. (1993), p. 282. Most authors share a common understanding of the general definition of the term 'cash flow'. The detailed definitions, however, are diverse, Rehkugler, H./Poddig, T. (1988), p. 220. For a critical assessment of different cash flow definitions, see Coenenberg, A.G. (2000), pp. 933-943.

scenario for the future cash flows of the company.[44] Senior debt is the least risky financial instrument in the capital structure. In the case of bankruptcy, the claims of senior debt lenders are fulfilled first. To limit the risk for the lenders, so-called 'covenants' (e.g., minimum liquidity level, maximum debt ratio, maximum investment budget) which must not fall below or exceed a certain value are agreed on. Additionally, the credit contract may include a clause which prohibits the borrowers from granting company assets as credit security to other lenders during a defined period of time. Compared to the other financial instruments, the interest rates for senior debt are relatively low (LIBOR[45] plus 1.5-2.5%). In addition, a fee of 1.5-2.0% is charged for the arrangement of the loan. Typically, a syndicate of banks provides senior debt.[46] On average, it accounts for 55-70% of the capital structure.[47]

If senior debt is structured as secured senior debt, a conservative value of real estate (50-70% of market value), machinery (50-75% of sales value), inventory (30-60% of purchase value), and receivables (65-95%) is taken as credit security (so-called 'asset-backed lending').[48] The interest rate for secured senior debt is slightly lower than for unsecured senior debt given the comparably lower risk.[49]

Mezzanine (so-called 'subordinated debt' or 'junior debt'), which is usually unsecured, is categorised between senior debt and equity.[50] In the US, subordinated/junior debt is also called 'high yield debt', which can also be structured as traded securities from issuers with no or sub-investment grade rating (also known as 'junk bonds'). Terms and conditions concerning maturity (between 5 to 15 years), interest payment (fixed or variable) and amortisation (e.g., monthly vs. pay-in-kind amortisation, for example, through the divestment of non-core assets at maturity[51]) are structured dependent on future cash flows and the specific financing requirements of the buyout. Compared to senior debt, mezzanine is junior in right of payment. In the case of bankruptcy, mezzanine lenders receive their funds only after the fulfilment of claims of senior debt lenders. Hence, mezzanine is riskier than senior debt. Therefore, the cost of funding

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44 Hoffmann, P./Ramke, R. (1992), pp. 83-84.

45 London Inter-Bank Offered Rate, i.e., the rate of interest at which banks borrow funds from other banks, in marketable size, in the London interbank market.

46 Hoffmann, P./Ramke, R. (1992), pp. 84-85; Honert, J. (1995), pp. 34-36; Luippold, T.L. (1991), pp. 66 and 206; Schwien, B. (1995), p. 87.

47 Hoffmann, P./Ramke, R. (1992), pp. 82-83; Honert, J. (1995), p. 34; Schmid, H. (1994), p. 130. Historically in the US and also in the UK, the share of debt has been significantly higher compared to more recent buyout transactions, see e.g., Burge, S.W. (1994), p. 32; Schmid, H. (1994), pp. 138 and 140.

48 Hoffmann, P./Ramke, R. (1992), p. 79; Honert, J. (1995), pp. 32-34; Luippold, T.L. (1991), p. 205.

49 Schmid, H. (1994), p. 133.

50 Schmid, H. (1994), pp. 133-134.

51 Hoffmann, P./Ramke, R. (1992), p. 23; Luippold, T.L. (1991), p. 67.

required is also superior to those of senior debt (LIBOR plus 3.5-6.0%). In addition, mezzanine providers charge an arranger fee of at least 2%.[52] Specialised mezzanine investors (typically mezzanine funds) exist in the financial market.[53] Usually, mezzanine amounts to 10-20% of the capital structure.[54]

Further, mezzanine can be structured as junior mezzanine when mezzanine lenders are also granted equity options (a so-called 'equity kicker').[55] In this case, the cost of funding might be a little higher than for mezzanine without an equity kicker due to the juniority of the claim.[56] However like equity holders, mezzanine lenders with an equity kicker participate in the upside potential of the buyout transaction.

In a buyout, the management (see also section 2.1.2.2.1.) typically provides part of the **equity** share. Since they frequently do not possess sufficient proprietary funds to finance the total equity piece, private equity firms (see also section 2.2.3.) are involved in the transaction to fund the remainder of the total equity investment.[57] In contrast with the managers, private equity firms have a limited investment horizon of approximately 3-5 years, dependent on the investment performance of the buyout, capital markets conditions, and also the maturity of their fund. In buyouts, equity investors typically do not receive annual dividends. Since equity is the riskiest source of funding (the so-called 'first loss piece'), private equity firms require a pre-tax internal rate of return (IRR)[58] of approximately 20-25%, sometimes even up to 40%.[59] Usually, 10-30% of the capital structure is funded by equity.[60]

An overview of the key characteristics of the different financial instruments is provided in table 2.

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52 Forst, M. (1992), pp. 13-14; Hoffmann, P./Ramke, R. (1992), pp. 86-88; Luippold, T.L. (1991), pp. 67-68.

53 Forst, M. (1993), p. 145; Honert, J. (1995), p. 40.

54 Hoffmann, P./Ramke, R. (1992), p. 82; Honert, J. (1995), p. 37; Schwenkedel, S. (1991), p. 87; Schmid, H. (1994), p. 130. FORST, GRÄPER and LUIPPOLD report a mezzanine share of approximately 25%, Forst, M. (1992), p. 99; Gräper, M. (1993), p. 110; Luippold, T.L. (1991), p. 215. Based on a sample of eight buyouts, VEST even states a mezzanine share of approximately 45%, Vest, P. (1995), pp. 258-259.

55 Luippold, T.L. (1991), p. 67; Schwenkedel, S. (1991), p. 86. In Germany, this type of financing is typically structured as 'partiarische Darlehen', 'stille Beteiligungen', and 'Genußscheine', see e.g., Schmid, H. (1994), p. 135-136.

56 Schmid, H. (1994), pp. 136-137.

57 Forst, M. (1992), p. 9; Hoffmann, P./Ramke, R. (1992), p. 81; Wright, M./Robbie, K. (1996), p. 692.

58 The internal rate of return (IRR) is the discount rate that results in a net present value of zero for a series of future cash flows.

59 Hoffmann, P./Ramke, R. (1992), p. 94; Luippold, T.L. (1991), p. 69; Schmid, H. (1994), p. 130; Schwenkedel, S. (1991), p. 78.

60 Forst, M. (1992), p. 25; Hoffmann, P./Ramke, R. (1992), p. 82; Schmid, H. (1994), pp. 69 and 130; Schwenkedel, S. (1991), p. 87.