Mind the Gap –

Financing Decisions in

Midcap Firms

Financing Strategy and Financing Process in

Replacing Standard Mezzanine in Germany

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Abstract

There is still limited knowledge available on how SME and midcap firms perform financing decisions and on what such a decision is based on. The literature revealed that capital structure theories can only partly explain parameters that determine financing decisions, particularly in a bank dominated lending environment like in Germany. Academic research tried to expand towards a broader and more strategic approach regarding a financing strategy and towards behavioural bias of a company's management. Furthermore, existing research tried to identify an interaction between business strategy and financing strategy but failed to identify a causal direction so far.

The present research provides a unique research approach to bridge this gap as it introduces a new aspect into the discussion on the decision for a financing instrument and whether a formulated financing strategy is followed. Based on a case study approach that combines manager interviews, document analysis and calculation of key financial ratios, the research explores the management's decision in a specific situation, the refinancing of standard mezzanine. Firms that used standard mezzanine had to perform a decent refinancing decision between the years 2011 and 2014 as there was no exact substitute instrument available in financing markets anymore.

The results showed that a financing strategy exists in the cases explored, but elements and form varied across cases. In addition, the cases indicated that behavioural bias on management level might exist, based on identified inefficiencies and delays. However, these inefficiencies cannot be primarily assigned to owner-managers as done by previous research. Furthermore, a causal direction between business strategy and financing strategy could be indicated in the cases investigated.

The results led to the development of a financing strategy typology, based on existing types of business strategies that might help to explain financing decisions. A template for a holistic financing strategy has been designed based on the investigations that allows midcap firms to establish and implement their own financing strategy (or adjust their existing strategy). The holistic framework provides core elements and financing principles as well as a prototype financing process that help to avoid the identified inefficiencies in their financing processes.

Declaration

This thesis is submitted to Edinburgh Napier University for the Degree of Doctor of Business Administration. The work described therein was carried out under the supervision of Malcolm Pettigrew, Prof. Dr. Thomas Henschel and Prof. Dr. Birgit Wolf. The work was undertaken in the School of Accounting, Financial Services and Law, Edinburgh Napier University, Edinburgh, UK.

In accordance with the regulations of Edinburgh Napier University governing the requirements of the Degree of Doctor of Business Administration, the candidate confirms that the work presented in this thesis is original unless otherwise referenced within the text.

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List of Abbreviations

adj.	adjusted
BACH	Bank of the Accounts of Companies Harmonised
BMWi	Bundesministerium für Wirtschaft und Energie *[Federal Ministry for Economic Affairs and Energy]*
CDS	Credit Default Swap(s)
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CLO	Collateralised Loan Obligation
e.g.	exempli gratia
EAT	Earnings after Tax
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before Interest, Tax, Depreciation on assets and Amortisation on goodwill
EMEA	Europe, the Middle East and Africa
et al.	et alii / et aliae
etc.	et cetera
EU	European Union
FAME	Forecasting Analysis and Modeling Environment
FDI	Foreign Direct Investment
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
HGB	Handelsgesetzbuch *[German Code of Commercial Law]*
IfM	Institut für Mittelstandsforschung *[Institute for Medium-Sized Businesses Research]*
IFRS	International Financial Reporting Standards
Int.	Internal
IMF	International Monetary Fund

IPO	Initial Public Offering
IRR	Internal Rate of Return
KfW	Kreditanstalt für Wiederaufbau *[Promotional bank of the Federal Republic and the federal states of Germany]*
KMV	Kealhofer, McQuown and Vasicek
KPI	Key Performance Indicators
LBO	Leveraged Buy-Out
Mgnt	Management
Moody's	Moody's Investor Service
n.a.	not applicable
Neg.	negative
OECD	Organisation for Economic Co-operation and Development
p.	page
pp.	pages
P&L	Profit & Loss (Statement)
PhD	philosophiae doctor, Doctor of Philosophy
PIK	Payment-in-kind
PREPS	Preferred Pooled Shares
PSD	Performance Sensitive Debt
S&P	Standard & Poor's
SME	Small and Medium-sized Enterprise
SPV	Single Purpose Vehicle
UK	United Kingdom
U.S.	United States of America

1. Introduction

”How do firms choose their capital structures?" (Myers, 1984b, p. 575). This basic question is intended to be answered easily. However, in his article “The Capital Structure Puzzle”, published in 1984, Stewart Myers’ answer was once again “We don’t know” (Myers, 1984b, p. 575). Since his publication, intensive research was performed to examine the capital structure of a firm and the decision mechanisms that led to the choice of a specific financing instrument or security.

Nevertheless, it seems that company management is still reacting on developments of financial markets in their decisions rather than to actively initiate a process that is based on a clear and formulated financing strategy for the firm. Competing theories to determine the optimal capital structure of a company or the optimal choice of a specific financing instrument within the capital structure have not been able to completely explain these decisions. Therefore, Myers stated seventeen years later, that „There is no universal theory of the debt-equity choice, and no reason to expect one“ (Myers, 2001, p. 81).

This DBA research wants to bring a new aspect into the discussion on the decision for a financing instrument by a firm and whether a formulated financing strategy is followed. The research explores the management’s decision in a specific refinancing situation as it focuses on the maturing standard mezzanine facilities that have been used by German midcap companies in the years 2004 to 2007 through a case study approach. These findings are contrasted with the propositions from the strategic capital structure theory developed by Barton & Gordon (1987) and two already existing PhD theses on standard mezzanine (Brüse, 2011; Nohtse, 2012) for explanation.

Before looking at midcap financing in general and mezzanine refinancing in particular, the introduction chapter starts in section 1.1 with a definition on what a midcap company represents in terms of this research. Section 1.2 follows with an overview on the corporate lending environment at the time of the effective refinancing to describe the market situation during the financing process. In section 1.3 the specific refinancing situation the research focuses on is presented to explore management decision mechanisms on the choice of financing instruments and to emphasize the need for investigating the basis for such decision mechanism. Chapter 1 then describes the

aims and objectives of the DBA thesis as well as the approach to achieve these aims in section 1.4 and closes with an overview on the further organisation of the thesis in section 1.5.

1.1 Definition of a Midcap Company

The term "small" or "medium" enterprise does not describe the same cluster of companies on an international basis. This is predominantly dependant on the varying stages of development of the respective economy. However, on an European as well as on a national level, there are quantitative and qualitative criteria used in segmenting small and medium-sized companies.

1.1.1 Quantitative Criteria

On an European level, a quantitative definition for small and medium-sized enterprises ("SMEs") has been carried out by the EU Commission. The Commission defines three criteria and respective thresholds to categorise (EU Commission, 2003, 2005). According to this definition, a company can be quoted a medium sized enterprise, if its staff headcount is below 250 persons employed – calculated on an annual work unit basis which corresponds to full-time-equivalent units – and either its annual turnover does not exceed € 50 million or its total annual balance sheet does not exceed € 43 million (EU Commission, 2003). Within Germany, very similar definitions for SMEs can be found by the German Institut für Mittelstandsforschung (Institute for Medium-Sized Businesses Research, "IfM") which defines an enterprise as an SME, if its staff headcount is below 500 employees and the annual turnover does not exceed € 50 million (Institut für Mittelstandsforschung, n.d.).

Table 1.1 provides an overview of the exact criteria by institution.

Table 1.1: Criteria for SME

	EU Commission			IfM	
	Staff headcount; and	**Annual sales, or**	**Balance sheet**	**Staff headcount; and**	**Annual sales**
Micro	< 10	≤ € 2 million	≤ € 2 million	n.a.	n.a.
Small	< 50	≤ € 10 million	≤ € 10 million	< 10	< € 1 million
Medium	< 250	≤ € 50 million	≤ € 43 million	< 500	≤ € 50 million

Sources: Adapted from EU Commission (2003, 2005); Institut für Mittelstandsforschung, (n.d.); Reinemann, (2011).

Despite these two almost congruent definition schemes in terms of the maximum staff headcount and annual sales or balance sheet numbers a company must not exceed to be qualified as a SME, there have been several other thresholds applied to companies to be qualified as a medium-sized company or midcap company. The German Kreditanstalt für Wiederaufbau ("KfW"), the promotional bank of the Federal Republic of Germany, defines in its subsidy and state-backed lending programmes companies to be qualified as medium-sized if their annual sales are not exceeding € 500 million (KfW Bankengruppe, 2011a).

Other institutions, e.g. the Deloitte Mittelstandsinstitut at the University of Bamberg, even exceed the midcap classification for companies beyond a level of 3.000 employees and annuals sales of € 600 million (Becker, Staffel & Ulrich, 2008a) in cases where a strong linkage between owner (family) and the management or the company's business model can be identified (Becker, Staffel & Ulrich, 2008b).

These differences emphasize that a pure economic and quantitative focus does not provide a complete set of criteria in defining "midcap" companies (Börner & Grichnik, 2003). Therefore, several institutions and research admit that qualitative elements have to be considered as criteria in identifying a midcap company (Becker et al., 2008b).

1.1.2 Qualitative Criteria

Midcap companies are characterised primarily through the "unity of capital and management" (Reinemann, 2011, p. 5) and are therefore also labelled as "family-

owned companies" in many publications (BMWi, 2007; Reinemann, 2011). The IfM tried to operationalise this criterion by identifying a company being family-owned, if

(a) up to two family trees are owning at least 50% of the company's common stock, and
(b) members of the family trees are also members of the top management team (Haunschild & Wolter, 2010; Wolter & Hauser, 2001).

In addition to the two qualitative criteria above, Reinemann (2011) presented four attributes to characterise a SME or midcap company:

(a) the unity of ownership, risk and control,
(b) a flat hierarchy and consensus between top management and employees,
(c) a strong relationship between company and its environment, and
(d) independency from a holding.

The unity of ownership, risk and control describes the typical midcap scenario, where members of the owners are also holding positions in the top management, whereas in a large cap company, the "management board (leadership), the supervisory board (control) and the shareholders (ownership and risk) are typically separated from each other" (Reinemann, 2011, p. 5).

These managers that are also members of the family shareholders of the firm will be referred to as 'owner-managers' (Schachner, Speckbacher & Wentges, 2006; Woods & Joyce, 2003). These owner-managers are characterised to act less economically rational and may therefore cause types of agency problems (Speckbacher & Posch, 2010) which will be described in section 2.3.1. On the other hand, they tend to be closely involved into daily operations of the firm that "may induce a more direct management style making formal control systems less important" (Speckbacher & Posch, 2010, p. 4). This is seen as a major difference compared to 'external managers' who are not members of the (family) shareholders (Lauterbach, Vu & Weisberg, 1999; Lutz & Schraml, 2011). Nevertheless, external managers can develop similar patterns as owner-managers in case they are compensated by stock options or a minority stake in the firm (Hiebl, 2014). These external managers – in other research publications also labelled as 'other manager' (Richbell, Watts & Wardle, 2006; Woods & Joyce, 2003) – were in many cases introduced in family firms as core element of a succession

(Lauterbach et al., 1999), or in situations, where several family trees are involved as shareholders to avoid frictions between the family trees (Hiebl, 2014; Schachner et al., 2006).

Another attribute that is described to be typical for midcap companies is a flat hierarchy between top management and operative functions, such as sales, marketing, and financing. Even in larger family-owned businesses, the owners are expected to establish a direct control relationship to the operative functions (Börner, Grichnik & Reize, 2010).

The third attribute focuses on the relationship between the company (including its family owners) and their environment and can be summarised with the term corporate social responsibility (Haunschild & Wolter, 2010). Corporate social responsibility describes companies that are integrated into regional networks as well as close personal networks of the owner-managers and are actively taking responsibility for elements such as environmental protection, social equity and economic growth (Bender & Ward, 2013).

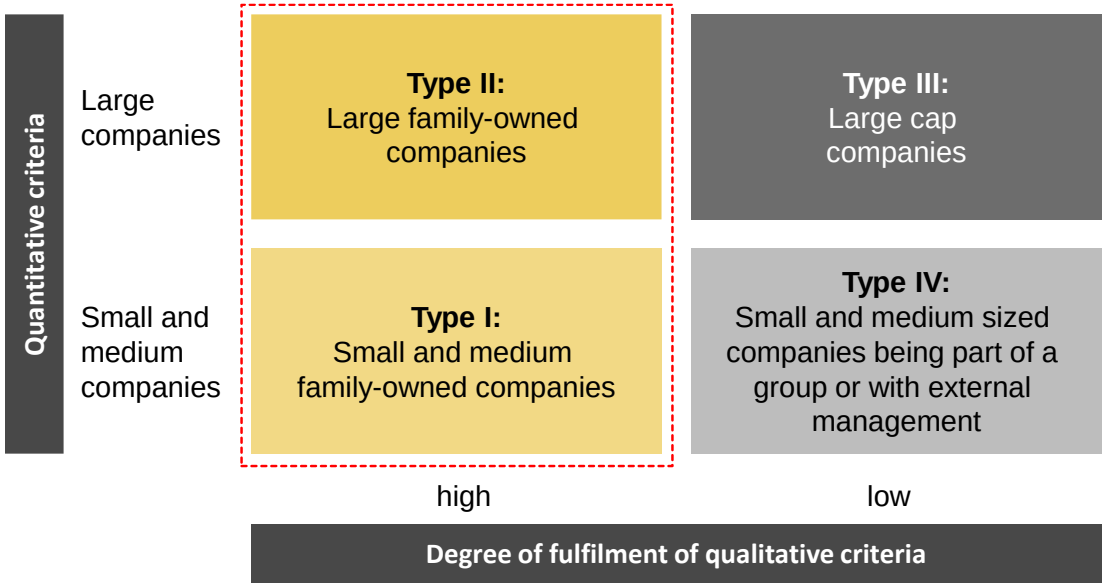
The last attribute to characterise a midcap company is its independency from a holding company. This should avoid that a third company owns more than 25% of the common stock of the midcap company (Reinemann, 2011). However, a family holding, where family trees have pooled their interests is excluded from this definition (Wolter & Hauser, 2001).

1.1.3 Interaction between Quantitative and Qualitative Criteria

Reinemann (2011) admits that a factual classification for a midcap company is difficult in many cases, e.g. in situations where a family-owned company is led by an employed management team. However, the German Federal Ministry for Economic Affairs and Energy ("BMWi") stated in its survey on the German "Mittelstand", that in such cases, the most important criterion to identify a midcap company is that an owner (family) maintains the strategic and operative control on the company (BMWi, 2007).

To differentiate between company clusters based on the discussed quantitative and qualitative criteria, Reinemann (2011) presented a typology of company categories to be identified by the criteria. The typology is shown in Figure 1.1:

Figure 1.1: Typology of Companies



Source: Reinemann (2011).

Based on the presented matrix, midcap companies describe the companies in the clusters Type I and Type II. Given the fact that the majority of the firms that used standard mezzanine as an element of their financing structure can be found in these two clusters as they usually lack further financing alternatives such as debt capital markets in Germany (Börner & Grichnik, 2003), this research will focus on midcap companies which are composed by the two clusters Type I and Type II and not solely on SMEs.

Therefore, midcap companies in this research are defined as family-owned firms with annual sales of up to €500 million, given that the standard mezzanine instrument was designed to mitigate equity constraints for these companies in Germany (PwC, 2011), as discussed in the following section 1.2. Midcap companies are either family-operated by owner-managers or by external managers with a direct link between management and family shareholders (Schachner et al., 2006). This direct link can be either through formal (e.g. supervisory board) or informal (direct communication) channels (Hiebl, 2014). Furthermore, the midcap company as defined in this research is reluctant to provide information about the firm to external parties such as banks, suppliers and clients, as they fear that these information could leak to competitors or the broader public (Börner & Grichnik, 2003).

1.2 Financing of Midcap Companies

Extensive research has been performed on the specific financing situation of midcap companies and their typical restrictions in terms of external funding e.g.

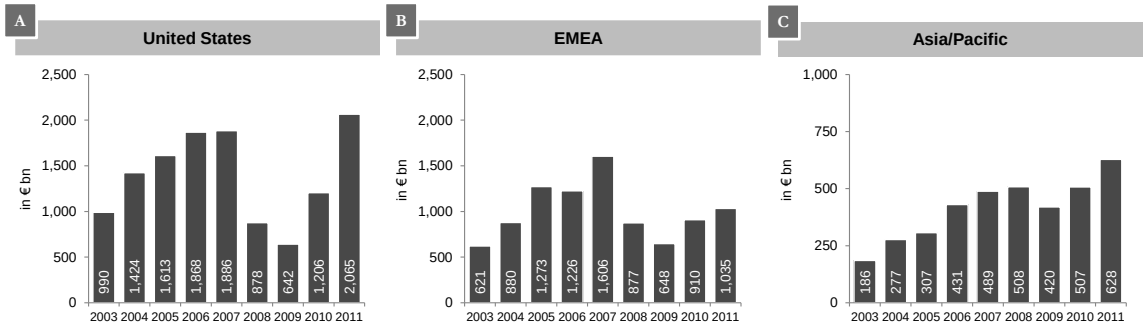
(a) dilution of the existing shareholder structure,
(b) limitations to access debt and equity capital markets, and
(c) dependency on bank loans (Beck, Demirguec-Kunt & Maksimovic, 2008; Börner et al., 2010; Psillaki & Daskalakis, 2008).

Especially the dominant bank loan financing of German midcap companies is still a differentiator compared to other matured economies (Ampenberger, Schmid, Achleitner & Kaserer, 2013; Bassen, Basse Mama, Koch & Rothe, 2013), even though alternative financing instruments gained influence given the restrictive bank lending policies since the financial crisis (T. Kraus, Schröder & Schnutenhaus, 2014). Therefore, this section will focus on the financing environment that midcap companies faced at the time of the upcoming refinancing of their standard mezzanine facility in the years 2010 until 2013.

1.2.1 General Financing Environment at the Time of the Refinancing

At the time of the refinancing, the financing environment for larger companies and midcaps was rather challenging: "Things are going from bad to worse in the syndicated loan market in [the] EMEA [region] as aggressive bank deleveraging and companies' aversion to debt continue to hammer lending volume and dealflow" (ThomsonReuters, 2012, p. 1). Given the complexity of their business model and their financing requirements in terms of form and volume, midcap companies usually have to approach syndicated loan markets as bilateral lending with core or relationship banks was not able to cover these requirements (Beck et al., 2008). Figure 1.2 shows that the syndicated loan markets in the United States had not only recovered in 2010 and 2011, but reached new record levels after a severe deterioration in the years 2008 and 2009 (ThomsonReuters, 2012). New record levels in syndicated corporate lending were also observed for the Asia/Pacific region. However, the EMEA region and particularly Europe had not returned to normal levels at that time, given the uncertainty of European banks and the extent of the state debt crisis (Standard & Poor's, 2012a).

Figure 1.2: Syndicated Loans to Corporates – Comparison of Global Regions



Sources: S&P (2012a), ThomsonReuters (2012).

1.2.2 Refinancing Wave in Europe and Germany

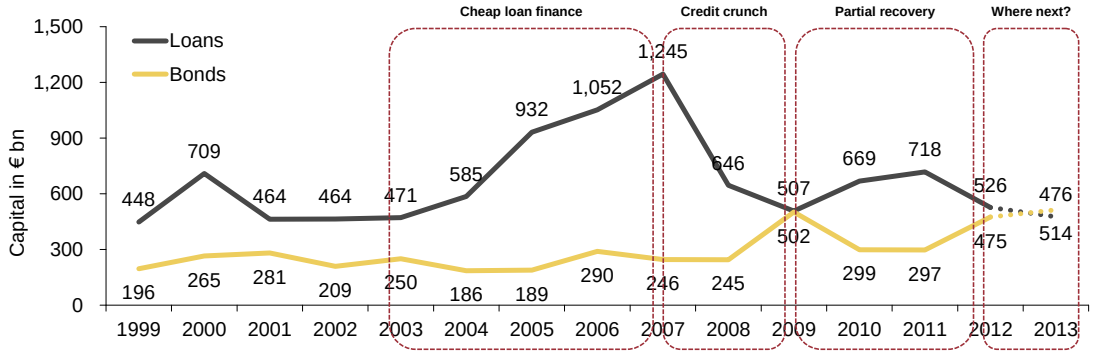
Figure 1.2 does not only indicate the availability of syndicated bank lending to enterprises. Based on the assumption that the typical maturity for a corporate term loan ranges between three to five years (Börner et al., 2010; Hernandez-Canovas & Koeter-Kant, 2011; Scherr & Hulburt, 2001), it also indicates that the record lending volumes to companies in the years 2005 to 2007 need to be refinanced between 2010 and 2012 (Standard & Poor's, 2012a). This is likely to have two implications:

(1) *Growth financing versus refinancing:* Companies that are looking for additional financing volumes to finance growth initiatives will have to compete with those, who are trying to refinance their existing bank debt. Alternative financing sources – such as leasing, factoring, subsidised loans – provide only limited additional funding capacity for refinancing scenarios and have been available in specific growth financing situations only (Börner & Grichnik, 2003; T. Kraus et al., 2014).

(2) *Large cap versus midcap companies versus SMEs:* With almost no access to the debt capital markets due to their company size and the disadvantage of being unrated (Beck et al., 2008; Lobe & Curac, 2014), midcap companies can be expected to be hit harder by restrictive bank lending than large cap enterprises which have access to other sources of debt financing and equity (Börner et al., 2010). SME's on the other hand, were investigated not to face more restrictive bank lending, as bilateral lending via cooperative banks and local savings banks was still available to them.

The trend for large cap companies to access other sources of debt financing becomes even more obvious by contrasting the development of the syndicated loan market with the bond market within the EMEA and the Western Europe region. Figure 1.3 shows that market analysts expected an ongoing shift from bank lending towards debt capital market financing via bonds in 2012 (Standard & Poor's, 2011, 2012c; ThomsonReuters, 2012).

Figure 1.3: Corporate Borrowing in Western Europe – Loans versus Bonds



Sources: Adapted from S&P (2012c) and ThomsonReuters (2012).

Even though bank lending tended to become more restrictive during every crisis of the last decades, this market trend in 2012 showed a clear reaction from borrowers and demonstrated the shift towards a direct lending relationship between companies and debt capital market investors (Standard & Poor's, 2012a), which is not available to midcap companies to that extent (T. Kraus et al., 2014).

Given their underdeveloped debt capital market access and the restrictive situation in the syndicated loan market already described, the remaining source of external funding for midcap companies is equity. However, their typical shareholder structure limits their ability to raise new equity capital either (Ang, 1991; Tappeiner, Howorth, Achleitner & Schraml, 2012). Even though empirical research showed that German SMEs and midcaps were able to significantly increase their equity ratio (Lobe & Curac, 2014), this effect and the already described emerging alternative financing instruments (Koropp, Kellermanns, Grichnik & Stanley, 2014; T. Kraus et al., 2014) have not yet been able to mitigate the dependency of midcap companies from bank lending (Bassen et al., 2013).

1.2.3 Equity Ratio and Access to external Equity

To better understand the development of the equity position of SMEs and midcap companies, the changes in the past 25 years should be taken into consideration. In the 1980s and 1990s, the equity positions of German SMEs and midcap companies were set at levels around 10%. However, this percentage is solely focussing on balance sheet equity, not on economic equity as introduced later in this chapter. Two further effects have been of significance in assessing the development of the equity ratio in addition to the lack of access to capital market financing and the avoidance of shareholder dilution already introduced in the previous section:

(1) The tax regime in Germany in the 1980s and 1990s that penalised companies which retained their earnings compared to a dividend payment. This led to a development, where companies that wanted to retain earnings paid them out as a dividend and received a shareholder loan immediately afterwards (Ampenberger et al., 2013). These loans ware typically subordinated to existing bank debt, an early form of mezzanine financing.

(2) Prior to the implementation of the regulations of Basel II in all EU member states on January 1, 2007, banks in Germany did not necessarily include a sufficient equity ratio as an important factor in their risk assessment (Deutsche Bundesbank, 2012). In addition, the focus on balance sheet equity ratios is only a limited predictor of capital strength. In companies that are constituted in the legal forms of private partnerships, shareholders are liable with their private assets to the obligations of the company and therefore did not aim to maintain a solid equity position at company level.

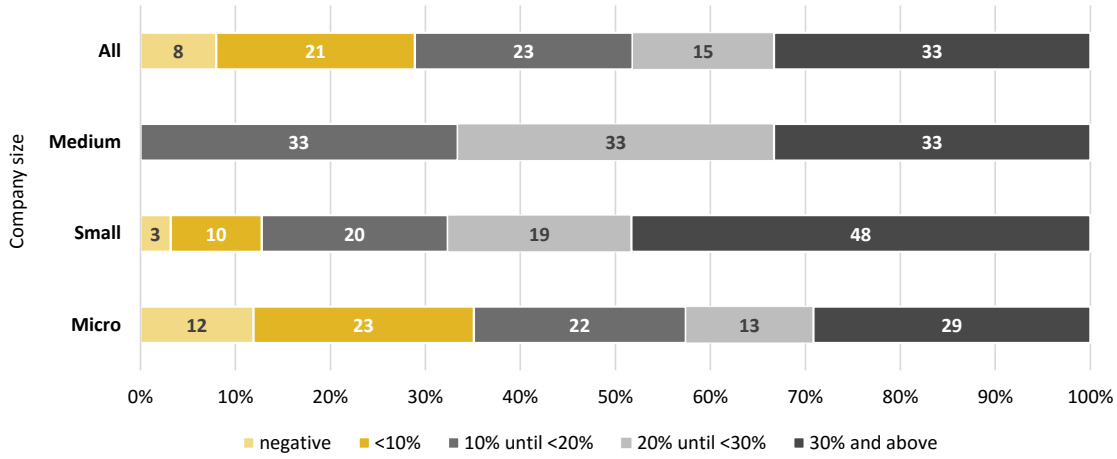
Between 1997 and 2007, equity ratios for SMEs and midcap companies improved from 6% to 18.4% on average (Deutsche Bundesbank, 2009). This development was mainly driven by an increase in retained earnings resulting from changes in the tax system as well as a favourable economic environment in the middle of the last decade (Valentin & Wolf, 2013).

Midcap companies further took the opportunity to strengthen their equity position to mitigate expected financing and operational risks they envisaged due to the dotcom and the financial crisis (KfW Bankengruppe, 2012) as well as with the changed bank financing environment after the implementation of Basel II in 2007. With the

implementation, German banks were forced to adopt their credit approval processes so that every company has to be rated to get a loan. As internal ratings have a focus on quantitative data and the equity ratio in particular, SMEs and midcap companies had to improve this ratio in order to restore their bank funding capabilities (Valentin & Wolf, 2013).

Rauch & Stadler (2012) analysed the equity ratio within SME and midcap companies in accordance with the IfM definitions. They surveyed 319 companies in 2010 and identified that especially medium-sized companies were able to generate comfortable equity ratios with 66% quoting levels of 20% or above. On the other hand, 13% of the small companies and 35% of the micro companies reported equity ratios smaller than 10% or even negative. Figure 1.4 displays a segmented diagram of SME and midcap companies' equity ratios.

Figure 1.4: Equity Ratios of SME and Midcap Companies

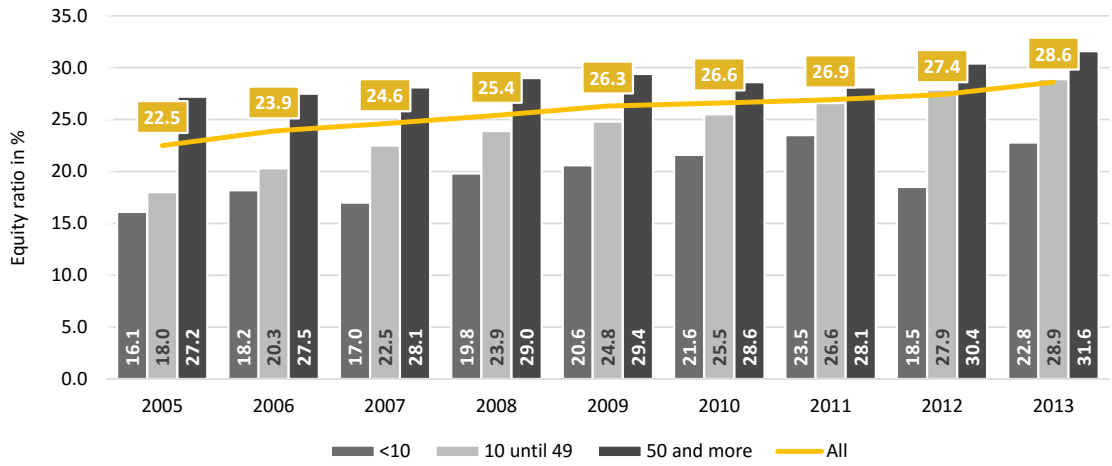


Source: Adapted from Rauch & Stadler (2012).

The German KfW presents every year a panel research of the German SME and midcap companies by annual feedback from 9.000 to 15.000 companies. They showed a steady improvement of the equity ratio across all clusters. Starting with an average equity ratio of 22.5% in 2005, the equity ratio showed levels between 26.6% in 2010 and 27.4% in 2012. These years are of particular interest, as the companies in need to refinance their standard mezzanine facilities have to perform their negotiations in the years 2011 to 2013, based on the current financial data. Given the strong economic development in Germany, the equity ratio further bolstered. SMEs in the cluster between 10 until 49 employees showed the strongest increase and the number of

companies with negative or weak equity ratio (below 10%) dropped further (KfW Bankengruppe, 2014). Figure 1.5 illustrates the development of the equity ratio within each cluster.

Figure 1.5: Development of average Equity Ratios in German SME and Midcap Companies



Sources: KfW Bankengruppe (2011, 2014)

In a second survey on the development of equity ratios in SME and midcap companies, the IfM analysed the development of balance sheet data of more than 4.500 companies between 2010 and 2013. They assessed an average equity ratio for the companies in 2013 of 37.1% and a stable level of bank debt (Lamsfuß, 2014).

Nevertheless, the increased equity ratio was primarily achieved based on retained earnings. Only 1% of the generated equity was provided via external funds (KfW Bankengruppe, 2011a, p. 36). This supports the propositions of Börner et al. (2010, p. 229), as they identify difficulties in preserving external equity, given the lack to directly access the capital markets and the limited transparency many SME and midcap companies are willing to provide to external stakeholders.

This lack to directly access the capital markets is not only caused by the reservation of family firms to provide information to external parties, but also by a more risk-averse approach of family shareholders towards debt financing, given their largely undiversified asset portfolios (Ampenberger et al., 2013). Therefore, family firms seem to be less indebted. According to Ampenberger et al. (2013), the investigated lower level of indebtedness could be also based on the fact that family firms have lower agency costs given the connection between management and shareholders. A

disciplining effect of external debt for the company management becomes less relevant. Both aspects could have an influence on the financing strategy of a family firm that would not necessarily apply to a non-family firm.

Research by Lobe & Curac (2014) and by Rauch & Stadler (2012) identified the avoidance of shareholder dilution by the existing (family) shareholders as additional explanation. According to Tappeiner et al. (2012) family firms highly value their independence. They do not necessarily follow a strict shareholder value approach but also focus on qualitative aspects, as indicated in section 1.1.2. Several research presented varying results of whether family impact supports or reduces shareholder value of a family firm (Anderson & Reeb, 2003; Barontini & Caprio, 2006; Villalonga & Amit, 2006). This focus on maintaining independence is seen to be one of the reasons, why private equity firms did not play such an important role in family firm successions or in enhancing equity ratios in Germany (Tappeiner et al., 2012).

1.3 Standard Mezzanine

1.3.1 Standard Mezzanine as a Response to a Gap in Bank Financing

As a result of the dotcom crisis in the years 2001 to 2003 and the described difficulties to increase external bank debt or to raise external equity, financial institutions invented a new product for German midcap companies to close the gap between bank debt and equity: the *standard mezzanine* or *program mezzanine* (Gündel & Hirdes, 2008). For the first time, this financing layer was a useful instrument for the broad variety of midcap companies, because

(a) these mezzanine tranches offered additional financing capacity by being subordinated to senior (bank) debt and were standardised which allowed for a less expensive instrument compared to individual mezzanine (Brüse, 2011; PwC, 2011),
(b) depending on the accounting principles of the company, the standard mezzanine was not only qualified as economic equity but also as balance sheet equity element (Küting & Dürr, 2005),
(c) only a standard rating check was used for a rather quick risk assessment (Moody's Investors Service, 2006; PwC, 2011), and

(d) it was made available to the companies in relatively small sizes, with tickets between € 500 thousand and € 20 million (Hommel, Nohtse & Schneider, 2011; PwC, 2011).

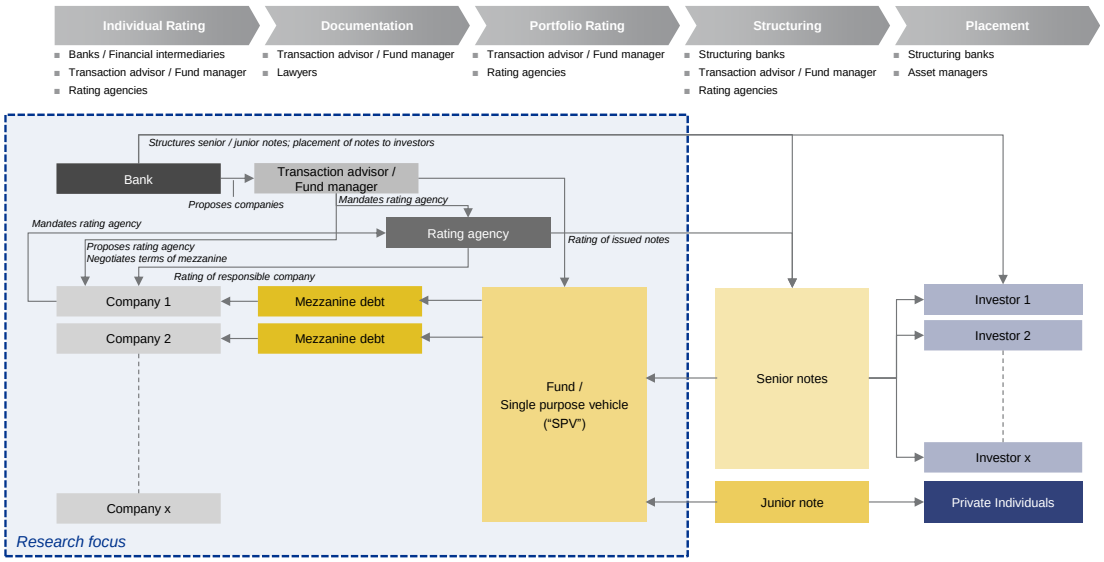
Mezzanine however was not a new product at all for midcap companies. Two types of mezzanine instruments were already available as financing options. Private equity-backed buy-out transactions typically include mezzanine financing elements in addition to senior and secured debt instruments to enhance leverage, reduce the equity portion of the private equity investor and therefore increase the IRR (Brokamp, Ernst, Hollasch, Lehmann & Weigel, 2008). These transactions are labelled as leveraged buy-outs ("LBOs") (Bösl & Sommer, 2006; Wolf, Hill & Pfaue, 2011). On the other hand, in many family-owned companies the owners provided capital injections not via straight equity, but through a shareholder loan to reduce tax burden on company level (De Ruijter Korver & Ongena, 2008; Meissner, Kritikos, Maas & Schmidt, 2009). Upon request of banks providing debt to the company, these shareholder loans had to be subordinated against the bank loans and can therefore be qualified as mezzanine financing instruments (Bösl & Sommer, 2006; Brokamp et al., 2008). These forms of mezzanine are named *individual mezzanine* (Herweg & Sonn, 2009; PwC, 2011).

Typically, individual mezzanine is offered by banks or other financing providers, such as specialised funds in terms of LBO financings, or – in case of an injection by shareholder loans – provided from the existing shareholders (Bean, 2008).

1.3.2 Structure of a Standard Mezzanine Fund

The funds for standard mezzanine were provided via the implementation of special funds or single purpose vehicles ("SPVs"). These SPVs achieved their funding through the placement of securities with international institutional investors, comparable with collateralised loan obligations ("CLOs") (Brüse, 2011; Lehmann-Tolkmitt, Knöll & Elmers, 2010). Therefore, no financial resources from banks or funds were necessary for providing standard mezzanine, which allowed banks to offer midcap companies a debt-like product that did not affect their own balance sheet (Lehmann-Tolkmitt et al., 2010). Figure 1.6 shows an overview of a typical standard mezzanine structure and the refinancing of the SPVs.

Figure 1.6: Overview of a typical Standard Mezzanine Structure and Research Focus



Sources: Adapted from PwC (2011) and Brüse (2011).

1.3.3 The Collapse of the Standard Mezzanine Market

Liquidity pressure from the capital markets and especially the competition between the active sales forces of German banks and financing intermediaries led to a situation in 2004, where the amount of standard mezzanine raised in Germany exceeded the money provided to companies via an IPO (PwC, 2011; Standard & Poor's, 2012b).

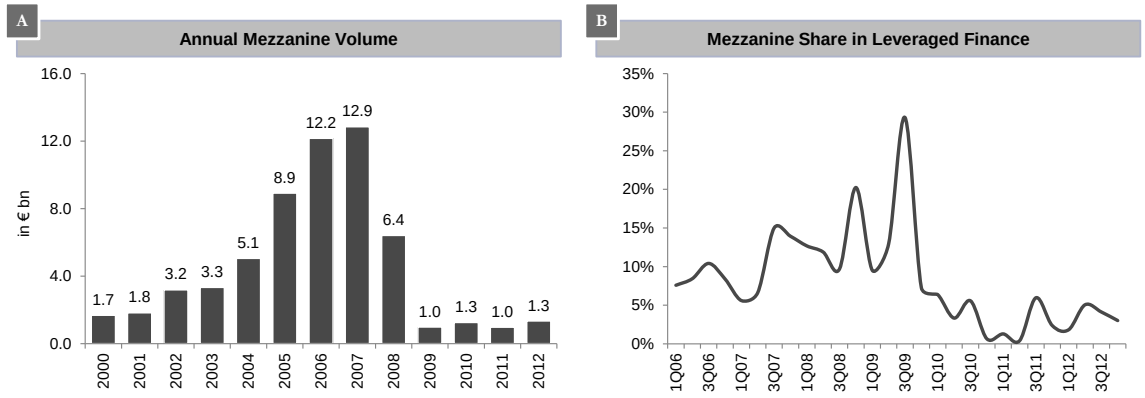
At the same time, the risk assessment from the mezzanine providers became less conservative but also the management of the companies stopped to carefully evaluate the risks of these mezzanine instruments (Lehmann-Tolkmitt et al., 2010). They took the advice from an educated party (the banks and financing intermediaries) that the presented standard mezzanine product would be a new option to fill a financing gap or even expand the financing capabilities. In addition, there was an external rating process which they had to undergo. There was neither a clear examination by the respective company if the terms and conditions of standard mezzanine would fit into the company's financing structure nor an individual assessment of a potential refinancing at maturity (Brüse, 2011).

The market for standard mezzanine collapsed in 2008 with the breakdown of the market for CLOs during the last financial crisis and the appearance of the first

insolvencies of standard mezzanine borrowers. Planned funding for new SPVs failed because of the lack of investor appetite (Nohtse, 2012; PwC, 2011).

This collapse had implications to the overall mezzanine market, which almost came to a standstill in 2008 and 2009. It slowly recovered since then, but is still only at a level of approximately 10%, compared to its record year 2007 (Standard & Poor's, 2012b, 2014). Figure 1.7 illustrates the development of the overall mezzanine market in Western Europe during the refinancing period.

Figure 1.7: Annual Mezzanine Volume and Mezzanine Share of Leveraged Finance in Europe

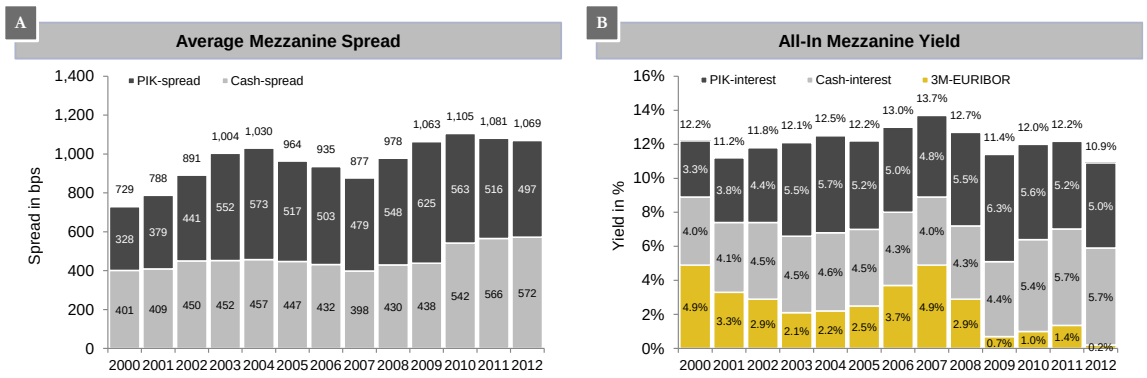


Source: S&P (2012b).

In addition, pricing for these individual mezzanine tranches with an all-in yield of up to 14% were almost twice as high compared to the typical standard mezzanine with an all-in yield between 7% and 10% (Brüse, 2011; Standard & Poor's, 2012b).

Figure 1.8 displays the developments of the average spread as well as the all-in yield for individual mezzanine financing.

Figure 1.8: Average Mezzanine Spread and all-in Mezzanine Yield

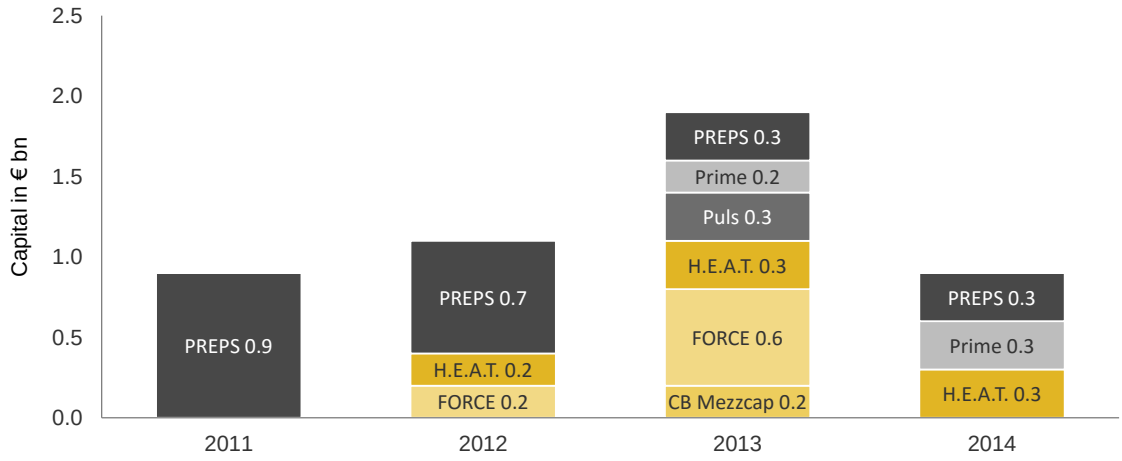


Source: S&P (2012b).

Midcap companies that financed themselves during 2004 and 2007 by using a standard mezzanine instrument were forced to refinance this part of their capital structure. However, the recognition of the refinancing issue started in 2010 as all of the standard mezzanine programmes in Germany matured during the years 2011 to 2014 (Lehmann-Tolkmitt et al., 2010; PwC, 2011) and several academic (Brüse, 2011; Nohtse, 2012) and market-driven research (Hommel et al., 2011; Lehmann-Tolkmitt et al., 2010; PwC, 2011) approached these companies during their studies to assess the refinancing.

German midcap companies had to find alternative financing instruments as there is no standard mezzanine market anymore. Several of the studies referred to indicate that between 60% and 80% of the companies expected to replace the matured standard mezzanine by classical debt financing and retained earnings, because of improved economic conditions and a deleverage in the existing senior lending over the last years (Hommel et al., 2011). However, the remaining midcap companies were expected to face a problematic refinancing situation (Brüse, 2011; Hommel et al., 2011) as standard mezzanine is no longer available as a refinancing instrument (Mayer-Friedrich & Müller, 2013). Figure 1.9 depicts the maturity profile of the major standard mezzanine funds in the years 2011 until 2014.

Figure 1.9: Maturity Profiles of German Standard Mezzanine Funds



Sources: Adapted from Brüse (2011) and PwC (2011).

Most of the fund names were labels, except for PREPS, which is the acronym for preferred pooled shares.

1.3.4 Refinancing Options for Standard Mezzanine – The € 5bn Wave

According to PwC's (2011) study on the upcoming refinancing cycle, the expected refinancing can be clustered as followed, based on expert interviews with bankers and mezzanine funds:

(a) Between 35% and 45% of the companies that used one or more standard mezzanine facilities are expected to be able to refinance these facilities by using retained earnings and/or existing debt facilities.

(b) 45% to 55% of the companies will be in an operational position that is solid enough to successfully perform their refinancing. However, these companies might need to introduce equity or equity-like financing instruments such as individual mezzanine in their refinancing concept as their performance will not allow for a debt-only refinancing. In addition, it was not clear at the time of the study whether such equity or equity-like financing will be available to these companies in sufficient quantum.

(c) The remaining 5% to 15% are classified as being problematic and might even have to file for insolvency because of an unsuccessful refinancing process. PwC is highlighting that the increased insolvency risk might even persist after a refinancing as a result of increased cost of financing for these problematic cases.

The analysis of key financial ratios in the study by PwC (2011) indicated that between 23% and 50% of the companies might not be able to refinance their standard mezzanine via senior debt as their leverage ratio exceeds 3.5x EBITDA already.

Whereas leverage is defined in a majority of academic literature as balance sheet financial indebtedness to balance sheet equity (e.g. De Jong, Kabir & Nguyen, 2008; Graham & Harvey, 2001), leverage in the study by PwC is defined as financial debt to EBIT(DA). (PwC, 2011, p. 47). This corresponds to the leverage definition to be found predominantly in financing contracts (Achleitner, Braun, Hinterramskogler & Tappeiner, 2011; Roland Berger Strategy Consultants, 2014; Tappeiner et al., 2012). This research also uses the terminology ‘leverage’ to describe the ratio financial debt to EBITDA; the ratio balance sheet equity to balance sheet debt is described by the term ‘gearing’.

The review of financing documents in this research revealed that in every financing agreement, individualised definitions of leverage were used. Adjustments were made to calculate financial debt by excluding in some cases cash and cash equivalent positions as well as to calculate EBITDA by adjusting non-operational items for example.

1.4 Aim and Objectives of the Thesis

The aim of the research project is to investigate the current state of the financing decision process to provide an increased understanding on whether a formal financing strategy has been formulated by the midcap company management and will be followed through this specific refinancing process.

This DBA thesis will establish which constituents are essential for the successful implementation of a refinancing project. The findings from the investigation will lead to the formulation of propositions how to overcome the expected deficiencies in the

current financing strategies and financing processes of midcap firms. In addition, it will provide guidelines to support a sound formation for these decisions.

Two existing PhD research projects on the upcoming refinancing of standard mezzanine admitted that a clear identification of one of the generally accepted theories on the capital structure by examining the relevant determinants for the initial choice to use standard mezzanine as a financing instrument was not possible (Brüse, 2011; Nohtse, 2012). In addition, a strategic planning of the refinancing was not identified.

What makes this research especially interesting is the sample it looks at. All of the 572 companies that used standard mezzanine will have to refinance the facility until the maturity of the last funds in 2014 by a different financing instrument (PwC, 2011). Therefore, the refinancing process will have to be performed in a limited timeframe and allows to a certain extent that a change in lender's appetite to enter into a new financing would influence the observation. In addition, refinancing of standard mezzanine allows a focus on midcap companies, as standard mezzanine represented a dedicated financing instrument for midcaps.

Furthermore, the research project aims to expand the current discussion on capital structure theories. It explores whether Barton & Gordon's (1987, 1988) strategic capital structure theory could serve as an integrating concept to combine heuristics and bias from behavioural finance with qualitative determinants from the rational capital structure theories such as tradeoff theory, agency theory and pecking order.

The strategic capital structure theory could provide a more detailed explanation of the financing decision, as it tries to include theses qualitative aspects of financing decisions under uncertainty. The research will focus on two major aspects,

(a) the choice or selection of an alternative that is compliant with the goals of the firm (strategy), and
(b) the execution and implementation of the selected alternative (process)

to allow for an in-depth investigation of financing decisions.

Given the qualitative approach, this research will not yet be another empirical investigation on capital structure, but a qualitative research using case studies to gain a deeper understanding of the management decision on the refinancing and the basis for such refinancing.

Qualitative research on midcap financing decisions in Germany is rare (Tappeiner et al., 2012), given the reluctance to provide information to external parties as already discussed in section 1.1.3. However, based on the importance of midcap firms for the overall economy in Germany, this research wants to add to the academic research.

Empirical research on financing decisions in German firms emphasizes the need for management teams to broaden their financing base as they still rely to core banks in their external financing (Börner et al., 2010). However, other research presents evidence that this core bank principle is economically rational for SME and midcap companies as it allows to mitigate information asymmetries (Lichtblau & Utzig, 2002). Brüse (2011) and Nohtse (2012) request in their research to contrast their findings regarding the planned refinancing of the standard mezzanine with the factual refinancing and to explore whether midcap management has learned from the experience they made. Based on the aims, the following objectives for the research study have been developed:

- Explore the behaviour of the midcap management team in the refinancing decision and whether different types of managers and shareholder structures in midcap firms will influence such decision;
- Identify the elements of the underlying financing strategy or the routines governing such a financing decision;
- Investigate the performed process for the refinancing, the core milestones as well as the interaction between the parties involved in the process;
- Develop recommendations how midcap companies can improve their decision making process to facilitate and substantiate the evaluation of financing options and the selection of appropriate financing instruments as well as to enhance transparency of the decision for the shareholders.

1.5 Structure of the Thesis

Following the introduction in chapter 1 that sets out the aim and objectives of the thesis, chapter 2 will present the theoretical literature review on capital structure and financing decisions. It starts with an overview of relevant theories that are based on a rational decision-maker. The chapter will then focus on behavioural aspects in decision-making and introduces strategic capital structure theory as a potential integrating approach.

Chapter 3 reviews the empirical literature with a particular focus on research on German companies and on refinancing of the standard mezzanine. The chapter further introduces a management typology that is used to categorise the investigations. The chapter ends with presenting the research questions that were identified by the review of the existing literature and the derived research propositions.

Chapter 4 contains the research methodology applied in this thesis. It explains the research methods that have been used to generate an own data set. Since the investigation is based on a qualitative approach, the chapter contains a detailed explanation about why the respective methods have been chosen, how they have been applied and how data quality is ensured.

Chapter 5 presents the results of the investigation which was conducted as a case study approach. It is structured alongside the units of analysis that were developed in chapter 3.

Chapter 6 transposes elements of business strategy typology towards a financing strategy typology. The results from chapter 5 form the basis for the transfer and identified refinancing determinants are assigned to the respective types. The investigated cases are linked with one of the types derived to serve as examples. This financing strategy typology might support to categorise management characteristics that exceed a sole distinction between owner-managers and external managers.

The following chapter 7 contains a framework for a financing strategy, outlining the core elements that a financing strategy could include based on the identified differences between the several types. A framework for a financing strategy in this thesis is seen as a set of assumptions, concepts, values, and practices. This framework is then more detailed as financing principles are assigned to each of the four core

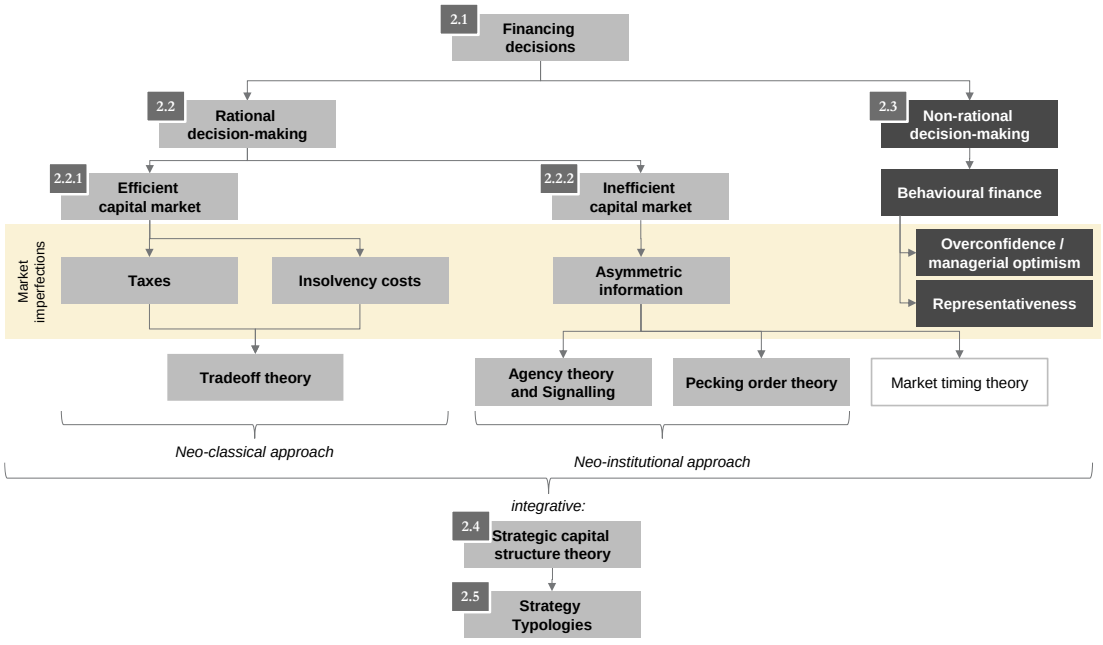
elements. Firms could use these principles to develop an own financing strategy by choosing which core elements and principles are useful for them. As a third element, a template for executing a financing process is described that might help in avoiding the identified inefficiencies and delays in the cases investigated.

Chapter 8 sets out the conclusions and recommendations of this thesis. It sums up the main findings of the research and demonstrates that most propositions can be confirmed by the findings. However, there are also some rejections and additional findings which result in adjustments to some of the research this thesis is based on. The chapter also highlights the limitations of the present research and features indications for further research.

2. Capital Structure Theories and Financing Decisions

Chapter 2 presents the main theoretical concepts on capital structure decisions that this research is based upon. It starts with a short overview in section 2.1 by explaining the underlying theoretical concepts. Section 2.2 will outline and critically review the different capital structure theories that are located in an environment of rational decision-making and are relevant for this research. The following section 2.3 contrasts that by introducing the behavioural and non-rational decision-making approaches. Section 2.4 discusses a more strategic concept towards capital structure decisions that might be seen as an integrative approach towards the presented dichotomy in the previous sections. Based on this inclusion of the strategic capital structure theory in financing decisions, section 2.5 critically reviews typologies to assess business strategies, especially whether they already cover financing considerations or whether they can be adopted to evaluate a management financing decision. The summary in section 2.6 completes the chapter. Figure 2.1 displays an overview on the structure of this chapter as well as the theoretical approaches discussed.

Figure 2.1: Overview on Capital Structure Theories



Sources: Own illustration.

2.1 Overview on theoretical Concepts

For almost sixty years, academic research tried to develop a modern and integrated theory on the capital structure of a company. The first theoretical model to explain the capital structure was presented by Modigliani & Miller in 1958. Their model was based on the hypothesis of the existence of a perfect capital market that is characterised by a large number of investors who analyse and value securities for profit. These investors deal with securities that are all highly divisible into small parcels, therefore all assets are perfectly divisible and liquid. The perfect capital market has no market entrance barriers and all transactions are done without any transaction or taxation costs (Fama, 1970; Modigliani & Miller, 1958). The perfect capital market hypothesis introduces the rational investor or rational market participant. These rational market participants – which in this thesis would also include company managers – are characterised

(a) to act risk-averse,
(b) are not able to influence prices, and
(c) have homogenous expectations (Fama, 1970, 1998).

As there are no differing expectations amongst investors or managers (Fama, 1970; Malkiel, 2003), any arbitrage will immediately result in a market equilibrium. These managers are described in this research as rational decision-makers.

Furthermore, the capital market is efficient. This means that all information is available at the same time to all investors and prices of securities reflect those information and adjust immediately to new information (M. H. Miller, 1988; Modigliani & Miller, 1958). Theories then evolved by acknowledging factors or anomalies that could lead to an imperfect market that is still efficient.

On the contrary, numerous empirical studies have indicated that investors or managers do not necessarily act rational as some investigated anomalies are no explainable by concepts that are based on efficient capital markets (Kahneman, Knetsch & Thaler, 1991; Kahneman & Tversky, 1979; Malmendier & Tate, 2005). Managers rather decide based on their experience and by including behavioural aspects (Meier & Esmatyar, 2015). These managers are referred to as non-rational or irrational decision-makers in this study.

2.2 Rational Capital Structure Decisions

Table 2.1 lists the main sources of academic literature that is focussing on research based on rational decisions. The first part of this section starts with assessments performed under the perfect capital market hypothesis. The literature then acknowledges certain influencing factors, corporate income taxes and cost of insolvency, leading to the tradeoff theory. Tradeoff theory still assumes an efficient capital market, where information is available to all market participants immediately at no costs and where prices for goods react promptly on new information. The second part of this section then discusses the literature on capital structure decisions in a market with information asymmetries.

Table 2.1: Literature Summary on Rational Capital Structure Decisions

Author / Research focus	Key findings
Modigliani & Miller (1958) Conceptual paper	Presentation of the irrelevance of the capital structure on the value of a firm. Substitution of equity by debt instruments will be balanced through increasing cost of equity because of the growing risk profile of the firm.
Durand (1959) Conceptual paper	Criticises the negligence of corporate income taxes on capital structure decisions by Modigliani & Miller (1958). Firms will aim to reduce pre-tax profits via increased indebtedness to lower income taxes.
Modigliani & Miller (1963) Conceptual paper	Acknowledge the demonstrated effect of income taxes on the level of indebtedness. Conclude that even under consideration of income taxes, this would not necessarily mean that companies should aim for the maximum possible amount of debt in all situations. So called 'real-world problems' and limitations by lenders might pose to prefer other funding sources, such as retained earnings.
N. D. Baxter (1967) Analysis of 3 U.S. firms that were in receivership	Refines the conclusion by Modigliani & Miller (1963), that lenders might limit debt availability. Argues that as the leverage of firm increases, firm's insolvency cost increases and creditor demand more risk premium. This ultimately leads to the conclusion that excess leverage can reduce the total value of the firm.

Source: Own illustration.

Table 2.1 (continued)

Author / Research focus	Key findings
Baxter & Cragg (1970) Analysis of 230 U.S. firms between 1950 and 1965	Indicate the existence of an optimal financing structure. Failed to present consistent results. Suggest the development of a detailed and integrated theory of the financial decision of the firm, based on their empirical findings.
A. Kraus & Litzenberger (1973) Theoretical paper	An increased company indebtedness leads to an increased risk of insolvency. This results in higher costs associated with a potential insolvency. Debt repayments have to be allocated by using the company's cash flows which depend on the operational performance Combining these two mitigating effects leads to an optimal capital structure, achieved when the additional positive tax effect by issuing new debt is compensated by the increased cost of insolvency.
Martin & Scott Jr (1974) Study of 112 U.S. corporates in 1971	Reduction of model complexity. Primarily large cap companies with a low working capital ratio issued bonds.
Taub (1975) Assessment of 172 U.S. companies in the years 1960-1969	Size and risk premium show a positive link to a debt issuance; Significance of other factors could not be proven.
Jensen & Meckling (1976) Theoretical paper	Principal-agent relationships exist that are characterised by information asymmetries. Agency costs occur, based on the asymmetric information amongst parties. These consist of monitoring expenditures, bonding expenditures and the residual loss.
Leland & Pyle (1977) Conceptual paper	Moral hazard problems exist that could be mitigated by a signalling model. Information on project or company quality could be observed by actions of the manager. Manager willingness to invest in own project or company could be seen as a signal on project quality.
Ross (1977) Conceptual paper	Development of the incentive-signalling model. Management could reveal the quality of a project or a firm by using debt rather than equity. Contractually fixed payments in debt contracts would increase financial risk of the firm in case the management assumes volatile and probably insufficient cash flows from the project. Management will only choose debt in case it is certain about cash flow predictability.
Marsh (1982) Analysis of 748 UK-based firms between 1959 and 1970	Companies are following a target capital structure, based on the variables insolvency risk, asset base and company size. Current market developments influence decisions.

Source: Own illustration.

Table 2.1 (continued)

Author / Research focus	Key findings
Myers & Majluf (1984) Conceptual paper	Preference-model on funding sources. Managers use private information to issue risky securities when they are overpriced. Investors assume an asymmetric information problem as managers use private information to issue risky securities when they are overpriced. This assumption leads to a discount on the new and existing risky securities when new issues are announced. Managers anticipate these discounts and might waive profitable investments if they must be financed with new risky securities. To avoid this distortion of investment decisions, managers prefer to finance projects with retained earnings, which involve no asymmetric information problem, and with low-risk debt, for which the problem is negligible.
Shyam-Sunder & Myers (1999) Survey of 157 U.S. firms between 1971 and 1989	Empirical test of tradeoff theory versus pecking order. The pecking order model predicts external debt financing is driven by the internal financial deficit. Pecking order with greater time-series explanatory power than a tradeoff model.
Lewis et al. (1999) Review of 644 transactions in the U.S. between 1977 and 1984	Introduction of hybrid financing instruments. Financing decisions and stock price developments are triggered by almost similar variables.
Hovakimian, Opler & Titman (2001) Analysis of 18,502 U.S.-issuances in the timeframe 1979-1997	Target capital structure is less relevant in issuing financing instruments but in repurchasing or prepaying those instruments. Significance of tradeoff-variables.
Fama & French (2002) Longitudinal research of U.S. companies between 1965 and 1999	Confirming the pecking order model but contradicting the trade-off model, more profitable firms are less levered Firms with more investments have less market leverage, which is consistent with the trade-off model and a complex pecking order model. Firms with more investments have lower long-term dividend payouts, but dividends do not vary to accommodate short- term variation in investment. As the pecking order model predicts, short-term variation in investment and earnings is mostly absorbed by debt.
Dutordoir & van de Gucht (2009) Analysis of 812 European transactions between 1997 and 2004	European companies differ from those in the U.S. as they are using hybrid financing instruments to expand debt capabilities and reduce interest burden. Investor requirements in both markets differentiate significantly.

Source: Own illustration.

2.2.1 Rational Decisions in Efficient Capital Markets

2.2.1.1 Modigliani-Miller-Theorem and the Inclusion of Taxes

Modigliani & Miller stated in their original research the irrelevance of using debt or equity on the entity value as well as on the shareholder value of a company (1958, p.

271), based on the perfect capital market hypothesis. According to Modigliani & Miller, the selection between debt and equity is irrelevant to the value of a firm because the "substitution of equity via [cheaper] debt instruments will be debilitated via an increasing cost of equity that reflects the increasing risk structure" of the firm (1958, p. 296). Even though further research disproved relevant assumptions of the original Modigliani-Miller-theorem (Akerlof & Yellen, 1987; Myers, 1984b; Wohlschiess, 1997), the article can be seen as the starting point to modern capital structure theory (Schneider, 2010). In fact, the relevance of the Modigliani-Miller-theorem has not been the evidence of the irrelevance of a capital structure for a company, but to identify the determinants which could lead to such irrelevance (Balakrishnan & Fox, 1993; M. H. Miller, 1988; Wolf et al., 2011). Modigliani & Miller addressed this issue in the last sentences of their research: "These and other drastic simplifications have been necessary in order to come to grips with the problem at all. Having served their purpose they can now be relaxed in the direction of greater realism and relevance, a task in which we hope others interested in this area will wish to share" (1958, p. 296).

Based on various critique on their approach and the drastic simplifications, especially neglecting the effect of income taxes (e.g. Durand, 1959), Modigliani & Miller themselves admitted that effect and corrected their original theorem in 1963. As already discussed in section 1.2.3, corporate income taxes do effect financing decisions. However, Modigliani & Miller did not focus on the differences between retained earnings and dividends of German midcaps, but on the general tax-shield effect of interest payments on a company's pre-tax profits. The basic effect describes that a company that is solely financed via equity has to pay income taxes on the complete dividend payment to its shareholders, whereas interest payments to debtholders would reduce the company's taxable income and therefore its tax payments. (A. Kraus & Litzenberger, 1973).

Research performed by Baxter (1967) and Stiglitz (1969) questioned this effect as they revealed that it would ultimately lead to a scenario, where companies aim to be completely financed via debt. However, an increased indebtedness of the company would also trigger negative effects such as an increased risk of insolvency.

The analysis performed by Baxter & Cragg (1970) can be identified as the first empirical research on capital structure decisions. They analysed issuances of long-term

capital (in the form of either debt or equity) by U.S. companies. However, they had to admit that the variables chosen have shown no or unexpected significance, which questions their analysis (N. D. Baxter & Cragg, 1970, p. 234). Their approach highlights the methodological and theoretical problems at the beginning of the security choice research.

Two further studies performed by Martin & Scott (1974) and Taub (1975) tried to develop a model that differentiates between debt and equity choice of a company by analysing key financial performance indicators. Martin & Scott reduced their analysis to seven factors, which they expect to be relevant for a management of a company in deciding the preferred financing instrument. However, they include no justification for using these factors. Martin & Scott concluded that primarily large cap companies with a low working capital ratio issued bonds and propose their model to be used by company managers to identify which financing decision other managers made under the given factors (Martin & Scott Jr, 1974, p. 235). Therefore, their research was also not able to present an adequate theoretical background for the financing decision, but a more practical benchmarking framework. Even though Taub tried to perceive more general results by the investigation of several financing decisions per company, he was not able to present results that showed significance in all tested variables. He had to admit that "if there exists an optimal debt-equity ratio for the firm we obviously need a more general theory as to those factors that influence the firm's choice" (Taub, 1975, pp. 415–416).

2.2.1.2 Tradeoff theory

A more realistic concept towards capital structure decisions was presented by Kraus & Litzenberger in 1973. Their basic assumption was that the usage of debt financing implies interest payments as well as the repayment of the principal amount and that these are usually contractually fixed. However, the repayments have to be allocated by using the company's cash flows which depend on the operational performance (Wolf et al., 2011). The rise of company indebtedness leads to an increased risk of insolvency resulting in higher costs associated with such potential insolvency (Jaeger, 2012). Kraus & Litzenberger (1973) showed that by combining these two mitigating effects, an optimal capital structure would exist. It is achieved when the additional positive tax effect by issuing new debt is compensated by the increased cost of insolvency. This

correlation forms the basis of the *static tradeoff theory* (Fama & French, 2004; Perret, 2013).

Even though Kraus & Litzenberger (1973) were able to present a theoretical approach that would support the existence of an optimal capital structure, critique was formulated because their empirical research declined the relevance of insolvency cost to act as an adequate antipole to the income tax effect (Haugen & Senbet, 1978). Empirical studies revealed that firms with similar profiles showed different capital structures (Jensen & Meckling, 1976). In addition, it was observed that companies still used debt financing instruments in periods where interest expenses were not deductible from operating income (De Jong, Verbeek & Verwijmeren, 2011; Shyam-Sunder & Myers, 1999). This led to the conclusion that further determinants must exist that influence the capital structure of the firm and that are not in line with the assumptions of a perfect capital market (Meier & Esmatyar, 2015).

2.2.2 Rational Decisions in Imperfect Capital Markets

An explanatory framework for determinants that influence capital structure decisions in imperfect markets is provided by Jensen & Meckling in 1976. They assess the relation between shareholders, debtholders as well as company management and information asymmetries amongst those parties.

2.2.2.1 Asymmetric Information

Jensen & Meckling (1976) discussed that in financing relationships various interests are involved that may differ by the individual party and information asymmetries exist between those parties. They introduced two pairs of relationship in their analysis (Jensen & Meckling, 1976, p. 312). The first pair of relationship exists between shareholders (principals) of a company and their managers (agent), or between lenders (principals) and the company as the borrower respectively its managers (agent) (Spremann, 1987). The parties are bound by contractual agreements, where the principal mandates an agent to act in the interest of the principal. The problem arises in situations where the two parties have different interests and asymmetric information exist (Jensen & Meckling, 1976). In both cases, the principal cannot directly ensure that the agent is always acting in the principal's best interests, particularly when activities that are useful to the principal are costly to the agent (bonding costs), and

where actions of the agent are costly for the principal to observe (monitoring costs) (Kochhar, 1996). Two basic scenarios of these principal-agent problems or dilemmas have to be differentiated:

(a) Prior to enter into a contractual relationship (ex ante): The management of a company (agent) could for example present an overoptimistic business plan and cash flow projections to a bank or financing partner (principal). The management could therefore obtain a larger amount of debt or more attractive terms than the bank would be willing to offer in a scenario where the bank would have the same information. Because of this information asymmetry the bank can never have the same certainty about predicted cash flows as the company management and therefore will not be willing to accept a higher price for a superior quality or – in terms of a financing relationship – is willing to offer lower interest rates to better credit qualities. In theory, this could lead to a situation, where firms that are representing such better credit quality will not accept the bank offers, but only the remaining lower credit quality profiles remain as potential clients for the banks. This effect is known as ‘adverse selection’ (Daniel & Titman, 1995; Stiglitz, 1988; Titman & Wessels, 1988).

(b) After entering into a contractual relationship (ex post): The company (agent) could for example present the bank (principal) financial data that are adjusted. Management uses for example opportunities to improve balance sheet statistics so that banks expect a better economic development of the company as they would do if they had the same information as the management. The management could optimise calculated interest margin in their financing contracts. This would lead to a pricing of the financing contract that is not reflecting the factual risk of the firm. Banks would suffer if they are not able to change the interest rate payable by the company due to long-term contracts. As a consequence, banks would refuse to offer long term contracts with fixed interest rates. This effect is described as ‘moral hazard’ problem (Fairchild, 2005). On the other hand, this would increase the pre-tax profit of such company – and in case that this increased profit is not totally compensated by higher tax payments – to a growing dividend payment potential to the shareholders. This example combines the two pairs of relationships. In the end, the manager would simulate a positive development of the firm but not based

on his operational or strategic actions, but on interpreting financial information that the manager presents to the banks.

2.2.2.2 Agency Theory and Signalling

According to the approach of Jensen & Meckling (1976), agency costs – which consist of monitoring expenditures by the principal, the bonding expenditures of the agent and a residual loss for the remaining divergence between the first two cost aspects – would not exist, if a company would be totally financed via internal funds and cash flows. Agency cost would therefore occur as soon as the company involves external equity or debt funding sources to its capital structure. However, the inclusion of external funding sources allows the agent (the company's management) a better diversification of the company's assets that leads to a further tradeoff between agency cost and diversification benefits (Meier & Esmatyar, 2015). In addition, the assumption of Jensen & Meckling (1976) did not acknowledge that internal funds are part of the shareholders equity and could be paid out via dividends. Therefore, in case a company would be completely financed via internal funds, the agency cost of equity would be maximised.

Further research by Jensen & Smith (1984) and Jensen (1986) analyses agency effects on the distribution of company internal funds and cash flows. Managers aim for retaining those cash flows for further investments rather than to raise new external equity which would increase their agency cost. On the contrary, shareholders will request dividend payments to avoid that the management could use retained cash flows to invest into projects not maximising their value without their control (Meier & Esmatyar, 2015). To solve this conflict, Jensen (1986) proposes to raise external debt rather than external equity, because interest payments would reduce the company cash flows. Reduced cash flows would restrict management leeway and therefore reduce the agency cost. However, the increased debt position of a firm would lead to increased agency cost between management and financing bank, including rising insolvency cost (Jensen, 1986). Two strategies, both initiated by the principal, could mitigate these principal-agent problems:

(a) *Screening*

Screening describes an assessment of the credit quality of a company (agent) by the potential bank or alternative financing partner (principal) or a third party

mandated by the principal. Such an assessment would be the internal credit examination or an external rating (Jensen, 1986; Lensink & Tra, 2006).

(b) *Self-selection*

The principal presents financing contracts with different features. The alternative selected by the agent allows to draw conclusions about the factual credit quality of the agent. The principal could present the agent two financing contract alternatives: (a) a contract with lower interest rates but linked to the adherence to defined financial covenants, and (b) a contract without financial covenants but higher interest rates. The same scenario could be configured by introducing collateral to such construct (Jensen, 1986; Wolf et al., 2011). The company management will only accept constructs that involve limitations in case it is certain about cash flow projections.

Leland & Pyle (1977) analysed information asymmetries between lenders and borrowers and assumed that the borrower knows about the true characteristics and quality of his firm or an investment but might not share such information with the lenders. Lenders will react to such asymmetric information by increasing interest and therefore the cost of capital to the borrowers. As a result, borrowers could mitigate such effect by an own financial commitment into the project or the firm showing that they are confident about the good quality of the investment to the lenders (Leland & Pyle, 1977, p. 371). This signalling approach has been further researched by Ross (1977) and forms the third strategy to mitigate principal-agent problems.

In addition to the signalling approach proposed by Leland & Pyle (1977), the research of Ross (1977) showed that the agent could furthermore reveal his credit quality by entering into debt financing agreements rather than opting for equity financing. The acceptance of fixed service (repayments as well as interest payments or coupons) of a debt instrument by the management shows the good credit quality. Otherwise it would not have signed such contract that increases financial risk in case the cash flows would be volatile and probably do not cover the required debt service (Flannery, 1986; Ross, 1977).

2.2.2.3 Pecking Order Theory

Following assumptions from the agency theory and the signalling concepts, Myers & Majluf present in 1984 their theory that capital structure decisions are based upon a ranking of the management's general willingness which financing source to use, the pecking order. According to the pecking order approach, the management will use internal funds such as retained earnings first before raising new external funding (Myers & Majluf, 1984). Within external funds, additional debt would be more preferable than new equity (Fama & French, 2005). Pecking order acknowledges transaction cost as well as information asymmetries between management and financing partners (Fama & French, 2005; Myers, 1984a). Two underlying drivers for such a pecking order are used for explanation.

The first driver is the assumption that the management prefers the financing source that implies the smallest influence on the company's cash flows (Mateev, Poutziouris & Ivanov, 2012). Therefore, internal funds, generated through retained earnings lead neither to changes in the income statement nor in the cash flow profile in future years. The overall equity of the company increases, but share capital remains stable, meaning that dividend expectations do not change (Shyam-Sunder & Myers, 1999). Even though this might be acceptable from an income statement-perspective, it is questionable on an economic basis, as the existing owners of the firm provided in fact new funds to the firm in waiving their dividend right. Therefore, their investment in the company raises which will reduce their return if the dividend payments remain stable (Chirinko & Singha, 2000). Debt as the second source will influence the company's cash flow through fixed interest payments, but are expected to have a lower impact on cash flow compared to the return expectations of new shareholders.

The second driver for a pecking order is the assumption that a company's management prefers the source that leads to minimum changes in stakeholder structure and deriving control mechanisms (Börner & Grichnik, 2003). The usage of internal funds leads to no changes of the existing stakeholder structure as it comes from the current owners (Perret, 2013; Prasad, Bruton & Merikas, 1997). External debt as the second choice will lead to changes in the stakeholder structure, but the level of influence of the debtholders could be optimised from a management's perspective by the contract design, such as accepting higher interest rates in return for a financing contract that

excludes financial covenants. New external equity ranks last in such a scenario because new shareholders will receive same rights as the existing (De Jong et al., 2011; Harris & Raviv, 1991).

The issuance of new equity can be interpreted as a signal of deteriorating operational performance expectations by the management, because otherwise it would not use this financing source. However, pecking order as a capital structure theory lacks in explaining an optimal decision between debt or equity, because equity financing resides at the top (internal funds) as well as at the bottom (capital increase) of the hierarchy (Jackson, Keune & Salzsieder, 2013). 'Hierarchy' or 'financing hierarchy' in the context of this research means a categorisation of internal and external financing sources into successive ranks with each level subordinate to the one above (Koropp et al., 2014; Leary & Roberts, 2010).

2.2.2.4 Market Timing Theory

A further theoretical concept that negates the existence of an optimal capital structure is the market timing theory, introduced by Baker & Wurgler in 2002. In their view, companies are more likely to issue equity when market value is high, compared to book value and historical market values, whereas managers would repurchase company equity when market values are low. In their results, the capital structure of a firm is the cumulative outcome of past attempts to time the equity market (Baker & Wurgler, 2002, p. 29).

However, market timing theory requires market values for debt and equity, which are not known for SMEs and midcap companies as these are predominantly privately held (Degryse, de Goeij, & Kappert, 2012). Furthermore, midcap firms are seen not to solely focus on a strict shareholder value maximisation, as already discussed in section 1.2.3.

In addition, institutional differences between countries exist as investigated by Sautner & Spranger in 2009. They researched market-timing effects on financing decisions in the US and in Germany and examined that there was no systematic and significant influence on financing decisions in larger German listed companies that could be explained by market timing theory. One possible explanation was based on different shareholder structures as the listed companies in Germany showed a significantly

higher level of controlling shareholders compared to US listed companies, where shareholdings are spread more widely. They conclude that market timing is unlikely in capital markets with concentrated shareholder structures (Sautner & Spranger, 2009, p. 247).

Further empirical research showed that the influence of market timing on capital structure decisions has been overrated (Jaeger, 2012, p. 57) and that timing of a transaction should be considered to be a further determinant in the decision but not the predominantly explanation for the capital structure of a firm (Leary & Roberts, 2005, 2010).

Nevertheless, even though a clear shareholder value orientation is questioned and publicly listed SMEs or midcap firms are at least rare, the underlying assumption of market timing theory that management choses financing by case based on instruments available and their price rather than on a defined capital structure remains important. A further aspect is presented in the conclusions of Baker & Wurgler's research, that equity market timing and capital structure dynamics could be either explained by pecking order with rational managers and investors or by involving irrational investors and time-varying mispricing (2002, p.27). Research was not able to present a consistent theoretical concept that explained all market developments and anomalies, but to indicate an advantage for either the one or the other approach (examples for this dichotomy in research are e.g. Chirinko & Singha, 2000; Shyam-Sunder & Myers, 1999, a good overview on this development is provided by Harris & Raviv, 1991). Empirical studies on capital structure and financing decisions failed in many cases to show consistent results for one particular capital structure theory. Research articles include a caveat that the results are not distinct (Hovakimian et al., 2001; Lewis et al., 1999) or that they are to some extend inconsistent (Dutordoir & van de Gucht, 2009).

Academic research in the last ten years aimed to integrate aspects of different theories to allow for a consistent explanation as none of the existing theories is able to provide a unified framework. Empirical research that expanded classical pecking order by factors such as income taxes which would have been typically attributed to other capital structure theories have been published by Fama & French in 2005 and by Leary & Roberts in 2010. They had to expand their explanatory framework given the developments of the financial crisis and were able to increase accuracy of their models.

Other research (Arnold, Lahmann & Reinstädt, 2011; De Jong et al., 2011) followed that path.

2.3 Non-rational Capital Structure Decisions

Kahneman & Tversky (1974a) explored that neo-classical and neo-institutional theoretical concepts were both not able to interpret all investigated anomalies in financing decisions. Further research proposed that theories were not able to explain financing decisions because of the misleading assumption of the existence of rational market participants (Adam, Burg, Scheinert & Streitz, 2014; Kahneman & Tversky, 1974b; Meier & Esmatyar, 2015). Therefore, non-economic aspects like psychology and behaviour of the decision-maker need to be included in assessing financing decisions and in explaining investigated anomalies. Table 2.2 presents the main literature sources on capital structure decisions that are based on behavioural finance.

Table 2.2: Literature Summary on Behavioural Capital Structure Decisions

Author / Research focus	Key findings
Kahneman & Tversky (1974a) Conceptual paper	Introduction of three heuristics, including representativeness. The authors conclude that heuristics are highly economical and usually effective, leading to systematic and predictable errors. They request further research to provide a better understanding of these heuristics and the biases to which they lead to improve judgments and decisions under uncertainty.
Kahneman & Tversky (1979) Theoretical paper	Presentation of the prospect theory. Persistent biases exist, motivated by psychological factors, influencing choices under uncertainty. Preferences are seen as a function of decision weights that would not necessarily match with probabilities. Decision weights tend to overweight small probabilities and to underweight moderate to high probabilities.
Busenitz & Barney (1997) Survey by comparing questionnaire results from 124 start-up entrepreneurs with responses from 95 managers from large cap firms in the U.S.	Authors investigated the importance of behavioural aspects in strategic management decisions and the existence of significant differences in strategic decision making. Large cap managers can rely on developed policies and have access to market information. Entrepreneurs lack this information access and base decisions more on own experience.

Source: Own illustration.

Table 2.2 (continued)

Author / Research focus	Key findings
Fama (1998) Theoretical paper	Critique on developed theories regarding behavioural models. The author presented two reasons for behavioural theory not to persist: (a) The discovered anomalies on stock returns tended to appear to be as often underreaction by investors as overreaction. Post-event continuation of pre-event abnormal returns would be about as frequent as post-event reversal. (b) The anomalies would tend to disappear, either by improving the methodology of the studies or by focusing on long-term returns.
Shiller (2003) Theoretical paper, critique on Fama (1998)	Behavioural finance has led to a profound deepening of knowledge on financial markets as efficient markets theory could lead to incorrect interpretations of events such as major stock market bubbles. Fama's (1998) first criticism would reflect an incorrect view of the psychological underpinnings. The second criticism would be also incorrect as the basic anomaly of excess volatility seems not to be disproved, but graphically reinforced by the assessment of the recent global stock markets developments. Moreover, the author states that the sole statement that anomalies sometimes disappear over time would be no evidence that the markets are fully rational.
Malmendier & Tate (2005) Survey based on assessing Forbes 500 CEO transactions in their companies' stock and options combined with the analysis of press portrays	The authors tried to empirically analyse CEO overconfidence and its impact on corporate investment and identified that management teams permanently overestimate their own skills. They conclude that existing debt might be an instrument to limit overconfident managers as company cash flows would be partly restricted for debt repayments.
Fairchild (2005) Theoretical paper	The author examined the combined effects of overconfidence, asymmetric information and moral hazard problems on the financing decision by presenting two models. Fairchild showed that management optimism leads to a higher company leverage and to higher insolvency costs.
Hackbarth (2008) Theoretical paper	Adds to the model by Fairchild (2005) as he showed in a model analysis that managers with overoptimistic bias tend to choose higher debt levels and issue debt more often. He differentiates two forms of perception biases: (a) The growth perception bias describes managers with overly positive views on company growth and therefore future revenues or cash flows from investments. (b) The second form of perception bias is the risk perception bias, where managers underestimate the volatility of future company cash flows.

Source: Own illustration.

Table 2.2 (continued)

Author / Research focus	Key findings
Malmendier, Tate & Yan (2011) Empirical analysis of 477 CEOs of publicly-traded U.S. firms and their personal investments between 1980 and 1994	Results showed that optimistic managers view external financing to be unduly costly. Optimistic managers believe that their firm is undervalued by the market because they overestimate their firms' future cash flows.

Source: Own illustration.

Behavioural finance represents an approach that combines traditional finance, psychology and sociology in an attempt to explain these anomalies (Ricciardi & Simon, 2000). According to Shiller (2003), behavioural finance theory presents a contradicting psychological and sociological approach to the efficient market hypothesis.

Nevertheless, behavioural finance is criticised by rational-decision scholars for missing robustness (De Bondt, 2002; Fama, 1998) and for not being an integrated or unified theory, but offers explanations on a series of individual anomalies (Subrahmanyam, 2007, p. 13). However, these central critiques have been also argued by research (Brav & Heaton, 2002; Shiller, 2003), especially for an "incorrect view of the psychological underpinnings of behavioural finance" (Shiller, 2003, p. 101). Welch (2004) found in his research, that corporates in fact did not adjust their individual capital structures in response to market and price fluctuations. This "runs counter to rational theories of capital structure choice" (Subrahmanyam, 2007, p. 22).

As behavioural finance investigates numerous heuristics and bias, this research will focus on two particular heuristics that are regularly used to explain differences between managers and entrepreneurs in financing decisions (e.g. Busenitz & Barney, 1997), overconfidence and representativeness. Overviews on the development of behavioural finance have been conducted by Sewell (2007), Subrahmanyam (2007) and Fairchild (2010), for example.

2.3.1 Overconfidence

The phenomenon of optimism or overconfidence has been widely analysed in the psychological and sociological area. Feather & Simon (1971) investigated that confident individuals attribute a successful decision to their competence and capability, whereas a failure is associated with bad luck. Further research by Fischhoff,

Slovic & Lichtenstein (1977) revealed that optimistic individuals are overly confident in the reliability of the information they base their decision on. They based their results on the research by Kahneman & Tversky (1974a), who introduced the overconfidence effect in 1974. In their view, the overconfidence bias is primarily identified in relation to two different aspects:

(1) the impact of an individual's decision or actions to future results or developments (Camerer & Lovallo, 1999), and
(2) the overestimation of the individual's knowledge or comprehension (Welsh & Zellweger, 2010).

2.3.1.1 Overconfidence in Management Decisions

Larwood & Whittaker (1977) transferred the overconfidence phenomenon towards management decisions. They were able to provide evidence that managers also tend to be overconfident. March & Shapira (1987) explain managerial optimism with their confidence in being able to control the effects of own decisions. This leads to the conclusion that managers will accept higher risks as they assume these risks not to become valid. Camerer & Lovallo (1999) assume that company failure is based on overconfidence of entrepreneurs. In situations where the success of a business is dependent on the skills of the entrepreneur, those entrepreneurs tend to overestimate their skills and capabilities compared to their competitors.

Busenitz & Barney (1997) investigated the importance of behavioural aspects in strategic management decisions. They differentiated between managers in large cap organisations and entrepreneurs and showed significant differences in strategic decision making. Managers in large cap organisations can often rely on developed policies and procedures also called "routines" (1997, p.14) as well as on information and databases to substantiate their decision-making. On the other hand, entrepreneurs usually do not have this access to these information sources or only at relatively high cost.

Heaton (2002) presents evidence that in behavioural finance it is widely accepted that managerial optimism leads to the situation that managers overestimate the probability of company success whereas they underestimate company failure.

Malmendier & Tate (2005) surveyed that management teams permanently overestimate their own skills by assuming that overconfident managers are overestimating the expected returns of their investment and corporate decisions. One of their conclusions was that probably the existing debt might be an instrument to limit overconfident managers. In such a scenario, corporate cash is to some extend restricted for debt repayments and the ability to raise additional debt to finance new investments is dependent on lenders' willingness. In addition, many financing contracts involve limitations on future investments and disposals.

Malmendier & Tate (2005) began to measure managerial overconfidence and its impact on corporate behaviour, based on the existing work by Busenitz & Barney (1997), who already examined the differences between entrepreneurs and managers.

2.3.1.2 Overconfidence in Financing Decisions

Graham and Harvey (2001) were the first who surveyed CFOs and their financing decisions based on behavioural finance aspects. Their attempt was to learn what factors decision makers take into account and what the corresponding capital structures are. They found "some support for the pecking order and tradeoff capital structure hypotheses but little evidence that executives are concerned about asset substitution, asymmetric information, transactions costs, free cash flows, or personal taxes" (Graham & Harvey, 2001, p. 188). A second research in the following year expanded their findings as they admitted that "when it comes to making capital structure decisions, corporations rely heavily on practical, informal rules and pay less attention to academic advice" (Graham & Harvey, 2002, p. 2). Bertrand & Schoar (2003) further developed this attempt as they assessed that CFO behaviour is driven by non-financial factors, such as education or relationships.

Further research performed by Fairchild in 2005 identified that management optimism leads to a higher company leverage and to higher insolvency costs. However, the result is not necessarily to be seen as a negative impact as they discuss that higher debt levels would also trigger higher managerial effort.

Hackbarth (2008) adds to that research as he showed in a model analysis that managers with overoptimistic bias tend to choose higher debt levels and issue debt more often compared to otherwise identical unbiased managers. He differentiates two forms of

perception biases. The growth perception bias describes managers with overly positive views on company growth and therefore future revenues or cash flows from investments. These managers assume that the market undervalues their equity and therefore assume external financing to be overly costly. They show a preference as described in pecking order theory. The second form of perception bias is the risk perception bias, where managers underestimate the volatility of future company cash flows. They assume that external debt is undervalued by the market and provided at inadequately high interest rates. Those managers tend to fund their companies via equity and would in fact follow a reverse pecking order. However, both groups of managers showed a trend for a higher leverage compared to rational managers as they assume their firm to be either more profitable or more robust compared to other companies (Meier & Esmatyar, 2015).

Malmendier, Tate & Yan (2011) showed that optimistic managers view external financing to be unduly costly based on the investigation of stock options and stock trades of CEOs. Optimistic managers believe that their firm is undervalued by the market because they overestimate their firms' future cash flows.

Hence, overconfident managers prefer to use cash flow funding or in case they have to raise external funding, they prefer debt to equity, since equity prices are more sensitive to differences of opinions about future cash flows. Unconditionally, they may choose low levels of risky debt relative to available interest tax deductions. As a second result, Malmendier et al. (2011) revealed that CEOs with financial depression experience are averse to debt and focus excessively on internal finance. They conclude that this variation in managers' personal histories is likely to generate differences in their financial decision-making.

Further academic research on overconfidence and behavioural finance in German firms followed (Adam et al., 2014; Koropp et al., 2014; Meier & Esmatyar, 2015) and will be discussed in section 3.2.

2.3.2 Representativeness

Managers manifest this heuristic in a decision process when they generalize about a phenomenon based on only a few observations of a specified phenomenon (Busenitz & Barney, 1997, p.16). A wide variety of problems has been developed to test

representativeness with studies repeatedly showing that subjects consistently ignore base rate information (Busenitz & Barney, 1997; Kahneman & Tversky, 1974b). The representativeness heuristic describes the tendency to overgeneralise from only a few characteristics and observations to generate judgements about the probability of an event under uncertainty. Representativeness, as surveyed by Busenitz & Barney (1997) is a "willingness of decision-makers to generalize from small, non-random samples [...]" (p. 16). According to the researchers, the most common type of small non-random sample used as a basis for generalisation is personal experience (p. 16). An important aspect to mitigate representativeness would be the inclusion of available market data and information as well as taking advice by independent third parties, such as accountants, financing advisors, etc. prior to performing a decision process. However, this directly interferes with the overconfidence bias, as overconfident and optimistic managers assume to have sufficient transparency on financing instruments available and the status of the financing markets to execute such a process. As representativeness bias is not measurable, only little research is available. However, the intended in-depth exploration of this research might provide some helpful insights.

2.4 Strategic Capital Structure Theory

Even though Barton & Gordon's (1987, 1988) strategic capital structure theory does not explicitly link to behavioural finance, it must be acknowledged that there is a congruence with behavioural finance as it analyses the influence of psychological and sociological aspects on "the behaviour of financial practitioners" (Sewell, 2007, p. 1). Koropp et al. (2014) found "empirical support for a strategic management approach to capital structure choice […] as future financial decision making (financing intention) is subject to distinctive personal characteristics (attitudes, perceived norms, perceived control) of the decision maker" (p. 321).

Based on the critique on simplifications of financing decisions to be analysed by the common theoretical models, Barton & Gordon (1987) presented their *strategic capital structure theory*. Their aim was to include strategic and behavioural aspects in the analysis of a financing decision or in the development of a capital structure theory of a firm. Even though Kahneman & Tversky's (1974a, 1979) fundamental work on heuristics and biases in management decisions were already published, Barton &

Gordon did not borrow from these behavioural finance sources, but combined financing theory with Andrews' (1980) theory on risk behaviour and corporate strategy. Table 2.3 exhibits an overview of key research on strategic capital structure theory.

Table 2.3: Research on Strategic Capital Structure Theory

Author / Research focus	Key findings
Barton & Gordon (1987) Conceptual paper	Critique on the oversimplification of quantitative research in financial theory. Introduction of strategic concepts and presentation of five capital structure propositions. Indication for a strategic managerial theory of capital structure of a firm which also includes management behaviour in its decisions. Requests for extensive empirical research to test these propositions.
Barton & Gordon (1988) Analysis of 279 Fortune 500 companies between 1970 and 1974	Presentation of contextual variables and hypotheses to substantiate their initial theoretical framework. Introduced diversification strategy typologies as risk mitigations. Overall findings provided support for the behavioural explanation of the capital structure decision at firm level. Focus on Fortune 500 companies provides only support for large cap companies.
Lowe, Naughton & Taylor (1994) Survey based on 176 out of the top 500 Australian public companies between 1984 and 1988	Profitability and earnings risk as two major variables only partially support the Barton & Gordon (1998) analysis. Nevertheless, acknowledge the importance of including strategy as a determinant of the capital structure. Introduced the impact of ownership and control to the theory and propose to consider alternative strategy models.
Taylor & Lowe (1995) Analysis based on the original Barton & Gordon setup of 279 Fortune 500 companies between 1970 and 1974	Given the weaker support for the Barton & Gordon (1998) results in their 1994 survey, Taylor & Lowe performed a second analysis by using the original Barton & Gordon dataset. Stronger support for the impact of profitability, but still only partial support for the quantitative elements of strategic capital structure theory.
Chaganti, DeCarolis & Deeds (1995) Survey based on 903 small and independently-owned member firms of the U.S. National Federation of Independent Businesses during a series of three surveys in 1985, 1986 and 1987	Expansion of Barton & Gordon's (1988) approach towards small cap firms and early stage ventures. Confirmation of Barton & Gordon's strategic management perspective by their statistical results and offered several predictors of capital structure decisions in small ventures.
Prasad, Bruton & Merikas (1997) Analysis of 810 U.S. public companies between 1969 and 1987, whereof 592 companies showed a similar systematic risk and were used as final sample	Further substantiated Barton & Gordon's results by mitigating methodological problems in the 1988 research. Introduction of systematic risk as used in the CAPM model. Strong support for the theoretical proposition that management influences and controls systematic risk through selection of financing structure.
Ginn, Young & Beekun (1995) Investigation of 114 U.S. hospital cases on interaction between business strategy and financial structure between 1981 and 1985.	Use the Miles & Snow typology and combine it with strategic capital structure theory and the pecking order approach. Based on the four variables liquidity, capital intensity, return on assets and leverage, the authors found evidence for the three dominant strategy types.

Source: Own illustration.

Table 2.3 (continued)

Author / Research focus	Key findings
Jordan, Lowe & Taylor (1998) Survey including 275 U.K. SME firms from the FAME database in 1997	Second research to focus on SME. Combination of corporate strategies, as used in research by Barton & Gordon (1988) or Lowe et al. (1994) with diversification strategies as introduced by Balakrishnan & Fox (1993). Only weak support for linkage between capital structure and diversification strategies, but stronger support for competitive strategies.
Gleason, Mathur & Mathur (2000) Cross-country survey in 14 European countries, focussing on 198 retail firms in 1994	Analysis of culture on capital structure and financing decisions and focus on one industry sector to avoid cross-sector bias. Key finding is that capital structure varies by cultural setting. Therefore, results show that agency problems may be primarily responsible for corporate overleveraging.
La Rocca, La Rocca & Gerace (2008)	Capital structure to be related also to products and product market characteristics of the relevant firm. Necessity to match corporate strategy, investment plans and financing requirements. Capital structure of the firm influenced by non-financial and by financial stakeholders of the firm, therefore the decision-making is not simply a matter of prescriptive principles.

Source: Own illustration.

Barton & Gordon state that the capital structure is the result of fundamental decisions by the management of a company and therefore must be in line with the overall strategic goals of the company. In addition, individual preferences of the management, based on their axiology, are influencing the capital structure. Five propositions have been formulated by Barton & Gordon:

1. "Top management's risk taking propensity will affect the firm's capital structure
2. Top management's goals for the firm will affect the firm's capital structure
3. Top managers would prefer to finance a firm's needs from internally generated funds rather than from external creditors or even new stockholders
4. The risk propensity of top management and specific financial context of the firm affect the amount of debt lenders are willing to lend and what terms they are willing to use
5. Relevant financial contextual variables moderate the ability of top management to select a capital structure for the firm" (Barton & Gordon, 1987, pp. 71-74).

The first two propositions imply management behaviour aspects (Barton & Gordon, 1987, p. 74), whereas the third proposition is upon pecking order theory. Proposition four implies a maximum level of debt available to a company and therefore could be

attributed towards tradeoff theory whereas the fifth proposition implies that financial variables affect the management choice of a financing mix for the firm (Barton & Gordon, 1987, p. 72).

Based on these propositions, the existence of a single, shareholder value maximising financing structure is rejected (Jaeger, 2012; Schneider, 2010). According to Jaeger, most important determinants are the risk attitude of the management as well as retaining control which are both included in the corporate strategy (2012, p. 51). A *corporate strategy* or *strategic management* is defined by Ansoff (1965) and by Nag, Hambrick & Chen (2007) to involve the formulation and implementation of major goals and initiatives taken by a firm's top management. The strategy is based on consideration of resources and an assessment of the environment in which the company operates in (Nag et al., 2007). According to Porter, strategic management provides the "overall direction to the enterprise and involves specifying the organisation's objectives, developing policies and plans designed to achieve these objectives, and then allocating resources to implement the plans" (1996, p. 61). Corporate strategy in this thesis is furthermore based on the work of Andrews (1980), who "included the debt/equity choice as one of the specific components of the corporate strategy of the firm" (Barton & Gordon, 1987, p. 70). Management aims for a capital structure that allows maximum control and flexibility. Therefore, limited indebtedness is preferred to retain control (Jaeger, 2012). Based on the definition of strategic management and Barton & Gordon's (1987) inclusion in capital structure decisions, a financing strategy in this research is the plan and approach to achieve a financing structure based on the defined goals of the midcap firm.

However, key elements of the theory – the strategic and behavioural aspects of the management – provide only limited operationalisability (Jaeger, 2012). Nevertheless, some of the propositions of the strategic capital structure theory were operationalised and therefore empirically tested (La Rocca, La Rocca & Gerace, 2008). Especially the third proposition – representing in fact the pecking order theory – allows for an operationalisation. Given the fact that taxes are not considered in their propositions, Barton & Gordon's strategic capital structure theory is declining one of the key effects of the tradeoff theory (Schneider, 2010). On the other hand, their fourth proposition indicates that the willingness of financing partners to provide external debt is

influenced by the economic environment the firm and its management envisages. Bank loans availability is depending on the probability of default of a firm which leads to the calculation of a risk premium on interest rates or even the denial of a loan request. This assumption can be assigned to tradeoff theory (Schneider, 2010).

The research by Barton & Gordon takes a special position in the capital structure theory. They are the first that postulate a theory without a quantifiable model backing their propositions (Schneider, 2010). The authors explicitly ask for an empirical examination of their propositions. In addition, the authors are the first that incorporate strategic and behavioural aspects in the centre of the consideration of an optimal capital structure.

The missing quantifiability is forming the major critique on Barton & Gordon's theory not to present an integrated capital structure theory (Schneider, 2010). Therefore, the authors convey empirically testable hypotheses based on their five propositions in a second research (Barton & Gordon, 1988). They investigated the effect of profitability, capital intensity and sales growth on debt levels. The empirical research of Lowe, Naughton & Taylor (1994) and Taylor & Lowe (1995) was only able to partially support the quantitative results of Barton & Gordon as they failed to reproduce the significance levels of the original survey. Additional research (Chaganti, DeCarolis & Deeds, 1995; Jordan et al., 1998) expanded the strategic capital structure theory towards SMEs.

An interesting research by Ginn et al. (1995) adopted the Miles & Snow (1978) typology to investigate the relationship between general business and financing strategy as well as its determinants for U.S. hospitals. They based their research on the pecking order theory (Myers, 1984b) as well as on the propositions from strategic capital structure theory (Barton & Gordon, 1987, 1988). Two dependent variables liquidity and gearing were assessed by several independent variables. Ginn et al. (1995) were able to identify consistent results on the influence of the three determinants, company size, capital intensity and return on assets on liquidity, but not on gearing. They allowed assigning the cases to a certain category according to the Miles & Snow typology which will be expanded in section 6.1. However, Ginn et al. (1995) proposed to investigate whether these patterns could be also observed in other branches. A further limitation of their research was the inability to detect a causal

direction between business strategy and financing structure. A certain corporate strategy might influence the decision on financing instruments to choose. However, a given capital structure might also predetermine the appropriate business strategy of that company (Ginn et al., 1995, p. 206).

Prasad, Bruton & Merikas (1997) presented in another research the quantitative evidence of an existing relationship between long-term goals of the firm and its capital structure decisions. They also admitted that they were not able to identify which strategy influences the other. Another expansion was introduced by research from Gleason, Mathur & Mathur (2000), who analysed the effect of cultural aspects on the capital structure.

Further research by La Rocca et al. (2008) showed that in addition to the risk attitude and retaining control goals of the management, a "high or low level of debt can compromise a firm's ability to take advantage of strategic options" (p. 15) and therefore limit the shareholder value creation. A high level of debt creates in their view an argument that this management is also willing to boost productivity to become a more aggressive market participant because their perception towards risk is less averse than a company with low debt levels. This again combines financing strategy and corporate strategy.

Even though the theoretical approach by Barton & Gordon is still criticised for not being entirely testable (Jaeger, 2012) it is a key source for research that focus on non-economic factors of the capital structure, such as preferences of the management, shareholder structure or cultural aspects (Kochhar & Hitt, 1998; Koropp et al., 2014; La Rocca et al., 2008). Strategic capital structure theory shows that management perception is influencing the financing decision and that financing structure and overall business strategy are influencing each other. Current research that tries to integrate several theoretical approaches and combine strategic aspects with capital structure (e.g. Koropp, Grichnik & Kellermanns, 2013; Koropp et al., 2014; Tappeiner et al., 2012) borrows from the approach by Barton & Gordon. However, there has been no newer empirical investigation of this approach since the research by Jaeger (2012), which will be discussed in more detail in section 3.2.

2.5 Business Strategy Typologies and Financing Decision

Following the investigation that business strategy and financing structure are influencing each other, academic research tried to use business strategy typologies to categorise financing decisions (Ginn et al., 1995). To allow for a categorisation or segmentation of firms, several typologies were developed in academic literature. They are mainly based on strategy formulation and organisational or risk behaviour (Henschel, 2010). Given the aim of this research to investigate the financing decision in midcap firms, the following paragraphs present the development of a set of typologies to sort types of financing decisions in midcap firms.

The literature review on business strategy typologies considers academic sources that were either empirically tested or deal with SME and midcap aspects with the intention to possibly adapt these approaches within this study. Table 2.4 presents the main sources.

Table 2.4: Research on Business Strategy Typologies

Author / Research focus	Key findings
D. Miller & Friesen (1978) and D. Miller (1986, 1996) Formulation of strategic archetypes by analysing published data from large cap companies, primarily U.S. Fortune 500 firms.	Presentation of ten archetypes deriving from 31 variables. Particular focus on the interaction of business strategy, (organisational) structure and strategy.
R. E. Miles & Snow (1978, 1984, 2003) Analysis of organisational strategies within U.S. firms through mail questionnaires and interviews.	Based on three levels of strategic problems, authors suggest four strategy types: Defender, prospector, analyser and reactor.
Mintzberg (1979, 1989) Presentation of general typologies for segmenting organisations.	Development of typologies for organisations. The general approach consists of six different types, the typology for SMEs only involves two types.
Zahra & Pearce (1990) Meta-analysis of 17 empirical studies on the Miles & Snow typology between 1980 and 1989.	Investigation of the main propositions of the Miles & Snow (1978) typology and their support as well as coverage by past research. Evidence on the propositions were mixed. Conceptual and methodological refinements were requested.
Doty, Glick & Huber (1993) Analysis of 232 U.S companies from different sectors via two mail surveys as part of a larger longitudinal project.	Compare Typologies of Mintzberg (1979) and Miles & Snow (1978). By modelling ideal-type organisations. Miles & Snow typology predicts organisational effectiveness. Mintzberg's (1979) theory and typology needs improvement as theory was refuted by the findings.

Source: Own illustration.

Table 2.4 (continued)

Author / Research focus	Key findings
Ginn, Young & Beekun (1995) Investigation of 114 U.S. hospital cases on interaction between business strategy and financial structure between 1981 and 1985.	Uses the Miles & Snow typology and combines it with the pecking order approach and strategic capital structure theory. Based on the four variables liquidity, capital intensity, return on assets and leverage, the authors found evidence for the three dominant strategy types.
Gimenez (2000) Analysis of 150 SMEs from Brazil on competitive strategies through a questionnaire.	Investigate competitive strategy behaviour of SME owner-managers. Additional evidence to support the Miles & Snow (1979) typology in SME environments including various sectors.
Schachner et al. (2006) Survey of 205 SME's in Austria and Germany via a questionnaire in 2003.	Family-owned firms are more conservative in delegating control rights to employees if led by owner-managers. Family firms led by external managers show more formalised processes and a higher degree of delegation of control. Highest grade of delegation within prospector types.

Source: Own illustration.

There has been a variety of approaches to assess strategy types, ranging from self-typing, expert panels, investigator assessment or cluster analysis (Zahra & Pearce, 1990). All approaches try to identify dimensions of organisational behaviour (Zahra & Pearce, 1990, p. 752). These dimensions include the existence of distinct strategy types, a performance hierarchy, as some types will outperform others. Hence, an environment-strategy link represents a further dimension, as these distinct types must exist in different environments. As an additional dimension, an organisational behaviour exists that comprises the approaches of firms with different perspectives on the competitive environment, the adaptive cycle. This adaptive cycle addresses three basic challenges for a company, the entrepreneurial problem, the engineering problem and the administrative problem. Whereas the entrepreneurial problem proposes that the strategic types identified will differ in the way they define their domain, the engineering problem focusses on different approaches towards technology, engineering and production. The administrative problem investigates the importance of the various functions within a firm and the internal organisation as well as the underlying managerial philosophy.

A first typology was presented by D. Miller & Friesen in 1978. They analysed strategic behaviour within a company by examining the dependency on 31 variables that can be linked with the dimensions of strategic behaviour. However, Miller & Friesen solely focussed on a separate assessment of the variables, primarily by bivariate

considerations and were therefore not able to present a holistic framework. As a result of their research, they present ten archetypes of firms. Miller provided a more comprehensive framework through the introduction of configurations for the archetypes by later research (D. Miller, 1986, 1996).

The usage of a scoring model by Miller & Friesen to identify the relevant configuration presented a comprehensive and transparent approach. Nevertheless, their research focussed on large cap cases and not on SME or midcap companies. In addition, the large number of ten different types and the assessment of up to 31 variables for configuration seem not suitable in a midcap context.

Another typology to evaluate organisational and strategic behaviour was introduced by Mintzberg in 1979. His approach was based originally on six different types that should be applicable for all company sizes. Mintzberg revised his approach in 1989 by presenting two types for small firm classification in particular. He differentiated small firms to be either an "entrepreneurial organisation" or an "innovative organisation" (Mintzberg, 1989, p. 117). An entrepreneurial organisation is characterised to be centric and totally aligned towards the owner-manager who combines all central functions or decisions. The innovative organisation on the other hand is described by Mintzberg (1989) as a structure that allows to integrate different forms of expertise to cope with more complex management problems.

Both classifications proposed by Mintzberg (1979, 1989) are questioned. According to Doty et al. (1993), the classification for SME and midcap companies by using two types do not allow for a differentiated typology, whereas the general classification that offers six types are not useable. They acknowledged that Mintzberg's (1979, 1989) typology offers a comprehensive description but lacks empirical justification. Therefore, they carried out a longitudinal study to compare Mintzberg's classification with the typology proposed by R. E. Miles & Snow (1978). Doty et al. (1993) assessed the performance of a broad variety of firms and were not able to distinguish firms that followed one of the classifications proposed by Mintzberg (1979, 1989) to be more successful compared to those that violated the criteria. They admitted that based on their results, the typology proposed by Miles & Snow (1978) provides a better classification framework.

Miles & Snow offer a set of four types of strategic behaviour (1978, 2003) that are named as

- defender,
- analyser,
- prospector, and
- reactor.

The first three types provide a dominant typology, whereas the reactor can only maintain in a stable environment. In case of a significant change in market, products or technology, reactors have to migrate towards one of the three dominant types (Ginn et al., 1995; R. E. Miles et al., 1978). Miles & Snow (1979, 2003) present a catalogue of criteria that allows for a segmentation, including the adaptive cycle and underlying functional problems (see section 6). Their typology has been validated most frequently (Schachner et al., 2006) and has been identified to be especially suitable for identifying SME and midcap company's strategic behaviour (Gimenez, 2000). Gimenez was also able to assess that the typology by Miles & Snow can be easily adopted to other research areas because of its simple and transparent description (2000, p. 237).

2.6 Summary

The literature review on capital structure and financing decision theories revealed the heterogeneity of the approaches. Furthermore, none of the concepts was able to provide a holistic approach being able to explain all developments and anomalies observed in financing decisions.

However, several financial and non-financial determinants have been identified that are observed to explain which financing instrument is preferably used or whether a financing hierarchy exists. Those determinants include – amongst others – company leverage or gearing, equity ratio, company size, age of the company and profitability. Further determinants that are linked towards managers and their behaviour are education, prior job positions and their experience as well as a general differentiation between owner-managers and external managers. Table 2.5 shows the determinants and their effect on choosing additional debt as refinancing instrument.

Table 2.5: Determinants influencing the Management's Preference for a new Debt Instrument

Determinant	Tradeoff	Agency theory/ Signalling	Pecking order	Overconfidence/ Representativeness
Higher profitability	Higher/positive	Higher/positive	Lower/negative	-
Higher existing leverage/gearing (lower equity ratio)	Neutral (depending on insolvency cost and tax burden)	Neutral (depending on a tradeoff between agency cost of debt versus equity)	Neutral (depending on internal funding capacity)	-
More matured company	Higher/positive	Neutral	Higher/positive	-
Larger company size	Higher/positive	Neutral	Higher/positive	-
Owner-manager	-	-	-	Higher

Source: Own illustration.

3. Financing Decisions in German Firms and Refinancing of Standard Mezzanine

3.1 Overview

The different capital structure theories allow to investigate financing decisions from various angles. Following the aim of the research, this chapter will primarily focus on a review of empirical literature of financing decisions in Germany, particularly in midcap firms. The section 3.2 focus on empirical research in Germany. The chapter continues in section 3.3 with the review of the existing literature on the refinancing of standard mezzanine. The literature review on capital structure theories in chapter 2 and on financing decisions in German SME and midcap firms are summarised in section 3.4 with the formulation of the relevant research questions and propositions. The chapter ends with the conclusions in section 3.5.

3.2 Financing Decisions in Germany

Financing in German SME and midcap companies differs significantly from other countries, given the dominating role of bank lending for German SME and midcap firms and the tax penalisation on retained earnings as described in section 1.2.3. Equity and debt capital markets were not accessible to those firms until the establishment of the specific market segments like the Neuer Markt for new economy companies, which collapsed in 2001 (Lichtblau & Utzig, 2002). This dominant bank lending led to the situation that research on capital structure and financing decisions were rare prior to the changes due to the upcoming regulations under Basel II (Deutsche Bundesbank, 2012). Table 3.1 displays the main empirical literature on financing decisions in Germany.

Table 3.1: Literature Summary on Financing Decisions in German Firms

Author / Research focus	Key findings
Rajan & Zingales (1995) Comparative study between 1987 and 1991, Analysing 8,000 listed companies in G7-countries	In all major economies, company size is positively correlated with leverage, except for Germany.
Deutsche Bundesbank (1999) Comparative survey of 15,000 French and 8,000 German non-financial companies between 1987 and 1995	French companies show more volatile levels of indebtedness compared to German companies. Capital structure in German companies varies by company size, with SME showing a higher debt level as large companies. Relationship lending and legal framework in Germany allow for a higher debt level of German companies, especially SMEs. Higher profitability leads to lower indebtedness levels.
Lichtblau & Utzig (2002) Analysis of 22,000 annual reports from German companies provided by the Deutsche Bundesbank to the European BACH-database between 1995 and 1999	Number of bank relationships increases with the size of the company. Less profitable companies show higher levels of indebtedness, could be based on a pecking order approach. The core bank principle is economically rational for SME and midcap companies as those are able to mitigate information asymmetries.
Börner & Grichnik (2003) Combined interviews of 131 midcap firms and 131 financing institutions in 2002	65% of companies expect financing environment to worsen after the implosion of the dotcom bubble. Internal funds represent the most important source of financing, followed by external bank debt and leasing (pecking order). Even though majority of companies expects a changing financing environment, alternative forms of financing play almost no role. No strategic approach towards financing investigated. Companies with a weaker operational development see bank debt as more important financing source, compared to better performing firms.
Börner et al. (2010) Analysis of 10,692 SME and midcap companies from the KfW-Mittelstandspanel (postal questionnaire) in 2004	Level of debt financing is significantly dependent on company size, company age, ownership structure and profitability. Legal form of the company is not relevant for the level of indebtedness. Results emphasize the importance of a deliberate capital structure policy for SMEs.

Source: Own illustration.

Table 3.1 (continued)

Author / Research focus	Key findings
Deutsche Bundesbank (2012) Analysis of the financial accounts as parts of the German national accounts in the period 1991 to 2010	Internal funds are the most important source of funding, but showed more cyclicality which can be attributed to economic developments. Loans are the most important external funding source, but bank lending importance reduced through the last two economic downturns due to tightening credit standards and regulatory effects. Alternative financing sources gained importance, with an advantage for large cap firms.
Jaeger (2012) Balance sheet data analysis of 93 listed companies 2000 and 2009	A higher profitability leads to lower indebtedness, supporting pecking order. Company age is not a determinant for indebtedness. No empirical evidence for economic variables of strategic capital structure theory.
Ampenberger et al. (2013) Analysis of 660 listed companies between 1995 and 2006	Family firms tend to be more profitable and show lower levels of indebtedness than non-family firms. Several approaches as tradeoff theory, pecking order and agency theory could explain their observation in a family-firm context. Management board involvement by the founding family has a consistently negative influence on leverage.
Koropp et al. (2014) Survey of 118 German family firms in 2010	Financial decision making in family firms is largely influenced by the desire to maintain family control. Family firms develop more positive attitudes toward internal rather than external financing and to external debt rather than external equity.
Adam et al. (2014) Assessment of syndicated and non-syndicated loans between 1990 and 2010	Optimistic CEOs are more likely to issue performance sensitive debt (PSD) compared to rational CEOs. Optimistic CEOs attribute more risk compensation to lenders. Managerial optimism does also influence qualitative aspects of the debt contract design.
Meier & Esmatyar (2015) Analysis of 192 listed companies between 2002 and 2014	Level of indebtedness is higher in companies with optimistic management, supports results by Hackbarth and Fairchild. Companies with optimistic managers show a significantly increased insolvency risk, leading to an increased cost of equity.

Source: Own illustration.

One of the first analysis on financing decisions and capital structure that included data from Germany was performed by Rajan & Zingales (1995). They analysed data of non-financial firms from G7-countries and showed that in almost every country, an increasing company size is correlated with a higher level of indebtedness, except for Germany. In their conclusion, they assume that different capital market conditions and

an insolvency law in Germany that particularly covers the interest of lenders might be a potential explanation for their observation. Insolvency cost being a determinant for a financing decision would support tradeoff theory,

The analysis of the Deutsche Bundesbank in 1999 added to that observation by comparing French and German companies across sectors and size levels. They investigated the company development between 1987 and 1995 and showed that capital structure in German companies varied by company size, with SME showing a higher debt level compared to large companies. French companies showed no significant differences across size ranges. The investigation demonstrated further that firms with higher profitability presented lower debt levels. Even though French companies presented more volatile levels of indebtedness compared to German companies, they were able to increase their equity ratio in the investigated timeframe across company sizes. SMEs in Germany were not able to increase equity ratios compared to large cap companies. The Deutsche Bundesbank concluded, that relationship lending from the core bank(s) and legal framework in Germany allowed for a higher debt level of German companies, especially SMEs. The relationship lending would support agency theory, whereas the legal framework – which is linked towards insolvency laws – would support tradeoff theory again.

Lichtblau & Utzig (2002) further researched the influence of the relationship lending by core banks on the capital structure of German firms. They detected that the number of bank relationships increased with the size of the company. Hence, SMEs have intense relationships with few bank partners and show a higher indebtedness compared to larger companies. They confirmed the effect that less profitable companies showed higher levels of indebtedness and discussed that this could be based on a pecking order approach, as those companies do not have sufficient internal funding available for their investments. Furthermore, Lichtblau & Utzig demonstrated that relationship lending by core banks is economically rational for SME and midcap companies as those are able to mitigate information asymmetries via signalling (2002, p. 31).

The survey by Börner & Grichnik in 2003 was the first research after the implosion of the dotcom bubble. They performed a combined survey of 136 midcap firms and 131 financing institutions on financing options. 65% of companies expected the financing environment to worsen. However, they studied that despite a changing financing

environment, alternative forms of financing played almost no role. Firms still relied on a pecking order approach that favours retained earnings over external bank debt and in some cases leasing finance. Mezzanine finance was irrelevant for more than 60% of the companies. Given their investigation of a pecking order approach, Börner & Grichnik (2003) acknowledged a missing strategic approach towards financing decisions and capital structure. Their statement is based on the assumption that pecking order does not allow for a design of an optimal capital structure, but just represents a necessity to enter new financial instruments or markets as soon as the more preferable source is not available to the firm. These would not access this new source by themselves, as the approach of a new financing source could be interpreted as a negative signal on company or management quality (Börner & Grichnik, 2003; Schneider, 2010). In their conclusion, Börner & Grichnik (2003) pointed that a more strategic exploitation of new financing sources is seen as a necessary step to avoid an increased financing risk following a more restrictive bank lending after the introduction of Basel II-regulations. This strategic approach in their view did not necessarily meant new instruments, but more active assessment of existing financing alternatives (Börner & Grichnik, 2003, p. 689).

In a second research, Börner, Grichnik & Reize analysed in 2010 data from more than 10,000 companies from the KfW–Mittelstandspanel. They confirmed again that debt financing of German SME and midcap firms depends on company size, age and profitability but further revealed that shareholder structure also significantly determines debt levels. Companies should enhance transparency to generate access to a broader spectrum of refinancing instruments, e.g. by presenting an external rating (Börner et al., 2010). They furthermore examined that management and especially family shareholders are often reluctant to present detailed financial information on their company and therefore limit themselves to existing bank relationships and shareholders (Börner et al., 2010; Nohtse, 2012).

In their 2010 research, Börner et al. reiterate their conclusion on a missing strategic approach towards financing decisions as "even companies with good profitability have to comply with the requirement for a strategic capital structure policy, to preserve the balance between dividend payments and retention of profits and to utilise leverage potentials" (p. 248).

Research by Deutsche Bundesbank (2012) revealed that internal funds are still the most important source of funding, but showed more cyclicality which can be attributed to economic developments. Loans represent the most important external funding source, but bank lending importance reduced through the last two economic downturns due to tightening credit standards and regulatory effects. Alternative financing sources gained importance for large cap firms. However capital market-based external financing play a subordinated role, except for the time period of the New Economy boom.

Jaeger (2012) analysed 93 listed companies in Germany between 2000 and 2009 and tried to identify determinants based on capital structure theories that could explain their development. She detected that none of the major capital structure theories was able to explain the observations entirely but confirmed the results by Börner et al. (2010) and Fama & French (2002) that more profitable firms are less levered. This confirmed the pecking order model but contradicted the tradeoff theory. With respect to company age, Jaeger (2012) could not support the results of Börner et al. (2010) as this determinant was insignificant in explaining debt levels.

Ampenberger et al. (2013) focused in their research on differences between family firms and non-family firms in Germany as well as on the impact of owner-managers on indebtedness. They showed that family firms in Germany are more profitable than non-family firms and identified that German family firms tend to have less indebtedness. According to them, family firms have lower agency costs and thus the disciplinary effect of debt as proposed by Jensen (1986) becomes less relevant. This explanation is further substantiated as they reveal the lowest debt levels in firms where family firm members are present in the management board. Nevertheless, Ampenberger et al. propose two further explanations. First, a lower level of indebtedness could also act as an indicator that family firms have lower target debt ratios as shareholders with their largely undiversified portfolios might emphasize the risk of default within their capital (2013, p. 23), which would support tradeoff theory. Second, a higher profitability of family firms would allow more funding power from retained earnings, which follows pecking order (Ampenberger et al., 2013, p. 24).

The influence of family shareholders on the financial decision-making process is further studied by Koropp et al. in 2014 by focussing on an owner-manager

perspective. In addition to a preference for a pecking order approach, they identify empirical support for a strategic management approach to capital structure choice (Barton & Gordon, 1987, 1988) as future financial decision making (financing intention) is subject to distinctive personal characteristics (attitudes, perceived norms and control) of the decision maker.

A current working paper by Adam, Burg, Scheinert & Streitz (2014) showed that managerial optimism affects not only the choice between debt and equity, but also certain debt design features such as performance-pricing provisions, which specifies that the interest rate rises if the borrower's performance deteriorates. This survey focused on companies with stronger credit profiles and wanted to assess whether optimistic managers are more likely to issue performance sensitive debt ("PSD") than rational managers. Adam et al. (2014) based their proposition on the assumption that optimistic managers persistently overestimate their firms' future expected cash flows. They found evidence, that optimistic managers are indeed more likely to issue PSD than rational managers. In addition, optimistic managers "choose contracts with larger risk-compensation to lenders, i.e., pricing grids with steeper slopes and more potential for interest rate increases in response to performance deterioration" (Adam et al., 2014, p. 20). They suggest that "managerial optimism can have a significant impact on a firm's debt contract design, as it does not only affect the choice of the general leverage ratio but also has a direct impact on the chosen debt instrument and its riskiness" (p.20).

Newest research by Meier & Esmatyar (2015) examined that managerial optimism leads to higher equity risk premiums and to a higher debt level, compared to rational managers. These results confirmed the studies by Fairchild (2005) and Hackbarth (2008). However, by combining these results with the assumption that owner-managers tend to be more confident than external managers (Busenitz & Barney, 1997), this would question the results by Ampenberger (2013) who associated owner-managers to have less interest in external debt financing.

3.3 Standard Mezzanine in Germany

Mezzanine is an umbrella term for several instruments that involve characteristics of both, debt and equity. Nevertheless, the international research so far only addresses

two forms of mezzanine, convertible bonds as a more debt-like structure, and preferred stocks as an equity-like instrument. These two instruments are real *hybrid* instruments, as they can change their characteristics, e.g. by executing the convertible option and receive common shares (Knaier, 2004; Rudolph, 2004). One reason for the focus on these two hybrid instruments is that they can be issued on regulated capital markets and provide a more solid data basis for research (Schneider, 2010).

Nevertheless, the broad majority of mezzanine products are not listed and cannot be found on regulated capital markets, especially in the SME and midcap area. One of the typical non-listed mezzanine instruments is the shareholder loan, as discussed in section 1.3.1. However, given its long-term (in some cases unlimited) availability to the company and its contractual subordination in relation to some or all other debt of the firm, it can be considered more to be an equity instrument in terms of insolvency risk.

Before the year 2004, mezzanine was a highly individual instrument, which has been tailored to the individual need of the firm (De Ruijter Korver & Ongena, 2008; Knaier, 2004). However, this individual mezzanine was not accessible to a broad investor base as it has not shown the necessary homogeneity to attract liquidity from debt capital markets (Brüse, 2011; Raupach, 2004). The development of a standardised and replicable mezzanine instrument (as well as its rating process) and its securitisation have been the key success factors for this financing product. As this research is explicitly focussing on the standard mezzanine, the following review adopts this specification.

Research on standard mezzanine in Germany can be divided into two major areas: Market-driven research and academic research. Bearing in mind that the standard mezzanine phenomenon started in 2004 and is therefore relatively new in academic terms, academic research is limited so far. In addition, standard mezzanine is a national phenomenon; therefore international research has not shown much activity. Table 3.2 illustrates the main research sources and their results on standard mezzanine refinancing.

Table 3.2: Research Results on the upcoming Standard Mezzanine Refinancing

	Market-driven research			Academic research	
	Lehmann-Tolkmitt et al. (2010)	**Hommel et al. (2011)**	**PwC (2011)**	**Brüse (2011)**	**Nohtse (2012)**
Companies approached	380	534	492	508	540
Companies responded	27	208	110	132	208
Response rate	8%	39%	22%	26%	39%
Percentage of companies that expect to face difficulties in the refinancing	n.a.	5% - 15%	23% - 50%	Not explicitly analysed	Up to 35%
Ranking of refinancing instruments expected to replace standard mezzanine	1. Bank debt 2. Individual mezzanine 3. Retained earnings 4. Equity 5. Sale and lease back	1. Retained earnings 2. Bank debt 3. Equity	1. Retained earnings 2. Mezzanine 3. Bank debt 4. External equity 5. Others	1. Retained earnings 2. Bank debt 3. Standard mezzanine 4. Individual mezzanine 5. External equity 6. Existing shareholders	1. Retained earnings 2. Bank debt 3. Others

Sources: Adapted from Brüse (2011); Hommel et al. (2011); Lehmann-Tolkmitt et al. (2010); Nohtse (2012); PwC (2011).

Market-driven research, provided by banks, advisors and governmental authorities has been active during the last few years to analyse the refinancing ability of the existing users of standard mezzanine. This has been primarily driven by the fact that there is no direct refinancing option, as standard mezzanine is not available anymore by the capital market. However, this research string provides important information and results that have to be included in the literature review. Table 3.3 summaries the major research on standard mezzanine in Germany.

Table 3.3: Research on Standard Mezzanine in Germany

Author / Research focus	Key findings
Market-driven-research	
Lehmann-Tolkmitt, Knöll & Elmers (2010) Survey with 27 standard mezzanine issuers between April and July 2010	Issuers realised goal of increased financing volume and economic equity, but did not improve debt financing terms, company rating and new sources of financing. Refinancing problem has been underestimated, ca. 75% of the issuers will not be able to repay the mezzanine at maturity. 91% are expecting to refinance with new financing partners as bank loan availabilities seem to be limited.
Hommel et al. (2011) Analysis of 208 companies using standard mezzanine between September and November 2010	Only 5% to 15% of the issuers are expecting refinancing problems. Approx. 40% have already secured refinancing. Most important factor in choosing the appropriate instrument is the preservation of control and shareholder rights. Companies can be clustered in two groups (Refinancing via debt and via more mezzanine or equity-like alternatives).
PwC (2011) 110 received feedbacks on a questionnaire sent out to 492 standard mezzanine issuers between October and November 2010	Issuers have not yet realised the upcoming refinancing problem and are expecting internal funds to become the major source of refinancing, followed by new mezzanine. Risk assessment procedures by banks intensified significantly.
Academic research	
Brüse (2011) Survey with 132 corporate feedbacks performed between August and September 2009	Internal funds as majority refinancing instrument followed by bank debt and new standard mezzanine tranches, even though probability of new standard mezzanine facilities was unlikely at that time. Equity-like characteristics of new financing instrument identified as one of the important criterions for choosing a refinancing instrument.
Nohtse (2012) Analysis of key financial data from 168 standard mezzanine issuers' annual reports as well as from the survey performed by Hommel et al. (2011) on the upcoming refinancing	Pecking order based variables proof more significance on the decision for using standard mezzanine than tradeoff variables. Presented similar results in his thesis as already published by Hommel et al. (2011).

Source: Own illustration, adapted from Nohtse (2012).

3.3.1 Market-driven Research on Standard Mezzanine in Germany

The first market-driven research on the upcoming refinancing in Germany was performed by Lehmann-Tolkmitt et al. in 2010. This research, mandated and funded by a German private bank, was performed through a questionnaire which was sent out to 380 standard mezzanine users. Together with other research, who analysed even smaller samples of the mezzanine issuers, these first research lack significance given their achieved response rates. Nevertheless, all of these first research provided similar results as the majority of the approached companies aimed for a refinancing by using

a combination of internal cash flows, senior bank debt and new mezzanine tranches (Hommel et al., 2011; Lehmann-Tolkmitt et al., 2010).

Relevant market-driven research have been performed by Hommel et al. (2011) and by PwC (2011). Both research tried to cover the complete sample of standard mezzanine issuers. Hommel et al. (2011) analysed the degree and volume of the refinancing problem and presented a first grouping of the mezzanine issuers whether (a) they will use primarily internal cash flows; (b) use external debt in addition to internal funds or (c) have to access external equity. A new mezzanine issuance has been denied by all participants. This reflects the gradual collapse of the standard mezzanine market, even though most issuers provided a positive feedback on the effect of standard mezzanine for their company. However, Hommel et al. (2011) do not deconstruct the reasons for such collapse.

PwC (2011) started their research with an in-depth analysis of the structural and contractual elements of standard mezzanine and presented key issues that led to the collapse of the standard mezzanine market and indicators why the market has not recovered. In terms of the refinancing probability, PwC (2011) performed a survey through a questionnaire and clusters the companies in three groups as well. In contrast to Hommel et al. (2011), PwC infers from the responses, that more than 50% of the participants are expecting problems in their refinancing, primarily due to a combination of a lack of sufficient internal funds, a more restrictive credit policy from their banks and the missing of a new standard mezzanine instrument at comparable terms.

Except for the research by PwC (2011), none of the market-driven research analysed the determinants that will drive the financing decision. PwC (2011) solely explored that a leverage exceeding a certain level will restrict new financing via debt, again supporting the tradeoff concept.

3.3.2 Academic Research on Standard Mezzanine in Germany

Brüse (2011) is the first who provides an academic research on the usage of standard mezzanine by companies in Germany. He analysed 508 firms who have issued a total amount of € 3.9 billion of standard mezzanine between 2004 and 2007 (p. 6). In his research, he assessed the development of these companies after the issuance of

standard mezzanine tranches by using key financial performance indicators that are implemented in Moody's KMV RiskCalc. Moody's KMV RiskCalc is a rating tool that focuses on the assessment of the risk profile of midcap companies and was implemented by several standard mezzanine funds in their rating assessment (PwC, 2011). Nevertheless, Brüse did not test the significance of these key financial performance indicators by using relevant capital market theories. However, he provided an analysis whether the usage of standard mezzanine led to differing developments of these companies compared to a test group that used classical debt and equity financing.

In a second step, Brüse also differentiated between SMEs and large cap companies and shows significant differences between the key financial indicators in these two groups (p. 205). In performing this differentiation, he followed Beck's investigation, that larger firms could expand their external financing more easily than SMEs (Beck et al., 2008; Torpey & Viscione, 1987).

Companies that have used standard mezzanine more than once were also tested to see if an indication for an adverse selection can be identified. He described that especially companies that went into insolvency can be characterised as having used a disproportionate high volume of mezzanine compared to their company size and risk profile. In addition, a significant level of these insolvent standard mezzanine users had been frequent issuers. Therefore, an adverse selection effect cannot be eliminated in his conclusion (Brüse, 2011, p. 207).

Further to his quantitative analysis, Brüse introduced a qualitative element through a questionnaire using semi-structured questions to inform about his quantitative results as well as to receive more background on the financing alternatives that were available to these companies. Another reason for this qualitative element was to obtain a feedback on the expected ability of the company to receive a refinancing for the maturing mezzanine tranche (p. 8).

Brüse concluded that the usage of standard mezzanine was beneficiary to these companies and has led to a positive effect on the corporate capital structure. This result is based on the characteristics of the long-term maturity profile as well as the equity-near structure of standard mezzanine and was substantiated by the quantitative as well as the qualitative analysis (Brüse, 2011, p. 301). Combined with the fixed interest

payments, this has led to a short-term negative effect on the company's income statement. Nevertheless, in the course of the observation period, positive effects of sales growth, cost reduction and cash flows have prevailed (Brüse, 2011, p. 302). Brüse's qualitative research further provided the result that especially SMEs have already started to prepare for the upcoming refinancing and that senior bank debt will have an important role. However, the primary source of refinancing will be internal cash flows of the company (Brüse, 2011, p. 305). This supported the argumentation that those SME will follow a pecking order approach. Nevertheless, he expected an increased risk for refinancing and for the company itself in the years 2011 to 2014. This increased refinancing risk was based on the rising uncertainty in the financial markets and on the missing improvements in the standard mezzanine programmes (Brüse, 2011, p. 306). It has to be highlighted that at the time of Brüse's research, it was not yet clear whether a return of standard mezzanine programmes would be possible (Herweg & Sonn, 2009; Immenkötter & Hess, 2012; KfW Bankengruppe, 2011b).

The second research that covered standard mezzanine in Germany was published by Nohtse (2012), who was involved in some of the market-driven research publications on mezzanine (please refer to section 3.3.1). Nohtse included 540 German standard mezzanine issuers in his analysis with a total volume of standard mezzanine of approx. € 4.1 billion and an issuance between 2004 and 2007 (p. 53). This number is significantly lower compared to Brüse's approach but can be explained as Nohtse had to exclude all issuers that have not provided a formal prospectus as he needed the comprised information to assess the decision to use standard mezzanine.

In contrast to Brüse (2011), Nohtse did not perform his analysis by using pre-defined key financial performance indicators of a rating tool, but accepted variables that are common in empirical studies to test capital structure theories (Fama & French, 2005; Jaeger, 2012). His research focussed on two key areas which were

(a) the search for relevant determinants that explain the issuance of standard mezzanine, and
(b) what type of refinancing are standard mezzanine users aiming to achieve.

Nohtse defined five hypotheses, based on pecking order theory and on tradeoff theory to be tested.

Another difference to Brüse is that Nohtse's research was not aiming to analyse the impact of standard mezzanine on the economic development of the company after such issuance. His goal was to determine the specific decision by a company to use standard mezzanine as an element of its capital structure. Therefore, his approach reflected a "cross sectional and not a longitudinal research" (Nohtse, 2012, p. 7).

Nohtse (2012) observed in his conclusion that pecking order hypotheses and tradeoff hypotheses both provided partial explanations of his empirical findings. However, he stated that the hypotheses that have been based on pecking order theory have provided a better explanation of his results. The probability of using standard mezzanine increased with a higher leverage of the company, a higher after-tax profit, a less liquid internal funds base and less mature business activities (Nohtse, 2012, p. 252). A higher leverage could also be explained by tradeoff theory as an indicator for the insolvency risk, but the results did not show any tax implications being included in the decision whether to issue standard mezzanine. In a first summary, Nohtse admits that "overall, companies that used standard mezzanine seem to satisfy a short-term cash need with the issuance, as described by DeAngelo et al. (2010) for an increase in share capital" (Nohtse, 2012, p. 252).

With respect to his analysis on the upcoming refinancing, Nohtse was able to differentiate three groups of mezzanine issuers. 41% of the involved companies had their refinancing already in place in form of internal cash flows or external bank debt at the time the research was performed. The second cluster comprised companies that were likely to achieve the refinancing via senior debt in form of bank loans. This cluster included approx. 25% of the involved companies. The third cluster of approx. 34% contained those mezzanine issuers which had to find a subordinated or more equity-linked refinancing and were expected to face refinancing problems. Linking these results with the capital structure theories he tested, Nohtse again found an explanation by using a combination of pecking order and tradeoff theory. He was able to identify that standard mezzanine issuers will follow a certain financing hierarchy, which is explained by pecking order. However, information asymmetries were not a basic aspect in choosing a specific financing instrument, but the risk profile of the respective company (Nohtse, 2012, p. 224).

Based on his research, Nohtse identified two areas for further research need. First of all, he proposed additional research on financing decisions, especially in economies with a banking-dominated financing environment, to provide a more detailed understanding of the capital structure for non-listed companies. His second section for further research was linked to his findings on the upcoming refinancing of the standard mezzanine and the expectations of the management he described. He recommended that the factual refinancing should be contrasted with his findings and the expected outcome to provide a better understanding of the financing behaviour of the mezzanine issuer (Nohtse, 2012, p. 256).

These conclusions by Brüse and Nohtse were of particular interest as most of the research on capital structure and standard mezzanine in Germany so far is based on the predominant economic paradigms in the field of finance.

Even though many of these research acknowledge the necessity of including non-economic aspects to provide a better understanding of the financing behaviour of the mezzanine issuer (Nohtse, 2012), or by including behavioural elements in their research (Brüse, 2011), this area needs further investigation.

The literature review on financing decisions in midcap firms in Germany revealed that the influence of an owner-manager on the level of indebtedness is not yet revealed undoubtedly. Given the contradictory results in terms of management behaviour and underlying capital market theories, it would be interesting to investigate, whether a more differentiated view on manager types could add to this discussion. Based on the findings from the literature review on financing decisions in German midcap companies, relevant determinants can be refined further.

Table 3.4: Determinants influencing the German Midcap Management's Preference for a new Debt Instrument

Determinant	Tradeoff	Agency theory/ Signalling	Pecking order	Overconfidence/ Representativeness
Higher profitability	Higher/positive	Higher/positive	Lower/negative	-
Higher existing leverage/gearing (lower equity ratio)	Neutral (depending on insolvency cost and tax burden)	Neutral (depending on a tradeoff between agency cost of debt versus equity)	Neutral (depending on internal funding capacity)	-
More matured company	Higher/positive	Neutral	Higher/positive	-
Larger company size	[Higher/positive]	Neutral	Higher/positive	-
Owner-manager	**Neutral**	**Lower/negative**	**Lower/negative**	Higher

Source: Own illustration.

3.4 Research Questions and Research Propositions

The literature review presented the several economic and behavioural research areas that are surveying capital structure decisions and form the basis for the present research. According to the research objective of this thesis the following research questions and resulting research propositions derive.

3.4.1 Financing Strategy and Determinants for the Decision

The discussion of the several capital structure theories and the influence of the management behaviour on a financing decision highlight the importance of a financing strategy to follow. A core element of such financing strategy would be whether it is including an optimal debt level or based upon a financing hierarchy to follow.

3.4.1.1 Existence of a formulated Financing Strategy

Barton & Gordon's second proposition for the strategic capital structure theory links corporate strategy with a financing strategy as they suggest that "top management's goals for the firm will affect the firm's capital structure" (1987, p. 71).

Börner & Grichnik (2003) and Börner et al. (2010) identified that the German midcap companies lack this strategic aspect within their financing decisions and this limits the

development and use of financing alternatives for them. They showed that the development of a future-proof financing behaviour of midcap companies does not mean the innovation of completely new instruments, but primarily the combination of existing financing alternatives (Börner & Grichnik, 2003, p. 689).

RQ1: How has the management of a midcap corporate chosen a refinancing instrument?

Busenitz & Barney's assessment identified that management teams in midcap companies are lacking the so called "routines" (1997, p.14) and might show a tendency for overconfidence as they do not have to perform financing decisions on such a frequent and recurring basis as managers in large cap organisations. In addition, Speckbacher & Posch (2010) identified that owner-managers tend to see formal control systems less important compared to external managers as they are more involved in the business decision.

Adam et al. further support this overconfident behaviour in their research as they identify that "managerial optimism can have a significant impact on a firm's debt contract design, as it does not only affect the choice of the general leverage ratio but also has a direct impact on the chosen debt instrument and its riskiness" (2014, p.20). This bias could be mitigated by using a transparent and formulated financing strategy to base financing decisions upon:

RP1: A formulated financing strategy exists and has been applied to in the refinancing process.

3.4.1.2 Financing Hierarchy

The financing hierarchy that might be followed by the management team should form a core part of such a financing strategy. However, a formulated financing strategy could also focus on different aspects, e.g. preferable financing instruments and partners, maturity profiles, the inclusion of performance-sensitive debt elements and further aspects, such as granting collateral or other financing documentation needs.

Barton & Gordon (1987) postulated in their third proposition, that the management of a company follows a financing hierarchy. Nevertheless, they did not differentiate between an external financing via debt, equity or hybrid instruments (p. 72) as they

describe both external elements to be more limiting for the management of the firm than retaining internal funds.

Nohtse postulated that his findings could be explained by a combination of tradeoff theory and pecking order theory (2012, p. 254) and ascertained that the standard mezzanine users followed a pecking order hierarchy in their planned refinancing. Therefore, the second research question (RQ2) will have to identify, if Nohtse's (2012) identified planned pecking order approach in the upcoming refinancing has been followed in the factual situation:

RQ2: Has management chosen a refinancing instrument following a certain financing hierarchy?

Börner & Grichnik (2010) identified a clear pecking order approach in their research on financing decisions in midcap companies. Koropp et al. (2014) further add in their most current research that "if the financial decision maker uses external financing […], external equity capital will be acquired after external debt sources are exploited. External equity financing is seen as a last resort after sources of debt have been exhausted" (p. 320).

However, the literature review revealed that different capital structure theories have varying definitions regarding an 'optimal' capital structure (like tradeoff theory or strategic capital structure theory), or neglect the existence of an optimal capital structure (like pecking order theory and market timing theory). Therefore the "optimal" financing structure of a midcap company can be an individual condition where the qualitative and quantitative goals of the company investigated are achieved in best possible combination.

RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking order approach (internal funds first, then external debt, then new equity).

3.4.1.3 Corporate Strategy and Determination of Financing Instrument

As already shown in the development of the first research question, Barton & Gordon's second proposition for the strategic capital structure theory links corporate strategy with financing (1987, p. 71). Therefore, an interesting aspect to consider is whether the corporate strategy or other factors that led to the choice of a specific refinancing

instrument explored in the second research proposition are based upon a transparent and formulated financing strategy?

Brüse surveyed in the qualitative section of his PhD thesis, that only 25% of the analysed standard mezzanine users already started external discussions on the upcoming refinancing or already secured the refinancing (2011, p. 264). Nevertheless, almost 83% of the companies expected to have access to more than one refinancing option (Brüse, 2011, p. 266). By valuing these results it must be recognised that at the time of Brüse's survey in the year 2009, the standard mezzanine users as well as the author included a possible refinancing via new standard mezzanine facilities in their consideration.

In the research by Nohtse (2012), this refinancing option was already negated, given the problems occurred with the first shortfalls in raising new standard mezzanine facilities (KfW Bankengruppe, 2011b; PwC, 2011). Nohtse recommended to broaden the analysis of the factual refinancing by considering the individual company's performance in the years prior and after the refinancing, especially those companies that were not successful in a timely refinancing (Nohtse, 2012, p. 256).

Börner & Grichnik (2003) and Börner et al. (2010) requested in their research that midcap companies should enhance transparency to generate access to a broader spectrum of refinancing instruments, e.g. by presenting an external rating. They examined that management and especially family shareholders are often reluctant to present detailed financial information on their company and therefore limit themselves to existing bank relationships and shareholders. These are factors that might predetermine potential refinancing instruments:

RQ3: Which other aspects have been the dominant factors in determining the chosen financing instrument?

In addition to the lack of presenting detailed financial information to external stakeholders, management behaviour gains momentum. The representativeness bias might limit a comprehensive process assessment of potential refinancing instruments and terms currently available in the respective financial market (Avgouleas, 2009; Busenitz & Barney, 1997). The management of a midcap company does not need to perform financing processes on a permanent basis. Usually, major financing

instruments have to be refinanced every three to five years, the standard mezzanine after seven years. Therefore, there is no need for a management team to permanently keep up to date with all relevant financing markets and currently available terms and conditions.

Moreover, overconfidence might further restrict an unbiased process and influences company indebtedness, as assessed by Fairchild (2005), Ampenberger (2013) and Meier & Esmatyar (2015). It will be interesting to investigate, whether owner-managers which are described to be more optimistic than external managers (Busenitz & Barney, 1997) will perform decisions that lead to a lower indebtedness compared to external managers (Ampenberger et al., 2013). Other research assume that optimistic managers aim for a higher debt level (Fairchild, 2005; Meier & Esmatyar, 2015).

Bertrand & Schoar (2003) found that the education and former job experience will influence a manager's decision. Malmendier et al. (2011) add that managers with a restructuring experience that involves intensive negotiations with debtholders try to avoid external debt.

In this context, it will be interesting to investigate whether there are significant differences between financing processes in firms headed by owner-managers or by external management teams. This research tries to explore whether the sole distinction between owner-manager and external managers allows to answer these questions or if a more detailed management typology would be more suitable, as discussed in section 2.5.

Based on the presented differences between owner-managers and external managers in their strategic planning and decision-making, several management types might be explored. The aim for adopting the Miles & Snow (1978) typology towards financing decisions as already performed by Ginn et al. (1995) might allow for further investigation of manager types. These results could help in understanding the difficulties in explaining financing decisions in German family firms (Ampenberger et al., 2013; Koropp et al., 2014).

This management behaviour can be also linked with Barton & Gordon's (1987) first two propositions of strategic capital structure theory, as they state that a management's perception towards refinancing risk and their strategy will influence the capital

structure of the company (p. 71). Ginn et al. (1995) revealed that they were unable to detect the causal direction between corporate strategy and financing structure. As a consequence, a further research propositions (RP3a) arises:

RP3a: The corporate strategy and the characteristics of the management team influence the determination of the refinancing instrument.

Barton & Gordon add that "the particular financial condition of the firm, specifically as it relates to risk, managerial control, and flexibility, has an effect on management's selection of a capital structure" (1987, p. 72). It must be highlighted, that this fifth proposition does not state that the financial condition of the firm – as a result of the company's strategy – determines the capital structure, but influences the chosen financing mix (Jordan et al., 1998). This can be interpreted by the analysis of key financing performance indicators (Adam et al., 2014; Barton & Gordon, 1988) and by exploring how the cost of the financing alternatives influenced the decision.

Ginn et al. (1995) found that the Miles & Snow (1978) business strategy typology might be used in identifying financing strategies. They presented several determinants that were used to explain liquidity position and gearing of the investigated companies.

The literature review in chapter 2 and 3 presented several determinants that could be used to explain why a certain financing instrument was preferred, such as company leverage or gearing, equity ratio, company size, age of the company and profitability. This leads to a second research proposition (RP3b) in relation to determining a refinancing instrument:

RP3b: Relevant determinants and indicators influence the selection of the refinancing instrument.

3.4.2 Refinancing Process

The financing environment and the financial markets were not in favourable conditions at the time of the refinancing process, as described in chapter 1. Management had to mitigate that there was no direct refinancing option via a new standard mezzanine facility, debt capital markets were limited for midcap companies and banks remained restrictive in providing additional debt.

Given this uncertainty to be anticipated in the refinancing process, management could have taken proactive steps to increase the probability of a successful refinancing. This would include measures to enhance transparency like an external rating, as proposed by Börner et al. (2010), or mandating external advisors to mitigate the described behavioural finance bias and heuristics overconfidence and representativeness. However, these measures would have to be taken especially in a situation, where management anticipates an increased risk based on the deteriorating financing markets at the time of the factual refinancing or based on insufficient internal funds to repay the standard mezzanine. Therefore, this corresponds again with one of the propositions of strategic capital structure theory that "the risk propensity of top management and specific financial context of the firm affect the amount of debt lenders are willing to lend and what terms they are willing to use" (Barton & Gordon, 1987, p. 72). Research question four compiles this:

RQ4: Has there been an increased refinancing risk by the company in the availability of suitable financing instruments during the process?

In case of such an increased uncertainty, the management team should assess potential financing alternatives and generate data to develop a market overview on currently available terms and conditions to avoid the representativeness bias. Uncertainty could be seen in two different ways. First of all, it represents the general risk of a management team to fail to successfully refinance via a new instrument that corresponds with the financing strategy and fits within the capital structure.

RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing.

Second, an increased risk could also occur on a timeline basis in case the refinancing process was not started early enough to allow for a decent and well-informed decision (Graham & Harvey, 2002; Immenkötter & Hess, 2012).

RP4b: The management team executed a timely refinancing process to avoid an increased refinancing risk.

3.5 Conclusion

The literature review revealed the weakness of the existing research concerning an explanatory framework for midcap companies' financing decisions. The literature on financing decisions and capital structure still tries to identify patterns by assessing on a primarily economic basis or by introducing behavioural finance aspects and failed so far to present a result on whether the firms follow a decent financing strategy. Therefore, this research explores, whether a financing strategy exists in German midcap companies. If a financing strategy would exist, the next investigation will be whether this financing strategy is embedded in the overall business strategy and which strategy is informing the other.

Furthermore, the review showed that several characteristics of midcap companies are not in line with assumptions of some of the capital structure theories and therefore might not be able to explain the financing decisions in family firms. Midcap firms are not publicly listed and have no access to capital markets. They are not solely focussing on maximising shareholder value, but also on qualitative aspects such as corporate social responsibility. Family shareholders are seen to be risk averse given their largely undiversified portfolio and information asymmetries between owners and managers are less relevant as companies are either operated by owner-managers or by external managers with a direct link between management and family shareholders.

In addition, the study tries to reveal if German midcap companies followed this financing strategy in a specific refinancing situation and to reveal the determinants that were key in deciding for the chosen instrument.

Besides the contribution to the discussion about financing decision and strategy, the present research enriches the discussion on differences between manager types by introducing a more detailed typology on financing as presented by Ginn et al. (1995).

This research also expands the existing literature on financing decisions and capital structure in German midcap firms by exploring a particular refinancing decision in-depth and will serve as a basis to prepare adjusted propositions for future research. In addition, the in-depth investigation helps in developing a template for building a holistic financing strategy and to execute a structured financing process.

4. Research Methodology and Methods

This chapter explains and reflects upon the research strategy and design of this study to investigate the developed research questions. The motives and justification for the research design are considered in a holistic manner which involves the underlying philosophy as well as the description of the methods. Therefore, the chapter starts in section 4.1 with the description of the underlying research paradigm and will be followed in section 4.2 by a presentation of the research method applied to in this study. Section 4.3 introduces the design of the research, including the discussion on resulting issues and considerations regarding data quality. The subsequent section 4.4 illustrates the preparation of the data collection and analysis process and the instruments to refine and enhance this process. Section 4.5 presents the data collection elements as well as the performed data collection process. The discussion of the data analysis tools and process in section 4.6 completes the chapter.

4.1 Research Paradigm

This research project is not intending quantitative testing for the developed research questions but to investigate the process leading to midcap company management decision in a specific refinancing situation and to provide an understanding, whether a financing strategy exists and was deployed during this process. Therefore, the research focus on qualitative aspects and addresses "practical problems in the real world" (Feilzer, 2010, p. 8). Divergent approaches are used to cope with these problems and to offer solutions for the different aspects that evolved in formulating the research questions (Bryman, British & Mar, 1984; Hesse-Biber, 2010).

To achieve this research focus, the research paradigm suits best that mitigates the constraints imposed by the forced choice dichotomy between an interpretivism and an objectivism paradigm (Benton & Craib, 2011; Grix, 2004) and which is open to a problem-oriented approach (Scott & Briggs, 2009). Therefore, an epistemology was chosen that allows the researcher to look at phenomena from different perspectives and to provide an enriched understanding (Morgan, 2007).

Pragmatism as a research paradigm offers to use a method that allows to adequately answer the research questions and to be flexible in investigative techniques as they

attempt to address a range of research questions that appear (Feilzer, 2010; Onwuegbuzie & Leech, 2005). Knowledge of objectives or institutions within the pragmatism research paradigm arise in the practical relationship that the researcher has to these objects (Bryman & Bell, 2007).

As shown in the following sections, this research uses a case study method to conduct the research and combines the derived data from the mixed sub-methods deployed for the analysis. Other epistemologies that form the basis for mixed-method research tend to put the data that derived through different methods alongside each other and discuss findings separately. Feilzer (2010) stated that "most empirical mixed methods research has not been able to transcend the forced dichotomy of quantitative and qualitative data and methods" (p.9) and are still presented as "totally and largely independent of each other " (Bryman, 2007, p. 8).

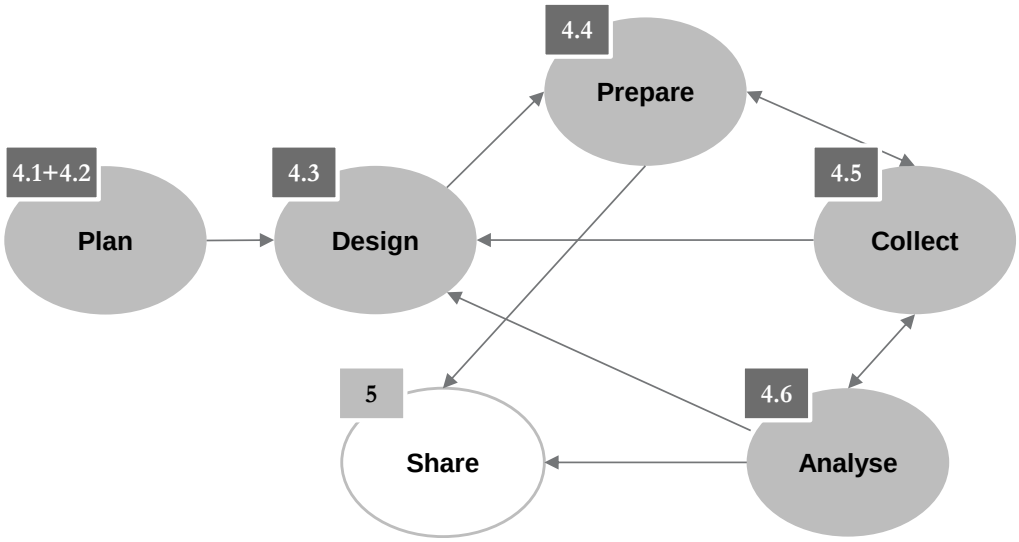
4.2 Methodology and Method

As introduced in the previous section, this research project has a qualitative focus as it tries to explore the behaviour of the management within a specific refinancing situation and to investigate whether the management followed a formulated financing strategy during this process. However, it will also involve exogenous variables to substantiate the cognition from the qualitative elements further, as most of the research within the field of entrepreneurship and finance have a quantitative-based decision element, such as financial ratios to cope with (Crook, Shook, Morris & Madden, 2010).

Whereas most of the research in the finance area is based upon a deductive approach (Leitch, Hill & Harrison, 2009), this project aims to provide a deeper understanding of the determinants of the decision process by analysing a specific refinancing issue and by focussing on individual cases. This research pursues an inductive approach to allow further research to generalise the observations by operationalising the findings and to test those towards a broader population (Bryman & Bell, 2007; Easterby-Smith, Thorpe & Jackson, 2008). The design includes Nohtse's (2012) recommendation that the factual refinancing should be contrasted with his findings and the expected outcome to provide a better understanding of the financing behaviour of the mezzanine issuer (p. 256). The overall structure of this chapter follows Yin's (2008) layout for

designing and performing case study research and is outlined in Figure 4.1 below, including the relevant sections within the thesis:

Figure 4.1: The Case Study Approach



Source: Adopted from Yin (2008).

Case studies are especially useful for asking *"why"* or *"how"* choices are made (Bettner, Robinson & McGoun, 1994; Schmittat, 2007). As outlined before, case study in terms of this research is seen to be a research method, following Yin's (2008) and Flyvbjerg's (2006) definition and not as a methodology, as seen by P. Baxter & Jack, (2008) and Hyett, Kenny & Sickson-Swift (2014). Therefore, *semi-structured interviews*, *calculation of key financial ratios* and *document review* are the elements of the investigation (Schmittat, 2007) or sub-methods (Gillham, 2000a, p. 13) and might not be misunderstood to serve as the research method.

Case study research as a relevant method in the field of finance has gained importance in the last years (Ardalan, 2000; Schmittat, 2007), as it enables to collect *"very extensive and intensive data (documents, interviews, personal observation, etc.)"* (Bettner et al., 1994, p. 14). Within a case study research, the researcher is analysing a situation which involves many variables, but probably a limited number of available data (Yin, 2008). Therefore, the researcher is focusing on the comprehension of a single case and tries afterwards to abstract these findings towards a broader population. However, Bettner et al. (1994) acknowledge that "case study research [...] always [includes] too few samples for statistical testing and generalisation as in capital market

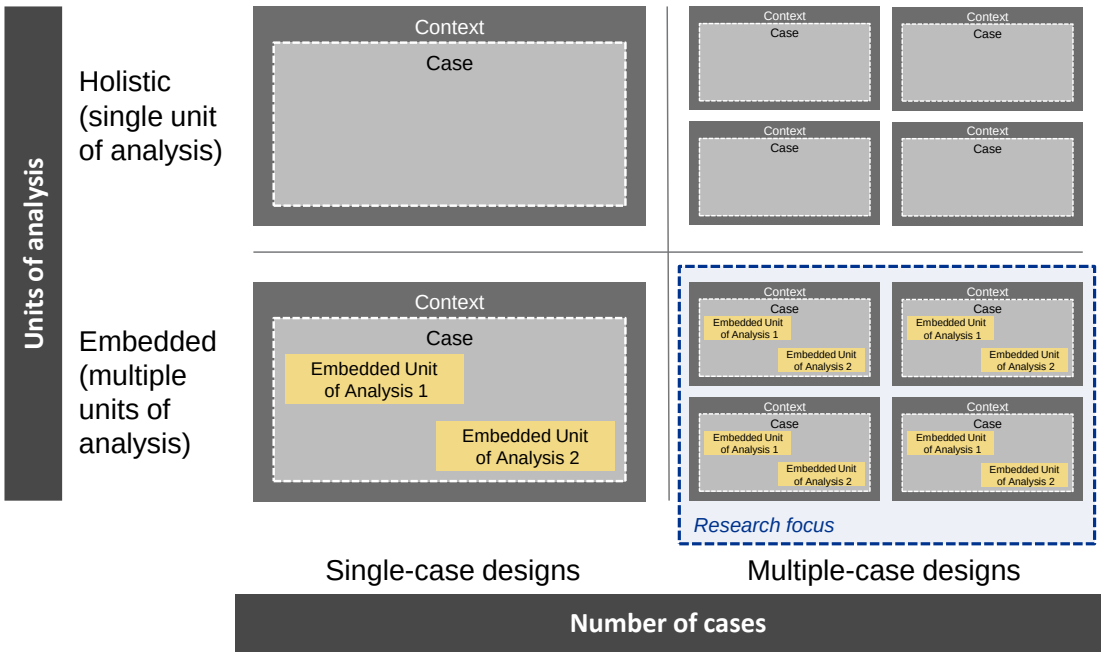
research. The characteristic value lies in the multifaceted examination of some situation [...]" (p.14). Case studies are therefore especially useful when exploring how complex decisions are made (Ardalan, 2001; Easterby-Smith et al., 2008).

4.3 Design of the Case Study Analysis

4.3.1 General Design

Yin (2008) differentiates two major characteristics that have to be clarified prior to the explicit case study design for a research, (a) the *number of cases* involved in the research and (b) the *unit(s) of analysis*. Figure 4.2 displays the general designs for a case study.

Figure 4.2: Basic Types of Designs for Case Studies



Source: Yin (2008).

4.3.1.1 Multiple Cases

This research is based on a multiple-case design as it does neither focus on a critical test of a single theory, nor on a rare or unique circumstance or a representative or typical case (Yin, 2008, p. 52). Therefore, a multiple-case design was chosen to enhance robustness and to allow for a deeper investigation of the companies that used standard mezzanine facilities. According to Yin (2008), multiple-case designs have to

follow a replication logic (p. 54), that is differentiated into two levels, *literal* and *theoretical* replication. Cases must therefore be selected carefully to allow for one of the two replication logics (M. B. Miles, Huberman & Saldana, 2013). The literal replication aims to explore cases that predict similar results by repeating and confirming identified findings and observations. The theoretical replication focuses on cases that predict contrasting findings. Through the explanation of these contrasting findings, the results will be substantiated (Schmittat, 2007).

An important step in the replication procedures is the development of a rich theoretical framework that forms the basis for generalising towards new cases. Yin presents in his discussions of the replication logic that in a situation where cases do not present the predicted results (either supporting or contrasting), the underlying theoretical assumptions have to be modified via a feedback loop (Yin, 2008, p. 54).

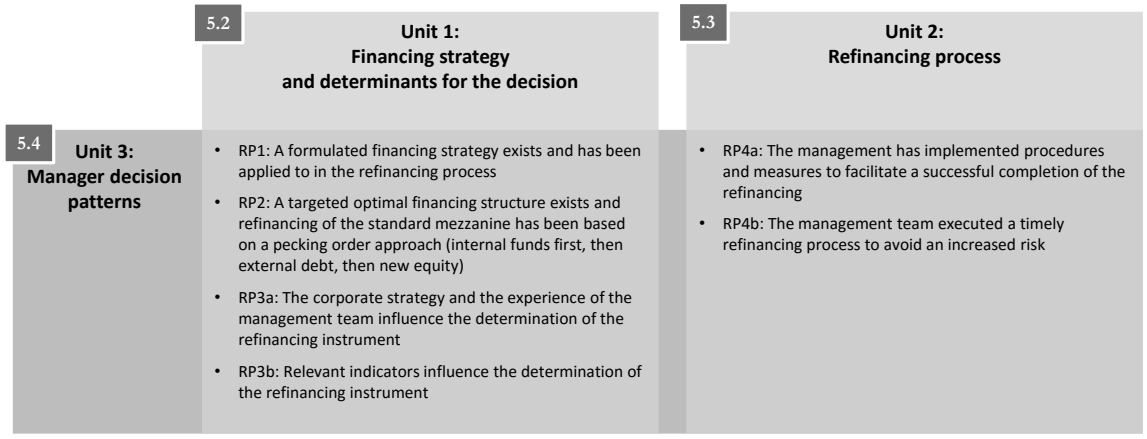
4.3.1.2 Units of Analysis

Case studies can follow a holistic or an embedded design, depending on the number of analysed units (M. B. Miles et al., 2013). According to Yin (2008) a unit can be for example an individual as well as an event or an entity (p. 29). This research uses an embedded case study design to investigate the derived research questions and consists of three embedded units of analysis. They are a direct result of the developed research questions in section 3.4:

1. The first unit of analysis focus on the exploration of the existence of a formulated financing strategy and on how financing decisions are influenced by procedures or routines that were defined in a financing strategy and what determinants led to the selection of a specific refinancing instrument (section 3.4.1);
2. The second unit of analysis investigates the refinancing process and whether the financing strategy or routine has been followed during the specific refinancing process (section 3.4.2);
3. Furthermore, the third unit of analysis explores if different management types with individual decision patterns can be observed in this research (section 3.4.1.3).

These embedded units of analysis must not be mixed with the "case" itself. The case is the refinancing of the standard mezzanine facility within a specific company. Figure 4.3 displays the structural connection between the units of analysis, the embedded research propositions and the relevant sections in the next chapter.

Figure 4.3. Units of Analysis, Research Propositions and Sections in the Discussion of Results



Source: Own illustration.

4.3.2 Selection of Cases

As outlined before, the selection of the cases plays an integral role for the robustness of the study. In a first round, cases were identified that predict similar results for the literal replication. For this identification, midcap companies were chosen that indicate no obvious problems in the upcoming refinancing as outlined in section 1.3.4. These are companies that

(a) were able to increase their operational performance (identified by an increased operational margin) since the original standard mezzanine financing was obtained to (partially) repay the standard mezzanine facility from retained earnings and/or

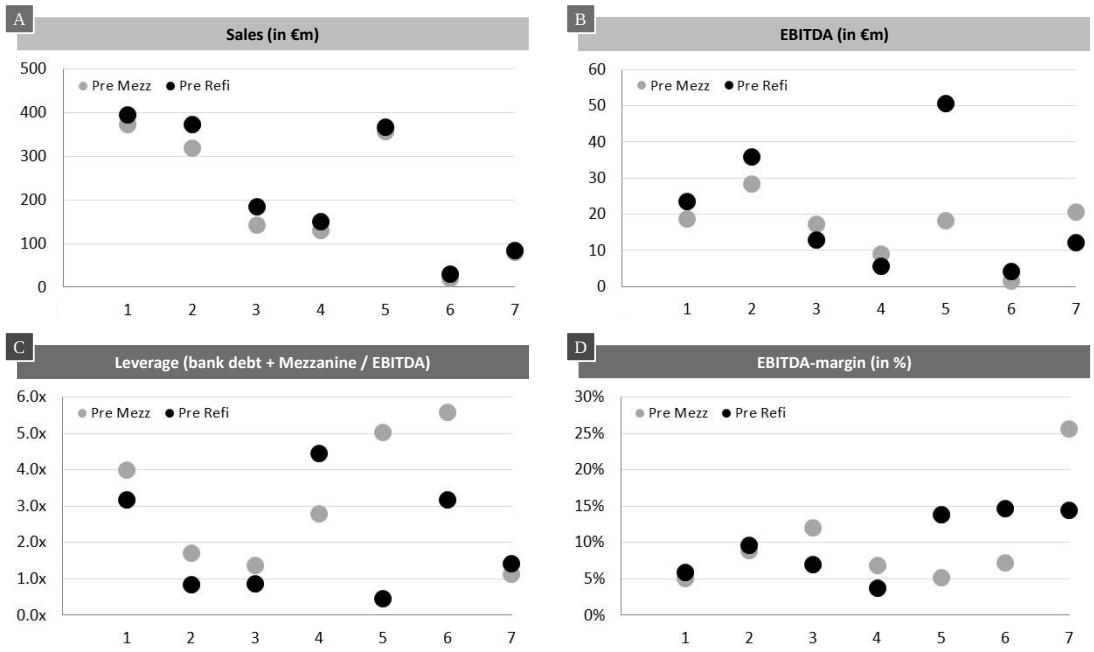
(b) showed a leverage ratio at the time of the refinancing at or below 3.5 times EBITDA which is seen as a basis to obtain new external debt for the refinancing (Adam et al., 2014; PwC, 2011).

Case 1, Case 2, Case 5 and Case 6 comply with both criteria, whereas Case 3 was able to reduce its debt towards a comfortable leverage ratio but showed a deteriorating

operational performance. Nevertheless, given the still positive operational margin this case has been also introduced to the literal part of the case study analysis.

For the theoretical replication, cases were selected that did not comply with the two criteria. These are Case 4 and Case 7. Figure 4.4 provides an overview on the cases that formed the multiple-case design.

Figure 4.4: Operational Development of the Cases

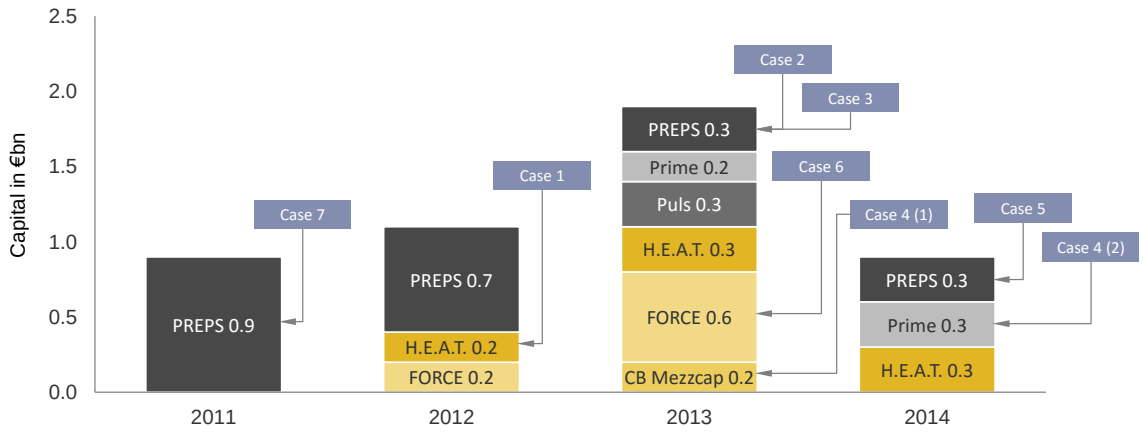


Source: Own illustration.

The researcher advised some of the cases in the refinancing of their standard mezzanine instrument. Debt advisors supported four out of the seven cases analysed in this research. Cases were numbered to ensure anonymity and have been numbered in the sequence of the performance of the semi-structured interviews during the data collection phase. The companies analysed in Case 5, Case 6 and Case 7 have not used a financial or debt advisor during their refinancing. Therefore, the researcher used a gatekeeper for approaching these companies to facilitate access to the respective interview partners (Newby, Watson & Woodliff, 2003). Nevertheless, given the duration and the depth of these interviews it can be identified that the personal involvement of the researcher in the other cases must be seen as an advantage to get a more detailed and open feedback from the participants as well as access to extensive company information.

The cases cover every year of the refinancing window and a broad variety of standard mezzanine providers. Case 2 and Case 3 both cover the same standard mezzanine programme, whereas Case 4 explores a company that used two different mezzanine tranches in 2006 and 2007. Figure 4.5 provides an overview of the selected cases and the respective standard mezzanine funds they received their financing facilities from.

Figure 4.5: Case Overview within the Maturity Profiles of German Standard Mezzanine Funds



Source: Adapted from Brüse (2011) and PwC (2011).

4.3.3 Case Study Data Quality

Data quality is an integral issue in case study research. Within the case study method, data quality is especially related to validity and reliability (Yin, 2008). Even though the term *validity* is often replaced in qualitative research by the term *trustworthiness*, given the association with the quantitative conceptualisation of the research process (P. Baxter & Jack, 2008; Leitch et al., 2009; Onwuegbuzie & Johnson, 2006), the term *validity* will still be used in this study. Generalisability which is also referred to as external validity has to be considered with special attention, as case study research does not aim to be statistically reliable. Therefore, case study research is not generalisable against population, but against theory (Gillham, 2000a). However, case study research is still to be seen as robust, given the careful design and the proper use of a replication logic (Yin, 2008).

4.3.3.1 Construct Validity

A case study research complies with this criterion when the methods used are suitable for the aim of the research and allows answering properly the research questions. It

has to be ensured that the factual investigation complies with the objectives of the research (Yin, 2008). Several strategies can be used to enhance construct validity of a research project. The researcher should submit interview content protocols as well as calculated ratios and interpretations of those to the interview participants for a formal sign-off (Schmittat, 2007).

Triangulation of the elements of investigation or sub-methods further enhances construct validity (M. B. Miles et al., 2013). Whereas outcomes from different elements of investigation converge towards a result, the importance and validity of such result has to be higher valued. The chain of evidence from the case study report and the analysis must be maintained.

4.3.3.2 Internal Validity

Internal validity covers the correctness of the conclusions drawn from the cases investigated (Easterby-Smith et al., 2008). It is therefore important, that the context between data collection, conclusions drawn and theories developed is ensured. This does also include the discussion of alternative explanations. Yin (2008) acknowledges, that internal validity remains a problematic area within the case study method because the methods to combine data and propositions are poorly developed.

4.3.3.3 External Validity

External validity values how the results of the research can be generalised towards a broader population (M. B. Miles et al., 2013). The case study method does not aim to achieve a statistical robust generalisability via statistical methods (Gillham, 2000a). Furthermore, case study uses replication logic – like in experiments – to allow for generalisability through analytical elements (Abernethy, Chua, Luckett & Selto, 1999). A multiple-case design enhances external validity as results drawn from the first cases are used to be substantiated, expanded or contradicted during the investigation of the next cases.

4.3.3.4 Reliability

Reliability within qualitative research means that other researchers would come to the same results by interpreting the data or that the re-investigation of the cases would lead to the same results (Easterby-Smith et al., 2008). Yin (2008) introduces three

principles to ensure reliability. The first principle is the usage of *multiple sources of evidence* which in this study is included by the combination of semi-structured interviews, the calculation of key financial ratios and an extensive document and information analysis.

The second principle refers to the documentation and organisation of the collected data for the study, the *creation of a case study database*. In this research, a case study database was developed that includes the content protocol, basic financial documents required for the calculation of the key financial ratios as well as all other received and collected documents and information.

The third principle is to maintain a *chain of evidence* that allows an external observer or researcher to "follow the derivation of any evidence from initial research questions to ultimate case study conclusions" (Yin, 2008, p. 122). The chain of evidence should allow to trace in either direction, also backwards from conclusions to initial research questions (Gillham, 2000a).

In addition, specific mechanisms were introduced to the research to avoid bias and ensure an appropriate ethical environment. Those mechanisms are illustrated in section 4.4.3.

The described mechanisms and elements to ensure data quality of the research are summarised in Table 4.1 below.

Table 4.1: Building in Validity and Reliability in the Research

Tests	Case study tactic	Phase of research

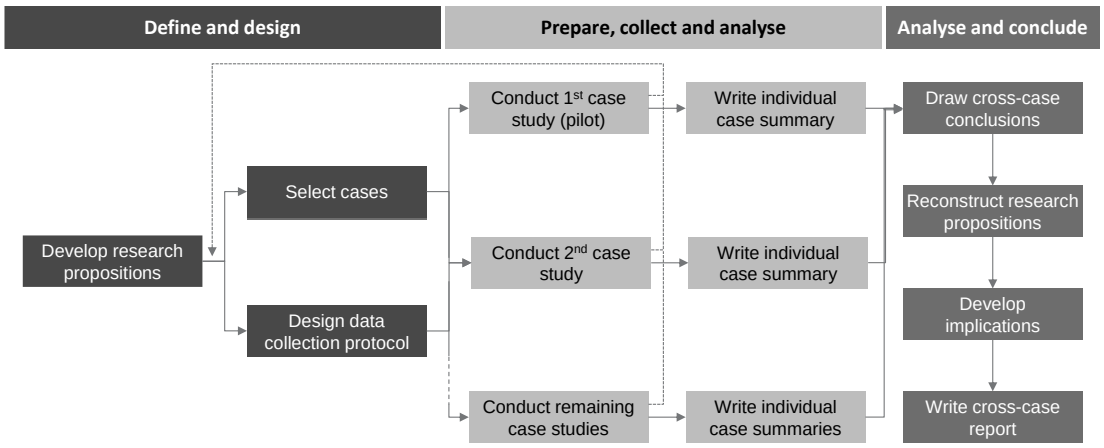
Construct validity	• Sign-off of interview content protocol by participant
	• Multiple sources of evidence:
	  o Semi-structured interviews
	  o Financial report analysis and ratios
	  o Document review
	• Review of draft by participant
		• Data collection
		• Data collection
		• Write-up phase

Internal validity	• Pattern matching	• Data analysis
External validity	• Replication logic (literal and theoretical)	• Research design
Reliability	• Interview content protocol • Case study database/document folder	• Data collection • Data collection

Source: Adapted from Yin (2008).

To summarise the design of the case study research, Figure 4.6 displays the overall layout of the followed approach:

Figure 4.6: General Case Study Layout



Source: Adapted from Yin (2008).

4.4 Preparation

4.4.1 Piloting

A pilot case has been conducted to test the overall procedure as well as the planned design. Even though the pilot study had to be performed with another company than originally expected and the time schedule had to be adopted, the data collection showed that the expected level of information as well as the availability of management teams to participate has been achieved. The first and second level coding allowed for a useful deconstruction and later aggregation of the relevant data and already showed that data was able to pose answers to the formulated research propositions. The pilot study was conducted in June and July 2013 and has been included in the main study as Case 1.

Two areas of further improvement have been identified during the pilot study. The first area is a reduction in the number of questions of the interview guidelines as both interviews exceeded the envisaged timeframe of approximately 90 minutes up to 120 minutes by far. The questions were reduced to 23 questions. The second area of improvement applied to the sequence of data collection methods. The document review and the calculation of the key financial ratios after the interview presented

findings that did not match responses from management and therefore required a re-interview during the sign-off of the interview protocol.

Given the unanticipated change of interview partners and the time restrictions of the pilot study, only one interview was performed during a personal meeting, whereas the interview with the CFO of the company of the pilot study was a telephone session.

4.4.2 Expert Review of the Interview Guideline

Prior to executing the pilot case, the developed interview guideline was presented to several financing advisors that the researcher had access to as well as to the professors of the supervisory team of the author. Guidelines were discussed with them for a critical review and refinement of the questions (Gillham, 2000b). The feedback from the experts led to changes in the order of the questions of the interview guideline as well as to the removal or improvement of some of the questions to ensure a consistent match with the research questions. The matrix of questions of the interview guideline with the underlying research question is provided in Appendix B.

4.4.3 Potential Study Limitations and Ethical Considerations

The potential limitations and ethical considerations for this research project have been carefully evaluated during the design and planning phase to avoid insufficient and poor data. The following areas were identified:

4.4.3.1 Informed Consent

As most of the envisaged interview partners will have worked with the researcher during his professional career, an uncoerced and voluntary participation is important (M. B. Miles et al., 2013). To ensure informed consent, several elements have been implemented. These included detailed pre-information on the aim and objective of the research, sign-off of the interview content protocol and the calculated key financial ratios as well as a re-interview mechanism in case some details might be found during the document review phase that were not corresponding to the interview (Gillham, 2000b).

4.4.3.2 Access to Data and to Interview Partners

As none of the firms that participated in the research is publicly listed, only limited data was available via general information tools and databases. In addition, family-owned businesses tend not to provide confidential information on management processes and company guidelines to external persons and researchers. Implemented confidentiality mechanisms mitigated this aspect (please refer to the following section 4.4.3.3). The second aspect was the bond of trust (Easterby-Smith et al., 2008), which developed between the company management and the researcher being its advisor during the refinancing. Most of the information and documents that are relevant were already with the researcher. However, the author did not use these documents but asked the management to resubmit the documents that are explicitly relevant for the research based on the information request list sent. The management was able to decide, whether they want to have an information to be included in the research or not. Interviews were scheduled via telephone calls but were held as personal meetings at the managements' offices. For the pilot study, this mechanism could not be complied with completely, as presented in section 4.4.1.

4.4.3.3 Power Differential, Confidentiality and Bias

The researcher has worked for some of the firms that participated in the research on their refinancing, including the pilot study case. It is therefore important to protect the interests of the interview partner by ensuring accuracy at the same time. To ensure an unbiased process, no case was analysed where a contractual agreement to support in the refinancing between the researcher's employer and the analysed firm was not completed at least six months prior the study. The minimum period of six months was chosen because this timeframe implies that at least one financial reporting cycle with financing partners was completed without the involvement of financial advisors.

Another element of power differential exists between the two interview partners as they interacted during the refinancing process and the Head of Treasury is normally reporting to the CFO of the firm. Strict anonymity is therefore required to allow for non-politically motivated answers from the interview partner (Harvey, 2011). This is ensured in the research design via completely separated interview strings. Each interview took place at an individually scheduled meeting with the respective interview participant, and no answer from one participant was discussed with the other

involved interviewee. Coding and categorisation of the interview content protocols delivered a level of aggregation that did not allow for drawing conclusions on an individual interview.

Confidentiality regarding the information received and each analysed refinancing decision was ensured by signing a confidentiality agreement and by keeping relevant company information and the interview content protocols as well as electronic copies in safeguarded lockers and workplace areas of the researcher. These comply with German audit firm regulations.

The personal involvement of the researcher in some of the analysed refinancing situations made an unbiased data collection and analysis even more important. Therefore, experienced researchers and practitioners reviewed the interview guidelines to avoid that the questions pretended a certain trend for an answer, as described in section 4.4.2. In addition, the sign-off of the content protocol and the calculated ratios granted a further review by the interview partner to ensure unbiased and accurate data collection.

4.4.3.4 Translation

The interviews were performed in German as this is the native language of all interview participants and the interview content protocol as well as almost all documents to be analysed were in German. To avoid a distortion of the data and to facilitate the analysis these have been conducted in German as well, even though language and exact wording were not crucial for the analysis (Bryman & Bell, 2007; Easterby-Smith et al., 2008). The interview content protocols as well as directly cited statements of the interview participants have been translated during the writing-up phase.

4.5 Data Collection

Each case study included three elements of data collection. The core element was the semi-structured interview with two participants that were responsible for the refinancing decision and process within the respective midcap company. These were usually the Head of Treasury or the Head of Finance and the CFO or the CEO in cases where no formal CFO was installed. The semi-structured interviews were

accompanied by a calculation of key financial ratios that formed the basis of the original mezzanine financing and supplied additional information on how the financial strength changed compared to the refinancing situation. The third sub-method or element of data collection was a detailed contract and information review of the performed refinancing. These two data collection methods offered further challenging or affirmative results to substantiate the statements received during the interviews (Molina-Azorín, 2011).

4.5.1 Semi-structured Interviews

The two existing PhD dissertations already presented questionnaires on the upcoming refinancing of the standard mezzanine in Germany (Brüse, 2011; Nohtse, 2012). In addition, several research projects examined the refinancing of these instruments (Hommel et al., 2011; PwC, 2011). These research and dissertation projects offered a sound basis to formulate the interview guideline.

The interview guideline was segmented into three parts and consisted of 23 questions (section B). In addition, the interview participant received a set of factual questions in advance of the interview session to allow for a later segmentation of the analysed company (section A).

Questions in the interview guideline were predominantly formulated in an open way to allow as much feedback as possible and to serve as "a guided conversation rather than structured queries" (Yin, 2008, p. 106) which is an important source for case study information. The semi-structured approach of the interview to use guidelines rather than a questionnaire allowed to react individually on interesting aspects that came up during the interviews and to enrich the data collection (Easterby-Smith et al., 2008, p. 143). Table 4.2 links the segments of the interview guideline with the research propositions, ensuring the relevance of the questions asked during each interview.

Table 4.2: Sections of the Interview Guideline and related Research Propositions

Section of the interview guideline	Main topic(s)	Related research proposition
Pre Interview – Basic facts **(Questions 1.1 to 1.7)**	Company descriptors: Sales, earnings, employees, industry, legal form Management descriptors: Size of management team, age, education, prior positions	RP3a: The corporate strategy and the experience of the management team influence the determination of the refinancing instrument
Part 1 – Financing strategy and financing hierarchy **(Questions 2.1 to 2.9)**	Existence of a financing strategy and elements Form of the financing strategy Financing hierarchy	RP1: A formulated financing strategy exists and has been applied to in the performed refinancing process RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking order approach (internal funds first, then external debt, then new equity). RP3a: The corporate strategy and the characteristics of the management team influence the determination of the refinancing instrument RP3b: Relevant indicators influence the determination of the refinancing instrument
Part 2 – Refinancing process and procedures **(Questions 3.1 to 3.9)**	Approach and timing Involved parties Availability of financing instruments and markets Selection and decision mechanisms	RP4b: The management team executed a timely refinancing process to avoid an increased refinancing risk RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing
Part 3 –Post-refnancing capital structure **(Questions 4.1 to 4.5)**	Change in capital structure and/or in financing strategy Relationship to financing parties	RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking order approach (internal funds first, then external debt, then new equity) RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing

Source: Own illustration.

4.5.2 Calculation of Key Financial Ratios

During the original mezzanine financing process, the mezzanine provider performed no internal rating to assess the creditworthiness of the respective company. Most of the providers used a standardised and generally accepted external rating tool, Moody's KMV RiskCalc (Brüse, 2011; Hommel et al., 2011; Nohtse, 2012). This purely quantitative rating tool focused on historical financial data of the company and presented an aggregated rating for each company (Moody's Investors Service, 2001, 2006). In most cases, this tool represented the main credit assessment element for the mezzanine providers (KfW Bankengruppe, 2011b; PwC, 2011).

At the time of the refinancing, individual credit assessments have been performed based on the chosen financing instrument and/or the financing partner approached. However, key financial ratios play an important role in every rating system that a bank bases its financing decision upon. To further explore whether there has been an increased refinancing risk for the company because of deteriorating financials, the original external rating ratios at the time of the mezzanine financing are contrasted with the rating ratios that are based on the current financial data prior to the refinancing. This allows an overview on how these financial ratios have changed and what effect arose for the overall rating. Therefore, each company was asked to submit their last financial statement to the researcher and a new calculation of the financial ratios, based on the ratios of Moody's KMV RiskCalc was conducted. The resulting ratios as well as the comparison with the original rating ratios provided insights on whether a financing strategy was followed that maintained or enhanced the companies risk profile. Between the original mezzanine financing risk assessment in the years 2004 to 2007 and the refinancing assessment in the years 2011 to 2014, major changes to the German national accounting standards and the German HGB occurred. However, given the limited information provided by the financial reports, manual adjustments were not performed to avoid a bias by the researcher.

Furthermore the calculated ratios were used during the interview to substantiate or challenge statements of the interviewee. During the pilot study, this analysis had to be performed after the two interview sessions due to the late submission of the company's annual financial statements. A description of Moody's KMV RiskCalc as well as the

calculation methodology for the financial ratios and an anonymised result sheet for the pilot study company can be found in Appendix C.

4.5.3 Document Review

The third method of data collection was a review of the executed refinancing contract as well as other relevant internal documents and protocols that allow for a reconstruction of the refinancing process and the following of a defined financing strategy. This review did not follow a certain guideline but aimed to identify aspects that are relevant for the study. This rather open approach has been chosen because the level of documents available varied from case to case. The review was performed in advance of the interview session to be able to discuss findings.

4.5.4 Collection Process

Each case was conducted sequentially to allow to permanently refine the design as outlined in section 4.3. However, the data collection within each case was not performed sequentially but rather in parallel to allow for an instant comparison of the collected data (Creswell & Plano Clark, 2007). The collection process of the raw data for the Cases 2 to 7 was performed between October 2013 and March 2014, and can be separated into three parts per case:

4.5.4.1 Before the interview

An introduction call has been held to introduce the researcher, to present the aim of the research and to ask for the general availability to participate in the research (Harvey, 2011). After the general consent to participate, this call has been followed by an introduction pack, which was submitted to the relevant participant one to two weeks in advance of the meeting. This introduction pack, which was sent by email, included a cover letter, a short presentation outlining the aim and objectives of the research project, the first set of factual questions and a prepared confidentiality agreement. Furthermore, the introduction pack also included an information request list, presenting the relevant documents and information that would be required to perform the calculation of the relevant key financial ratios and to gain a deeper understanding of the current status of the refinancing process in advance of the interview meeting (Gillham, 2000b). Even though the researcher might have access to some of these data

already during his advisory role for the company or management team, it is important to solely focus on information that is given under this research string and under the confidentiality agreement to mitigate confidentiality concerns. All documents of the introduction pack can be found in the Appendix A of this research (English convenience translations).

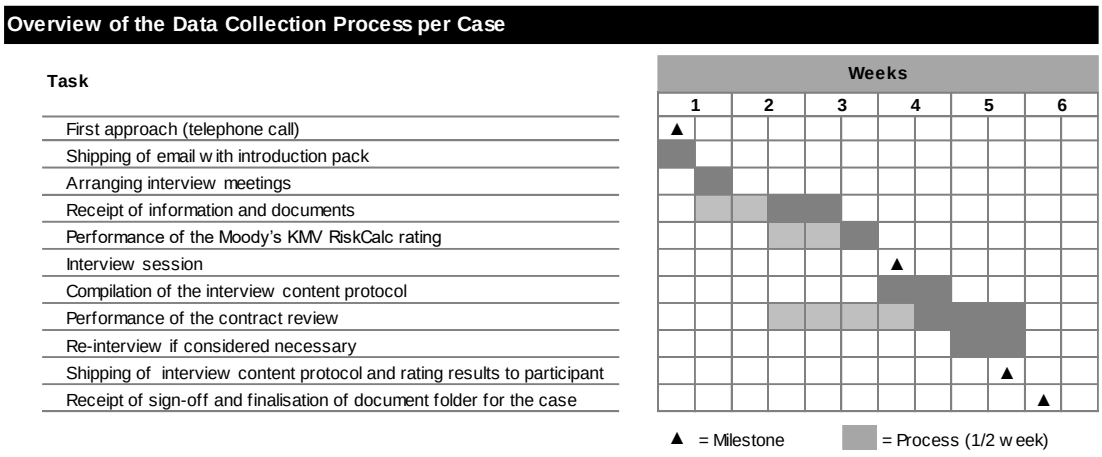
4.5.4.2 During the interview session

Interviews were performed during personal meetings. At the beginning of each interview, an overview of the received information and data was presented to the interview partner and the participant was asked again whether he is concerned about confidentiality or he is unclear about the aim of the research project. If so, a personal explanation would have followed and the interview would have only started if the participant felt comfortable to continue. The interviews had a duration between two and three hours. Keywords and main testimonies were recorded under the relevant guideline question. At the end of each interview session, the participant was asked if he accepted a re-interview in case of further questions arising during the analysis phase.

4.5.4.3 After the interview

After the interview content protocol was finalised, it was sent to the interview participant for a formal sign-off of the protocol. In addition, the calculated key financial ratios of the company as well as the calculation method were presented and asked for a formal sign-off to ensure factual correctness. Figure 4.7 presents the key steps of the data collection process per case.

Figure 4.7: Overview of the Data Collection Process per Case



Source: Own illustration.

4.5.5 Document Folder

The complete correspondence between each interview participant as well as the interview content protocols, the information received and the printouts from the rating tool were collected in a separate document folder per case (Gillham, 2000a). The folder exists as a hardcopy and as an electronic file as well. Both are secured. Each document folder is headed by a cover page, which provides a general overview of the case complied, the result from the pre-sent factual questions as well as general data. An overview of the documents and information received per case as well as the individual case summaries can be found in the Appendices D and E.

4.6 Data Analysis

The general layout of the data analysis process consisted of two levels, a "within-case analysis" as a first step, deconstructing the collected data for the individual case (Eisenhardt, 1989; M. B. Miles et al., 2013). As a second level, a "cross-case analysis"

of all cases was performed to allow to draw for conclusion between cases and across cases (Yin, 2008, p. 160).

4.6.1 Within-Case Analysis

Each interview content protocol has been transferred into a table after receipt of the sign-off (column: name of the interviewee/company, rows: questions and answers) for the analysis phase. After the transfer, the content protocol table has been read several times, first labels have been identified. These labels have been highlighted within the table. These labels do not need to be exactly the same words, but the identical reasoning behind it is important. For example, in question 3.2 ("What are key elements of this financing strategy?") one participant responded that "Identification of core banks that will provide financing for the company" is a key element of the strategy. The second participant of that case answered that "Financing partners to work with have been pre-selected per instrument and/or country the company has operations in" would be one key element. The words "Financing partners" and "banks" are not identical, but the context of their answer shows that they mean similar things.

This first round descriptive coding allowed for categorisation of similar data (Easterby-Smith et al., 2008; Miles et al., 2013). Even though the researcher wanted to perform initially a deductive coding prior to the interviews, the analysis started with an inductive coding to allow for an individual coding during the data collection and analysis to ensure that no question will direct an answer towards a specific, already existing code.

The key financial ratios calculated with Moody's KMV RiskCalc have been linked to the respective questions as a cross check. This rating was already performed prior to the interview session to be able to react in case of a differing answer.

The cross-check tried to substantiate the answers given via the financial ratios and their development from the initial rating during the mezzanine financing phase and the new rating performed during or after the refinancing. As an example, in Case 1 the participants both answered question 5.3 ("Has the financing risk profile of the company changed significantly?") in a way, that the risk profile of the company has reduced significantly after the completed refinancing. However, the three financial ratios that map this factor (Debt Coverage, Leverage/Gearing and Liquidity) indicated

an increased risk compared to the rating in 2006, when the mezzanine financing started. Therefore, the results were presented and discussed with both participants and led to a partial revision of their answer.

The third level of the within-case analysis was the review of relevant information that documented the refinancing decision process. These were primarily the signed financing contracts as well as management memos and notes of the involved decision makers. These were analysed after the completion of the interviews and tried to further substantiate or challenge the answers of the participants. In addition, this document analysis allowed a revision of the codes already assigned during the analysis of the interview content protocols.

Having completed this first round of coding and analysis, a second cycle coding has been performed to group the codes into categories or themes and to finally reconstruct to the related research propositions. As an example, both participants of Case 1 answered on question 5.1 ("Please describe your capital structure post refinancing") that they were able to refinance the standard mezzanine mainly via external debt and with only minimum involvement of the company's existing liquidity and without any shareholder injecting new equity. First round coding identified "external debt", "equity" and "liquidity" as labels. The second cycle coding identified "capital structure", which is a reconstruction of the second research proposition. In fact, the answer indicated that in this case, pecking order approach as one of the main propositions from strategic capital structure theory has not been considered during the refinancing. However, the answer also indicated that in view of the participants, they still followed a financing hierarchy which was in their view an optimal solution.

4.6.2 Cross-Case Analysis

The reason for a multiple case study approach that allowed a cross-case analysis was based on the aim to enhance the generalisability of the findings as well as to provide a deeper understanding and a more sophisticated explanation to strengthen the link between the refinancing decision and a financing strategy or routine that was deployed. It followed a case-oriented approach (Miles et al., 2013) which means that a comparative analysis between the cases was performed after carefully evaluating causes and effects within each case first. However, each case was deconstructed in a

similar way and after the within case analysis, relevant data passages (each answer) were isolated and carefully analysed if they allowed for a further aggregation throughout the cases (M. B. Miles et al., 2013).

Each case is displayed in a matrix, which is structured based on the categories and themes that have been identified through the second level coding of the within case analysis (Gillham, 2000a). For drawing first conclusions, comparisons between the cases as well as making contrasts and counting of the identified themes were used. These first conclusions were checked with the interview content protocols and notes generated during the document review. In case of unclear conclusions, a re-check with raw data or with the participants was added and allowed for a revision (Yin, 2008). To further substantiate the conclusions, if-then tests were included to allow for an investigation of potential connections between categories and themes (Eisenhardt, 1989; Flyvbjerg, 2006).

5. Results

This chapter presents the results identified through the data analysis from the interviews, the supporting document analysis and the calculation of the Moody's KMV RiskCalc factors as described in the previous chapter. Structured alongside the units of analysis defined in section 4.3.1.2, the chapter lays out whether the findings from the data collection and analysis will substantiate or falsify the formulated research propositions. Section 5.1 illustrates the basic demographic data on the cases explored that are important for the further analysis in the following sections. Section 5.2 presents the analysis and findings on the financing strategy and elements thereof as well as on the financing hierarchy. Section 5.3 introduces the outcomes of the analysis on the refinancing process and on financing decisions including the determinants, which represent the second unit of analysis. The third unit of analysis discusses the findings on expected differences between owner-managers and external managers in section 5.4. The chapter is summarised in section 5.5. Some of the findings will be illustrated by short quotations.

5.1 Basic Demographic Variables

The section presents the fundamental data to describe the profiles of the firms investigated in this case study, such as age, size, management and ownership structure. These basic variables will be combined with the various results from the data analysis to identify whether they are dependent on certain variables.

This research will not make use of the legal form of the company being a demographic variable. Legal form of the company has not been investigated to be serving as a meaningful variable in midcap firms (e.g. Börner et al., 2010).

Distribution among company size as presented in Table 5.1 displays that this research only includes one company that would be categorised as a SME Type I according to the classification shown in section 1.1.3. The others firms are midcap companies to be categorised as Type II. In terms of sector, the cases investigated have a focus in more traditional industry areas, except for Case 7. The three cases that are grouped in the broad manufacturing sector represent significantly different business models and subsectors they operate in (engineering, optical industry and transportation) which do not allow for a useful comparison.

Table 5.1: Industrial Sector and Company Size

Case	Industry sector (Q 1.4)	No. of employees (Q 1.2)	Sales range (€) (Q 1.1)
1	Food	500-1000	250-500m
2	Automotive	1000-1500	250-500m
3	General Industrial	100-250	50-150m
4	Manufacturing	<100	50-150m
5	Manufacturing	500-1000	250-500m
6	Manufacturing	<100	<50m
7	Media	100-150	50-150m

Source: Own illustration.

To explore the operational performance as well as the financing conditions of the cases in the year prior to the refinancing, these descriptors are shown in Table 5.2 below. The data is contrasted with the financials prior to the original mezzanine financing to investigate the development of the firms during the mezzanine financing and to detect whether they are in a similar situation compared to the prior financing decision.

Table 5.2: Key Financial Data

		Growth and profitability			Indebtedness and capital structure		
Case	**Last fiscal year**	**Sales growth**	**EBITDA-margin**	**EBIT-margin**	**Leverage**	**Gearing**	**Equity ratio**
Prior to the original mezzanine financing							
1	2004	-17.20%	10.7%	7.4%	1.89 x	95%	31%
2	2005	4.42%	8.9%	3.9%	1.71 x	80%	30%
3	2005	11.09%	12.1%	7.2%	1.36 x	67%	18%
4	2005	8.75%	6.9%	5.0%	2.78 x	100%	38%
5	2006	16.62%	5.1%	3.0%	5.03 x	105%	35%
6	2005	6.12%	7.2%	5.4%	5.58 x	255%	18%
7	2004	-0.65%	25.7%	13.6%	1.13 x	114%	27%
Prior to the refinancing							
1	2011	6.71%	11.3%	8.4%	1.68 x	118%	25%
2	2012	0.59%	9.6%	4.6%	0.83 x	57%	27%
3	2012	4.72%	6.9%	4.6%	0.86 x	25%	24%
4	2012	-7.42%	3.7%	1.4%	4.44 x	115%	24%
5	2013	3.03%	13.8%	11.1%	0.46 x	40%	27%
6	2012	16.89%	14.7%	12.5%	3.19 x	149%	32%
7	2011	-3.82%	14.4%	6.5%	1.43 x	88%	32%
Changes							
1			5.2%	13.4%	-0.21 x	25%	-19%
2			8.4%	17.6%	-0.88 x	-29%	-10%
3			-42.4%	-36.1%	-0.50 x	-63%	31%
4			-46.6%	-71.1%	1.67 x	15%	-37%
5			167.8%	266.7%	-4.57 x	-62%	-22%
6			105.0%	132.2%	-2.39 x	-42%	76%
7			-43.7%	-52.4%	0.30 x	-22%	18%

Source: Own illustration.

Based on the assumptions discussed in section 4.3.2, four cases presented increased operational margins as well as reduced indebtedness compared to the mezzanine financing decision. These companies are classified as literal replication cases that should be able to secure refinancing without significant problems. Cases 3, 4 and 7 show deteriorating operational performance and profitability. However, Case 3 considerably reduced its indebtedness to a leverage factor of 0.86x and is envisaged to perform a successful refinancing. The remaining Cases 4 and 7 are therefore identified

as theoretical replication cases as these had to cope with increasing leverage factors in combination with the deteriorating profitability.

A further group of important demographic variables considers the details on the ownership structure. Main variables are assembled in Table 5.3.

Table 5.3: Ownership Structure (Q 1.5)

Case	Shareholder structure	Shareholder generation	Family tree(s)	Individual shareholders
1	Family-owned and operated business	2-3	3	9
2	Family-owned/PE as minority shareholder	4	6	15
3	Family-owned	2	3	3
4	Family-owned and operated business	1-2	3	3
5	Holding/Family-owned	3	2	5
6	Family-owned and operated business	1	1	3
7	Holding/Family-owned	1-2	1	2

Source: Own illustration.

Cases 1, 4 and 6 represent the companies that are led by owner-managers. The cases selected show a broad variety in terms of family trees, individual shareholders and age. For this research, the company age is not seen as an important variable. It seems more interesting to focus on the generation of shareholders that is currently managing the business (Tappeiner et al., 2012). Cases 1, 4 and 7 are in a transition process at the time of the research as ownership and management responsibility are transferred to the next younger generation. Case 2 had to include an external minority shareholder in addition to the existing six family trees during the financial crisis to maintain an acceptable equity ratio. Case 5 and Case 7 manage their various business activities via a holding company.

The fourth group of demographic variables focus on manager types and are presented in Table 5.4.

Table 5.4: Manager Demographics

	Manager type (Q 1.6)		Prior job experience (Q 1.7)	
Case	**Top**	**Middle**	**Top**	**Middle**
1	Owner-manager	External manager	None	Competitor, Audit firm
2	External manager	External manager	Competitor	Competitor, Bank
3	External manager	External manager	Competitor, Audit firm	Bank, Audit firm
4	Owner-manager	Owner-manager	None	None
5	External manager	External manager	Competitor	None
6	Owner-manager	Owner-manager	None	None
7	External manager	External manager	None	Audit firm

Source: Own illustration.

Two of the three companies that are led by owner-managers also involved family members on the middle level. None of the owner-managers had a prior external job experience. External managers that had no prior external job experience started their professional career within the family firm. External managers at CEO/CFO-level with prior external job experience were primarily hired from competitors, in the middle level from audit firms.

5.2 Financing Strategy and Elements

This section illustrates the findings with regard to the existence of a financing strategy, which elements are included and the interaction between financing strategy with the business strategy.

5.2.1 Existence of a Financing Strategy and Elements

The responses on the questions have been heterogeneous regarding the existence of a financing strategy within the investigated companies, the elements of such strategy and whether it is formulated. However, several elements could be identified in the interviews as well as in the document analysis.

These elements have been grouped into categories as displayed in Table 5.5.

Table 5.5: Elements of the Financing Strategy (Q 2.1 and Q 2.2)

	Fin. partners	Fin. instruments	Principles	Financial ratios	Further policies	Description of process
Rank	**1**	**1**	**3**	**4**	**4**	**4**
No. of responses (max. 14)	11	11	8	5	5	5
Manager types						
Top level (max. 7)	5	5	5	2	1	3
Middle level (max. 7)	6	6	3	3	4	2
Owner-manager (max. 5)	4	3	3	1	1	1
External manager (max. 9)	7	8	5	4	4	4
Shareholder generation						
1 (max. 6)	4	4	4	1	1	2
2 (max. 4)	4	3	1	3	3	2
3 (max. 2)	2	2	2	-	-	1
4 (max. 2)	1	2	1	1	1	-
Family trees						
1 (max. 4)	3	3	3	1	1	1
2 (max. 2)	2	2	2	-	-	1
3 (max. 6)	5	4	2	3	3	3
>3 (max. 2)	1	2	1	1	1	-
Literal/theoretical replication						
Literal cases (max. 10)	9	9	6	4	4	3
Theoretical cases (max. 4)	2	2	2	1	1	2

Source: Own illustration.

5.2.1.1 Financing partners/banks

Eleven out of 14 participants named that a list of relevant or acceptable financing partners should be included in a financing strategy of the firm, primarily banks that the company should work with. Only four participants explicitly included other financing providers in their response. The relation between answers from top management and middle management with five to six matches in the respective answers shows that this aspect is seen to be important in both levels.

5.2.1.2 Instruments

The inclusion of predetermined financing instruments (or at least categories) in the financing strategy was also named by eleven out of 14 participants. Financing instruments and financing partners were therefore identified to represent the most important elements to be included in a financing strategy based on the analysed cases. Table 5.6 presents the instruments used as primary source for the refinancing as well as potential additional instruments to maintain the necessary funding.

Table 5.6: Refinancing Instrument(s)

Case	Is the refinancing process completed?	Primary refinancing instrument	Additional refinancing instrument(s)	Other aspects
1	Yes	Syndicated loan	Schuldschein[1] State-backed loans on subsidiary level	Integrated refinancing
2	Yes	Syndicated loan Schuldschein[1]	Reverse factoring	Integrated refinancing
3	Yes	Retained earnings	Increase in syndicated loan	-
4	Ongoing	Extension of standard mezzanine Bridge loan	-	-
5	Yes	Midcap bond	Revolving credit facility	Integrated refinancing
6	Yes	Retained earnings Bilateral loans	Working capital financing	-
7	Yes	Syndicated loan	-	Integrated refinancing

Note: [1]*Schuldschein is a particular German financing instrument and is named as Schuldschein in most English documentation. Other translations for a Schuldschein are promissory notes or debt certificates.*

Source: Own illustration.

A significant shift from a bank-dominated relationship lending towards a debt capital market financing or towards alternative financing instruments could only be identified in Case 5. Three cases used bilateral or syndicated loans as their dominant refinancing instrument. Case 3 and Case 6 were able to refinance primarily via retained earnings plus additional bank lending. Case 4 had to overcome problems in maintaining a suitable refinancing instrument at the time of this research. The management team negotiated a temporary prolongation of one mezzanine facility and a bridge loan from a bank to repay the second tranche. Together with the observations on financing

partners in section 5.2.1.1, this emphasizes the dominance of bank financing as primary source for external debt in SMEs and midcap companies, especially in Germany (Börner et al., 2010; Johannesen, 2011). Four out of the seven cases used the replacement of their standard mezzanine instrument to refinance larger parts of their capital structure in an integrated refinancing.

5.2.1.3 General financing principles

Eight participants saw ‘general financing principles’ to be an element of the financing strategy. This element groups several patterns of answers, such as key terms and conditions that should be obtained in every financing process like the composition of maturity profiles or the granting of collaterals for the financing. Furthermore, it involves answers on a target capital structure of the firm. This target capital structure could be either the mixture of debt and equity a company wants to obtain or the legal entity where external financing should be raised (e.g. local subsidiary or group holding company). As a third pattern, answers on the interaction with financing partners are grouped in this element, like information package to be presented or the organisation of annual bank meetings.

General financing principles allowed to identify differences between top management and middle management. As shown in Table 5.5, this element could be identified in five top management interview content protocols. Therefore, this element is for the top management as important as the inclusion of financing instruments or financing partners. But only three middle management interview content protocols allowed for the identification of general financing principle elements. This is of particular interest, because this category includes most of the factors that are important for the interaction with the financing partners on a day to day basis during the lifetime of the financing. The financing principles will be investigated further in section 5.3.6 as it will be revealed that these are used by the management to discipline shareholders and family trees.

5.2.1.4 Key performance/financial ratios

‘Key performance ratios’ play an integral part in the controlling of the overall performance and development of a company (Taylor & Lowe, 1995). They should therefore be an element of the overall corporate strategic discussion:

> Participant 2 (external manager, middle level, literal replication): "Key financial ratios that the company / the group uses as KPIs to run the company and is willing to accept in financing contracts [are an element of the financing strategy] and that derive from the business plan that has been signed-off by the management and the shareholders of the company."

However, ratios as a quantitative determinant to ensure a certain debt to equity ratio, a leverage ratio or a minimum equity ratio were found only in five out of the fourteen interview content protocols and only in three of the seven cases. Financial ratios are investigated in more detail in section 5.3.5, where the consistency of financial ratios and their effect on determining the refinancing instrument will be explored.

5.2.1.5 Further Policies

'Further policies' like an investment memorandum or hedging principles have been named as elements that should be included in a financing strategy. Interestingly, this element has been named by four middle management participants and ranks third after financing instruments and financing partners.

> Participant 1 (owner-manager, top level, literal replication): "Financing strategy follows the overall company strategy (e.g. the new syndicated loan agreement includes a dedicated basket for further joint venture financing within a specific product sector)."

However, only one top management interview participant stated that further policies represent a relevant aspect of the financing strategy. This result is not surprising as it indicates the aim of the middle management that in their view a good financing policy includes very detailed and operative elements that serve as guidelines in their day to day work.

5.2.1.6 Process Description

Five interview participants included an outline on how a typical 'financing process' should be conducted by the company's management in their answer on elements of a financing strategy. In contrast to further policies, this element seems to be of more importance to top management participants. Interestingly, the process description element does not concentrate on how the banks are approached and on how the negotiation process with external financing partners should be executed. The

description is primarily focussing on the internal communication between middle management, top management and supervisory bodies of the company. Consequently, the process description element has been only named by external managers. This undermines the research of Naldi, Nordqvist, Sjöberg & Wiklund (2007) and Busenitz & Barney on risk taking and corporate entrepreneurship, as they indicate that owner-managers "are likely to perceive less risk in a given decision situation than are managers" (1997, p. 24) and therefore are not aiming for a transparent documentation of the decision process. The financing process will be further investigated in section 5.3.

5.2.2 Form of the Financing Strategy

Interviews as well as the accompanying document analysis have allowed to code five categories regarding the degree of formality of a financing strategy. Table 5.7 groups the answers identified, starting from the strongest degree of formality to the weakest.

Table 5.7: Form of the Financing Strategy (Q 2.3)

	Explicitly formu-lated financing strategy	Partly formu-lated	(Partly) Included in other formulated strategic elements	Comuni-cated and agreed	Minimum legal require-ments	Lived experience
Rank	**2**	**n.a.**	**3**	**4**	**n.a.**	**1**
No. of responses (max. 14)	4	-	3	2	-	5
Manager types						
Top level (max. 7)	2	-	1	1	-	3
Middle level (max. 7)	2	-	2	1	-	2
Owner-manager (max. 5)	-	-	-	1	-	4
External manager (max. 9)	4	-	3	1	-	1
Shareholder generation						
1 (max. 6)	-	-	-	1	-	5
2 (max. 4)	2	-	1	1	-	-
3 (max. 2)	2	-	-	-	-	-
4 (max. 2)	-	-	2	-	-	-
Family trees						
1 (max. 4)	-	-	-	1	-	3
2 (max. 2)	2	-	-	-	-	-
3 (max. 6)	2	-	1	1	-	2
>3 (max. 2)	-	-	2	-	-	-
Literal/theoretical replication						
Literal cases (max. 10)	4	-	3	1	-	2
Theoretical cases (max. 4)	-	-	-	1	-	3

Source: Own illustration.

The highest degree of formality is represented by an integrated documentation that is explicitly labelled as a financing strategy and includes elements and/or process guidelines as discussed in the previous subsection:

> Participant 6 (external manager, middle level, literal replication): "Financing guidelines [are] in place that cover: preferred financing instruments, list of relationship banks, allowed hedging instruments and hedging strategies (no speculation, but currency and interest hedging as well as selected raw material prices)."

The next category describes cases where at least parts of the elements of a financing strategy were found as written documentation or included in other strategic guidelines:

> Participant 2 (external manager, middle level, literal replication): "Not an integrated financing strategy, but core elements such as an investment policy (which has been presented to the supervisory board but not yet been approved), a hedging memorandum and a handbook on business planning for each company of the group that also includes rules on financing and limitations on bilateral financing via local bank partners."

The third category includes cases, where no explicit documents or guidelines were found, but some routines or rules were communicated either via internal memos or via protocols of the management and/or supervisory board:

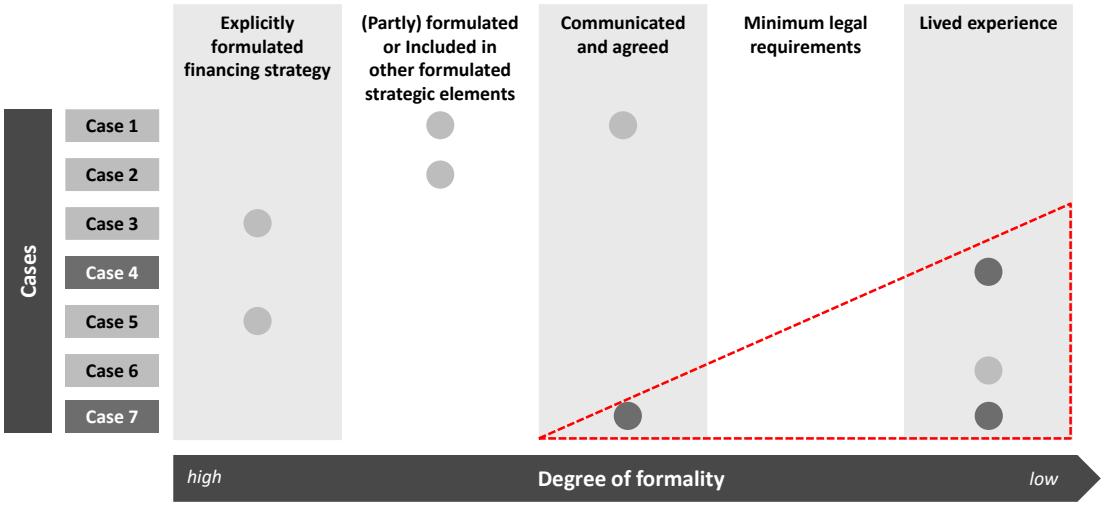
> Participant 3 (external manager, top level, literal replication): "KPI's and target ranges are formulated within the general corporate strategy."

A fourth category has then been included that would have described cases, where at least the legal requirements based on the form of incorporation have been clearly adopted in the refinancing situation. For example, within a German incorporation ("Aktiengesellschaft"), the management has to ask the supervisory board of the company for authorisation prior to execute specific transactions. Entering into financing agreements is one of these transactions. The last category – which has been labelled as 'lived experience' – includes all investigations, where no routines or guidelines were found:

> Participant 7 (owner manager, top level, theoretical replication): "[A formulated financing strategy is] not necessary as all relevant financing functions are covered by family members who are also shareholders."

Figure 5.1 portrays the categorised responses.

Figure 5.1: Financing Strategy and respective Cases (Q 2.3)



Source: Own illustration.

Three aspects of the responses have to be highlighted. First of all, the participants in Case 1 and in Case 7 provided divergent answers on the degree of formality of the financing strategy in their company. However, the top level managers (one owner-manager and one employed CEO), indicated a less formal financing strategy compared to their respective middle-management participants.

Second, the theoretical replication cases (Case 4 and Case 7) indicated a lower degree of formality compared to the literal replication cases, except for Case 6. Case 4 and Case 7 both had to cope with deteriorating operational performances measured by a reduced EBITDA-margin and were not able to lower their leverage accordingly to adopt their financing to such operational development, as presented in section 4.3.2. Case 3 on the contrary – also coping with a reduced EBITDA-margin compared to the original mezzanine financing – was able to significantly reduce the indebtedness, expressed by a lowered leverage ratio.

The third investigation is that four out of the five responses that were categorised as ‘lived experience’ came from owner-manager participants. All five respondents are active in a company, where the first shareholder generation is active. On the other hand, only external managers stated that a formal financing strategy or an inclusion in other formulated strategic elements exist. These external managers work in companies with more than one family shareholder tree and are at least in the second shareholder generation.

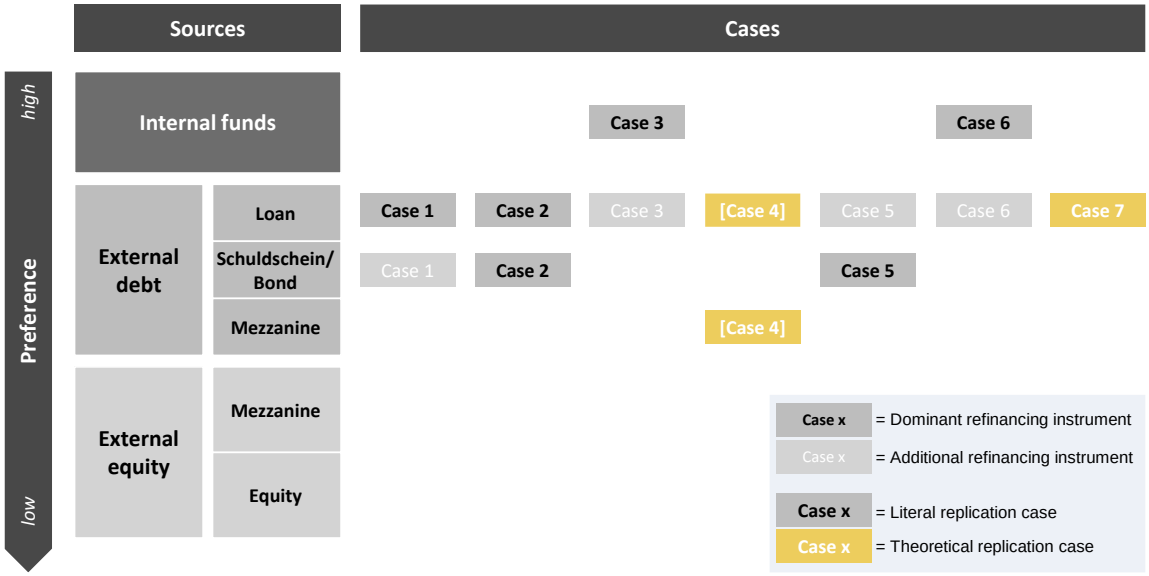
5.2.3 Financing Hierarchy

As presented in Table 5.6, cases that were able to (partly) refinance standard mezzanine via retained earnings used this internal funding source as primary instrument. Therefore, Case 3 and Case 6 added external debt via loans and additional working capital financing instruments as refinancing sources.

Cases that were expected to face no difficulties in refinancing but had only limited internal financing sources used external debt as primary resource. Within the external debt instruments, syndicated loans and Schuldscheindarlehen were the dominant instruments, only Case 5 used a debt capital market instrument in form of a midcap bond.

Figure 5.2 presents the refinancing structure as well as the financing hierarchy per case in a pecking-order preference ranking.

Figure 5.2: Refinancing Structure and Financing Hierarchy



Source: Own illustration.

External equity, provided by either the owner family or new external shareholders, was not identified to be part of the refinancing negotiations in the literal replication cases. However, contractual articles that limit dividend payments have been identified in all syndicated loan agreements (Case 1, Case 2, Case 3 and Case 7) where at least one external manager was involved in the negotiations. These have been designed heterogeneously but typically include a mechanism that allows a certain amount or

quota of annual net income to be paid out to the shareholders. Excess income or cash flows will trigger a mandatory increase of the revenue reserves or an additional prepayment of debt in case of available cash flows. Nevertheless, these clauses can include a minimum dividend payment to the owner families prior to trigger these mandatory payment mechanisms as well. This minimum dividend allowance was designed to secure a projectable income stream to the shareholders and to pay inheritance and income taxes at shareholder level. By comparing the first drafts of the syndicated loan agreement which is provided by the banks with the comments from the companies and their advisors, Case 2 and Case 3 pro-actively introduced a dividend clause that limits payments to the shareholders.

Theoretical replication presented in Case 4 and in Case 7 showed a varying picture. As already described, Case 4 was unable to find a suitable refinancing structure and therefore not able to complete in time. To mitigate the situation, one tranche of the standard mezzanine had to be extended. The second tranche – where an extension was not possible due to the structure of the mezzanine fund – had to be covered by a bridge loan from the bank that introduced this second tranche to the company. The owner family in Case 4 was not able to insert additional equity to mitigate a potential shortfall in the refinancing. As external debt was limited due to the weakening operational performance, external equity provided by third parties was proposed by the financing banks. This proposal was rejected by two owners and led to a critical situation, as email correspondence and document analysis showed that the negotiations were close to be aborted by at least one bank. At the time of the data collection and analysis, no long-term solution was agreed upon, but the described bridge financing was established.

Case 7 on the other hand managed to successfully complete a refinancing by using a syndicated loan. However, in this case the refinancing bank also represented the core bank of the shareholder family which could lead to a potential conflict of interest. Case 7 presented typical limitations that family firms show in terms of generating funds from internal or external equity (Ampenberger et al., 2013; Tappeiner et al., 2012). Interviews and document analysis revealed that the banks started the refinancing negotiations by asking for a partial equity injection from the shareholders or for a limitation on future dividend payments. Both proposals were rejected by the management and the shareholders. The final syndicated loan agreement showed a

clause that included a minimum dividend mechanism that allowed the shareholders to generate a projectable income stream and to pay inheritance and income taxes.

5.2.4 Financing Structure and Corporate Strategy

The revealed gap in detecting the causal direction between corporate strategy and financing strategy (section 2.4) formed the basis for the investigation of an interlinkage between these two. Table 5.8 assembles the feedback from interview participants.

Table 5.8: Financing Strategy and Corporate Strategy (Q 2.4)

	Element of the corporate strategy	**Partly interlinked with corporate strategy**	**Determines corporate strategy**	**No connection**
Rank	**1**	**3**	**n.a.**	**2**
No. of responses (max. 14)	10	1		3
Manager types				
Top level (max. 7)	6	-	-	1
Middle level (max. 7)	4	1	-	2
Owner-manager (max. 5)	4	-	-	1
External manager (max. 9)	6	1	-	2
Shareholder generation			-	
1 (max. 6)	3	-	-	3
2 (max. 4)	3	1	-	-
3 (max. 2)	2	-	-	-
4 (max. 2)	2	-	-	-
Family trees				
1 (max. 4)	2	-	-	2
2 (max. 2)	2	-	-	-
3 (max. 6)	4	1	-	1
>3 (max. 2)	2	-	-	-
Literal/theoretical replication				
Literal cases (max. 10)	9	1	-	-
Theoretical cases (max. 4)	1	-	-	3

Source: Own illustration.

Ten out of the 14 interview participants stated that the financing strategy is an element of their business strategy:

> Participant 1 (owner-manager, top level, literal replication): "Financing strategy follows the overall company strategy (e.g. the new syndicated loan agreement includes a dedicated basket for further joint venture financing within a specific product sector)."

This particular link between strategy and the selected financing instrument will be further investigated to see whether contractual elements adopt the strategic elements, such as financial covenants (section 5.3.5) or certain limitations in the debt contract design (section 5.3.6).

The view on the interlinkage between the strategies and the causal direction is not specific for owner-managers or top level managers, but also shared by external managers and by middle managers:

> Participant 6 (external manager, middle level, literal replication): "[The financing strategy] derives from the overall company strategy."

However, only one out of four participants from theoretical replication cases shared this view on the linkage between business strategy and financing strategy:

> Participant 7 (owner-manager, top level, theoretical replication): "Financing strategy follows the overall vision of the company to maintain its position as a family-owned business with a solid financing structure."

This finding is consistent with the results on the form of the financing strategy (section 5.2.2), where most of the managers from theoretical replication cases located the financing strategy in the 'lived experience' category.

Even though that three participants did not share the view of a connection between these strategic elements, none of the interviewees indicated that the financing strategy would influence or determine the overall business strategy.

5.2.5 Summary

The results from the cases allowed the identification of the existence of a financing strategy, as proposed by the first research proposition (RP1). Table 5.9 provides an overview of the findings from section 5.2.

It became obvious that the term 'financing strategy' does not describe a clear set of elements that it should include. This observation substantiates the assumption of Barton & Gordon (1987, 1988), that capital structure decisions do not solely follow a shareholder value maximisation principle, but include a broader perspective that is based on "the values and goals of the management, in combination with external and internal contextual factors which impact the basic concerns of risk and control" (Barton & Gordon, 1988, p. 623). Even though the existence of a financing strategy as well as elements of such strategy have been identified in the cases explored, a heterogeneous set of frameworks was investigated in section 5.2.1.3 that varies by case. The varying degree of formality and involved elements in the financing strategy of the cases can be linked to different manager types and shareholder set-ups, as presented in section 5.2.2.

The following of a pecking order approach could not be falsified in section 5.2.3 (RP2). The cases investigated revealed that retained earnings were the favoured funding source in the refinancing, if available. Senior debt played the second important role in various forms (e.g. syndicated loans, Schuldschein, bilateral loans). Managers followed a financing hierarchy as proposed by Börner et al. (2010) and Koropp et al. (2014). Based on the described preference for the different funding sources, the financing hierarchy follows the same ranking as indicated by the pecking order theory and Barton & Gordon's (1987, 1988) third proposition.

Besides the support for a pecking order approach of the cases examined, aspects were explored that could be explained by other capital structure theories. Even though six out of the seven cases achieved a refinancing via debt instruments, not all aspects are attributable to a pecking order. Case 4 received temporary debt and mezzanine financing. Banks requested an equity injection by the shareholders and forced the company to think about solutions that could include a minority equity provider. Based on its deteriorating profitability, this case was not able to refinance via retained earnings or external debt. The reduced profitability caused a tax-reducing financing

instrument like a loan being less important. Banks were not willing to offer additional debt facilities because of the increased operational risk that leads to higher cost of insolvency, resulting in higher interest rates or in refusing the request. Therefore, in this case, an optimal capital structure could be anticipated and the current financing did not represent the optimal capital structure for Case 4. This could be explained by tradeoff theory.

The mixed investigation regarding the potential explanation by various capital structure theories is supporting the results by Brüse (2011) and Nohtse (2012) with regard to standard mezzanine refinancing as well as by Ampenberger et al. (2013) with regard to financing decisions in German family firms.

Furthermore, the identified dividend limitations in the financing contracts could be based upon asymmetric information. Management uses the financing to discipline the shareholders. Even though research primarily sees external debt to act as disciplining element for company management (Malmendier & Tate, 2005), the observation relates to a principal-agent-problem between shareholders and management. Consequently, it was observed in cases with external management (Case 2, Case 3 and Case 7), or with one external manager and a complex shareholder structure (Case 1).

Asymmetric information between banks and management could be anticipated in cases, where the management did not perform a request for proposal. Case 6 and Case 7 – both being smaller cases in terms of sales and by number of employees – primarily discussed the refinancing with their core bank. This would follow the analysis of Lichtblau & Utzig (2002), that for smaller firms a relationship lending could be a rational decision to mitigate information asymmetries with financing partners.

Finally, the participant feedback on the research proposition RP3a could not disprove the existence of an interlinkage between corporate strategy and financing strategy. The participants that acknowledged the interlinkage between the two strategies consistently stated that the overall business strategy influences the financing strategy. This result supports Barton & Gordon's (1987) first two propositions of strategic capital structure theory and adds to the research of Ginn et al. (1995).

Feedback allowed to explore a causal direction in the investigated cases. However, the results so far do not allow to investigate whether there are differences based upon

education and former job experience as proposed by Bertrand & Schoar (2003) and by Malmendier et al. (2011).

Table 5.9: Findings on Research Propositions from Section 5.2

Research proposition	Aspect	Finding
RP1: A formulated financing strategy exists and has been applied to in the refinancing process.	Confirmation of existing research	Existence of a financing strategy that is based on the goals and the strategy for the firm (Barton & Gordon, 1987). Financing strategy represents not a clear set of elements, but varies from case by case, based on different manager types and shareholder set-ups (Meier & Esmatyar, 2015). Owner-managers and firms that involve a little number of family trees or shareholders show a less formulated or integrated financing strategy and are less strict in following this strategy (Speckbacher & Posch, 2010).
	Contradictory findings	None
	New/additional findings	Elements of the financing strategy might not primarily been driven by a differentiation between owner-managers and external managers, but relating to a more complex strategic approach
	Limitations	None
RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking order approach.	Confirmation of existing research	Financing decision was based on a pecking order approach (Barton & Gordon, 1987; Börner et al., 2010; Brüse, 2011; Koropp et al., 2014; Nohtse, 2012). Further elements would support tradeoff theory or findings on asymmetric information/agency theory (Ampenberger et al., 2013; Brüse, 2011), but could not be proved in the cross-case analysis.
	Contradictory findings	None
	New/additional findings	None
	Limitations	None
RP3a: The corporate strategy and the characteristics of the management team influence the determination of the refinancing instrument.	Confirmation of existing research	Existence of an interlinkage between corporate strategy and financing strategy (Barton & Gordon, 1987; Ginn et al., 1995).
	Contradictory findings	None
	New/additional findings	Causal direction between business strategy and financing strategy (Ginn et al., 1995): Overall corporate strategy influences the financing strategy.
	Limitations	Not observable, if differences based upon education or former job experience (Bertrand & Schoar, 2003; Malmendier & Tate, 2005).

Source: Own illustration.

5.3 Refinancing Process

Following the discussion on the overall existence of a financing strategy and hierarchy, the subsequent section will investigate the process executed and the decisions taken in the refinancing of the standard mezzanine instrument. Several categories have been identified through the coding process and are forming the main topics for this section.

5.3.1 Approach and Timing

Given the awareness of the companies regarding potential refinancing difficulties as outlined in section 1.3.4 it is interesting to explore, whether the companies pro-actively started their refinancing process to avoid a financing gap. Therefore, the research assessed which party initiated the refinancing process and compares the findings with the process of the original standard mezzanine financing. The results on the initiator of the original mezzanine financing process were homogenous. Twelve out of the 14 interviewees stated that the process was initiated by one or more relationship bank(s), only Case 2 approached directly banks for presenting financing alternatives. During the refinancing process, a varying picture could be observed, assembled in Table 5.10 below.

Table 5.10: Initiator of the Refinancing Process (Q 3.2)

	Relationship bank(s)	Mezzanine lenders	Other (potential) financing partners	Advisors	Pro-actively initiated by the company
Rank	**1**	**3**	**n.a.**	**n.a.**	**1**
No. of responses (max. 14)	6	2	-	-	6
Manager types					
Top level (max. 7)	3	1	-	-	3
Middle level (max. 7)	3	1	-	-	3
Owner-manager (max. 5)	3	2	-	-	-
External manager (max. 9)	3	-	-	-	6
Shareholder generation					
1 (max. 6)	2	2	-	-	2
2 (max. 4)	4	-	-	-	-
3 (max. 2)	-	-	-	-	2
4 (max. 2)	-	-	-	-	2
Family trees					
1 (max. 4)	2	-	-	-	2
2 (max. 2)	-	-	-	-	2
3 (max. 6)	4	2	-	-	-
>3 (max. 2)	-	-	-	-	2
Literal/theoretical replication					
Literal cases (max. 10)	6	-	-	-	4
Theoretical cases (max. 4)	-	2	-	-	2

Source: Own illustration.

The level of activity has significantly changed during the refinancing process. Only three cases were still waiting to be approached by relationship banks and Case 4 was directly approached by the mezzanine lender to mitigate the identified refinancing risk.

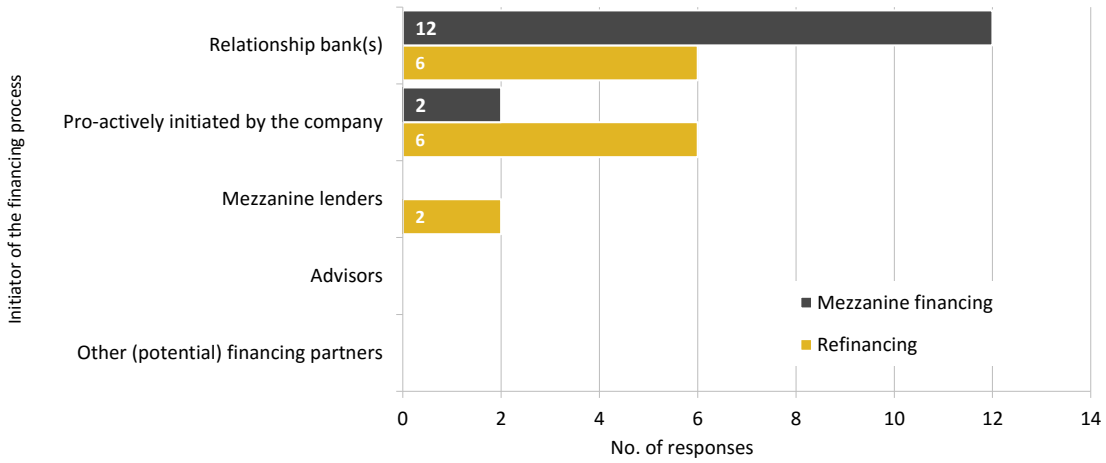
However, only external managers pro-actively initiated the refinancing process. Owner-managers stated that they were either approached by relationship banks or by mezzanine lenders. In addition, the cases that were approached by external parties were in the first or second shareholder generation, whereas the pro-active cases were primarily more matured.

Probably even more interesting, none of the relationship banks approached the theoretical replication cases, which would have been expected as these firms were facing a higher refinancing risk:

> Participant 8 (owner-manager, middle level, theoretical replication): "The existing mezzanine providers [approached the firm] in Spring 2013 after review of financial reporting for year-end 2012 and a potential covenant default by year-end 2013 (based on the presented budget for 2013) given the development in the sector that all clients of the company are acting in (transportation and logistics)."

Banks must have been aware of the operational situation, as they were already existing lenders prior to the refinancing. Figure 5.3 displays this change in initiating the financing process.

Figure 5.3: Initiator of the Process (Q 2.8 and Q 3.2)



Source: Own illustration.

Only one participant in Case 3 stated that the approach was triggered by the performed academic and market-driven research on the refinancing of standard mezzanine:

> Participant 6 (external manager, middle level, literal replication): "Prior contacts via consultants and researcher that were performing studies on the upcoming refinancing led to an early internal start of the refinancing process"

The other responses show that there was a routine in place, that led to this pro-active initiative. Nevertheless, none of the investigated cases showed in the interview content protocols or in the document analysis the design of a pre-defined procedure or process that had to be followed. It remains unclear, whether this routine or process was a singular event, based on the specific refinancing situation, or whether it was an established process that will also be maintained in further financing situations.

From a strategic perspective, the timely start of the financing process is important to ensure a completion prior to the maturity of the instrument to be refinanced. Therefore, the research also investigated how many months prior to the repayment of the standard mezzanine the process started. Table 5.11 visualises the duration indicated by the interview participants.

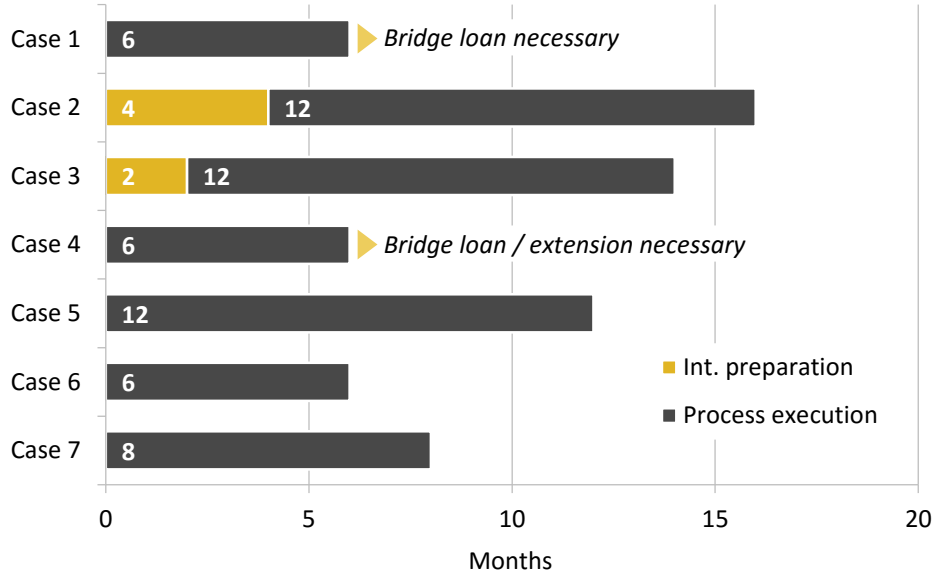
Table 5.11: Duration of the Refinancing Process (Q 3.1 and Q 3.7)

	Process duration											
Months	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
No. of responses (max. 14)						6		2				6
Manager types												
Top level (max. 7)						3		1				3
Middle level (max. 7)						3		1				3
Owner-manager (max. 5)						5						
External manager (max. 9)						1		2				6
Shareholder generation												
1 (max. 6)						4		2				
2 (max. 4)						2						2
3 (max. 2)												2
4 (max. 2)												2
Family trees												
1 (max. 4)						2		2				
2 (max. 2)												2
3 (max. 6)						4						2
>3 (max. 2)												2
Literal/theoretical replication												
Literal cases (max. 10)						4						6
Theoretical cases (max. 4)						2		2				

Source: Own illustration.

Three cases started their refinancing process six months prior to the maturity date of the standard mezzanine, whereas four cases started eight or even 12 months in advance. Case 2 and Case 3 added that prior to the start of the execution, an internal preparation phase was conducted, where process documents were prepared and potential financing partners discussed. However, five cases did not introduce an internal preparation phase, this underpinnes the results from the explored approach in the previous paragraphs, where four cases were adressed by existing financing partners. Figure 5.4 illustrates the duration of the refinancing process.

Figure 5.4: Duration of the Refinancing Process (Q 3.1 and Q 3.7)



Source: Own illustration.

The importance of the timely execution becomes even more obvious by combining the responses regarding the duration (Q 3.1) with the answers on the successful completion of the process within that timeframe (Q 3.7). Case 1 and Case 4 both had to admit that they introduced a bridge financing before the originally envisaged refinancing was completed. Case 4 in fact had to ask for an extension of one mezzanine facility in addition to the bridge loan. This indicates that the timely and successful completion is not primarily depending on the operational performance of the company at the time of the refinancing. It is more a question of duly starting into the process. In addition, only Case 6 was able to complete the refinancing within the six months period. A reason for that could be the financing instrument obtained. As shown in Table 5.6, Case 6 refinanced via bilateral loans combined with retained earnings. Bilateral loans involve little documentation compared to syndicated loan agreements or debt capital market instruments, such as bonds or Schuldscheindarlehen. Furthermore, this instrument involves only one financing party, whereas bank consortiums consisted of three to nine banks for syndicated loans in this research. This leads to the assumption, that a refinancing process must be considered to take longer than six months in execution.

In addition, it will be crucial to explore, if the processes were only started too late or if there were other constraints that led to the increased refinancing risk.

Interestingly, all cases that aimed for a refinancing wihtin a timeframe of six months are led by owner-managers. External managers started the refinancing process eight or 12 months prior to the maturity.

5.3.2 Involved Parties

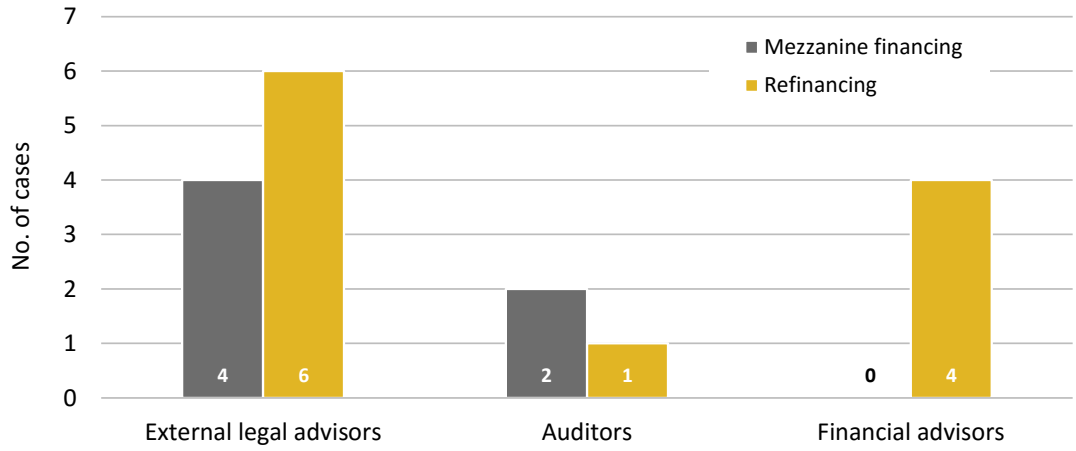
After the investigation of the overall executed process and the initiators, the role of the parties involved will be explored in more detail.

Even though banks have played a prominent role in the recommendation of the standard mezzanine financing, the cases investigated still relied on bank proposals for the refinancing (Q 3.2). This has been also identified in cases, where the company pro-actively initiated the refinancing process. The request for a refinancing proposal in the pro-active cases was primarily sent out to banks that already had a prior client relationship with the company or were at least in a regular dialogue with them.

However, a significant change was explored in terms of advisors involved in the process. During the original mezzanine financing, only legal advisors were mandated in four of the cases at a rather later stage in the process to support in the negotiation of the mezzanine financing agreement (Q 2.9). In addition, two cases consulted the company's auditor with regard to the expected classification of the standard mezzanine instrument to be qualified as economic equity.

During the refinancing process, only Case 7 abstained from involving a legal advisor in the process (Q 3.5). In all other cases, an external legal counsel was introduced in the negotiation phase. Even more interesting is the involvement of financial advisors, who provided independent advise to the company with respect to the presented refinancing proposals and supported in four cases in the negotiations with the financing parties. In none of the original mezzanine financings, such a financing advisor participated. In Case 1, Case 3 and Case 4, additional specialists were included in the process, such as Due Diligence advisors on request of the banks in Case 3 to get an additional view on the current market developments. Figure 5.5 displays this investigation:

Figure 5.5: Involved external Parties (Q 2.9 and Q 3.5)



Source: Own illustration.

This development may reflect that the refinancing risk perception of the companies changed, compared to the original financing process. However, the finding could be based on two different factors:

1. Independent financial advisors have been involved to support the internal capacities as they supply additional deep and broad know-how on financing markets, on recent developments and trends as well as on terms and conditions currently to be achieved in the market compared to a company management, that probably runs a financing process every three to five years,
2. The mutual trust is weakened between the company's management and those banks that proposed the original mezzanine financing and are involved again in the refinancing process because of the perceived difficulties with the standard mezzanine instrument.

To further investigate this trend, it will be interesting to see how the companies assessed the availability of financing instruments and markets.

5.3.3 Availability of Financing Instruments and Markets

The review of the documents made available by the companies showed that there was no process to assess alternative financing instruments. Companies solely relied on the financing instruments presented by the banks or – in the pro-active cases – to ask for a proposal based on a pre-defined structure. This pre-defined structure was explicitly requested by the companies to ensure the ability to compare the proposals made by the

banks. However, this approach avoided the option to allow for a broader and more open assessment of potential alternatives. In addition, the invitation letter sent out by the pro-active companies did not involve a clause that asked for alternative ideas. This option to present alternative structures or ideas would have allowed a back-testing for the company whether other instruments should be considered in this or potential future financing processes. In Case 1, Case 3 and Case 5, some bank proposals included alternative structures but only Case 5 considered the alternative in their written comparison of the proposals that formed the decision basis.

The finding in terms of the instruments continues in the analysis of the management's approach to assess the constitution of relevant financing markets. All cases investigated relied in the first instance on their own appraisal combined with the market overviews provided by the banks in their proposals. However, in none of the cases external market reports, analysis or other material was identified to be used to substantiate the internal appraisal.

Independent financial advisors that could deliver such market overviews have only been involved in the preparation phase of the process in Case 2. In Case 1, Case 3 and in Case 4 the financial advisor was involved either at a later stage where the banks and the financing instrument were already selected (Case 1 and Case 3), or where no alterantive was accessible due to the uncertain company situation (Case 4). Financial advisors have been involved to support internal capacities and to provide market insights (Case 1 and Case 2) as well as in situations where the relationship to the bank partners was humbled (Case 4).

5.3.4 Selection and Decision Mechanisms

Continuing the investigation on elements of the financing strategy in section 5.2.1, determinants need to be further explored that drove the financing decision. This also includes the investigation whether the financing strategy was followed during the specific refinancing event.

5.3.4.1 Selection of the Refinancing Instrument

To explore the determinants for choosing a specific financing instrument, the comparison of the determinants is important that triggered the selection during the

original mezzanine financing with those that formed the basis for the selection at the refinancing. The Table 5.12 visualises the relevant determinants in the mezzanine financing decision.

Table 5.12: Determinants for choosing the Mezzanine Financing (Q 2.7)

	Strengthening economic equity	Attractive conditions	Avoid shareholder dilution	Increase independence/ enter new markets	Mitigate shortfall in bank lending
Rank	**1**	**2**	**3**	**3**	**5**
No. of responses (max. 14)	11	5	4	4	2
Manager types					
Top level (max. 7)	5	2	2	1	1
Middle level (max. 7)	6	3	2	3	1
Owner-manager (max. 5)	3	2	2	1	-
External manager (max. 9)	8	3	2	3	2
Shareholder generation					
1 (max. 6)	5	3	1	-	1
2 (max. 4)	2	1	3	3	1
3 (max. 2)	2	-	-	1	-
4 (max. 2)	2	1	-	-	-
Family trees					
1 (max. 4)	4	1	1	-	1
2 (max. 2)	2	-	-	1	-
3 (max. 6)	3	3	3	3	1
>3 (max. 2)	2	1	-	-	-
Literal/theoretical replication					
Literal cases (max. 10)	8	2	4	4	1
Theoretical cases (max. 4)	3	3	-	-	1

Source: Own illustration.

At the time of the original mezzanine financing, the most important aspect to choose this type of instrument was to ‘strengthen the economic equity’ of the company as this aspect has been identified in eleven answers. Given the fact that most cases had to cope with operational challenges after the implosion of the dotcom-bubble in the years 2002 to 2004 (Brüse, 2011; Nohtse, 2012).

The aspect ‘attractive conditions’ ranked second with five answers identified. This determinant groups answers that characterised the standard mezzanine pricing being

attractive compared to individual mezzanine yields and required returns for minority equity investors. Furthermore, this determinant includes the answers that highlight the tax reducing effect caused by the interest payment for standard mezzanine. Both determinants are connected with tradeoff theory, as the loss-absorption effect of company equity and the positive effect of a strong equity position on the company's rating will reside in lower insolvency cost for a potential financing partner. The second determinant 'attractive conditions' also indicates the following of tradeoff theory as companies are looking for beneficial interest margins and repayment profiles. They show the existence of an optimal capital structure which the company aims to achieve via the mezzanine instrument.

Three further determinants were identified to be important. These determinants grouped the answers that pronounced either the avoidance of the dilution of the current shareholders or that were looking to enter into new markets to increase independence from existing financing partners. Whereas the determinant 'avoid shareholder dilution' is attributed to pecking order, the last two determinants 'mitigate shortfall in bank lending' and 'increase independence' are assigned to different capital structure theories. A shortfall in bank lending would occur in case of an increased probability of default of the firm. This has been particular true in Case 4. This determinant would be attributable again to tradeoff theory. The 'increase independence' determinant would allow for two explanations. The first explanation is again based on tradeoff theory. The independence from banks and therefore the diversification of financing sources reduces the financial risk of a company and, therefore, the probability of default. The second explanation relates to asymmetric information and agency theory. Given the fact, that predominantly literal replication cases indicated this determinant, a reason could be to broaden the network of financing partners that are less demanding regarding the provision of company information. More detail will be provided in the interpretation of the determinants regarding the refinancing.

All determinants have been identified almost equally distributed among responses from top and middle management participants, except for the increased independence/entrance into new markets, which was detected in three answers from middle management participants, but only in one top manager content protocol.

Another finding to be mentioned is that three out of the five responses for the attractive conditions determinant are from theoretical replication cases.

By contrasting these results with the determinants that were predominant for choosing the refinancing instrument, a significant shift can be stated. Table 5.13 illustrates the determinants identified.

Table 5.13: Determinants for choosing the Refinancing Instrument (Q 3.4)

	Increase independence/ enter new markets	**Availability in further refinancing**	**Contractual optimisation**	**Avoid shareholder dilution**	**Attractive conditions**	**Lack of alternative**
Rank	**1**	**2**	**2**	**4**	**5**	**5**
No. of responses (max. 14)	7	6	6	5	3	3
Manager types						
Top level (max. 7)	4	3	4	3	1	1
Middle level (max. 7)	3	3	2	2	2	2
Owner-manager (max. 5)	4	2	2	-	-	2
External manager (max. 9)	3	4	4	5	3	1
Shareholder generation						
1 (max. 6)	3	4	-	1	-	3
2 (max. 4)	1	2	3	2	1	-
3 (max. 2)	2	-	1	-	2	-
4 (max. 2)	1	-	2	2	-	-
Family trees						
1 (max. 4)	2	2	-	1	-	1
2 (max. 2)	2	-	1	-	2	-
3 (max. 6)	2	4	3	2	1	2
>3 (max. 2)	1	-	2	2	-	-
Literal/theoretical replication						
Literal cases (max. 10)	6	2	6	4	3	-
Theoretical cases (max. 4)	1	4	-	1	-	3

Source: Own illustration.

The dominant determinant from the original mezzanine decision ‘strengthening the economic equity’ was not identified in a single response for the refinancing. The literal replication cases were all in a solid financial situation and able to refinance without a request to further bolster the equity ratio to obtain other sources of funding.

The determinant ‘increase independence’ became the most important aspect during the refinancing:

> Participant 1 (owner-manager, top level, literal replication): “Broadening of lender base (expanding core banks and potentially new debt lenders such as pension funds, insurance companies and small banks via debt capital market products).”

Given the fact that six out of the seven responses that indicate ‘increase independence’ are literal replication cases, this could support both explanations from the previous page. Based on the experience that the standard mezzanine instrument disappeared from the market, determinants become more relevant that avoid dependency from a single financing instrument or few partners:

> Participant 10 (external manager, middle level, literal replication): “Request from the management explicitly included a challenge of alternative financing sources in addition to 'classical' bank financing.”

This would support trade-off theory. However, the document analysis showed that in Case 1, Case 2, Case 3 and Case 5, financing instruments had differing regulations regarding information requirements from lenders. In all four cases, ‘increase independence’ was indicated. By contrasting the information requirements included in the respective bank loan agreements with those in the Schuldscheindarlehen or the midcap bond, the debt capital market instruments required less detailed information and on a less frequent basis. As an example, in Case 1 the firm had to provide quarterly financial reports on consolidated and on unconsolidated basis, including several additional information. In the Schuldschein documentation, only consolidated financial reports had to be presented on an annual basis.

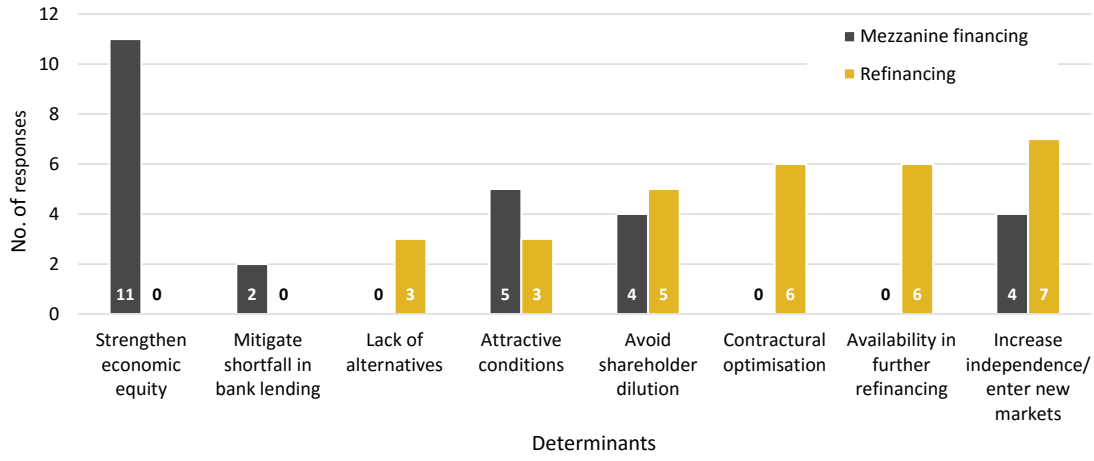
The ‘avoidance of shareholder dilution’ is still under the top four responses. Even though this determinant can be attributed to pecking order, it could be also explained by the aim of family shareholders to maintain independence even though this would lead to a decision that would not follow a strict shareholder value approach (Koropp et al., 2014; Tappeiner et al., 2012). By following this string, the determinants ‘strengthen economic equity’ and ‘increase independence’ – both assigned to different capital structure theories – could be also grouped with ‘avoidance of shareholder

dilution' as all determinants are aiming in conclusion for a financing instrument that does not impact family shareholdings. Interestingly, this determinant was identified in external manager responses only. The data analysis allowed not for a clear investigation, whether the determinant was not named by owner-managers because the avoidance of shareholder dilution was so clear that it did not needed to be mentioned or whether it was not of importance to them.

In the theoretical replication Cases 4 and 7 answers were identified that were grouped either in the categories 'availability in a further refinancing' or 'lack of alternatives'. This is of interest, as these two cases should have performed a particularly decent process in obtaining alternative solutions. But in addition to the rather short duration of their process (see section 5.3.1) these cases did not pro-actively identify or try to mitigate the refinancing risk caused by a lack of alternatives.

The new category 'optimisation of contractual elements' grouped themes, that allowed the companies more flexibility, avoided the provision of collateral for the new financing or the inclusion of financial covenants in the new financing contracts. Figure 5.6 demonstrates this development by comparing the relevant determinants in the two decision situations:

Figure 5.6: Comparison of the Determinants (Q 2.7 and Q 3.4)



Source: Own illustration.

Again, all determinants can be attributed to capital structure theories. The determinants that would indicate the following of tradeoff theory ('strengthen economic equity' and

attractive conditions') played a reduced role in the decision of the refinancing instrument.

As already indicated in section 2.2.2.4, market timing theory was not acknowledged by research to explain capital structure decisions in SME and midcap companies. However, market timing theory presented the underlying assumption that management performs financing decisions on an individual basis and on financing instruments available at that decision rather than on a defined capital structure. This assumption could be supported by the identified determinants 'lack of alternatives' and 'attractive conditions' However, in none of the cases investigated and neither in the original mezzanine financing decision, nor in the refinancing decision, these two determinants were the dominant determinants. In particular, the determinants 'strengthen the economic equity' and 'avoid shareholder dilution' neglect the following of a market timing approach as management did not focus on the price of the financing alternative.

Based on the results, the cases investigated seem not to follow a particular capital structure theory in their financing strategy except for the already investigated preference ranking under pecking order. Cases rather seem to accentuate determinants based on their current situation as well as on available funding sources.

5.3.4.2 Internal Decision Process

In addition to the timing of the refinancing, the internal decision process is of interest. By analysing the bank proposals for the refinancing, none of the documents included a timeline or process description that illustrated potential internal approval processes or milestones that had to be taken into account, except for the date of the envisaged signing of the financing agreements. Only in Case 3, a detailed update of the process timeline was developed by the middle management of the company and the bank added the internal approval processes to the schedule such as submission dates for the supervisory board. In all other cases later updates provided either by banks or by financial advisors involved, still missed that connection between external financing milestones and internal approval aspects. This missing processual element in the financing decision routine led to processes, where in some cases the middle management informed the top management only on a sporadic basis or where the supervisory board was informed by the management upon request only.

These absent interlinkages resulted in significant delays in Case 1 and Case 7. The document and protocol analysis in Case 1 revealed that the decision on the preferred financing solution took eight weeks after the submission of the evaluation of the bank proposals to the supervisory board of the firm. The reasoning behind this delay is that the regular supervisory board meeting was already scheduled for the calendar year and the company management and the advisors missed to inform the supervisory board on the required approval in advance. A second situation for the missing interlinkage and resulting delays could be observed during the signing of the financing contracts. Banks and advisors did not highlight the requirement that the managing directors of local subsidiaries of the company had to sign the financing agreements as well as these subsidiaries had to be included as guarantors. Two of the local managing directors were not accessible at the signing date because of annual leave. Therefore, the signing of the agreements had to be postponed which led to increased financing costs for the company.

These processual gaps that caused delays in the process were observed in further cases. Case 2 and Case 5 showed a missing coordination between banks, management and supervisory board. In Case 2, a scheduled supervisory board meeting had to be cancelled because the date was not communicated to the advisors and therefore the proposals from the banks were not received yet. In Case 7, the missing communication of the planned signing date of the syndicated loan agreement led to a similar situation as in Case 1, as not all persons relevant for the signing were informed and did not attend the meeting. Again, the signing had to be postponed. Interestingly, the other theoretical replication case presented a different picture. Decisions in Case 4 were taken immediately via circular resolution after being presented by the banks or legal advisors.

The involvement of external advisors did not show a significant improvement of this processual gap. Financial advisors and lawyers carefully supervised the external process and milestones, but left all internal processes with the company's management. In fact, the optimistic presentation of the upcoming refinancing process by the advisor in Case 1 and Case 4 can be seen as one element that led to a shortfall in timely completing the refinancing. The advisor – or the banks as well – should have

highlighted this upcoming shortfall in advance to avoid an increased refinancing risk for the company.

All cases that faced delays in their financing process (Case 1, Case 2, Case 5 and Case 7) involve external managers on both levels, except for Case 1, where an external manager is active at middle level. There is no clear explanation for the phenomenon, as none of the basic descriptors allows for a clear attribution and the reasons for the delay vary by case.

A second investigation relates to the depth of information presented to the supervisory board and the shareholders. A variety of these information packs and approval submissions were explored. In some cases, only summaries aggregated on three to five slides (Case 5, Case 6 und Case 7) were distributed. These included information on instrument, tranches, maturity profile and pricing as well as on financing partners and an outlook on the upcoming next steps. An education effect could be attributed, as only one of the six managers had a prior job experience. In other cases, management presented formal submissions that consisted of more than 20 pages, providing a decent analysis and comparison of the proposals received.

5.3.5 Financial indicators

Feedback from interview participants revealed that corporate strategy influences financing strategy (section 5.2.4) and research proposition RP3b stated, that indicators will influence the selection of the refinancing instrument. The results in section 5.2.1.4 showed that key performance and financial ratios are an element of the financing strategy, even though it was not seen as one of the most important elements. Therefore this section explores from document analysis (a) if the financial ratios have been a decision parameter of the management and/or (b) if they were a limitating factor from a bank perspective. Table 5.14 displays the financial covenants used in the existing financing contracts of the cases after the performed (or envisaged) refinancing:

Table 5.14: Refinancing Instrument and Financial Covenants

Case	Primary refinancing instrument(s)	Financial covenants in the existing/new financing contracts
1	Syndicated loan	Leverage (Net financial debt / adj. EBITDA)
2	Syndicated loan Schuldschein	Leverage (Net financial debt / adj. EBITDA) Interest rate coverage Minimum economic equity ratio
3	Retained earnings	Leverage (Net financial debt / adj. EBITDA) Minimum equity ratio
4	Extension of standard mezzanine Bridge loan	Leverage (Net financial debt / adj. EBITDA) Minimum economic equity ratio
5	midcap bond	Leverage (Net financial debt / adj. EBITDA)
6	Retained earnings Bilateral loans	Leverage (various definitions) Minimum economic equity ratio
7	Syndicated loan	Leverage (Net financial debt / adj. EBITDA)

Source: Own illustration.

A leverage ratio – defined accordingly with section 1.3.4 – was identified in every case to be included. A minimum economic equity ratio was furthermore included in four out of the seven cases. These two important ratios for financing contracts could not be identified in any interview but only in the supporting financing documents from the cases. No differences were observable between owner-manager and external manager cases. In addition, literal and theoretical cases did not differ in terms of financial ratios found in the documents.

However, these two ratios are named by banks and companies to be the most common financial ratio in financing contracts (Roland Berger Strategy Consultants, 2009, 2014). In particular, the leverage ratio was not only used as a limitation that could trigger an event of default in case the company would exceed the agreed level. This event of default could lead to a mandatory repayment of the financing. It was also identified in every case to be included in the documentation as a measure to calculate the interest margin of the respective instrument. This inclusion of a leverage to calculate a margin grid qualifies the instrument as performance sensitive debt corresponding to the investigation by Adam et al. in 2014. Case 5 and Case 6 must be differentiated from the other cases, since these used a midcap bond or bilateral loans respectively as primary external source of refinancing. However, even in these two cases, a leverage ratio was included as maximum level of indebtedness for the

company which would trigger a mandatory prepayment event in case of an exceedance.

Coming back to performance sensitive debt, it appears that the included margin grid might not be a result of management optimism or management behaviour, as indicated by Adam et al. (2014), but depending on the chosen refinancing instrument. Margin grids were included in every syndicated loan agreement as well as in the syndicated bridge loan in Case 4. However, neither in any of the Schuldschein agreements nor in a reverse factoring nor in a bilateral loan agreement, a performance sensitive component was identified. Leverage steps within the margin grid and step-ups per margin grid were also quite homogeneous.

By contrasting financial ratios used in the overall corporate strategy with ratios that were found in the existing financing strategy – or respective elements – it became obvious that in none of the cases financing ratios were included in the general corporate strategy. The general corporate strategy only includes performance ratios, whereas the three investigated financing strategies included ratios on financing, such as a minimum equity ratio to maintain, or liquidity ratios. Table 5.15 summarises the ratios identified.

Table 5.15: Key Financial Ratios and Financial Covenants

Case	Key performance ratios in the corporate strategy	Key financial ratios in the financing strategy (or guidelines)	Financial covenants in the existing/new financing contracts
1	*Profitability:* Minimum consolidated EBITDA-Margin of 10.0%	*Financing:* Minimum equity ratio	Leverage (Net financial debt / adj. EBITDA)
2	*Profitability:* Minimum ROCE of 18.0% *Profitability:* Return on Sales (EAT / Sales): > 4.0% *Liquidity:* Free cash flow / Sales: 3.5% to 4.0% *Liquidity:* Minimum cash position of € 150 Mio. plus minimum undrawn revolving credit facilities of € 400 Mio.	*Financing:* Minimum equity ratio *Liquidity:* Free cash flow / Sales: 3.5% to 4.0% *Liquidity:* Minimum cash position of € 150 Mio. plus minimum undrawn revolving credit facilities of € 400 Mio.	Leverage (Net financial debt / adj. EBITDA) Interest rate coverage Minimum economic equity ratio
3	*Profitability:* consolidated ROCE of 9.0% *Profitability:* Minimum EBIT level of € 70 Mio.	*Financing:* Minimum equity ratio of 30.0% *Financing:* Leverage (Net debt / EBITDA) < 3.5x	Leverage (Net financial debt / adj. EBITDA) Minimum equity ratio
4	*Profitability:* Minimum EBIT-Margin	None	Leverage (Net financial debt / adj. EBITDA) Minimum economic equity ratio
5	*Profitability:* Minimum EBITDA-Margin	None	Leverage (Net financial debt / adj. EBITDA)
6	Not commented	Not commented	Leverage (various definitions) Minimum economic equity ratio
7	*Profitability:* Minimum EBITDA-Margin *Profitability:* Minimum EAT-Margin	None	Leverage (Net financial debt / adj. EBITDA)

Source: Own illustration.

Comparing the financial ratios from the financing strategy with the financial ratios used as covenants to be included in the financing contracts, only Case 2 and Case 3 show a partial linkage between the two elements. In all other cases, financial ratios were used in the financing agreements as covenants without any feedback towards the financing strategy. This further indicates that these ratios are introduced by the financing partners rather than actively being used by the company to establish a direct connection between financing strategy and financing contracts. However, it must be recognised that such financial covenant would lead to a mandatory repayment event and represents an obligation for the company. In addition, the profitability ratios are indirectly connected to the financial ratios and the financial covenants. In Case 1, a reduced EBITDA-margin caused by a decreasing profitability would directly lead to

an increased leverage in the financing contract. Therefore, this is a limitation factor for the management as it is dependent from external partners in case the financial ratios are not met.

By exploring the determinants that drove the refinancing decision, an interaction with financial indicators was explored. Especially the leverage ratio was investigated to be included as financial covenant in every case and independent from the chosen refinancing instrument. Financial covenants serve as an instrument to mitigate information asymmetries, as these are reported on a regular basis to the lenders and many financing contracts include mandatory prepayments (see section 5.3.5) in case these financial covenants exceed certain levels. They allow banks to get information on deteriorating economic conditions earlier, as firms are motivated to enter into discussion with the banks prior to such incident.

5.3.6 Debt Contract Design

As presented in section 5.3.5, the proposition of Adam et al. (2014) that optimistic or overconfident managers are more likely to enter into a PSD agreement and to accept more aggressive margin grids could not be substantiated by this research. However, Adam et al. summarise in their conclusion that "managerial optimism […] does not only affect the choice of the general leverage ratio but it also has a direct impact on the chosen debt instrument and its riskiness" (2014, p.20). This means that they see two additional levels to be explored,

(a) the determination of the instrument itself, and
(b) the design of relevant conditions and the risk potential associated with such design.

With regard to the determination of the refinancing instrument, this research was not able to exclude such a management behaviour even though the management did not pro-actively decide which instrument to choose in the cases analysed. Furthermore, the results in section 5.3.4.1 showed that the management relied on the proposals made by potential financing partners and on the feedback from the financing advisors if involved in the process.

By focussing on the design of the debt contracts, this research examined which paragraphs were of particular importance for the management and the shareholders of

the respective cases. The document analysis contrasted the first drafts of the financing agreements with the executed versions. In addition, the research explored further information and documents that were made available, such as internal memos and email correspondence. These information were supplied in the Cases 1 to 5. The following conditions – summarised in Table 5.16 – were assumed to be the most intensively negotiated in the cases researched.

Table 5.16: Crucial Debt Contract Design Negotiation Aspects

Case	Dividend payouts	Information requirements and reporting	Covenant structure and definitions	Transferability of the financing instrument
1	• Minimum dividend payment to allow for tax payments at personal level of shareholders • Maximum dividend payment of 75% of annual net income	• Allowance to submit consolidated financial reports within 210 days after end of fiscal year due to implementation of new reporting system; banks requested 180 days • Discussion of breadth of information provided on consolidated level as well as on level of individual borrower; templates to be included in the financing contracts	• Limitation to one financial covenant (Leverage); banks requested three covenants • Significant adjustments to the definitions of net financial debt and to consolidated EBITDA because of unavailability of some consolidated figures on a quarterly basis • More flexibility in the threshold to license group trademarks to external parties	• Transferability for banks restricted (no sale of debt tranches to hedge funds, CLOs, pension funds, other banks) • Strict limitation to information provided to European central Bank for refinancing purposes
2	• Maximum dividend payment of 50% of annual net income or personal tax requirements plus 25% of net income	-	• Adjustments to the financial covenants due to individual circumstances (EU antitrust investigation) • More flexibility in the thresholds for sales of company assets and intergroup loans	-
3	-	-	• Adjustments to the financial covenants because of changes in the reporting standards • Hedging requirements for variable interest tranches to be lowered	• Transferability for banks restricted (no sale of debt tranches to hedge funds, CLOs) without prior written consent of the company

Source: Own illustration.

Table 5.16 (continued)

Case	Dividend payouts	Information requirements and reporting	Covenant structure and definitions	Transferability of the financing instrument
4	• Maximum dividend payment to the shareholders, based on excess cash flow definition	• Extent of financial information to be provided; negotiation of standard tables and schedules in accordance with existing tools and platforms used	• Adjustment of financial covenants to meet restructuring requirements • More flexibility in the thresholds for asset sales and group reorganisations	• Transferability for banks restricted (no sale of debt tranches to hedge funds, CLOs) without prior written consent of the company
5	-	• Reduced reporting requirements on quarterly and annual basis based on reporting standards and tools currently used in the company	• Reduction to one financial covenant (Leverage); banks requested two covenants • Increased thresholds for asset sales, group reorganisations and external licensing	-

Source: Own illustration.

The key aspect identified is that the company management tried to mitigate risk towards two directions. The negotiations showed a trend to enhance operational flexibility for the firms and its management compared to the first draft provided by the financing partners. In some cases, the discussions were identified to be intense and negotiations were held because of differences. These differences included for example discussions whether asset sales would be prohibited with certain exceptions or if they would be generally permitted but restricted up to a certain amount or level.

The second interesting direction for a risk mitigation aspect was the aim of the management in several cases to use restrictions in the financing documents to manage shareholder expectations or to discipline shareholder influence. This can be observed especially in the dividend payout restrictions, where the company management acted accordingly to existing dividend policy or previous routines. However, the management accepted limitations on dividend payments for receiving more favourable thresholds in the covenant sections or for obtaining a limitation that the banks are not allowed to sell the loans or notes to third parties (“transferability”).

Coming back on the first research proposition RP1, differences in the degree of formality of the financing strategy can be observed between owner-managers and external managers as shown in Table 5.7 and Figure 5.1. Nevertheless, this finding

supports the proposition of Speckbacher & Posch (2010) that formal control systems are seen to be less important for owner-managers.

These investigations presented in the prior paragraphs allow to discuss information asymmetries in principal agent situations, as introduced in section 5.3.5. The dilemma in the relationship between the principal (bank) and the agent (company management) seems to be mitigated via reporting requirements and covenant inclusion in the financing agreements. However, the situation in the second pair of relationships between the principal now being the shareholder(s) and the management acting as agent again appear to be problematic. The behaviour of the management to negotiate the financing contract to direct the shareholders of the companies was explored in all cases that are either owned by multiple family trees or an increasing range of shareholders, or where no owner-manager is involved in the management. In addition, this phenomenon was neither explored in Case 3 nor in Case 5, where a formulated financing strategy was identified.

All syndicated loan agreements as well as the Schuldscheindarlehen and the midcap bond documentations included limitations on future investments, maximum indebtedness and asset disposals. The financing contracts therefore limit managers in operational flexibility and cash flow distribution, as proposed by Malmendier & Tate in 2005 (see section 2.3.1.1). But existing debt served in the cases investigated not only as an instrument to limit overconfident managers. The financing instrument was used by management to limit shareholder influence on company cash flows and on operational decisions. They offered a stricter monitoring on dividends to receive limitations from banks and investors on transferability of their share in the loan/note and/or an increased headroom for disposals.

Only minimal differences were observable between owner-managers and external managers as the owner-managers were more focussing on the avoidance of transferability in Case 1 and Case 4. It has to be acknowledged that only five out of the seven cases provided more detailed information on the contract negotiations. Nevertheless, the results by Adam et al. (2014) on optimistic managers to accept more aggressive terms and conditions in debt contracts could not be substantiated by this study.

5.3.7 Summary

Companies have reacted since the original mezzanine financing decision. Three cases pro-actively approached potential refinancing partners, but remained within a banking environment and did not explore further funding sources as proposed by Börner et al. (2010). Three cases aimed for a refinancing within a timeframe of six months, with two companies in need for a bridge solution as they failed to achieve the refinancing in that period. All cases that aimed for this refinancing period are led by owner-managers. This finding supports the assumption, that owner-managers are overly optimistic in managing their process (Speckbacher & Posch, 2010).

The results regarding the cases exploring financing alternatives available to the firm and current market conditions in sections 5.3.3 and 5.3.4 reemphasise the analysis by Börner et al. (2010) that midcap companies are still lacking to assess suitable alternatives to reduce dependency from bank lending. Even in a situation of deteriorating financing markets, management teams showed only limited ability to initiate measures to avoid a refinancing risk as assumed in research proposition RP4a. Management teams did not recognise an external rating to serve as a signalling instrument to enhance transparency towards potential financing parties and to expand the financing alternatives as proposed by Börner et al. (2010). Even the theoretical replication cases (Case 4 and Case 7) did not use an external rating to mitigate their difficulties in the refinancing. However, an external rating was included in Case 5, where the chosen financing instrument requested such an element. Nevertheless, the pro-active cases presented an information package to the approached banks that allow for a credit assessment.

The cases that pro-actively started the refinancing process remained within their banking universe. Only external managers performed a pro-active approach. This result again leads to the question, whether this can be seen as an indicator for owner-managers being overly optimistic in assuming that banks will provide suitable solutions and approach the firm early enough.

Furthermore, the involvement of financial advisors researched in section 5.3.2 seemed not to significantly enhance a broader pre-investigation by the company or an in-depth assessment of financing market alternatives prior to executing the refinancing process. This was presumed in research proposition RP4a. The results on the importance of an

external financial advisor are mixed. External financing advisors have been involved in some cases to support internal capacities and to provide market insights. In Case 4, the cause for mandating a financial advisor was to moderate the negotiations with the banks as the relationship was humbled and mutual trust was weakened. In Case 2, the financial advisor was introduced in a later stage to support negotiations with the lenders. However, refinancing instrument and banks were already selected by the company.

One of the investigated aspects that led to a delay in a financing process was a lack of communication between management and shareholders, represented through the supervisory board. In particular, a missing coordination between the external financing process and the internal decision and approval processes was identified that led to significant delays in executing the refinancing. In contrast to the cases that envisaged an overly optimistic timeframe and a missing pro-active approach, the communication delay was observed in cases where external manager were involved only.

The findings on the determinants that drove the decision for the financing instrument showed a shift compared to the original mezzanine financing. Determinants that were dominant in the standard mezzanine financing seemed not to be relevant in the refinancing anymore. This might be seen as an indicator that even though a financing strategy and a financing hierarchy exist, the detailed determinants change. Therefore, different capital structure theories that are attributed to several determinants could provide stronger or weaker explanations per decision or manager type (Ampenberger et al., 2013).

Present research explored that manager types in both manager groups showed a shift in the determinants relevant for the refinancing compared to the original mezzanine financing which supports an experience effect. This result again supports Barton & Gordon (1987) and their proposition that a management's perception towards risk and their strategy will influence the capital structure decisions of the company.

By exploring the determinants, an interaction with financial indicators in the cases was investigated. Especially the leverage ratio was investigated to be included as financial covenant in every case and independent from the chosen refinancing instrument. By comparing the financial covenants included in the financing agreements with the financial ratios in the financing strategy or guidelines of the cases, a missing link was

identified. Only Case 3 included a leverage in the financing ratios that should serve as strategic financial indicator to manage the capital structure. However, not a single case included a financial ratio in the overall company strategy which is comprehensible in cases, where an additional financing strategy or financing guideline exist.

Findings on financial indicators lead to the conclusion that these have been primarily introduced by external financing partners to serve (a) as a factor to limit raising further debt beyond acceptable levels to avoid an increased risk of default. The second conclusion is that (b) the financial ratios serve as a basis to calculate a risk-adjusted interest margin for the financing instrument. Both findings would support tradeoff theory. The margin grid leads to a risk-adjusted pricing of the financing instrument which motivates the management to increase profitability and therefore reduce financing cost.

With regard to performance sensitive debt, the effect of overconfident managers to be more likely to issue PSD because they persistently overestimate future cash flows as proposed by Adam et al. (2014) could not be supported by the findings from the cases. The primarily reason for accepting pricing grids in the financing as well as the levels of such pricing grid was based on the chosen financing instrument itself as every syndicated loan included pricing grids. With regard to the determination of the refinancing instrument, this research was not able to exclude such a management behaviour even though the management did not pro-actively decide which instrument to choose in the cases analysed. Table 5.17 displays the additional findings from the current section, these have been highlighted.

Table 5.17: Findings on Research Propositions from Section 5.3

Research proposition	Aspect	Finding
RP1: A formulated financing strategy exists and has been applied to in the refinancing process.	Confirmation of existing research	Existence of a financing strategy that is based on the goals and the strategy for the firm (Barton & Gordon, 1987). Financing strategy represents not a clear set of elements, but varies from case by case, based on different manager types and shareholder set-ups (Meier & Esmatyar, 2015). Owner-managers and firms that involve a little number of family trees or shareholders show a less formulated or integrated financing strategy and are less strict in following this strategy (Speckbacher & Posch, 2010). **Most cases investigated lack the exploration of financing alternatives (Börner et al., 2010).**
	Contradictory findings	None
	New/additional findings	Elements of the financing strategy might not primarily been driven by a differentiation between owner-managers and external managers, but relating to a more complex strategic approach
	Limitations	None
RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking order approach.	Confirmation of existing research	Financing decision was based on a pecking order approach (Barton & Gordon, 1987; Börner et al., 2010; Brüse, 2011; Koropp et al., 2014; Nohtse, 2012). Further elements would support tradeoff theory or findings on asymmetric information/agency theory (Ampenberger et al., 2013; Brüse, 2011), but could not be proved in the cross-case analysis.
	Contradictory findings	None
	New/additional findings	None
	Limitations	None

Source: Own illustration.

Table 5.17 (continued)

Research proposition	Aspect	Finding
RP3a: The corporate strategy and the characteristics of the management team influence the determination of the refinancing instrument.	Confirmation of existing research	Existence of an interlinkage between corporate strategy and financing strategy (Barton & Gordon, 1987; Ginn et al., 1995). **Principal-agent problems identified between shareholders and managers. Managers use the financing agreements as an instrument to limit shareholder influence on the company.**
	Contradictory findings	**No support that owner-managers prefer performance-sensitive debt that includes variable interest margins linked with company leverage (Adam et al., 2014).**
	New/additional findings	**Inclusion of performance-sensitive elements is solely based on the chosen financing instrument.** Causal direction between business strategy and financing strategy (Ginn et al., 1995): Overall corporate strategy influences the financing strategy.
	Limitations	Not observable, if differences based upon education or former job experience (Bertrand & Schoar, 2003; Malmendier & Tate, 2005).
RP3b: Relevant determinants and indicators influence the selection of the refinancing instrument.	Confirmation of existing research	**Financial ratios affect the availability of financing instruments to the company (Barton & Gordon, 1988; Jordan et al., 1998).**
	Contradictory findings	**Missing interlinkage between ratios in the overall company strategy as performance indicators, the financial ratios in the financing strategy and financial ratios included in the financing agreements.**
	New/additional findings	**The avoidance of a future refinancing risk as well as an increased independence determined the selection, not the cost of the alternative.** **Accentuation of determinants by company management show no clear link towards a single capital structure theory.**
	Limitations	**Current interest rate developments might humble the findings on the cost of financing being less relevant and should be explored in different financing conditions, especially in financing markets where margin spread are broader across rating categories.**

Source: Own illustration.

Table 5.17 (continued)

Research proposition	Aspect	Finding
RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing.	Confirmation of existing research	None
	Contradictory findings	**Only in selected cases, measures were detected. These include an internal preparation phase and the involvement of financial advisors.** **External rating or further transparency-enhancing elements have not been identified.**
	New/additional findings	**Only external managers initiated a pro-active approach**
	Limitations	None
RP4b: The management team executed a timely refinancing process to avoid an increased refinancing risk.	Confirmation of existing research	None
	Contradictory findings	**Brüse's (2011) investigation that the companies already started a refinancing process or are thinking about the refinancing was not identified throughout all cases. Three cases (primarily owner-managers) started the refinancing process too short in advance to secure a timely refinancing.** **Management not to assume an internal preparation phase.** **Primarily fact for unexpected process delays not a deteriorating market environment, but missing coordination between internal and external processes, especially timely involvement of the supervisory board by the management.** **Internal delays (primarily in cases with external managers) endangered the timely completion of the process.**
	New/additional findings	None
	Limitations	None

Source: Own illustration.

5.4 Differences between Owner-Managers and External Managers

As discussed in the previous sections, several situations indicated different approaches from owner-managers and external managers. However, the study of the refinancing process showed that not only optimistic owner-managers might be responsible for delays in the process. The research was not able to explore differences in the determinants that lead to the selection of a financing instrument. Based on the

investigations so far, the following paragraphs will explore potential differences between owner-managers and external managers within (a) the influence on the financing strategy and (b) the impact on the timely execution of the financing process.

5.4.1 Influence on the Financing Strategy

This research does not only focus on the management at the top executive level, but also on the operational management level, which is typically responsible for the execution of the refinancing process and the negotiations with the financing partners. The flat hierarchy and consensus between top managers and employees, as proposed by Reinemann (2011) could be identified in most cases studied with regard to the view on the financing strategy. Table 5.18 links the management and shareholder structure with the financing strategy identified.

Table 5.18: Management and Shareholder Structure and Financing Strategy

Case	Form of the financing strategy	Interview partners		Shareholder generation	Sales range (€)
1	Partly formulated/ Communicated and agreed	Top: Middle:	Owner-manager External manager	2-3	250-500m
2	Communicated and agreed	Top: Middle:	External manager External manager	4	250-500m
3	Formulated	Top: Middle:	External manager External manager	2	50-150m
4	"Lived experience"	Top: Middle:	Owner-manager Owner-manager	1-2	50-150m
5	Formulated	Top: Middle:	External manager External manager	3	250-500m
6	"Lived experience"	Top: Middle:	Owner-manager Owner-manager	1	<50m
7	Communicated and agreed/ "Lived experience"	Top: Middle:	External manager External manager	1-2	50-150m

Source: Own illustration.

The two cases that presented an explicitly formulated financing strategy were managed by external managers on top as well as on middle management level. In addition, with Case 1 and Case 2 being identified as the cases where the financing strategy was either partly formulated, included in other strategic elements or at least a communicated and agreed element only one owner-manager at the top level was recognised.

Theoretical replication cases were detected in the less formulated categories in terms of financing strategy (see section 5.2.2). This less formulated strategy could be allocated in the owner-manager area (Case 4 and Case 6). On the other hand, Case 7 that is also identified to follow a 'lived experience' approach towards financing is managed by external managers.

A second explanation relates to shareholder generation and company size, both determinants that were identified in capital structure theories. The firms that indicated a 'lived experience' are all found in the smaller two categories in terms of company size. However, Case 3 presents a 'formulated strategy' by ranging in the same category. Looking at the shareholder generation in the cases investigated reveals that a distinction exists. Starting with the second shareholder generation, a more formulated approach is followed and at least guidelines or routines are established. Therefore, younger companies explored (not to be misunderstood to be start-ups) are lacking a formulated approach. They are predominantly smaller in terms of sales and found to be led by owner-managers.

5.4.2 Impact on the Financing and Decision Process

A different picture can be found by matching the management structure with the duration of the refinancing process discussed in section 5.3.1 and allowed for a more detailed exploration of behavioural aspects.

5.4.2.1 Overconfidence

The three cases that aimed to execute a refinancing within a period of six months (Case 1, Case 4 and Case 6) were all led by owner-managers with the already presented result that two of these three cases had to use an intermediate step to avoid an increased risk of insolvency.

Except for the middle management participant in Case 1, none of the responsible managers had a prior external job position where relevant experience from financing processes or decisions in other firms could be gained.

Financial advisors that were mandated in the first four cases were not able to mitigate this process risk component in Case 1 and Case 4. These mitigation factors could have been for example (a) to highlight the importance of an internal preparation prior to

start the refinancing process or (b) to explain typical pitfalls within a financing process. On the other hand, Case 2 and Case 3 who explicitly added an internal preparation phase in advance are managed by external managers on top and on middle level.

Therefore, an overconfidence bias could be assumed in the cases, where owner-managers are responsible at top management level. Even an external middle manager in Case 1 was not able to identify or influence that bias. Cases that were managed by external managers assumed a more realistic duration of the refinancing process. But even in these cases, not every company included an appropriate internal preparation phase for such refinancing.

A different situation was identified when studying the cases that had to cope with delays caused by internal issues in section 5.3.4.2. Table 5.19 links the delays identified with manager type and form of the financing strategy.

Table 5.19: Financing Strategy, Manager Type and internal Delays

Case	Form of the financing strategy	Interview partners		Delay(s)
1	Partly formulated/ Communicated and agreed	Top: Middle:	Owner-manager External manager	• Missed to setup supervisory board meeting to approve financing proposals • Missed to align managers in subsidiaries to inform about the signing process
2	Communicated and agreed	Top: Middle:	External manager External manager	• Managers and advisors missed to coordinate internal board meetings and milestone for the external process
5	Formulated	Top: Middle:	External manager External manager	• Managers missed to coordinate internal board meetings and milestone for the external process
7	Communicated and agreed/ "Lived experience"	Top: Middle:	External manager External manager	• Missed to align managers in subsidiaries to inform about the signing process

Source: Own illustration.

Delays in the process were only found in cases, where external managers were involved. Three out of the four cases with internal process delays were led by external managers. Some of the managers had prior external job experience. A potential explanation could be that owner-managers have a more direct link to the shareholders (Ampenberger et al., 2013). An overconfidence effect is not directly observable, but could only be indicated in external manager cases.

No other variables served as a potential explanation for this observation, as these delays were found in literal as well as in theoretical replication cases. They were also detected in cases across shareholder generations and company size.

5.4.2.2 Representativeness

The second heuristic, representativeness, is explored in the financing process

(a) via mechanisms that the management team executed in order to obtain an overview on the financing markets prior to executing the own refinancing and
(b) by assessing options to limit information asymmetries with the potential external financing partners by providing an external rating or other instruments.

Enhancing transparency towards external financing partners via instruments like an external rating has already been identified to be primarily driven by the preferred financing instrument and only found in Case 5. No external rating initiative was investigated in cases, where syndicated loans or bilateral loans were used as primary refinancing instrument. An external quality assessment for Schuldscheindarlehen can be achieved by the application at the European Central Bank. These loans can be used by the investor to be pledged for refinancing purposes. Therefore, the proposal by Börner et al., (2010) that the management should use an external rating pro-actively is still missed in this refinancing situation.

An assessment of the conditions in the financing markets by inviting several financing partners to present solutions or by introducing financial advisors was performed by Case 1 to Case 4 and Case 6. However, only in Case 4 the financial advisor introduced new banks or other financing partners to the company. In the other cases, the company management already developed a list of banks to be invited to present refinancing proposals, primarily consisting of existing lenders or banks that already had a prior lending relationship to the firm. The inclusion of external financing advisors is therefore seen primarily not to introduce new financing partners to the companies or to present alternative financing sources. They supported in the execution of the process, assisted in the negotiation phase of the refinancing and benchmarked terms and conditions offered by the banks.

All cases investigated were primarily relying to personal experience and proposals from banks which could indicate a representativeness bias across all cases. Two exceptions have to be considered. (a) Cases that involve financial advisors to benchmark terms and to support in the negotiation tried to mitigate this bias at least in a later stage in the process. (b) Following the results from Lichtblau & Utzig (2002), the focus on relationship lending in Case 6 and Case 7 can be seen as rational as these firms mitigate asymmetric information problems. They avoid costly measures to overcome these asymmetries by continuing a long-standing relationship with their core bank(s).

5.4.3 Summary

Overconfidence and representativeness biases were not clearly attributable to owner-managers in all situations. The classification might be more complex than to solely differentiate between the shareholding impact and to focus on behaviour. In addition, only some determinants linked with specific capital structure theories were explainable. Probably a more strategic management typology can present a comprehensive framework for categorising midcap firms and their strategic approach towards financing. The basis for that assumption is that if business strategy influences financing strategy and if business planning connects with financing planning, could this approach also works towards financing decisions?

6. Types of Financing Practices

The results of the research showed a mixed picture regarding relevant determinants that allow to assign a case to base its financing decision upon a certain capital structure theory. Identified inefficiencies in the financing strategy, in delays of the financing process and differences in the terms and conditions of the financing agreements could not be attributed to be in particular an issue for owner-managers. It seems that management characteristics differ amongst cases as indicated by research proposition RP3a. Therefore, this chapter introduces a financing strategy typology which allows for a broader categorisation of manager types, financing strategies and processes. This approach follows the investigation that the managers in the cases explored predominantly stated that the financing strategy of a firm follows the business strategy or is an element of the business strategy. Section 6.1 provides a short overview on the business strategy typology chosen. Relevant elements of the typology will be transposed towards a financing strategy typology in section 6.2. The cases investigated in this research will then be categorised following the typology in section 6.3.

6.1 From Business Strategy to Financing Strategy

The typology for financing practices is based on the approach by Miles & Snow (1978, 1984), as presented in section 2.5. The Miles & Snow typology was originally developed to cluster business strategy types. However, the approach has been adopted by various academic areas to generate useful typologies, e.g. in risk management practices (Henschel, 2010; Smallman, 1996) or to differentiate innovation strategies (Gimenez, 2000). Ginn et al. (1995) used the Miles & Snow typology to segment financing strategies in U.S. hospitals. Their approach linked the strategy types with certain financial determinants that were used in assessing a pecking order hierarchy.

The results of this study showed again that identified determinants in section 5.3.4 and section 5.3.5 could support elements of several capital structure theories in addition to a pecking order concept. These findings are consistent with the mixed results by Brüse (2011) and Nohtse (2012) on the upcoming refinancing of the standard mezzanine. In addition, the behavioural biases explored in section 5.4.2 presented mixed results and were not solely allocated to owner-managers.

As this research performed an in-depth investigation on financing strategy and financing processes in midcap companies, the sole focus on financial determinants would not be useful in developing a basic typology of midcap companies.

Interview findings indicate a dependency between business strategy and financing strategy. The results from this study identified that a causal direction from business strategy to influence financing strategy is seen by most participants (see section 5.2.4).

Based on this dependency and the causal direction, the research transfers basic characteristics that Miles & Snow (1978) assign to their types towards financing strategy and financing process.

6.2 Adoption of the Typology

Miles & Snow (1978) introduce four types to categorise operational performance, as already presented in section 2.5:

- Reactor,
- Defender,
- Prospector, and
- Analyser.

The types ‘defender’, ‘prospector’ and ‘analyser’ are labelled by Miles & Snow to be dominant types. These types can be proactive in their environment (R. E. Miles et al., 1978, p. 557) and can achieve a successful long-term performance. The ‘reactor’ type responds inappropriately to developments and can only exist in stable environments. Miles & Snow (1978) state that the reactor represents a residual strategy when none of the dominant types can be assigned. The reactor needs to adopt in a changing environment, converting towards one of the three dominant strategy types, or disappears. Therefore, the further aspects are focussing on the three dominant types, following the original approach by Miles & Snow (1978).

6.2.1 Defender

The defender management type aims for a stable environment. The manager aggressively tries to prevent competitors from entering their market “by ignoring developments and trends outside of their domain” (R. E. Miles et al., 1978, p. 551) at

the same time. Table 6.1 presents the relevant defender characteristics by Miles & Snow and their adoption in a financing strategy typology.

Table 6.1: Financing Strategy and Determinants of the Defender

Strategic approach and organisation	Main determinants and instruments	Processual consideration
Business strategy		
• Niche player • Operates in a stable domain • Tendency to ignore developments • Some product development but closely related to current goods or services • Manager promotions from within	• Cost-efficient technology • Single core technology	• Maintain strict control • Intensive planning cycle • Limited environmental scanning • Centralised control and information systems
Transposition to financing strategy		
• No formal strategy required as control remains with top manager • Financing partners and financing instruments most important elements • Intensive relation to core banks • Conservative/reluctant towards financial innovations • Owner-managers or external managers without prior external job(s)	• Strengthen economic equity • Attractive conditions • Mitigate shortfall in bank lending (core bank principle to mitigate principal-agent conflicts) • Availability in further refinancing • Instruments: Bank lending with potential add-ons	• Internal process management • Financial advisors to support internal work or to review proposals • No prior market assessment, primarily relies on proposals from existing financing partners • Limited preference for providing detailed information or to enhance transparency
Financial characteristics of corresponding cases (Case 6, Case 7, prior to the refinancing)		
• Growth and profitability (minimum to maximum): o Sales growth: neg. to 16.9% o EBITDA-margin: 14.4% to 14.7% o EBIT-margin: 6.5% to 12.5%	• Indebtedness and capital structure (minimum to maximum): o Leverage: 1.43x to 3.19x o Gearing: 88% to 149% o Equity ratio: 32% in both cases	

Source: Own illustration, adapted from Miles & Snow (1978, p. 552)

Business strategy and determinants

The defender follows a business strategy that is based upon a stable market and product environment. This type is not aiming to introduce new products to the market or react to innovations, but to optimise his products and market position. The defender develops cost-effective technologies to maximise profits in this stable environment and solely focus on one core technology. In terms of process, the defender manager

maintains strict control at top level to secure effectiveness and to direct product developments. This management type requires intense business planning, but without decent environmental scans as the defender focus on his own products and in his stable market. Based on this management approach, control and information systems are managed centrally. The defender prefers to rely to internal managers, either owner-managers or external managers that made their career within the firm and are familiar with routines, products and procedures.

Financing strategy and determinants

Based on the centralised control and decision routines, no formal financing strategy is needed as only few people act as decision makers. The defender acts in a stable financing environment, which leads to an intense relationship to core bank(s). Therefore, financing partners and financing instruments are the main elements in the financing organisation. Financial innovations are seen as being risky and costly as these might require new internal procedures or because there is no experience with such products. The aim for cost-effectiveness makes attractive conditions and strengthening the economic equity to achieve an optimal credit assessment the most important determinants. The defender must avoid a shortfall in bank lending as he relies in particular on relationship banks. This management type provides those to the core banks, but is reluctant to provide detailed information to further parties. This is seen to be costly and in addition these information are at risk to leak and might be made available to competitors. Given this dependency on bank loans, a further core determinant for selecting a financing instrument is the availability in a future refinancing, in particular after the experience with standard mezzanine. Defenders prefer bank lending, supplemented with additional bank instruments, such as leasing.

Financing Process

The defender wants to control the financing process and maintains the project management. Financial advisors are seen to be costly and only to provide limited added value, given the stable relationship with core banks. In case financial advisors are involved, they solely have a role as a sparring partner, supporting internal work or reviewing bank proposals. The defender avoids a prior market assessment, primarily relies on proposals from existing financing partners. As already described, the

defender shows only limited preference for providing detailed information or to enhance transparency.

6.2.2 Prospector

The prospector type is described to be in many determinants the opposite of the defender. However, the prospector is presenting a clear and consistent pattern, like the defender. Prospectors act in a more dynamic environment. Core competence of the prospector is that this type identifies new opportunities fast and can rapidly respond to trends through innovation and adoption. The prospector is not primarily aiming for highest profitability levels, but for market share and competitive advantage. Table 6.2 groups the relevant characteristics of a prospector type.

Table 6.2: Financing Strategy and Determinants of the Prospector

Strategic approach and organisation	Main determinants and instruments	Processual consideration
Business strategy		
• Entering and developing new markets • Operates in a dynamic environment • Fast responder to new developments and innovations • Manager promotions from within as well as external hires	• High-end and flexible technologies • Multiple technologies or services	• Low degree of formalisation • Proactive planning cycle • Intensive research and development combined with environmental scanning • Decentralised control and information systems
Transposition to financing strategy		
• Little to some strategy to allow for reaction to developments • Financing partners, general financing principles and further policies most important elements • Open to alternative financing partners and financial innovations • No clear preference for manager type: Owner-managers, external managers with or without prior external job(s)	• Attractive conditions • Increase independence/ enter new markets • Contractual optimisation • Instruments: Bank lending, debt capital market financings, alternative and innovative financings	• Internal or external process management • Financial advisors to manage process and/or support in negotiations • External market assessment • Willingness to enhance transparency and to provide information, in some cases problems due to decentralised information systems
Financial characteristics of corresponding cases (Case 1, Case 4, Case 5, prior to the refinancing)		
• Growth and profitability (minimum to maximum): o Sales growth: neg. to 6.71% o EBITDA-margin: 3.7% to 13.8% o EBIT-margin: 1.4% to 11.1%		• Indebtedness and capital structure (minimum to maximum): o Leverage: 0.46x to 4.44x o Gearing: 40% to 118% o Equity ratio: 24% to 27%

Source: Own illustration, adapted from Miles & Snow (1978, p. 554)

Business strategy and determinants

The prospector seeks for additional profits by product and market innovation strategies. This manager operates in a dynamic environment by developing new products and creating new markets. He is particular successful in highly competitive environments as his organisation is aligned to respond quickly to new developments. This type seeks always for the manager that presents the best set-up (experience, education and knowhow, network, etc.) for the respective task. The prospector is therefore indifferent in hiring external managers or to promote internal candidates. Given the competitive and innovative structure, the prospector organisation develops

and maintains multiple technologies or services that are flexible and can be adopted. This reactive and flexible structure is not very formalised and involves a proactive business planning. A core challenge for the prospector is to anticipate trends and innovations which requires intensive research and development combined with environmental scanning. The adaptive organisation of the prospector further requires a decentralised information system.

Financing strategy and determinants

An integrated formulated financing strategy would limit the prospector to respond immediately to new developments and financing opportunities. Therefore, this manager type only involves necessary parts of a financing strategy to keep a consistent structure by avoiding inflexible processes. General financing principles as a framework, further policies like a hedging memorandum or an investment policy and financing partners are the core strategic elements of the prospector. The type is interested in obtaining alternative financing solutions and financial innovations that support his competitive advantage. As for the product portfolio, the prospector aims to increase independence from financing partners and to enter new markets. He avoids limitations and seeks contractual optimisation. Even though this manager type is interested in achieving attractive conditions, he would trade this determinant for gaining more flexibility.

Financing Process

As for the preferred manager type, the prospector mandates financial advisors to moderate complex financing processes or to support in contract negotiations. Therefore, he is indifferent whether an internal or an external process management is installed. Prior to the process, a market assessment will be conducted, but no particular internal preparation phase is necessary. The prospector is flexible in providing information or to enhance transparency via external measures to achieve the preferred financing solution. The decentralised structure of information systems hinders in some cases a comprehensive information transfer.

6.2.3 Analyser

This management type resides between the defender and the prospector. An analyser manager combines characteristics from both types to maximise profitability based on a given risk appetite. Even though this combination of the 'best of both worlds' allows the analyser to react to market developments but not commit the same market entrance risks as the prospector, this type also faces individual risks and challenges. These occur in the complex structure the analyser type built in achieving a balanced strategy that involves all relevant determinants. The Table 6.3 below groups the main characteristics of the analyser type.

Table 6.3: Financing Strategy and Determinants of the Analyser

Strategic approach and organisation	Main determinants and instruments	Processual consideration
Business strategy		
• Developing existing and entering in new markets • Can operate in dynamic and stable environments • Identifies and reacts to new developments and innovations • Manager promotions based on assessment process	• Balanced product-market development • Dual technological core (stable and flexible component)	• Middle to high degree of formalisation • Intensive planning cycle • Some research and development combined with environmental scanning • Moderate centralised controlling and information systems
Transposition to financing strategy		
• Formal strategy to allow for clear structures in complex environments and to react on developments • Financing instruments, general financing principles and description of process most important elements • Several relationship banks, willingness to expand bank financing towards established alternatives • Preference for external managers with prior experience	• Contractual optimisation • Avoidance of shareholder dilution • Availability in further refinancing • Instruments: Bank lending, debt capital market financings, selected alternative financings	• Prefer internal process management with external support • Financial advisors to support process and/or in negotiations • Limited external market assessment • Willingness to enhance transparency and to provide information
Financial characteristics of corresponding cases (Case 2, Case 3, prior to the refinancing)		
• Growth and profitability (minimum to maximum): o Sales growth: 0.59% to 4.72% o EBITDA-margin: 6.9% to 9.6% o EBIT-margin: 4.6% in both cases	• Indebtedness and capital structure (minimum to maximum): o Leverage: 0.83x to 0.86x o Gearing: 25% to 57% o Equity ratio: 24% to 27%	

Source: Own illustration, adapted from Miles & Snow (1978, p. 556).

Business strategy and determinants

The analyser can develop existing markets and products (like the defender) and enter into new markets if this seems appropriate. This management type operates in different environments and can react to new developments. However, he is not the driver for innovation like the prospector. This type aims to hire external and experienced managers to introduce further know-how to the team. An analyser opts for a balanced mix of products and markets to be able to react to developments. This strategy type shows the highest level of formalism to manage the complexity of the strategy,

including an intense business planning cycle. Like the prospector, the analyser performs research and environmental scanning. But these aspects are not as strong as in the previous type, as the analyser still aims to be cost-effective. The information system is centralised, but allows for some flexibility.

Financing strategy and determinants

The typology requires the highest degree of formulated financing strategy to ensure clear structures and decisions in the complex environment and to react to developments at the same time. Therefore, financing instruments, general financing principles and a process description are core elements. The analyser keeps relationships with several banks or financing partners and is willing to expand bank financing towards alternatives. However, he is not aiming for latest and innovative trends, but for proved and established alternatives that suit his needs.

The analyser aims for contractual optimisation, in particular for flexibility and in maintaining control over cash flows and operational decisions. As this manager combines stability with flexibility, he tries to avoid a shareholder dilution as long as a new shareholder would not provide additional merits. Preferred financing instruments are bank loans and established debt capital market products like a Schuldschein or other private placement instruments.

Financing Process

The analyser prefers an internal process management with external support by a financial advisor for process management and negotiations. An internal preparation phase and a market assessment are supported if seen as a rational element to enhance the decision basis. Transparency towards financing partners and the submission of information packages is supported in case this will lead to better results.

6.3 Example Cases and Type Description

To illustrate the financing strategy typology developed in the previous section, typical cases will be discussed, based on the identified results.

6.3.1 Defender Type: Case 6 and Case 7

Due to the performed refinancing and the investigated financing process, Case 6 and Case 7 are dedicated to be a defender type.

Strategic approach and organisation

Case 6 is a manufacturing company active in the optical industry sector. The firm is family-owned and operated and presented annual sales of up to € 50 million in the fiscal year prior to the refinancing. Both interview participants acknowledged that a financing strategy should be an element of the overall corporate strategy. In terms of formality, both indicated that there is no need for a formulated financing strategy as all decisions are taken by the owners. The participants stated that they are aiming for a broad financing base that relies on bilateral bank loans with up to ten partners, primarily small and regional savings banks and cooperative banks. The company used retained earnings and an expansion in their existing bilateral bank loan facilities to fund the refinancing of standard mezzanine.

Case 7 is managed by external managers on middle and on top level. The external management team was installed by the owner family several years ago during a succession reorganisation. The top manager was with the firm throughout his career, the middle manager had a prior job position with an audit firm. The company operates in the media sector and had annual sales between € 50 million and € 150 million in the fiscal year prior to the refinancing. Operational performance had been under constant pressure in the last years due to intense competition and aftermaths from the financial crisis. The interview participants stated that there is no formal financing policy in place, but a verbal agreement with the shareholder family. During the refinancing, the passing of the old shareholder led to a structural reorganisation and required additional aspects to be considered. The two inheritors needed a minimum dividend in the next years to be able to pay inheritance taxes, even in a deteriorating operational situation of the company. Refinancing was performed via a renewal of the syndicated loan agreement. Core success factor in view of the participants was that the core bank that led the syndicated loan consortium is also the core bank of the shareholder family. The core bank therefore had a full picture on firm and shareholder requirements.

Case 6 and Case 7 were both identified to present a less formulated or even a 'lived experience' form of financing strategy (see section 5.2.2). Participants from both cases presented answers in their interviews that financing partners and financing instruments are core elements in their strategic approach. In addition, both cases heavily relied towards their existing core banks, by renewing the existing syndicated loans in Case 7 or by new bilateral loans from existing banks combined with retained earnings in Case 6 (see section 5.2.1.2). No new or innovative financing instruments were considered during the refinancing.

Main determinants and instruments

Case 6 was able to maintain a strong equity ratio and achieved attractive financing conditions as well as suitable add-on instruments for working capital needs.

The managers in Case 7 had to negotiate a minimum dividend clause with banks to comply with upcoming tax payments on individual shareholder level. During the negotiations, the managers accepted a mechanism that a certain amount of earnings need to be retained until a certain equity ratio is reached again. However, they also receive the required minimum dividend clause.

Processual consideration

Case 6 was approached by several core banks six months prior to the maturity of the standard mezzanine and successfully completed the refinancing within ten weeks.

In Case 7, the discussions of the standard mezzanine refinancing started eight months prior to the maturity as the management had to renegotiate the overall syndicated loan agreement caused by the passing of the old shareholder.

Both cases did not involve any financial advisor in the process and did not perform any market assessment as both were either approached by their banks (Case 6) or forced to start negotiations based on other circumstances (Case 7).

Financial Characteristics

The cases that were assigned to the defender type show the highest profitability margins of the investigated cases. This would correspond with the aim of defender managers to enhance cost-efficiency. Interestingly, the defender Case 6 also presented the highest sales growth which would have been more a characteristic for a prospector.

However, capital structure and indebtedness showed highest equity ratios of all cases explored. This could be seen as an indication that defender types want to present stable balance sheet ratios to be able to cope with unexpected events as they are performing limited analysis on market and product trends only. The broad range of leverage shows the importance of bank loans for those two cases as funding source.

6.3.2 Prospector Type: Case 1, Case 4 and Case 5

Strategic approach and organisation

Case 1 is a family-owned and operated company in the food industry with annual sales ranging between € 250 million and € 500 million prior to the refinancing. The company recently entered Asian markets and currently changes its product structure to respond to customer demand. Interview participants explained that the firm follows a financing strategy which is not formally written down in a single document. The financing strategy is included in several documents such as guidelines and memoranda. The strategy includes a core bank policy. A shareholder agreement excludes the ability to raise equity from external investors and limits the ability to sell equity outside the existing family.

Case 4 operates in the logistic manufacturing area. The company is family-owned and family shareholders are acting on top and middle management level. In the fiscal year prior to the refinancing, the company achieved annual sales between € 50 million and € 150 million. Both managers have no external job experience. The interview participants stated that the company does not have a financing strategy but is in no need for such a strategy, as the managers also represent the majority of the shareholders. Nevertheless, there are two limitating factors. Equity must be kept within the owner family which limits the ability to raise additional equity funds. Furthermore, the company aims to comply with the financial covenant that is included in the bank loan agreement.

The third case that has been assigned to the prospector type area is Case 5. Being an international manufacturing and engineering company with annual sales between € 250 million and € 500 million, Case 5 is operated by an external management team. The company implemented formulated financing guidelines for the group. These guidelines include a list of preferred bank partners to work with as well as key terms

and conditions to be considered in negotiations. The company planned an IPO back in 2002, but stopped the process as capital markets were not available at that time.

Based on a proposal from one bank, Case 5 started to evaluate refinancing options 12 months prior to the maturity. This bank proposal preferred a refinancing via a midcap bond. The company invited several potential banks to assess market conditions and decided to execute the proposed midcap bond refinancing, combined with a new revolving credit line. The midcap bond was not used solely to refinance standard mezzanine, but also major parts of the existing senior bank loans. Even though interest expenses increased, the interview participants indicated that they were able to achieve contractual optimisation for the company. These optimisation items included the reduction of financial covenants to comply, the limitation of information rights for financing partners as well as to ease the repayment profile for the firm.

The three cases identified vary significantly in terms of formality of their financing strategy. But even Case 5 had a financing strategy in place that allowed to react quickly on new and innovative financing concepts. Case 4 – being a theoretical replication case – nevertheless showed flexibility as they were discussing to include individual mezzanine or even an external minority shareholder to mitigate their failed refinancing approach.

Main determinants and instruments

All three cases aimed to generate or enhance flexibility towards existing bank financing. It could be either achieved via optimisation of loan contracts or by exploring new funding sources. In addition, attractive conditions were amongst the frequently identified responses. The three prospector cases refinanced via a variety of funding sources and with several types of financing partners.

Processual consideration

Case 1 and Case 4 both aimed for a rather short refinancing process of six months and were both not able to complete the financing within that timeframe. Case 1 had to use a bridge loan from banks that afterwards provided the long-term refinancing via syndicated loans and an additional Schuldschein. The managers involved a financial advisor to support in the later negotiations. Major reasons for the delay were problems in generating the required information for the banks in time based on their various and

unconnected information systems as well as communication gaps between managers and shareholders.

Case 4 had to mitigate a more severe refinancing risk as banks were not able to support the refinancing based on the declining operational performance. One mezzanine provider extended the financing and the second mezzanine tranche was temporarily refinanced via a bank bridge loan. The management therefore used advisors to present alternative funding solutions and started negotiations with individual mezzanine providers. The inclusion of external equity was also discussed. This prompt adoption of their approach by involving alternative instruments, performance of a market assessment and the involvement of external advisors has been the reasons, why Case 4 is still seen to be more connected with a prospector typology and not as a defender. Their need for a bridge financing was primarily caused by a late start of the process that is related to the low degree of formality and the underestimating of the bank financing ability.

Financial Characteristics

The three assigned prospector cases included the strongest sales growth (Case 1), but also with Case 4 a firm with negative sales growth in the year prior to the refinancing. Profitability margins presented the largest spread compared to the other two typologies. This could be seen as an indicator for the focus of prospector types on gaining market share and competitive advantage through innovation and technology rather than to optimise cost-efficiency. The analysis of the cases further revealed more aggressive capital structure ratios in terms of higher leverage and lower equity ratio, but still with large spreads between the cases. These more aggressive ratios could be seen again in connection with the strive for development and innovation rather than to focus on efficiency and profitability.

6.3.3 Analyser Type: Case 2 and Case 3

Strategic approach and organisation

The company investigated in Case 2 is an automotive company with annual sales ranging between € 250 million and € 500 million. The majority of the firm is owned by the founding family, a private equity house holds a minority stake. No integrated formulated financing strategy exists, but several elements were identified. These

elements have been agreed between managers and shareholders and include a target capital structure of the firm, preferred financing instruments and key financial ratios. The elements are seen to be included in the overall company strategy. Both managers acting as interview participants are external managers with prior job experience.

In Case 3, both interview participants were external managers that have prior job experience. The company started its operations in the power and utility sector and expanded into further areas. The family-owned company had annual sales between € 50 million and € 150 million prior to the refinancing. The company faced intensive competition, like Case 4 and Case 7. However, the company reacted to that development by reducing operational cost and reduce indebtedness.

Main determinants and instruments

Both cases aim to avoid a shareholder dilution, even though Case 2 was forced to increase the equity ratio during the financial crisis by involving an external shareholder. The cases refinanced their standard mezzanine by either using retained earnings and increase their syndicated loan (Case 3), or by a combination of syndicated loans and the placement of a Schuldschein (Case 2). They strived for contractual optimisation elements in their financing negotiations. However, Case 3 had to accept that further information were requested by lenders to gain a better understanding on the market challenges. Nevertheless, Case 3 was able to negotiate financial covenants that were adjusted to their needs.

Case 2 also had to present more detailed information to the financing partners as an EU antitrust investigation started during the negotiation phase. As for the previous case, management of Case 2 could achieve significant contractual adjustments that reflected potential outcomes of the antitrust investigation.

Processual consideration

The cases both mandated external advisors to support the process and started an internal preparation phase prior to the refinancing process. The processes were started approximately 12 months prior to the maturity. In Case 2, circumstances occurred that led to a delay in the process (see section 5.3.4.2), but could be mitigated.

Financial Characteristics

The two analyser cases both showed growth and profitability margins with lower spreads compared to the other two types. In all three ratios, Case 2 and Case 3 do not present maximum or minimum values across cases. This could be seen as an indicator for an analyser type who combines aspects of the previous two cases and avoids extreme levels. An interesting finding is that the two cases assigned to the analyser type present leverage and gearing ratios that are even below the ratios of a defender. A possible explanation could be that analyser managers are open to other funding sources – like the inclusion of minority equity during the financial crisis in Case 2 – and therefore do not rely primarily on bank loans in general.

6.4 Summary

The proposed financing typology shows that financing strategy has a different importance to the different manager types. This was investigated in terms of form as well as in terms of core elements to be involved. In addition, the types have individual approaches towards the financing process. Inefficiencies were explored across these types that relate in particular to delays caused by inadequate communication and insufficient alignment between internal procedures and the timeline for the refinancing. Furthermore, many participants across the typology acknowledge the importance of a financing strategy but seem not to be aware of elements that such financing strategy could include. These aspects will be reflected in the practical implications.

7. Practical Implications

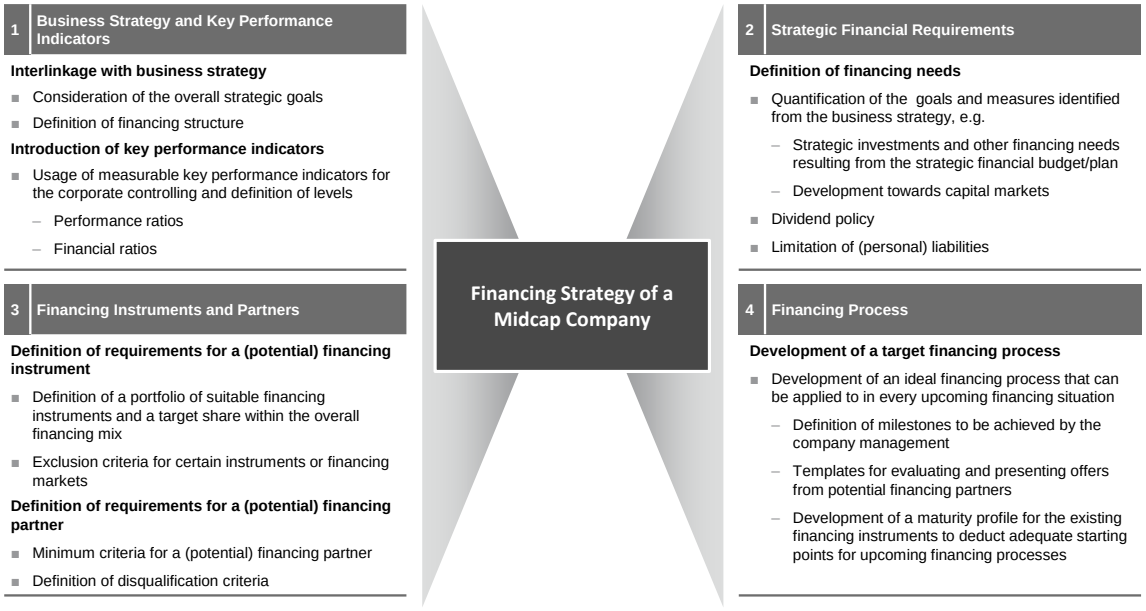
The presented financing strategy typology and the attribution of the cases explored to one of the types based on the characteristics of the financing decision led to the question how a template for a financing strategy and a prototype of a financing process would look like. Even though the different types of financing practices will put a varying amount of effort in setting up a financing strategy, a template that outlines the potential elements as well as underlying financing principles and examples could help in mitigating the identified inefficiencies in the decision process.

Based on the main findings presented and the intense exploration of the cases, the identified differences between form and elements of a midcap financing strategy across all types lead to the formulation of this template for a holistic financing strategy. It is not aiming to represent an ideal or optimal financing strategy that derived through research, but wants to present what elements could be included. Section 7.1 presents the main categories of a financing strategy. The following section 7.2 lays out the financing principles that could be involved per category in more detail. Section 7.3 completes the chapter by introducing a prototype financing process with a particular focus on the identified inefficiencies from the processes investigated, in particular the internal preparation phase that was missed in five cases and the missing interaction between management and supervisory board or shareholders.

7.1 Potential Structure of a Financing Strategy

This framework derived by the exploration of the cases and consists of four core elements. Starting from the described interlinkage with the overall corporate strategy and deriving key performance indicators, this holistic framework also includes strategic financial requirements each company should define. A further component of such financing strategy is the careful evaluation of suitable financing instruments and partners to work with. The fourth core element is the definition of a basic financing process for the company, combining internal preparation phase, external execution phase and the inclusion of internal approval requirements in such a process. Figure 7.1 presents this template for a midcap financing strategy.

Figure 7.1: Components of a Holistic Financing Strategy



Source: Own illustration.

Business strategy and key performance indicators

The research revealed a causal direction from business strategy towards financing strategy. The first element of a financing strategy should therefore be the consideration of the overall strategic goals of the firm to be adequately reflected in the financing strategy. Financial and performance ratios can be used as a connecting element between those two strategies. This interlinkage was only partially explored in the research.

Strategic financial requirements

Business strategy for the firm leads to an investment strategy and is reflected in the business plan of the firm. These items must be responded to in the financing strategy to ensure an appropriate funding for the business plan and to cope with expected growth. For example, a fast growing prospector company might include a strategic plan to expand towards equity capital markets and plan an IPO, such as Case 5 did in 2002.

Financing instruments and partners

The two elements that were identified in most interviews were financing instruments and partners. It is seen to be crucial to define what financing instruments suit the needs

of the firm and financing partners to work with. Even in a defender environment, where bank lending still is the major source of external financing, management should be considering pros and cons of alternative sources. For example, in case that a management is averse about debt funds or hedge funds becoming financing partners, the company should be careful towards viewing all capital market instruments as suitable forms.

Financing process

The revealed inefficiencies in the process to be a major risk factor in obtaining a suitable refinancing solution in the envisaged timeframe points the importance of implementing a clear and consistent process. The financing process should highlight the different phases of such a process and could start by introducing an internal preparation phase. Relevant milestones need to be specified and communicated to all relevant parties. But even prior to that communication, all relevant parties need to be identified and introduced to the process to avoid the delays identified in section 5.3.4.2. A second item could be the development of templates for evaluating and presenting offers from potential financing partners to allow for an informed and prompt approval by decision-makers at all company levels. The third item could be the strategic development of a company-wide maturity profile for the existing financing instruments to deduct adequate starting points for upcoming financing processes.

7.2 Elements of the Financing Strategy: The Financing Principles

Each core element can be further detailed by underlying ‘financing principles’. These resulting financing principles are based on the main findings presented in the previous sections and weaknesses observed as well as on the documents analysed. These financing principles were compiled to serve

(a) as a basic template for midcap companies in establishing their integrated financing strategy, and
(b) as a basis to develop variables that might be able to test the findings in a broader questionnaire survey.

These financing principles should not be understood as a single and comprehensive framework, but to be seen as a model kit where midcap companies can combine, adopt, change or add to meet individual requirements. Table 7.1 presents the developed

financing principles, which core element of the financing strategy they relate to and explanations or examples for each financing principle.

Table 7.1: Recommendations and Examples for the Development of Financing Principles

Element of financing strategy	Financing principle	Examples / explanation
1. Business strategy and key performance indicators	a. Financing structure	• Financing at level of [holding company / subsidiaries / special finance vehicle] to cope with the overall strategic plan of the company, e.g. diversification or internationalisation strategies • Ensure optimal utilisation of financing capabilities of the overall company / group by centralising / decentralising the financing function • Inclusion of requirements for special financing situations, such as subsidised loans
	b. Limitation of financial risks	• Mitigation of the following potential risk factors – Credit risks – Pricing and volatility risks – Liquidity risks • Mitigation of these risk factors by adopting an appropriate hedging strategy
	c. Financial ratios	• Leverage (defined as Net debt to EBITDA) not exceeding [x.x]times EBITDA • Minimum equity ratios of [xx.x]% • [other / sector specific ratios] • Inclusion of defined events that allow for a temporary shortfall in these ratios, e.g. because of unplanned additional investment needs or special events and mechanisms to return to the defined ratios
	d. Profitability and performance ratios	• ROCE of [xx.x]% at company level • Target minimum cash flow • Target EBIT(DA) or respective margins • [other / sector specific ratios] • Benchmarking with competitors
	e. Flexibility	• No limitations or restrictions of financing capacity at holding level caused by financing activities at subsidiary level • Definition of minimum funding reserve for unexpected events or unplanned additional investment needs, benchmarking with competitors

Source: Own illustration.

Table 7.1 (continued)

Element of Financing Strategy	Financing Principle	Examples / Explanation
2. Strategic financial require-ments	a. Securing the funding base	• Basis is the strategic company planning / budget • Definition of financing needs and timing for such needs to avoid shortfall in financing strategic investments or general corporate needs • Definition of minimum available funding reserve to be obtained during the horizon of the strategic corporate planning
	b. Dividend policy	• Definition of general dividend principles (sometimes already included in the company's articles of association); e.g. Limitation on annual dividends as long as the minimum equity ratio is located below the target ratio or the Leverage exceeds a certain range • Careful evaluation of different forms of organisation and impact on general dividend layout
	c. Limitation of (personal) liabilities	• Definition of general rules and limitations for liabilities for the company that external financing partners typically envisage • Regulation on potential personal liabilities of the owners / shareholders, depending on the form of the respective organisation e.g. limited partnerships
3. Financing instru-ments and partners	a. Mixture of instruments and maturities	• The company's financing should [be a diversified portfolio of instruments / be based on long-term bilateral bank financing / syndicated loan facilities / capital market instruments] • The maturity profile of the financing mix reflects the nature of the business • The instruments chosen avoid significant refinancing risks based on single refinancing events • All financings should include a maturity profile that is adequate to the respective usage of the funds / investment
	b. Optimisation of funding cost	• Finding a financing portfolio that optimises (but not necessarily minimises) the cost of funding for the company by maintaining the other financing principles
	c. Collateral	• Definition of collaterals that are available to secure external debt / negative pledge
	d. Relationship to banks / financing partners	• Definition of core or relationship banks and depth of relationship, e.g. new financing business at company or group level only to be discussed with defined core banks • Criteria for defining a bank as core or relationship bank, such as rating, regional presence and focus, competence in relevant products and services
	e. Potential new financing partners and investors	• Definition of criteria for accepting a new financing partner such as leasing companies, pension funds or insurance companies • Disqualification criteria – especially with regard to capital market instruments – e.g. no hedge funds, no financing partners with a jurisdiction outside the EU, no sovereign funds

Source: Own illustration.

Table 7.1 (continued)

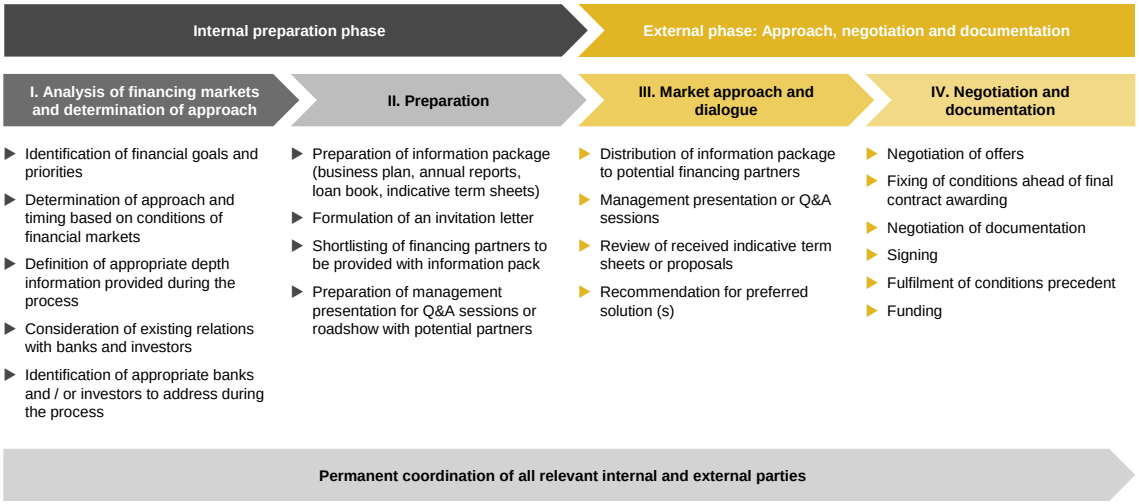
Element of Financing Strategy	Financing Principle	Examples / Explanation
4. Financing process	a. Exemplary financing process	• Development of an exemplary financing process that includes all key milestones; starting from internal preparation, covering selection and approach of identified potential financing partners, selection and negotiation process until funding of the new financing instrument • Maintain a stringent financing process with a timely execution to avoid refinancing risks
	b. Templates	• Design of templates for executing the financing process as well as for the selection and internal approval process(es)
	c. Maturity overview	• Establish a company-wide banking ledger that avoids any unexpected refinancing event to occur as well as to be able to execute the developed exemplary financing process

Source: Own illustration.

7.3 Prototype of a Financing Process

To continue the fourth principle of a financing strategy, a prototype or template for a financing process has been developed. Figure 7.2 displays the phases as well as core processual steps.

Figure 7.2: Phases of a Financing Process



Source: Own illustration.

7.3.1 Internal preparation phase

The developed financing strategy typology showed that not all three types are concerned about an internal preparation phase. However, consistent planning and a market assessment would have helped in executing a process without the investigated interruptions and delays.

Analysis of financing markets and determination of approach

The first step in preparing for a financing decision is to identify the goal and priorities to be achieved. This links to the elements and determinants of the financing strategy. After this internal assessment, an external market assessment could be considered to detect which financing might be suitable in current market conditions. Following these investigations, the information requirements by potential financing partners should be assumed and mirrored with available packages based on the implemented information systems. The last step is the determination of potential financing partners that seem suitable to the company and its financing needs. This determination involves an assessment of the existing relations with banks and investors.

Preparation

The second step relates to the preparation of the documents that are required during the financing process. In a pro-active approach, a request letter should act as a cover for the documents provided. This request letter should outline the intended financing purpose, envisaged structure and core milestones to comply with. Financing partners should indicate, if they see any obstacles in meeting the milestones. The shipped documents should include a comprehensive set of information to allow a potential financing partner to perform an internal risk assessment. Latest annual reports and the current business plan of the company are mandatory, if not already provided to existing lenders. Market and industry surveys could be added to help potential financing partners to back test the business plan. A helpful tool could be the preparation of a ‘loan book’ or ‘bank memorandum’ that compiles all relevant company, market and financial information as well as details on the planned financing.

7.3.2 External phase: Approach, Negotiation and Documentation

The second phase starts with the communication to potential financing partners. It further involves the complete selection phase as well as the negotiation and documentation process until the funding of the instrument.

Market approach and dialogue

The shipment of the information package and probably a prior introduction call with potential financing partners, kicks-off the external process phase. After the review of the submitted information, financing partners typically expect a communication platform with the company to answer questions that occurred, receive more insights on the business and the strategy and to get a feeling for the capability of the management team. Such a platform differs amongst financing instruments and investors. For example, in a bank loan financing, the management typically holds a personal bank meeting with the leading bank(s) and performs a management presentation. On the other hand, a more debt capital market oriented product like the placement of a Schuldschein normally requires multilayer communication. It starts with a personal meeting with potential lead banks and their analysts. These analysts prepare a credit research that will be shipped later to the potential investors of the Schuldschein. In a second phase, a telephone conference is held by the company with potential investors or even a personal roadshow to core investors is undertaken. Following this communication phase, banks and investors are expected to submit their proposals and the management has to conduct an assessment process to select the appropriate solution. In many cases, the assessment reveals that the combination of several instruments will meet best the company needs. Therefore the indicative detailed timetable that is shown in Figure 7.3 includes a combined financing process by obtaining a syndicated bank loan in addition to place a Schuldschein.

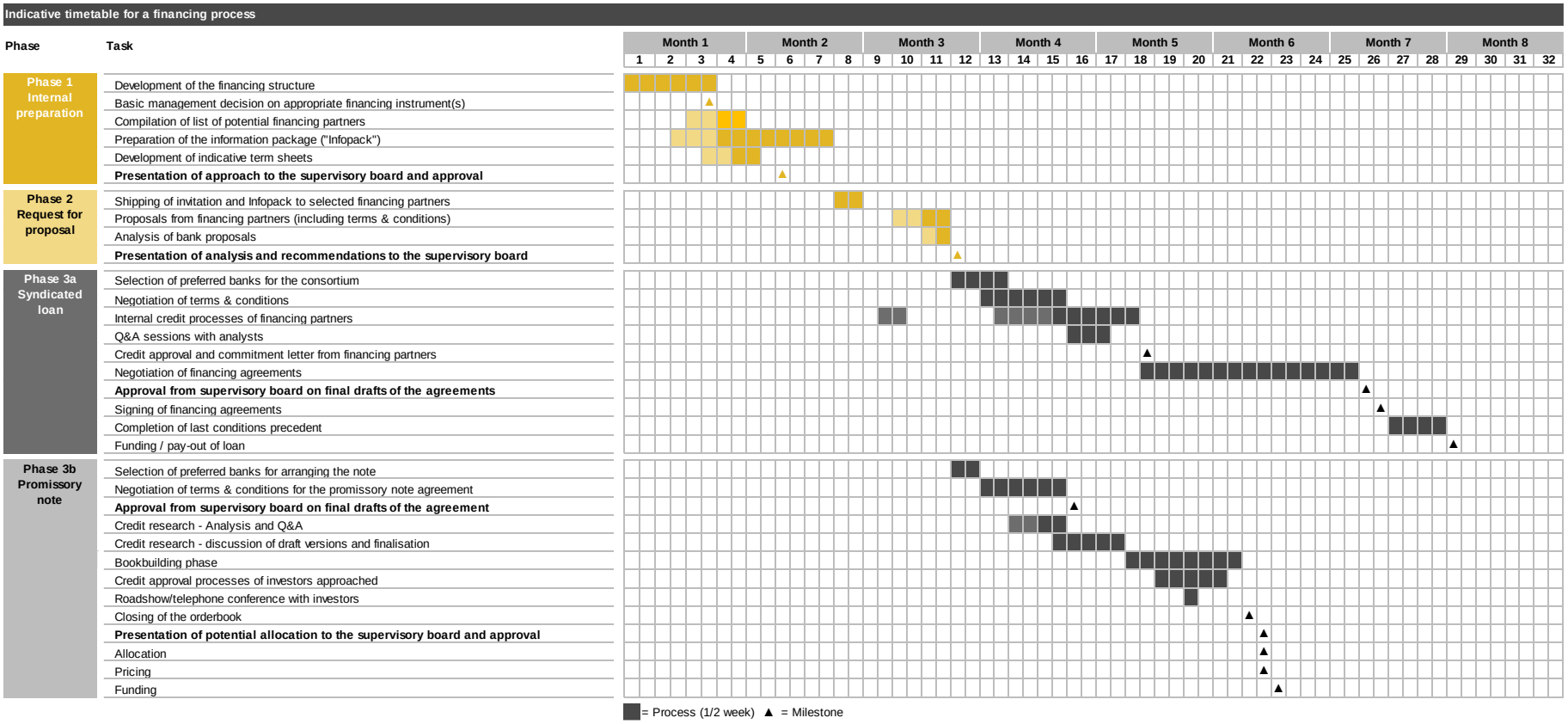
Negotiation and Documentation

The last step in the financing process is the negotiation and documentation phase. Most of the delays investigated in this research happened in this last phase of the process (see section 5.3.4.2), except for starting too late into the process (see section 5.3.1).

The phase contains the – sometimes intense – negotiations with the selected financing partners in particular with respect to the contract design and limitations included (see

section 5.3.6). A critical element is the careful preparation of the signing and funding process, in particular to coordinate all relevant parties to be involved. The detailed example financing process in Figure 7.3 highlights internal approval elements to emphasize the importance of combining the external process with the various situations, where internal presentations and approvals are necessary.

Figure 7.3: Exemplary detailed Financing Process



Source: Own illustration.

8. Conclusion and Recommendations

The chapter presents a summary of the essential findings of the present investigation in section 8.1. The section 8.2 discusses the limitations of the research approach and indicates the need for further research in section 8.3.

8.1 The Midcap Financing Decision

The main purpose of this thesis was to investigate the current status of the financing decision in German midcap firms. It explored what elements determine such a decision by focusing on the underlying financing strategy of the respective cases and the financing process executed. The study observed characteristics of the cases' management in the refinancing decision and different types of managers and shareholder had an influence on the financing decision (see section 1.4). In particular, the focus of this research to study the refinancing decisions of the maturing standard mezzanine facilities allowed to detect cases that all had to solve a comparable financing task.

8.1.1 Financing Strategy

The study revealed that a homogeneous financing strategy could not be explored. The financing strategy differs by case in terms of structure and in terms of form. Several core elements were observable across cases but with individual accentuation (see section 5.2.1).

A preference for a certain financing hierarchy could be identified in the cases, following a pecking order approach. However, several determinants indicate that other capital structure theories provide partial explanation for the financing decision, in particular tradeoff theory and agency theory. Some of the determinants could be explained by more than one capital structure theory. Furthermore, the determinants that influence a financing decision vary across the individual decisions. The contrasting of the determinants that influenced the original standard mezzanine financing with the refinancing decision showed that the importance of the individual factors shifted. In addition, qualitative aspects are seen to be also important in the financing decisions, such as maintaining independence and avoid dilution of the family

shareholders. Therefore this research indicates that in the cases explored, existing financing strategies do not consist of one clear set of elements, but differ by management type and level of family shareholder involvement. However, the distinction between owner-managers and external managers in the cases explored was not able to present consistent investigations. The developed financing strategy typology helped in categorising the cases as well as the respective form and elements of the financing strategy.

8.1.2 Financing Process

The heterogeneity that was explored in the financing strategy was also investigated in the executed financing process. The cases showed partially a more pro-active approach in the refinancing process compared to the original standard mezzanine financing. However, the management did not perform a market assessment that would have allowed for the identification of potential suitable alternative instruments. Cases that were seen to face a more problematic refinancing were still approached by lenders first.

Further to not actively starting the refinancing, two additional process inefficiencies were identified. The first was that the management assumed a duration of the process that turned out to be too short, and where in some cases banks or mezzanine lenders had to provide temporary solutions to mitigate a shortfall in the refinancing. The second inefficiency was that coordination amongst stakeholders was humbled, in particular between top management and shareholders as well as between management and subsidiary management. The detailed exploration of the debt contracts negotiated in the refinancing revealed that certain aspects repeatedly are key in negotiations. No overconfidence bias was identified in the cases regarding owner-managers to be more willing to accept performance-linked interest rate margins or by the design of the contract. This research was also not able to entirely support the assumption that debt contract design is an element to discipline managers and to mitigate asymmetric information aspects between shareholders and managers. The investigated negotiation processes rather allowed to conclude that managers accept certain restrictions in the financing contracts that are limiting the shareholders by trading key aspects.

Again the sole distinction between owner-managers and external managers was not able to completely attribute these inefficiencies to be either caused by owner-managers or external managers. However, the proposed financing strategy typology allowed for the investigation that prospector-type or defender-type cases faced the described inefficiencies. Analyser-type cases were able to avoid these processual gaps, except by the occurrence of an external influence such as in Case 2.

Financial advisors had only limited abilities in enhancing process execution and in mitigating deficits, if involved. Therefore, the influence of financial advisors on the process seems still limited.

This research proposes that no universal financing strategy exists in the explored midcap cases and a sole distinction between owner-managers and external managers is not able to explain differences and inefficiencies. However, based on the developed financing strategy typology, several determinants and elements become more or less important for the financing decision which are attributable to various capital structure theories. This investigation and the proposed typology might help in the ongoing discussion on competing capital structure theories.

The presented holistic financing strategy and the included financing principles are helpful for midcap company managers and shareholders in developing an own or in challenging and improving their existing financing strategy. Combined with the displayed prototype financing process, it can serve as a building block in enhancing financing decisions and overcome existing inefficiencies.

8.2 Limitations of the Research

Only midcap companies in Germany have been investigated and inference to other countries should be made with caution. The institutional environment regarding financing markets and practices as well as legal systems vary across countries and regions and therefore may influence financing decisions. Furthermore, the author relied on two interview participants per case, the managing director or owner-manager and one responsible person on the operational level, meaning that only a limited view is provided. Ideally, future research would also include other perspectives, for example, that of the firm's further key employees or of shareholders that have no

management role. This could be seen as a mean to obtain a more balanced understanding of financing in midcap firms and the identified processual gaps in the decision process.

Another potential limitation of this study is the small sample size of midcap companies and the cross-sectional research design. The sample was not random and was derived from one geographic population. The study is limited to the extent to which it can be generalised to a wider population of midcap firms. However, the thesis uses a qualitative methodology that involves in-depth, semi-structured interviews which is uncommon in financing research and provided new insights regarding the financing decisions in a midcap environment. These could be investigated further with a wider questionnaire survey to make the results of this study more robust. The developed management typology in chapter 6 and the financing principles presented in section 7.2 could serve as a basis for developing survey questions and testable variables to assess.

The aim of the research to investigate a single financing decision allowed for a comparison of the operational situation of the company and the corresponding financing decision. However, longitudinal studies could substantiate the findings by analysing, if several financing decisions were based on a financing strategy.

8.3 Recommendations for further Research

Based on the research design applied and the financing decision explored, the results presented in the previous chapters would recommend to further investigate or broaden the following aspects.

Develop and test the presented type of financing practices

The examples for financing principles based on the developed holistic financing strategy and the financing strategy typology might be useful to broaden the discussion on determinants that would be able to assess capital structure theories. As elements and categories for the financing strategy typology are based solely on the investigations of the cases explored, further empirical research will help to substantiate or adjust the presented typology.

Ginn et al. (1995) used a different approach to categorise financing strategies and capital structure theories. They asked the CEOs during the data collection to read a description of the Miles & Snow typology and to classify strategies of competitors on the basis of descriptive profiles. Furthermore, the CEOs had to classify the strategies of their own organisations. This approach would help to substantiate the findings from the present research, as interview participants were not asked to perform such a self-assessment.

Further analyse debt contract design and overconfidence bias

Meier & Esmatyar (2015) concluded in their research on management optimism and cost of capital that companies that are led by optimistic managers showed an increased gearing and a corresponding higher risk of insolvency. This adds to the result presented by Adam et al. in 2014 that overconfident managers are more likely to issue performance sensitive debt.

The present research was not able to identify these aspects as almost all cases achieved a refinancing via external debt. In addition, the findings indicated that an overconfidence bias could exist but could be attributed to owner-managers or to external managers in different situations. As a third aspect, the document review provided signs that the management used the debt contract to discipline shareholders and organisational elements of the firm. This would add to the assumption that debt contracts limit managerial overconfidence (Malmendier et al., 2011; Meier & Esmatyar, 2015). Further research could assess if this was only the case in the present research or if this could be a more general phenomenon.

Furthermore, the importance of the individual determinants that drive the selection of a particular instrument changed by comparing the original standard mezzanine decision with the refinancing. Longitudinal studies on financing decisions could help in understanding the effects that led to such a variation in the importance.

Expand towards further financing decisions and regions

The findings from this research and the proposed adoption of the Miles & Snow management typology to categorise German midcap companies in financing decisions should be contrasted with financing decisions in midcap firms in other countries.

To reveal general phenomena, this research could be performed in future refinancing decisions within German midcap companies, such as the refinancing of midcap bonds. It would be interesting to see whether the request by Börner et al. (2010) that midcap companies should strategically develop alternative sources of financing and to enhance transparency will further improve as already indicated by the more pro-active approach by the management.

Appendix

A. Introduction Pack

A.1 Cover Letter

Mark Hill
Zum Köpperner Tal 7
61381 Friedrichsdorf

Tel.: 0172 677 9907

[English convenience translation]

Mark Hill • Zum Köpperner Tal 7 • 61381 Friedrichsdorf

[redacted]

geschäftlich:
KPMG Aktiengesellschaft
Advisory, Corporate Finance
The Squaire, Am Flughafen
60549 Frankfurt am Main

Tel.: 069 9587 3704

Frankfurt am Main, 26. June 2013

PARTICIPATION IN AN ACADEMIC RESEARCH PROJECT

Dear [redacted],

The refinancing of the standard mezzanine programmes is one of the major strategic financing issues for midcap corporates in Germany. Given the complexity of this particular financing instrument and the missing refinancing option via new mezzanine facilities this process requires intensive management attention and capacity.

The research that I am currently conducting during my dissertation program as a Doctor of Business Administration at Edinburgh Napier University aims to provide an increased understanding of whether a formal financing strategy has been formulated and will be followed through this specific process to investigate the current state of the management decision process. The findings from the research will lead to the formulation of propositions how to further improve current financing strategies and financing processes of midcap corporates. In addition, it will provide guidelines to support a sound formation for these decisions.

Thank you very much for your willingness to participate in the research project. Information received as well as findings from the interview and the review of the information and documentation will be made anonymous and are solely used for the purpose of this research.

I look forward to hearing from you and am at your disposal for any questions you may have.

Kind regards,

Mark Hill

A.2 Research Presentation (including the Information Request List)

Edinburgh Napier UNIVERSITY

Mark Hill

Mind the Gap – The Recognition of Strategic Capital Structure Theory in the Refinancing of Midcap Standard Mezzanine Programmes in Germany

Outline of the Research Project

Edinburgh Napier UNIVERSITY

Contents

1 Aim and Objectives of the Research

2 Conceptual Layout

3 Feedback and Usage of the Content

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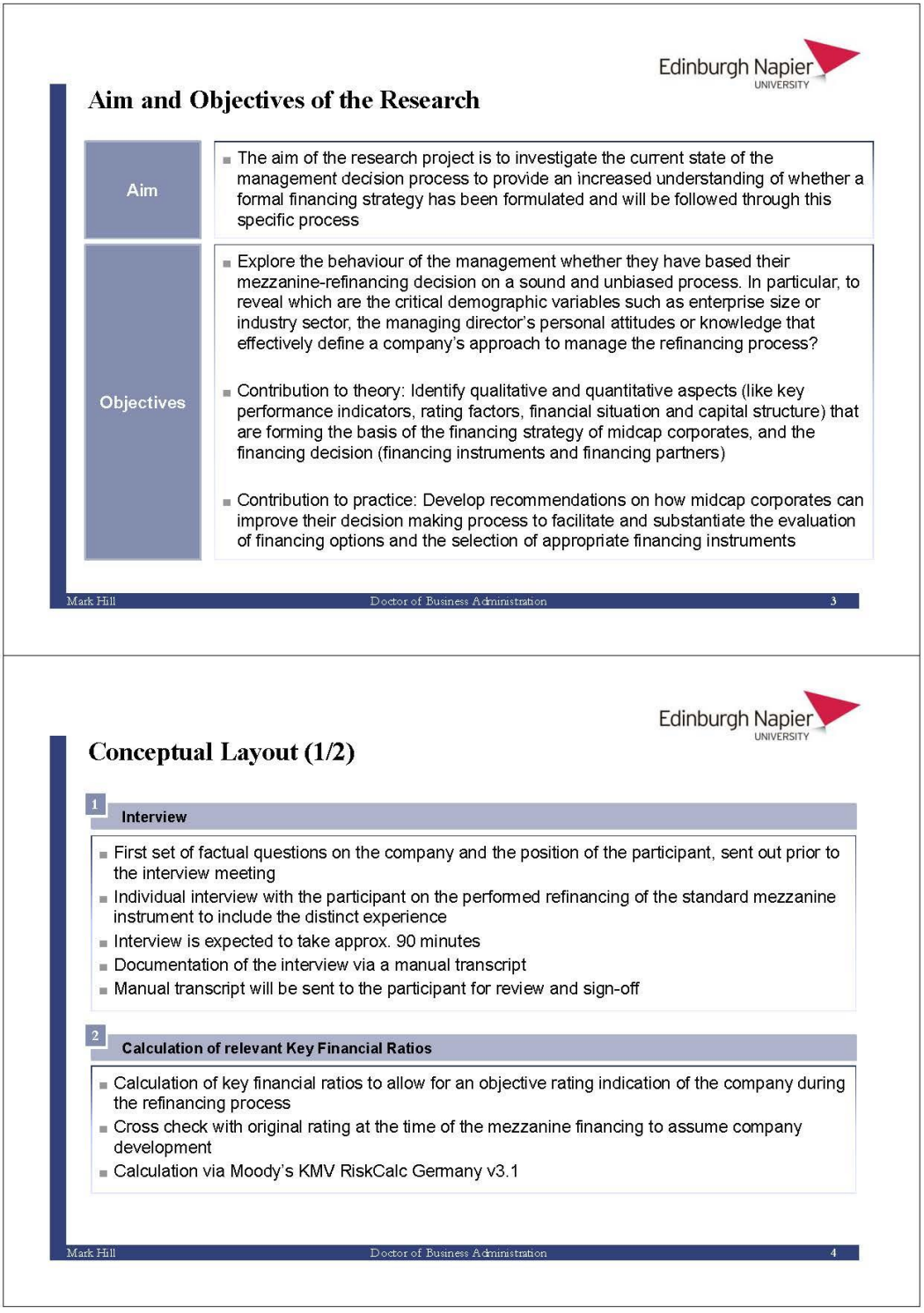
A.2 (continued)



Edinburgh Napier UNIVERSITY

Aim and Objectives of the Research

Aim

- The aim of the research project is to investigate the current state of the management decision process to provide an increased understanding of whether a formal financing strategy has been formulated and will be followed through this specific process

Objectives

- Explore the behaviour of the management whether they have based their mezzanine-refinancing decision on a sound and unbiased process. In particular, to reveal which are the critical demographic variables such as enterprise size or industry sector, the managing director's personal attitudes or knowledge that effectively define a company's approach to manage the refinancing process?
- Contribution to theory: Identify qualitative and quantitative aspects (like key performance indicators, rating factors, financial situation and capital structure) that are forming the basis of the financing strategy of midcap corporates, and the financing decision (financing instruments and financing partners)
- Contribution to practice: Develop recommendations on how midcap corporates can improve their decision making process to facilitate and substantiate the evaluation of financing options and the selection of appropriate financing instruments

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Conceptual Layout (1/2)

1 Interview

- First set of factual questions on the company and the position of the participant, sent out prior to the interview meeting
- Individual interview with the participant on the performed refinancing of the standard mezzanine instrument to include the distinct experience
- Interview is expected to take approx. 90 minutes
- Documentation of the interview via a manual transcript
- Manual transcript will be sent to the participant for review and sign-off

2 Calculation of relevant Key Financial Ratios

- Calculation of key financial ratios to allow for an objective rating indication of the company during the refinancing process
- Cross check with original rating at the time of the mezzanine financing to assume company development
- Calculation via Moody's KMV RiskCalc Germany v3.1

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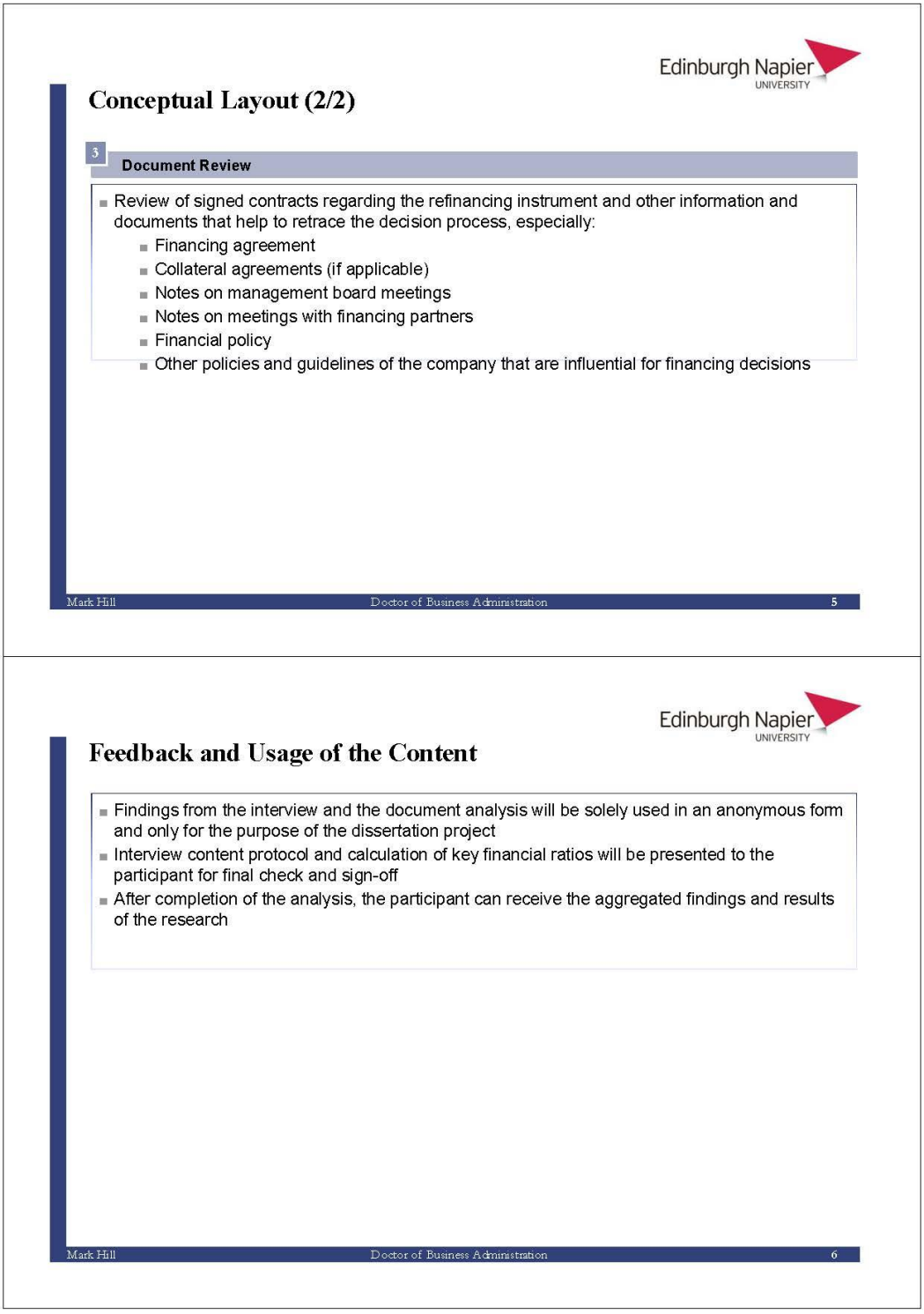
A.2 (continued)



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Conceptual Layout (2/2)

3 **Document Review**

- Review of signed contracts regarding the refinancing instrument and other information and documents that help to retrace the decision process, especially:
  - Financing agreement
  - Collateral agreements (if applicable)
  - Notes on management board meetings
  - Notes on meetings with financing partners
  - Financial policy
  - Other policies and guidelines of the company that are influential for financing decisions

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Feedback and Usage of the Content

- Findings from the interview and the document analysis will be solely used in an anonymous form and only for the purpose of the dissertation project
- Interview content protocol and calculation of key financial ratios will be presented to the participant for final check and sign-off
- After completion of the analysis, the participant can receive the aggregated findings and results of the research

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B. Interview Guidelines and Link to the Research Propositions

Section / question of the interview guideline	Related research proposition					
	RP1: A formulated financing strategy exists and has been applied to in the performed refinancing process	**RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking-order approach**	**RP3a: The corporate strategy and characteristics of the management team influence the determination of the refinancing instrument**	**RP3b: Relevant determinants and indicators influence the selection of the refinancing instrument**	**RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing**	**RP4b: The management team executed a timely refinancing process to avoid an increased risk**
Section A - Factual Questions						
1. Company Descriptors and Management Descriptors						
1.1. Current sales of the company (ranges)						
1.2. Number of employees (ranges)						
1.3. Legal constitution of the company						
1.4. Industry sector (multiple selection possible)						
1.5. Shareholder structure						
1.6. Current position within the company			X			
1.7 Prior job positions and responsibilities			X			
Section B - Interview						
2. Financing Strategy and Financing Hierarchy						
2.1. What is in your view a financing strategy?	X					
2.2. What are key elements of this financing strategy?	X	X		X		
2.3. Is there a formulated and agreed financing strategy in place and communicated to all relevant recipients?	X					
2.4. Is this financial strategy interlinked with the general company strategy and vision?	X		X	X		
2.5. Have there been any exceptions from this strategy in a financing decision process? If so, please exemplify	X	X	X	X		
2.6. When you compare your current financing structure, does it comply with the financing strategy?	X	X	X	X		
2.7. How has the standard mezzanine fitted in the financing strategy?	X	X	X	X		
2.8. How was the standard mezzanine financing instrument introduced to the company/management?	X	X				
2.9. Have advisors been involved in the original mezzanine financing process?					X	

B. (continued)

Section / question of the interview guideline	Related research proposition					
	RP1: A formulated financing strategy exists and has been applied to in the performed refinancing process	RP2: A targeted optimal financing structure exists and refinancing of the standard mezzanine has been based on a pecking-order approach	RP3a: The corporate strategy and characteristics of the management team influence the determination of the refinancing instrument	RP3b: Relevant determinants and indicators influence the selection of the refinancing instrument	RP4a: The management has implemented procedures and measures to facilitate a successful completion of the refinancing	RP4b: The management team executed a timely refinancing process to avoid an increased risk
Section B - Interview (continued)						
3. Refinancing Process						
3.1. How many months prior to maturity of the standard mezzanine did the company start the refinancing process?						X
3.2. Who initiated the refinancing process (management, lender, advisor)?						X
3.3. Please describe the overall economic environment the company operated in at the start of the refinancing?					X	
3.4. What have been the relevant determinants in analysing which instrument to use as the refinancing instrument?			X	X	X	X
3.5. Have advisors been involved in the refinancing process? If so, external advisors or bank advisors?					X	
3.6. Please describe the decision and negotiation process with the relevant financing partners?					X	X
3.7. Was the company able to complete the refinancing within the envisaged timeframe? If not, how did the company mitigate the financing gap?					X	X
3.8. Have there been other risk factors during the refinancing? How has the company reacted to them?					X	X
3.9. What have been further critical success factors in the refinancing?			X	X	X	X
4. Flexibility on Financing Strategy and post-financing Capital Structure						
4.1. Please describe your capital structure post refinancing?		X				
4.2. How has the refinancing process matched the defined financing strategy? (Check with question 3.2.)					X	
4.3. Has the financing risk profile of the company changed significantly? If so, please specify		X			X	
4.4. Please describe the relation of the company and the management team with their financing partners? Has it changed during the refinancing process?		X	X		X	
4.5. Will the financing strategy be adopted to reflect the experiences during the refinancing and the behaviour of the financing partners and the availability of refinancing instruments?	X	X			X	

C. Moody's KMV RiskCalc Financial Ratios and Calculation

Category	Definition
Activity	**Trade Creditors Ratio** (Trade Liabilities + Notes Payable)*360 to Sales
Debt Coverage	**Debt Coverage** Ordinary Profit Before Depreciation to (Liabilities + 50% of Special Items with Equity Character** – Advances)
Growth	**Sales Growth** Sales(t)/Sales(t-1) – 1
Leverage/Gearing	**Equity Ratio** (Equity + 50% of Special Items with Equity Character – Intangible Assets) to (Total Assets – Intangible Assets – Cash & Equivalents – Short Term Financial Investments – Land & Buildings) **Liabilities Structure** (Trade Liabilities + Bank Liabilities + Notes Payable) to (Liabilities + 50% Special Equity – Advances)
Liquidity	**Cash to Current Liabilities** Cash & Equivalents to Current Liabilities
Profitability	**EBITD to Assets** EBITD*** to Total Assets **Ordinary Profit to Sales** Ordinary Profit to Sales
Cost	**Personnel Expense to Sales** Personnel Expense / Sales
Size	**Size** Inflation adjusted Sales (2002 Euros)

** The name of this line item in German is "Sonderposten mit Rücklageanteil"
*** EBITD stands for Earnings before Interest, Taxes and Depreciation

Source: Moody's Investors Service (2006, p. 12)

D. Document and Information Overview

D.1 Case 1

D.1.1 Interviews

D.1.1.1 Interview 1

Position:	Chief financial officer (CFO)
Date of the interview:	12.07.2013
Duration:	160 minutes
Form:	Telephone call
Date of re-interview:	25.07.2013
Duration:	45 minutes
Form:	Telephone call

D.1.1.2 Interview 2

Position:	Head of the treasury department
Date of the interview:	05.07.2013
Duration:	180 minutes
Form:	Telephone call
Date of re-interview:	25.07.2013
Duration:	30 minutes
Form:	Telephone call

D.1.2 Analysed documents

- Company 1 audited consolidated financial statements as of 31.12.2004
- Company 1 audited consolidated financial statements as of 31.12.2011
- Investment policy of company 1
- Hedging memorandum of company 1

- For the original mezzanine financing
  - H.E.A.T MEZZANINE I-2005 S.A. financing agreement
  - Protocol of the supervisory board meeting, June 2005
- For the refinancing
  - Invitation letter to the banks to participate in the upcoming refinancing
  - Analysis of the refinancing proposals, dated 19.07.2012
  - Senior syndicated loan agreement, dated 18.12.2012 and previous draft versions
  - Internal email correspondence
  - Ledger of group bank facilities [Bankenspiegel] of company 1 as of 31.12.2012

D.1.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 22.07.2013

D.2 Case 2

D.2.1 Interviews

D.2.1.1 Interview 1

Position:	Chief financial officer (CFO)
Date of the interview:	06.11.2013
Duration:	120 minutes
Form:	Meeting

D.2.1.2 Interview 2

Position:	Head of the treasury department
Date of the interview:	06.11.2013
Duration:	160 minutes
Form:	Meeting

D.2.2 Analysed documents

- Company 2 audited consolidated financial statements as of 31.12.2005
- Company 2 audited consolidated financial statements as of 31.12.2012
- Company 2 vision and strategy presentation, dated 15.02.2005
- Company 2 strategy update, dated 15.09.2008
- For the original mezzanine financing
    - PREPS 2006-1 financing agreement
- For the refinancing
    - Invitation letter and request for proposal
    - Senior syndicated loan agreement, dated 15.02.2013
    - Draft versions of the syndicated loan agreement and compare versions to the prior syndicated loan agreement, dated 20.05.2009

- Presentations to the supervisory board
- Analysis on the received refinancing proposals

D.2.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 20.11.2013

D.3 Case 3

D.3.1 Interviews

D.3.1.1 Interview 1

Position:	Chief financial officer (CFO)
Date of the interview:	08.11.2013
Duration:	150 minutes
Form:	Meeting

D.3.1.2 Interview 2

Position:	Head of Finance, Treasury & Accounting
Date of the interview:	08.11.2013
Duration:	120 minutes
Form:	Meeting

D.3.2 Analysed documents

- Company 3 audited consolidated financial statements as of 31.12.2005
- Company 3 audited consolidated financial statements as of 31.12.2012
- Financing guidelines, dated June 2006
- For the original mezzanine financing
  - PREPS 2006-1 financing agreement
- For the refinancing
  - Invitation letter and information package shipped to the banks
  - Presentations to the supervisory board
  - Analysis on the received refinancing proposals
  - Ledger of group bank facilities [Bankenspiegel] of company 3 as of 31.12.2013

D.3.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 16.12.2013

D.4 Case 4

D.4.1 Interviews

D.4.1.1 Interview 1

Position:	Chief executive officer (CEO)
Date of the interview:	18.11.2013
Duration:	180 minutes
Form:	Meeting

D.4.1.2 Interview 2

Position:	Head of Treasury
Date of the interview:	19.11.2013
Duration:	150 minutes
Form:	Meeting

D.4.2 Analysed documents

- Company 4 audited consolidated financial statements as of 31.12.2005
- Company 4 audited consolidated financial statements as of 31.12.2012
- For the original mezzanine financing
  - CB MezzCAP financing agreement
  - Prime 2007-1 financing agreement
- For the refinancing
  - Documentation on the prolongation of the CB MezzCAP factility
  - Bridge loan agreement for the Prime 2007-1 facility
  - Memorandum of understanding on the envisaged long-term refinancing structure
  - Internal email correspondence

D.4.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 28.11.2013

D.5 Case 5

D.5.1 Interviews

D.5.1.1 Interview 1

Position: Chief financial officer (CFO)

Date of the interview: 10.12.2013

Duration: 120 minutes

Form: Meeting

D.5.1.2 Interview 2

Position: Head of Finance

Date of the interview: 10.12.2013

Duration: 140 minutes

Form: Meeting

D.5.2 Analysed documents

- Company 5 audited consolidated financial statements as of 31.12.2006
- Company 5 audited consolidated financial statements as of 31.12.2012
- Company 5 financing guidelines, dated 2003
    - PREPS 2007-1 financing agreement
- For the refinancing
    - Midcap bond prospectus of company 5, dated September 2013

D.5.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 26.11.2013

D.6 Case 6

D.6.1 Interviews

D.6.1.1 Interview 1

Position:	Chief executive officer (CEO)
Date of the interview:	20.01.2014
Duration:	90 minutes
Form:	Meeting

D.6.1.2 Interview 2

Position:	Head of Finance and Accounting
Date of the interview:	20.01.2014
Duration:	120 minutes
Form:	Meeting

D.6.2 Analysed documents

- Company 6 audited consolidated financial statements as of 31.12.2005
- Company 6 audited consolidated financial statements as of 31.12.2012
- For the original mezzanine financing
    - StaGe Mezzanine 2006 financing agreement

D.6.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 03.02.2014

D.7 Case 7

D.7.1 Interviews

D.7.1.1 Interview 1

Position: Chief executive officer (CEO)

Date of the interview: 21.01.2014

Duration: 100 minutes

Form: Meeting

D.7.1.2 Interview 2

Position: Head of Accounting

Date of the interview: 21.01.2014

Duration: 90 minutes

Form: Meeting

D.7.2 Analysed documents

- Company 7 audited consolidated financial statements as of 28.02.2003
- Company 7 audited consolidated financial statements as of 28.02.2010
- For the original mezzanine financing
    - PREPS 2004 financing agreement
- For the refinancing
    - Senior syndicated loan agreement, dated 24.11.2011
    - Draft versions of the syndicated loan agreement

D.7.3 Moody's KMV RiskCalc calculations

Sign-off from the company: 03.02.2014

E. Individual Case Summaries

The following section provides a more detailed overview on the cases analysed in this research. Each case overview will start with a short description of the company and the interview participants. It will then present the general outline on the company's financing strategy and the standard mezzanine instrument used. A description of the company's situation at the time of the refinancing completes each overview.

E.1 Case 1

E.1.1 Description of the Company

The company that forms the object of analysis for Case 1 is a family-owned business, operated by members of the owner family. The company is active in the food sector with annual sales ranging between € 250 million and € 500 million and 500 to 1,000 employees. It operates in 20 countries all over Europe and Russia and is constituted as incorporation ("Aktiengesellschaft") under German and Swiss law. Interview participants were the CFO of the company who is also representing one family tree and the Head of Treasury. The Head of Treasury joined the company almost ten years ago and held similar positions with a competitor for six years. He started his professional career as a public accountant working for a large international audit firm.

E.1.2 Financing Strategy

The company follows a financing strategy that is not formally written down, but generally accepted between the owner family trees and communicated to all relevant employees in the firm. Several financing guidelines e.g. for hedging and investment policy have been implemented as written memoranda as well as a handbook on business planning for all group companies. These memoranda include general rules on financing, limitations on bilateral financing via local bank partners and a general core bank policy (Company 1 hedging memorandum, D.1.2; Company 1 investment policy, D.1.2). The predominant strategic financing element is that there must not be any equity provided by external parties. In case of a change in the ownership structure, a formal memorandum at shareholder level limits the ability to sell equity stakes outside the existing family trees (Company 1 interview, D.1.1.1).

E.1.3 Standard Mezzanine Financing

The company used a standard mezzanine facility in 2005 out of the H.E.A.T MEZZANINE I-2005 S.A. programme. The principal relationship bank introduced the instrument to the company as the company was seeking for an expansion of its external financing capabilities to fund its Eastern European growth strategy. One of the key aspects for using standard mezzanine according to the two participants was the ability to enter into new external financing markets without diluting the existing shareholders and to cover with a significant reduction in sales of more than 17% in 2004, following a late response to a change in client preferences (Company 1 supervisory board presentation June 2005, D.1.2). The second key aspect was the enhancement of the group's economic equity ("wirtschaftliches Eigenkapital") with positive response from external debt providers. The standard mezzanine instrument could be classified as economic equity under German GAAP (HGB) and from the senior bank lenders in their internal rating of the company.

E.1.4 Refinancing

Situation of the Company

The company showed a strong position in the domestic market with a market share of approximately 50%, according to both interview participants. Nevertheless, some growth markets in Eastern Europe required ongoing funding from the top holding company, as they have not reached adequate profitability levels yet (Company 1 audited consolidated financial statements as of 31.12.2012, D.1.2). Overall group profitability, measured by Moody's KMV RiskCalc as EBITD to assets, increased to 17.9% prior to the refinancing, compared to 15.8% prior to the original mezzanine financing. These developments led to a strong credit profile of the company at the time of the refinancing, as the Moody's calculated equity ratio remained solid with 35% of the total assets. By looking at an equity ratio that is calculated by balance sheet equity divided through total balance sheet assets, the ratio reduced from 31% to 25% prior to the refinancing. Liabilities structure reached 87%, an almost identical level compared to 88% prior to the mezzanine financing.

Refinancing Process

The refinancing process started with the approach of potential financing partners six to seven months in advance of the maturity date. There was a differing view from both participants on the question, who initiated the refinancing process. One participant stated that the company started with the internal preparation. However, the second interview participant quoted that the former core relationship bank that already introduced the standard mezzanine approached the company and presented an overall refinancing concept for the company and its subsidiaries (Company 1 interview, D.1.1.1; Company 1 interview, D.1.1.2).

Both interview participants describe the refinancing process as complex and lengthy, as the new financing structure did not only include the refinancing of the standard mezzanine, but also a complete group wide refinancing. This shows a change in the overall financing strategy from bilateral financing to a centralised lending with several financing instruments to be combined. A selection process for the lead banks included up to nine potential financing partners (Company 1 senior syndicated loan agreement, D.1.2). Such selection process has never been performed before (Company 1 interview, D.1.1.2). Nevertheless, the company was able to use the favourable financing environment and the increased appetite from debt investors for non-cyclical borrowers at that time to replace the standard mezzanine.

Changes in the Financing Strategy

The overall financing strategy had undergone a significant change during the refinancing in 2012 and 2013. The general financing layout changed from bilateral loans at the level of the respective group company to a syndicated financing at the level of the group top holding company. Nevertheless, some bilateral financings have been prolonged or newly introduced to cover individual needs, e.g. for the Eastern European subsidiaries or for state-backed financing ("Förderkredite") (Company 1 bank account ledger as of 31.12.2012, D.1.2).

Several aspects were mentioned to be key in the refinancing. The first aspect was the intention to broaden the lender base by introducing new banks to the company and other potential debt lenders by debt capital market products to the financing structure. The second aspect was the requirement by the top management and the owner families to strictly limit the information that will be made available to the potential financing partners. The third aspect was a limitation requirement on transferability of the debt

instrument to ensure that financing partners chosen will be the relevant negotiation partners in a stress scenario (Company 1 interview, D.1.1.1; Company 1 interview, D.1.1.2). The fourth and last aspect was a focus on well established financing products to ensure that the instrument chosen will not bear an increased refinancing risk due to its unavailability at the next refinancing. The third and fourth aspect can be seen as a direct result from the former standard mezzanine financing and the missing direct refinancing option by using a new standard mezzanine instrument. These aspects are now seen to be core elements of the financing strategy.

E.1.5 Post-financing Capital Structure

Both participants stated that the company shows an increased level of senior debt, even though provided via several financing instruments. The company's equity remained at a very comfortable level and liquidity is seen from the participants to be at an adequate level to allow for planned investments and operational needs of the group. The comparison of the calculated key financial ratios before the initial standard mezzanine financing and before the performed refinancing substantiates the feedback from the interview partners.

The missing of an instrument that also qualifies as economic equity and the ongoing financing needs of the Eastern European activities led to the conclusion from both interview participants, that there is an enhanced risk from the financing activities. However, both participants stated that this enhanced financing risk is mitigated by the operational strength of the group and by the new financing structure that provides greater flexibility and refinancing certainty (Company 1 interview, D.1.1.1; Company 1 interview, D.1.1.2).

Moody's KMV RiskCalc Key Financial Ratios of Company 1

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	39.27	50.53
Debt Coverage		
Debt Coverage	30.4%	29.8%
Growth		
Sales Growth	-17.2%	6.7%
Leverage/Gearing		
Equity Ratio	46.3%	35.0%
Liabilities Structure	88.4%	87.0%
Liquidity		
Cash to Current Liabilities	34.4%	18.1%
Profitability		
EBITD to Assets	15.8%	17.9%
Ordinary Profit to Sales	7.4%	8.4%
Cost		
Personnel Expenses to Sales	12.2%	13.2%

Source: Moody's KMV RiskCalc calculations, D.1.3.

E.2 Case 2

E.2.1 Description of the Company

Case 2 focuses on a company which is active in the automotive sector, employs between 1,000 and 1,500 people and achieves sales in a range between € 250 million and € 500 million. It is incorporated as German Limited partnership with a limited liability company as general partner ("GmbH & Co. KG"). In 2008, a private equity investor became minority shareholder of the company through a capital increase; the majority of the shares remain with the family of the founder. This change in the ownership structure followed an intense restructuring of the company in the years 2008 and 2009 given the overall breakdown of the global automotive industry. The CFO as well as the Head of Treasury aced as interview participants. Both participants held previous positions with other firms. The CFO acted as Director of Finance of a competitor and as Director of Finance for the company's EMEA operations prior to the actual function. The Head of Treasury held positions as Vice President Finance for a multinational industrial conglomerate and started her career as a relationship manager of an international bank.

E.2.2 Financing Strategy

There is no formal written financing strategy existing within the company, but several elements have been developed and agreed between the board of directors and the supervisory board. These elements include a target capital structure of the company, preferred financing instruments and key financial indicators presented in the management reporting (Company 2 management reporting as of 30.09.2013, D.2.2). Key financial indicators and their target ranges are formulated within the general corporate strategy (Company 2 vision and strategy presentation, dated 15.02.2005, D.2.2.; Company 2 strategy update, dated 20.09.2008, D.2.2). Both participants stated that the financing strategy is a segment of the overall corporate strategy.

E.2.3 Standard Mezzanine Financing

The standard mezzanine instrument was implemented in 2006 as a requirement from banks to enhance the company's balance sheet equity – which represented 18.5% of the total assets – in preparation of an external growth initiative (Company 2 audited consolidated financial statements as of 31.12.2005, D.2.2). Several relationship banks

introduced different standard mezzanine tranches to the company. The shareholders at that time were reluctant to provide further liquidity to bolster the capital structure of the firm but reject any option to introduce an external shareholder (Company 2 interview, D.2.1.1). External debt providers reacted positive on the inclusion of the standard mezzanine in their internal rating and one interview participant stated that the standard mezzanine also enhanced the external rating profile to some extent. The second participant contrasted that response as in her view there was only very limited to none effect in the external rating result (Company 2 interview, D.2.1.2). The company used a PREPS 2006-1 tranche as standard mezzanine instrument.

E.2.4 Refinancing

Situation of the Company

In the years 2008 and 2009, the global automotive sector went through a significant restructuring phase, which affected the company. The company had to cope with several breaches of financial covenants under the existing senior loan facilities and needed to agree a restructuring-adjusted new syndicated loan agreement. To release the company from this unfavourable negotiating situation with the core banks, the shareholders changed their rejection against external equity and introduced a minority shareholder to the capital structure. After a recovery year in 2010, the company was able to increase performance and profitability in 2011 and 2012. However, the equity ratio remained with 23.2% of total assets at a rather low level and shows the significant effects of leveraging the business before the execution of the expansion strategy and the following restructuring phase (Company 2 audited consolidated financial statements as of 31.12.2012, D.2.2). The effects of the restructuring phase were also traceable in the development of the cost indicator calculated with Moody's KMV RiskCalc. Personnel expenses to sales lowered from 23.3% in 2005 to 18.9% in 2012 (Company 2 Moody's KMV RiskCalc calculations, D.2.3).

Refinancing Process

Both participants describe the refinancing process with the relevant financing partners as complex even though the company started with the internal preparations 14 to 16 months before the maturity of the standard mezzanine (Company 2 interview, D.2.1.1; Company 2 interview, D.2.1.2). The company approached potential financing partners 12 months prior to maturity. One aspect that enhanced complexity was the starting point of the negotiations as all potential financing partners based negotiations on the existing restructuring-near syndicated loan agreement.

In addition, the early start of the refinancing process required the standard mezzanine provider to accept a voluntary prepayment. However, the provider showed limited availability to co-operate due to discontinuation of his activities, but the relationship bank that introduced the mezzanine provider helped in the negotiations and became one of the Mandated Lead Arrangers of the new financing (Company 2 interview, D.2.1.2).

Given the equity ratio with 23% before the refinancing being at the lower end of a comfortable area, the banks tried to shift parts of the financing to a debt capital market instrument (hybrid bond). Both participants stated that this was not in the interest of the company as the firm skipped the external rating during the restructuring phase and was not intended to be re-established (Company 2 interview, D.2.1.1; Company 2 interview, D.2.1.2).

A special situation occurred during the refinancing process, as an EU antitrust investigation started in three countries during the negotiation. Nevertheless, a clear and transparent communication strategy to the mandated banks led to almost no further complexity according to both participants (Company 2 interview, D.2.1.1; Company 2 interview, D.2.1.2).

Changes in the Financing Strategy

Given the experiences of the shareholder and the management of the company, one essential aspect of the refinancing process was to establish a stable and well-mixed lender base by leaving behind the restructuring-near financing contracts at the same time. The management decided not to execute a new financing structure including any debt capital market instruments, as proposed by the banks. Therefore, there has not

been a significant change in the overall financing strategy, but several aspects could be adjusted during the refinancing process. In addition, the new financing structure allowed the company to gain flexibility for the upcoming growth scenario in the global automotive sector in 2013 and beyond (Company 2 interview, D.2.1.1).

E.2.5 Post-financing Capital Structure

The capital structure post refinancing is seen to be more simplified as no further mezzanine or hybrid financing instrument is included. Even though the equity ratio decreased compared to the situation prior to the initial mezzanine financing, both participants describe their equity position as solid and within the defined management key performance indicators (Company 2 interview, D.2.1.1; Company 2 interview, D.2.1.2).

They see their relationship with their lenders enhanced during the last 16 months due to constructive discussions and negotiations. In addition to the negotiations on the syndicated loan facility, the company also initiated alternative financing instruments such as reverse factoring to enhance their equity ratio in the future (Company 2 interview, D.2.1.2).

Further changes in their financing strategy might occur according to the CFO as soon as the management thinks an adjustment will be necessary due to internal developments and/or due to changes in the financing markets (Company 2 interview, D.2.1.1).

Moody's KMV RiskCalc Key Financial Ratios of Company 2

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	30.39	34.18
Debt Coverage		
Debt Coverage	26.1%	34.8%
Growth		
Sales Growth	4.4%	0.6%
Leverage/Gearing		
Equity Ratio	18.5%	23.2%
Liabilities Structure	69.2%	63.1%
Liquidity		
Cash to Current Liabilities	16.6%	15.7%
Profitability		
EBITD to Assets	14.2%	18.6%
Ordinary Profit to Sales	3.9%	4.6%
Cost		
Personnel Expenses to Sales	23.3%	18.9%

Source: Moody's KMV RiskCalc calculations, D.2.3.

E.3 Case 3

E.3.1 Description of the Company

Case 3 explores a family-owned company that is active in the broader power and utilities sector. The company presented current sales between € 50 million and € 150 million and employs between 100 and 250 people. The company is founded as incorporation ("Aktiengesellschaft") under German law. The two interview participants were the CFO and the Head of Finance, Treasury & Accounting. Both participants have a qualification as a German accountant. The CFO held previous positions as Head of Finance of a large cap competitor. The Head of Finance, Treasury & Accounting started his career as a banker, before joining an accountancy firm. The CFO is also representing one tree of the owner family.

E.3.2 Financing Strategy

The company implemented formulated financing guidelines in 2006. These financing guidelines outline the targeted capital structure of the company, preferred financing instruments, current relationship banks as well as a hedging concept regarding instruments and strategies (Company 3 financing guidelines, D.3.2). The financing guidelines are distributed to the relevant organisational areas of the company, including treasury, accounting, financing and legal (Company 3 interview, D.3.1.1).

In addition, the guidelines set out the basic parameters on how these organisational areas should act and interact. The overall financing structure of the company is also described therein, as well as definitions of key processes for the group wide liquidity and financing management (Company 3 financing guidelines, D.3.2). Furthermore, the financing guidelines lay out the information and transparency rules the company wants to follow, especially standards for the financial reporting, external communication and fiscal reports.

E.3.3 Standard Mezzanine Financing

Several relationship banks presented standard mezzanine options to the company. The instrument chosen was a tranche of PREPS 2006-1, which has been element of a proposal from one relationship bank for a complete refinancing of debt layers by covering further growth expectations (Company 3 interview, D.3.1.1). The structure

allowed to enhance the (economic) equity ratio and therefore enabled further financing steps to cope with the expected further organic growth from 2006 onwards (before the financial crisis) and the need for additional working capital and capex financing.

The standard mezzanine has been not explicitly seen as an exception the financing guideline, because the capital structure – which is measured via equity ratio and leverage – was met and the instrument was developed by one of the relationship banks and has been presented by them to the company.

E.3.4 Refinancing

Situation of the Company

The company had positive earnings in the years 2010 to 2012 which they managed to retain and therefore enhanced its equity ratio. The regulatory uncertainty in the German power and utilities market that arose in the last years led to a decrease in profitability margins and key financial ratios. EBITD to assets lowered from 9.0% one year prior to the original mezzanine financing in 2005 to 6.8% in 2012 (Company 3 audited consolidated financial statements as of 31.12.2012, D. 3.2).

Refinancing Process

Approaches from several consultancy firms and researcher that were performing studies on the upcoming refinancing led to an early internal discussion on how to refinance the standard mezzanine. However, two relationship banks contacted the company approximately 12 months before the maturity date and presented refinancing concepts (Company 3 interview, D.3.1.2).

The mentioned uncertainty on the legal and regulatory environment in the sector led to a situation where financing partners performed a detailed check of the presented financial plan. As a result, they requested some security mechanisms in the new loan documentation as well as an external validation of the business plan via a due diligence to provide additional comfort (Company 3 interview, D.3.1.2). The mitigation of the risk concerns from the lenders also included a careful design of financial covenants, including their adjustment and of the overall financing documentation.

The negotiations were described from both participants as constructive but intense. The core bank that introduced the standard mezzanine had to be negotiated to become

one of six relationship banks that offer a new syndicated loan facility. The bank that provided the refinancing proposal has been upgraded to become coordinator of the relationship banks (Company 3 interview, D.3.1.1; Company 3 interview, D.3.1.2).

Changes in the Financing Strategy

The repayment of standard mezzanine was possible via retained earnings and a slight increase in bank debt. Therefore, only partners mentioned within financing guidelines provided external debt financing to the company after the refinancing of the standard mezzanine (Company 3 interview, D.3.1.1). Given the operational performance, leverage even declined compared to the year of mezzanine issuance. However, one participant questioned whether the current capital structure combined with the decreasing profitability would match the challenges arising from regulatory as well as economic uncertainty. The existing shareholders gave a clear refusal on the management's proposal to introduce a minority shareholder to strengthen the equity ratio (Company 3 interview, D.3.1.1).

E.3.5 Post-financing Capital Structure

The new financing structure incorporates a new financing element, reverse factoring, which has been introduced in the bank's proposal. Both participants stated that the overall financing risk profile has been bolstered due to (a) the long term refinancing, (b) the introduction of an additional financing instrument, and (c) the composition of the bank club which broadened the lender base and the conservative documentation (Company 3 interview, D.3.1.1; Company 3 interview, D.3.1.2). The equity position is described as being comfortable for companies within the power and utilities sector, but with limited potential to enhance the equity via a capital increase to cope with increased risk due to operational and regulatory uncertainty. Therefore, the management described the overall risk profile of the company as increased compared to the initial mezzanine financing process (Company 3 interview, D.3.1.1).

The financing guidelines has been adopted several times since the initial mezzanine financing. For instance, approved financing partners had to be changed due to the discontinuation of some banks in the German market during the last years, or their re-entry into the financing market. As another example, reverse factoring needed to be

adopted as preferable financing instrument in the financing guidelines (Company 3 interview, D.3.1.1).

Moody's KMV RiskCalc Key Financial Ratios of Company 3

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	2.02	1.61
Debt Coverage		
Debt Coverage	38.3%	28.0%
Growth		
Sales Growth	11.1%	4.7%
Leverage/Gearing		
Equity Ratio	22.9%	29.5%
Liabilities Structure	53.9%	26.0%
Liquidity		
Cash to Current Liabilities	16.6%	1.4%
Profitability		
EBITD to Assets	9.0%	6.8%
Ordinary Profit to Sales	7.2%	4.6%
Cost		
Personnel Expenses to Sales	12.7%	7.2%

Source: Moody's KMV RiskCalc calculations, D.3.3.

E.4 Case 4

E.4.1 Description of the Company

Owned by the founder family and operated by members of the family, the company that was studied in this case is active in the manufacturing sector, especially for the transport and logistics industry. Sales levels were between € 50 million and € 150 million. The company employed less than 100 people in 2013. Interview participants were the CEO as well as the Head of Treasury. Both represent the owner family and had no prior external job experience.

E.4.2 Financing Strategy

The participants explained that there is no need for a formulated financing strategy as family members – who are also shareholders – cover all relevant financing functions (Company 4 interview, D.4.1.1; Company 4 interview, D.4.1.2). Therefore, all interests are aligned. Nevertheless, they refer to generally accepted financing principles. The major paradigm is that the equity must be kept within the owner family. A second paradigm is based on the financial covenant in their senior financing agreement that they must comply with. This financial covenant is a leverage ratio (Company 4 interview, D.4.1.2).

E.4.3 Standard Mezzanine Financing

Company 4 represents the only company within the analysed cases that used two standard mezzanine tranches from different providers. In 2006, the company obtained a tranche under the CB MezzCAP programme. The following year, the second tranche was paid out to the company from the Prime 2007-1 programme.

According to both participants, standard mezzanine fitted into the financing principles as it did not dilute the existing shareholder structure. In addition, it represented a tax efficient financing instrument and (at least under German HGB) was not only considered as economic equity capital in the view of the financing partners but also as equity element in the financial statement of the company.

One of the relationship banks introduced the first standard mezzanine tranche as part of a request for a larger investment financing to establish a new production line. The

second instrument was chosen via a request for proposal that was initiated via the company from three relationship banks (Company 4 interview, D.4.1.2).

E.4.4 Refinancing

Situation of the Company

The company had to undergo a significant replacement and expansion capex cycle in the years 2010 and 2011 to cover the planned operational development. The transportation and logistics sector in 2013 still recovered from the two crisis pushbacks in 2007/2008 and in 2010. Therefore, the sector, which the company delivers all products to, is still very careful in replacing existing machines and extends the average economic lifetime, which led to a shortfall in orders in 2011 (Company 4 interview, D.4.1.1). The year 2012 provided a slight increase in order intake, but still approximately 20% below the strategic business plan of the company (Company 4 interview, D.4.1.2). Given that the average duration from order intake to sales takes eight to twelve months, revenues decreased again by 7.4% in 2012 as shown in the table. Profitability levels and equity ratio decreased accordingly (Company 4 Moody's KMV RiskCalc calculations, D.4.3).

The firm renewed its facilities in 2011 and increased its production capacities which led to a significant production overcapacity. In addition, one family tree offered a sale of their stake, which required significant financing that was needed to be provided via the company (at least a majority stake) (Company 4 interview, D.4.1.1).

Refinancing Process

The existing mezzanine providers approached the company in Spring 2013 and asked for a statement on the repayment strategy after their review of the financial reporting for the fiscal year 2012 and a potential covenant default by year-end 2013 (based on the presented budget for 2013) given the development in the sector (Company 4 interview, D.4.1.2).

First negotiations with the existing senior lenders led to the conclusion, that a complete long term refinancing of the mezzanine facilities via debt was not possible based on the financial performance of the company in 2011 and 2012. The banks also rejected the proposed purchase of the equity stake from one family tree by the remaining shareholders by using company debt capacity (Company 4 interview, D.4.1.1). The

following negotiations led to an extension of one mezzanine tranche and a bridge financing for the second mezzanine tranche. This bridge structure allowed for a more comfortable timeframe to negotiate the overall long term refinancing of the firm with senior lenders (Company 4 interview, D.4.1.2).

The planned change in shareholder structure has been put on hold, because (a) the current financial development led to a new purchase price assessment for the equity stake, and (b) the given unavailability of sufficient funds from senior lenders, the remaining shareholders and company liquidity to purchase the stake on sale. The banks forced the company to hold the potential change in the shareholder structure until the mezzanine refinancing was solved by mid-2014 at least (Company 4 interview, D.4.1.1).

Changes in the Financing Strategy

The described unsolved long-term refinancing situation and the intended change in the shareholder structure might lead to changes in the accepted financing principles. One interview participant stated that an external minority shareholder could be included until the remaining family tree can repurchase this minority stake and the long-term financing of the company is secured (Company 4 interview, D.4.1.1).

E.4.5 Post-financing Capital Structure

Given the refinancing process was still in process at the time of the research, the definitive capital structure after the refinancing was not clear. One participant stated that the capital structure is likely to involve individual mezzanine or a minority external shareholder (Company 4 interview, D.4.1.1). The postponed sale of the equity stake and the decreased risk profile of the firm due to the sector environment is expected to lead to a situation where the company will be bound to long term debt financings and potentially external equity / mezzanine providers to allow for a successful refinancing of the standard mezzanine and - eventually - the financing of the buy-out (Company 4 interview, D.4.1.2).

Moody's KMV RiskCalc Key Financial Ratios of Company 4

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	16.55	7.32
Debt Coverage		
Debt Coverage	18.0%	13.5%
Growth		
Sales Growth	8.7%	-7.4%
Leverage/Gearing		
Equity Ratio	37.4%	23.7%
Liabilities Structure	62.0%	67.7%
Liquidity		
Cash to Current Liabilities	10.7%	5.4%
Profitability		
EBITD to Assets	13.8%	6.3%
Ordinary Profit to Sales	5.0%	1.4%
Cost		
Personnel Expenses to Sales	23.0%	22.0%

Source: Moody's KMV RiskCalc calculations, D.4.3.

E.5 Case 5

E.5.1 Description of the Company

The company that is explored in Case 5 is an international manufacturing company with sales in a range between € 250 million and € 500 million. The company employs between 500 and 1,000 people and is incorporated as a German limited liability company ("GmbH"). The group is structured as a holding with several operating entities. The holding company is family owned, but operated via an external management team. Interview participants were the CFO and the Head of Finance of the holding company that are responsible for the group-wide financing. Whereas the Head of Finance started his career with the company, the CFO held a prior position as CFO of the European operations of a large cap competitor.

E.5.2 Financing Strategy

The company has implemented formulated financing guidelines since the year 2003. These guidelines include group-wide financing rules, especially cash pooling, external financing options and limitations. The financing guidelines do also supply a process handbook for financing decisions at subgroup and at group level providing key terms and conditions that need to be considered in each financing negotiation (e.g. collateralisation and/or parent guarantees, maturity profiles). Furthermore, the guidelines include a list of preferred bank partners to ensure not to have a fragmented bank universe and to avoid concentration risk at the same time (Company 5 financing guidelines, D.5.2).

The financing guidelines have been developed in the group wide strategy review process in 2003 (after the dotcom crisis) and the abandoning of the planned IPO of the company (Company 5 interview, D.5.1.1). They are part of every strategy review at top-management level and have been adjusted several times due to changes in the group structure and the implementation of a cash pooling agreement. They are currently under revision to allow for the implementation of a separate special purpose vehicle ("FinanceCo") to prepare for the first planned bond issuance on the German midcap bond market (Company 5 interview, D.5.1.1).

E.5.3 Standard Mezzanine Financing

The company intended to perform an IPO in 2002, but due to the unavailability of the stock market, the existing shareholder had to inject additional capital to cover the turbulences in the years 2002 and 2003. In 2006, the existing shareholder intended a partial repayment of the capital injection to pursue other financing options (Company 5 interview, D.5.1.2). Standard mezzanine was the preferable option for the company at that time as it enhanced the overall financing capability of the group by not enlarging the financing risk profile significantly. Therefore, the company kept the economic equity at a stable level and managed to use this situation for a refinancing process to secure favourable terms in 2007 (Company 5 interview, D.5.1.2).

E.5.4 Refinancing

Situation of the Company

After an internal restructuring process in 2008 and 2009, leading to cost reductions and increased flexibility to mitigate further economic downturns, the company had a positive development in the years 2011 to 2013 (Company 5 interview, D.5.1.1). The EBITDA-breakeven point as key financial performance indicator for the restructuring was lowered to 70% of actual sales, compared to 85% in 2007 (Company 5 interview, D.5.1.2). EBITD to assets were at a record level of 23.3%, according to one interview participant (Company 5 interview, D.5.1.2), compared to 7.2% at the time of the initial mezzanine financing (Company 5 Moody's KMV RiskCalc calculations, D.5.3).

Refinancing Process

The management started to evaluate refinancing options approximately 12 months before the maturity date of the standard mezzanine, based on a proposal from a financing partner to refinance standard mezzanine via a German midcap bond (Company 5 interview, D.5.1.1).

The company invited several potential financing partners and arrangers of debt capital market products to select the preferred solution for the group. The request for proposal asked for a refinancing not only of the standard mezzanine, but for a refinancing of major parts of group debt. The selection process led to a combination of a debt capital market instrument (midcap bond) with a bank-arranged revolving facility (Company 5 interview, D.5.1.2). Placement risks of a debt capital market instrument were

mitigated via a bridge-to-bond financing that was offered from the mandated banks. According to both participants, the financing markets showed increased volatility at the year-end of 2013. Therefore, in case that the placement would not have met expectations, the bridge-to-bond facility included an option to be shifted in a mid-term syndicated loan facility (Company 5 interview, D.5.1.1; Company 5 interview, D.5.1.2).

Changes in the Financing Strategy

The usage of a debt capital market instrument did not involve a change in the financing strategy of the group, as the access to capital markets (debt and equity) was already considered when the financing guidelines were established in 2003 (Company 5 interview, D.5.1.1; Company 5 interview, D.5.1.2).

E.5.5 Post-financing Capital Structure

The overall refinancing included the standard mezzanine tranche as well as senior secured term debt and revolving credit facilities through a combination of retained earnings, the issuance of a midcap bond (backed by a bridge loan facility) and a senior secured revolving credit facility (Company 5 interview, D.5.1.2). As a result, the equity ratio decreased from 38.3% prior to the refinancing to 30.1%, due to the lack of the midcap bond to be disclosed as equity-like instrument (Company 5 Moody's KMV RiskCalc calculations, D.5.3). But in fact, the midcap bond represents a subordinated instrument compared to the senior secured revolving credit facility (Company 5 midcap bond prospectus, D.5.2). Nevertheless, the equity ratio represents in the view of the interview participants a solid figure, given the fact that during the restructuring years in 2008 and 2009 the equity ratio was even below levels of 30.0% (Company 5 interview, D.5.1.1; Company 5 interview, D.5.1.2).

Interest expenses increased at group level due to refinancing of senior secured term debt via the midcap bond. However, other terms and conditions (such as repayments, information rights and financial covenants) could be modified in advance of the company (Company 5 interview, D.5.1.2). The bond serves as the main long term debt financing instrument and shows with a tenor of seven years the same maturity profile as standard mezzanine (Company 5 midcap bond prospectus, D.5.2).

Both participants recognised the increased flexibility that the company gained by entering into a new financing market and reduce dependence from financing banks (Company 5 interview, D.5.1.1; Company 5 interview, D.5.1.2).

Moody's KMV RiskCalc Key Financial Ratios of Company 5

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	101.46	48.72
Debt Coverage		
Debt Coverage	9.4%	59.0%
Growth		
Sales Growth	16.6%	3.0%
Leverage/Gearing		
Equity Ratio	42.7%	38.3%
Liabilities Structure	98.4%	85.0%
Liquidity		
Cash to Current Liabilities	10.4%	18.0%
Profitability		
EBITD to Assets	7.2%	23.3%
Ordinary Profit to Sales	3.0%	11.1%
Cost		
Personnel Expenses to Sales	39.0%	36.3%

Source: Moody's KMV RiskCalc calculations, D.5.3.

E.6 Case 6

E.6.1 Description of the Company

The family-owned and operated company achieved sales in a range up to € 50 million. The company, which is active in the manufacturing sector, employs less than 100 persons. The CEO as well as the Head of Finance and Accounting acted as interview participants, who also represent the owner family. The CEO has been with the firm for more than 20 years, starting with his apprenticeship. The Head of Finance and Accounting started his career with the company directly after his completion of his diploma in commerce.

E.6.2 Financing Strategy

Even though both participants responded that a financing strategy should be "one of the baseplates of the overall strategy of a firm" (Company 6 interview, D.6.1.1), the company has no formulated financing strategy in place. They stated that there is no need for a formulated strategy or a described process as financing decisions are taken by the owner in general. In case the owner decides to pursue a different financing instrument than used before, the financing strategy changes (Company 6 interview, D.6.1.1; Company 6 interview, D.6.1.2). As standard mezzanine has never been used before the year 2006, this was seen as an exception from the overall financing strategy in 2007. One participant redefined during the interview session that in fact, the company has no financing strategy, but a financing behaviour (Company 6 interview, D.6.1.2). The company endeavoured a broad financing base that is structured via bilateral financing agreements with ten banks.

E.6.3 Standard Mezzanine Financing

The company used a tranche of StaGe Mezzanine 2006 programme. According to the participants, standard mezzanine was seen as another bilateral agreement with a financing partner, introduced by relationship banks. Therefore, it fitted into the described financing behaviour (Company 6 interview, D.6.1.1; Company 6 interview, D.6.1.2).

Standard mezzanine was introduced to the firm by the relationship banks as they requested an increase in the balance sheet equity ratio, following a significant increase

in sales in the years before (Company 6 interview, D.6.1.2). The owner family was not able to provide an adequate amount of new equity. Therefore, standard mezzanine filled this gap and avoided a dilution of the current shareholders. Several proposals from relationship banks were provided to the company; two offers were negotiated in depth (Company 6 interview, D.6.1.1).

E.6.4 Refinancing

Situation of the Company

The company faced an overall prospering economic environment in the years 2011 and 2012 in the core domestic market which led to strong earnings. The interview participants described the company to be still in a growth phase, with an increase in sales by 16.9% in the year before the refinancing (Company 6 interview, D.6.1.1). In addition, the company's profitability rose to 15.0% on EBITD to assets basis and to 12.5% in the profit to sales ratio (Company 6 Moody's KMV RiskCalc calculations, D.6.3).

Refinancing Process

The refinancing process was initiated six months prior to the maturity date of the standard mezzanine facility as several relationship banks approached the firm. The discussions were described as being constructive and the negotiation and refinancing process was completed within ten weeks (Company 6 interview, D.6.1.2).

Changes in the Financing Strategy

The overall financing behaviour or strategy remained unchanged in the view of the participants (Company 6 interview, D.6.1.1). The company kept bilateral relationships to each financing partner rather than to opt for a syndicated credit solution. Strong balance sheet and retained earnings allowed a refinancing structure excluding a new junior debt instrument. Based on the financing market conditions at the refinancing, new working capital financing instruments were introduced to the company that fitted the current financing need (Company 6 interview, D.6.1.2).

E.6.5 Post-financing Capital Structure

Due to the company's retained earnings from the strong economic years 2011 and 2012, no new mezzanine was required. The introduction of new working capital

financing products like borrowing base lending and factoring helped to secure all financing needs. As a result, the company broadened its lender base and instruments available to the company (Company 6 interview, D.6.1.2). The avoidance of shareholder funds to be involved in the refinancing and any restrictions on dividends by the financing partners was seen as another important factor to be achieved in the refinancing (Company 6 interview, D.6.1.1). The equity ratio remained around 30% and the financing banks were also willing to accept short term equity levels below 30% during the fiscal year in case that borrowing base financing will lead to such level (Company 6 interview, D.6.1.2).

Moody's KMV RiskCalc Key Financial Ratios of Company 6

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	49.03	48.96
Debt Coverage		
Debt Coverage	12.0%	24.0%
Growth		
Sales Growth	6.1%	16.9%
Leverage/Gearing		
Equity Ratio	16.6%	31.2%
Liabilities Structure	89.9%	98.7%
Liquidity		
Cash to Current Liabilities	3.3%	0.2%
Profitability		
EBITD to Assets	8.3%	15.0%
Ordinary Profit to Sales	5.4%	12.5%
Cost		
Personnel Expenses to Sales	28.4%	27.3%

Source: Moody's KMV RiskCalc calculations, D.6.3.

E.7 Case 7

E.7.1 Description of the Company

The company explored is active in the broader media sector. The founding family controls the company via a holding entity. Sales in the year 2013 amounted in a range between € 50 million and € 150 million. The company employed between 100 and 150 people and is incorporated as a German limited partnership with a limited liability company as general partner ("GmbH & Co. KG"). An external management team has been implemented several years ago during a succession reorganisation. The CEO as well as the Head of Accounting, who is also responsible for the financing activities, acted as interview participants.

E.7.2 Financing Strategy

Both participants explained that there is no formal written financing policy in place at the company. There exists a verbal agreement between the top management and the owner family on general financing principles including that the net debt level should not exceed a level of 1.5x consolidated EBITDA, which would indicate an investment grade rating for the company. Both participants stated that there is no general link between the overall corporate strategy and the financing strategy (Company 7 interview, D.7.1.1; Company 7 interview, D.7.1.2).

E.7.3 Standard Mezzanine Financing

The company intended to acquire a competitor in 2005, according to both participants. Even though the leverage was around 1.6x consolidated EBITDA, the equity ratio of the company was in a range of 18.5%, below a comfortable level for the banks involved (Company 7 interview, D.7.1.1). Therefore, the banks proposed to add a mezzanine financing to the balance sheet of the company to avoid a further decrease in equity after the potential acquisition (Company 7 interview, D.7.1.2). In addition, the owner family was not able to provide the required funds for the acquisition but did not want to increase its bank debt significantly above the internal barrier of 1.5x EBITDA. The firm already entered into discussions with a private equity sponsor. Nevertheless, these negotiations were aborted due to the cognition that the company and the family shareholders would not be able to take out and repay the sponsor because of his IRR expectations (Company 7 interview, D.7.1.1).

E.7.4 Refinancing

Situation of the Company

Based on the standard mezzanine financing, the economic equity position of the company was considered to be strong with a ratio of 48% (Company 7 interview, D.7.1.1, Company 7 audited consolidated financial statements as of 28.02.2010). Nevertheless, sales and profitability levels have been under constant pressure due to intense competition in Germany and challenges in the European markets as result of the financial crisis. EBITD to assets reduced from 27.5% prior to the initial mezzanine financing to 19.9% the year before the refinancing. Accordingly, ordinary profit to sales reduced from 13.6% to 6.5% (Company 7 Moody's KMV RiskCalc calculations, D.7.3). In addition, a change in the shareholder structure due to the passing of the old shareholder led to a structural reorganisation at company level (Company 7 interview, D.7.1.1).

Refinancing Process

The refinancing process was initiated eight months prior to the maturity with the start of the negotiations of the overall group wide refinancing. The shareholders ability to inject new funds was limited. In fact, they required a minimum level of dividends to be able to pay the inheritance tax (Company 7 interview, D.7.1.1). The discussions with the banks have been described as constructive negotiations. One of the reasons for this constructive situation was the fact that the key relationship bank represented the core bank for the private financing of the shareholders as well and was therefore able to get a full picture on the financing situation (Company 7 interview, D.7.1.1). As a result, the company was able to refinance the standard mezzanine completely via bank debt. The new financing contract included a maximum annual dividend agreement with shareholders and a mechanism to strengthen the capital reserves of the firm to achieve an acceptable equity ratio within the next three years as the equity ratio dropped below 30% after the exit of the standard mezzanine (Company 7 interview, D.7.1.2).

Changes in the Financing Strategy

There has been no fundamental change in the understanding between management and shareholders to comply with a determined net leverage level. However, given the

specific situation at shareholder as well as at company level, the company will exceed the leverage level for the next three years (Company 7 interview, D.7.1.1; Company 7 interview, D.7.1.2). During these three years, the company expects to be able to restore these levels, based on the limitation on dividends to the shareholders and under the assumption that the operational effects will not become worse.

E.7.5 Post-financing Capital Structure

The refinancing structure led to a net leverage that exceeded the agreed levels. However, this represented in view of both participants the only suitable solution for the company to comply with the boundaries by shareholders, banks and mezzanine providers in the refinancing (Company 7 interview, D.7.1.1). The equity ratio dropped but the banks and the shareholders implemented a mechanism to enhance the ratio at an investment grade level (Company 7 interview, D.7.1.2).

Moody's KMV RiskCalc Key Financial Ratios of Company 7

	Key financial ratios prior to…	
Position	**…Standard Mezzanine**	**...Refinancing**
Activity		
Trade Creditors Ratio	44.15	40.12
Debt Coverage		
Debt Coverage	45.4%	34.5%
Growth		
Sales Growth	-0.7%	-3.8%
Leverage/Gearing		
Equity Ratio	18.5%	48.0%
Liabilities Structure	72.9%	75.9%
Liquidity		
Cash to Current Liabilities	10.8%	21.8%
Profitability		
EBITD to Assets	27.5%	19.9%
Ordinary Profit to Sales	13.6%	6.5%
Cost		
Personnel Expenses to Sales	14.2%	14.4%

Source: Moody's KMV RiskCalc calculations, A.7.3.

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