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Corporate Hybrid Capital – Expensive Debt or Cheap Equity?

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ABSTRACT

Hybrid capital financing has gained substantially in popularity since the late 1990s. Initially, the securities were issued by financial institutions, but since a modification in the rating treatment by Moody's in 2005 there has been a surge in issuance from non-financial corporations. The hybrid security is in essence a deeply subordinated bond structured so as to emulate equity characteristics.

Our focus of the study has been to pursue three main goals: to discover if hybrid capital should be viewed as cheap equity or expensive debt, to review previous issues and issuers in order to identify certain characteristics of suitable hybrid issuers, and to investigate if the use of hybrid financing can increase shareholder value.

We approached the subject using a qualitative methodology, underpinned by quantitative research when so required. Since hybrid capital in its present form is a novel occurrence, there is virtually no academic research on the subject, so we therefore based our analysis on a broad theoretical foundation of primarily optimal capital structure, asymmetric information, and corporate taxes.

In our case study of previous issues we have found that although similar at face, there are several subtle yet important differences. These differences have rendered widely diverse treatment from the rating institutions.

In order to put our results to work and explain in what situations hybrids can be beneficial for a corporation, we constructed a series of hypothetical case studies, along with a review of an already completed hybrid issue by an unrated corporation.

When analyzing our results, we found that corporate hybrid capital seems to be a security class and a financing instrument with considerable appeal. Properly structured, corporate hybrid financing offers significant advantages to issuers with the right profile; making it possible to effectively issue non-dilutive, low-cost equity while increasing shareholder value by lowering the weighted average cost of capital. However, hybrids are senior only to equity, the market is illiquid with a low level of pricing convergence, which makes hybrids a product suitable only for the sophisticated investor. To conclude, we believe that although certain risks are involved, hybrid capital can be a useful addition to the financial structure of suitable companies.

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1 INTRODUCTION

“When we announced our refinements in 2005 and gave more equity benefit to hybrids, corporates started to view them more as low-cost equity than high-cost debt.”

The above quote from Barbara Havlicek, chair of the new instruments committee at credit rating agency Moody's, epitomises the allure of hybrid capital, which in essence are deeply subordinated bonds structured so as to emulate common equity. Since the Basel committee issued its guidelines on banking capitalization in 1998 (Bank for International Settlements, 1998-10-27), several banks and insurance companies have issued hybrid securities, which have received favourable treatment by the rating agencies. According to Merrill Lynch (2005), between 2000 and 2004 some \$150 billion of hybrid capital was issued by financial institutions and insurers. The non-financial corporate sector has, however, been more cautious in approaching these novel instruments. As indicated by the quote above, this picture changed radically in 2005 as bond yields dropped and, more importantly, in February that year Moody's announced a new way of rating hybrid securities (Moody's 2005). This new approach effectively raised the maximum equity credit they would assign to a corporate hybrid form 50% to 75%, prompting a big surge in corporate interest. Shortly after Moody's announcement, Swedish utility giant Vattenfall completed an over-subscribed €1bn hybrid capital issue which received 75% equity credit from Moody's and 60% equity credit from Standard & Poor's. When asked to comment on the Vattenfall hybrid, Eirik Winter from Vattenfall's structuring advisor Citigroup, said that: “The last 18 to 24 months have been the era of liability management, with buy-backs and exchange offers, now it's the era of hybrid capital.” (The Banker 2005)

The two main traits of a hybrid bond are a long maturity (hybrids are often perpetual) along with the possibility to defer interest payments under certain conditions. Now that the basics of hybrid capital are explained, and the backdrop for our study is laid out, it is time to continue with an investigation of the history of hybrid financing.

1.1 History

Hybrid securities have been around for some time and come in many forms, with the most common being convertible bonds and preferred stock. Of these two, only preferred stock is close being a true hybrid, with both equity-like and debt-like features at the same time, while

convertible bonds are either debt or equity at any given point in time (for work on convertible bonds and preferred stock, see e.g. Arak & Martin, 2005 and Callahan et al., 2001). What preferred stock has been lacking is favourable tax treatment. Since the securities formally are shares they are being treated by tax authorities as equity, resulting in no deductibility of dividend payments. The U.S. market solved this problem by the creation of special trust preferreds in 1993, which resembles hybrids (Morgan Stanley, 2006). At least until recently, American banks and corporations have been a few steps ahead of the European market, but due to the new approach to hybrid instruments taken by the Basel committee and Moody's along with the adoption of the new International Financial Reporting Standards (IFRS) on January 1st 2005, the European hybrid market is now picking up pace.

1.2 Problem Discussion

How a corporation ideally should finance itself is an issue that has been debated for decades and will probably be so for many more to come (for more recent research on this topic, see e.g. Leary & Roberts, 2005 and Miao, 2005). The original, simple choice between debt and equity is long gone, and has through clever financial engineering been extended to include numerous variations of debt instruments and several other financing forms with equity characteristics (Choudhry & Fabozzi, 2003). It appears as if the Holy Grail of capital structuring would be an instrument that combines the positive aspects of equity and debt, i.e. some kind of hybrid security.

We have chosen to study corporate hybrid capital due to the fact that it is an exciting new phenomenon, and because there is a lack of research in this particular area and comprehensive information is scarce. The only scientific study on hybrid capital conducted so far has been the one by Mjös & Persson (2004), where they analyzed pricing aspects of hybrid capital for financial institutions. As such, it is our ambition to contribute to the scholarly community by analyzing corporate hybrid capital in an empirical context, based on a theoretical foundation of primarily optimal capital structure and various topics concerning corporate financing.

Proponents argue that hybrid capital combines the most appealing characteristics of debt and equity (as illustrated by hybrid issuer Otto's CFO Michael Crusemann: "That is the charm of it. To have something that is considered as equity, but on which interest is treated as tax deductible", quoted in EuroWeek, 2006). There are, however, concerns regarding how the bonds should be structured and the financial opacity they create, issues that might deter non-financial

corporations from issuing hybrids. The main appeal for corporations is most likely the neutral or marginally positive impact on ratings that hybrids can offer when structured appropriately. Furthermore, since it is regarded as debt for fiscal purposes but can be booked as equity on the balance sheet, hybrid capital is non-dilutive and coupon payments are tax deductible. Given the seemingly big advantages of issuing hybrids coupled with the relative uncertainty surrounding them, it will be intriguing to investigate corporate hybrid capital in detail and attempt to determine whether hybrids can play a part in solving the optimal capital structure puzzle.

1.3 Problem Statement

Our aim is to discuss and analyze if hybrid capital really can be regarded as high-cost debt or low-cost equity, to what kind of non-financial corporations and in what situations hybrid financing can be suitable, and if shareholder value can be increased by utilizing hybrids.

1.4 Purpose

The purpose of our study is to identify and assess the advantages and disadvantages of corporate hybrid capital, and to explain the subject in as great detail as possible so that the concepts and characteristics can be understood and appreciated by someone with a fair amount of knowledge in finance. Furthermore, we intend to present companies of a specific nature or with a specific need that might benefit from utilizing hybrid capital, and investigate how a hybrid security might be structured in order for the issuer to benefit the most.

1.5 Delimitations

The study will focus exclusively on the European markets, with special attention given to Swedish corporations. In the event that there is a divergence between the Nordic and European markets, assumptions will be based on Nordic market characteristics. Although the study's primary intent is to research the impact of hybrids on corporations in general, certain other aspects, such as investor appeal, will be studied in order to explain and attempt to understand the hybrid market and where it will be heading in the future. The hybrid issuers presented in this thesis are all the European issuers of corporate hybrids so far that we have been able to obtain an issue prospectus from.

Since hybrid capital is broadly defined as all securities that are not common equity or straight debt, there is a need for clarification of the language that will be used in this thesis: when the term ‘hybrid capital’ is used, it will solely refer to the relatively new security class defined by its unique combination of tax-deductible interest payments and equity-like features. Furthermore, if nothing else is specifically stated, ‘hybrid capital’ will refer to corporate hybrid capital.

2 METHODOLOGY

This section will discuss the specific way in which we have conducted our study and how the data has been gathered. It also includes an evaluation of the chosen research method.

2.1. Research method

Our research model in this thesis could be described as a step-by-step process in which the structure was created partly from result of theoretical insights and partly from empirical findings. Because of the interaction between theory and empirical findings, it is difficult to describe the research as either deductive or inductive. But as Dubois & Gadde (2002) describes, research accomplished by this thesis can be categorized as abduct (in line with the abductive approach). In order to further enhance the understanding of the reader and to increase relevancy, we esteem to implement an analytical approach throughout the remainder of the paper.

2.2 Research strategies

Research can be performed in several strategies, with different benefits and detriments. Yin (1994) presents three conditions:

- Type of research question posed
- The extent of control an investigator has over actual behavioural events.
- The degree of focus on contemporary as opposed to historical events.

Our research is based on case studies, a strategy motivated when the researcher does not have control over the future events (Merriam, 1988). In Table 2.1, the case studies are categorized in the three types of research approaches as described by Yin (1994):

Table 2.1 Classification of research approach for the case studies

| | Exploratory | Descriptive | Explanatory |
|--------------|-------------|-------------|-------------|
| Case Study 1 | X | X | |
| Case Study 2 | | X | X |
| Case Study 3 | | X | |
| Case Study 4 | | X | |

2.3 Data collection technique

The primary data collected consists of information obtained from interviews and discussions with capital market professionals, people who have been involved in previous corporate hybrid issues and rating agency professionals. Another important source of primary data was round table discussions at the hybrid capital congress, hosted by Euromoney, which we attended in late March. These sources are all in line with Patel & Davidsson's (1994) classification of primary data.

Secondary data has been gathered from a wide array of sources; including scientific journals, books, financial information systems such as Reuters, further denoted as (FIS) and articles in various business publications. The collection of data in different case studies is presented in Table 2.2 below.

Table 2.2 Data collection for the case studies

| | Case Study 1 | Case Study 2 | Case Study 3 | Case Study 4 |
|--------------------------------|--------------|--------------|--------------|--------------|
| Interviews | X | X | X | |
| FIS | X | | X | X |
| Round-table discussions | X | X | X | |
| Publications | X | X | X | |

2.4 Methodology evaluation

In order to assess whether the results of our study can be regarded as fairly correct, it is important that we as authors are able to critically analyze and evaluate the chosen research method. Such an evaluation will be carried out in the following sections, focusing on validity and reliability, the two most important factors, discussed in relation with the case study methods (Eisenhart, 1989 and Yin, 1994). Table 2.3 presents an overview of methodology evaluation when conducting case-based research:

Table 2.3: Reliability and validity in case study research

| Tests | Case study tactic | Phase of research in which tactic occurs |
|---------------------------|---|---|
| Construct validity | Use multiple sources of evidence Establish chain of evidence Have key informants review draft case study report | Data collection Data collection Composition |
| Internal validity | Do pattern-matching Do explanation building Do time-series analysis | Data analysis Data analysis Data analysis |
| External validity | Use replication logic in multiple-case studies | Research design |
| Reliability | Use case study protocol Develop case study data base | Data collection Data collection |

2.3.1 Validity

Validity can, according to Ejvegård (1996), be regarded as the ability of a method to measure what it intends to measure. Furthermore, it is feasible to distinguish between two different concepts of validity; the external and the internal. External validity measures how well our results are applicable to real world conditions and if they successfully can be transferred to another research area, whereas internal validity has to do with the concept of our study objects and their definitions (Eriksson & Wiedersheim-Paul, 2001). We consider the internal validity of our study to be reasonably good, since we have clearly defined hybrid capital, the associated concepts as well as the limitations for our research.

As the research method is firmly anchored in empirical findings, the external validity of the research has been in focus, which leads us to believe that the external validity is strong. The clarity of various concepts and characteristics of hybrid financing have been scrutinized in order to attain a satisfactory internal validity.

2.3.2 Reliability

In the context of research methodology, reliability has to do with whether our method is trustworthy and able to generate stable results (Carlsson, 1990). High reliability can be reached through the use of standardized data, a standardized analysis process and an objective approach. Eriksson & Wiedersheim-Paul (2001) point out that in a qualitative study, reliability is always a

problem due to the absence of hard data. This is also the case for us. We have therefore taken measures to enhance the reliability, primarily through sharp definitions of the discussed objects and concepts, and by broadening the scope of the literature review in trying to limit any possible subjectivity.

2.5 Methodology critique

An alternative methodology strategy to case studies could have been a survey. According to Merriam (1998), a survey is limited to the variables included and these must also be known before the study takes place. Since this is a fairly new research area, lacking a significantly large number of desirable interviewees, we decided to use a case study approach in our research.

Due to the brief amount of time that corporate hybrid capital has been used to any larger extent, it is natural that the number of available research objects is limited. According to Bell (1995) a research should provide the same results at different times if the conditionals are identical. Although we will study all of the corporate hybrids issued so far, it might be that the market still suffers from teething troubles in terms of investor receptiveness and various structuring features, factors that might cause us to draw the erroneous conclusions. Since the study is of the qualitative kind, it is extremely important that we as authors retain our objectivity throughout the study. Special attention should therefore be given to the discussion and analysis parts to ensure that the conclusions drawn are consistent with applicable theory and our findings, and not flawed by any subjectivity on our part.

3 REVIEW OF LITERATURE

The review will provide the reader with a framework on capital structure and various financing choices, asymmetric information and tax considerations.

3.1 Optimal Capital Structure

Although extensive research has been conducted on the topic of optimal capital structure, the theory is still remarkably imprecise, limiting the application possibilities of the theory on corporate decision making (Leland 1998).¹ The optimal capital structure of any corporation is generally perceived as the financial structure that renders the lowest possible weighted average cost of capital and thus maximizes the enterprise value. However, critics argue that this statement would also imply that there are arbitrage opportunities in all firms with sub-optimal capital structures, which is inconsistent with the equilibrium theory (Ross, 1977).

One of the primary concerns when attempting to quantify the optimal capital structure is that risky debt is not easily valued (Leland 1998).² According to the seminal work of Modigliani and Miller (1958), the value of the firm in a zero-tax market is independent of the capital structure, sometimes referred to as the irrelevancy theorem. They proceed, however, to argue that when taxes are included in the model, there are benefits of leverage which are outweighed at a certain point by increasing costs of leverage caused by a higher probability of financial distress. This static trade-off hypothesis indicates that an optimal capital structure must exist (Myers, 1984). A more symmetric view is sometimes offered, claiming that the tax-shield only shifts proceeds from the government to the private markets without augmenting firm value, thereby in effect creating a tax arbitrage.³ Assuming that the firm value is unchanged, there is an implied reduction in the government's valuation of the firm, which is equal to the market value increase of equity from leverage (Ross, 1977).

The dynamics of the optimal capital structure were indicated by Jensen and Meckling (1976) as they pointed out that equity holders can augment their value by increasing operational risks after

¹ This statement is further developed later on in this section

² See section 3.5 for a further development

³ The theory disregards from the off-setting effects from personal taxation

the debt financing is in place, a process referred to as asset substitution. In contrast to Modigliani and Miller, Jensen and Meckling deduce their results from the reduction of agency costs, defined as the sum of monitoring expenditures by the principal, bonding expenditures by the agent and the residual loss.⁴ Donaldson (1963) argues that firms tend to be underleveraged as a direct consequence of management being overly concerned, relative to shareholders, of the risk for bankruptcy.

Although these theories still form the foundation of modern financial theory regarding optimal capital structure, Leland (1998) points out that they hold two significant flaws:

1. There is a lack of convergence and integration of the two theories
2. The theories do not offer a quantitative approach for optimizing the capital structure

We find that these issues are primarily caused by the divergence between the assumptions on which the theories are based and the real world environment of corporations, indicating a questionable external validity. Furthermore, quantification requires relaxation of assumptions and the use of an ad-hoc approach, which encumbers the development of generalized theory. We also believe that quantified deductions of optimal static capital structure are of a highly limited use to practitioners, since certain factors such as financial flexibility cannot be accurately quantified.

3.2 Asymmetric Information

One of the basic assumptions in the irrelevancy theorem⁵ proposed by Modigliani and Miller (1958) is that the markets possess full information regarding the company. In the absence of complete and perfect information, issues of asymmetric information arise. In the capital structure context, informational asymmetry refers to the superior knowledge that firm insiders, i.e. management, possess regarding the true value of the firm's shares as determined by the market value of assets and future earnings (Klein et al 2002). The financiers of a company are naturally eager to acquire information regarding the true status of the company. However, as borrowers stand to benefit from embellishing the company's financial status, there is a moral hazard predicament (Leland & Pyle, 1977).

⁴ Please see Jensen and Meckling (1976) for more information

⁵ As discussed in section 3.1

Myers (1984) argues that firms prefer to finance investments internally. If internal financing is not adequate to cover the financing needs, the firm will finance a desired investment in the following order, known as the pecking order theory:

1. Debt
2. Hybrid securities (e.g. convertible bonds)⁶
3. Equity

Myers and Majluf (1981) studied various causes and effects of the asymmetric information between management and investors pre-investment. If the financial slack does not suffice to cover the investment, management has to consider whether the shares are over- or under priced, based on their superior knowledge of the firm. In this situation, assuming that management acts in the best interest of existing shareholders, we have an adverse selection problem (as discussed by Akerlof, 1970); if management does not have to issue but chooses to do so, the company signals to the capital markets that the shares are overvalued, as is the case when management chooses not to repurchase shares in order to reduce excessive financial slack (Fama & French, 2005).⁷

Assuming that markets are rational and efficient, the implied cost of dilution to existing shareholders will be the difference between issue price and the price at which the shares would be priced if all information was made public, assuming all else equal (Myers 1984). When faced with an investment opportunity, the determinant for whether the opportunity is pursued or not will be whether the positive net present value of pursuing the project is greater than the difference between the issue price and the price of the shares if all information was made public (Myers 1984). For tests of the theory, see Frank and Goyal (2003), Shyam-Sunder and Myers (1999) and Fama and French (2002)

3.3 Signalling

Ross (1977) applies the Akerlof (1970) logic to the corporate capital structure. He argues that the capital structure can be seen as an indication of future cash flows as bankruptcy costs for a company with higher expected cash flows are lower. So what are the signalling effects of a hybrid

⁶ Hybrid capital in the broader, traditional sense

⁷ More on signalling in section 3.3

capital issuance? According to Ross, increasing leverage sends bullish signals on earnings, which would indicate the same result for hybrid capital, deemed subordinated debt for regulatory purposes.

In order to measure the effects of signalling, Eckbo (1985) and Mickleson and Parch (1985) use a two-day window event study. They were not able to find any significant signalling effects of straight debt offerings. Brown et al. (1978) instead argued that the effect cannot be measured in such a short period and therefore suggested using a 30-day window. Metha (1995) used this approach in a study and found that there is a significant *negative* effect on share price in the 30-day period following the announcement of a bond issue.

We would suggest a substance over form approach in estimating the market signals from issuance of hybrid securities. Although the increased presence of fixed rate instruments should theoretically signal a positive outlook on earnings, the deferral trigger raises concerns of management's certainty regarding this aspect. We believe that an ad-hoc analysis of the probability of the trigger being employed is a suitable means in determining the signalling effects, as in some cases the triggers might well be a mere formality in order to attain equity credit on the instruments. Of greater certainty is the signal communicated to the markets by not opting to issue equity, thus indicating that equity is undervalued according to management.

3.4 Tax Aspects of Financing

In a predecessor to the pecking order theory, Modigliani and Miller (1963) wrote that firms should first and foremost utilize financial slack when investing.⁸ They claimed that this form of financing is more suitable when the personal income taxes related to the tax imposed on investors is taken into account. Fourteen years later, Miller (1977) presented the expression in the form of Equation 3.1 below, known as the perpetual tax shield formula.

Equation 3.1- The Perpetual tax shield formula

$$G_L = \left[1 - \frac{(1 - \tau_C)(1 - \tau_{PS})}{1 - \tau_{PB}} \right] B_L$$

⁸ See section 3.2 for more information on financial slack

This expression describes the gain from leverage (G_L), where τ_c is the corporate income tax rate, τ_{ps} is the personal income tax rate for income from common stock and τ_{pb} is the personal income tax rate for income from bonds. A firm has to weigh the tax benefits of debt with the costs related to financial distress and bankruptcy. Still, no strong evidence between tax rate differentials and their impact on financing decisions was presented until Mackie-Mason (1990) found empirical proof that the desirability of debt finance at the margin varies positively with the effective marginal tax rate.

Now, let us consider our main question. Is shareholder value increased? There is, if Miller's formula is used, no significant correlation between leverage and firm value. Fama & French (1998) tried to find confirmation on how a firm's value is related to debt, using cross-sectional regression analysis with a wide range of variables, but failed to isolate the tax effect. Graham (2000) focused on calculating corporate tax effects and found that firms used debt too conservatively, which is consistent with the findings of Donaldson (1963).⁹ In line with the results obtained by Fama & French (1998), Graham (2000) indicated that several factors, such as financial flexibility, informational asymmetry, size of the corporation and collateral all affect debt policy. Moreover, Graham critically analyzed Miller's formula and argued that τ_c should not be held as a constant, since firms do not pay taxes in all states of nature and the effective tax rate is a function of debt and non-debt tax shields.

As a final contribution to this chapter, we present Hennessy & Whited's (2005) results. They showed, theoretically and by model simulations that there is no specific target leverage ratio and that tax is not of a secondary importance in leverage decisions. Instead, firms make their investment decisions on the current and anticipated financial margins, where tax is considered a significant variable.

⁹ See section 3.1

3.5 Pricing of Hybrid Instruments

As mentioned in section 3.1, Leland (1998) states that one of the primary issues when attempting to identify an optimal capital structure is the valuation of corporate debt. The difficulty lies in the fact that debt value is interlinked with the firm's capital structure. This means that the capital structure needs to be determined before corporate debt can be valued and vice versa, which causes a dilemma related to Merton's third parameter below.

According to Merton (1974), the value of corporate debt depends on the following factors:

- 1.) The required rate of return on risk free debt.
- 2.) The various provisions and restrictions contained in the indenture.
- 3.) The probability of default.

The first general model for valuing debt was created by Black & Scholes (1973). In their Nobel-prize awarded formula, they indicated that it could be used to value all corporate securities. Merton (1974) and Black & Cox (1976) expanded the model and their approach, often called the Merton model, has been an academic cornerstone for years. Today, an extended model for measuring default-risk probabilities (the KMV-version), presented by Vasiek (1984), constitutes the norm for rating agencies (Cass, 2000).

Reviewing critique of the Merton model raises questions regarding the accuracy. For instance, Kao (2000) presented empirical evidence that the model does not work well in valuing liabilities subject to default and Jones et al (1984) explained the shortcoming of the model when it comes to pricing corporate bonds with simple capital structure. Pricing theory specifically adopted for hybrid securities is scarce. However, Mjøs & Persson (2004, 2006) have created a pricing model, based on the Leland (1994) model, which is a further development of the Merton model (1974), for pricing hybrid instruments. This model accounts for the value of the embedded option in a callable bond. For a brief presentation of a model applied in the professional valuation of hybrids, please see Appendix A.1.

4 EMPIRICAL FINDINGS

This chapter contains the results of our research on the corporate hybrid capital issues completed to date, as well as information on the credit rating agencies' and the investors' view on hybrid capital.

4.1 Case Study I- Previous Issues

In this section, we will explain and highlight the similarities and differences between the fifteen surveyed European corporate hybrid deals completed so far.¹⁰ We will present and briefly discuss the most important features of them. As described earlier, corporate interest for hybrid capital surged in 2005 with nine completed issues, totalling nearly €7bn, up from just one deal worth €80m in 2004. The market activity so far in 2006 has been in-line with 2005, with over €3.1bn worth of completed issues, with €1.25bn issued in May alone. The most active market so far has been Germany where Linde became the first European corporate to issue hybrid capital in July 2003. In total, the German market has seen eight out of fifteen issues in the last few years. However, there are signs that the hybrid market is expanding in geographical scope, with Morgan Stanley having recently completing an issue for the Hungarian oil and gas company MOL (EuroWeek 2006-03-17).

4.1.1 Structure

According to Karsten Frankfurth of Fitch Ratings, “Deals look similar at face, but details are very different”. One of the less equivocal aspects concerns maturity; ten out of the fifteen issues reviewed have involved infinite maturities, whilst the shortest time to maturity is 30 years. Apart from maturity, there are essentially seven key points to focus upon in a hybrid security offering, and these are:

- From when the bonds are callable
- The replacement language
- From when the step-up clause becomes eligible
- What the step-up rate is set to be

¹⁰ The issue companies studied are: Bayer AG, Casino Guichard-Perrachon SA, CLAAS KGaA, DONG AS, Henkel KGaA, Linde AG, Lottomatica SpA, Michelin SA, Otto GmbH & Co KG, Südzucker AG, Thomson SA, TUI AG, Vattenfall AB and VINCI SA

- Which the early redemption triggers are
- How the deferral triggers are defined
- Whether the interest payments will be cumulative or not.

4.1.2 Issuer's call option

In ten of the fifteen studied hybrid deals, the issuer has had the option to call the bonds in ten years from issuance. Two companies have opted for a call option in five years while three issuers have desired that their bonds be callable in seven, eight, and nine years respectively. The call feature of the hybrid bond is important when it comes to investors' considerations, especially when the bonds are perpetual. As no investor intends to hold a bond in perpetuity, a hybrid must feature a call option.

4.1.3 The replacement language

The issuer's right to call the bonds leads us to the next structuring aspect, which is replacement language. This term refers to what the company intends to replace the hybrids with when they are called, an issue of great importance when credit rating agencies assign equity credit to hybrids. Since the issuer's option to call the bonds early reduces their potential equity content, it therefore has to be countered by strongly-worded replacement language in which the issuer states that if the bonds are redeemed, they will be replaced by securities with similar or higher equity content. (Herbert Smith, 2006)

4.1.4 The step-up

The primary function of the step-up is to reassure investors that the issuer will redeem the bonds. In twelve of the fifteen issues reviewed, the step-up kicks in at the same time as the bonds are first callable, with the interest rate level of the step-up set to be higher than the projected prevailing interest rate level for similar types of financing, at the specified time in the future. All issues have been structured so that when the step-up kicks in, the coupon shifts from being fixed to floating, and in all but one issue, the choice of floating rate has been the three-month Euribor plus a specified margin. According to Mike Turnbull of Morgan Stanley, the step-ups are also a highly relevant factor in the pricing process, since a high step-up rate increases the likelihood that

the issuer will redeem the bonds early, making investors willing to accept a lower coupon (Morgan Stanley, 2006).

4.1.5 Redemption triggers

Due to the fact that hybrids is a relatively new class of bonds, there is still some uncertainty regarding the regulatory framework, primarily concerning tax and accounting issues. Most issue structures therefore include tax event and accounting event triggers, effectively making the bonds redeemable should the tax authorities or the accounting regulators decide to treat hybrids in a less favourable way. The main concerns here have to do with losing the tax-deductibility of hybrid bond interest payments and the event of losing the opportunity to book hybrids as equity on the balance sheet, a possibility that arose when the IFRS standards were adopted by several European countries in 2005 (Ernst & Young, 2004).

4.1.6 Deferral triggers

When discussing deferral triggers, one important distinction has to be made: in hybrid structuring, there are both optional and mandatory deferral triggers. This is important when considering the differences between hybrid capital bonds and ordinary preferred stock. The interest on a hybrid bond *has* to be deferred if a mandatory deferral trigger kicks in, and it *can* be deferred according to the optional deferral clause, while the dividend on preferred stock always is paid at the company's discretion. This means that a company that has financed itself with hybrids and breaches the conditions under which deferral becomes mandatory, has no option but to cease paying interest on the hybrids. Now consider a company financed with preferred stock instead, and assume that they are in the same condition as the one using hybrid financing. Due to the lack of mandatory deferral clauses for preferred stock, the company might elect to pay dividends on its common stock for e.g. signalling purposes, making it impossible to avoid paying dividends on the preferred stock as well. Thus, senior bondholders can be said to be in a better position when the more junior instruments carry mandatory deferral clauses.

Of the fifteen issues studied, five have mandatory deferral clauses, where the triggers are certain coverage ratios, measured in terms of cash flows and interest expenses with somewhat different definitions thereof for each specific issue. The other issues only carry optional or discretionary deferral triggers, typically defined as if no dividend is paid or no distribution of payment is made

on any junior or *pari passu*¹¹ ranking instruments, the interest on the hybrid bonds could also be deferred. From an equity credit perspective, a mandatory deferral trigger makes the hybrid instrument more equity-like than if the deferral trigger only is mandatory.

4.1.7 Cumulative or non-cumulative interest

The decision of whether to make interest payments cumulative or non-cumulative is highly important to the ultimate cost of the hybrids for the corporation and the pricing of the issue in the primary market. To this date, ten of the corporate hybrids issued so far have been cumulative in some sense, while the others have not. However, the line between cumulative and non-cumulative is somewhat unclear, as some issuers have decided on paying deferred interest by issuing equity or similar junior securities while others have chosen to only distribute deferred interest if the company pays dividends on the common stock. The issue of whether interest payments should be cumulative or not is an important one, both from the perspective of the rating agencies as well as the investors, but from what we have learned so far, there appears to be a fair amount of uncertainty on how this issue should be dealt with when structuring hybrids. The structuring advisor must delicately balance the totally opposite demands of rating agencies and investors, with the former wanting non-cumulative interest in order to assign the hybrid a high equity credit and the latter desiring cumulative interest to make up for the risk of interest deferral.

4.1.8 Rationale

When analyzing the issuers of corporate hybrids, one particular company characteristic stands out; nine out of fifteen are controlled by a major shareholder with more than 50% voting power, for some even 100%. This bias can be explained by hybrid capital's unique mix of non-dilution and equity credit; for a company with one major owner in need of significant capital to invest, hybrid capital might be the best solution as it does not reduce the majority owner's share of the company, while the effect on the company's leverage is muted, as opposed to when using ordinary debt financing.

The motives for the issues placed so far have been largely the same, with 'refinancing of debt' and 'general corporate purposes' being the most frequently appearing. Others have used hybrid

¹¹ A French term, commonly used in bond offerings meaning "of equal rank" in the case of bankruptcy

securities as part of an acquisition financing package, namely Lottomatica, TUI and VINCI. Moreover, the German consumer-goods conglomerate Henkel issued €1.3bn of hybrids in November 2005 for the sole purpose of funding their pension obligations. With the VINCI and Lottomatica issues completed in February 2006 and May 2006, it is reasonable to expect further increase in acquisition-related hybrid issues. This belief is in line with how many industry professionals perceive the future of the corporate hybrid market, as illustrated by this quote by Geoff Tarrant, Global head of hybrid capital at Deutsche Bank: “We expect this market to develop even further in 2006 as it becomes a key component in M&A financing.” (EuroWeek 2006)

4.2 Case Study II- Credit Rating Aspects

Although credit ratings are less significant for creditors and investors in Europe - and certainly in the Nordic region - than in the U.S., assigned credit ratings as well as equity credit assessments serve as useful indicators of market sentiment in determining the impact of a bond issue on a corporation's financial standing. As explained briefly above, when it comes to determining the equity credit rewarded to a hybrid issue, the rating agencies are mainly concerned with the maturity, the replacement language, the deferral triggers and whether the interest payments are cumulative or not.

4.2.1 Moody's

Moody's framework for assessing the relative debt and equity characteristics, known as the Moody's Tool Kit, was first introduced in 1999 (Moody's, 2003). The Tool Kit utilizes a rating consisting of five different baskets – labelled from A to E – as illustrated in Exhibit 4.1, with securities in basket A having the least amount of equity content and securities awarded basket

Exhibit 4.1 Moody's equity credit basket system

| Basket A | Basket B | Basket C | Basket D | Basket E |
|-----------|----------------------|----------------------|----------------------|-------------|
| 100% debt | 75% debt, 25% equity | 50% debt, 50% equity | 25% debt, 75% equity | 100% equity |

E being treatment regarded as most equity-like. A major refinement was made to the Tool Kit in February 2005, according to Barbara Havlicek¹² – chair of the new instruments committee at Moody's – because “...we came to the view that in the past we had been too conservative.”

¹² As referred to in the Introduction

(Euromoney, 2006). This new approach allowed hybrid securities to attain a maximum equity credit of 75% compared to the earlier maximum of 50%.

In determining the equity similarity of a hybrid, Moody's analyze the securities based on the three following characteristics of equity (Moody's 2003):

1. No maturity
2. No ongoing payments, the absence of which would result in an event of default
3. Loss absorption for all creditors

The similarity is graded in four levels - *none*, *weak*, *moderate* and *strong* - where strong indicates the greatest measure of equity resemblance. When this procedure is completed, the hybrid is compared to existing hybrids already assigned to an equity credit basket. Ratio calculations are then made in order to adjust the balance sheet and also to adjust for the hybrid's impact on the income and cash-flow statements. This assumed impact on the aggregate fundamentals is then considered when reviewing the corporate credit rating. Regarding the fixed charge coverage ratio, it is generally not adjusted for issuers that hold a high credit rating and subsequently charged as an interest payment. For lower rated issuers, the ratio will be calculated with and without hybrid coupons that are deferrable, payable-in-kind (PIK), or payable in common stock (Moody's, 2003).

4.2.2 Standard & Poor's

As Standard & Poor's (S&P) rating methodology is highly similar to that of Moody's, we will focus our efforts on highlighting some of the differences. S&P pioneered the quantification of assigning equity credit to hybrid issues in 1999, in an attempt to guide corporate issuers and increase market transparency. The system, which was based on a percentage scale, has been modified since, and the agency now assigns hybrids *minimal*, *intermediate* or *high* equity credit.¹³ S&P made this change to stress that the previously assigned percentage figures were never intended for use in financial ratio¹⁴ calculations as the results might be misleading. Instead, when minimal equity is assigned, the hybrids are treated as debt and with high equity content they are treated as equity for the purpose of calculating ratios. When the hybrid's equity content is

¹³ Minimum corresponds to earlier 10/20/30, Intermediate to 40/50/60 and High to 70/80/90

¹⁴ For example fixed charge coverage, equity ratio etc.

intermediate, both approaches to calculating are applied and the end-result can be obtained by analysing the interval or by splitting the difference (Standard & Poor's, 2006).

According to S&P, the assignment of equity credit indicates a focus on leverage ratios, which is not the agency's stated intent. Instead, aspects such as cash flow adequacy and financial flexibility have come to outweigh the importance of balance-sheet considerations (Standard & Poor's, 2006).

4.3 Case Study III- The Investor Perspective

One crucially important aspect when analyzing hybrid capital is to take the investors' into consideration at an early stage, since hybrid bonds would do corporations no good if they were impossible to sell. Although many issues, for example Vattenfall's and Bayer's, were significantly oversubscribed (EuroWeek, 2005-07-22), there are still numerous uncertainties regarding the investor interest in hybrids. The primary hybrid investors so far have been institutional investors and hedge funds in search for higher yields than what is currently offered by senior corporate or government bonds. Only one issuer so far, Casino, has tested the appetite of the retail market, with discouraging results as Casino was forced to postpone the offering due to weak interest in the bonds (EuroWeek, 2004-11-05).

4.3.1 Market liquidity concerns

The main concerns of the investors' have been the lack of a large and liquid secondary market for the hybrids, as well as the difficulty in pricing the specific characteristics (Euromoney, March 2006). Investor confidence has not exactly been helped by the dismal performance of most of the hybrids issued so far, as only three out of fifteen are currently trading above the issue price and with some issues being extremely lightly traded.¹⁵ Some investors have therefore been reluctant to buy into hybrids issued by corporations using only one investment bank as manager on an issue, in doubt of the bank's ability to make a market in the hybrid (EuroWeek, September 2005). If the primary objective of the investor is to buy and hold the hybrid, secondary market liquidity is of less importance, but to a hedge fund it is crucial to be able to exit an investment quickly.

¹⁵ For further information on the performance of hybrid bonds, see Case Study IV and section 4.4.2

4.3.2 Overall market risks

Another issue raised by market professionals has concerned the standardization of hybrid structuring (Euromoney Hybrid Capital Congress, 2006-03-28). It has been argued that without standardization, the hybrid bond market faces systemic risks of market failure in the event of severe market uncertainty regarding hybrids. This is due to the wide array of different structuring solutions, with no two issues looking exactly the same, and the fear of investors failing to ascertain the specific features and risks of each issue, causing investors to panic sell all issues instead of just the bad ones in times of uncertainty. According to Karsten Frankfurth of Fitch Ratings (2006), the more mature U.S. market, has come a lot further in terms of standardizing structures. A related matter of uncertainty regarding the market for hybrids has to do with the fact that it has not yet faced any time of financial stress, and due to the hybrids' combined equity- and debt-like nature it is difficult to predict how the bonds will perform under such market conditions. Investors fear that the hybrids may actually behave like common stock and not at all like bonds, which translates into substantially higher risks (Euromoney Hybrid Capital Congress, 2006-03-28).

4.3.3 Structure- and issue-specific preferences

Regarding the specific structuring of the corporate hybrids, investors appear to favour certain characteristics apart from a high coupon; namely significant step-up rates, change of control-covenants, and a strong rationale for issuing. Since many of the hybrids issued so far have been perpetual, investors face the potential risk of owning the securities for eternity. This is why they are keen on seeing the use of a high step-up rate, increasing the incentive for the issuer to redeem the bonds early. Change of control-covenants is something that investors are currently demanding from issuers being regarded as potential targets for leveraged buyouts (LBOs), since in the event of an LBO, the existing bondholders would be made worse off due to the probable massive undertaking of new debt and the downgrading of the company. When structuring an LBO coverage clause, it is crucial to make it a mandatory trigger if it should have the desired effect. This problem was highlighted recently when analysts at JPMorgan investigated the Thomson hybrid issued in September 2005 and found out that since the change of control clause that would increase the coupon by 5% in the event of an LBO was linked to an optional deferral trigger, it effectively meant that if a private equity buyer would set up a deal that involved paying out no dividends, they could actually avoid triggering the change of control clause (Reuters, 2006-02-06). Furthermore, some investors have also demanded the issuer to have a strong rationale for

issuing hybrids, preferably to finance an acquisition or for refinancing purposes, but not for outright share repurchases since bond buyers do not want to feel like some other party is taking advantage of them (Euromoney, March 2006).

4.3.4 Factors driving demand for hybrids

In October 2005, due to the massive increase in size of the hybrid bond market in 2005, corporate hybrids were included in the important bond index family iBoxx, as well as in several other significant indices constructed by investment banks (Euromoney, March 2006). With these new securities now part of closely watched indices used for benchmarking purposes, follows that investors need to pay attention to corporate hybrids regardless of their opinion of them, since asset managers who shun them might face the risk of relative underperformance. This may lead to a surge in new offerings, as well as higher activity in the secondary markets as investors try to rebalance their holdings. Furthermore, it is possible that the demand in hybrids from the investor side in the prevailing environment of low bond yields can be fuelled by the fact that corporate hybrids is one way for funds restricted to invest in nothing but investment grade paper to enhance returns (F&C Investments, 2005).

4.4 Case Study IV- Ex-post Performance

4.4.1 Ex-post performance of share prices

In this section, we will investigate how share prices perform relative to applicable index in the three-month period following the issue. This will give an indication of whether hybrid capital raises shareholder value.

As the share price is the most direct indicator of market approval, we have studied the share performance of 10 of the publicly listed companies that have issued hybrids in recent years.¹⁶ We have measured the performance of the shares relative to the expected return from the Capital Asset Pricing Model, based on the appropriate index (DAX 30 for the German companies and CAC 40 for the French) in the 30 day period following the pricing date of each of the hybrid

¹⁶ These are: Bayer, Casino, Henkel, Linde, Michelin, Porsche AG, Südzucker, Thomson, TUI and VINCI

securities (an approach in line with Brown et al., 1978)¹⁷. The data, presented in Table 4.2 below, shows that eight out of 10 shares outperform the index against which they have been benchmarked. Although the evidence points to a considerable positive impact on share prices, we do not believe this to be enough proof as the number of issues studied is limited. Assuming that an issue of hybrids does impact share prices, we believe this impact to be a consequence of two factors, namely signalling and perceived impact on fundamentals.

Table 4.2: *Abnormal returns, 30 days*

| | Bayer | Casino | Henkel | Linde | Michelin |
|-------------------|----------------|------------------|----------------|--------------|-----------------|
| Diff. CAPM | -4,56% | 4,48% | 7,86% | 10,17% | 7,75% |
| | Porsche | Südzucker | Thomson | TUI | VINCI |
| Diff. CAPM | 7,37% | 6,25% | -10,41% | 0,53% | 4,29% |

In order to test the signalling effects, we have performed an event study with ten publicly listed companies based on daily data for one year. Assuming efficient markets, we tested for abnormal returns during the announcement day of the issue of hybrid capital. Our hypotheses were:

H_0 = No abnormal returns during the announcement day

H_a = Abnormal returns during the announcement day

The test did not offer any significant answer, judging from the data in Table 4.3 below; six companies show positive results and four were negative, so the null hypothesis could not be rejected.

Table 4.3: *Event study, Abnormal returns, 1 day*

| | Bayer | Casino | Henkel | Linde | Michelin |
|-----------------|----------------|------------------|----------------|--------------|-----------------|
| AR-value | 0,0110 | 0,0150 | -0,0029 | 0,0180 | -0,0085 |
| | Porsche | Südzucker | Thomson | TUI | VINCI |
| AR-value | 0,0085 | -0,0062 | -0,0010 | 0,0006 | 0,0012 |
| p-value | 0,5296 | | | | |

As described in section 3.3, signalling refers to the effect on market prices when agents indirectly disclose private information regarding the true status of a company. Based on the findings in the

¹⁷ See section 3.3 for a background on this

informational asymmetry framework in section 3.2, we find that management will tend to issue new shares when they believe that shares are over-valued in order to avoid excessive dilution. If hybrids are seen as a viable alternative to issuing shares, we might conclude that management is more likely to issue hybrids when they are bullish on the share price, which signals to the market that shares are under-valued. Although these effects could not be measured in the observed timeframe, we can not reject the possibility that a hybrid issue does have a signalling effect on the share price.

4.4.2 Ex-post performance of bond prices

After reviewing relevant market data, we concluded that conducting a quantitative analysis of the bond prices and the bond spreads would not be very informative. Hybrid bonds were only recently included in the iBoxx indices (Deutsche Börse, 2005-10-13) and some of the hybrids issued so far have been traded very lightly, making it difficult to conclude anything with regards to the performance of the bonds. From what we have learned from investors, they are somewhat disappointed with how the hybrids have performed (Euromoney Hybrid Capital Congress, 2006-03-28, and Euromoney, March 2006). Currently, only four issues out of fifteen are trading above par, with most of the others slightly below par, whereas the two worst performing ones are trading in the low 80's.

5 ANALYSIS

This chapter contains an analysis of the various traits and characteristics of hybrid capital. The analysis has been performed by modelling potential issues and by reviewing an historic issue.

5.1 Potential Uses of Hybrid Capital

5.1.1 Impact of hybrid capital

In order to illustrate the impact on a corporation of a hybrid capital issue we have modelled two specific scenarios and calculated the effect on various ratios. The case is based on a Merrill Lynch presentation in Amsterdam dated 2006-03-28. Although most of the basic assumptions are alike, we have made several modifications and adjustments, and our assumptions are found in Table 5.1 to the below right.

Table 5.1- Basic assumptions

In the first example, we have modelled the impact of refinancing senior debt through issuing equity or hybrid securities. Based on the figures illustrated in Table 5.2, we find that deleveraging by issuing hybrids offers a relatively inexpensive means to bolster finances. The net balance sheet effects of

| | |
|--------------------------------|--------------|
| Cost of equity | 8,0% |
| Cost of hybrids | 6,0% |
| Cost of debt | 4,0% |
| Tax rate | 30,0% |
| Moody's treatment | 75% |
| S&P treatment | Intermediate |
| Market value of equity/ | 1,5 |
| Book value of equity | |

refinancing are however subject to choice of equity credit rating. Using the 75% equity credit assumed by Moody's, the debt/equity ratio falls from 56% to 39 %. An unadjusted accounting based approach renders either 33% or 56% D/E¹⁸, while with an intermediate equity content assigned by S&P, the new D/E ratio falls somewhere in the range of 33-56%.

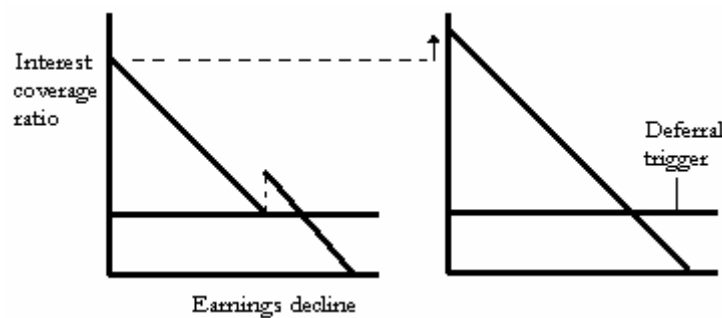
Table 5.2- Debt refinancing

| | Ex ante | Equity refinancing | Hybrid refinancing |
|---------------------------------|----------------|---------------------------|---------------------------|
| Return on equity | 9,63% | 7,35% | 8,93% |
| Earnings per share | 0,39 | 0,33 | 0,36 |
| WACC | 5,1% | 6,3% | 5,4% |
| Debt-to-equity (Moody's) | 0,56 | 0,33 | 0,39 |
| Debt-to-equity (S&P) | 0,56 | 0,33 | 0,33-0,56 |
| Interest coverage ratio | 3,75 | 6,25 | 3,13-6,25 |

¹⁸ Depending on whether the securities are booked as equity or debt.

Arguably, a more relevant measure in determining the appropriate leverage is the interest coverage ratio, based either on earnings or cash flows. As we can see from figure 5.3, the interest coverage ratio is kinked by the deferral trigger, which complicates the comparison with corporations not funded by hybrid capital. In our view, the interest coverage is primarily a tool for determining the risk of senior debtors. Therefore, it may be argued that the ratio should be calculated by excluding the interest paid on the hybrids, as this will be the case when the ratio drops below a predetermined level.

Figure 5.3 – Interest coverage ratio



We therefore conclude that in the presence of an interest coverage based trigger, the senior debt capacity expansion can appropriately be measured by excluding the interest paid on hybrids and by adjusting earnings for the marginal revenues of new assets.¹⁹ Also, the relative share of assets to senior claimants has increased, indicating a further reduction in senior debt default probability.

In the second example, we will assume that the company has exhausted its senior debt capacity and thus needs to find other means to finance an impending expansion. In order to finance the expansion we have issued equity and debt in portions so that to replicate the ex ante capital structure. Secondly, we have emulated the primary characteristics by issuing hybrids and debt.

Table 5.3- Asset expansion

| | Ex ante | Debt&Equity financing | Hybrid&Debt financing |
|-------------------------|---------|-----------------------|-----------------------|
| Return on equity | 9,6% | 7,7% | 11,9% |
| Earnings per share | 0,39 | 0,43 | 0,47 |
| WACC | 5,1% | 5,1% | 4,7% |
| D/E (Moody's) | 0,56 | 0,56 | 0,56 |
| D/E (S&P) | 0,56 | 0,56 | 0,33-0,69 |
| Interest coverage ratio | 3,75 | 3,73 | 2,67-4,04 |

¹⁹ Please notice that the interest coverage for hybrid security investors as well as for general corporate purposes will include the hybrid interest portion.

In Table 5.4 above, we can see that the Hybrid&Debt combination offers a greater ROE, higher EPS and a lower WACC and than does the Debt&Equity expansion alternative. When applying the Moody's approach to balance sheet adjustments we find that the adjusted D/E ratio is equal for both alternatives as well as ex ante.²⁰ So what's the catch? Well, the interest charge coverage ratio is far lower in the hybrid alternative. However, applying the logic deduced from the previous example, we find that by deducting the interest charge on the hybrids the coverage ratio is actually greater than in the equity/debt scenario. This implies that senior debtors are actually better off when the hybrid alternative is implemented, which appears to be intuitively correct as the portion of senior debt/assets is lower. We find that raising capital by issuing hybrid securities offers the same benefits to senior claimants as equity.

²⁰ We find Moody's assessments to be the most coherent with our own views in terms of equity credit assigned.

5.1.2 Using hybrid capital to fund a share buyback

The Swedish telecommunications company TeliaSonera has for long been criticized for being overcapitalized, with investors demanding that the company should return excess capital to the shareholders, while management has argued that at least most of the funds might be needed for investments. These characteristics, in our view, makes TeliaSonera a good fit for a hybrid capital-backed share buyback. Some basic facts²¹ about the company are displayed in Table 5.4. The benchmarks for this hypothetical issue have been the Henkel and Vattenfall hybrids priced and launched in late 2005, since these companies share some features with those of TeliaSonera, primarily the credit ratings. Our suggestion is that TeliaSonera should issue €1.5 billion of hybrids and use the proceeds to fund a directed buyback offering, paying 55 SEK per share, identical to the price offered in their latest buyback program and equal to a premium of approximately 20% over the share price for the 30 trading days. This transaction would reduce the number of outstanding shares by slightly more than five percent, enough to impact the financial ratios. The interest rate on the hybrids is assumed to be 5.5 percent, somewhat higher than Henkel's and Vattenfall's coupons due to the size of the proposed issue and the slightly higher bond rates currently prevailing. Given that this rate is reasonable and could be obtained, the interest expenses of TeliaSonera would increase by roughly 57%. However, all else equal, the earnings per share would be augmented incrementally

Table 5.4 TeliaSonera factsheet, ex ante

| | |
|---------------------------|---------------|
| Share price (30/5) | 42,50 kr |
| Number of shares | 4 490 457 213 |
| Total assets | 187 856 MSEK |
| Return on equity | 11,00% |
| Earnings per share | 3,05 kr |
| Equity ratio | 66,30% |
| Avg. interest rate | 6,54% |
| Credit rating | A2, A- |

Table 5.5 TeliaSonera factsheet, ex post

| | |
|---------------------------|---------------|
| Share price (30/5) | 42,50 kr |
| Number of shares | 4 239 220 427 |
| Total assets | 187 856 MSEK |
| Return on equity | 12,08% |
| Earnings per share | 3,16 kr |
| Equity ratio | 64,50% |
| Avg. interest rate | 6,12% |
| Credit rating | A2, A- |

due to the decrease in the number of shares. Most importantly, the return on equity would also be increased, but the effect on the equity ratio would be limited due to the equity credit of an estimated 75% assigned to the hybrids. TeliaSonera's ratios after the hybrid issue and the share buyback are shown in Table 5.5. We believe that by issuing hybrids to pay for a share buyback, TeliaSonera could delicately balance the demands from the investors regarding

²¹ Based upon the reports for 2005 and the first quarter of 2006. The numbers have been adjusted for the dividend paid after the latest reporting date

capital redistribution and the need to maintain financial strength and senior borrowing flexibility and capacity should lucrative investment opportunities arise.

5.1.3 Incentives to Issue for a non-rated corporation

The advantages for issuing hybrids appear to be greatest for rated companies that can utilize hybrids in order to maintain or even marginally improve credit ratings. But what about an unrated corporation? Are the advantages still significant enough to justify hybrid issuance? In order to investigate this, we will study the case of Porsche AG who completed a hybrid security issue in January 2006. Following the €3bn acquisition of an 18.5 percent stake in Volkswagen in October 2005, Porsche issued \$1bn of hybrid bonds along with another \$1bn of senior debt to – in the company’s own words: “...optimize our liquidity structure” (Porsche, 2006-01-04). The hybrid issue is to date the largest ever issue of perpetual debt of an unrated corporate, and according to Jeff Tannenbaum, syndicate manager at Merrill Lynch, the transaction was made possible thanks to strong brand recognition and the company’s financial track record (Merrill Lynch, 2006).

The Group Treasurer of Porsche - Henrik Hänche – estimates the company’s cost of equity to be in the 15 to 20 percent range. Considering the equity-like characteristics of hybrid capital, the 7.2²² percent coupon prompts the treasury group to regard the bonds as cheap equity rather than expensive debt, especially when considering the tax benefits of issuing hybrids instead of equity. Hänche concludes by stating that in retrospect, the issue was the right way to go. Despite the absence of a step-up clause, investors embraced the issue and it was eventually oversubscribed more than four times, a powerful signal to the market that unrated companies may be equally successful issuers of hybrids as rated ones.

²² Original guidance was set to 7.5 percent

6 DISCUSSION

If it walks like a duck, looks like a duck and quacks like a duck- how can it be tax deductible? When structured appropriately, hybrids bare a greater resemblance with equity than debt, a fact recognized by the rating agencies as they assign more than 50% equity credit. If the irrelevancy theorem of financing holds true than it could be argued that the perceived gains to the shareholder are off-set by the lower tax revenues, indicating a tax arbitrage. We believe this to be a part of the explanation; we also believe that hybrids offer opportunities to expand the enterprise, indicating that the benefit to shareholders is not simply a question of reallocation.

As stated earlier, hybrids offer a possibility to obtain beneficial effects in a way that is similar to when leverage is increased, which of course leads us to the question whether or not leverage actually is increased. As a consequence of the deferral clause, interest is paid when earnings are strong and not when earnings are weak. Therefore, it could be argued that hybrids offer the same cushion as equity when earnings are weak, which is in fact the only time at which the cushion is needed.

The market for corporate hybrid securities is still in its infancy and has not yet been faced with periods of adversity, entailing declining corporate earnings and unruly interest rates, prompting a decreased proclivity for risk exposure. With European bond yields at historical lows, investors have been more than willing to accept the risks involved with hybrids. It might therefore be that hybrids are a tougher sell in times of greater risk aversion.

In light of investor concerns, hybrid capital should be issued by stable corporations. We believe that the ideal issuer of hybrid capital is a company that has the following characteristics:

- Non-cyclical business
- A documented and successful history in the bond market
- Under-valued shares
- Limited senior debt capacity
- A strong majority owner unwilling to invest and opposed to dilution

7 CONCLUSIONS

We conclude that hybrids are, in all essential aspects, low-cost equity rather than high-cost debt. Regarding the subject of what corporations might be suitable issuers and in what special situations hybrids might prove useful, it is our belief that companies that are reasonably well-known to investors, who have a strong rationale for issuing and who also have limited access to senior debt funding can benefit the most from issuing hybrids. Having showed that the return on equity can be augmented and the weighted average cost of capital can be lowered by the use of hybrids, we conclude that a properly structured hybrid can increase shareholder value.

7.1 Suggestions for Further Research

Since this thesis has primarily been of qualitative nature, we have not examined the quantitative issues of corporate hybrids in greater detail. Therefore, it would have been interesting to review the implications of an inclusion of corporate hybrids in the optimal capital structure model with risky debt, extending the research conducted by Mjös & Persson (2004) on the banking and insurance hybrids market.

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APPENDIX

A.1 Investment Banks' Pricing Policy










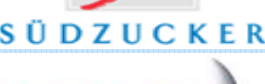




“I have spoken to ten different banks and all have different methods of pricing” – (Florian Grandcolas of AXA Investment Managers)

After having interrogated several investment bankers at the Hybrid Capital Congress 2006 (ex. From Societe General, JP Morgan, ABN Amro, Citigroup), we have observed differences between theoretical and practical pricing models. In the final version, they are as Grandcolas stated different, but they are all based on replication models with adjustments to the unique risks related to hybrid corporate bond, such as coupon risk and extension risk. An example of a price model Turc (2006) is presented below by:

- Simulate all possible future scenarios on credit spread using the CDS curve of the issuer and assumptions on spread volatility.
- Determine the company's decision for each of these scenarios on terms of coupon deferral and extension.
- Assign a probability to each of these scenarios and price the product.

This model uses the CDS-curve to simulate the default risk of the company. The deferral and extensions risks are related to different premiums. Finally, a partial differential equation enables to assign a probability to each scenario and to compute the net present value of the product in each case.

A.2 Corporate Hybrid Capital Scorecard

| Corporate Hybrid Capital Scorecard | Issue size € m | Maturity (years) | Credit rating (Moody's S&P) | Coupon (%) | Step-up (in years from issue, rate) | Deferral trigger(s) | Cu-mulative? | Use of proceeds | Balance sheet treatment | Equity credit (Moody's S&P) |
|---|----------------|------------------|-----------------------------|------------|--|---------------------|--------------|-----------------------|-------------------------|-----------------------------|
|  Bayer | 1,300 | 100 | A3 A | 5.000 | 10 3-m EURIBOR+2.80% | Optional, Mandatory | Yes | Refinancing | Debt | 75%, Intermediate |
|  Casino | 600 | Perpetual | Unrated BBB- | 7.500 | 3, lower of EUR CMS 10 +1.00% or 9.00% | Optional | No | General purposes | Equity | Unrated 60% |
|  CLAAS | 80 | Perpetual | Unrated | 7.620 | 10 3-m EURIBOR+5.50% | Optional | Yes | Refinancing | Equity | Unrated |
|  DONG energi til mere | 1,100 | 1000 | Baa3 BBB+ | 5.500 | 10 3-m EURIBOR+3.20% | Optional | Yes | Refinancing | Equity | 50% 50% |
|  Henkel | 1,300 | 99 | A2 A- | 5.375 | 10 3-m EURIBOR+2.85% | Optional, Mandatory | Yes | Pensions funding | Debt | 75%, Intermediate |
|  Linde | 400 | Perpetual | A3 BBB+ | 6.000 | 10 3-m EURIBOR+3.375% | Optional | Yes | Refinancing | Debt | 25% Minimal |
|  LOTTOMATICA S.p.A. | 750 | 60 | Baa3 BBB- | 8.250 | 10 3-m EURIBOR+5.05% | Optional, Mandatory | Yes | Acquisition financing | Debt | 75% N/A |
|  MICHELIN A better way forward | 500 | 30 | Baa2 BBB+ | 6.375 | 10 3-m EURIBOR+2.95% | Optional | No | Refinancing | Debt | 0% 60% |
|  otto group | 150 | Perpetual | Unrated | 6.500 | 7 3-m EURIBOR+5.25% | Optional | Yes | General purposes | N/A | Unrated |
|  SÜDZUCKER | 700 | Perpetual | A3 A- | 5.250 | 10 3-m EURIBOR+3.10% | Optional, Mandatory | Yes | Refinancing | Equity | 75% 50% |
|  THOMSON images & beyond | 500 | Perpetual | Baa2 BBB | 5.750 | 10 3-m EURIBOR+3.625% | Optional | No | General purposes | Equity | 50%, Intermediate |
|  TUI Aktiengesellschaft | 300 | Perpetual | Ba2 BB+ | 8.625 | 8 3-m EURIBOR+7.30% | Optional | Yes | Acquisition financing | Equity | 25%, Intermediate |
|  VATTENFALL | 1,000 | Perpetual | A2 A- | 5.250 | 10 3-m EURIBOR+2.95% | Optional, Mandatory | Yes | General purposes | Debt | 75% 60% |
|  VINCI | 500 | Perpetual | Baa1 BBB+ | 6.250 | 10 3-m EURIBOR+3.75% | Optional | No | Acquisition financing | N/A | 50% 50% |