NORGES HANDELSHØYSKOLE
BERGEN, 20/06/2010

Renegotiation of corporate bond contracts

A study of the Norwegian market 2007-2010

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MSc Thesis, Major in Financial Economics

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Abstract

This study examines 176 renegotiations of Norwegian corporate bond contracts in the period 1/1/2007-3/31/2010. An especially high renegotiation activity is observed between the last quarter of 2008 and throughout 2009. Close to 2/3 of the renegotiations relate to an actual or an inevitable default situation. Extension of the maturity date and altering of covenants are the most commonly proposed changes, while equity issue and increased coupon represent the most common forms of compensation offered to bondholders. The bondholders in general act uniform in their voting towards the borrower proposals. However, indications are found that renegotiations initiated at a late stage of the bond lifetime receive fewer acceptances from the bondholders.

Preface

Working on this project has been a challenging but valuable experience. Renegotiations of corporate bond contracts are complex actions that have required both creativity and a broad specter of knowledge.

Gaining insight to the Norwegian corporate bond market has nevertheless been exciting. Hopefully, this thesis can act as inspiration to others that want to discover corporate bonds. For those especially dedicated, this thesis is attached with a CD, containing my database, examples of the applied renegotiation documents, and a brief guideline.

I would like to express my gratitude towards them who have contributed to this thesis.

First of all, thanks to my supervisor Dr. Carsten Bienz.

A special thanks to the representatives from Norsk Tillitsmann both for granting me access to Stamdata and for sharing their time and knowledge.

I would also like to thank representatives from Verdipapirsentralen for sharing historical data on the bond market.

Furthermore, thanks are directed to the investment bank representatives that have shared their time, and their knowledge and passion towards the corporate bond market.

Finally, a special thanks to my sisters, Ingrid and Marie, who spent their first days of the summer holiday helping this into a presentable product.

Bergen, 20/06/2008

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1. Introduction

Bonds are often generalised as safe and predictable investments (read boring). The reality might however prove this perspective wrong. At the time of this writing, even government-backed bonds do not necessarily guarantee a good night's sleep. Corporate bonds represent a less renowned part of the bond market. In contrast to governmental bonds that under normal circumstances are regarded as riskless, corporate bonds represent great diversity within credit quality, thus also representing both risk and unpredictability. If still not convinced that corporate bonds represent fun, think about when most of the action during a bond lifetime is taking place. Yes exactly, at the event of a renegotiation.

This paper studies renegotiation of corporate bond contracts in the Norwegian market during the period from 1/1/2007 to 31/3/2010. This respective time period embraces the recent financial crisis which probably can be said to represent the first real downturn faced by a developed Norwegian corporate bond market. Conditions for high renegotiation activity, followed by exciting and diverse problems to be addressed, should therefore be in place.

The aim of this study is to provide insight to complex renegotiation processes taking place in a market that must be regarded as rather enclosed to outsiders. In addition to providing a general insight, this paper aims to answer the following type of questions: How was the corporate bond marked affected by the last turbulent years? What triggers renegotiations? What is being renegotiated? How are bondholders being compensated? What are the bondholders' decisions towards the proposals?

The approach of this paper is based on examinations of correspondences between borrowers and bondholders. Based on summons and notice documents in relation to bondholder meetings, relevant renegotiation data has been extracted and structured in a framework for further analysis. Access to these renegotiation documents has been provided by Norsk Tillitsmann (NTM), the dominating trustee in the Norwegian market. Representatives from NTM have also acted as conversation partners to discuss and address upcoming problems. During the course of this work, also representatives from different functions within investment banks have been consulted. Conversations with a bond salesman, a credit analyst and a head of fixed income, have all provided practical input to the overall understanding of the bond market and renegotiation processes.

1.1 Structure

Chapter 2 will provide a theoretical approach to contract theory and the important role of covenants. The process of renegotiation will be presented both from a theoretical and practical perspective before related studies will be paid a visit.

Chapter 3 introduces the context of this study. Important features of the Norwegian corporate bond market will be reviewed with the intention of increasing the understanding of the further analysis.

Chapter 4 represents the backbone of the subsequent descriptive analysis part. The chapter will provide information regarding the process of data collecting, the choice of input, and how the collected data have been categorised to constitute a framework for further analysis. The chapter will be concluded by a discussion of data validity and limitations of the chosen approach.

From the framework presented by the previous chapter, Chapter 5 will describe and analyse the collected renegotiation data. Insight will be provided by both overall statistics and quarterly statistics. Findings will be discussed and occasionally illustrated by individual examples from the sample.

Chapter 6 will provide statistical testing based on hypotheses developed throughout the paper.

Finally, chapter 7 concludes the study, and presents possible future research.

2. Theory

2.1 Contract theory

A renegotiation can be found necessary when the original contract has failed to accommodate an upcoming eventuality. Writing a complete contract able to foresee all types of contingencies is regarded as impossible, and if possible would incur enormous costs. Even writing a good contract is costly.

Among the first research to establish the concept of costs associated with the process of writing contracts was Ronald Coase's paper "The Nature of the Firm" of 1937. In contrast to the prevailing view at the time that efficient markets would favour out-contracting, he suggested that firms arise as a consequence of desire to avoid transaction costs associated with the market. The research following Coase's paper focused on explaining the rationale of firm integration. The idea was that contracting would be less costly in a controlled insider environment in contrast to dealing with outsiders. Williamson (1975,1985) recognises that it under certain circumstances is either impossible or inefficient to design complete contracts. He therefore believes it necessary to create a mechanism that will complete the contractual incompleteness by monitoring. The research in this direction constitutes what is known as the Transaction Cost Theory (TCT).

In the mid eighties a new direction in contract theory emerged, known as the Incomplete Contract Theory (ICT). The pioneer of this field, Oliver Hart has presented several papers on the subject. Introduced in Grossman and Hart (1986), and developed in Hart and Moore (1990), a low cost alternative to contracts that allocate all specific rights of control is presented, namely residual rights of control, or ownership. The idea is that power of ownership will fill the gap of an incomplete contract. The latter theory is also known as the property rights approach. The residual right is important in respect to debt financing. Seeing that a perfect contract between borrower and lender is costly and unlikely, the gap of the incomplete contract is filled with the switch of control feature, known as the put option. The switch of control characteristic of a debt contract is essential to understand why renegotiations occur and to understand the incentives of both parties in a bargaining situation.

2.2 The role of covenants

Covenants play an important role in bond contracts, and are not at least central in respect to renegotiation of these contracts. Breach of covenants, or restrictions imposed by covenants,

are common triggers for renegotiation events. Three important papers, all published in the seventies, laid the ground for subsequent research on covenants and the borrower lender relationship, and constitute the foundation of what is known as the Agency Theory of Covenants (ATC).

First, Jensen and Meckling (1976) provide in their paper a thorough discussion on agency costs associated with financing provided by outsiders. Their discussion explains why it is rationale for lenders to restrict borrower behaviour. An important extraction from their work is the distribution of agency costs associated with the conflict of interest between borrower and lender. They show that the agent bears all agency costs and consequently has strong incentives to reduce this conflict (i.e. by the use of covenants).

Second, Myers (1977) explains in his paper, "Determinants of corporate borrowing", that optimal capital structure depends on future growth opportunities. These growth opportunities can be seen as real options. He argues that issue of risky debt reduces the present market value of a firm that is holding real options by inducing a suboptimal investment strategy or forcing the firm and its creditors to bear the cost of avoiding such a suboptimal strategy.

Third, based on the work of the two previous papers, Smith and Warner (1979) in their paper "An Analysis of Bond Covenants" directly address the use of covenants in bond contracts as a remedy to control the conflict between stockholders and bondholders. Through a qualitative examination of widely employed covenants, they research this conflict by testing the "irrelevance hypothesis" and the "costly contracting hypothesis". The irrelevance hypothesis implies that the conflict does not affect the total value of the firm. In contrast, the costly contracting hypothesis states that controlling the stockholder-bondholder conflict can increase firm value. Smith and Warner find support for the latter hypothesis, and argue how different covenants can be applied to reduce the agency cost of debt. (However, they also argue that direct costs and opportunity costs of complying with these contractual restrictions can be substantial.)

The use of covenants in loan agreements will depend upon the risk of conflict between borrower and lender, i.e. corporate bonds will typically be subject to more restrictions than governmental bonds. Reisel (2004), find in her empirical research on U.S. public bond issues that by including financial covenants, the direct cost of borrowing can be reduced by as much as 311 basis points. This finding supports the claim that corporate bonds are more likely to include covenants. Thoresen and Tobiassen (2008) find a strong increase in the use of

covenants in Norwegian corporate bond issues during the period 1998-2008. They argue that the market has become more professional and sophisticated towards the use of different types of covenants.

An increasing use of covenants will impose more restrictions and less flexibility to the agent. Myers (1977) argues that both the direct costs and the opportunity costs of complying with restrictions appear to be substantial. By transferring Myer's argument on direct costs and opportunity costs to the context of renegotiation, the following is presumed sensible. If restrictions are violated there will be direct costs associated with liquidation or the avoidance of such action. When restrictions hinder the borrower from taking actions that maximise the firm value, it will impose opportunity costs. The similarity of both situations is the need for a renegotiation to reduce costs.

2.3 Renegotiation in practice and theory

The renegotiation process is typically initiated by the borrower contacting the bondholders. The motivations for amending a contract can be wide ranging, however most of them can be ascribed to some sort of restrictiveness of the initial contract (recall covenant discussion). Restrictions of the initial contract can either have been violated, implying a default situation, or impose hinders for desired corporate action outside any distress. The renegotiation is either way triggered by a misalignment between the terms of the existing contract and the present- or future situation of the borrower. Maskin and More (1999) somewhat more sophisticated, refer to this as an out-of-equilibrium phenomenon in their theoretical paper "Implementation and Renegotiation".

Terms of the existing contract can be diverted from in two different ways. A waiver implies that bondholders agree to overlook a breach with contractual restrictions, typically only for a limited time period, before returning to original terms. (Creditors' decision to waive covenant violations is analysed by Chen and Wei (1993)). The alternative solution is to make permanent amendments by rewriting the indenture.

Renegotiation of a debt contract is not costless. In addition to indirect costs such as time and effort, the bondholders will normally require compensation in return for their acceptance of new terms. Beneish and Press (1993, 1995) study costs associated with renegotiations resulting from covenant violation attributable to U.S companies. They estimate the average costs of such violations attributable to the borrower in the range between 1.2 percent and 2 percent of market value of equity.

Both the costs to the borrower and the bondholders' willingness to renegotiate the existing contract terms will depend on their respective bargaining power. The bargaining power will be influenced by alternative solutions and credibility of proposals. Papers of Hart and Moore (1998) and Gromb (1995) provide theoretical models on the process of debt renegotiation. They show that in states of high cash flow the borrower may be able to negotiate down onerous or restrictive terms of the initial contract, i.e. by reducing interest rates or allow for prior prohibited corporate actions. Although these papers solely focus on cash flow, their argumentation can be applied to credit quality in general. Thus, factors that improve credit quality will improve the borrower's bargaining position, though only if he has a credible threat of leaving the current lender. The credibility argument is important to both parties in a renegotiation, and can be applied in different credit quality environments. In states of distress, the bondholders' threat will normally be to enforce bankruptcy proceedings; however, this threat will be less credible if liquidation values are low. Benmelech and Bergman (2008) show in their empirical study of U.S. airlines how liquidation values affect renegotiations. They find indications that airlines in relatively poor financial positions are able to renegotiate and reduce their lease payments with lessors. Credibility will also apply in respect to the compensation offered to bondholders. Compensation through future payment will be less credible than payment today, as future payment is subject to uncertainty.

The implications to the initial contract, size and credibility of compensation, and the possible alternative of liquidation, are among many factors that bondholders will have to take into account when considering the borrower's proposal. The renegotiation outcome is eventually decided at a bondholders' meeting. A potential resolution in favour of the proposal will be prevailing to all bondholders.

2.4 Related studies

Familiar to the author, there exists no study of renegotiation of corporate bonds directly equivalent to the approach of this paper.

The vast majority of empirical studies on the subject of debt renegotiation examines companies in default or distress. Papers by Beneish and Press (1993, 1995), Chen and Wei (1993), Smith (1993), Chava and Roberts (2008), Nini, Smith, and Sufi (2009), and Roberts and Sufi (2009) all study implications and outcomes of covenant breach, known as technical default. Papers by Gilson (1990), Gilson, John and Kang (1990), Asquit, Gertner and Scharfstein (1994), and Benmelech and Bergman (2008), on the other side study the

bargaining processes and outcomes of debt subject to payment default or bankruptcy. In common for all these studies is the focus on U.S. data.

In contrast to the mentioned papers, the approach of this paper does not filter the data sample upon ex. ante status of the borrower. Identification of borrower status is rather a partial objective of the research conducted in this paper.

The most related paper is found to be Michael R. Roberts, Amir Sufi (2009): "Renegotiations of financial contracts: evidence from private credit agreements". In contrast to the other studies they focus on all types of renegotiations, in which most of them occur outside default or distress. Their paper examine 1000 private credit agreements between U.S. publicly trades firms and financial institutions, during the period 1996 to 2005. They show that over 90 percent of long term debt contracts are renegotiated prior to the original maturity, that renegotiations occur relative early in the lifetime of the contract and that it is rarely a consequence of distress or default. Furthermore they show that renegotiations result in large changes to the amount, maturity, and pricing of the contract. Primary determinants of renegotiation and its outcome are found to be accrual of new information concerning credit quality, investment opportunities, collateral of the borrower, and macroeconomic fluctuations in credit and equity markets. They also find that terms in the initial contract play an important role in respect of bargaining power in the renegotiation process.

2.5 Corporate bonds in one-two-three

This section will give a brief introduction to the pricing and characteristics of corporate bonds. For a more detailed review of the complexity of corporate bonds the reader is directed to consult other texts.[1] The price of a bond is simply calculated as the present value of all future cash flows. Future cash flows can materialise as coupon payments and repayment of the face value. The cash flows are discounted with an appropriate rate of return. There are four three main elements that affect the pricing of a corporate bond. In addition some bonds are attached with an option element.

Interest rate fluctuations affect the price of all fixed coupon bonds. Increasing interest rates lead to higher required return, and bond prices drop. If interest rates fall, the opposite is true to the bond price. Floating coupon bonds, often referred to as FRNs[2], are tied to the market

[1] e.g. Bodie, Kane and Marcus, (2008) chapter 14
[2] FRN – Floating Rate Notes

rate through some reference index, typically NIBOR 3m or US-LIBOR 3m, and will thus be little affected by interest fluctuations.

Corporate bonds are less liquid than governmental bonds, so in order to compensate for lower liquidity they must offer bondholders a higher yield. This paper discloses that a large proportion of the corporate bonds are unlisted, a feature which does not promote liquidity.

Furthermore, corporate bonds are subject to credit risk. AAA-rated governmental bonds bear little or no credit risk, as there is no doubt that in example the U.S. Treasury will always repay its debt. However, companies can go bust or restructure their debt. Hence, corporate bonds must offer their holders a higher yield in order to compensate for this credit risk. The credit risk itself stems from both business risk and financial risk. Business risk typically relates to industry characteristics, competitive position and management. Financial risk is concerned with financial policy, profitability, capital structure, cash flow protection and financial flexibility.[3]

Corporate bonds are often attached with some sort of option element. The most common feature is the borrower's right to redeem the loan prior to maturity, referred to as a call option. Occasionally the lenders have the right to require repayment, referred to as a put option. A convertible bond is a hybrid security, which allows the lenders to convert their debt claims into equity in the borrower. The option to convert can be seen as a call option on the stock. A warrant represents another type of call option on the stock. It is very similar to a normal call option, but typically offers a longer lifetime, and exercise involve issue of new shares, thus representing a potential dilution threat to existing shareholders. A warrant attached to a bond is often referred to as a "sweetener", and can usually be separately traded in the market. With the exception of warrants, all the presented option elements will affect both the initial terms of a bond and the pricing of it. The option element can be valued by applying option pricing formulas.

[3] Barcleys Bank PLC (2006)

3. Corporate bonds in Norway

This chapter will provide introduction to the Norwegian corporate bond market. It will take on how the market has developed, how it is organised and who the participants in the market for these securities are. The last part of this chapter will provide insight to the harsh economic climate that prevailed during the time window of this study and how this affected the market for corporate bonds. Furthermore, this part will raise expectations towards the findings of this paper.

Corporate bonds are in this chapter defined as all corporate issues to non-financial institutions.

3.1 The market

The market for corporate bonds in Norway is relatively new. This is especially true if concentrating on the high yield part of the market, which basically has emerged over the last decade. Prior to the banking crisis that prevailed in the Nordic countries in late eighties and early nineties, corporate borrowing was strictly regulated. The privilege of issuing bonds was at this time mainly reserved mortgage companies and some utilities. The banking crisis required a massive governmental intervention, and was followed by new regulations that altered the old financial system. Commercial banks were granted access to the bond market, something they responded to and quickly became the dominant non-governmental issuer of bonds. The commercial banks' entry to the bond market was an important milestone in respect to gradually phasing in other type of borrowers to the market. However, it should still take quite some time until the bond market would represent an option for most companies. Thoresen and Tobiassen (2008) show that the market for corporate bond issues, excluding for utilities, was close to non existing prior to 1998 and did not start to grow properly until after year 2000.

Figure 3.1 shows the development of total outstanding value in the Norwegian bond market at year end from 2001 to 2009. The corporate bond market showed an enormous growth between 2005 and 2008, and the value outstanding did more than double during the period.

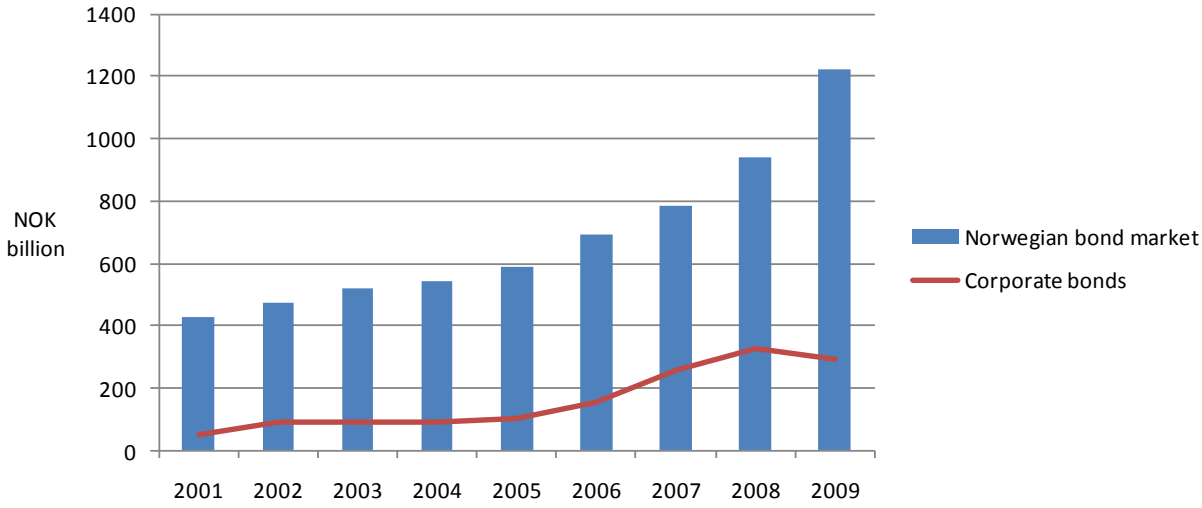


Figure 3.1: Outstanding nominal value of the Norwegian bond market (2001-2009) Corporate bonds' fraction of the total market is illustrated by the red line. Corporate bonds are defined as all non-financial corporate issues. *Data: Verdipapirsentralen ASA (VPS).*

The size of the Norwegian bond market relative to the economy is significantly less than those markets of comparable nations in the Nordic region. However, the relative demand for capital of Norwegian institutions and companies is not believed to be any less of what is seen in the comparable nations.[4] The less developed bond market will thus lead Norwegian institutions and corporate borrowers abroad in their search for funding. For corporate borrowers, this has mainly been the trend for blue chip companies that are placing large bonds. However, in recent time there has also been an increasing awareness towards this option among the high yield issuers.[5]

3.2 The marketplace

Oslo Børs ASA (Oslo Stock Exchange) is the provider of market place services to the Norwegian bond market. Traditionally there has been only one exchange, namely Oslo Børs. Oslo Børs is the equivalent marketplace to where equities trade and it is strictly regulated by Norwegian and European legislation through the Stock Exchange Act. Due to new and stricter EU directives on financial reporting (Compliance with IFRS), a new marketplace, Alternative Bond Market (ABM) was established in 2005. ABM is a separate marketplace offering rules and procedures accommodated to the Norwegian market, independent of the new EU

[4] Finansnæringens Hovedorganisasjon (2007)
[5] Private conversation with RS Platou bond salesman

directives. ABM offers the same standard and quality as the traditional exchange market, but offers a somewhat simplified procedure towards admission of listing and nonetheless represents an alternative to issuers who do not prepare their consolidated accounts in accordance to IFRS. ABM also differentiates itself by offering two separate sub markets, one in which is directed towards professional investors and one which is directed towards retail investors, facilitating trade of face value above and less than NOK 500.000, respectively.

The function of an exchange is to provide liquidity to the bondholders by arranging for a fair and orderly second-hand market. Requirements to company disclosure are among the most important features of Oslo Børs and ABM to secure a fair market. In addition, all trades in a listed bond must be reported. Trading at Oslo Børs and ABM requires a membership at the stock exchange, and an authorisation to trade bonds in specific. There are approximately 16 brokerage firms and investment banks that hold this title and thus can act as an intermediate between investors in the second-hand market of listed bonds.[6]

Figure 3.2 shows the listing status of corporate bonds measured by the nominal value outstanding. The figure shows a strong growth in unlisted bonds from 2005 and on, indicating that most of the issues from the booming period of 2005 to 2008 did not apply for listing. ABM has only managed to attract a small fraction of the corporate bond market since the introduction in 2005.

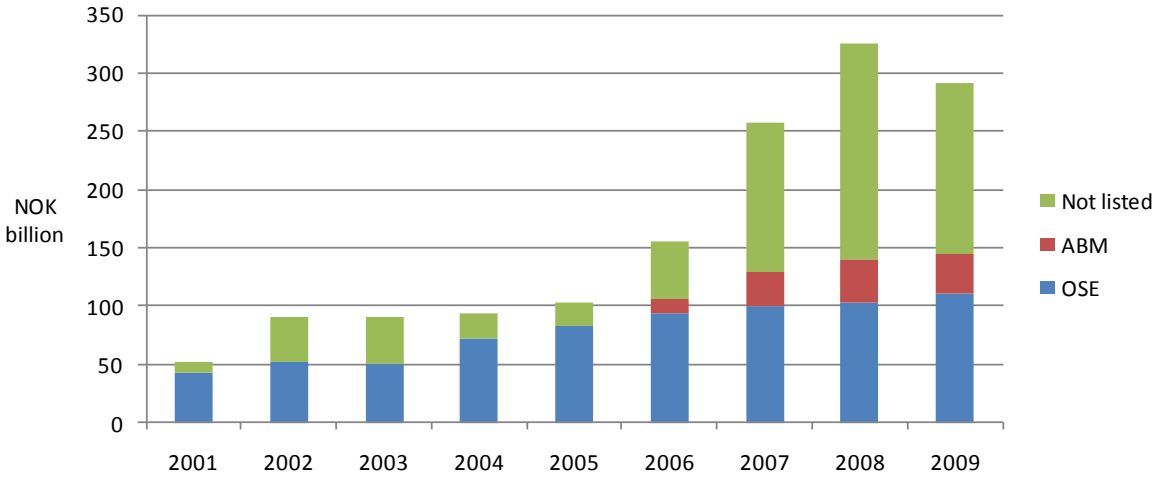


Figure 3.2: Listing by outstanding nominal values (2001-2009) The figure illustrates the size development of corporate bonds per listing status. *Data: VPS ASA and Oslo Børs ASA*

[6] www.oslobors.no/ob_eng/Oslo-Boers/Trade/Membership

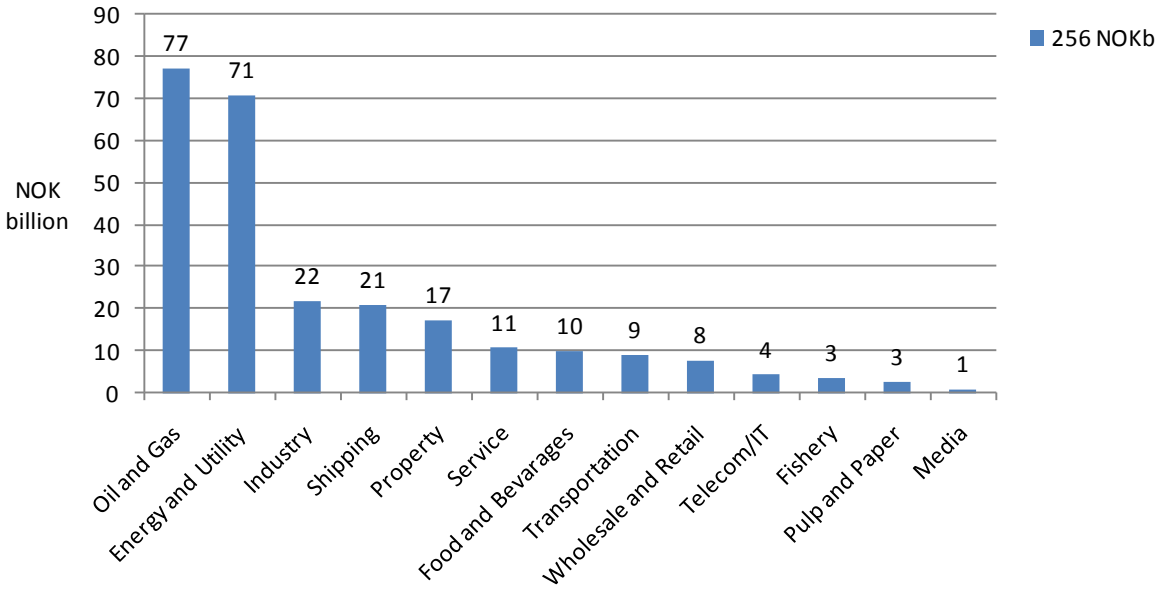
Unlisted bonds trade in over-the-counter market. The second-hand market for these bonds is to a larger degree dependent on the investment banks. Brokers in the investment banks will have to take use of their networks both to match and price an order with a counterpart.

3.3 Market participants

3.3.1 Issuers

Corporations that issue bonds can generally be classified in three categories. The first type consists of those companies that are able to raise debt in the bond market at better terms compared to what they can achieve by traditional bank financing. If excluding utilities, they are a rare species in the Norwegian market, and qualifying candidates will often raise their debt abroad (e.g. Yara, Statoil). The second type, are those companies that need a residual funding subsequent to partial bank financing being secured. The last type consists of those companies incapable of raising bank financing at all, and therefore approach risk willing bondholders instead. Debt issued by the two latter types of companies will often be regarded as high yield bonds, also referred to as junk.[7] These types of bonds constitute a large fraction of the Norwegian corporate bond market.

Figure 3.3.1 illustrates the outstanding corporate bond value as of June 2010 per sector. The three largest contributors are oil and gas, energy and utility, and industry.



[7] Below investment grade (BBB) criteria from credit rating agencies as i.e. Standard & Poors

Figure 3.3.1: Value outstanding per sector per 14/06/2010 The figure illustrates the outstanding value of corporate bonds per sector. *Data: Stamdata*

3.3.2 Investors

Figure 3.3.1 shows the ownership distribution of corporate bonds as of year-end 2009. The investor side is dominated by large professional investors, and a significant part of them are of foreign origin. Furthermore, it is clear that private investors hold a rather small portion of the corporate bond value. Hedge funds are said to be an important investor in corporate bonds, especially during harsh market conditions. Hedge funds are worth mentioning in specific because they often differ in their intensions towards corporate bonds as an investment class. Where others see corporate bonds as a portfolio investment, offering diversification and a high coupon, hedge funds may use corporate bonds in an active bet. Hedge funds can buy "cheap" bonds in the second-hand market only to speculate on the recovery value of a default or control of company assets. As part of the strategy, they may have a short position in the stock. Hedge funds will actively take use of their voting rights to trigger a favoured outcome. A hedge fund with a late entry and a creative strategy can therefore have misaligned interests to those of the existing bondholders, and thus create unanticipated renegotiation outcomes.[8]

When examining the ownership distribution, one should bear in mind that a lot of investors are hidden behind nominee accounts, in other words that the beneficial owner deviate from the registered owner. In contrast to the stock market, openness in respect to ownership is a lacking feature of the bond market. The VPS register, which contains specific information of bondholders, is confidential by law. An exception goes for convertible bonds, where the company can request access to bondholder lists.

Although not to be debated here, it is surely a rightful discussion whether this investor secrecy is sensible or not, and why the policy should differ from those applying to equity ownership. However, it is worth noting that especially the investment banks have strong incentives to keep ownership information withdrawn from the public.

[8] Based on various conversations with investment bank representatives.

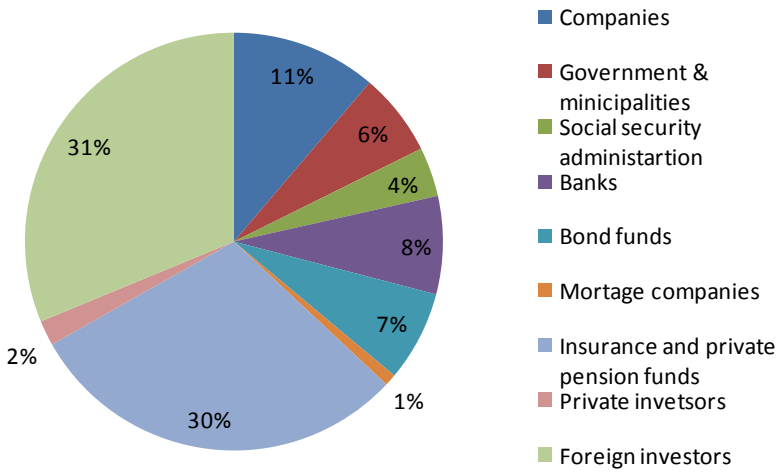


Figure 3.3.1: Ownership distribution of corporate bonds per 12/31/2009 The pie chart illustrates who the investors in corporate bonds are. Total outstanding corporate bond value per 12/31/2009 was 291NOKb. *Data: VPS ASA. Based on the sectors "industry" and "others".*

3.3.3 Trustee

Norsk Tillitsmann (NTM) is the dominating provider of trustee services to the Norwegian bond market. Excluding for governmental bonds, NTM has a market share of more than 90 percent measured both in number of issues and outstanding nominal value. In respect to the high yield market NTM acts as trustee for all issues. Their total number of trusteeships counts to approximately 2000. NTM was established in 1993, based on the idea of an independent and competent bond trustee function. Prior to NTM, the trustee function was facilitated by individual savings banks, commercial banks, brokers and investment banks. NTM is today owned by the most substantial institutions in the Norwegian financial market like banks, assurance companies, securities firms and institutional investors.

The role of the bond trustee is to act as an independent intermediary between the borrower and the bondholders. This role offers beneficial functions to both parties.

Dealing with NTM implies a simplified process to the borrower as he only has to interact with one legal entity, and hence is being sheltered from consulting individual bondholder interests. The trustee has authority to consent on minor breaches of the loan agreement and power to modify formalities not found prejudicial to bondholders, thus not requiring a bondholders meeting. Furthermore, the trustee can be consulted in confidentiality by the borrowers to discuss solutions of refinancing.

To bondholders the trustee acts as a professional agent protecting the bondholders' best interest. The trustee actively monitors that the loan agreement is in compliance with both contractual terms and general laws. Furthermore NTM provides deposit and follow-up on security connected to the loan. If the loan agreement is violated the trustee can take legal actions on behalf of the bondholders. When actions that exceed the authority of the trustee are required, a bondholders' meeting is summoned.

The trustee service is paid by the borrower. This is in accordance with Jensen and Meckling (1976) which show that the existing owners bear entire agency cost of debt, and therefore also will capture the gains of reducing them. In other words, because the borrower benefit from reducing costs, it is natural that he pays the involved costs of doing so.

3.3.4 Investment banks

The investment banks are involved in several phases of a bond lifetime. In the initial phase, the investment banks act as managers, by organising the issue and the placement of a new bond. The manager role involves preparing the loan prospectus and other practical formalities before selling the bond to investors. Figure 3.3.4 shows the largest managers of corporate bonds in the period from 1998 to 2007, measured by their number of issues.

When the bond eventually is placed in the market, the investment bank operates as broker in the second-hand market. The placing process has now provided the investment bank with valuable information about investor identity, information which is restricted to others. This information is especially valuable in respect to unlisted bonds, where matching of the buyer and the seller side is more demanding, and were the commission to the investment bank tends to be much higher.[9] To facilitate the second-hand market the larger investment banks will monitor the market and provide analysis to both investors and brokers. Some investment banks also offer investors the opportunity to invest in portfolios of different types of corporate bonds.

Eventually, if the borrower at a later stage needs to renegotiate or refinance the bond, an investment bank may be consulted as financial advisor. It is also observed that investment banks provide advisory services to the bondholders during renegotiation processes.

[9] Private conversation with Head of fixed income, RS. Platou Markets.

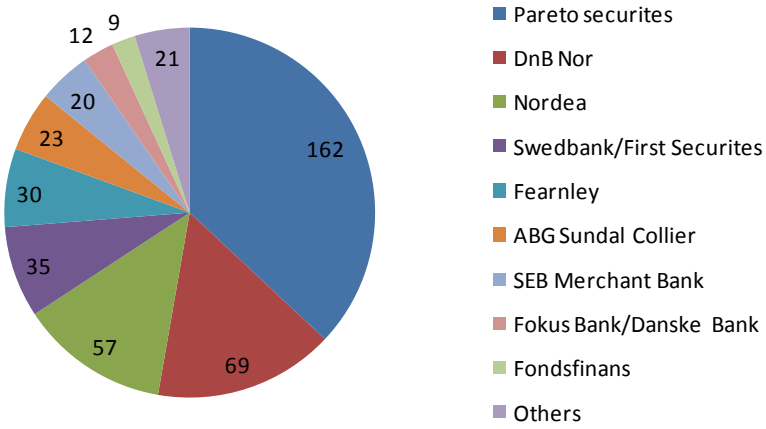


Figure 3.3.4: Corporate bond issues per manager in the period1998-2008 Issues towards energy and utility companies (mainly power companies) are not included. Total number of issues equal 438. *Source: Thoresen and Tobiassen (2008)*

3.4 A bond market in crisis

The debt markets played a central role in the financial crisis that developed during late 2007, and stroke the markets when Lehman Brothers filed for bankruptcy 15th of September 2008. Figure 3.4.(1) illustrates the daily credit spread between the Norwegian Central Bank's key policy reference rate and NIBOR 3 month during the time of this study.

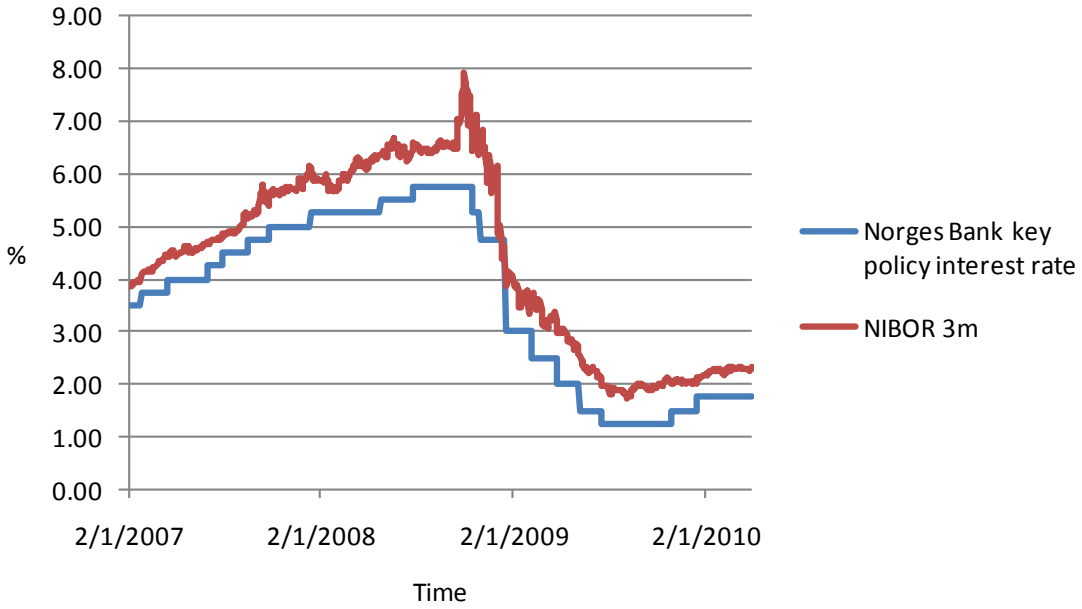


Figure 3.4 (1): Daily development in credit spread 1/1/2007-3/31/2010 Credit spread is the difference between the key policy interest rate and the NIBOR 3m. Highest credit spread is observed

01/10/2008 yielding 2.16 percent while the average credit spread during the period was 0.73 percent. *Data: Norges Bank*

Figure 3.4 (1) illustrates that the credit spread gradually increased during 2008 before skyrocketing in the time after Lehman Brothers collapsed. The credit spread reflects the risk premium that banks require to lend between each other, and thus have little direct meaning towards the corporate bond market. Nevertheless, it serves as an illustration of the difficulties both lenders and borrowers in the corporate bond market must have experienced in this period. When what was perceived to be solid Norwegian banks suddenly were mistrusted, one can only imagine how the much more illiquid and risky corporate bond market was affected. Increasing credit spread is a sign of less supply of capital and less risk willing investors, thus restricting companies' ability to raise debt.

Recall from section 3.3.1 that a large proportion of the outstanding Norwegian corporate bond value belong to oil- and oil related companies. It is rather obvious that the business of an oil production company will be highly dependent on the price of which they can sell their commodity. Eventually, the price of oil will probably be the single most important value driver for all type of oil- and oil related companies, whether it is an exploration company or a service provider. A decreasing oil price is thus expected to lower the credit quality of a large proportion of the Norwegian corporate bond market, and possibly be an influential trigger of renegotiation events. Figure 3.4 (2) illustrates how the daily spot price for oil developed during the sample period.

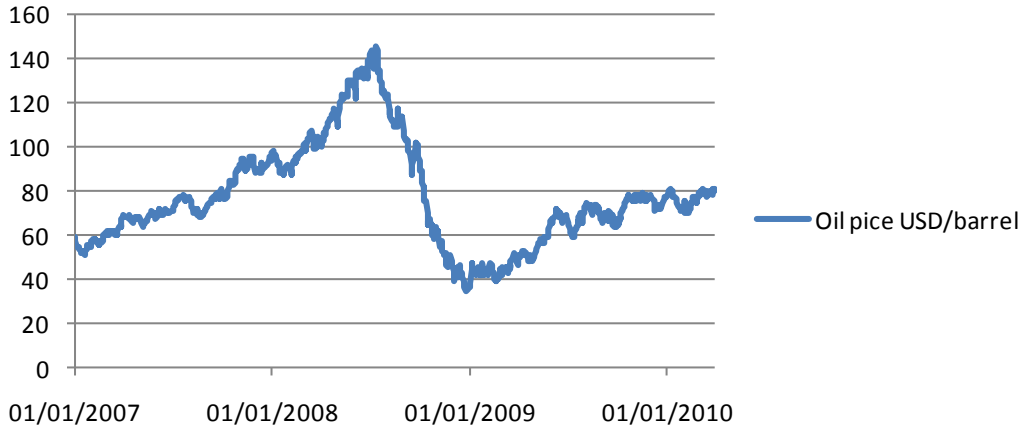


Figure 3.4 (2): Daily oil price development 1/1/2007-3/31/2010. Spot prices per barrel of crude oil. The lowest oil price was recorded 29/12/2008 of 35.38USD/barrel while the average price during the period was 77USD/barrel. Y-axis in USD per barrel. *Source: Datastream*

An article from Dagens Næringsliv published late November 2008 reviewed the pricing of corporate bonds in the Norwegian second-hand market. They showed that even secured bonds to borrowers with some degree of cash flow were priced on yields to maturity in the 30 percent area. The worst example would imply a yield to maturity of 75 percent if successfully redeemed according to plan. Bonds issued to oil- and oil service companies suffered greatly. A credit analyst in Nordea Markets commented that foreign hedge funds were forced to cut their positions and that there were literally no buyers in the market.

To further illustrate the rough conditions that prevailed in the bond market in general and corporate bond market in specific, governmental authorities found it necessary to implement relief measures. In March 2009, a governmental bond fund was established to help increase the supply of capital and liquidity in the bond market. The fund, with a ceiling of NOK 50 billon was given mandate to invest in both new issues and in the second-hand market. 35-75 percent of the amount was intended towards the corporate bond market, though with a maximum of 30 percent in below investment grade securities. The fund had no mandate to invest in enterprises with a credit rating corresponding to CCC+ or lower.[10]

The introduction to the market presented by section 3.1, illustrated that the Norwegian market had its "golden age" in respect to issuance corporate bonds in the years prior to the crisis. This is also supported by the work of Thoresen and Tobiassen (2008) in their mapping of corporate bond issues. A large proportion of these issues could be ascribed to high yield bonds. The period prior to the financial crisis period was characterised by risk willing investors and overflow of capital, thus attracting less solid companies that under normal market conditions probably would face more difficulties in accessing this market. A typical corporate bond has a lifetime of 3 or 5 years, implying that quite a few of these high yield bonds will mature, or reach close to maturity date within the time window of this study. Under normal market conditions, refinancing options are usually available as long as underlying business is promising. However, in a restricted capital market with uncertain business outlooks these types of high yield issuers are expected to have few alternatives except from negotiating with existing creditors.

Separately, and not at least collectively, all the factors discussed in this section raise expectations of observing high renegotiation activity in the corporate bond market during the time window of this study. Initial conversations with Norsk Tillitsmann confirmed that they

[10] Press releases from the Ministry of Finance 18/03/2009

had been abnormally dedicated towards renegotiation of corporate bonds in later time, in the worst period dealing with three to four renegotiations a week.

4. Data

To enable an analysis of renegotiations at an aggregated level, a framework has been developed to organise and categorise the collected data material. A substantial part of the time allocated for this paper has been employed to the process of collecting data and constructing a database suitable for the purpose of further analysis. This chapter will explain how information has been collected, what type of data that has been collected, and how the database is structured. The descriptive analysis in Chapter 5 will be based on this structure. This chapter is concluded with a discussion of data validity and limitations of the presented framework.

This study has applied the following definition to identify renegotiation events: *The borrower approaches the bondholders to propose changes to the original loan agreement which are subject to approval by a bondholders' meeting. The changes can be subject to a waiver, or have permanent effect. Changes in the terms of the bond that are dictated by the original contract are not considered renegotiations.*

4.1 Collecting the data

Identification of renegotiation events and subsequent information collecting was facilitated through extensive use of Stamdata[11]. Stamdata is a database owned and operated by Norsk Tillitsmann (NTM), containing information about all issues where NTM acts as trustee. Stamdata has three main capabilities. First, it consists of a newsfeed function that publishes relevant information to bondholders such as information updates from borrower companies or summons' to bondholder meetings. Second, it provides a bond specific register where all information about individual bonds can be accessed. Third, it provides an aggregated statistical function which allow for criteria specific extraction. The work of this paper has mainly utilised the two former capabilities.

The newsfeed function has been employed to identify events of renegotiation and the scope of these events. When the borrower desires to make changes in the loan agreement he contacts NTM that prepares and sends out a summons to a bondholders' meeting. The summons document provides the bondholders with a presentation of the borrower's renegotiation proposal and an explanation of the consequences of the respective changes to the existing loan agreement. At the bondholders meeting the proposal is voted pro or con, and a resolution is

[11] Stamdata is a payment service. Granted access by Norsk Tillitsmann.

found. A notice from the bondholders' meeting is produced, explaining the outcome of the meeting. Both the summons to bondholders' meeting and the notice from bondholders' meeting are published in the newsfeed function. The objective of the data collecting has been to extract and categorise relevant information from these documents in respect of; background of the proposal, what is being proposed, how bondholders are being compensated, and what are the bondholders' decision towards the proposal.

The bond specific register has been employed to collect characteristic data in respect to the renegotiated bonds, such as among others; interest rates, disbursement and maturity dates, and amounts outstanding. Due to the register being dynamic, in the sense that it is updated according to changes, the original loan documents had to be consulted to verify maturity dates and interest rates. Furthermore, the amounts outstanding at the time of the events had to be manually calculated from a list showing a history log of prior redemptions.

All information, both in respect to the newsfeed function and the bond specific register had to be manually collected and typed in.

4.2 Sample selection

The data has been collected from renegotiations initiated between 01/01/2007 and 31/03/2010. This specific timeframe was selected in expectations of embracing three different stages of the market. The stages in mind are the time prior to-, during- and after the financial crisis, though it can be discussed whether the after period has yet come.

4.2.1 Type of bonds

Energy and utility companies are not included in the sample (mainly power companies). The reasoning is two folded. First, energy and utility companies issue extremely safe bonds that are unlikely to bring up many renegotiation events at all. However, as already illustrated, these types of bonds constitute a large portion of the Norwegian corporate bond market and consequently create quite a lot of documentation in the newsfeed function of Stamdata. All these documents would have to be analysed if included. Thus, excluding energy and utility companies saved a substantial amount of time without sacrificing the size of the sample. Second, because of the low risk involved, energy and utility companies include considerable less restrictions and covenants. As analysis of what type of covenants that are renegotiated is an important part of this study, these types of bonds would be of less interest. In respect to covenants, excluding energy and utilities is also consistent with the approach of Thoresen and Tobiassen (2008) and their study of covenants in Norwegian corporate bond issues.

Furthermore, loan agreements issued with a lifetime of less than a year, referred to as notes or certificates of deposit (CD), are not included. Only two of these were observed, so the choice of not including them is merely a decision to keep the sample "clean".

4.2.2 Additional accounting criteria

First of all, this paper takes bond specific approach, meaning that each specific bond is seen as a unique renegotiation event. If a borrower company has three bonds outstanding and proposes changes to all of them, it will thus account as three renegotiation events. Bonds are separated based on their unique ISIN numbers.

During the collecting process it became clear that bondholders in some bonds were summoned to a bondholders' meeting quite often. This typically happened in cases where the borrowers had not been able to implement the agreed terms of the last resolution within the valid time period. As a consequence, the company had to call for a new meeting with the purpose of extending the last resolution. Accounting for these events would have implied that the same bond appeared several times containing more or less the same renegotiation content. To avoid this, the criterion for the same bond to appear multiple times is that the content of the renegotiation proposal is substantially new.

A renegotiation proposal has to be evaluated at the bondholders' meeting to be accounted for. Withdrawn proposals, or proposals where an insufficient number of bondholders were present at the meeting, are thus not accounted for.

4.3 Constructing the database

Each bond is a unique contract between the borrower and the bondholders. Thus, it was a challenging task assigning renegotiations of these unique contracts into one single framework. The database is structured through five dimensions as illustrated by Figure 4.3. Each renegotiation event is examined according to these five dimensions with the intension of addressing the respective subtexts provided in the figure. The renegotiation events are chronologically accounted for by the time of the summons to the bondholders' meeting.

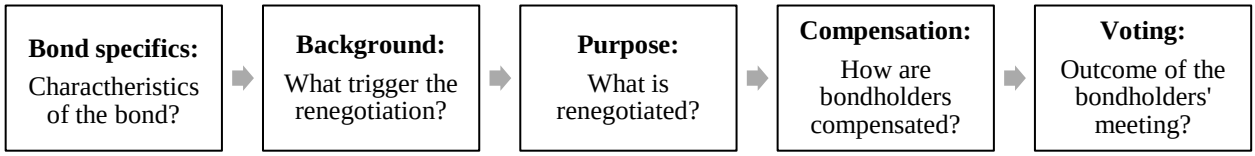


Figure 4.3: Framework applied in construction of database and presentation of findings. The figure illustrates the framework applied in constructing a database of relevant renegotiation data.

The following will take a closer look at what type of renegotiation data which is included in each of the five dimensions, to facilitate further analysis in Chapter 5.

4.3.1 Bond specifics

What characterises the renegotiated bonds?

Several types of bond specific data are collected to address this question*; bond/convertible, interest rate type, pledge status, included options, redemption type, listing status, currency denomination, coupon, disbursement and maturity date, and the involved manager*.

In addition to purely collected data, three features have been added to the bond specific dimension. First, a measure from here and on called lifecycle. The lifecycle measure identifies at what point in the bond lifetime the renegotiation event takes place, calculated as the fraction elapsed until renegotiation. Second, due to varying currency denomination among the observed bonds, a calculation of the nominal outstanding NOK value has been added. The calculation is based on currency conversion ratios as of 15/4/2010.[12] USD bonds have been converted to NOK at a USD/NOK ratio of 5.9, while SEK bonds have been converted at a SEK/NOK ratio of 82.7. Third, the sector classification of the issuer firm is subject to personal interpretation, based on company individual research where it was found necessary. An attempt to collect NACE rev. 2 classification numbers from the Amadeus database yielded limited success.[13] Quite a few of the issuer companies are situated abroad, and the Norwegian register number appeared insufficient. In some cases, the database was unable to provide a NACE code even if the company was identified.

4.3.2 Background

What trigger the renegotiation?

[12] Collected from www.e24.no
[13] Amadeus – Financial information about 14.000 European companies, NACE rev. 2. – European standard for classification of economic activity.

This dimension is designed to capture the reason for the renegotiation approach. The categorising relies on subjective interpretation of the background information provided as part of the summons document. First, the bond is labelled according to the borrowers' ability to fulfil the existing loan agreement. *Default* is defined as the loan agreement being in breach with any covenant restriction, or the borrower not having fulfilled interest payment or instalment payment according to plan. A bond that is not yet in a default situation, but where the borrower is approaching the bondholders ahead of a deemed default situation is labelled as *close-to-default*. A bond where the borrower has no problem fulfilling the loan agreement, and is approaching bondholders for some other reason is consequently labelled as *non-default*. Keeping the two latter reasons apart could in some cases be a challenge. The purpose of the borrowers' approach has therefore also contributed to decide on the type of category. (I.e. a company that is proposing a conversion or a write down is more likely to be seen in a-close-to-default situation than in a non-default situation.)

The bonds in default are further categorised into what sort of breach that has occurred; *Covenant*, when any covenant is violated. *Interest payment*, when interest payment has been missed. *Instalment* when instalment, or instalment and interest payment have been missed.

The bonds in close-to-default are categorised in the same subcategories as for default bonds if it is explicitly stated that any of these breaches will occur. The remaining close-to-default bonds are categorised as *financial distress*, implying that the borrower is approaching the bondholders to restore a difficult financial situation ahead of an unidentified upcoming breach of contract.

The bonds in non-default are further categorised based the specific reason for the renegotiation approach: *M&A*, if due to mergers and acquisition activity. *Investment*, if due to investment plans. *Tax & Regulations*, if due to tax and regulations benefits or restrictions. *Corporate action* is an accumulation category for action not attributable to any of the other categories and for unidentified reasons outside default.

4.3.3 Purpose

What is it that the borrower wants to renegotiate?

The following will presents the framework that is intended to address this question. The framework consists of 13 different categories. The categories gradually took form as a substantial amount of observations were analysed. Multiple combinations of the below

explained purpose elements are common. Observations have been accounted for by dummy variables (1,0).

New repayment schedule (1) is accounted for when a new long term solution in respect to instalments and interest payments is proposed. A long term solution implies a schedule that is accommodated to the present and future situation of the of the borrower

Postponement of interest/instalment payment (2) represents the short term solution that merely solves a present problem.

Extension (3) is accounted for when the final maturity date is proposed relocated ahead in time.

Early redemption (4) is accounted for when the borrower desires to redeem the loan ahead of schedule. It does not include callable bonds that are called in accordance with the call scheme set out in the loan agreement.

Write down (5) recapitulates two different ways of how the borrower proposes to reduce his contractual liability towards bondholders. Firstly, it includes the principal amount being directly cut off. Secondly, it includes reduction of the coupon or waiving of interest payments.

Conversion (6) is accounted for in events where the bondholders are asked to give up their debt claim in exchange for equity in the issuer. The category contains observations of both full- and partial conversion of debt.

Renegotiations of covenants are widely observed in the sample. To arrange for a closer look at what type of covenants that are renegotiated, observations have been accounted for in six different categories. The categories are based on the work of Thoresen and Tobiassen (2008), and their study of covenants employed in Norwegian corporate bond issues. Smith and Warner (1979) have also acted helpful in the interpretation of some covenants.

The six main categories of covenants have been accounted for based on the identification scheme presented in Table 4.3.3. A brief insight to the main functions of the covenants attributable to the six categories follows after the table. For a full description of each specific covenant type the reader is suggested to consult Thoresen and Tobiassen (2008).

Table 4.3.3 : Identification and classification scheme of covenants. The figure illustrates what type of covenants that could be accounted for in the six upper main categories of covenant types. *Source : Thoresen and Tobiassen (2008)*

Corporate actions	Security protective	Corporate policy restrictions	Stock relevant covenants	Norwegian corporate covenants	Financial covenants
-Change of control	-Neg. Pledge	-Dividend related payments	-Stock issuance issuer	-Change of contract	-Indebtedness
-Voting power percentage	-Senior debt issue	-Restricted payments	-Stock transfer sale disp	-Restriction on registration	-Leverage test
-Asset sales clause	-Junior security	-Cash flow restrictions	-Maintain listing	-Hedging/ Environment	-Maintenance net worth
	-Materials included in the security	-Investments		-Restrictions on or demand for new Equity/Debt	-EQ-ratio
		-Sale assets		-Maintenance, insurance and monitoring	-Min. Net working capital
		-Sales leaseback			-Fixed Charge coverage
		-Transaction affiliates			
		-Consolidation merger			

Corporate action covenants (7) enable the bondholders to require the bond redeemed if the company control changes or substantial assets are sold.

Security protective covenants (8) limit the stockholders' incentive to reduce the value of the outstanding bond by subsequently issuing debt with higher priority that will dilute the bondholders' claim on the assets.

Corporate policy restrictive covenants (9) limit the management's incentive to extract value from bondholders through strategic actions.

Stock relevant covenants (10) put restrictions on the stock of the issuer company.

Norwegian covenants (11) impose restrictions tailored to the Norwegian market. These are covenants reflecting the nature of many of the oil related borrower companies.

Financial covenants (12) serve as early warning signals of poor company performance or risk shifting trough leverage.

Other purpose (13) is an accumulation category of those agendas not fitting into any of the other categories. This category contains among others; insertion of call options, removal of conversion rights, and changes to statements in the loan agreements that are not directly connected to covenants.

4.3.4 Compensation

How are bondholders being compensated?

To achieve acceptance towards the proposed changes the borrower will normally offer some sort of compensation to the bondholders. Compensation has been categorised and accounted for in 11 different categories. With exception of the "none compensation" category, which excludes all others categories, multiple compensation elements are possible. Observations have been accounted for by dummy variables (1,0).

Compensation through increased *coupon (1)* is quite often observed. This category accounts for increased coupon to both fixed- and floating rate bonds. The size of the coupon increase is measured in an *IF Coupon* section, as percentage point increase from the original coupon rate. However, if the coupon increase has a complicated varying structure, it has not been measured.

One-time fee (2) is recorded when the borrower offers the bondholders a lump sum payment upon acceptance of the proposal. The offer can be settled in cash or as a payment-in-kind (PIK). The size of the one-time fee is measured in an *IF One-time* fee section as percentage of the outstanding loan amount.

Increased redemption price (3) refers to compensation through an increase of future instalments. Seeing that a majority of the sample bonds have a bullet structure, this typically implies redemption at a premium to face value on the maturity date. The premium is measured in an *IF Increased redemption price* section, as a percentage increase to face value.

Reduced conversion price (4) only apply to convertible bonds and bonds accompanied with warrants. The right to convert a bond and the right to exercise a warrant are both options. A reduction of the conversion price, or the exercise price, will increase the value of these options, hence transferring wealth from borrower to bondholders.

In some cases the borrower proposes to reduce the outstanding amount through a *buyback/ partial redemption (5).* This represents value to bondholders as they are given an option to redeem parts of their bond. The debt reduction is exercised in one of two ways, either by redemption or as an organised pro rata buyback.

The covenant section captures compensation to bondholders through additional protection, by insertion of new *covenants (6)* to the loan agreement. Covenant compensation has been registered as long as any of the covenants from the Table 4.3.3 or similar were identified.

The *shares/warrants (7)* section registers if bondholders are compensated through equity ownership or optional equity ownership. This section solely records allocation of shares or warrants taking form as compensation; hence no recording when the agenda of the borrower is conversion of debt.

If bondholders are favoured with any new form of pledge, guarantee, or other form of security favourable term, it will be accounted in the *security (8)* section.

Equity issue (9) is accounted for when the borrower offers to raise additional equity. Supply of new equity is valuable to bondholders as it lowers the risk of the debt. Equity issue is only accounted for when it is a condition for a valid resolution. Loosely expressed intensions about raising equity are thus not accounted for.

Other compensation (10) is a gathering of those items in the summons that are found favourable to bondholders, but not suitable for any of the other categories. This category contains among others; insertion of put options, increased call premiums, and extended conversion periods.

None compensation (11) is accounted for if no compensation elements are observable. However, that a proposal is accounted for in this category does not necessarily imply that it is unfavourable to bondholders.

4.3.5 Voting

What are the outcomes of the bondholders' meetings?

At the bondholders meeting the borrowers' proposal is voted in favour or rejected. To adopt a proposal certain procedural rules must be fulfilled. The general requirement is 5/10 presence of votes and 2/3 majority in favour of the proposal. These requirements can vary on a bond individual basis and also be dependent on the scope of the proposal. The voting section accounts for the percentage of bondholders in favour of the proposal, and whether the proposal was adopted or not.

4.4 Limitations and sources of error

There should be no doubt that the collecting and structuring of data as set out in this chapter have several clear limitations and possible sources of error.

4.4.1 Limitations

The method applied towards both the collecting and structuring of data has little scientific background. To the knowledge of the author there exists no paper with a similar approach. The methodology applied towards the collecting and structuring of data is therefore to a great extent based on creative thinking and subjective interpretation.

The structure of this paper does not cover the full renegotiation process. It is more a study of what the borrowers propose and what the bondholders accept. This paper does not consider whether the renegotiation content is implemented or not. Neither does it account for whether the renegotiation represents a sustainable solution in respect to continued business or not.

Another limitation is the bond specific approach. When a borrower is renegotiating several bond contracts, the content of the renegotiations will often be very similar. Together with the fact that some bonds are renegotiated several times this could imply that the data material to some extent will be interdependent.

4.4.2 Sources of error

The process of data collecting could be a source of error or misinterpretation. The newsfeed function in Stamdata contains all sort of information to bondholders in different types of bonds, not only renegotiation correspondences in respect to corporate bonds. The newsfeed can be regarded as somewhat difficult to follow, especially in periods of extensive activity. Omitted renegotiation events can therefore not be ruled out. The possibility of unpublished renegotiation documents is another risk which lies outside the control of the author. However, Norsk Tillitsmann has verified that the newsfeed function should contain all documentation, as long as it does not disfavour the bondholders' interests.[14]

Extraction and categorising of data is based on reading and interpreting the summons documents to the bondholder meetings. These documents are to some degree standardised in form, but the complexity of the content differs enormously. The process of extracting and categorising data is thus subject to both personal interpretation and a source of misjudgement.

[14] Meeting with NTM representatives 10/5/2010

Transition of information from the data sources to the excel sheet is carried out on a manual basis, something which could be a source of errors.

However, to minimise the above mentioned sources of error and misjudgement, both the identification process and the interpretation- and extraction process have been carried out twice.

5. Descriptive analysis

This chapter is structured in six parts. The first part will present the total number of renegotiation events, while the subsequent five parts will examine these events according to the framework introduced in the previous chapter. Insight will be provided through both aggregated statistics and timeline statistics. Findings will be discussed and occasionally illustrated by examples.

Before getting on with the analysis, it will be worth dwelling at some phrases applied to debt renegotiation. This paper mainly uses the term "renegotiation" because it is an adequate word for describing all kind of changes made to an existing contract. It is thus a suitable word for the approach applied in this paper, looking solely at the changes and impact towards the specific bond. However, in practice, renegotiation events are often distinguished based on a wider context. "Restructuring" is a term often applied to renegotiations that involve companies in distress. A characteristic of a restructuring is that the balance sheet composition of the borrower is altered, often involving changes to the entire equity and liability side, thus not only impacting the bond in question. According to Norsk Tillitsmann these types of renegotiations differ widely from those others, both in respect to complexity and time involved. The data of this paper involves several restructurings, and they can in example be identified by the background situation of the borrower, if the borrower renegotiates several bonds, if the proposal involves a write down or a conversion, and if the compensation involves an equity issue. "Refinancing" is another commonly applied term to renegotiation of debt. It is broadly applied to a wide range of situations, and is therefore hard to define precisely. It can basically be applied to all sorts of renegotiation where the existing debt terms are replaced with new ones. However, a refinancing with existing bondholders could be interpreted to represent a new long term solution to the repayment schedule, typically taking form as an extension of the maturity date.

5.1 Sample

In total, 176 renegotiation events are observed. Of these 176 observations, there are 137 unique ISIN numbers, implying that several bonds have been renegotiated more than once during the time period. Moreover, the bonds are issued by all together 86 companies, further implying that several of the issuer companies have more than one bond impacted by renegotiation activity. The latter fact does not represent a problem to this paper as it is based

on the individual bond. However, to deal with the multiple representations of individual bonds, two different samples will be applied in the further presentation.

The main sample, illustrated by Table 5.1 (1) contains all of the 176 renegotiation events. As set out in the previous chapter, the conditions for multiple accounting of a bond depended on substantial new content. In analysing the content of renegotiations, multiple accounting does therefore not represent a problem, and the main sample will consequently be applied for this purpose. More specific, the main sample will be applied in the further presentation of background, purpose, compensation and voting.

Table 5.1 (1): Main sample. The table illustrates total quarterly recording of renegotiated bonds and the total outstanding NOK value of the respective bonds.

Time		Number of obs.	% of total	NOKm Value	% of total
2007	Q1	4	2.3 %	805	1.3 %
	Q2	5	2.8 %	1,919	3.0 %
	Q3	8	4.5 %	1,145	1.8 %
	Q4	5	2.8 %	2,132	3.4 %
2008	Q1	9	5.1 %	3,171	5.0 %
	Q2	11	6.3 %	4,370	6.9 %
	Q3	10	5.7 %	2,112	3.3 %
	Q4	23	13.1 %	11,760	18.6 %
2009	Q1	20	11.4 %	9,463	15.0 %
	Q2	27	15.3 %	12,000	19.0 %
	Q3	20	11.4 %	5,359	8.5 %
	Q4	22	12.5 %	6,976	11.0 %
2010	Q1	12	6.8 %	1,992	3.2 %
Total		**176**	**100%**	**63,205**	**100.0 %**

Table 5.1 (1) shows a clear increase in the number of renegotiation events during the time period of this study. An especially high activity is observed between the last quarter of 2008 until the end of 2009. The renegotiation activity peaks in the second quarter of 2009 both in respect to the number of renegotiations and the total outstanding value of the involved bonds. While 2007 in total facilitated 22 renegotiation events, the equivalent number for 2009 was 89. The numbers observed are in accordance with the picture Norsk Tillitsmann gave about their hectic workload as intermediate in recent years, explaining that they could be working on 4-5 renegotiations simultaneously.[15] It is also in line with the pre-outset expectations that macroeconomic factors or other factors could influence the renegotiation activity. The total

[15] Meeting with NTM representatives 11/01/2009

value of the bonds being renegotiated, measured as the nominal NOK amount outstanding, sums to a respectable 63 billion.

The sub sample, illustrated by Table 5.1 (2), constitutes the 137 unique ISIN numbers and the first renegotiation that each of these bonds are involved in. This sample will only be employed in the presentation of bond characteristics in section 5.2. This is to give an independent and "clean" description of what types of bonds that are involved in renegotiations, without multiple accounting for frequently appearing bonds.

Table 5.1 (2): Sub sample. The table illustrates the quarterly recording of unique bonds and the total outstanding NOK value of the respective bonds.

Time		Number of obs.	% of total	NOKm Value	% of total
2007	Q1	4	2.9 %	805	1.6 %
	Q2	5	3.6 %	1,919	3.7 %
	Q3	6	4.4 %	1,065	2.1 %
	Q4	4	2.9 %	1,483	2.9 %
2008	Q1	9	6.6 %	3,171	6.1 %
	Q2	8	5.8 %	3,461	6.7 %
	Q3	6	4.4 %	1,550	3.0 %
	Q4	19	13.9 %	10,322	20.0 %
2009	Q1	16	11.7 %	6,723	13.0 %
	Q2	22	16.1 %	10,135	19.6 %
	Q3	12	8.8 %	3,963	7.7 %
	Q4	15	10.9 %	5,041	9.8 %
2010	Q1	11	8.0 %	1,942	3.8 %
Total		**137**	**100.0 %**	**51,580**	**100.0 %**

Table 5.1 (2) illustrates a very similar pattern to the main sample though with 39 fewer observations and approximately 12 billion less in value.

Not to be applied in any further analysis, but to illustrate what type of companies that are involved in renegotiation activity, table 5.1 (3) illustrates the most frequently observed companies both in respect to number of renegotiations and renegotiated amount.

Table 5.1 (3): Company representation. The table illustrates those companies with the highest representation in the data material: Left-hand side in number of renegotiation events. Right-hand side in renegotiated NOK outstanding value. Based on the total number of renegotiations.

Company	Nr. of re - negotiations	NOKm	Comapany
Reservoir Exploration Technology ASA*	9	4,590	Norwegian Energy Company*
Crew Gold Corporation	7	3,581	Skeie Drilling & Production*
Norse Energy Corp. ASA*	6	3,558	Petromena ASA*
Aladdin Oil & Gas Company ASA*	6	2,847	Marine Subsea AS*
Ignis ASA	5	2,340	Crew Gold Corporation
Artumas Group Inc.*	5	2,291	Reservoir Exploration Technology ASA*
Skeie Drilling & Production*	4	2,213	MPF Corp. Ltd.*
Norwegian Energy Company *	4	2,180	Petrojack ASA*
BW Gas ASA*	4	1,600	Oceanteam ASA*
Ziebel ASA*	4	1,475	Nexus Floating Production Ltd*
Eitzen Chemical ASA	4	1,454	Marine Subsea Cyprus Holdings Ltd.*
Marine Subsea AS*	4	1,357	Marine Accurate Well ASA*
<4	114	33,719	1357>
Total	**176**	**63,205**	**Total**

* Oil & Gas, Oil Service

Table 5.1 (3) shows that the majority of represented companies are attributable to the oil industry.

5.2 Bond characteristics

Based on the sub sample, this section will provide insight to the characteristics of the renegotiated bonds.

5.2.1 The bond indentures

Table 5.2.1 (1): Bond characteristics I. The table presents the quarterly accounting of bond characteristics in comparison to the number of renegotiations in the equivalent period. The bottom line presents totals for the entire sample period both in numbers and in percentage of total renegotiation events.

			Type		Security			Option			Redemtion type	
Time		Obs.	Bond	Convertible	Pledge	Neg.Pledge	Unsecured	Call	Put	No	Bullet	Other
2007	Q1	4	4	0	4	0	0	2	2	0	4	0
	Q2	5	4	1	4	0	1	2	0	3	4	1
	Q3	6	3	3	2	0	4	3	0	3	6	0
	Q4	4	3	1	2	0	2	4	1	0	3	1
2008	Q1	9	8	1	4	2	3	4	1	5	8	1
	Q2	8	5	3	3	0	5	3	0	5	7	1
	Q3	6	3	3	2	1	3	3	0	3	6	0
	Q4	19	17	2	17	1	1	18	0	1	12	7
2009	Q1	16	11	5	8	1	7	12	0	4	16	0
	Q2	22	15	7	11	4	7	13	2	8	19	3
	Q3	12	9	3	5	0	7	8	0	4	12	0
	Q4	15	11	4	6	0	9	9	0	6	15	0
2010	Q1	11	6	5	2	2	7	5	1	5	9	2
Total		**137**	**99**	**38**	**70**	**11**	**56**	**86**	**7**	**47**	**121**	**16**
%		**100%**	**72%**	**28%**	**51%**	**8%**	**41%**	**63%**	**5%**	**34%**	**88%**	**12%**

Table 5.2.1 (1) shows the renegotiated bond agreements in respect to type of bond, security of the bond, options involved, and the type of redemption plan.

The majority of the renegotiations involve regular bonds, while less than a third of the sample is constituted by convertible bonds.

Just above half of the bonds observed are secured by pledge in the borrowers' assets. Very few of the bonds are solely protected by a negative pledge. A negative pledge clause restricts the borrower from issuing new debt secured by pledged assets unless a better or the same protection is given to existing bondholders.[16] This has not been accounted for if the bondholders also have a pledge.

Around two thirds of the contracts include a call option, and only five percent include a put option. The percentages add up to more than a hundred as a consequence of some contracts containing both type of options.

Bullet structures are typical characteristics of high yield bonds and this type of redemption structure is widely applied in the Norwegian market. It is thus no surprise to see a high percentage of bullet structures among the renegotiated bonds as well. Nevertheless, it brings along an interesting aspect to the renegotiation context. The high proportion of bullet structures implies that most of the bonds still have their full amount outstanding at the time of renegotiation. Stakes involved are in other words high. Receiving a renegotiation proposal is probably not very desired or promising to bondholders when still not having been repaid a penny. If asset values have deteriorated and the claim is unchanged, full repayment in an event of liquidation is less likely. Asset values in the event of liquidation play a central role in incomplete contracting literature (e.g. Aghion and Bolton (1992) and Bolton and Scharfstein (1996).) When liquidation values are low, creditors' bargaining position will weaken vis-à-vis debtors, and all else equal, the expected pay off to creditors decreases.

The category for "other" redemption types mostly contains irregular structures. Only one observation of a serial redemption structure is recorded. The observation of such a high bullet proportion and only one serial structure is a sign that the sample to a large degree consists of high yield bonds. Serial structures are typically issued by companies with steady cash flows able to service the debt at a regular basis. These types of companies will usually classify as above high yield.

[16] Thoresen and Tobiassen (2008)

Table 5.2.1(2): Bond characteristics II. The table presents the quarterly accounting of bond characteristics in comparison to the number of renegotiations in equivalent period. The bottom line presents totals for the entire sample period both in numbers and in percentage of total renegotiation events. The coupon interest refers to fixed interest contracts, while as the spread refers to FRN's.

			Currency		Interest type		Average interest rate	
Time		Obs.	NOK	Other	Fixed	FRN	Coupon	Spread
2007	Q1	4	4	0	2	2	9.0%	2.5%
	Q2	5	3	2	4	1	9.1%	2.0%
	Q3	6	4	2	4	2	8.8%	3.6%
	Q4	4	2	2	1	3	8.0%	7.8%
2008	Q1	9	8	1	3	6	9.8%	3.0%
	Q2	8	5	3	4	4	7.8%	3.5%
	Q3	6	3	3	4	2	10.5%	3.8%
	Q4	19	12	7	11	8	9.6%	4.8%
2009	Q1	16	12	4	6	10	7.2%	4.3%
	Q2	22	9	13	14	8	9.3%	3.7%
	Q3	12	6	6	7	5	9.5%	4.8%
	Q4	15	7	8	11	4	8.9%	4.6%
2010	Q1	11	9	2	8	3	12.1%	5.4%
Total		**137**	**84**	**53**	**79**	**58**	**9.4%**	**4.3%**
%		**100%**	**61%**	**39%**	**58%**	**42%**		

Table 5.2.1 (2) shows the initial terms of contract in respect to type of interest and currency denomination. 61 percent of the bonds are denominated in NOK. This number is in proportion to the currency denomination of historical corporate bond issues in the Norwegian market. From year 2001 and onwards the NOK denomination in new issues has steadily declined from 100 percent to 60 percent by 2008[17]. The category "other" mainly consists of USD denomination with the exception of a few SEK bonds.

The proportion of fixed versus floating bonds is a little less in line with historical issues. Five years' history of corporate bond issues shows a distribution between fixed and floating interest rate of 72 and 28 percent, respectively.[18] The average coupon of the fixed bonds is 9.4 percent, while the average spread over reference rate for FRN bonds shows 4.3 percent. It would be fair to say that these interest rates bear clear signs of risk and thus support earlier arguments towards a large proportion of high yield bonds in the sample.

[17] Thoresen and Tobiassen (2008)
[18] Stamdata statistics. Return type, corporate bonds issues 01/01/2005-31/12/2009. Illustrated in Appendix 9.1.1

5.2.2 Sectors

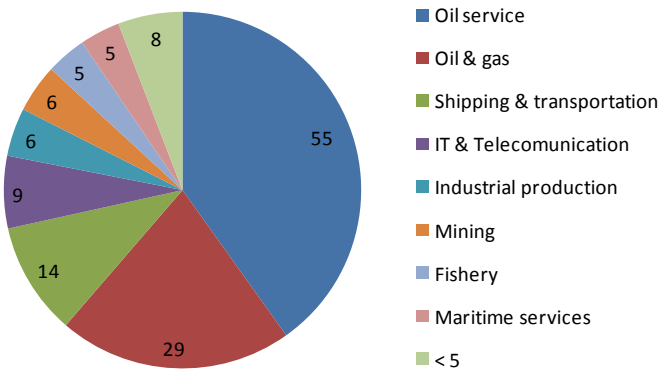


Figure 5.2.2: Sector representation. The pie chart illustrates the number of renegotiations per sector. *Oil service* consists of all support services to the oil industry (i.e. rig, supply, seismic) while *Oil & Gas* solely contain exploration and production companies.

Figure 5.2.2 illustrates the number of renegotiations attributable to different sectors. Bonds granted to the oil industry stand out as the by fair largest contributors to the sample. Relative to the number of issues in the period 2005-2009 the oil industry's representation in the renegotiation sample seem somewhat high. According to Stamdata, the sector "oil and gas" constituted approximately 27 percent of the new issues in this period. [19] However, this comparison should be carefully interpreted due to possible diverging sector classification. The time period chosen for comparison has been subject to sensitivity testing with no major impact on the 27 percent. In spite of a somewhat weak comparison argumentation, the oil and gas industry could seem to be overrepresented in the renegotiation sample, thus possible supporting initial expectations set out in Chapter 3 in respect to the influence of oil price.

[19] Stamdata statistics. Corporate bond issues per sector 01/01/2005-31/12/2009. Illustrated in Appendix 9.1.2

5.2.3 Listing status

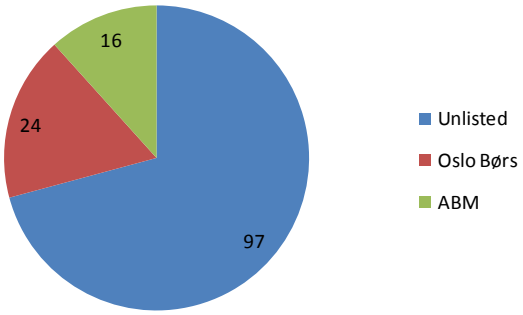


Figure 5.2.3: Listing status.

Figure 5.2.3 illustrates the listing status of the renegotiated bonds. It is worth noting that unlisted bonds constitute a clear majority. Listing requires from the borrower certain minimum standards on several fronts thus diverting borrowers unable or unwilling to meet these requirements towards the unlisted option. These types of companies are typically connected to high risk, and the probability of a renegotiation event could therefore be expected to be higher for unlisted bonds. In this respect, it is somewhat surprising that bonds listed at Oslo Børs (OSE) outnumbers those at ABM. ABM could be perceived as a less restrictive marketplace thus attracting borrowers of lower credit quality.

Listing status should be carefully interpreted. Though listing theoretically can be seen as a sign of quality, in practice investors might not emphasise it too much. Requests towards information flow, which is one of the important features a listing status provides, can independently be regulated directly in the loan agreement. Furthermore, in a situation where the borrower company is listed on a stock exchange, the information flow required by this listing mandate will usually be more than sufficient to bondholders. [20]

5.2.4 Lifecycle

The lifecycle measure identifies at what time in between the issue date and the maturity date the bonds are being renegotiated, represented as the time elapsed until renegotiation. This is an interesting measure for several reasons. First of all, it can provide an indication to investors about what time a renegotiation event could be expected to occur. Because this measure does

[20] Meeting with NTM representatives 10/05/2009

not involve the probability of a renegotiation event itself, it should nonetheless be carefully interpreted. In a contract theory perspective, the measure offers insight to the durability of an incomplete contract by illustrating how far ahead the existing contract terms are able to foresee upcoming eventualities, or how long the borrower manages to keep within the given restrictions of the contract.

Moreover, the time of the renegotiation could influence the balance of bargaining power between the borrower and the bondholders. When a bond reaches close to maturity the borrower has limited time to arrange alternative financing. Restricted capital markets, or poor business performance, might completely deter alternative solutions, thus increasing the borrowers' dependence on existing bondholders.

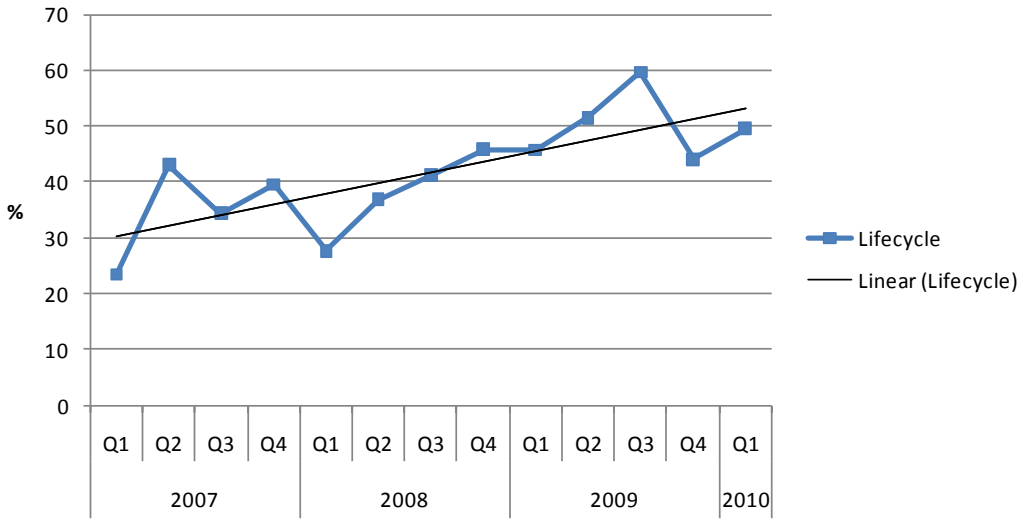


Figure 5.2.4 (1): Quarterly average lifecycle development. Lifecycle is calculated as the time elapsed until renegotiation relative to the lifetime of the bond. The average is calculated based on the number of renegotiations and their respective lifecycle measure per quarter

Figure 5.2.4 (1) illustrates the quarterly development in average lifecycle. It shows a fairly solid trend towards renegotiations on average occurring at a later stage during the time period, represented by an increasing lifecycle measure. The linear regression line supports this trend. The increasing lifecycle measure is consistent with the expectations set out in chapter 3.3, that the "golden age" of high yield issues in the period of 2005-2007 would facilitate an increasing number of renegotiation events as these bonds would draw near their maturity dates.

While the former figure illustrated the average lifecycle per quarter Figure 5.2.4 (2) illustrates the distribution of individual bonds and a categorisation of them.

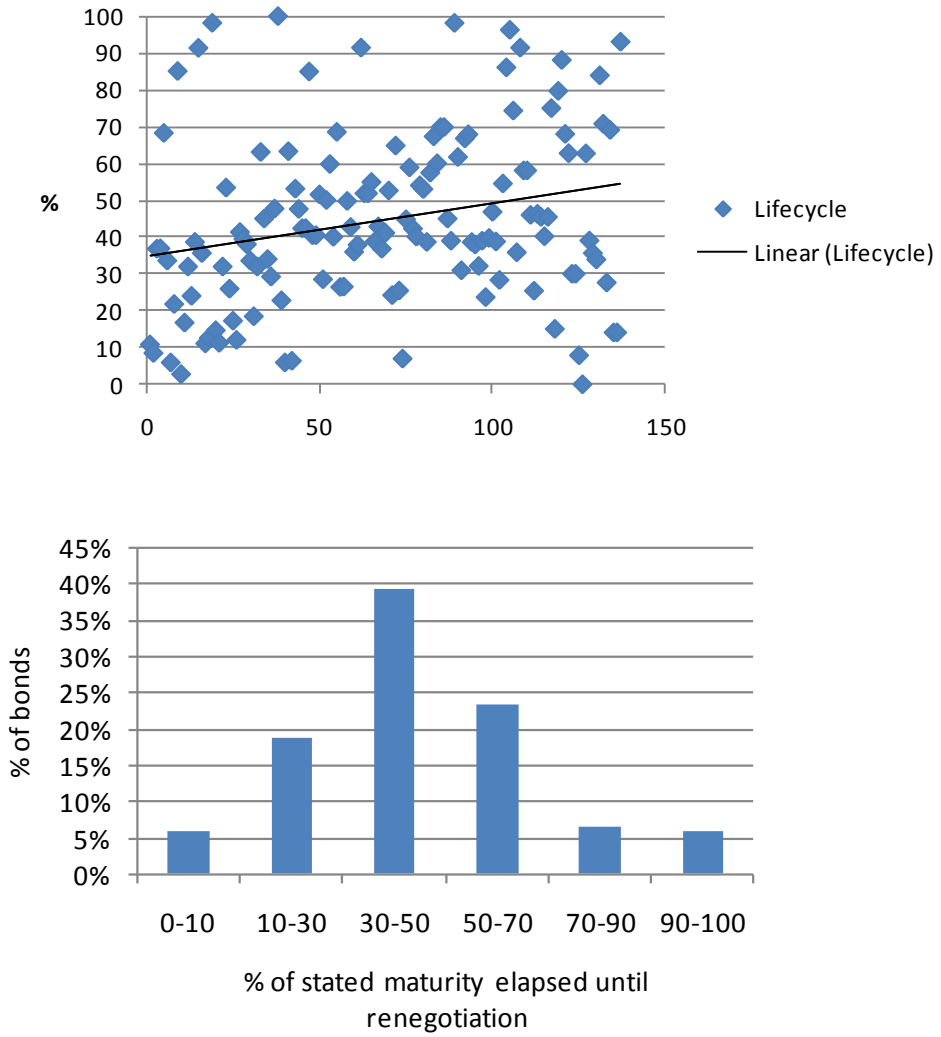


Figure 5.2.4 (2): Lifecycle distribution. The upper figure illustrates the lifecycle distribution of the entire sub sample. X-axis refers to the chronological accounting of the events starting 1/1/2007.The lower figure shows the percentage of bonds that are renegotiated as a fraction of the elapsed stated maturity

The upper figure illustrates the lifecycle measure attributable to each of the 137 bonds, while the lower figure categorises the bonds into intervals based on the lifecycle percentage. Extreme observations are present in both ends of the scale. Six percent of the bonds are renegotiated during the first ten percent of the lifetime, and the other way around, six percent are renegotiated during the last ten percent of their lifetime. The majority of bonds are renegotiated during the first half of their lifetime, with the most common interval as 30-50

percent of the lifetime constituting 54 observations. The average bond is renegotiated when 45 percent of the stated maturity has elapsed. As an informal comparison, Roberts and Sufi (2009) found in their assessment of 1000 U.S. private credit agreements that the majority of renegotiations occurred during the 25 to 50 percent interval, with an average of 57 percent.

5.2.5 Managers

Table 5.2.5 displays the original managers' share of the renegotiated bonds measured both in numbers of observations and by outstanding value of the renegotiated bonds. Pareto thrones majestically on the top of both measures. It should be taken into consideration that during the period from 1998 to 2007, Pareto Securities was the top manager issuing 162 new bonds in the Norwegian market.[21] A major part of Pareto's issues in this period attributed to high yield bonds related to the oil industry. High yield bonds are by definition risky, and it should be of no surprise that quite a few of these eventually would have to come in a renegotiation setting. The even higher percentage attributable to Pareto in respect to the outstanding value of the renegotiated bonds is a reflection of sizable bonds to a capital intensive industry.

Table 5.2.5: Manager representation Managers are ranked according to number of renegotiations. Value refers to total outstanding NOK m of the renegotiated bonds.

Manager	Number		Value NOKm	
Pareto Securities	69	50.4 %	35,221	68.3 %
Fearnley Fonds	13	9.5 %	2,353	4.6 %
DnB Nor	10	7.3 %	993	1.9 %
ABG Sundal Collier	9	6.6 %	3,994	7.7 %
Nordea	7	5.1 %	1,949	3.8 %
First Securities	5	3.6 %	2,025	3.9 %
Swedbank	5	3.6 %	1,105	2.1 %
< 5	19	13.9 %	3,941	7.6 %
Total	**137**	**100.0 %**	**51,580**	**100.0 %**

5.3 Background

Figure 5.3 illustrates the development in number of renegotiation events on a quarterly basis, categorised in accordance with the background of the bonds. The following will look closer at each of the three background types.

[21] Thoresen and Tobiassen (2008) and Figure 3.3.4

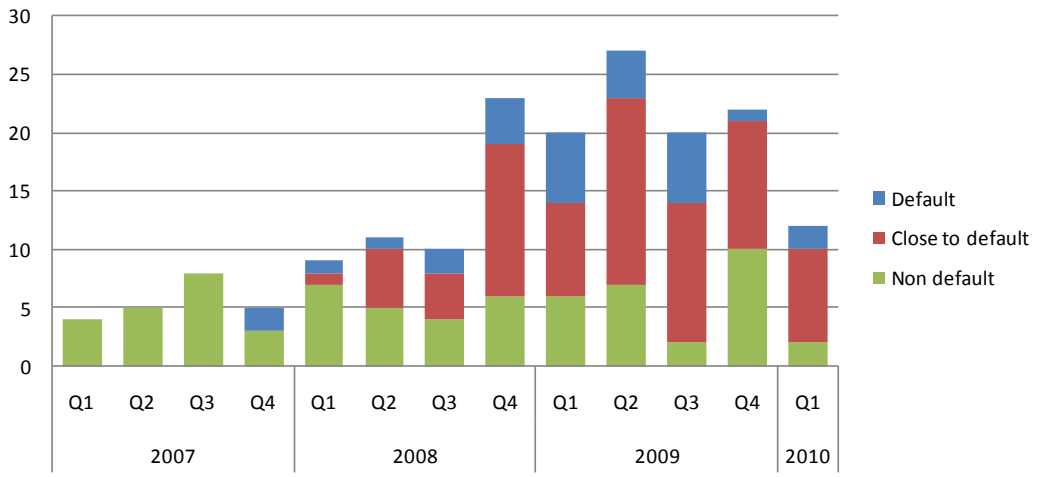


Figure 5.3 Development in renegotiation events per background. Illustrates the number of renegotiation events per quarter classified according to the main status the bond. In total 176 renegotiation events constituted by 29 defaults, 78 close-to-defaults and 69 non-defaults.

5.3.1 Default

A default situation implies that the borrower already is in breach with the existing terms of the bond when approaching the bondholders. This is the case in 29 of the observations, corresponding to 16 percent of the sample. Figure 5.3 illustrates a higher frequency of defaults between last quarter of 2008 and well into 2009. The underlying reason for a default situation will typically associate to deteriorating operational performance or extraordinary events that impact the business. The increase in default situations in the respective period is thus not surprising, when considering the economic climate that prevailed at the time being.

In the event of a contract violation, the borrower will typically be entitled to a short grace period, at special pre-outset conditions. If the contractual terms are not restored within the grace period, bondholders will subsequently have the ability to require the bond immediately redeemed. The motivation of the borrower in such a situation will be to renegotiate with bondholders to deter them from requiring this type of action. Redemption of the full loan amount will for most companies be unfeasible to facilitate in a default situation, thus implying that liquidation or bankruptcy proceedings represent the alternatives. The threat of liquidation could weaken the borrower's bargaining position vis-à-vis bondholders, but the credibility of such threats depend on asset values and costs associated with liquidation. Low asset values, and high realisation costs, will lower the bondholders' incentives to engage in bankruptcy proceedings.

Violation of the existing loan agreement can occur in different ways. The following will present the default observations based on three types of violations; covenant breach, interest payment default and instalment default. A breach of covenant is in the literature referred to as technical default while the lack of interest and instalment payments are referred to as liquidity or payment defaults. Figure 5.3.1 illustrates the distribution of violations recorded among the 29 defaulted bonds.

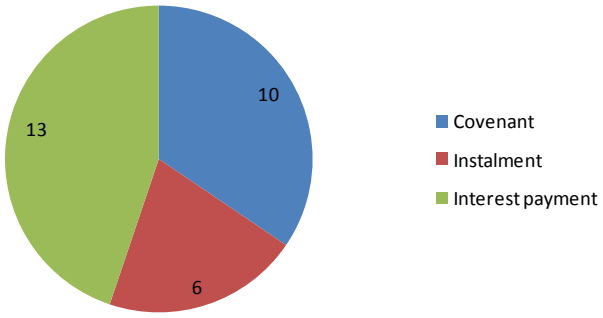


Figure 5.3.1: Distribution of defaulted bonds. The pie chart illustrates the defaulted bonds according to the underlying violation of contract. Total number of defaulted bonds equal 29.

Ten of the default observations stem from breach of covenants. The most frequently observed covenants violated, are those restricting financial key figures such as equity ratio and indebtedness.

13 of the default observations stem from borrowers incapable of paying interest on time. Loan agreements usually "accept" a smaller delay subject to a pre-stated compensation. The accounted observations are subject to a breach beyond the pre-stated contractual terms.

Six of the default observations stem from lack of repayment on the nominal amount, known as instalments. Two of these are bullet bond observations, implying that the full principal amount have not been repaid at the maturity date.

5.3.2 Close-to-default

Close-to-default implies that the borrower has yet not officially violated any contractual terms, but that a default situation inevitably will occur if the situation is not resolved. This is found to be the case in 78 of the observations, corresponding to 44 percent of the sample. Figure 5.3 shows a strong increase in close to-default-bonds from mid 2008 and throughout the sample period. Much of the same analogy applied to the defaulted bonds can be applied to

this section. However, the main difference from the default section is the fact that the borrower is proactive in respect to approaching the bondholders ahead of a breach that entitle the bondholders to legal rights. Thus, the timing aspect might put the borrower in a slightly better bargaining position vis-à-vis bondholders.

The close-to-default bonds are further categorised in respect to what type of default that is about to occur, on similar terms as set out for defaulted bonds. Those bonds found hard to assign to a specific type of breach, are represented in an additional category called financial distress. Figure 5.3.2 illustrates the distribution of the 78 close-to-default bonds in respect to these categories.

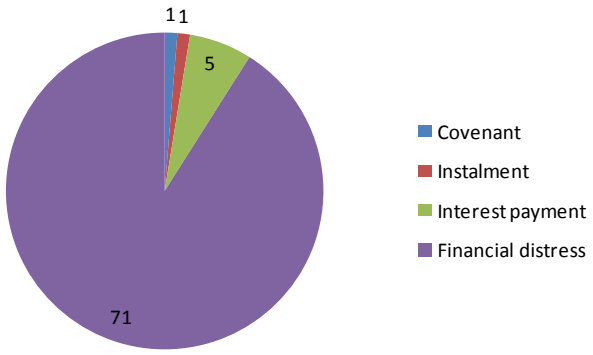


Figure 5.3.2: Distribution of close-to-default bonds. The pie chart illustrates the close-to-default bonds according to the upcoming violation of contract. Financial distress is accounted for when upcoming violation of any of the other three categories are not explicit stated. Total number of close-to-default bonds equal 78.

Covenant breach, instalment- and interest payment default together only compromise seven of the observations, corresponding to nine percent of the close-to-default bonds. The low figures can be explained by the applied approach. These categories are only accounted for when the information memorandum following the summons explicitly states which type of breach that is about to occur. The far more common analogy employed by the borrower, is to communicate trouble in more diffuse terms, by not specifically stating the consequences. Consequently, the unidentified category "financial distress" compromises a total of 71 observations. Typical observations for this respective category involve oil- and oil service companies that experience delays and cost overruns on their project based assets, suddenly finding themselves in a situation of no cash flow and insufficient funding.

5.3.3 Non-default

Non-default implies that the borrower seeks to renegotiate the loan agreement for reasons not related to violating the contract. On the contrary, the borrower approaches the bondholders to renegotiate restrictions imposed by the existing loan agreement that hinders him from some sort of corporate activity, in a situation outside financial distress. This is the case in 69 of the observations, corresponding to 39 percent of the sample. Figure 5.3 illustrates a rather stable number of non-default renegotiations throughout the entire sample period.

Reasons for amending the contract outside distress can differ greatly. The non-default bonds have been categorised according to often observed argumentation as follows; Investments, M&A activity and Tax & Regulations. In addition, the category "corporate action" accounts for motivation not attributable to any of the other three categories. Figure 5.3.3 illustrates the distribution of motivation types among the non-default bonds.

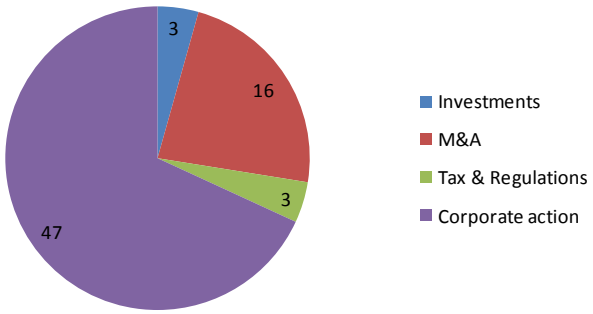


Figure 5.3.3 Distribution of non-default bonds. The pie chart illustrates the non-default bonds according to the borrower's underlying motivation to alter the loan agreement. Corporate action is accounted for when specific motivation is not attributable to any of the other categories, or is unidentified. Total number of non-default bonds equal 69.

Again, the unassigned category compromises the most observations. This is partly due to the great variety in motivations, and thus the need for a fill up category, but also due to lack of information in quite a few of the summons memorandums.

M&A activity constitutes the largest specific motivation category. M&A activity will often be restricted to protect creditors from asset substitution. For further discussion of asset substitution consult e.g. Jensen and Meckling (1976) and Smith and Warner (1979). Bond agreements will typically contain restrictions towards the issuer's ownership structure, facilitated by a change in control clause. The change in control clause implies that the

bondholders can require the loan redeemed when ownership control is altered. To prevent bondholders from requiring this right, and to allow for M&A activity, the borrower will call for a renegotiation of this restriction.

Tax & Regulations is included as a specific motivation due to observations of shipping companies accommodating their debt agreements to account for the new shipping taxation regime proposed by the Norwegian government. The new taxation regime would alter the shipping companies' accounting principles, resulting in possible violations of financial ratios. Quite a few shipping companies took early precautions by renegotiation away these covenants. These events have not been included in close-to-default due to the hypothetic nature of the situation, and because the companies in question were far away from any distress.

5.4 Purpose

The most frequently proposed changes relate to extension of the maturity date and altering of financial covenants. These elements are observed respectively in 26 and 23 percent of the renegotiation events. Table 5.4 (1) displays the complete recording of different purpose elements. The different purpose elements will be further examined in the three following subsections according to similarities among them: Rescheduling of payments, reducing liabilities and altering of covenants.

Table 5.4: Summary statistics - purpose elements. The table shows the quarterly accounting of purpose elements in comparison to the quarterly number of renegotiations. The bottom line presents the total numbers across the sample period, and the percentages of total renegotiations. Average elements represent the average number of purpose elements per renegotiation in the respective quarter.

		Total reneg.	New repayment schedule	Early redemtion	Postph. Interest/ installm.	Extension	Write down	Conv-ersion	Corporate Action Cov.	Security Protective Cov.	Corporate Policy Cov.	Stock Relevant Cov.	Norwegian Cov.	Financial Cov.	Other	Average ele - ments
2007	Q1	4	-	1	-	1	-	-	1	2	1	2	-	-	1	2.3
	Q2	5	-	3	-	-	-	-	1	1	-	-	1	-	-	1.2
	Q3	8	-	2	-	1	-	-	-	3	1	1	-	-	-	1.0
	Q4	5	-	1	2	1	-	-	-	-	-	-	1	1	-	1.2
2008	Q1	9	-	2	2	1	-	1	2	1	-	-	-	2	-	1.2
	Q2	11	1	2	2	1	2	-	3	1	-	-	2	1	-	1.4
	Q3	10	-	2	1	-	3	2	3	5	-	1	-	1	1	1.9
	Q4	23	4	3	4	2	6	4	6	5	1	-	-	3	2	1.7
2009	Q1	20	4	-	4	6	1	4	3	6	-	-	-	7	3	1.9
	Q2	27	4	4	9	11	8	8	6	2	-	-	4	9	3	2.5
	Q3	20	4	-	4	7	6	6	3	-	-	-	1	5	1	1.9
	Q4	22	-	2	3	11	1	3	6	4	-	-	-	9	4	2.0
2010	Q1	12	3	1	1	4	-	5	3	3	1	-	-	3	3	2.3
Total		**176**	**20**	**23**	**32**	**46**	**27**	**33**	**37**	**33**	**4**	**4**	**9**	**41**	**18**	**1.9**
% of total		**100%**	**11%**	**13%**	**18%**	**26%**	**15%**	**19%**	**21%**	**19%**	**2%**	**2%**	**5%**	**23%**	**10%**	

The table displays that on average the borrower proposals contain 1.9 different elements of purpose each. To analyse the relationship between the different purpose elements, pairwise correlation coefficients have been calculated. The correlation matrix is found in Appendix 9.1.1. The highest correlation is found between conversion and write down, with a correlation coefficient of 0.321. A correlation coefficient of 0.321 is regarded as rather weak. A high positive correlation would have implied that the accounting of one purpose element tended to be followed by the accounting of the other purpose element.

5.4.1 Rescheduling of payments

Rescheduling of payments captures the proposal elements that are motivated by the borrowers' desire to alter the timing of repayment to bondholders. Figure 5.4.1 illustrates how the different payment related elements have been part of renegotiations during the sample period.

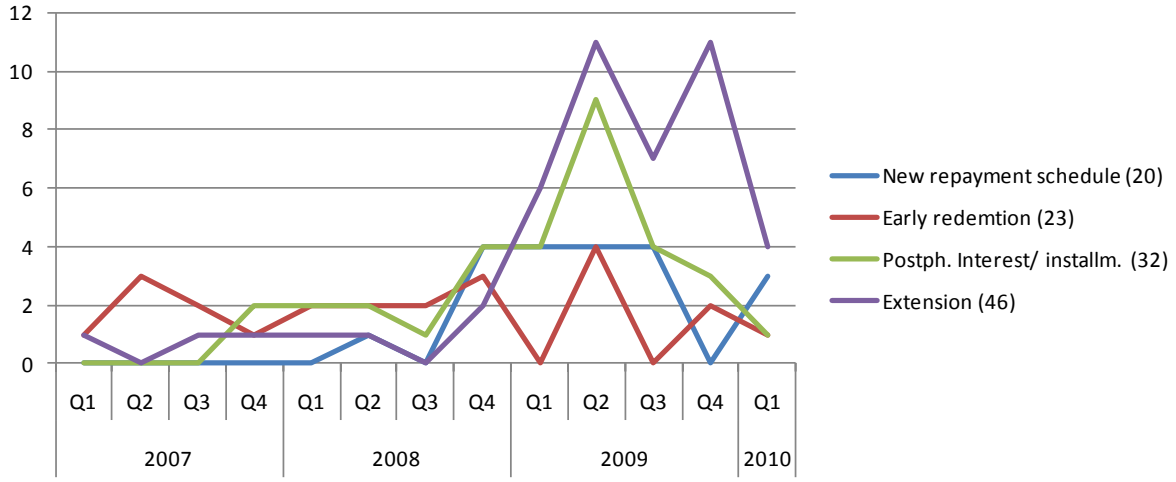


Figure 5.4.1: Development in "rescheduling of payment" elements. The figure illustrates the quarterly accounting of respective purpose elements being part of the renegotiation proposals. Y-axis in number of renegotiations.

A new repayment schedule is proposed in 20 of the total renegotiation events. It is often observed in the more complex cases, in what can be called complete restructurings. A complete restructuring can be seen as the borrower not only making amendments to bond in mention, but being subject to altering of the complete capital structure. (Recall discussion in the introduction to chapter 5). A new repayment schedule is thus introduced to tailor the interest- and instalment payments to the new long term plan and capital structure.

Extension is a proposed element in 46 observations, corresponding to 26 percent of the total sample, and thus the most frequently observed purpose element. As a comparison, Roberts and Sufi (2009) found extensions of the maturity dates to be part of 57 percent of their examined loan agreements. Figure 5.4.1 illustrates a strong increase in the number of extensions proposed from late 2008 and throughout the sample period. This supports the expectations set out in Chapter 3, that the "golden age" of corporate bond issues in the period 2005-2007 would cause the need for high refinancing activity with existing bondholders. Quite a few of the bonds issued in this period went to project based companies, typically to construction of new assets (i.e. rigs and vessels). The plans of these companies have probably been to refinance their debt at favourable terms when assets were in cash generating operations. During the information gathering of this study, it became clear that a large number of these project based companies experienced major setbacks according to plan, either caused by delays or cost overruns. Negative business factors, together with severely restricted debt markets, therefore led many of these companies to seek compromises with existing bondholders.

Postponement of interest or instalment is a proposed element in 32 observations. Figure 5.4.1 illustrates a noticeable increase in the proposal of this element from the end of 2008 until end of 2009. This type of payment deferment is asked for when the borrower believes he can come up with the necessary capital within a short time period. It has been observed in cases where the borrower has initiated processes of additional funding or sale of assets to finance the postponed debt obligations.

Early redemption is a proposed element in 23 observations. Early redemption differs greatly from the three other elements presented above as it in contrast to deferring payments instead offers an acceleration of payments. While deferral of payments often will be associated with a borrower in trouble, the opposite can be said about early redemption. Figure 5.4.1 shows a rather stable frequency of this proposal throughout the period. An early redemption can be desired by the borrower for several reasons. First, if underlying business is generating large amount of excess cash, conservative managers might want to bring down the leverage earlier than planned. Second, quite a few of the recorded early redemptions in the sample are due to merger and acquisition activity. A potential buyer of a company will also be responsible towards the debt of the acquired company, and will sometimes offer to redeem the loan as part of the deal. Third, an early redemption can be desired if the borrower seeks to refinance its debt obligations from an alternative funding source.

5.4.2 Reducing liabilities

When proposing a write down, or a conversion, the intention of the borrower is to reduce his contractual future liabilities towards the bondholders. Figure 5.4.2 shows the proposal frequency of the two mentioned methods for reducing future liabilities.

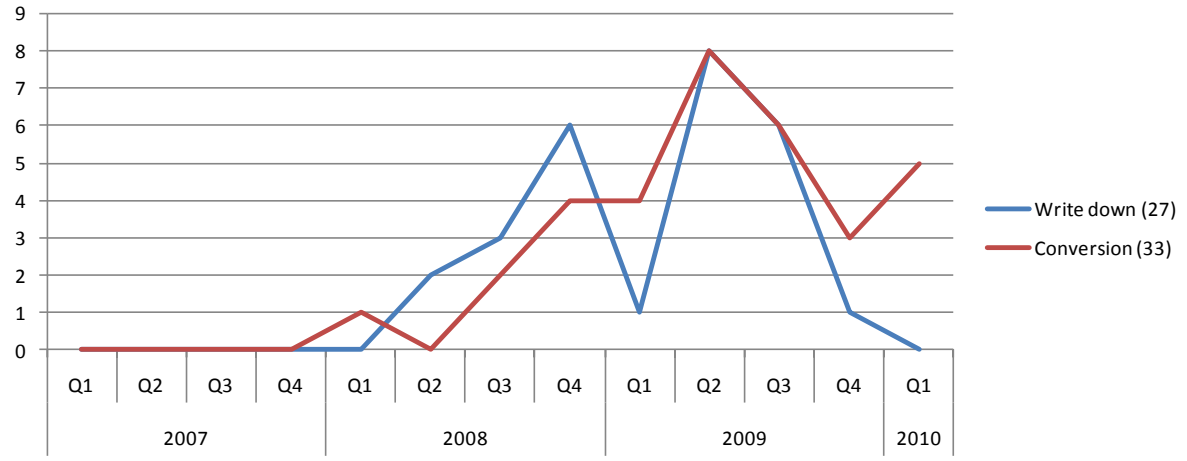


Figure 5.4.2: Development in "reducing liability" elements. The figure illustrates the quarterly accounting of respective purpose elements being part of the renegotiation proposals. Y-axis in number of renegotiation events.

Write down is an action that will only be proposed in severely distressed situations, as bondholders otherwise never would accept such measures. Write down is an element in 27 of the total observations, and from Figure 5.4.2 it is not observed until second quarter of 2008. That the bondholders should be willing to give up their contractual claim requires a worse alternative and a corresponding weak bargaining position.

An interesting case in respect to bargaining power and write down is a restructuring indirectly involving one of the bonds in this sample, a 200 USDm convertible bond issued by the dry bulk company Golden Ocean. This restructuring was not facilitated through the normal procedure of involving Norsk Tillitmann and a bondholders' meeting. However, the bond was subject to renegotiation of a financial covenant related to the same event;

As the dry bulk rates plunged together with the world economic climate, Golden Ocean found themselves in a though liquidity position. In addition to the low market rates, Golden Ocean was committed to take delivery of several new vessels still not fully financed. Covenants in the bond agreements restricted further prioritised bank facilities. Golden Ocean was in the valuable possession of long term charter contracts with an estimated excess value of 200

USDm, relative to the prevailing market rates at the time being. The estimated second-hand value of their vessels was in the range of 400-450 USDm. The assets of Golden Ocean was thus worth approximately 600-650 USDm as a going concern. However, in a bankruptcy situation, the customers would gladly step out of the expensive long term contracts, implying that the 200 USDm excess value would vanish. In addition to the convertible bond, Golden Ocean was financed by a 400 USDm 1st priority loan from Nordea. As a consequence of Nordea's first priority, a bankruptcy would possible yield nothing to the investors in the convertible. The bargaining position of the bondholders was correspondingly week. The main owner of Golden Ocean, John Fredriksen, saw his opportunity to exploit this fact. Through his privately owned company Hemen Holding, he proposed an offer to buy the convertible bond at 30 percent of par, facilitated by a market transaction. To the bondholders, this represented a solution equivalent to a 70 percent write down. A rejection of the offer was clearly signalled to be a filing for bankruptcy by Golden Ocean. The threat was valid, as a bankruptcy would cause John Fredriksen to lose only 40 USDm in book valued equity, and considerable less if accounting for the prevailing share price at the time being. It was regardless a small amount for a man of his net worth. The bondholders, on the other side, would most likely have to write of their hope of getting back any of those 200 USDm. The winner in a default situation would be Nordea that would get back their 400 USDm through their first priority claim, and partly John Fredriksen, who still would have kept his good relations to his main bank connection.

The end of the story was that most bondholders accepted and thus gave up 70 percent of their contractual claims. Hemen Holding quickly sold its convertibles to Golden Ocean at 35 percent of par, which on top of reducing their future liabilities could account a gain of more than 100 USDm in the P&L statement for buying back debt below par. Golden Ocean subsequently issued new equity in a private placement and could as a consequence of this acrobatic exercise present a much stronger balance sheet. The share price has since surged more than 1000 percent.

It belongs to this story that quite a few of the investors in the convertible bond were hedge funds that simultaneously to buying the bonds had been short in the stock which had fallen 99 percent from the top.[22]

[22] Partially based on presentation given by credit analyst (SEB Enskilda) 17/03/2010 and information from www.newsweb.no

Conversion is another way of reducing debt liabilities. In difference from a write down, conversion does by definition offer something in return, namely equity ownership. Conversion is proposed as an element in 33 of the total observations. From Figure 5.4.2, the development in number of conversion seems to follow a very similar pattern as for write downs. Recalling from the correlation matrix presented in Table 5.4 (2), the relationship between conversion and write down constituted the highest correlation coefficient within purpose elements. Conversion and write down are simultaneously proposed 13 times. Similar to write down, conversion is usually observed proposed when the borrower is in clear trouble.

An important problem to be addressed in conversion cases is the resulting ownership structure after the conversion has taken place. An example from the data material can illustrate this:

Crew Gold Corporation, an exploration and mining company, was in late 2009 in severe trouble finding themselves low on cash and with large capital expenditure commitments. One of their bonds had already matured without repayment. As part of a complete restructuring, the bondholders were asked to convert their bonds to equity. The existing shareholders would participate with new equity through a share issue. The equity at the time being was valued at close to nothing after the shareholder valued had plunged from several billions at top levels. The outstanding value of in total five bonds was approximately 1.9 NOKb. The proposed deal implied that by raising only 65 NOKm in fresh equity, existing shareholders would retain a 50 percent stake in the company, while the bondholders would get a controlling stake of just above 50 percent by writing off and converting half of their 1.9 billion bonds. The conversion price that bondholders were asked to accept corresponded to approximately five times the price of the rights issue to existing shareholders. The bondholders' alternative would be to seize the whole company through a bankruptcy. A riot towards the imbalanced ownership outcome developed among certain influential bondholders. Even though four out of five bonds accepted the proposal, a fifth bond rejected and hence put a stop to the restructuring. The bondholders hired a financial advisor (which happened to be the original manager of the bond) to negotiate the conversion terms with the company. Following long lasting negotiations, the final conversion price ended at a price that gave bondholders an ownership of 95 percent. A mutual fund, which had bought the convertible bonds in the second-hand

market and fronted the riot, made a gain of 140 percent on their investment when they half a year later sold of their holding of shares to an industrial buyer.[23]

The example illustrates the importance of the conversion price in respect to conserving bondholder value, but also serves as an example to employment of creditor rights and bargaining power.

5.4.3 Altering of covenants

In respect to earlier discussions about the role of covenants, it is not surprising to see a large amount of covenants being renegotiated. Figure 5.4.3 shows the quarterly development in accounting of the different covenant categories. Jointly, the six types of covenants have been observed 128 times.

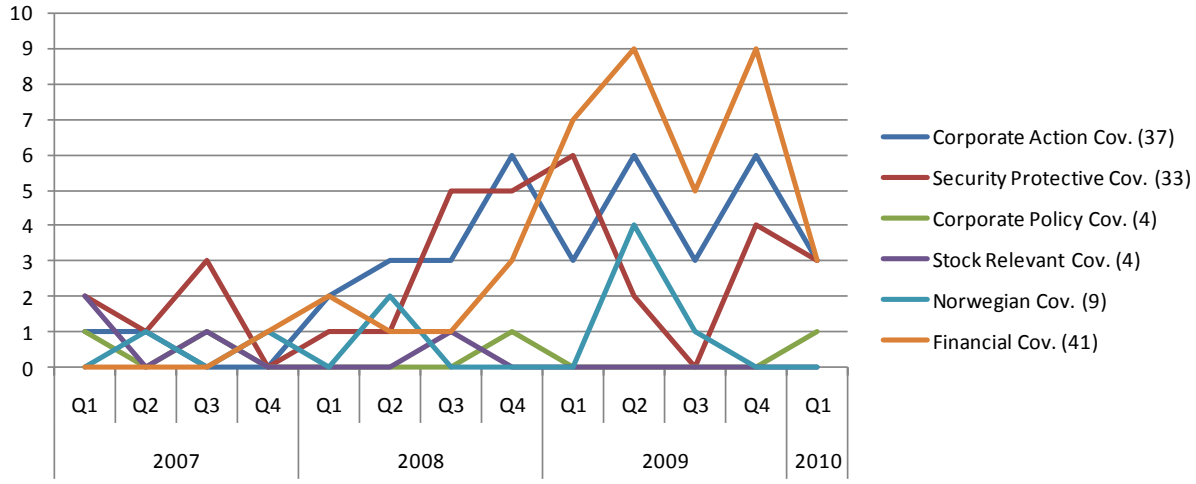


Figure 5.4.3: Development in covenant elements. The figure illustrates the quarterly accounting of respective purpose elements being part of the renegotiation proposals. Y-axis in number of renegotiations.

Corporate action covenants are observed as en element in 37 of the renegotiation events. Both "change in control" clauses and "restrictions on asset sale" clauses are widely observed in the data material. The earlier background analysis illustrated quite a few mergers and acquisition triggered renegotiation events. Mergers and acquisitions are central actions that may put to work a change of control covenant. Consequently, if the borrower wants to avoid the bondholders requiring the bond redeemed, he will thus have to renegotiate or ask bondholders

[23] The example is partially based on three articles published in Dagens Næringsliv (October/September 2009 and February 2010)

to waive this clause. Asset sale clauses are observed renegotiated in connection to sale of vessels, rigs and shares.

Security protective covenants are observed as an element in 33 of the renegotiation events. "Negative pledge" and restrictions towards "materials included in the security" are the most commonly observed types of security protective covenants at work. In a refinancing event that requires new debt investors, the new investors will often demand security backing of their bond. This will affect the negative pledge restrictions in existing bonds, or might require a rearrangement of materials included in the bonds to satisfy the new investors.

An example of security protective covenants being affected is well illustrated by two Ignis bonds that were renegotiated twice during 2007. Early that year, Ignis wanted to acquire another company, Datametrix. The acquisition was intended to be financed by an equity issue; however, there was a need for a short term bridge financing until new equity could be in place. As two of Ignis' bonds included negative pledge restrictions on further debt financing, the bondholders had to be approached for a waiver of this covenant until new equity was raised. As part of the compensation, the existing bondholders were given first-priority pledge to the new shares in Datametrix. Eventually, new equity was raised and the bridge financing repaid according to plan. During the autumn of 2007, Ignis had identified a need for additional funding related to the integration process of Datametrix. Conditional on receiving pledge in Datametrix shares, a bank had agreed on providing the additional financing. Again, Ignis had to approach bondholders, this time to ask bondholders to give up their newly acquired first priority pledge in Datamatrix shares in addition to asking for another waiver in respect to the negative pledge clauses. As there was no distress involved in the situation, the bondholders had a strong bargaining position and got accordingly compensated. The bonds were later successfully redeemed trough a call option prior to maturity.

Corporate police covenants are observed in only four of the renegotiation events. Three of them relate to relaxation or removal of dividend covenants. Dividend covenants restrict the borrower's direct- or indirect possibilities of transferring wealth to the shareholders. Dividends that are financed by a reduction in investments will reduce the value of the firm's bonds by decreasing the expected value of the firm's assets at the maturity date, thus increasing the probability of a default. The dividend covenant serves an important role in respect to preserving bondholder values, and it is extensively applied in the Norwegian market. However, the dividend covenant is not very likely to be subject to altering during

harsh economic climates as companies' excess cash will be limited and because the dividend restriction is unlikely to be breached.

Stock relevant covenants are also observed in only four renegotiation events. Three of them relate to a stock issuance covenant that allows the bondholders to put their bond if additional equity is raised. The last observation relates to restrictions towards listing of the bond.

Norwegian covenants are among the elements in 9 of the total renegotiation events. Most of the Norwegian covenants observed renegotiated relates to "change of contract" covenants. These types of covenants restrict the borrower from making material changes to contracts that are already entered into, typically related to construction of assets. Restrictions towards construction contracts were observed renegotiated as a consequence of both delays and exceeding of costs in respect to construction of vessels and rigs.

Financial covenants are accounted for in 41 of the observations thus constituting the most common group of covenants being renegotiated. Figure 5.4.3 illustrates a sharp increase in observations of these covenants from late 2008, similar to the time when the financial crisis escalated. The high number of observations in respect to these types of covenants is not unexpected. Financial covenants are widely applied in bond contracts and the primary objective of these types of covenants is to limit the financial leverage. When asset values decrease, all else equal the leverage ratios will increase. The rough market conditions that prevailed during 2008 affected asset values negatively and consequently put financial covenants at work. Both actual and expected breaches of covenants are observed in the sample, though with a majority towards the latter. Typically, borrowers approached bondholders ahead of releasing new financial statements that would result in an actual breach. The most commonly observed financial covenants relate to restrictions towards equity ratio and indebtedness.

5.5 Compensation

The most frequently proposed forms of compensation offered to bondholders are shareholders' contribution of equity and increased coupon. These elements are respectively observed in 31 and 26 percent of the renegotiation events. Table 5.5 (1) displays the complete recording of different compensation elements. The different compensation elements will be further examined in the three following subsections according to similarities among them: Direct-, indirect-, and alternative compensation.

Table 5.5: Summary statistics - compensation elements. The table shows the quarterly accounting of compensation elements in comparison to the quarterly number of renegotiations. The bottom line presents the total number across the sample period and the percentages of total renegotiations. Average elements represent the average number of compensation elements per renegotiation in the respective quarter.

Time		Total reneg.	Increased Coupon	One-time fee	Increased redemtion	Reduced Conversion price	Buyback/ Partial redemtion	Covenants	Shares/ Warrants	Security	Equity issue	Other	None	Average ele - ments
2007	Q1	4	3	-	1	-	1	1	-	2	2	1	-	2.8
	Q2	5	-	2	2	-	-	-	-	-	-	-	1	1.0
	Q3	8	3	1	1	1	1	2	1	-	-	2	1	1.6
	Q4	5	2	2	2	1	-	-	-	-	-	1	-	1.6
2008	Q1	9	2	2	3	1	-	1	-	1	1	-	-	1.2
	Q2	11	2	3	-	3	-	-	2	2	3	1	2	1.6
	Q3	10	1	1	2	-	1	1	-	1	1	-	6	1.4
	Q4	23	4	-	-	1	6	1	2	1	4	-	6	1.1
2009	Q1	20	6	3	2	1	2	1	-	2	8	-	1	1.3
	Q2	27	6	2	7	3	1	8	3	1	13	1	6	1.9
	Q3	20	6	2	4	1	2	9	1	1	8	-	5	2.0
	Q4	22	9	1	1	-	6	5	7	5	6	1	2	2.0
2010	Q1	12	1	-	2	-	-	3	-	1	8	-	2	1.4
Total		**176**	**45**	**19**	**27**	**12**	**20**	**32**	**16**	**17**	**54**	**7**	**32**	**1.6**
% of total		**100%**	**26%**	**11%**	**15%**	**7%**	**11%**	**18%**	**9%**	**10%**	**31%**	**4%**	**18%**	

From Table 5.5 (1), the average renegotiation proposal contains 1.6 elements of compensation. To analyse the relationship between the different compensation elements, pairwise correlation coefficients have been calculated. The correlation matrix is found in Appendix 9.2.2. The highest correlation is found between security and buyback/partial redemption, with a correlation coefficient of 0.307. A correlation coefficient of 0.307 is regarded as rather weak. A high positive correlation would have implied that the accounting of one compensation element tended to be followed by the accounting of the other compensation element.

5.5.1 Direct compensation

Direct compensation recapitulates payments given to bondholders either up-front or through the lifetime of the bond. Figure 5.5.1 illustrates the frequency of the three different direct compensation elements being accounted for.

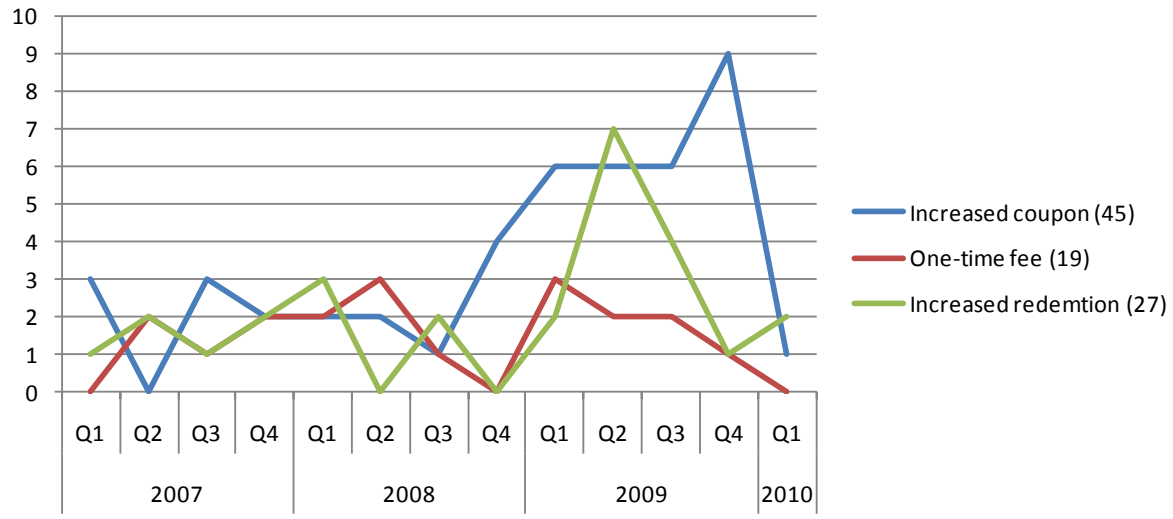


Figure 5.5.1 Development in direct compensation elements. The figure illustrates the quarterly accounting of respective direct compensation elements being part of the renegotiation proposals. Y-axis in number of renegotiations.

Increased coupon is accounted for in 45 renegotiation events and thus represents the most frequently observed form of direct compensation. An increased coupon represents value to bondholders, as future expected cash flows increase. To the borrower, on the other hand, compensating bondholders by increased coupon represents a method to spread the cost throughout time, with the result of a smoother P&L effect. An increased coupon will only be credible if the borrower is expected to serve this increase going forward. The average extra coupon offered to bondholders throughout the sample equals 2.9 percent.[24] In situations of default, five percent seem to be the standard, which is equivalent to the penalty interest rate for late payments set out in most bond agreements.

A one-time fee is offered as compensation in 19 of the renegotiations events. The one-time fee is organised as a payment to bondholders upon acceptance or implementation of the renegotiation. Such payments represent less uncertainty to bondholders, as they extract the compensation immediately in comparison to future uncertain payments. To the borrower, a one-time fee thus requires available funds at the time being. Figure 5.5.1 illustrates that one-time fee compensation, relative to the other direct compensation elements, was a less popular form of compensation during the peak period of renegotiation activity. The average one-time fee offered to bondholders throughout the sample equals 1.3 percent.

[24] The average IF compensation numbers in respect to Increased coupon, One-time fee and Increased redemption price being mentioned in this section is to be found in Appendix 9.4.

Increased redemption price is recorded in 27 of the renegotiations events. It implies that the bond will be redeemed at a premium to originally contracted terms. As most bonds in the sample have a bullet structure, the common time of compensation is at the maturity date. However, instalments redeemed at premium are also observed. Similar to increased coupon, increased redemption price represent value to bondholders through future cash flows, though typically with a higher duration and equivalent uncertainty. An increased redemption price represents a well adapted solution to companies in distress that potentially will recover and thus eventually be able to materialise the payment. Figure 5.5.1 illustrates that increased redemption price mostly was accounted for during the first quarters of 2009, supporting that this type of compensation mostly is offered by companies in distress. The average increased redemption price offered to bondholders throughout the sample equals 3.2 percent.

5.5.2 Indirect compensation

Indirect compensation recapitulates compensation that is not quantifiable through a payment like in the previous section. Indirect compensation elements represent return services that nevertheless provide value to bondholders. Figure 5.5.2 shows the frequency of the six different indirect compensation elements offered to bondholders.

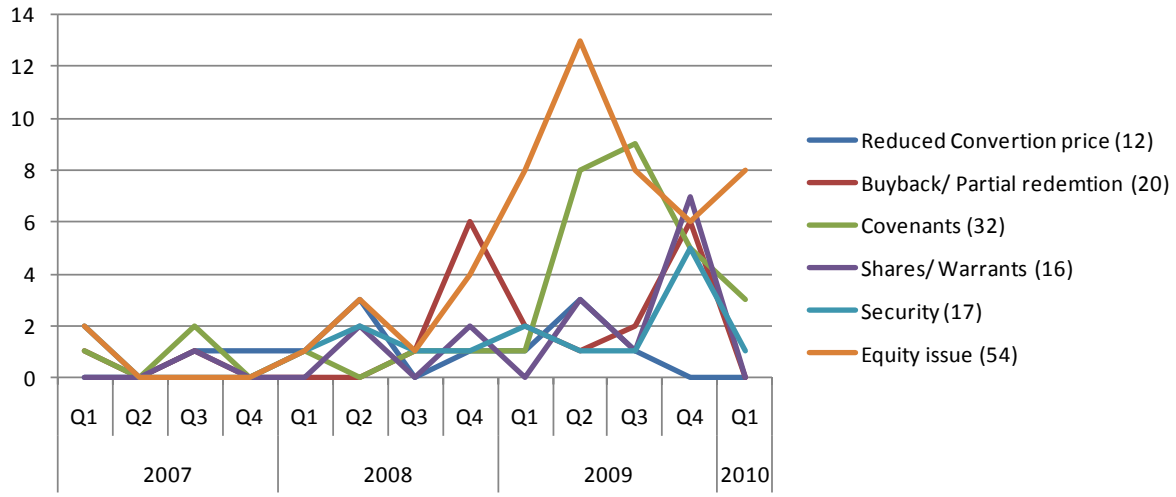


Figure 5.5.2: Development in indirect compensation elements. The figure illustrates the quarterly accounting of respective indirect compensation elements being part of the renegotiation proposals. Y-axis in number of renegotiations.

Reduced conversion price is represented in 12 of the renegotiation events, and is naturally only found in respect to convertible bonds and bonds with a warrant element. A reduced conversion price increases the value of the option element, as a future exercise by the

bondholders becomes more likely. A reduction of the conversion price can represent a well accommodated solution to borrowers in a tough financial position. Granting of options is a "cheap" solution with no immediate cash effect. However, if the future should appear prosperous, shareholders will have to give away some of the upside to bondholders and it might thus eventually become very expensive. If the alternative is bankruptcy, it can nevertheless represent a win-win solution to both parties. From Figure 5.5.2 it is somewhat surprising that reduced conversion price does not appear to be a particularly popular form of compensation during the worst part of the financial crisis. The observations rather seem to be evenly distributed throughout the sample period.

Buyback or partial redemption is represented in 20 of the renegotiation events. Both a buyback and a partial redemption represent value to bondholders as they are given an option to receive cash today and correspondingly reduce the future uncertain repayments. One might argue that bondholders are long term investors with little interest in an early redemption, or if so should be the case, could sell their holdings in the second-hand market regardless of the offer from the borrower. However, an option can never have negative value, and in situations where risk or interest rates have developed unfavourable towards bondholders, possible in an illiquid market, money today could represent great value. To the borrower, a buyback or partial redemption obviously require the necessary available cash either through internal funds or new external funding. These types of compensation are thus not very likely to be observed in situations of distressed borrowers. The data set confirms this by recording only four renegotiations with the combination of a distressed background and compensation through buyback or redemption. A case constituting three of these less likely observations relates to the former rig company Petrojack ASA. Petrojack offered a partial redemption of their three bonds if bondholders would allow the company to sell one of their rigs.

Additional or stricter covenants are recorded in 32 of the renegotiation events. Covenants can vary considerable in function and form, as already discussed in Chapter 4.3 and Chapter 5.4. However, what they all have in common is the protective function towards the bondholders' interests. Thus, adding or restricting relevant covenants in the bond indenture will provide value to bondholders through increased protection. Although the covenants represent protection and a corresponding value, it is not necessarily in the best interest of the bondholders to uncritically plead their rights according the covenants. However, a break of covenant will put the bondholders in an optional renegotiation or default situation. To the borrowers, granting of covenants have no cash effect and can be regarded as "cheap"

compensation as long as they are able to comply with the restrictions. On the other hand, it can turn out very costly if covenants limit the operational freedom of action to create firm value. Another risk to shareholders is that covenants are violated and that bondholders choose to initiate bankruptcy proceedings. The most commonly observed covenants offered as compensation fall into the categories of "corporate policy" and "financial covenants". In respect of corporate policy covenants, restrictions on future dividends is the most commonly observed protection offered to bondholders.

Shares or warrants are offered as compensation in 16 of the renegotiation events. This category could be argued to be a direct form of compensation; however, uncertainty towards the value of the offered securities place it the section of indirect compensation. To the bondholders, shares and warrants represent value as they get to take part in the upside potential of the firm value. However, shares and warrants will only be credible forms of compensation if it is plausible that the company will be able to fulfil its debt obligations, implying that the equity actually has value. The offering of shares and warrants will respectively have a dilutive and potential dilutive effect to the existing shareholders ownership fraction.

Security is offered as compensation in 17 of the renegotiation events. Additional security represents value to bondholders by increasing the prioritised entitled assets or funds attributable to repay the bonds in a default situation. The expected repayment to bondholders will hence increase. Different types of security have been observed offered as compensation. The first and most frequent type is the offering of new or additional pledge to assets. Being offered pledge to an asset implies that bondholders get possession of the asset until all the conditions of the debt is met. Also an unconditional guarantee from the parent company is observed, meaning that the parent company ultimately is responsible to repay the bond. The characteristics of both these types of security measures are the fact that they do not take effect until a possible bankruptcy or liquidation situation emerges. An interesting security observation is the offering of cash sweep agreements. A cash sweep agreement implies that the borrower is committed to credit an escrow account entitled to the bondholders with pre-stated amounts of cash at pre-stated points in time. The bondholders are thus protected against the use of cash for other purposes than repayment of their debt claims. In difference from the two other types of security compensation, a cash sweep operates during the lifetime of the bond.

Equity issue is observed in 54 of the renegotiation events, and thus represents the most frequently observed form of all compensation elements. Issue of new equity will be valuable to bondholders as it reduces the financial leverage of the firm and correspondingly reduces the risk of the debt. In addition, the shareholders' willingness to contribute capital signals their faith in the business. This is especially important in respect to distressed companies. There would be no point for shareholders to contribute fresh capital unless there was hope for the business to recover, if not it would be better to abandon the ship by declaring bankruptcy. Thus, an equity issue can in most cases be seen as a very credible form of compensation. To the borrower, an equity issue will require either the existing shareholders or alternatively new investors to arrange fresh capital. In the case of new external investors, the existing shareholders will be diluted. In a distressed situation, new investors will typically require a very low valuation and correspondingly demand a high ownership stake in return for their capital contribution.

5.5.3 Alternative compensation

Alternative compensation recapitulates renegotiation events where other types of compensation to those yet illustrated are involved. It also captures renegotiation events where none compensation to bondholders have been interpreted. Figure 5.5.3 shows the frequency of these elements being part of the compensation offered to bondholders.

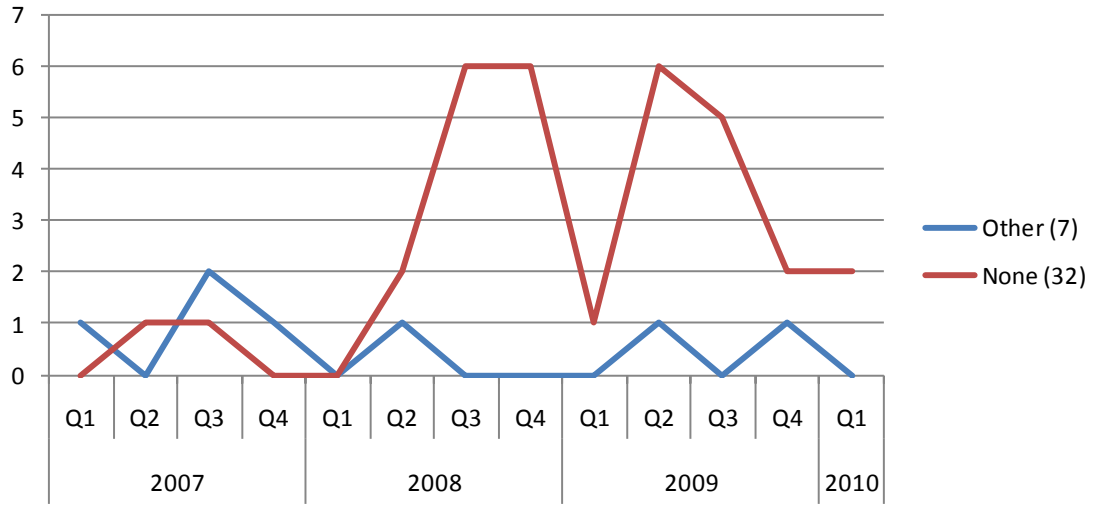


Figure 5.5.3: Development in alternative compensation elements. The figure illustrates the quarterly accounting of respective alternative compensation elements being part of the renegotiation proposals. Y-axis in number of renegotiations.

Other compensation elements are recorded in 7 of the renegotiations events. From Figure 5.5.3, other compensation elements seem to appear rather coincidently. It might be somewhat surprising that alternative compensation elements do not appear more frequently during the harsh economic environment from 2008 and on. Among the elements accounted for in the "other compensation" category are: -Insertion of put calls that provide value to bondholders through the option of requiring the loan redeemed at certain dates. -Increased call premium that provides extra value to bondholders in the event of the borrower exercising his right to call the bond. -A failure fee that provides the bondholders with a cash payout if the conditions of the renegotiation fail to be met, resulting in an invalid resolution. -Conversion of a shareholder loan that provides value to bondholders as less debt claims reduce the risk of the bond not being repaid. -Preferred right to subscribe in a new bond issue that provides value as an option.

In 32 of the renegotiation events there is not recorded any form of compensation offered to bondholders, represented by the "none compensation" category. From Figure 5.5.3, this type of observation appears more frequently in 2008 and 2009. Under normal circumstances it is expected that bondholders are being offered compensation to ease their contractual rights. However, this rule of thumb might be departed from, depending on the situation. Firstly, the bondholders might accept a proposal without anything in return if the changes impose minor implications to the loan agreement. The second type of scenario occurs in situations of distress, where the borrower lacks the ability to offer any form of compensation. None compensation does not necessarily mean it is unfavourable to bondholders to still accept the proposal. Whether favourable or not really depends on the bondholders' alternative. In example if the break-up value is low and the bond is subordinated, the bondholders might be reluctant to a bankruptcy situation and hence willing to keep the company alive by agreeing to the proposed changes.

5.6 Voting

The renegotiation proposal is considered and decided upon at the bondholders' meeting. The bondholders' meeting represent the highest authority within the bondholders' community, and may approve to alter each and all of the terms and conditions set out in the loan agreement. A resolution that is passed at the bondholders' meeting is binding and prevailing to all bondholders. The bondholders' meeting is facilitated by Norsk Tillitsmann, and most bondholders meet trough a proxy by giving a tied vote in the hands of the trustee. A resolution in favour of the proposed changes is dependent on two procedural conditions. These

conditions can slightly differ between loan agreements, however, the main procedural rules applies as follows: First of all, a quorum must be present, requiring 5/10 of bondholders to be represented at the meeting. Second, 2/3 of the represented bonds must vote in favour of the proposal to form a valid resolution.

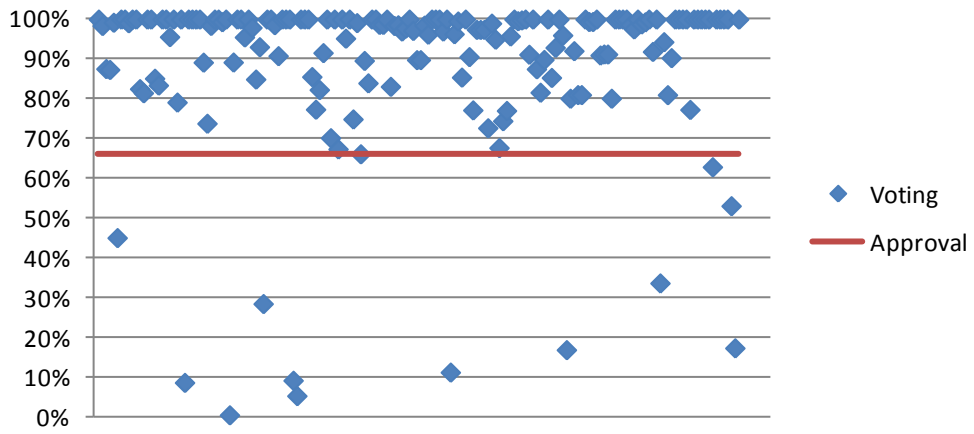


Figure 5.6: Voting distribution. The figure displays the voting percentage and outcome of 172 bondholder meetings, each renegotiation event represented by a square. The red line illustrates the required 2/3 threshold for adoption of proposal. Y-axis measures voting percentage in favour of the proposal. X-axis illustrates time of renegotiation event starting 1/1/2007 and ending 31/3/2010.

Of the 176 renegotiation events and corresponding number of bondholders' meetings 163 quorums accepted the proposal and 13 quorums rejected. Figure 5.6 illustrates the voting outcome of 172 bondholder meetings. The figure excludes four of the meetings due to lack of disclosed information about voting percentage. [25]

An interesting observation from Figure 5.6 is that very few of the voting outcomes lie close to the required 2/3 threshold, as illustrated by the red line. The majority of the proposals achieve more or less 100% acceptance. In the other end of the scale, in respect to those proposals rejected, most of them lie far away from acceptance. In other words, bondholders seem to be rather homogenous in their opinion towards the proposal, regardless of whether it implies to accept or to reject it.

This type of consensus could have an underlying explanation. It is common practice for the borrower to discuss the shaping of the proposal with Norsk Tillitsmann in advance. With great experience as an intermediate they will prove valuable in finding acceptable terms to the bondholders. When NTM finds the terms of the proposal favourable to bondholders they will

[25] However, they were all sufficient for approval.

often provide a recommendation in the summons. From around mid 2008 there has been a shift towards direct contact with influential bondholders in advance of a proposal launch. The presence of external advisors on both the issuer and bondholder side have also become part of this trend.[26] As advisors, both the legal profession and investment banks are seen consulted. Those proposals observed rejected have typically not been discussed with NTM in advance and lack sufficient background information about the reason for the proposals.

[26] Meeting with NTM representatives 10/05/2010

6. Statistical analysis

This chapter is structured in three parts. The first will have a brief look at the relationship between macro factors and renegotiation activity. The second part will test relations within the content of the renegotiation proposals. The third part will attempt to identify factors that affect the voting outcomes of the bondholder meetings. All testing in this chapter is based on the main sample.

6.1 Macroeconomic relations

Roberts and Sufi (2009) find in their analysis of private credit agreements that macroeconomic fluctuations in credit and equity markets are main determinants for renegotiations taking place. Chapter 3.4 of this paper introduced the development of credit spread and the oil price. The expectations were that these factors could be important triggers to the number of renegotiations observed during the sample period. The pattern of renegotiation events observed and presented in Chapter 5 can indicate support to this view. Furthermore, the descriptive analysis presented a sample that to a great extent was constituted by companies that presumably would be sensitive to the oil price development.

This section will provide insight to a possible relationship between the credit spread, the oil price and the number of renegotiation events observed. However, no predictions or causal explanations will be made. The intention is purely to identify whether there exist correlation in the developments between the respective variables.

Standard correlation coefficients are calculated and regular t-statistics applied to identify correlations that are statistical distinct from zero. The hypotheses are.

H_0: [$\rho = 0$]

H_A: [$\rho \neq 0$]

The macro variables are represented by average quarterly credit spread and average quarterly oil price.[27] Credit spread is equivalent to the difference between NIBOR 3m and the key policy interest rate (styringsrente). The quarterly numbers of renegotiations are given by the main sample. Recall from chapter 5.3 that most of the increase in number of renegotiations from mid 2008 and onwards could be ascribed to bonds in default or close-to-default, while

[27] Quarterly credit spread is based on daily data on key policy interest rate and NIBOR 3m collected from Norges Bank. Quarterly oil price is based on daily Brent Spot prices collected from Datastream.

the non-default bonds showed a stable frequency. In addition to calculate the correlation towards the total number of renegotiations, a similar exercise will therefore also be conducted towards the sum of default bonds and close-to-default bonds. For full input data please consult Appendix 9.3.

Table 6.1 (1): Correlation matrix – macro factors vs. renegotiation activity. The table displays correlation coefficients based on 13 observations of each variable

	Nr. of Renegotiations	Nr. of Reneg. Default
Mean Credit spread	0.438	0.444
Mean Oil price	-0.420	-0.404

Table 6.1 (1) shows moderate correlations. Number or renegotiations show sign of positive correlation to credit spread and negative correlation towards oil price, though none of the correlations are statistical distinct from zero. The null hypothesis can thus not be rejected.

The same exercise is applied to the quarterly changes in the respective variables. In other words the quarterly changes in average credit spread and average oil price are tested against the quarterly changes in number of renegotiations. The results are displayed in Table 6.1 (2).

Table 6.1 (2): Correlation matrix – change in macro factors vs. change in renegotiation activity. The table displays correlation coefficients based on 12 observations of each variable

	ΔNr. of Renegotiations	ΔNr. of Reneg. Default
ΔMean Credit spread	0.534	0.721***
ΔMean Oil price	-0.450	-0.459

*** Statistical distinct from zero at 1% level

Table 6.1 (2) shows overall stronger correlation coefficients compared to Table 6.1 (1). Still, at a significance level of $\alpha = 0.05$, the null hypothesis can only be rejected in respect to the correlation between changes in credit spread and changes in number of default renegotiated bonds.

All in all, the results provide indications that renegotiation activity can be positively correlated with credit spread and negatively correlated with the oil price. This would imply

that high credit spread and low oil price are correlated with high renegotiation activity. However, the results are generally too weak to conclude.

6.2 Content relations

This section will analyse the relationships between background, purpose and compensation elements. The objective is to identify correlated elements and identify differences within special type of bonds. Standard correlation coefficients, Spearman rank correlation test, and t-tests will all be applied for the purpose of this section.

6.2.2 Pairwise correlation

The descriptive analysis provided frequency statistics and pairwise correlation within purpose elements and within compensation elements. This section will connect purpose and compensation elements by analysing the relationship between them. Correlation coefficients will also here be an important tool.

An intuitive question is whether purpose and compensation elements tend to occur at a special pattern. Will certain purpose elements be followed by certain compensation types? To answer this question a correlation matrix has been organised. The correlation coefficient indicates if there exists a linear relationship between two variables. Due to dummy variables (0,1) and consequently lack of normality, significance level will not be stated. Table 6.2.2 (1) displays the full correlation matrix between purpose and compensation elements.

Table 6.2.2(1): Correlation matrix – purpose vs. compensation. The correlation is calculated based on dummy variables accounting of purpose and compensation elements. Significance level cannot be stated due to non normality. Numbers outlined in bold, indicate the five strongest positive correlations.

Purpose vs compensation	None	Coupon	One-time fee	Increased redemtion	Reduced Conversion price	Buyback/ Partial redemtion	Covenants	Shares/ Warrants	Security	Equity issue	Other
New repayment schedule	-0.169	-0.009	0.164	0.146	-0.026	0.097	0.287	-0.062	0.186	0.072	-0.073
Early redemtion	-0.169	-0.009	0.164	0.146	-0.026	0.097	0.287	-0.062	0.186	0.072	-0.073
Postph. Interest/Instalment	-0.031	0.189	-0.069	0.045	0.048	-0.122	-0.113	-0.110	-0.104	-0.122	-0.021
Extension	-0.213	0.294	-0.082	0.141	0.096	0.113	**0.344**	0.141	**0.331**	0.137	-0.055
Write down	0.045	-0.253	-0.097	-0.181	0.135	-0.152	0.078	0.064	-0.139	**0.332**	-0.006
Conversion	0.000	-0.186	-0.167	-0.204	0.101	-0.126	-0.007	-0.018	-0.157	**0.533**	-0.023
Corporate Action Cov.	0.010	-0.037	-0.053	-0.065	-0.063	0.141	0.318	-0.159	0.199	-0.152	-0.006
Security Protective Cov.	-0.013	-0.037	0.010	-0.133	-0.078	0.180	0.016	0.067	-0.067	0.008	-0.029
Corporate Policy Cov.	0.027	0.083	0.085	-0.048	0.206	-0.169	0.211	-0.117	0.021	0.113	-0.073
Stock Relevant Cov.	0.027	0.083	-0.053	-0.065	-0.041	0.186	0.024	-0.051	0.208	0.064	-0.031
Norwegian Cov.	-0.109	-0.021	0.085	-0.099	-0.063	-0.002	-0.045	-0.078	-0.076	0.125	0.217
Financial Cov.	0.054	0.162	0.155	-0.048	-0.096	0.141	0.114	-0.009	0.093	0.129	-0.112
Other	-0.062	0.141	-0.117	-0.144	0.206	0.234	0.318	-0.114	**0.397**	0.263	-0.069

The strongest positive correlation is found between conversion and equity issue, while the strongest negative correlation is found between write down and increased coupon. The

positive correlations are the easier to interpret. When the borrower proposes a conversion, the correlation coefficient indicates to what extent an equity issue tend to be part of the compensation. A correlation of 0.533 is a medium strong coefficient that indicates a positive relationship. A correlation coefficient of 1 would have indicated a perfect positive relationship. Opposite, a correlation coefficient of -1 would indicate a perfect negative relationship. The negative correlation between write down and compensation indicates that when write down is proposed it tend not to be compensated with increased coupon, however a weak coefficient of only -0.253 does not tell much and should hence be carefully interpreted.

Although the positive correlation coefficients indicate the degree of co-existence of purpose and compensation elements, they do not state the frequency of combinations. Consequently, Table 6.2.2 (2) illustrates the accounting of pairwise observations.

Table 6.2.2 (2): Pairwise observation matrix – purpose vs. compensation. The table illustrates pairwise combinations of purpose and compensation elements within the renegotiation proposals. Numbers outlined in bold, indicate the five most frequent combinations.

Purpose vs. compensation	None	Coupon	One-time fee	Increased redemtion	Reduced Conversion price	Buyback/ Partial redemtion	Covenants	Shares/ Warrants	Security	Equity issue	Other
New repayment schedule	0	5	5	6	1	4	10	1	5	8	0
Early redemtion	9	1	0	11	0	0	0	1	0	2	2
Postph. Interest/Instalment	5	14	2	6	3	1	3	1	1	6	1
Extension	2	**22**	3	11	5	8	**19**	8	12	**19**	1
Write down	6	0	1	0	4	0	7	4	0	**18**	1
Conversion	6	3	0	0	4	1	6	3	0	**27**	1
Corporate Action Cov.	7	5	4	3	1	10	11	2	8	15	2
Security Protective Cov.	6	8	4	2	1	8	7	5	2	11	1
Corporate Policy Cov.	1	3	0	0	0	0	2	0	0	1	1
Stock Relevant Cov.	1	2	0	0	0	2	1	0	2	2	0
Norwegian Cov.	0	2	2	0	0	1	1	0	0	5	2
Financial Cov.	9	16	8	5	1	8	11	4	6	17	0
Other	2	8	0	0	4	6	10	0	8	12	0

To connect the most frequent combinations to the correlation coefficients recall from the descriptive analysis that conversion was proposed in 33 of the renegotiation events. Table 6.2.2 (2) illustrate that the borrower offered to contribute equity in 27 of the same renegotiations, thus providing help to understand the rather high correlation.

6.2.3 Complexity

Along the process of collecting and structuring the data an impression was formed that complex agendas seemed to be followed by complex compensation structures. Complex, meaning that the content of the proposals had to be assigned to several categories of both

purpose and compensation.[28]Is it really so that complex agendas are followed by complex compensation structures?

To address this question the correlation between the sum of purpose elements and the sum of compensation elements is calculated across the sample. The sum of elements implies adding up the dummy variables within the respective sections for each renegotiation event. The sum of purpose and compensation elements will qualify as ordinal data, and will lack qualities of normal distribution because the observations have high density around few elements. (Recall from Table 5.4 (1) and Figure 5.5 (1) that the average numbers of purpose and compensation elements per renegotiation were 1.9 and 1.6, respectively.) To state significance the non parametric Spearman rank correlation coefficient test is therefore chosen. The Spearman test calculates the Pearson correlation coefficient "ρ" based on ranked data. The hypotheses to test the initial claim are formulated:

H_0: Number of purpose- and compensation elements are not correlated [$\rho = 0$]

H_A: Number of purpose- and compensation elements are correlated [$\rho \neq 0$]

Table 6.2.3: Spearman test results. The table illustrates the test results from Spearman rank correlation test. Input data consists of number of purpose elements and corresponding number of compensation elements per renegotiation event.

Spearman rank correlation	
$\rho_{Purp.ElementsComp.Elements}$	0.405
N	176
p-value	0

Table 6.2.3 displays the test results. With a p value of zero the null hypothesis is rejected. The correlation coefficient of 0.405 is significantly different from zero, thus implying that a high number of purpose elements is indeed correlated with a high number of compensation elements.

The initial view that complex agendas are followed by complex compensation structures is thus supported.

[28] Related to earlier discussion of restructurings, Chapter 5.3.

6.2.4 Background vs. compensation

The previous chapter argued that borrowers with bonds in default or close-to-default might have less bargaining power towards bondholders. Could less bargaining power be reflected in higher compensation offered to bondholders? Beneish and Press (1993,1995) find in their papers that technical defaults are costly to renegotiate. This paper has too few observations to look at specific types of defaults, thus the following will look at all types of defaults as one. More precisely, the compensation offered when bonds are in default and close-to-default will be compared towards the compensation offered to bonds outside default. A standard two sample t-test is applied for the purpose. The t-test compares the means of the two different populations. The sample will only consist of renegotiation events that include increased coupon, one-time fee or increased redemption price as part of compensation. The compensation also have to be recorded as a percentage in the respective *IF* section.[29]

Differences in compensation will separately be tested for the increased coupon, one-time fee and increased redemption price sample, however the hypotheses are the same (substitute compensation with the respective type);

H_0 = There is no difference between compensation offered to bondholders in default bonds and non-default bonds. [Mean (CompensationDefaultCloseToDefault) – Mean (CompensationNonDefault)] = 0

H_A = Bonds in default offer a higher compensation to bondholders compared to bonds in non-default [Mean (CompensationDefaultCloseToDefault) – Mean (CompensationNonDefault)] > 0

Table 6.2.4: Background vs. Compensation results. The table illustrates the t-test results of three one sided tests comparing the mean of compensation in respect to increased coupon, one-time-fee and increased redemption price between bonds in default/close-to-default and non-default bonds.

Variable	N	Mean	Std.Dev.	t-value	p-value
CouponDefaultCloseToDefault	15	0.047	0.0116		
CouponNondefault	26	0.019	0.0201	4.95	0.000
OnetimeDefaultCloseToDefault	7	0.020	0.0274		
OnetimeNondefault	10	0.008	0.0027	1.46	0.083
RedemtionDefaultCloseToDefault	7	0.031	0.0276		
RedemtionNondefault	11	0.033	0.0272	-0.14	0.554

[29] Explained in Chapter 4.3.4 The input data is to be found in Appendix 9.4.

Table 6.2.4 shows the test results of the three tests. At a significance level of $\alpha = 0.05$ the null hypothesis can only be rejected in respect to compensation through increased coupon. Compensation by increased coupon offered to bondholders in default and close-to-default bonds is significantly higher than for those of non-default. However, the result should be carefully interpreted. The extra coupon offered in most of the default cases seems to be subject to a standard of five percent. In that case the premises of the t-test can have been violated both in respect to independence and normal distribution. The one-time fee results show sign of difference between the two groups though the results are not significant. Few observations might affect the result. In the case of increased redemption price, the bonds in non-default actually show a higher mean than those in default and the t value is as a result negative.

The overall mixed results keep the initial claim yet unanswered.

6.3 The voting process

This section will take the analysis of the voting process a step further, attempting to identify determinants for the voting percentage. Hypotheses will be tested by comparing two different populations. As observed in the descriptive analysis the voting data is skewed towards a 100 percent acceptance, hence not meeting a normal t-tests' requirements of normal distribution. Therefore the non parametric Wilcoxon rank sum test is applied for the purpose.[30] The Wilcoxon test ranks the data and identifies differences in location between populations based on the median.

Because of lacking voting percentage in respect to four renegotiations the main sample is reduced to a total of 172 observations.

6.3.1 Background – hypothesis on

Chapter 5.3 argued that borrowers with bonds in default or close-to-default might have less bargaining power towards bondholders. Could less bargaining power be reflected in more reluctant voting in favour of the renegotiation proposal? To find out, the median of voting percentage in respect to default/close-to-default bonds are compared to those of non-default. The hypotheses to be tested are as follows:

[30] Also referred to as Mann-Whitney test. Minitab performs the Mann-Whitney test rather than the Wilcoxon test, and has thus been applied in this paper. However the tests are equivalent.

H_0 = There is no difference in the voting percentage between bonds in default and bonds in non-default [Median (VotingDefaultCloseToDefault) – Median (VotingNonDefault)] = 0

H_A = Bonds in default have a lower voting percentage than bonds in non-default [Median (VotingDefaultCloseToDefault) – Median (VotingNonDefault)] < 0

Table 6.3.1: Test results – hypothesis one. The table shows Mann-Whitney test results from a one sided comparison of the median voting percentage between bonds in default/close-to-default and non-default.

	N	Median
VotingDefaultCloseToDefault	106	0.98555
VotingNondefault	68	0.98455
W	9009.5	
P-value	-	

* No p - value because W > 8996.0

Table 6.3.1 shows the result of the test. The null hypothesis cannot be rejected. In other words there is no difference in voting percentage between default/close-to-default bonds and bonds outside default. Actually, the result in favour of the alternative hypothesis is so poor that the test will not provide a p-value. If anything that rather indicates a difference in location in the other direction.

The argumentation in respect to bargaining position could still be valid, but it is not explained by the voting percentage. An intuitive reasoning is that the borrower proposes renegotiation terms suitable to the situation, thus satisfying bondholders regardless of the bond status.

6.3.2 Lifecycle – hypothesis two

Chapter 5.2 argued that borrowers that are initiating renegotiation processes at a late stage of the bond lifetime might be worse off in respect to bargaining power. Have the proposals in respect to these bonds achieved a lower acceptance percentage? The bonds with a lifecycle measure of more than 90 percent are tested towards the rest of the sample to address this question.

The hypotheses to be tested are thus formulated as follows:

H_0 = There is no difference in the voting percentage between bonds with a high lifecycle and the rest of the bonds [Median (VotingLowLifecycle) – Median (VotingHighLifesycle)] = 0

H_A = Bonds with a high lifecycle have a lower voting percentage than the rest of the bonds

[Median (VotingLowLifecycle) – Median (VotinghHighLifecycle)] > 0

Table 6.3.2: Test results – hypothesis two. The table shows Mann-Whitney test results from a one sided comparison of the median voting percentage between high lifecycle bonds and the rest of the sample. High lifecycle constitutes bonds with a lifecycle measure above 90 percent.

	N	Median
VotingHighLifcycle (90%+)	161	0.9866
VotingBonds	11	0.8333
W	13823.5	
P-value	0.0296	
Robustness:		
VotingHighLifcycle (80%+)	155	0.9866
VotingBonds	17	0.9126
P-value	0.0165	
VotingHighLifcycle (80%+)[1]	155	0.9866
VotingBonds	16	0.9059
P-value	0.0336	

[1] Excludes one extreme lifecycle observation (1.11) wich only obtained 33% voting

The results of the test are shown in Table 6.3.2. The p value is below the significance level of $\alpha = 0.05$, implying that the null hypothesis can be rejected in favour of the alternative hypothesis. The bonds with a lifecycle measure of more than 90 have a statistical lower voting percentage than the rest of the bonds. This indicates that the initial claim can be correct. To check the robustness of the claim a similar test has been run towards bonds with a lifecycle measure of more than 80 percent, relocating six observations. This test yields an even lower p value and thereby supports the view of the alternative hypothesis. A second action to check the robustness of the initial finding is to exclude an extreme observation. One of the bonds in the sample had a lifecycle measure of more than a 100 percent, more precisely 111 percent, combined with a low voting percentage of only 33 percent. Though this observation is in perfect alignment with the argumentation of the initial claim it is regarded as somewhat special, and consequently excluded to isolate its impact on the test results. The second robustness check shows an increase in p value, though still well below the significance level of $\alpha = 0.05$. Neither of the two robustness checks can thus trap the initial findings and the alternative hypothesis is therefore adopted.

6.3.3 Number of investors – hypothesis three

Bolton and Scharfstein (1996) argue in their paper "Optimal Debt Structure and the Number of Investors" that number of creditors can affect the outcome of debt restructurings. Applying their mindset to this paper one might ask if the number of bondholders affects the outcomes of the observed bond renegotiations. It is presumably a plausible thought that a large number of bondholders will increase the potential of diverting opinions or interest of conflict towards the proposed new terms of a renegotiation (recall discussion on hedge funds, Chapter 3.3.2). Could this possibly be reflected by low voting percentages at the bondholders' meetings? The problem of this paper is how to measure the number of investors in a bond when ownership is confidential by law. This paper will employ the size of the bonds, measured as NOK amount outstanding, as an approximation of the number of investors holding them. This approximation is believed to generally make sense as most investors have limited wealth, and at normal circumstances will tend to diversify their holdings. Furthermore, small investors with limited voting power are of less interest, thus making it a measure towards the number of sizable bondholders. It should however be stressed that it still is a rather speculative assumption. The upper and lower 20 percent of bonds in respect to outstanding NOK value is assigned to represent to high value bonds and low value bonds, respectively. The hypotheses are thus formulated:

H_0 = There is no difference in the voting percentage between bonds with a low number of investors and bonds with a high number of investors [Median (VotingNOKAmountLow) – Median (VotingNOKAmountHigh)] = 0

H_A = Bonds with a low number of investors will have higher voting percentage than those bonds with a high number of investors [Median (VotingNOKAmountLow) – Median (VotingNOKAmountHigh)] > 0

Table 6.3.3: Test results – hypothesis three. The table shows Mann-Whitney test results from a one sided comparison of the median voting percentage between high value bonds and low value bonds. High and low value bonds are constituted by the upper and lower 20 percent bonds in respect to NOK outstanding value.

	N	Median
VotingValueHigh (upper 20%)	34	1.0000
VotingValueLow (lower 20%)	34	0.9955
W	9009.5	
P-value	0.4246	

Table 3.3.3 shows the result of the test. The null hypothesis cannot be rejected. In other words there is no difference in the voting between high value bonds and low value bonds. The claim that high number of investors can lead to diverting opinions and conflicts of interest can still be valid. Whether or not this is reflected in low voting percentages is still an unsolved question, but if so should be the case, the value of outstanding bonds seem to be a rather poor approximation of number of investors.

7. Conclusion

An important part of this paper has been to construct a database suitable for the purpose of gaining insight to renegotiation of Norwegian corporate bond contracts. The database covers renegotiations initiated in the period from 1/1/2007 to 31/3/2010 and contains information towards a total of 176 observations. Each observation includes information about bond specifics, background for the proposal, the purpose of renegotiation, compensation offered to bondholders, and the outcome of the bondholder meetings. The construction of this database has consumed a significant part of the allocated time and represents the foundation of this paper.

This study observes a significant increase in number of renegotiations initiated from late 2008 and throughout 2009. While year 2007 in total facilitated 22 renegotiation events, the equivalent number for year 2009 was 89. The renegotiation activity peaked in the second quarter of 2009, a quarter that facilitated a total of 27 renegotiation events. The accumulated outstanding value of the renegotiated bonds sums to a total of 63 billion NOK.

A majority of the renegotiated bonds are found attributable to oil- and oil related companies. Although these companies constituted a large proportion of the Norwegian corporate bond market in the first place, week indications are found that these types of bonds are relatively overrepresented at the renegotiation arena.

Approximately 2/3 of the bonds are found to be either in a default situation or a close-to-default situation when the renegotiation process is initiated by the borrower approaching the bondholders. Observations related to these types of bonds show the greatest increase during the sample period. Moreover, the average bond is renegotiated when 45 percent of the stated maturity has elapsed.

The most frequently proposed changes are found to be extension of the maturity dates and changes to financial covenants, observed respectively in 26 and 23 percent of the renegotiation events. In persuading bondholders' acceptance, the most common forms of compensation offered by borrowers are contribution of equity and increased coupon, represented in 31 and 26 percent of the proposals, respectively. The most frequent appearing combination of proposed changes and corresponding compensation is found to be the proposal of a conversion and compensation by an equity issue. This combination appears in 27 of the total renegotiations events.

The bondholders accept the proposed changes in more than 95 percent of the observations. Their voting in favour of the proposed changes shows a homogenous view, represented by either a very high or a very low acceptance percentage. The generally high acceptance percentages are probably explained by discussions between the borrower and major bondholders prior to the proposals.

The statistical analysis finds evidence that the number of elements proposed altered is correlated with the number of compensation elements offered to the bondholders, thus supporting the view that renegotiations with complex agendas are followed by complex compensation structures.

The descriptive part argues that borrowers of defaulted- and close-to-defaulted bonds could have less bargaining power towards the bondholders. Statistical analysis of whether this could be reflected in higher compensation yield mixed results. The t-test only manages to confirm this in respect to bonds that are compensated by an increased coupon. However, doubt is raised about the validity of the result.

Finally, analysis of the median voting percentage finds rather robust evidence that bonds that are renegotiated at a late stage of their lifetime achieve lower voting percentages in favour of the borrower proposals. Thus, the argument that late renegotiated bonds impair the borrower's bargaining power vis-à-vis bondholders is supported.

This paper has provided a comprehensive description of renegotiation of corporate bond contracts. Hopefully, it can act as inspiration for further studies.

7.1 Further research

As this paper represents a rather innovative study, at least in respect to the Norwegian market, there will be several options for further studies. The following will briefly provide two suggestions.

While this study provides relative thorough insight to the content of renegotiations, its ability to explain why renegotiations actually occur is insufficient. A multiple regression approach taking into account in example company specific operational and financial parameters could represent a comprehensive but interesting approach to gain better insight to renegotiation determinants.

This paper provides an unsuccessful attempt in explaining voting percentage with an approximation of the number of investors as input. Potential relaxation of investor confidentiality can in the future arrange for interesting problems to be addressed in respect to bondholder behaviour.

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Sources of additional data input

Datastream (Oil price data)

E24 (www.e24.no) (Currency exchange rates)

Norges Bank (www.norges-bank.no)

http://www.norges-bank.no/templates/article____55483.aspx (NIBOR)

Norsk Tillitsmann (www.trustee.no)

Oslo Børs (www.oslobors.no)

http://www.oslobors.no/Oslo-Boers/Statistikk/AArsstatistikk/(index)/1

http://www.osloabm.no/Oslo-ABM/Statistikk/Maanedsstatistikk

www.newsweb.no

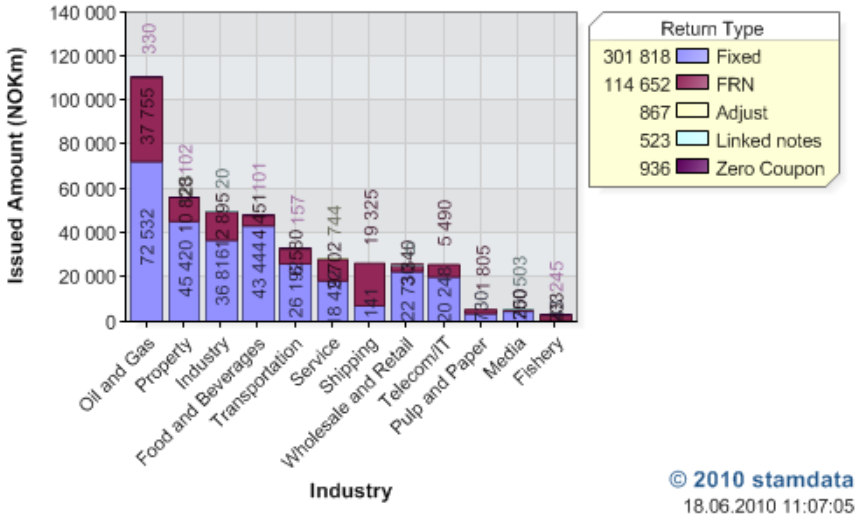
Stamdata (www.stamdata.no)

9. Appendix

9.1 Stamdata comparisons

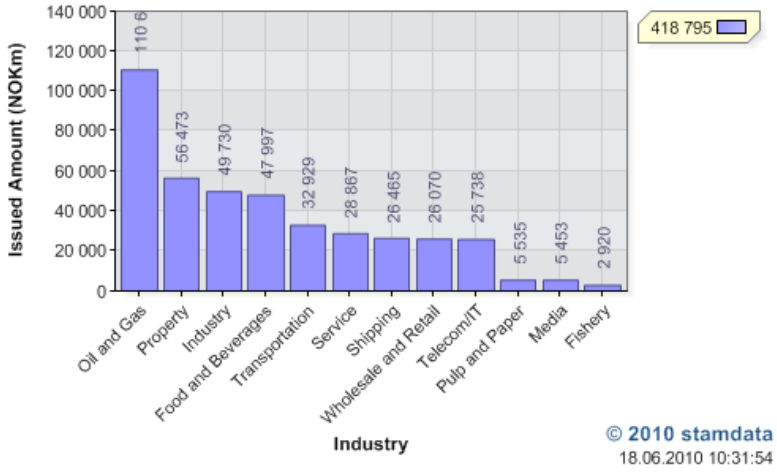
9.1.1 Fixed vs. FRN corporate bond issues 01/01/2005-31/12/2009

The figure illustrates the issued amount per sector of corporate bonds denominated in the respective interest rate type. Fixed- and floating rate bonds constituted respectively 72 and 28 percent of the issued value in this period. *Source: Stamdata*



9.1.2 Corporate bond issues 01/01/2005-31/12/2009

The figure illustrates the issued per sector amount per sector of corporate bonds. Oil and gas constituted 27 percent of the issued value in this period. *Source: Stamdata*



9.2 Correlation matrixes

9.2.1 Correlation matrix, purpose elements

The correlation is calculated based on dummy variables accounting of purpose elements. (0,1) Significance level cannot be stated due to non normality Numbers outlined in bold indicate the five strongest positive and negative correlations.

Purpose	1	2	3	4	5	6	7	8	9	10	11	12	13
1: New repayment schedule	1.000												
2:Early redemtion	-0.139	1.000											
3:Postph. Interest/Instalment	-0.169	-0.183	1.000										
4:Extension	**0.317**	-0.154	-0.180	1.000									
5:Write down	-0.103	0.069	-0.037	-0.110	1.000								
6:Conversion	-0.080	-0.100	**-0.189**	-0.120	**0.321**	1.000							
7:Corporate Action Cov.	0.079	-0.159	-0.026	-0.021	0.129	-0.176	1.000						
8:Security Protective Cov.	0.091	**-0.193**	**-0.235**	0.060	-0.054	-0.093	**0.267**	1.000					
9:Corporate Policy Cov.	-0.055	0.054	-0.072	-0.004	0.041	0.024	0.108	0.020	1.000				
10:Stock Relevant Cov.	-0.055	-0.059	-0.072	-0.004	-0.065	-0.073	-0.079	0.211	-0.023	1.000			
11:Norwegian Cov.	-0.083	-0.090	**0.292**	-0.138	0.187	-0.112	0.260	-0.051	-0.035	-0.035	1.000		
12:Financial Cov.	-0.028	**-0.214**	**-0.190**	0.162	-0.160	-0.127	0.046	-0.039	0.006	-0.084	-0.067	1.000	
13:Other	0.234	-0.131	-0.110	**0.311**	-0.092	0.030	0.194	0.020	-0.051	0.074	-0.078	-0.009	1.000

9.2.2 Correlation matrix – compensation elements

The correlation is calculated based on dummy variables accounting of compensation elements. (0,1) Significance level cannot be stated due to non normality. Numbers outlined in bold indicate the five strongest positive and negative correlations.

Compensation	1	2	3	4	5	6	7	8	9	10	11
1:None	1.000										
2:Increased coupon	**-0.280**	1.000									
3:One-time fee	-0.164	-0.082	1.000								
4:Increased redemtion	**-0.201**	-0.002	-0.046	1.000							
5:Reduced Conversion price	-0.128	-0.110	-0.021	-0.053	1.000						
6:Buyback/Partial redemtion	-0.169	0.154	-0.067	-0.103	-0.026	1.000					
7:Covenants	**-0.226**	**0.211**	0.021	0.038	-0.014	**0.287**	1.000				
8:Shares/Warrants	-0.159	-0.073	-0.117	-0.040	0.132	-0.121	-0.066	1.000			
9:Security	-0.154	0.199	0.072	0.021	-0.012	**0.307**	**0.286**	-0.110	1.000		
10:Equity issue	**-0.218**	-0.031	-0.152	**-0.181**	0.113	0.072	**0.249**	-0.143	0.116	1.000	
11:Other	-0.096	0.011	0.023	-0.006	-0.055	-0.073	-0.023	0.027	-0.067	-0.009	1.000

9.3 Input data – macro factors

The table contains quarterly average credit spread and oil price calculated from daily data. *Data source: Norges Bank and Datastream.*

Time		Mean Credit Spread	ΔMean Credit Spread	Mean Oil Price	ΔMean Oil Price	Nr. of Reneg.	ΔNr. of Reneg.	Nr. of Reneg. Default	ΔNr. of Reneg. Default
2007	Q1	0.48	-	58.23	-	4	-	0	-
	Q2	0.53	0.06	68.65	10.42	5	1	0	0
	Q3	0.55	0.01	74.62	5.98	8	3	0	0
	Q4	0.75	0.20	88.78	14.16	5	-3	2	2
2008	Q1	0.70	-0.05	96.52	7.74	9	4	2	0
	Q2	0.95	0.25	122.06	25.54	11	2	6	4
	Q3	0.85	-0.10	115.68	-6.38	10	-1	6	0
	Q4	1.16	0.31	55.17	-60.51	23	13	17	11
2009	Q1	0.79	-0.37	44.26	-10.91	20	-3	14	-3
	Q2	0.80	0.01	58.89	14.62	27	7	20	6
	Q3	0.64	-0.16	68.22	9.33	20	-7	18	-2
	Q4	0.60	-0.05	74.87	6.65	22	2	12	-6
2010	Q1	0.53	-0.07	76.81	1.94	12	-10	10	-2
Total						**176**		**107**	

9.4 IF compensation

The table illustrates the measurement of the three different direct compensation elements. This table serve also serve as input data to the Background vs. Compensation hypothesis in Chapter 6.2.4. Numbers in italic represent bonds in default and close-to-default. The bottom line displays the averages numbers referred to in Chapter 5.5.1.

IF Increased Coupon		IF One-time fee		IF Increased redemtion price	
0.050	0.002	*0.080*	0.004	*0.025*	0.020
0.050	0.005	*0.001*	0.005	*0.025*	0.032
0.050	0.005	*0.010*	0.010	*0.090*	0.058
0.050	0.010	*0.010*	0.010	*0.004*	0.065
0.050	0.005	*0.008*	0.005	*0.014*	0.090
0.050	0.020	*0.008*	0.010	*0.030*	0.005
0.050	0.020	*0.025*	0.008	*0.030*	0.010
0.050	0.008		0.010		0.010
0.050	0.008		0.005		0.033
0.050	0.005		0.010		0.030
0.050	0.023				0.010
0.050	0.005				
0.005	0.005				
0.050	0.005				
0.050	0.051				
	0.018				
	0.040				
	0.010				
	0.090				
	0.028				
	0.048				
	0.030				
	0.020				
	0.024				
	0.005				
	0.003				
0.029		**0.013**		**0.032**	