

Corporate Finance and Governance

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Analyzing Wealth Effects for Bondholders

New Insight on Major Corporate Events
from the Debtholders' Perspective

1. Introduction

1.1 The Importance and Economic Relevance of Corporate Bonds

Whenever a company is in need of funds to finance future investments, management is frequently confronted with the question as to which type of capital to choose: equity, debt or a combination of both. Straight equity capital can be gained through initial public offerings (IPO) or, if the company is already publicly listed, seasoned equity offerings (SEO). Basically, buyers of the shares (i.e. share- or stockholders) own a part of the company and obtain the potential to profit or lose from this investment depending on how the company fares. Monetary gains for the investors are realized through dividend payments or stock price appreciation, while the latter requires the shareholders to sell their stocks. Losses for the stockholders occur when the stock price declines. While stockholders in general, have numerous rights and the power to decide about the utilization of a company's earnings, they are not entitled to a steady return on their investment. In a worst case scenario, shareholders obtain no or only negative returns because the company only generates losses and its stock price declines. On the other hand, stockholders have access to, in theory, possibly unlimited returns, as they participate with a certain percentage on a firm's profit.

If equity capital is on the left hand side of the continuum of types of funds, then debt capital represents the right hand side of this continuum. The reason is that debt and debt securities typically have the exact opposite configuration as stocks. For instance, corporate debt, which can be subdivided in corporate loans and corporate debt securities like bonds, usually includes predefined arrangements that contain a payment structure for the interest and principal as well as information about how much interest the borrowing company has to pay to the creditor¹. Thus, under the assumption of negligible default risk and held to maturity investments, creditors know exactly what return they will receive on their investment. Furthermore, when a company goes bankrupt, creditors, unlike shareholders, have first claim to the assets available, again underlining that debt securities in general are less risky than stocks. Like stocks, debt securities

1 Often, creditors and debt security holders (e.g. bondholders) are viewed as two different groups. Nevertheless, in this context the word "creditors" is used to also address holders of debt securities.

can be sold on the secondary market to realize a profit through increased prices. However, markets for plain corporate debt securities like bonds exhibit a much weaker liquidity compared to stocks, leading to higher liquidity risk.² Moreover, debt like loans and bonds usually constitute segregated contracts between debtor and creditor and thus do not represent any ownership of the borrowing company. Therefore, they do not give the investors (e.g. bondholders) the same number of rights that stockholders receive.

The third group of funds contains hybrids of equity and debt financing (e.g. mezzanine, convertibles, etc.).³ One of them are convertible securities, also known as convertible bonds or just convertibles. Typically, they consist of a plain corporate bond and a non-detachable call option on the company's stock, increasing the upside potential of this security compared to the stand-alone bond (Brennan & Schwartz, 1980). This also leads to lower yields demanded by investors, which can be interpreted as the payment from the investors to the issuer for the additional call option. Previous research argues that convertibles are used by management to raise equity capital through the backdoor when regular stock offerings seem to be unattractive (Stein, 1992).

But how are the three types of funds related to each other? A well-known theory in corporate finance that links the three security classes equity, debt, and hybrids together and makes statements about their "attractiveness" for management is the Pecking Order Theory developed by Myers and Majluf (1984). In summary, the theory states that management tries to minimize adverse selection costs when deciding how to finance investments. These adverse costs stem from an asymmetric distribution of information between managers and investors and in order to minimize them managers will follow a pecking order. First they retain earnings, then issue debt, and lastly issue stocks. Therefore, the Pecking Order Theory predicts stronger negative (abnormal) stock returns for the announcement of SEO compared to debt offerings. Convertibles, as a quasi-equity debt instrument, should fit between stocks and bonds. Not surprisingly, previous research found increased negative price responses from plain debt offerings to the announcement of SEO, thereby confirming this hypothesis (Eckbo, Masulis, & Norli, 2007). However, capital markets are transforming. Research by Duca, Durtodoir, Veld, and Verwijmeren (2012) provides evidence that since 2000 negative announcements returns are strongest for convertible bonds, showing that

2 See chapter 2.1.1 for further discussion of the illiquidity of corporate bonds.

3 In this section only convertible bonds are discussed as they are compared to plain equity and debt later on (see Figure 1-1 and Figure 1-2).

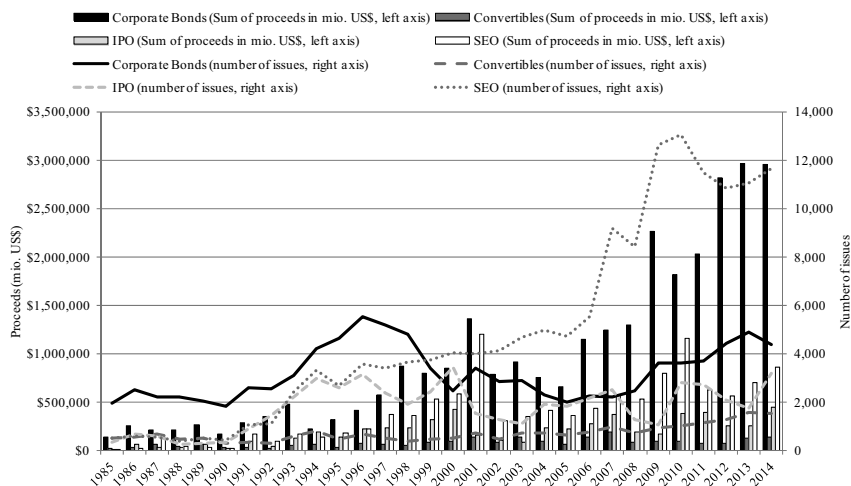
capital market players obviously changed their behavior and the Pecking Order Theory does no longer apply universally. This example shows that, from time to time, markets experience systematic changes which, in turn, dramatically affect the conclusions research will draw about investors and their behavior. In such a context, researchers need to adapt to the new situation and acknowledge that rules have changed.

While debt offerings still result in much (economically and statistically) weaker abnormal stock returns compared to stock offerings (Duca et al., 2012), debt markets also present substantial changes in the last two decades. A current report by Rohini Tendulkar and Gigi Hancock from the IOSCO Research Department shows that the importance of bonds as a part of the capital structure for non-financial companies worldwide has increased drastically (Tendulkar & Hancock, 2014). Overall, they reached a size of \$49 trillion in 2013 and almost tripled their volume since 2000, while about one third came from non-financial issuers. One reason is that lending by banks is continuously substituted by bonds, in particular in the United States and Europe. Issues grew from \$0.9 trillion in 2000 to \$3.2 trillion in 2013, and many emerging economies began to issue corporate bonds (from 5% in 2000 to 30% in 2013). The increasing relevance of corporate bond markets for the economy is also confirmed by several other reports (e.g. ICMA, 2013; Kaya, 2013). Thus, it is a known fact that bonds have gained importance for corporations in comparison to stocks, and firms rely heavily on debt capital to fund their venturing.

All the same, the Thomson One Banker database is utilized to check the validity of this statement. Figure 1-1 presents the number of issues (right axis) and sum of proceeds (left axis) for corporate bond and convertible bond issues, as well as SEO and IPO over the last 30 years.

As expected, funds through bonds always played an important role for companies. The black bar is constantly the largest and normally as high as or higher than equity capital through SEO (white bar) and IPO (light gray bar) combined. Especially, from 2011 to 2014 a clear predominance of debt financing over equity financing with a peak in 2013 is shown. In comparison, convertibles play only a minor role (dark gray bar). Surprisingly, higher proceeds are achieved with a smaller number of issues. For the most part, the quantity of corporate bond issues remains between 2,000 and 6,000 issues per year while the number of SEO outperforms the bond issues for the first time in 1999 and reaches over 13,000 issues in 2013. Hence, the average volume in the corporate bond market considerably increased over the last 15 years. Overall, Figure 1-1 confirms the conclusion of recent reports about the growing importance of bond financing for non-financial firms.

Figure 1-1: Corporate Bond Issuance, Convertibles, SEO, and IPO Activity of Non-financial Firms 1985–2014



This graphic presents the number and proceeds of all straight corporate bond issues, convertible issues, SEO, and IPO of non-financial firms (indicated by Thomson Financial Macro Description) from Thomson One Banker database between 1985 and 2014.

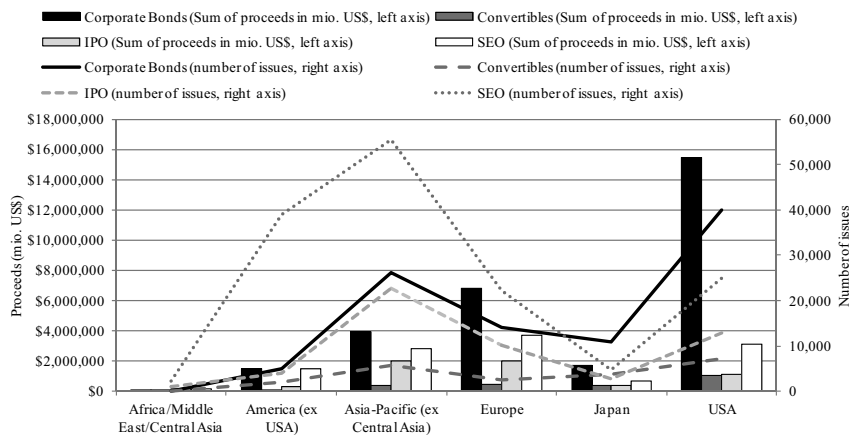
Figure 1-2 presents the issuing activity separated by six different regions (1. Africa/Middle East/Central Asia; 2. America (ex USA); 3. Asia-Pacific (ex Central Asia); 4. Europe; 5. Japan; 6. USA). Again, proceeds through corporate bond issues are the highest, except for Africa/Middle East/Central Asia. Moreover, Figure 1-2 shows that corporate bonds play a key role in particular for Europe and the United States. Thus, the research focuses on these two regions.

Despite the growing importance of financing through bonds for non-financial firms, most investigations on the short-term effects of certain events on firm value are only conducted for stocks. For instance, a keyword search of “abnormal stock returns” with google scholar lead to approximately 10,900 hits, while the keyword “abnormal bond returns” only lead to approximately 282 hits.⁴ Thus, it is the author’s opinion that most research provides an incomplete view on the impact of events on listed firm values in the short run, as allegedly positive or negative events could have the opposite effect on a firm’s debt capital. Moreover, the gap in empirical work devoted to (corporate) bond markets compared to equity markets is also criticized by prior research, which requests a stronger focus on bonds (e.g.

4 Conducted on March 20, 2015.

Biais, Declerck, Dow, Portes, & von Thadden, 2006). It is the main objective of this thesis to contribute to this request. Current research is utilized and enhanced with a new perspective, thereby contributing to the understanding of major corporate events on two different stakeholder classes: stockholders and bondholders.

Figure 1-2: Corporate Bond Issuance, Convertibles, SEO, and IPO Activity of Non-financial Firms by Region 1985–2014



This graphic presents the number and proceeds of all straight corporate bond issues, convertible issues, SEO, and IPO of non-financial firms (indicated by Thomson Financial Macro Description) from Thomson One Banker database between 1985 and 2014 separated by region (Africa/Middle East/Central Asia; America (ex USA); Asia-Pacific (ex Central Asia); Europe; Japan; USA).

1.2 Thesis Structure

This thesis is divided into three main parts. For a start, chapter 2 provides a comprehensive overview of existing academic research on event studies concerning bondholder wealth effects. While reviewing more than 100 published and unpublished research papers, the innovative evolution of bond event study methodology since the mid-70s of the 20th century is discussed. Furthermore, past and present event study methods to calculate abnormal bond returns are illustrated and the applied parametric and non-parametric test statistics are evaluated. Besides, insight on how the availability of corporate bond data has evolved through the last four decades, as well as the impact on prevailing methodology is provided. Moreover, the relationship between abnormal bond returns and abnormal stock returns is reviewed. Altogether, a first extensive snapshot of the current bond event study methodology is conducted and guidance for future research offered.

Next, chapter 3 explores stockholder and bondholder wealth effects of synergy disclosing and non-disclosing mergers and acquisitions in the US energy sector. To the best knowledge of the author, this is the first study investigating the interdependence of synergy forecasts and bond price effects. In line with prior research, synergy estimates affect abnormal stock returns positively. Interestingly, bondholders of the respective companies experience a wealth loss, implying a wealth transfer from bondholders to stockholders. Regression analysis confirms a positive impact of synergy forecasts on stockholder wealth and a negative impact on bondholder wealth. Moreover, after controlling for multicollinearity and confounding events, evidence consistent with a wealth expropriation of bondholders is found. Overall, synergy forecasts no longer can be seen as purely firm value enhancing strategy, proving the necessity to regard both stakeholder classes to fully assess the impact.

Chapter 4 provides first evidence on the difference in wealth effects between new bond issues and reopenings. For a unique dataset of European companies, robust results are detected which indicate that equity investors react differently to both announcements. Excess stock returns turn out to be stronger for regular issues. Bondholders, on the other hand, experience similar negative wealth effects for both issue types. Furthermore, factors explaining bondholder and stockholder wealth effects diverge between issuing types. Thus, it is crucial for future research analyzing bond issues to distinguish between both offering types. Moreover, the results offer insights on how investors respond to different issue types thereby aiding management with the selection of the appropriate debt offering type.

Finally, chapter 5 summarizes the results of the empirical investigations. The main conclusions of this thesis are discussed and implications for financial markets drawn. In addition, the limitations of the empirical analyses are briefly described and possible future research outlined.

Overall, the results suggest that bond markets and their interaction with stocks play a key role in conclusively determining the wealth effects of major corporate events like mergers and acquisitions and debt offerings. Thus, future research ought to consider more than one stakeholder class to assess the impact of events and new information on firm value.