CONCLUSION

5.1 Summary of results and implications

The dissertation provides novel insights on various capital market related research questions. More specifically, I investigate whether financial reporting information signals are associated with bond prices and value relevant to bond holders. As research results may not be transferred from the corporate to the financial institution bond market, both settings are examined (Chapter 2 versus Chapter 3 and 4). Furthermore, as an additional information source to typical income statement (e.g., earnings) and statement of financial position information (e.g., capital structure), the importance of tax-related information signals is investigated in the corporate bond market (Chapter 3). As bond returns in the corporate bond market show a larger dispersion (in comparison to bond returns in the banking sector setting), sensitivity tests on varying bond return levels reveal interesting insights. Furthermore, non-parametric estimation techniques are used to shed light on the feasibility of traditional OLS-techniques (Chapter 4) applied in debt capital market settings. In addition, specific income statement information related to earnings and earnings components (e.g., accruals and cash flows) is examined further. These accounting information signals are challenged with market-based information signals (e.g., VIX volatility and credit rating information) as these information sources are more timely and probably anticipate information revealed through financial statements (Chapter 4). Underlying all three studies in the dissertation is the interest in shedding light on the “dynamic” composition of information required by bond holders to make optimal buy/sell decisions. To exploit these differential information needs, this dissertation examines the information set composition during the period preceding the recent financial crisis and the GFC.

Results in chapter two shed light on whether and to which extent bond investors in the financial institution sector use accounting signals in their decision-making process during economic downturns. The recent financial crisis provides a perfect setting to test whether financial institutions’ accounting ratios related to the CAMEL framework of the U.S. Federal Bank Regulatory Agencies – capital adequacy, asset quality, earnings ability, and liquidity - if at all, enter into the decision-making process of investors holding a portfolio of debt instruments in financial institutions. Applying a perfect foresight portfolio investment strategy (Aharbanell and Bushee 1998), the results in chapter two provide evidence that cumulative monthly bond returns are associated with changes in “earning power” and changes in credit ratings only when financial markets are illiquid and not transparent. Additionally, bond prices do not fully anticipate accounting signals
during the recent GFC. To draw causal inferences, a short term window event study is applied and provides evidence on the value relevance of ratios related to changes in “earning power”, liquidity, and capital adequacy for bond holders during the recent financial crisis period.

The study in chapter two reveals three contributions to the literature. First, it sheds light on bond investors’ different and dynamic informational needs during financial and non-financial crisis periods. Second, it provides evidence that accounting information signals related to the bank regulatory framework are not fully anticipated and incorporated into contemporaneous bond prices during the recent financial crisis. Third, accounting signals related to core business performance, liquidity, and equity cushion are value relevant to bond holders only during the recent financial crisis period stressing the importance of accounting signals to prevent mispricing especially during periods of financial distress and increased uncertainty (e.g., when efficiency in semi strong financial markets deteriorates even more).

Chapter three adds to literature by providing evidence on the relative importance of earnings, liquidation values (capital structure), and estimated taxable income in the corporate debt market. The results indicate that, irrespective of the state of the economy, information related to changes in a firm’s liquidation value are significantly associated with bond returns. As assumed, these insights deviate from the findings in the banking sector in chapter two, as investors in the corporate bond market are not downside risk protected by regulation authorities. Furthermore, it is shown that estimated taxable income and not earnings related information is significantly associated with bond prices in the period preceding the GFC.

Chapter four extends the findings in Chapter three by investigating earnings and earnings components (e.g., accruals and cash flows). The objective is to extend prior findings in the debt market and to explore the sensitivity of the value relevance of accounting information to macro-economic scenarios which are linked to the asymmetric payoff function of bond holders. Although well established in the research literature on equity markets, it is an important research question whether transitory and persistent components of earnings are associated with contemporaneous bond returns.

Furthermore, also based on the evidence in chapter three, non-parametric methods (quantile regressions) are used to account for the fact that accounting information signals (accruals and cash flows) influence bond prices differently for debt instruments with low returns than for those with average returns. Controlling for the presence of systematic risk and private information of credit rating agencies, chapter four provides evidence that accounting accruals and cash flows are not associated with corporate bond returns in the three years preceding the financial crisis. However, using a point estimate of the conditional mean of annual bond returns, the study reveals a positive and significant association of accounting accruals with annual bond returns during the recent financial crisis. Additionally, using a semi-parametric technique to include conditional quantiles of bond returns, this study shows that the rate of change in the regression coefficients is dependent on those quantiles. Thus, evidence is provided that,
conditional on the distribution of bond returns, both changes in cash flows and accruals are positively and significantly associated with annual bond returns during the recent financial crisis. The results suggest that debt market investors base their investment decisions on credible market-based measures (e.g., VIX volatility and credit rating information) during the pre-financial crisis, but complement these information signals with accounting-based measures during the recent financial crisis. Therefore, accounting signals may reflect information about a firm's closeness to default and creditworthiness that is not captured by market-based measures. Overall, my research sheds light on the role of financial reporting and market-based information signals in the bond market.

5.2 Future research

The research presented in this dissertation can be extended in multiple ways. Besides testing the association of accounting information signals with security prices and the value relevance of those signals to investors, the stewardship function of financial reporting also presents an interesting research area. For instance, gaining knowledge about bond-specific debt covenants probably reveals new insights which can be incorporated in capital market studies. The language in which debt covenants are provided (e.g., market- versus accounting-based restrictions) in debt contracts may affect whether and how quickly financial reporting information is impounded into bond prices. Furthermore, the impact of debt covenant violations with regard to debt restructuring provides a potential and interesting research area. Such studies could provide standard setters (e.g., IASB and FASB) with new insights on the importance of the stewardship function which has been suppressed by the information approach of decision useful financial reporting in the recent years. Acknowledging differential information needs of different groups of stakeholders may lead to a view that not only shareholders interest should be reflected in new accounting standards. Furthermore, before the GFC hit many economies worldwide, standard setters restricted the expansion of fair value accounting and re-introduced many measurement rules and choices related to historical cost accounting. Attributable to these accounting standard changes, firms were probably able to circumvent debt covenant violations which translated into a relative drawback for debt holders in comparison to equity providers.

Another interesting research extension would be to investigate different types of bond contracts that include embedded derivatives, such as step-up clauses, redeemable features, and other cash-flow changing restrictions. Financial reporting information signals are probably to a different extent impounded into bond prices as embedded derivatives that improve the position of bond holders in comparison to shareholders provide some sort of downside risk protection. This is especially true when financial markets deteriorate in terms of efficiency.

50 Databases such as Bloomberg provide a complete set of debt instruments that include embedded derivatives.
Given that a researcher has access to bond specific debt covenants (e.g., through the Dealscan database) and a set of debt instruments that includes those contracts with embedded derivatives, examining the value relevance of fair value accounting (FVA) would be an interesting research extension. With regard to the payoff structure of debt instruments that implies that bond investors do not participate in any firm specific upside potential, unrealized gains, to a larger extent generated through FVA, are a natural threat to bond investors as these gains are cash outflows to shareholders. Nevertheless, market-based debt covenants and bond-specific embedded derivatives may offset these potential cash outflows and thus mitigate bond holders concern with regard to this wealth extraction.

Overall, the results of this dissertation with regard to a “dynamic” information set used by investors, which composition changes as the credibility and precision of all information available in the financial market changes, might be applied to other research settings, for example research in the equity and derivative financial market. In addition, spill-over effects from one capital market to another might provide interesting insights to capital market oversight authorities (in addressing financial stability issues) and accounting standard setters (in drafting new accounting standards). Furthermore, future research may examine whether contagion effects between different capital market are mitigated during periods of financial distress and illiquidity.