RESEARCH ONLINE

Australasian Accounting, Business and Finance Journal

Volume 6 | Issue 3 Article 3

Governance-Default Risk Relationship and the Demand for Intermediated and Non-Intermediated Debt

Husam Aldamen
Qatar University, Doha, Qatar

Keith Duncan
Bond University, kduncan@bond.edu.au

Safdar Khan
Bond University

Follow this and additional works at: http://ro.uow.edu.au/aabfj
Copyright ©2012 Australasian Accounting Business and Finance Journal and Authors.

Recommended Citation
Aldamen, Husam; Duncan, Keith; and Khan, Safdar, Governance-Default Risk Relationship and the Demand for Intermediated and Non-Intermediated Debt, *Australasian Accounting, Business and Finance Journal*, 6(3), 2012, 25-42.
Available at:http://ro.uow.edu.au/aabfj/vol6/iss3/3

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

RESEARCH ONLINE

Governance-Default Risk Relationship and the Demand for Intermediated and Non-Intermediated Debt

Abstract
This paper explores the impact of corporate governance on the demand for intermediated debt (asset finance, bank debt, non-bank private debt) and non-intermediated debt (public debt) in the Australian debt market. Relative to other countries the Australian debt market is characterised by higher proportions of intermediated or private debt with a lower inherent level of information asymmetry in that private lenders have greater access to financial information (Gray, Koh & Tong 2009). Our firm level, cross-sectional evidence suggests that higher corporate governance impacts demand for debt via the mitigation of default risk. However, this relationship is not uniform across all debt types. Intermediated debt such as bank and asset finance debt are more responsive to changes in governance-default risk relationship than non-bank and non-intermediated debt. The implication is that a firm's demand for different debt types will reflect its governance-default risk profile.

Keywords
Corporate governance, default risk, intermediated debt, non-intermediated debt, endogeneity, 2-stage least squares

Cover Page Footnote
This paper has benefited from comments by seminar participants at University of Southern Queensland, participants at the 22nd Asian-Pacific Conference and Jere Francis, Catherine Whelan, Jan Hollandale and Tony van Zijl who commented on earlier versions of this research. Any remaining errors and omissions remain the authors

This article is available in Australasian Accounting, Business and Finance Journal: http://ro.uow.edu.au/aabfj/vol6/iss3/3

Governance-Default Risk Relationship and the Demand for Intermediated and Non-Intermediated Debt

Husam Aldamen[1], Keith Duncan[2], Safdar Khan[2]

Abstract

This paper explores the impact of corporate governance on the demand for intermediated debt (asset finance, bank debt, non-bank private debt) and non-intermediated debt (public debt) in the Australian debt market. Relative to other countries the Australian debt market is characterised by higher proportions of intermediated or private debt with a lower inherent level of information asymmetry in that private lenders have greater access to financial information (Gray, Koh & Tong 2009). Our firm level, cross-sectional evidence suggests that higher corporate governance impacts demand for debt via the mitigation of default risk. However, this relationship is not uniform across all debt types. Intermediated debt such as bank and asset finance debt are more responsive to changes in governance-default risk relationship than non-bank and non-intermediated debt. The implication is that a firm's demand for different debt types will reflect its governance-default risk profile.

Key Words: Corporate governance, default risk, intermediated debt, non-intermediated debt, endogeneity, 2-stage least squares

JEL Codes: M40, M41

[1] Qatar University, Doha, Qatar
[2] Bond University
Email: kduncan@bond.edu.au

Acknowledgements: This paper has benefited from comments by seminar participants at University of Southern Queensland, participants at the 22nd Asian-Pacific Conference and Jere Francis, Catherine Whelan, Jan Hollandale and Tony van Zijl who commented on earlier versions of this research. Any remaining errors and omissions remain the authors.

Introduction

We examine the impact of the corporate governance-default risk relationship on the demand for intermediated and non-intermediated debt in Australia. There is a relatively new but growing literature that links corporate governance, accounting information and debt contracting (Armstrong, Guay & Weber 2010). However, most of this research is United States (US) centric and has largely focused on the drivers of non-intermediated (public) debt pricing (Anderson, Mansi & Reeb 2004; Ashbaugh-Skaife, Collins & LaFond 2006; Bhojraj & Sengupta 2003; Mansi, Maxwell & Miller 2004; Sengupta 1998). In contrast, the Australian corporate debt market is dominated by intermediated or private debt, with relatively low levels of non-intermediated debt (Reserve Bank of Australia 2005). More importantly, the Australian debt market arguably has lower inherent information asymmetry, relative to other countries, due to the continuous disclosure regulations which ensure private lenders have greater access to financial information (Gray et al. 2009). Despite this unique market characteristic, recent research finds good accruals quality reduces the cost of debt (Aldamen & Duncan 2011b; Gray et al. 2009) but governance and default risk only impact the cost of non-intermediated (not intermediated) debt (Aldamen & Duncan 2011a). However, as Armstrong et al.'s, (2010) review notes, to date the literature has generally ignored the relationship between other debt contracting parameters, such as the demand for different types of debt, and the firm's corporate governance and accounting information characteristics. We address this gap in the literature and build on the work of Aldamen and Duncan (2011a) to explore the impact of different corporate governance-default risk relationships on the demand for different types of debt.

Wang and Lin (2010) find that default risk reduces significantly as the number of corporate governance provisions adopted increases. Furthermore, Armstrong et al.'s, (2010) review suggests that different segments in the debt market (i.e. debt types and lenders in each category) have different corporate governance-default risk preferences and that this heterogeneity is a function of firms' economic characteristics. Firms will demand more of the debt type that matches their extant governance-default risk characteristics. In our analysis we focus on the relative levels of each debt type across firms, rather than capital structure questions that are dealt with extensively elsewhere, and distinguish between two broad debt types, intermediated and non-intermediated debt (Cantillo &and Wright 2000; Denis & Mihov 2003). The greater monitoring information available to Australian intermediated debt providers potentially reduces the default risk mitigating effect of good corporate governance and differentially impacts the demand for intermediated versus non-intermediated debt relative to debt providers in other countries.

One of the core differences between intermediated and non-intermediated debt is the role of the intermediary versus the market. Intermediated debt requires a third party intermediary to facilitate the debt contracting process between lenders and borrowers (Warner 1989) and the main types of intermediated debt in Australia are asset finance debt, bank debt and non-bank debt (Aldamen & Duncan 2011a). Asset finance debt includes finance leases and hire purchase finance. Bank debt is composed of bank loans, facilities and overdrafts, while non-bank debt includes loans from non-bank financial institutions, directors and related entities. Non-intermediated debt includes publicly traded debt instruments that are issued directly to lenders without intermediation, such as corporate bonds and other placements such as convertible and non-convertible commercial papers and notes.

For intermediated debt the intermediary performs much of the market's role (for non-intermediated debt) and assesses and monitors the borrower's risk and determines the optimum contracting terms (Diamond 1984). Given the supervisory role of the intermediary, intermediated debt is also referred to as highly monitored debt (Majumdar & Sen 2006, 2007;

Rauh & Sufi 2008). Monitoring by the intermediary provides an alternative form of control and thus mitigates the demand for formal corporate governance mechanisms such as those recommended by the Australian Securities Exchange (ASX) (Armstrong et al. 2010; Berger & Udell 2002; Bhattacharya & Chiesa 1995; Diamond 1984; Fama 1985; James 1987; Leland & Pyle 1977). It is, however, an empirical question whether or not lower demand for monitoring translates to lower governance in place for companies with high levels of intermediated debt. In contrast, non-intermediated debt is characterised by a lower monitoring intensity, reflective of the borrower's lower risk position (Cantillo & Wright 2000; Denis & Mihov 2003; Diamond,1991). Lower monitoring, however, could in turn result in increased information asymmetry between the debt contracting parties, adversely impacting demand for non-intermediated debt. We propose that higher levels of corporate governance mitigate this effect and positively impact demand for non-intermediated debt.

The research question we pose is whether in Australia's debt market, a unique monitoring environment dominated by intermediated debt, the nature of the governance-default risk relationship differentially impacts the demand for intermediated and non-intermediated debt. We address this question and extend the predominantly US empirical evidence on the drivers of demand for different debt types in a market dominated by intermediated debt. While there are many debt demand drivers, we draw on the work of Aldamen and Duncan (2011a) and explore the role of corporate governance and default risk as the two primary drivers. We contribute to the literature by modelling a two stage process whereby governance mitigates default risk and this modified risk drives demand for four intermediated and non-intermediated debt types. Our methodology explicitly recognises potential endogeneity issues and estimates a system of equations by identifying the correct channel of governance and risk in the demand for intermediated and non-intermediated debt.[3] Thus our evidence is more robust than much of the prior work. We also contribute to the literature by examining the governance-default risk relation in a market that is systematically different to the prior US centric literature.

We examine the relative proportion of each type of debt contracted by 595 non-financial Australian companies. The analysis finds that companies with higher levels of corporate governance have lower levels of default risk. We use the predicted default risk score from our stage one analysis in subsequent analysis and find that estimated default risk is negatively related to the demand for all debt types: asset finance, bank debt, non-bank debt and non-intermediated debt, albeit that the relationship between default risk and non-intermediated debt is insignificant. Our cross-sectional evidence suggests that higher corporate governance impacts demand for debt via the mitigation of default risk. Although this relationship is uniformly positive, the magnitude of the impact is not uniform across all debt types. Bank and asset finance debt are more responsive to changes in risk levels than non-bank and non-intermediated debt. As risk increases the level of bank debt and asset finance that companies can contract decreases at a faster rate than for non-bank and non-intermediated debt. Our evidence suggests that while all debt categories are responsive to the governance-default risk characteristics of the firm, a firm with higher default risk is more likely to obtain debt from non-banking institutions or non-intermediated providers. Traditional debt providers, banks and asset finance lenders, are more risk averse, as one would expect, than the less constrained non-bank debt providers. Hence they are more responsive to the governance-default risk relation.

The remainder of the paper proceeds as follows. The second section reviews prior literature and distils the key theoretical relationships between corporate governance, default

[3] Endogeneity issues plague much of the governance (see Brown et al. 2011 for a review) and more generally accounting (see Larcker & Rusticus 2010)for a review) and finance (see Bhagat & Bolton 2008).

risk and demand for the different debt types. The third section develops the analytical models tested in the study. The fourth section describes the research design which includes the sample, variables and the empirical methods. The fifth section presents the estimation of the models and results discussion. The final section offers a summary and conclusion to the paper.

Literature Review

It is well established in the literature that default risk is a significant driver of debt contracting outcomes (Anderson et al. 2004; Byun 2007; Denis & Mihov 2003; Klock, Mansi & Maxwell 2005). However, it is less clear how corporate governance will impact this relationship and the demand for different types of debt, although there is some evidence to suggest governance reduces default risk (Wang & Lin 2010) and hence increases the demand for less risk-sensitive debt.[4] To develop our core proposition we briefly review the prior studies that link default risk and access to debt and then examine how corporate governance influences the drivers of default risk thereby influencing demand for debt. Grenadier (1996) finds that higher levels of default risk impact negatively on secured debt types such as finance lease contracts. Smith (1987) suggests that firms with high default risk encounter difficulties in obtaining bank debt. Furthermore, companies that have low default risk, are larger, older and more successful, tend to demand non-intermediated debt such as corporate bonds and notes (Cantillo & Wright 2000; Denis & Mihov 2003; Diamond 1991). Collectively the evidence suggests that higher levels of default risk restrict demand for all four debt types.

A reduction in risk can be achieved by targeting the drivers of that risk. One of the significant determinants of default risk is the company's cash flow uncertainty (Aziz, Emanuel & Lawson 1988; Gentry, Newbold & Whitford 1985; Scott 1981; Trueman & Titman 1988). Prior research finds a negative relationship between cash flow uncertainty and default risk (Zeitun, Tian & Kean 2007). Minton and Schrand (1999) show that cash flow fluctuations defer capital expenditures and delay debt repayments thereby increasing default risk. The underlying theory is that agency conflicts between managers and stakeholders increase the variance in expected cash flows thereby increasing default risk (Ashbaugh-Skaife et al. 2006; Bhojraj & Sengupta 2003). Managers that are focused on advancing their self-interest are likely to engage in shirking, over-consumption of perquisites, empire building and unprofitable investments in negative net present value projects (Bhojraj & Sengupta 2003; Dechow & Sloan 1991; Fan 2004; Jensen & Meckling 1976; Sengupta 1998; Shleifer & Vishny, 1997). The adverse effects of such self-seeking managerial behaviour reduces the firm's expected cash flows and increases default risk (Ashbaugh-Skaife et al. 2006; Bhojraj & Sengupta 2003; Jensen & Meckling1976; Sengupta 1998).

It is recognised in the literature and embodied in regulatory provisions worldwide that implementing good corporate governance practices mitigates the agency costs of self-serving managers (Ashbaugh-Skaife et al. 2006; Bhojraj & Sengupta 2003). We define corporate governance as the methods employed by the owners via the board of directors to mitigate the debt agency conflict and to align the interests of managers and owners with those of the debtholders. Good corporate governance consists of many systems and process that elevate the monitoring and control functions in the firm thereby reducing default risk (Ashbaugh-Skaife et al. 2006; Byun 2007). Corporate governance practices also enhance the disclosure of quality financial information, thereby bridging the information gap between stakeholders (Armstrong et al. 2010; Ashbaugh-Skaife et al. 2006; Beekes & Brown 2006; Bhojraj & Sengupta 2003; Cohen, Krishnamoorthy & Wright 2004; Sengupta 1998). Higher levels of corporate governance mitigate agency conflicts and reduce information asymmetry between

[4] See Aldamen et al. (2010) for a discussion on the drivers of default risk.

managers and investors, thereby impacting variances in expected cash flows and lowering default risk (Ashbaugh-Skaife et al. 2006; Schultz, Tan & Walsh 2011; Wang & Lin 2010). As a result, higher levels of corporate governance are expected to increase demand for all types of debt.

A more sophisticated proposition is that corporate governance has a differential impact on demand for debt and depends on the degree to which governance mitigates default risk in relation to each type of debt: intermediated versus non-intermediated. In particular, given the differences in monitoring environment there is an argument that the expected impact of corporate governance on non-intermediated debt will be different to the more highly monitored intermediated debt. Uppal (2007) finds that extensive disclosure requirements and better governance are associated with larger bond markets (greater demand for non-intermediated debt). At the other end of the spectrum, demand for asset finance debt is not expected to increase in the presence of higher levels of corporate governance because asset finance providers' capital is secured with assets pledged by borrowers (Grenadier, 1996). As a result of this collateralised debt agreement, the monitoring and informational advantages associated with implementing corporate governance practices are less likely to be a factor in asset finance lending decisions. However, the evidence suggests otherwise with Robicheaux, Fu and Ligon (2008) finding that higher levels of corporate governance increases the demand for lease financing. This evidence discounts the differential corporate governance argument and instead suggests an alternative proposition that corporate governance has a positive influence on demand for all debt types via default risk mitigation. The purpose of this paper is to shed some light on this conflicting expectation within the Australian debt market.

Analytical Model

We theorise that higher levels of corporate governance increase demand for all debt types by reducing managerial opportunistic behaviour and information asymmetry thus reducing default risk (Ashbaugh-Skaife et al. 2006; Byun, 2007). That is, corporate governance systems and processes impact default risk (Wang and Lin, 2010) and this in turn impacts demand for different debt types as follows:

$$DRISK_i = f\left(GOVERNANCE_{ji}\right) \quad (1)$$

$$DEBT_{ji} = f(DRISK_i) \quad (2)$$

where, default risk, $DRISK_i$, corresponds to the default risk measure for firm *i* in the sample and $GOVERNANCE_{ji}$ represents the corporate governance signal *j* corresponding to the firm *i* in the sample. In equation (2) $DEBT_{ji}$ refers to the debt portfolio *j* corresponding to the respective firm *i* in the sample and includes both intermediated and non-intermediated types of debt. The alternative types of debt we examine are asset finance debt (*ASFIN*), bank debt (*BANK*), non-bank debt (*NBANK*) and non-intermediated debt (*NONINT*). Expanding equation (1) and (2) a simple simultaneous model of governance, risk and debt demand can be produced as follows:

$$DRISK_i = \alpha_0 + \alpha_1 GOVERNANCE_{ji} + \upsilon_i \quad (3)$$

$$DEBT_{ji} = \beta_0 + \beta_1 DRISK_i + \beta_2 CONTROL_{ji} + \varepsilon_i \quad (4)$$

where, αs measure the impact of a vector of corporate governance systems and processes on the firm's default risk. Similarly the βs measure the structural effects of corresponding risk variables to the relative debt type while controlling for other variables, $CONTROL_{ji}$, including collateral in place, age and size of the firms. Finally υ_i and ε_i are the error terms for equations (3) and (4) respectively. We derive a reduced form debt model by substituting $DRISK_i$ from equation (3) into equation (4). Therefore,

$$DEBT_{ji} = \beta_0 + \beta_1(\alpha_0 + \alpha_1 GOVERNANCE_{ji} + \upsilon_i) + \beta_2 CONTROL_{ji} + \varepsilon_i \quad (5)$$

collecting terms

$$DEBT_{ji} = \underbrace{\beta_0 + \beta_1\alpha_0}_{\omega_0} + \underbrace{\beta_1\alpha_1}_{\omega_1} GOVERNANCE_{ji} + \beta_2 CONTROL_{ji} + \underbrace{\beta_1\upsilon_i + \varepsilon_i}_{\xi_i} \quad (6)$$

giving

$$DEBT_{ji} = \omega_0 + \omega_1 GOVERNANCE_{ji} + \beta_2 CONTROL_{ji} + \xi_i \quad (7)$$

where, ωs are the reduced coefficients measuring the effect of corporate governance on demand for the *j* different debt types. Equation (7) is the reduced equation in implied non-linear form which models debt demand for each type as a function of governance characteristics and controls. In order to estimate the structural parameters we adopt a two stage method of estimation. In stage one, we estimate the corporate governance and risk model shown by equation (3) and substitute the estimated $\widehat{DRISK}_i$ for default risk $DRISK_i$ in equation (4) in stage two. Thus the estimable equations can be reproduced as in the following equations (3′) and (4′).

$$\widehat{DRISK}_\iota = \widehat{\alpha_0} + \widehat{\alpha_1} GOVERNANCE_{ji} \quad (3')$$

$$DEBT_{ji} = \beta_0 + \beta_1 \widehat{DRISK}_\iota + \beta_2 CONTROL_{ji} + \varepsilon_i \quad (4')$$

The dependant variable, $DEBT_{ji}$, in equation 4′represents either a categorical variable for intermediated versus non-intermediated debt (*CHOICE*) or the demand for each of the four debt types: asset finance debt (*ASFIN*), bank debt (*BANK*), non-bank debt (*NBANK*) and non-intermediated debt (*NONINT*). In stage two of the analysis we examine whether estimated default risk, $\widehat{DRISK}$ from stage one, is related to the demand for different debt types via individual models for each debt type (ie equations 4′a, 4′b, 4′c and 4′d below).

$$ASFIN_i = \phi_0 + \phi_1 \widehat{DRISK}_\iota + \phi_2 CONTROL_{ji} + \varepsilon_i \quad (4'a)$$

$$BANK_i = \lambda_0 + \lambda_1 \widehat{DRISK}_\iota + \lambda_2 CONTROL_{ji} + \varepsilon_i \quad (4'b)$$

$$NBANK_i = \gamma_0 + \gamma_1 \widehat{DRISK}_\iota + \gamma_2 CONTROL_{ji} + \varepsilon_i \quad (4'c)$$

$$NONINT_i = \theta_0 + \theta_1 \widehat{DRISK}_\iota + \theta_2 CONTROL_{ji} + \varepsilon_i \quad (4'd)$$

Finally, we estimate these equations as a system of equations and impose cross equation constraints to test the relative magnitude of the risk impacts for each debt type.

Data and Variables

The sample consists of public companies listed on the Australian Stock Exchange in 2007, the last available year prior to the Global Financial Crisis of 2008 – 2009. Only one year's worth of data is used because corporate governance characteristics tend to be sticky and not change very quickly over time (Black, Jang & Kim 2006; Brown, Beekes & Verhoeven 2011). The initial sample frame which includes 1,824 listed companies is reduced to 595 companies after applying data and sample constraints.[5] The data is collected from annual reports and database information from AspectHuntley's DatAnalysis and FinAnalysis and Thomson Reuters Tick History (TRTH).

Debt Types

Demand for the different debt types is measured by the company's relative ability to contract intermediated or non-intermediated debt. At an aggregate level, this is captured as a binary

[5] The sample was reduced by the following restrictions: (1) 257 companies from the banking, insurance and financial sectors are excluded; (2) 328 companies without a 30 June balance date are excluded; (3) 618 companies without interest bearing debt are excluded; (4) 16 companies did not report cost of debt in their annual reports; (5) 10 outliers were omitted(see McDonald 1973; Subramanyam 1996).

variable, *CHOICE* ,which is one if more than 50% of the company's debt financing is non-intermediated debt and zero otherwise. *CHOICE* therefore represents those firms with the majority of their debt being non-intermediated debt. To capture the richness in the data, debt types are separated into demand for asset finance debt (*ASFIN*), bank debt (*BANK*), non-bank debt (*NBANK*) and non-intermediated debt (*NONINT*). Demand for the different debt types are measured as the proportion of each debt type relative to the total interest bearing debt for the firm (Bougheas, Mizen & Yalcin 2006; Cantillo & Wright 2000; Denis & Mihov 2003; González, Lopez & Saurina 2007) as defined below:

$$ASFIN_i = \frac{AFDEBT_i}{IDEBT_i} \quad \text{(a)}$$

$$BANK_i = \frac{BKDEBT_i}{IDEBT_i} \quad \text{(b)}$$

$$NBANK_i = \frac{NBKDEBT_i}{IDEBT_i} \quad \text{(c)}$$

$$NONINT_i = \frac{NINDEBT_i}{IDEBT_i} \quad \text{(d)}$$

where, $AFDEBT_i$ corresponds to asset finance debt for firm *i* which includes hire purchase and finance lease liabilities, $BKDEBT_i$ refers to bank debt for firm *i* which includes bank loans, facilities, and overdraft, and $NBKDEBT_i$ denotes non-bank debt for firm *i* which includes loans made by non-bank financial institutions. Similarly, $NINDEBT_i$ is non-intermediated debt for firm *i* which includes commercial papers, notes, and bonds and finally $IDEBT_i$ is the total interest bearing debt for firm *i*.

Default Risk

We employ an accounting-based measure of default risk for several reasons. Firstly, the study is motivated by Armstrong et al.'s (2010) call for further investigation of the relationship between accounting information and debt contracting. Secondly, there is an extensive body of accounting literature that links the quality of a firm's governance 'mosaic' (board, audit committee, internal auditor, external auditor and management characteristics) and financial reporting quality (Cohen et al. 2004). The quality of a firm's accounting information is the link between its level of corporate governance, default risk and type of debt demanded which is captured by our accounting ratio based default risk measure. Finally, while there are alternative market risk measures such as bond ratings (for non-intermediated debt), share price changes and recent multi-factor models (Schultz et al. 2011; Wu et al. 2010), our focus is on governance-enhanced accounting information and hence we use an accounting based risk measure rather than the most comprehensive or predictive default model per se.

Default risk, *DRISK*, is measured via an accounting ratio based out-of-sample Australian Z-score model identified using multivariate linear discriminant (MLD) consistent with extensive prior literature (Altman, 1968, 1983). A paired sample of failed and non-failed Australian companies that are similar in size, industry and time period are employed to estimate a five factor accounting ratio model. The five accounting ratios are working capital to total assets (*WORKCAP*), retained earnings to total assets (*RETEARN*), earnings before interest and tax to total assets (*ROA*), book value of total debt to total assets (*LEVERAGE*) and sales to total assets (*ASSTURN*).[6] The estimated *DRISK* captures both the profitability (via retained earnings, return on assets and turnover) and financial risk (via leverage and working capital) dimensions of each firm. Hence we do not include additional controls for profitability or financial risk in the analysis.[7] To enhance clarity, the estimated *DRISK* is

[6] The estimated Z-score model is $DRISK_i = -0.38 + 0.16WORKCAP_i + 2.05RETEARN_i + 3.06ROA_i - 2.91LEVERAGE_i + 1.09ASSTURN_i$.

[7] Although the other controls include a collateral variable this is not significantly correlated with leverage.

multiplied by negative one. The transformed *DRISK* ranges from -3.73 to 4.58 with a high *DRISK* representing high default risk and a low or negative score representing low default risk.

Corporate Governance

To capture the multi-faceted nature of the corporate governance construct we draw on fourteen individual governance variables identified in the prior literature and shown in Table 1 (Aldamen & Duncan 2011a; Ang, Cole & Wuh Lin 2000; Daily & Dalton 1994; Davidson, Bouresli & Singh 2006; Fama & Jensen 1983a, 1983b; Kent & Stewart 2008). The governance measures include board independence, duality of the role of board chair and chief executive officer, board size, board meeting, the presence of a nomination committee, the presence of a remuneration committee, audit committee independence, financial expertise of the audit committee, audit committee meetings, size of audit committee, audit committee charter, identity of external auditor, blockholders and insider ownership.

One of the issues facing governance researchers is the dimensionality of the corporate governance construct (Brown et al. 2011). We follow the approach by Larcker, Richardson and Tuna (2007) and Aldamen and Duncan (2011a) and utilise principal component analysis (PCA) to compute two corporate governance factors which summarise the fourteen individual corporate governance variables. Eleven variables are included in PCA but three variables are excluded due to low sampling adequacy and Eigen values that are below 1. The eleven variables show a Kaiser Meyer Olkin (KMO) score of approximately 0.5. The overall sampling adequacy measure KMO is 0.856 and the Bartlett's test of Sphericity is significant at one percent level of significance indicating that the model is appropriate for PCA. Furthermore, the rotation sums of square loading shows that two factors are extracted and they explain 65 percent of variance in the corporate governance variables. Table 1 reports the respective factor loading for each corporate governance variable. The two factors, labelled *GOV1* and *GOV2*, are employed as the governance proxy measures in all subsequent analysis. *GOV1* captures the audit committee and board oversight (remuneration and nomination committee) components of the corporate governance for the firm. While *GOV2* captures the size related elements of governance, namely board size and independence and frequency of hiring a Big4 auditor. The audit-oversight and size governance dimensions are consistent with the first two factors of Aldamen and Duncan (2011a, 2011b) and are key aspects of the governance 'mosaic' identified in much of the prior accounting governance, debt contracting and financial reporting literature (Armstrong et al. 2010; Cohen et al. 2004).

Controls

We also employ the typical controls for company age, collateral and size.[8] Company age, *AGE*, a proxy for reputation, is defined as the number of years since incorporation (Diamond, 1989; Pittman and Fortin, 2004). We expect *AGE* to be negatively related to the level of asset finance but positively related to other debt types. Young firms will have a higher proportion of leased assets relative to older more established firms that can use one or more of the other debt types. We also employ a control for collateral. Asset collateral provides the borrower with greater access to credit markets (Bougheas et al. 2006) and impacts perceived risk and

[8] Profitability and leverage are also considered significant drivers of cost of debt. However, *ZSCORE*, measured as a composition of different accounting ratios, includes return on assets which is a common profitability measure and debt to asset which is a leverage measure. As a result, the study does not include separate profitability and leverage control variables.

thus should be positively related to debt type demanded. In accordance with prior research, we measure collateral, *COLLT*, as property plant and equipment divided by total assets (Berger, Ofek & Yermack 1997; Wen, Rwegasira & Bilderbeek 2002). As well as being a standard control, company size is an important factor which influences the relationship between corporate governance practices and demand for all debt types (Brewer 2007; Cantillo & Wright, 2000; Minton & Schrand 1999). We measure company size, *SIZE*, as the log of total assets (Pittman & Fortin 2004; Sengupta 1998) which is expected to be positively related to debt types.

Table 1
Corporate Governance Variables and Rotated Component Matrix

Variable Name	Variable Description	Principal Components	
		GOV1	*GOV2*
INDP	Proportion of non-executive independent directors on the board.		0.723
DUAL	One if the CEO is separate from chair of the board, and zero otherwise.		
BDSIZE	Number of directors on the board.		0.787
BDMEET	Number of board meetings.	0.575	
NOM	One if the company has a nomination committee, and zero otherwise.	0.537	
REM	One if company has a remuneration committee, and zero otherwise.	0.693	
AUDCHRT	One if the company has an audit committee charter, and zero otherwise.	0.658	
AUDIND	Proportion of non-executive independent members on the audit committee.	0.640	
AUDEXP	Proportion of audit committee members with accounting and finance qualifications.	0.549	
AUDSIZE	Number of directors on audit committee.	0.634	
AUDMEET	Number of audit committee meetings.	0.600	
AUDITOR	One if the auditor is a Big Four, and zero otherwise.		0.675
BLOCK	Percentage of shares owned by investors owning 5 percent or more of the company's shares.		
INSIDER	Percentage of company's shares owned by insiders.		

Note: PCA procedure: Varimax Rotation with Kaiser Normalization

Three variables, *DUAL, BLOCK* and *INSIDER* were dropped from the Principle Components Analysis.

Estimation and Result Discussion

Descriptive Statistics

Table 2 reports the aggregate levels for each debt type (i.e. asset finance, bank debt, non-bank debt and non-intermediated debt). The aggregate debt types are further broken into short-term and long-term debt where the former comprises 21% of total interest bearing debt while the latter makes up 79%. Additionally, non-intermediated debt, which includes convertible and non-convertible notes, bonds and commercial paper, comprises the largest debt type in terms

of aggregate value at $54.2 billion or 43.3% of total interest bearing debt. Bank debt which includes bank loans, facilities and overdrafts totals $42.4 billion or 33.9% of the total interest bearing debt thereby making it the second largest type of debt. Non-bank debt which includes loans from non-bank financial institutions, directors and related entities is the third largest debt type at $24.2 billion or 19.3% of total interest bearing debt. Finally, asset finance which is represented by finance lease and hire purchases amounts to $4.3 billion or 3.4% of total interest bearing debt making it the smallest debt type relative to the other types of debt. However these aggregate dollar levels are distorted by firm size and can be misleading. Hence we measure the demand for the different debt types as the proportion of each debt type relative to the total interest bearing debt for the firm. Thus our analysis is based on the relative demand for each type of debt in a firm's debt funding mix rather than the dollar value per se. This allows us to compare the cross-sectional association between relative debt levels and the governance-default risk driver.

Table 2
Breakdown of Interest Bearing Debt by Type and Term

Type	(Billions)	% of Total
Short Term Debt		
(i) Asset finance	$1.0	0.8
(ii) Bank	16.4	13.1
(iii) Non-bank	3.4	2.7
(iv) Non-intermediated	5.9	4.7
Total	**26.7**	**21.3**
Long Term Debt		
(i) Asset finance	3.3	2.6
(ii) Bank	26.0	20.8
(iii) Non-bank	20.8	16.6
(iv) Non-intermediated	48.3	38.6
Total	**98.4**	**78.7**
Total Interest Bearing Debt	**$125.1**	**100.0**

Note: *N=595 firms. The largest 20 companies account for $47.8 billion of the total non-intermediated (88% of the total $54.2 billion in non-intermediated debt).*

The binary variable *CHOICE* represents the aggregate demand for non-intermediated versus intermediated debt and equals one if the majority of the company's debt is non-intermediated and zero otherwise. The results reported in Table 3 show 116 companies have a majority of non-intermediated debt. Demand for the different debt types is further examined by the use of four variables which represent the proportion of each debt type relative to the total interest bearing debt as presented in Table 3. The dominant type of debt accessed is *BANK,* with a mean of 33% across the sample. The mean proportion of total interest bearing is similar across the other three debt types: *ASFIN, NBANK* and *NONINT*. However the mix of debt varies across companies as indicated by the wide range for each type of debt with different companies having between zero to one hundred percent of each kind of interest bearing debt. That is, some companies have only *ASFIN* or only *NONINT* and so on while other companies have more of a mix. The median levels also imply most companies have some form of *BANK* debt.

Descriptive statistics for *DRISK* and the controls are also reported in Table 3. The mean for default risk, *DRISK*, is 0.49 and ranges from -3.73 to 4.58. *AGE* ranges between 1 and 124 years with an average of 19.98 years. The collateral control, *COLLT*, has a mean of 0.33 and ranges between zero and 1.18. The average *SIZE* is 7.78 which equates to assets of about $60 million.

Table 3
Descriptive Statistics

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
ASFIN	0.27	0.03	0.40	0.00	1.00
BANK	0.33	0.01	0.41	0.00	1.00
NBANK	0.19	0.00	0.35	0.00	1.00
NONINT[1]	0.20	0.00	0.35	0.00	1.00
CHOICE [2]	0.20	0.00	0.40	0.00	1.00
DRISK	0.49	0.75	1.46	-3.73	4.58
AGE	19.98	15.00	18.33	1.00	124.00
COLLT	0.33	0.26	0.29	0.00	1.18
SIZE	7.78	7.67	0.93	5.71	10.87

Note: N: 595
[1]183 companies have some non-intermediated debt in their finance mix which represents 31% of the total sample. Of these 38 or 6.4% of the sample have only non-intermediated debt.
[2] *CHOICE* equals 1 if the majority of the company's debt is non-intermediated and zero otherwise. 116 companies have a majority non-intermediated debt.

Corporate Governance and Default Risk

Stage one of the analysis tests whether corporate governance is related to default risk. The results presented in Table 4 indicate that *GOV1* (audit and board oversight governance) and *GOV2* (size related governance such as board size, independence and Big4 auditor) are negatively related to *DRISK* at the 1% significance level. This implies that an increase in both audit-oversight and size aspects of corporate governance results in a decrease in default risk as expected. Similar results are reported by Bhojraj and Sengupta (2003), Wang and Lin (2010) and Ashbaugh-Skaife et al. (2006) who also find that corporate governance decreases default risk. We save the estimated values for default risk, $\widehat{DRISK}$, and use them in the next phase of the analysis.

Default Risk and Demand for Debt Types

Stage two of the analysis examines whether estimated default risk, $\widehat{DRISK}$, is related to the demand for different debt types. We estimate equations (4′ a through d) for the four debt types. The results shown in Table 4 suggest that *ASFIN* is negatively related to $\widehat{DRISK}$ at the 5% significance level. This indicates that a decrease in $\widehat{DRISK}$ results in an increase in *ASFIN*. Additionally, *AGE* and *SIZE* are negatively related to *ASFIN* at the 1% significance level which indicates that the demand for asset secured finance such as lease liabilities and hire purchase decreases with an increase in company age and size. For *BANK,* the $\widehat{DRISK}$ coefficient is negative and statistically significant at the 5% significance level. Demand for bank debt therefore increases when estimated default risk decreases. Additionally, *SIZE* is positively related to *BANK* which indicates that demand for bank debt increases as companies become larger. The results in Table 4 suggest that *NBANK* and $\widehat{DRISK}$ are negatively related at the 10% significance level. This further supports the overall negative relationship between estimated default risk and demand for all intermediated debt types. Finally the relationship between *NONINT* and $\widehat{DRISK}$ is negative, but unlike the previous default risk-debt type relationships, it is not statistically significant. The final model relates the choice of intermediated versus non-intermediated debt to the debt choice drivers $\widehat{DRISK}$, age, collateral

and size. The results show that a significantly negative relationship between debt type, *CHOICE*, and estimated default risk. The significant negative coefficient means that companies with higher estimated default risk are more likely to choose intermediated debt. This implies that the proportion of intermediated debt is more sensitive to the governance-default risk relation, $\widehat{DRISK}$, than is the case for non-intermediated debt.

Table 4
Corporate Governance, Default Risk and Demand for Debt Types

STAGE ONE (Equation 3′)		***STAGE TWO (Equation 4′)***				
	DRISK	*ASFIN*	*BANK*	*NBANK*	*NONINT*	*CHOICE*[v]
Intercept	4.269*** (0.00)	1.359*** (0.00)	-0.423*** (0.00)	0.183 (0.30)	-0.089 (0.79)	0.043 (0.16)
GOV1	-0.216*** (0.00)					
GOV2	-0.171*** (0.01)					
$\widehat{DRISK}$		-0.084** (0.03)	-0.076** (0.04)	-0.05* (0.10)	-0.104 (0.16)	-0.026** (0.01)
AGE		-0.002*** (0.00)	0.001 (0.40)	0.002** (0.04)	0.001 (0.84)	-0.001*** (0.00)
COLLT		0.070 (0.21)	-0.042 (0.49)	0.080 (0.25)	-0.026 (0.74)	0.04* (0.06)
SIZE		-0.129*** (0.00)	0.101*** (0.00)	-0.005 (0.83)	0.041 (0.31)	0.02** (0.02)
Adj. R-Squared	0.21	0.08	0.08	0.04	0.06	0.09
F-statistic	33.17*** (0.00)	14.09*** (0.00)	11.84*** (0.00)	2.684** (0.03)	12.01*** (0.00)	2.48** (0.04)
Obs*R^2	0.32 (0.85)	0.05 (0.82)	2.12 (0.15)	6.60 (0.16)	2.87 (0.57)	16.22 (0.30)

Notes:

i. *Stage One refers to the corporate governance and default risk model corresponding to equation (3′).*
ii. *Stage Two presents estimates of default risk (estimated) and debt type model equation (4′a-d) plus a fifth model where the dependant variable is the binary CHOICE variable (see vi below).*
iii. *The corporate governance components have been reduced to two factors using principal component method. These reduced factors satisfy all necessary properties before to be utilized in the stage one estimates.*
iv. ****, ** and * respectively significant at 1 %, 5% and 10% level of significance. P-values are presented in brackets.*
v. *We pass these estimates through the battery of different statistical tests including F-statistics showing overall significance of the coefficients corresponding to each model estimated in the above. Further we take care of heteroskedasticity the potential problem in cross-sectional estimations. White hetroskedasticity test and Breusch-Pagan Godfrey Tests produce the consistent results and do not allow to reject the null hypothesis of no hetroskedasticity shown as Obs*R^2*
vi. *CHOICE is a binary variable defined as one if the company has more than 50% of its financing mix from non-intermediate debt and zero otherwise. 116 or 19.5% of the companies in the sample have more than 50% non-intermediated debt.*

To more fully explore the implications of this result we re-estimate the stage two system of equations with cross equation restrictions to test the hypothesis that the coefficient for $\widehat{DRISK}$ is equal for all debt types. The results reported in Table 5 show that all risk coefficients corresponding to *ASFIN*, *BANK*, *NBANK* and *NONINT* are significantly different from each other. To determine the relative impact of governance-default risk across the debt types we impose pairwise restrictions on the cross equation $\widehat{DRISK}$ coefficients. The results in Table 5 show that ϕ_1 and λ_1 are not different from each other suggesting governance-default risk has a similar impact on the demand for both *ASFIN* and *BANK* debt. We also find that parameters γ_1 and θ_1 are not significantly different which implies the demand for non-bank debt, *NBANK*, and non-intermediated debt, *NONINT*, have a similar responsiveness to the governance-default risk relation.

We also find that the estimated coefficient ϕ_1 is significantly larger than both γ_1 and θ_1 which means that the level of asset finance, *ASFIN*, is more responsive to increases in governance-default risk than both *NBANK* and *NONINT*. Similarly the coefficient for λ_1 is significantly larger than both γ_1 and θ_1. The statistical results in Table 5 suggest the following relationship between the parameters: $\phi_1 = \lambda_1 > \gamma_1 = \theta_1$. In total these results imply that there is a cascading effect of governance-default risk across the debt types. The governance-default risk relation has a larger impact on the proportion of *ASFIN* and *BANK* relative to *NBANK* and *NONINT* debt. The evidence from the restricted estimation is consistent with the *CHOICE* model and suggests that a higher governance-default risk relation has more of an impact on the proportion of *ASFIN, BANK* and *NBANK* debt relative to *NONINT*. Overall these results are consistent with governance mitigating accounting based measure of default risk and the resultant risk negatively impacting debt levels, more so for asset finance and bank debt than non-bank and non-intermediated debt. Hence we can conclude that governance positively impacts asset and bank debt more than non-bank and non-intermediated debt.

Table 5
Cross Equation Restrictions to Test Differential Impact of Governance-Default Risk on Debt Type Demanded

Coefficient Hypothesis	$\chi^2 - Test$ $(P-value)$	***Decision***	***Comments***
$H_0: \phi_1 = \lambda_1 = \gamma_1 = \theta_1$ $H_1: \phi_1 \neq \lambda_1 \neq \gamma_1 \neq \theta_1$	64.31 (000)	Reject H_0	All risk coefficients $\phi_1, \lambda_1, \gamma_1$ and θ_1 corresponding to *ASFIN*, *BANK*, *NBANK* and *NONINT* are different from each other.
$H_0: \phi_1 = \lambda_1$ $H_1: \phi_1 > \lambda_1$	0.0002 (0.985)	Fail to reject H_0	ϕ_1 and λ_1 are not statistically different from each other.
$H_0: \gamma_1 = \theta_1$ $H_1: \gamma_1 > \theta_1$	0.268 (0.604)	Fail to reject H_0	γ_1 and θ_1 are not statistically different from each other.
$H_0: \phi_1 = \gamma_1$ $H_1: \phi_1 > \gamma_1$	29.10 (0.000)	Reject H_0	ϕ_1 and γ_1 are different from each other and ϕ_1 is relatively greater than γ_1.
$H_0: \phi_1 = \theta_1$ $H_1: \phi_1 > \theta_1$	34.30 (0.000)	Reject H_0	ϕ_1 and θ_1 are different from each other and ϕ_1 is relatively greater than θ_1.

$H_0 : \lambda_1 = \gamma_1$ $H_1 : \lambda_1 > \gamma_1$	29.93 (0.000)	Reject H_0	λ_1 and γ_1 are different from each other and λ_1 is relatively greater than γ_1.
$H_0 : \lambda_1 = \theta_1$ $H_1 : \lambda_1 > \theta_1$	35.05 (0.000)	Reject H_0	λ_1 and θ_1 are different from each other and λ_1 is relatively greater than θ_1.

Conclusion

The purpose of this study is to investigate the impact of corporate governance, via default risk mitigation, on the demand for different debt types in Australia. Companies choose between intermediated debt, such as asset finance, bank debt and non-bank debt, and non-intermediated debt. While there are many potential drivers for this choice we explore the role of governance and default risk, two primary drivers, on the relative proportion of each type of debt contracted by companies in a two-stage analysis.

The results for stage one show that companies with higher levels of corporate governance have lower levels of default risk, consistent with the prior evidence (Wang & Lin 2010). We use the predicted default risk from our stage one analysis to examine the differential demand for four debt types. The results for stage two show that estimated default risk is negatively related to asset finance, bank debt, non-bank debt and non-intermediated debt. However, the relationship between default risk and non-intermediated debt is insignificant. Our cross-sectional evidence suggests that firms with higher levels of corporate governance also exhibit lower default risk and this is associated with firms demanding higher levels of all of the intermediated debt types. Similar results are reported by Bougheas et al. (2006) who conclude that firms with higher default risk contract lower levels of bank debt. Furthermore, Gonzalez, Lopez and Saurina (2007) find that default risk is negatively related to the demand for bank debt but the relationship is not statistically significant. In contrast we find a significant negative relationship with all intermediated debt types.

Regulators can benefit from this analysis as it provides evidence with respect to the value of corporate governance. Companies that engage in costly governance practices expect payback benefits including improved financial stability, lower default risk, reduced information asymmetry, improved information quality and thus improved decision making (Aldamen, Duncan & McNamara 2010). More specifically one would expect governance to impact demand for debt over and above other firm specific factors. Our results suggest that corporate governance impacts access to intermediated and non-intermediated debt for Australian companies via the mitigation of default risk. However this relationship is not uniform across debt types. The demand for both bank and asset finance debt is more responsive to changes in governance-default risk levels than non-bank and non-intermediated debt. As default risk increases the level of bank debt and asset finance that companies can contract decreases at a faster rate than for non-bank and non-intermediated debt. So while all debt categories are responsive to the governance-default risk characteristics of the firm, if a firm has higher risk it is more likely to obtain debt from non-banking institutions or non-intermediated providers. Traditional debt providers, banks and asset finance lenders, are more risk averse, as one would expect, than the less constrained non-bank debt providers. Hence the level of corporate governance potentially has a larger impact on the demand for these intermediated debt types relative to other types of debt.

We expected that Australia's intermediated debt market, with its unique continuous disclosure requirements, might not be as responsive to governance as other markets such as the US where non-intermediated debt is more prevalent. The increased monitoring by intermediaries, in the banking sector in particular, serves as an alternative form of control and

thus mitigates the demand for formal corporate governance mechanisms (Aldamen & Duncan 2011a; Armstrong et al. 2010). The US public debt market, the focus of much prior research, is likely to be more responsive to governance than the Australian market. However our findings suggest that higher levels of corporate governance mitigate default risk even in Australia's information-rich intermediated debt market. This supports the ASX's pursuit of governance best practices within the local market.

Finally our analysis has implications for future research. The differential impact of governance and default risk on demand for different debt types suggests that researchers need to control for this non-uniform relationship when examining debt contracting. Researchers need to control for the co-variation between governance and default risk via instrumental or two-stage analysis by first modelling the risk drivers then the impact of this relationship on the focus variables of the research. However, the current cross-sectional study is but one limited piece of evidence. Future research needs to consider the relationship over time to shed further light on the causal links between changes in governance and resultant changes in debt contracting outcomes.

References

Aldamen, H & Duncan, K 2011a, 'Does adopting good corporate governance impact the cost of intermediated and non-intermediated debt?', *Accounting & Finance* Forthcoming. DOI: 10.1111/j.1467-629X.2011.00439.x

Aldamen, H & Duncan, K 2011b, 'Pricing of innate and discretionary accruals in Australian debt', *Accounting & Finance,* Firthcoming DOI: 10.1111/j.1467-629X.2011.00458.x

Aldamen, H, Duncan, K & McNamara, R 2010, The relationship between corporate governance and cost of debt: Evidence from Australia's intermediated debt market, Paper presented at the Accounting & Finance Association of Australia and New Zealand (AFAANZ), Christchurch, 3-6 July 2010

Altman, E 1968, Financial ratios, discriminant analysis and the prediction of corporate, *Journal of Finance* vol.23, pp589-609.

Altman, E, 1983, *Corporate financial distress: A complete guide to predicting, avoiding and dealing with bankruptcy* (Wiley & Sons, Toronto).

Anderson, RC, Mansi, SA & Reeb, DM 2004, 'Board characteristics, accounting report integrity, and the cost of debt', *Journal of Accounting and Economics* vol.37, pp315-342.

Ang, JS, Cole RA & Wuh Lin, J 2000, 'Agency costs and ownership structure', *The Journal of Finance* vol.55, pp81-106.

Armstrong, CS, Guay, WR & Weber, JP 2010, 'The role of information and financial reporting in corporate governance and debt contracting', *Journal of Accounting and Economics* vol.50, pp179-234.

Ashbaugh-Skaife, H, Collins, D & LaFond, R 2006, 'The effects of corporate governance on firms' credit ratings', *Journal of Accounting and Economics* vol.42, pp203-243.

Aziz, A, Emanuel, D & Lawson, G 1988, 'Bankruptcy prediction - an investigation of cash flow based models', *Journal of Management Studies* vol.25, pp419-437.

Beekes, W & Brown, P 2006,'Do better-governed Australian firms make more informative disclosures?', *Journal of Business Finance & Accounting* vol.33, pp422-450.

Berger, A & Udell, G 2002, 'Small business credit availability and relationship lending: The importance of bank organisational structure', *The Economic Journal* vol.112, pp32-53.

Berger, PG, Ofek, E & Yermack, D 1997, 'Managerial entrenchment and capital structure decisions', *Journal of Finance* vol.52, pp1411-1438.

Bhagat, S & Bolton, B 2008, 'Corporate governance and firm performance', *Journal of Corporate Finance* vol.14, pp257-273.

Bhattacharya, S & Chiesa, G 1995, 'Proprietary information, financial intermediation, and research incentives', *Journal of Financial Intermediation* vol.4, pp328-357.

Bhojraj, S & Sengupta, P 2003, 'Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors', *Journal of Business* vol.76, pp455-475.

Black, B, Jang, H. & Kim, W 2006, 'Predicting firms' corporate governance choices: Evidence from Korea', *Journal of Corporate Finance* vol.12, pp660-691.

Bougheas, S, Mizen, P & Yalcin, Y 2006, 'Access to external finance: Theory and evidence on the impact of monetary policy and firm-specific characteristics', *Journal of Banking and Finance* vol.30, pp199-227.

Brewer, E 2007, 'On lending to small firms', *Journal of Small Business Management* vol.45, pp42-46.

Brown, P, Beekes, W & Verhoeven, P 2011, 'Corporate governance, accounting and finance: A review', *Accounting & Finance* vol.51,pp 96-172.

Byun, H-Y 2007, 'The cost of debt capital and corporate governance practices', *Asia-Pacific Journal of Financial Studies* vol.36, pp765-806.

Cantillo, M & Wright, J 2000, 'How do firms choose their lenders? An empirical investigation', *The Review of Financial Studies* vol.13, pp155-189.

Cohen, J, Krishnamoorthy, G & Wright, A 2004, 'The Corporate governance mosaic and financial reporting quality', *Journal of Accounting Literature vol.23* pp87-152.

Daily, CM & Dalton, DR 1994, 'Bankruptcy and corporate governance: The impact of board composition and structure', *The Academy of Management Journal* vol.37, pp1603-1617.

Davidson, WN, Bouresli, AK & Singh, M 2006, 'Agency costs, ownership structure, and corporate governance in pre-and post-IPO firms', *Corporate Ownership and Control* vol.3, pp88-95.

Dechow, P & Sloan, R 1991, 'Executive incentives and the horizon problem: An empirical investigation', *Journal of Accounting and Economics* vol.14, pp51-89.

Denis, DJ & Mihov, VT 2003, 'The choice among bank debt, non-bank private debt, and public debt: Evidence from new corporate borrowings', *Journal of Financial Economics* vol.70, pp3-28.

Diamond, D, 1984, 'Financial intermediation and delegated monitoring', *Review of Economic Studies* vol.51, pp393-414.

Diamond, DW 1989, 'Reputation acquisition in debt markets', *Journal of Political Economy* vol.97, pp828–862.

Diamond, DW, 1991, 'Monitoring and reputation: The choice between bank loans and directly placed debt', *Journal of Political Economy* vol.99, pp689-721.

Fama, E & Jensen, MC 1983a, 'Agency problems and residuals claims', *Journal of Law and Economics* vol.26, pp327-349.

Fama, E & Jensen, MC 1983b, 'Separation of ownership and control', *Journal of Law and Economics* vol.26, pp301-325.

Fama, EF 1985, 'What's different about banks?, *Journal of Monetary Economics* vol.15, pp29-39.

Fan, P 2004, Review of Literature and empirical research on corporate governance, *Financial Services Group Training Unit* (Monetary Authority of Singapore, Singapore).

Gentry, J, Newbold, P & Whitford, DT 1985, 'Predicting bankruptcy: If cash flow's not the bottom line, what is?', *Financial Analysts Journal* vol.41, pp47-56.

González, RL, Lopez JA & Saurina, J 2007, 'Determinants of access to external finance: evidence from Spanish firms', *Federal Reserve Bank of San Francisco, Working Paper 2007-22*.

Gray, P, Koh , P-S & Tong, YH. 2009, 'Accruals quality, information risk and cost of capital: Evidence from Australia', *Journal of Business Finance & Accounting* vol36, pp51-72.

Grenadier, S 1996, 'Leasing and credit risk', *Journal of Financial Economics* vol.42, pp333-364.

James, C 1987, 'Some evidence on the uniqueness of bank loans', *Journal of Financial Economics* vol.19, pp217-235.

Jensen, MC & Meckling, WH 1976, 'Theory of the firm: managerial behavior, agency costs and ownership structure', *Journal of Financial Economics,* vol.3, pp305-360.

Kent, P & Stewart, J 2008, 'Corporate governance and disclosures on the transition to International Financial Reporting Standards', *Accounting & Finance* vol.48, pp649-671.

Klock, MS, Mansi, SA & Maxwell, WR 2005, 'Does corporate governance matter to bondholders?', *Journal of Financial and Quantitative Analysis* vol.40, pp693-719.

Larcker, DF, Richardson SA & Tuna, IA 2007, 'Corporate governance, accounting outcomes & organizational performance', *The Accounting Review* vol.82, pp963-1008.

Larcker, DF & Rusticus, TO 2010, 'On the use of instrumental variables in accounting research', *Journal of Accounting and Economics* vol.49, pp186-205.

Leland, H & Pyle, D 1977, 'Informational asymmetries, financial structure and financial intermediation', *Journal of Finance* vol.32, pp371-387.

Majumdar, SK & Sen, K 2006, 'The costs of agency: Debt composition and diversification strategy in Indian industry', *Development Economics and Public Policy, Paper No. 18*.

Majumdar, SK & Sen, K, 2007, 'The debt wish: Rent seeking by business groups and the structure of corporate borrowing in India', *Public Choice* vol.130, pp209-223.

Mansi, SA, Maxwell WF & Miller, DP 2004, 'Does auditor quality and tenure matter to investors? Evidence from the bond market', *Journal of Accounting Research* vol.42, pp755-793.

McDonald, CL 1973, 'An empirical examination of the reliability of published predictions of future earnings', *The Accounting Review* vol.48, pp502-510.

Minton, B & Schrand, C 1999, 'The impact of cash flow volatility on discretionary investment and the costs of debt and equity financing', *Journal of Financial Economics* vol.54, pp423-460.

Pittman, JA & Fortin, S 2004, 'Auditor choice and the cost of debt capital for newly public firms', *Journal of Accounting and Economics* vol.37, pp113-136113-136.

Rauh, JD & Sufi, A 2008, 'The composition and priority of corporate debt: Evidence from fallen angels', *Working Paper*, accessed 15/06/2011 http://www.rhsmith.umd.edu/Finance/pdfs_docs/seminarspring08/Angels_RauhSufi_20080115_POST.pdf

Reserve Bank of Australia, 2005, How do Australian businesses raise debt?, *Financial Stability Review. accessed 18-07-2011,* Available from URL: *http://www.rba.gov.au/publications/fsr/2OO5/mar/*pdf/0305-1.pdf.

Robicheaux, S, Fu, X & Ligon, J 2008, 'Lease financing and corporate governance', *The Financial Review* vol.43, pp403-437.

Schultz, EL, Tan, D & Walsh, K 2011, 'Corporate goverance and the probablity of default, *Working Paper*, accessed 8/08/2011 http://www.business.uq.edu.au/sites/default/files/web/accountingFinanceForum/ECR_4_FinanceDavidTan.pdf

Scott, JH 1981, 'The probability of bankruptcy: A comparison of empirical predictions and theoretical models', *Journal of Banking and Finance* vol.5, pp317-344.

Sengupta, P 1998, 'Corporate disclosure quality and the cost of debt', *The Accounting Review* vol.73, pp459-474.

Shleifer, A & Vishny, RW 1997, 'A survey of corporate governance', *The Journal of Finance* vol.52, pp737-783.

Smith, J 1987, 'Trade credit and informational asymmetry', *The Journal of Finance* vol.42, pp863-872.

Subramanyam, K 1996, 'The pricing of discretionary accruals', *Journal of Accounting and Economics* vol.22, pp249-281.

Trueman, B & Titman, S 1988, 'An explanation of accounting income smoothing', *Journal of Accounting Research* vol.26, ppS127-S139.

Uppal, J 2007, 'Role of securities law in the development of domestic corporate bond markets', *State Bank of Pakistan Research Bulletin* vol.3, pp75-88.

Wang, C-J & Lin, J-R 2010, 'Corporate governance and risk of deafult', *International Review of Accounting, Banking and Finance* vol.2, pp1-27.

Warner, B., 1989, *Australia's financial markets: An introduction* (Allen & Unwin, Sydney).

Wen, Y, Rwegasira, K & Bilderbeek, J 2002, 'Corporate governance and capital structure decisions of the Chinese listed firms', *Corporate Governance* vol.10, pp75-83.

Wu, Y, Gaunt, C & Gray, S 2010, 'A comparison of alternative bankruptcy prediction models', *Journal of Contemporary Accounting & Economics* vol.6, pp34-45.

Zeitun, R, Tian, G & Keen, K 2007, 'Default probability for the Jordanian companies: A test of cash flow theory', *International Research Journal of Finance and Economics* vol.8, pp147-162.