Capital Structure and Financing Choices: An Australian Study

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Abstract

We use a modified pecking order framework to analyse financing choices for Australian firms. The traditional pecking order model has been extended to allow a non-linear relationship between a firm's requirements for external capital (the financial deficit) and the amount of external debt used to meet these requirements. The pecking order theory predicts that firms will follow a defined hierarchy of financing choices with internal funds being used first, followed by external debt and as a last resort the issuance of external equity.

Our main finding is that Australian firms do not follow the pecking order as closely as in other markets as the model explains less of the variation in debt issuance. Importantly, we find that this is not related to debt capacity constraints, which has been hypothesized by other researchers as a legitimate reason why firms, small firms in particular, would not appear to be following the pecking order theory. We use Altman's Z-Score, which is a commonly used measure of financial distress, to identify firms that are relatively unconstrained in terms of debt capacity. We also find that while controlling for debt capacity does improve the explanatory power of our model, the improvement is only marginal. We do find evidence against the static trade-off theory of capital structure. In particular firms that are unconstrained in terms of debt capacity and not facing significant capital expenditure do not increase leverage towards an optimal capital structure in the manner predicted by the static trade-off theory.

We hypothesize that at least part of the reason for these findings is due to taxation differences, with the imputation credit system in Australia effectively removing the tax advantage of debt for domestic investors. Another important factor that could explain the lower explanatory power of the pecking order model could be the more accepted use of warrants and rights issues to raise equity, which have been argued to have lower asymmetric information costs than issuing straight equity.

1. Introduction

This paper examines capital structure theory and how it relates to a firm's financing choices. There are many different theories about capital structure and despite a substantial amount of research there is no clear and persuasive evidence that supports one theory over another. Recent research has focused on combining elements from multiple theories to gain a better understanding on what drives financing choices.

The traditional approach to capital structure has been that firms should target an optimal capital structure where the costs and benefits of debt financing are balanced, to maximise shareholder wealth. The problem with this approach is that these costs and benefits are not always easy to quantify and vary widely across different firm specific operating characteristics. In addition, there are a multitude of external factors to consider such as market sentiment, macroeconomic conditions as well the transaction costs of different forms of financing. The end result is wide cross-sectional variation in capital structures which is difficult to capture within a theoretical model. What is particularly difficult to understand is how comparable companies with similar operational characteristics make very different financing choices.

It is relatively easy to understand the costs of debt financing, which is primarily the risk of financial distress or bankruptcy. Understanding credit risk is an established area of research and practitioners and academics alike have a good understanding of what factors are important for the risk profile of a firm, and how much debt a firm can support. What is far less clear are the benefits of debt financing. Early literature on capital structure focused on the benefit of debt financing from the tax deductibility of interest payments. There is little evidence that supports the argument that the tax advantage of debt drives capital structure decisions. The other major hypothesized benefit of debt relates to agency theory, where debt reduces agency problems by leaving fewer resources under management's control.

There are two competing theories to the optimal capital structure idea. The first is that capital structure is irrelevant as investors can use leverage to achieve the same results. This argument is only plausible if the tax and agency benefits of firm level debt are small. The second theory

is based on transaction costs, which drives firms to choose the lowest cost instrument to raise finance. This is the pecking order theory which defines a hierarchy of financing preferences where firms will use internal funds first followed by external debt and then external equity only as a last resort. External equity ranks last under this theory because new equity investors generally will not be prepared to pay full value for the new equity as they are at an informational disadvantage to managers and existing investors. New equity is always issued at a discount to its true value, and thus is dilutive and expensive for existing shareholders. Under the pecking order theory observed capital structures are simply a byproduct of past investment decisions. Low leverage firms have had a combination of high cash flows and/or low capital expenditure requirements while high leverage firms have had low cash flows and/or high capital expenditure requirements.

However the key contribution of this research is to apply existing pecking order models and the extensions to Australian data. There are several characteristics of the Australian market that provide an interesting comparison to the US market, where most of the research has been done. The first obvious difference between the two markets is the existence of a full dividend imputation system for domestic Australian investors. This prevents double taxation of dividend payments at the firm and investor level which effectively removes the taxation advantage of debt financing. Instead of theorising about the relevance of the taxation advantages of debt we can observe a market where we know that the taxation advantage of debt is minimal. The other major difference is that Australian firms make more extensive use of rights issues and warrants as a source of raising equity whereas in the US this is usually done with a seasoned equity offering. There are arguments that not only are rights issues more 'fair' for existing shareholders but that they have lower asymmetric information costs. To the extent that rights issues are more accepted by the market and less dilutive for existing shareholders then they are less likely to be subject to the same discount to true value as for seasoned equity issuance. Warrants have lower information costs because of the option embedded in the equity issue that gives new investors additional flexibility to evaluate outcomes after the issue date i.e. their informational disadvantage for new investors relative to existing investors and management is lower.

We extend the models of (Lemmon & Zender, 2008) and (De Jong, Verbeek, & Verwijmeren, 2009) to a specification that includes a quadratic term to allow for a non-linear

relationship between the financial deficit and change in debt as well as using dummy variables to differentiate between firms facing a financial deficit or a financial surplus.