

# The Systematic Risk Effect of Hybrid Securities Classifications

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Financial reports are fundamental to investors' assessments of firms' future cash flows and risk profile when pricing equities. Accounting standards aim to produce information relevant to such decision making. AASB 1033 *Presentation and Disclosure of Financial Instruments* was promulgated for this purpose. The standard prescribed that hybrid securities classification, previously unregulated, should be according to securities' economic rather than legal substance.

Given the risk effect of the classification, our study investigates whether the requirements of AASB1033 provide additional information to the investing community in revising firms' systematic risk.

## Background and Aims of the Project

Accounting standards are costly to promulgate and firms incur costs to implement them. Thus, similar to any investment project, the effectiveness of a new standard should be evaluated, at least partially, in terms of the benefits the standard provides to the targeted user groups.<sup>1</sup> For example, an accounting standard on the classification of debt and equity can change the way in which a firm presents its capital structure. If analysts and investors use financial statements to make recommendations or investment decisions, such an accounting standard affects an important input in the equity pricing process. If financial statement analysis affects investment decisions then the accounting standard is likely to influence firms' achievement of their optimal capital structures. In such a case, the cost of setting and implementing the new standard should be justified in relation to its benefits to the investing community. The evidence of such benefit can be defined in terms of whether investors use the new information, i.e., the value relevance of the new standard to the equity pricing process.

Effective from 1998, Australian Accounting Standard AASB1033 *Presentation and Disclosure of Financial Instruments* has regulated hybrid securities classification. Prior to AASB 1033, firms determined the classification of their hybrid securities as debt, equity or mezzanine finance. AASB1033 requires a balance sheet classification consistent with securities' economic substance, and specifies the appropriate classification for hybrid securities with certain characteristics. The significance of the debt or equity classification is due to its impact on firms' agency costs. At least two effects are likely to be immediate. The first involves increasing or decreasing firms' proximity to violating accounting-based debt contract covenants such as those that are leverage based or related to interest coverage, hence affecting the firms' systematic

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<sup>1</sup> Other factors to consider include the costs to implement the accounting standard, which will likely be transferred ultimately to shareholders.

risk. The second is the impact upon earnings-based management compensation as the classification affects whether returns to security holders are classified as expenses (interest on debt) or distributions of earnings (dividends to equity).

This study aims to investigate whether AASB 1033 implementation altered Australian firms' systematic risk. A significant change in their systematic risk indicates that the new standard has altered market perceptions of the hybrid securities. Systematic risk is an important input into the capital asset pricing model (CAPM) which determines the cost of equity capital. In turn, the cost of equity capital is used to assess firms' profitability and is therefore a significant factor in firm valuation. Evidence of no change in the systematic risk raises questions regarding the need for such a costly accounting standard, and why firms lobbied against the standard.

### **Significance and Innovation**

This study is significant in terms of documenting the economic consequences of accounting standards. Most accounting standards require firms to disclose information not previously available to the users, including the investing community. If new, the information will affect the equity pricing process, which in turn stimulates trading in shares and contributes to market efficiency. The innovation of our project is that it is the first study that investigates the effects of AASB 1033 on systematic risk.

### **Description of Approach**

Although a firm's systematic risk (beta) may be determined from regressing stock returns on market returns using historical data (historical beta), it is essentially influenced by fundamental factors such as decisions about the firm's type(s) of business, the extent of operating leverage employed, and the extent to which the firm uses financial leverage. There is also evidence that beta is influenced by the firm's size and growth potential. This is depicted in Model 1:

$$Beta_i \approx TP_i; OL_i; FL_i; SIZE_i; GROWTH_i \quad \text{(Model 1)}$$

Where

- $Beta_i$  = systematic risk of firm<sub>i</sub>
- $TP_i$  = industry affiliation of firm<sub>i</sub>
- $OL_i$  = operating leverage of firm<sub>i</sub>
- $FL_i$  = financial leverage of firm<sub>i</sub>
- $SIZE_i$  = market capitalization of firm<sub>i</sub>
- $GROWTH_i$  = ratio of book-to-market equity of firm<sub>i</sub>

From Model 1 it appears that hybrid security classification will influence a firm's financial leverage. *Ceteris paribus*, an increase (decrease) in financial leverage will increase (decrease) the firm's equity beta. Intuitively, the interest payments on debt result in increasing income in good years and decreasing income in bad years. Higher leverage increases net income variance and makes equity investment riskier. In an

extreme case where a firm's capital structure does not include debt (the beta of debt is zero), the levered beta will equal the unlevered beta as follows (Model 2):

$$\beta_L = \beta_U [1 + (1 - t)(D / E)] \quad \text{(Model 2)}$$

Where

$\beta_L$	=	levered beta for equity in the firm (i.e., with both debt and equity in the capital structure)
$\beta_U$	=	unlevered beta of the firm (i.e., no debt in the capital structure)
$D/E$	=	market value of debt-to-equity ratio
$t$	=	corporate tax rate.

As debt levels increase, equity investors bear increasing amounts of market risk in the firm, leading to higher betas (reflected by increases in  $\beta_U$  and  $\beta_L$ ).

Firms' unlevered (asset) betas are usually determined by the business in which the firms operate and their operating leverage. The levered beta, however, is determined by both (1) the type of business and operating leverage, and (2) the financial leverage risk. It can therefore be argued that an increase in financial leverage (D/E), either by way of simply a reclassification or a real transaction, will affect beta.

Other than the above fundamental factors, market factors such as firm growth (book-to-market equity) and market capitalization (size) can also influence a firm's risk. We therefore can employ the following model (Model 3) to examine the risk effect of AASB 1033:

$$\begin{aligned} \text{Beta}_i = & \alpha_0 + \beta_1 TB_i + \beta_2 OL_i + \beta_3 FL_{i,ahs} + \beta_4 FL_{i,bhs} + \beta_5 (FL_{i,bhs} - FL_{i,afs}) + \beta_6 YEAR \\ & + \beta_7 YEAR * (FL_{i,bhs} - FL_{i,ahs}) + \beta_8 SIZE_i + \beta_9 GROWTH_i + \varepsilon_i \end{aligned} \quad \text{(Model 3)}$$

Where

$\text{Beta}_i$	=	historical systematic risk of firm <sub>i</sub> determined using regression of weekly prices on a market index over three years time
$FL_{i,bhs}$	=	financial leverage (D/E) for firm <sub>i</sub> exclusive of hybrid securities
$FL_{i,ahs}$	=	financial leverage (D/E) for firm <sub>i</sub> inclusive of hybrid securities
$(FL_{i,bhs} - FL_{i,ahs})$	=	effect of firm <sub>i</sub> 's hybrid securities classification on financial leverage (D/E)
$YEAR$	=	a dichotomous variable partitioning the sample period into pre and post regulatory years
$SIZE_i$	=	market capitalization of equity for firm <sub>i</sub>
$GROWTH_i$	=	book-to-market equity for firm <sub>i</sub>
$\varepsilon_i$	=	error term

In Model 3,  $\beta_5$  measures the effect of hybrid securities' classification on the firm's systematic risk. Further,  $\beta_6$  indicates the incremental effect of hybrid securities classifications on systematic risk.

### **Nature of expected outcomes**

Given the innovative nature of the project we expect:

- A conference and research seminar paper
- An academic research journal article submission to a high tier internationally refereed academic accounting research journal
- A practitioner orientated article targeted at a professional organisation's magazine