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What lies beneath the implementation of expensing equity-based compensation?[☆]

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ABSTRACT

This study explores whether SFAS 39, which mandated expensing of equity-based compensation (EBC) causes an unexpected wealth reallocation between debtholders and shareholders. Through a structural framework under the economic measure, we theorize that mandatory EBC expensing affects the priority of free cash flow payment mechanisms and thereby transfers firm value to equity at the expense of debt. Based on 582 Taiwan listed firms over the period 2005–2010, we empirically find that a significant increase in equity value as a percentage of firm value for firms that were affected by EBC expensing rule, compared to firms that were not affected. The wealth transfer from debtholders to shareholders is more salient for heavy EBC users. We also document that firms with more intensive debtholder-shareholder conflicts experience a larger wealth transfer than their counterparts do. Overall, our analyses suggest that mandated expensing of EBC leads to a value transfer from debt to equity.

1. Introduction

In this paper, we examine whether the accounting treatment of equity-based compensation (EBC) causes a transfer of value from debt to equity. In Taiwan, accounting for EBC transactions changed significantly in January of 2008 with the implementation of SFAS 39, *Share-Based Payment*, which required companies to recognize the fair market value of equity-based compensation issued to executive and non-executive employees as an expense when the EBC are granted. Critics of SFAS 39 claimed that reporting EBC expense in the income statement results in increase in contract cost,[1] whereas proponents of SFAS 39 argued companies that do not expense EBC are hiding their true cost from shareholders and should be recognized (Aboody et al., 2004; Farber et al., 2007). While the debate over EBC accounting focused largely on the decrease to net income from recognition of EBC expense, whether the accounting policy further affected firms' shareholder-debtholder wealth transfers has not been explored by existing research.

Previously, firms recognized EBC awards as allocations from retained earnings. Thus, issuing EBC transfers claims on residual

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[1] SFAS 39 required firms to record expenses for the fair value of EBC grants. For many firms, this would have resulted in an increase in expenses, which causes a decrease in net income and shareholders' equity. United Microelectronics Corporation (UMC), one of Taiwan leading companies in the semi-conductor industry, argue that stock value would go down as the companies absorb the huge future costs that these EBC may have. In addition, firms may come closer to violating their debt covenants. Tightening debt covenants is likely to result in increases in contracting costs and decreases in stock prices.

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equity from existing shareholders to employees, diluting existing shareholders' wealth. However, after the adoption of SFAS 39, mandatory recognition of EBC expense moves the costs directly associated with EBC from residual equity to the income statement. It would reduce a firm's expected future cash flows attributable to debt which produces a decrease in the value of claims that protect debtholders' interests. In the modified structural framework based on Black and Scholes (1973) and Merton (1974), we provide a theoretical illustration which shows that recognizing EBC expense reduces the distribution of the firm's economic benefits to the debtholders, leading to agency conflicts between shareholders and debtholders. Consequently, EBC expensing leads to transfer wealth from debtholders to shareholders. We therefore expect the equity value portion of the firm's overall vale to increase and the debt value portion to decrease upon adopting SFAS 39.

We test the effects of mandatory recognition of EBC expense on the transfer of firm value from debtholders to shareholders using a sample of 2712 non-financial firm-year observations in Taiwan. Our primary analysis focuses on the affected firms that granted EBC both before and after the adoption of SFAS 39 and uses three years before and after the SFAS 39 mandate. We use this relatively short event window to reduce the effects of potential confounding events, such as the 2011 trial implementation of IFRS reporting. Specifically, we employ a difference-in-differences research design that compares the change in equity value portion of firm overall value for SFAS 39 affected firms with changes for a control sample over the period 2005–2010. Our control sample controls for non-SFAS 39 related changes that may affect the proportion of equity value over firm value (Bakke et al., 2016). The control sample consists of firms issuing no EBC to the employees prior to and after SFAS 39, on the ground that these firms were likely unaffected by the new standard.

Our analysis supports the hypothesis that the equity value portion of a firm's overall value increases after the adoption of SFAS 39. In addition, the increase in shareholder wealth is more pronounced for heavy users of EBC, consistent with the increase being attributed to the change in accounting for EBC. Furthermore, firms with greater conflicts of interest among shareholders and debtholders experience a significant increase in the ratio of equity value to firm value after mandatory recognition per SFAS 39. This result lend further support to our theoretical prediction that the mandatory recognition EBC expense in the income statement causes intensified debtholder-shareholder agency conflicts, leading to a wealth transfer from debtholders to shareholders.

This study contributes to the literature on the economic consequences of accounting treatment for EBC. One stream of research focuses on the effect of mandatory EBC expensing on firm contracting behaviors (Aboody et al., 2006; Carter et al., 2007; Choudhary et al., 2009; Brown and Lee, 2011; Cadman et al., 2013). These studies highlights that firms alter contract terms in response to the mandatory EBC expensing rule so that they can minimize the compensation expense recognized on their income statement. Another rising stream of literature documents that companies conducted some real activities to mitigate the adverse effect of EBC grants on EPS and firm value after the mandatory adoption of SFAS 39, such as repurchasing stocks (Hegemann and Ismailescu, 2016), improving investment efficiency (Dou et al., 2014), and undertaking avoidance (Seidman and Stomberg, 2012). By examining shareholders' and debtholders' wealth changes, we show the impact of EBC expensing on asset valuation.

Our study also adds to the literature on how firms' contracts affect the conflicts among stakeholders (Maxwell and Stephens, 2003; Adams and Mansi, 2009; Klein and Zur, 2009; Liao, 2015). To the best of our knowledge, this is the first paper to examine how EBC grants under SFAS 39 affect debtholder-shareholder conflicts. Prior to SFAS 39, EBC, same as dividends, are deducted from retained earnings, and thus mainly reduces economic benefits attributable to shareholders. The passage of SFAS 39, which means that all companies must expense EBC, thus affecting both the economic benefits attributable to shareholders and debtholders. As expected, we observe a value transfer from debtholders to shareholders in the post-SFAS 39 period. For regulators, our results demonstrate an unintended consequence of mandatory expensing EBC costs, as it amplifies debtholders' concern for priority of payment to employees, debtholders, and shareholders.

The remainder of the paper is organized as follows. Section 2 illustrates the wealth transfer effect we emphasize. Section 3 presents the model and the main prediction that we test. In Section 4, we conduct numerical illustration and develop hypothesis. Section 5 describes the data and the sample we use in our empirical analysis. We present the empirical results in Section 6. Finally, Section 7 concludes.

2. The wealth transfer effect

Since the adoption of mandatory expensing equity-based compensation via SFAS 39 has generally been considered as an accounting standard change question, its impacts are intuitively examined by using the accounting measure (book value). However, some potential economic effect resulted from direct market reaction to such a policy implementation could not be observed under the accounting measure but can only examined by the economic measure (fair value). The wealth transfer effect between shareholders and debtholders identified in this study is the case.

Intending to clearly explain the occurrence of the wealth transfer effect resulted from the mandated expensing of EBC, we show the economic balance sheets of a firm before and after implementing SFAS 39 in Panel A of Fig. 1. Assuming no dividend and no additional debt are issued, E1b (E1a) is the ending equity fair value before (after) the SFAS 39 mandate, while L1b (L1a) is the ending debt fair value before (after) SFAS 39. EB is the amount of employee EBC. Assuming that facing the same investment opportunities in the market, implementing SFAS 39 does not change a firm's asset fair value (ASST1) because it is unrelated to the firm's capital budgeting and investment decision makings but solely generates a wealth transfer effect. Therefore, E1b + L1b + EB = E1a + L1a + EB = ASST1, meaning that a firm's total asset fair values are identical before and after implementing SFAS 39. As for depicting the