Accounting For Corporate America's Pension Plans: A Review Of Recent History

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ABSTRACT

This descriptive study aims to historically review the underfunded status of private defined benefit pension plans (DBPP) over the period from 2000 to 2014. Economic/financial events which led to new regulation and legislation are described. Regarding new regulation, it explores the influence of *Statement of Financial Accounting Standards No. 158: Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans* (SFAS No. 158) on pension accounting and reporting. Regarding new legislation, it discusses the impact of the Pension Protection Act of 2006 (PPA) on DBPP. Both items of legislation (regulation) were enacted (adopted) in 2006 after which prior research documents the persistent likely inability of DBPP firms to meet pension obligations. This study is important for identifying probable contributors to the underfunded status of private U.S. DBPP and may also be one of few to focus on the impact of both the PPA of 2006 and SFAS No. 158 on DBPP post 2006.

Keywords: PBO discount rates, defined benefit pension plan, pension intensity risk, leverage, SFAS No. 158, Accounting Standards Codification Topic 960

1. INTRODUCTION

Social security, defined contribution plans, and defined benefit pension plans (DBPP) comprise the main sources of retirement income in the United States (U.S. Securities and Exchange Commission, 2005). And although defined contribution plans have increased from approximately 200,000 plans in 1975 to more than 640,000 plans in 2014 while DBPP have steadily declined from over 100,000 plans to less than 45,000 plans during the same timeframe (U.S. Department of Labor, 2016), DBPP represent a legal obligation of the employer, for which the magnitude may be large. Hence, DBPP represent a potentially significant source of financial risk for corporate pension plan sponsors.

While not legally obligated to offer pension plans or other retirement benefits to employees, firms aim to attract and retain employees by offering retirement benefits. Consequently, most publicly traded corporations offer some type of retirement savings vehicle— most commonly in the form of a defined contribution plan (e.g., 401(k) plan) which is primarily funded by the employee. Those firms offering DBPP are obligated to make-good on the promise to pay a pension in keeping with the regulatory requirements of the Employee Retirement Income Security Act (ERISA).

Further, DBPP sponsors are subject to federal regulation by the Internal Revenue Service, the Department of Labor, and the Pension Benefit Guaranty Corporation (PBGC). The PBGC insures private pension plans and acts as a safety net in the event a firm defaults on its obligation to pay defined benefits. Additionally, the Securities and Exchange Commission (SEC) mandates that publicly traded firms report their financial performance in accordance with Generally Accepted Accounting Principles (GAAP) of which the main standard setter is the Financial Accounting Standards Board (FASB).

This study extends prior research on the financial reporting effects of the FASB's *Statement of Financial Accounting Standards No. 158* (SFAS No. 158, now part of Financial Accounting Standards Board Accounting Standards Codification Topic 960) by reviewing the literature then anecdotally investigating the underfunded status of private DBPP from 2000 to 2014 (before and after the 2006 adoption of SFAS No. 158). Prior research suggests that after the adoption of SFAS No. 158, the discount rate used by firms to determine the amount of projected benefit obligation (PBO) increased, and that increased PBO discount rate was positively correlated with firms' leverage (Houmes & Boylan, 2010).

Since an inverse relationship exists between PBO discount rate and pension liability (the higher the discount rate, the lower the pension liability), Houmes and Boylan (2010) theorize that the positive correlation between PBO discount rate and leverage is due to the inverse relationship between PBO discount rate and pension liability. Hence, the tendency for highly leveraged firms to use higher discount rates to reduce reported PBO (Houmes & Boylan, 2010). Although not an empirical investigation, the current study examines events leading to the adoption of SFAS No. 158 and the enactment of the Pension Protection Act of 2006 (PPA) conjecturing whether this new regulation and legislation may have had unintended consequences leading to further pension underfunding and thereby, creating implications for investors, pension plan sponsors, pension plan participants, and indeed, the overall economy.

2. LITERATURE REVIEW

Pension accounting.

Pre- SFAS No. 158.

A lack of transparency, complex computations, a lack of understandability amongst users, and failure to require relevant disclosures constitute some of pension accounting's criticisms (U.S. Securities and Exchange Commission, 2005). To be sure, determining pension obligation is a complex issue that, among other things, involves estimating employees' life expectancies, projecting investment performance, assuming

expected salary increases, and discounting future pension benefits to present value—all of which are difficult to measure.

An overarching implication of pension accounting's criticisms is that the required accounting disclosures for DBPP may be unnecessarily complicated. Further, as it pertains to presumed financial statement users, the average DBPP participant is not financially sophisticated (Easterday & Eaton, 2012). Current pension accounting guidance makes it difficult for financial statement users to understand how pension liability affects a company's financial position or its ability to meet pension plan obligations (Response to FASB Exposure Draft, 2007).

Undeniably, prior to the adoption of SFAS No. 158, a potentially material amount of pension liability could be off-balance sheet (FASB, 1985). Furthermore, pension gains and losses could be recorded at any time before the pension obligations were due (FASB, 1985). Since immediate recognition of pension gains and losses was likely to result in volatile pension expense, many plan sponsors elected to defer recognition of pension gains and losses resulting in smoother pension expense between accounting periods (U.S. Securities and Exchange Commission, 2005). However, this election caused greater uncertainty regarding the reported net retirement plan asset or liability (U.S. Securities and Exchange Commission, 2005).

The FASB attempted to mitigate the effects of smoothing pension expense and, thereby, reduce the amount of retirement liability that could potentially be off-balance sheet by issuing *Statement of Financial Accounting Standard No. 87: Employers' Accounting for Pensions* (SFAS No. 87) in 1985 (U.S. Securities and Exchange Commission, 2005). SFAS No. 87 required firms to accrue an actuarially derived pension expense each year better aligning pension accounting with accrual basis accounting required by GAAP (FASB, 1985). SFAS No. 87 also instituted a "minimum liability rule." Under this new rule, plan sponsors electing to defer pension gains and losses were required to recognize a liability of at least the amount by which the accumulated benefit obligation (the best estimate of the present value of future pension payments excluding future salary increases) exceeds the fair value of pension plan assets (FASB, 1985).

Yet, even with recognizing the minimum liability, a significant amount of a sponsor's pension obligation could possibly remain off-balance sheet since the minimum liability was based on accumulated benefit obligation instead of PBO, which considers the effects of expected salary increases (U.S. Securities and Exchange Commission, 2005). The funded status, calculated with PBO, was merely disclosed in the financial statements' notes. Although additional pension related standards (SFAS Nos. 88, 106, and 132 R) followed the issuance of SFAS No. 87, it remained the predominant guiding accounting standard for DBPP for more than 20 years.

SFAS No. 158's impact on pension accounting.

In 2006, the FASB issued SFAS No. 158 creating a more stringent DBPP regulatory environment with more prominent reporting of pension liability. Among other things,

SFAS No. 158 mandates that firms with DBPP recognize the funded status of their pension on the balance sheet (FASB, 2006). Funded status is measured as the difference between the plan's PBO and the fair market value of the plan's assets (FASB, 2006). The PBO is defined as the value of future pension benefits discounted to actuarial present value (FASB, 2006).

Previously, pension liability had been disclosed in the footnotes to the financial statements. The adoption of SFAS No. 158 was intended to be an improvement to pension accounting. However, based on their findings, Adams et al. (2011) urged regulators to focus on more appropriate ways to help financial statement users assess the risk of companies' pension portfolios. They noted that certain disclosures — the DBPP audit opinion, risk assessment of plan termination, and reportable events (required by the Pension Benefit Guaranty Corporation) — could potentially help plan participants but are not required by SFAS No. 158. Thus, although the adoption of SFAS No. 158 may have improved pension accounting, criticism endures.

After examining public and private sector pension plans (post SFAS No. 158), Easterday and Eaton (2012) assert that all users of financial statements—from financial experts to average pension plan participants—should be able to clearly understand the financial implications related to the funding, stability, and financial management of DBPP by reviewing the financial statements and their accompanying notes. However, a review of the literature reveals this is not the case. Kiosse and Peasnell (2009) document that current pension accounting requirements do not convey useful information regarding the long-term costs of providing a DBPP. Investors need supplementary information to assist with understanding the uncertainties of pension commitments that stretch far into the future (Kiosse & Peasnell, 2009). Consistent with Kiosse and Peasnell (2009), current required disclosures do not provide enough information to adequately assess risk since they "do not hit the core issues relating to pensions" (Rangecroft, 2009). The perceived flaws in DBPP financial reporting indicate significant opportunity to improve accounting standards related to pension plan reporting.

Although criticism continues, adopting SFAS No. 158, in some ways, simplifies disclosure requirements by eliminating the need to reconcile the plans' funded status with the amount recognized in the balance sheet since the funded status is now recognized directly on the balance sheet. In addition, SFAS No. 158 eliminates the disclosure of the plan's measurement date by requiring the firms' fiscal year end to coincide with the DBPP measurement date.

Recognition versus disclosure.

The adoption of SFAS No. 158 represents a change in accounting standards that required a transition from footnote disclosure to the recognition of the funded status of firms' pension obligation on the balance sheet aligning with the FASB declaration that, "footnote disclosure is not an adequate substitute for recognition (FASB, 1985)." Regarding the financial reporting of pension assets and liabilities, Coronado et al. (2008) find that investors focus on the face value of financial statements instead of the

more detailed information reflected in the footnotes accompanying the financial statements. The Coronado et al. (2008) study supports the findings of earlier, non-pension related, research which indicate capital markets value disclosure and recognition differently (e.g., Aboody 1996; Davis-Friday, Folami, Liu, and Mittelstaedt 1999; Davis-Friday, Liu, and Mittelstaedt 2004). Combined, these studies provide support for SFAS No. 158's change from footnote disclosure to recognizing the funded status of plan assets on the balance sheet.

Specifically, prior research suggests that the decision to recognize versus disclose a write-down impacts firms' market valuation (Aboody, 1996). Likewise, results of the Davis-Friday et al. (1999) study indicate the market attaches less weight to postretirement benefit (PRB) liabilities disclosed in the notes than to those subsequently recognized in the balance sheet. In a related study, Davis-Friday et al. (2004) investigate whether the market treats disclosed financial statement information as if it is less reliable than information recognized in the body of the financial statements. Overall, the findings indicate that the market treats disclosed PRB liabilities as less reliable than recognized PRB liabilities and pension liabilities (Davis-Friday et al., 2004).

Still, other literature indicates that financial statement users do incorporate information disclosed in the notes to the financial statements (Response to FASB Exposure Draft, 2007). Nevertheless, those results are based primarily on stock analysts' predictions and credit agency ratings indicating more sophisticated financial statement users. Although the literature contains conflicting results, the Davis-Friday et al. studies (1999 & 2004) imply that SFAS No. 158's requirement to recognize pension liability on the balance sheet (instead of mere note disclosure) represents an improvement in the usefulness of pension accounting information.

Finally, Beaudoin et al. (2010) explore whether SFAS No. 158's required recognition of pension asset and liability is value relevant in comparison to those same items previously only disclosed in the notes to the financial statements. Their findings support efficient markets theory: regardless of whether pension obligation is disclosed in the notes (as required pre-SFAS No. 158) or recognized directly on the balance sheet (as required post SFAS No. 158), the results suggest no significant difference regarding how the market uses pension related information to determine equity valuation (Beaudoin et al., 2010). The implication being that as long as the information is available, it will be impounded in stock price.

Accounting standard changes and managements' decisions.

Anecdotal and empirical evidence imply that new accounting standards may impact management decisions. For example, Mittelstaedt et al. (1995) observe that companies limited the offering of post-retirement health care benefits after the adoption of *Statement of Financial Accounting Standard No. 106: Employers' Accounting for Postretirement Benefits Other than Pensions* (SFAS No. 106) which requires the accrual of postretirement health care benefits (FASB, 1990).

Jones (2013) documents that recognition versus disclosure of retirement liabilities may affect managements' accounting choices. Likewise, non-pension related prior research documents that managers perceive recognized amounts differently than disclosed amounts and this perception affects their actions (Bens & Monahan, 2008; Carter et al., 2007; Johnston, 2006; Aboody et al., 2004; Imhoff & Thomas, 1988).

Accounting standard changes appear to have real effects on management's decisions (Bens & Monahan, 2008). Findings of a study by Carter et al. (2007) suggest favorable accounting treatment for options led to increased use of options and lower use of restricted stock than would have been the case without the change in accounting standards. Johnston (2006) reports that firms who recognize stock-based compensation expense manage the expense downward more so than firms that disclose the expense in the notes to the financial statements. Similarly, Aboody et al. (2004) find the likelihood of expense recognition under *Statement of Financial Accounting Standard No. 123: Accounting for Stock-Based Compensation* (SFAS No. 123) is linked to the private incentives of top management.

Finally, Imhoff and Thomas (1988) report a substitution from capital leases to operating leases and non-lease sources of financing after the adoption of *Statement of Financial Accounting Standard No. 13: Accounting for Leases* (SFAS No. 13). Although not all pension related, the literature regarding the impact of new accounting standards on management decisions suggests that changes in accounting standards affect management decisions and specifically, that managers perceive recognized amounts differently than disclosed amounts, which also alters their decisions.

Incentives to manage PBO discount rate.

FASB's sole guidance regarding an appropriate pension benefit discount rate stipulates that it be based on the rate at which the retirement benefit could be effectively settled and should reflect the "rates of return on high-quality fixed-income investments" (FASB, 2006). Consequently, management has discretion in setting the PBO discount rate. Since actuaries estimate future pension benefits over typically extensive time horizons, small changes in the discount rate could significantly affect the magnitude of a DBPP's PBO.

Certainly, prior studies reported that after the adoption of SFAS No. 158, firms use higher discount rates to calculate pension liability, and the higher the firm's financial leverage (liquidity), the greater (lower) the PBO discount rate (Houmes & Boylan 2010). Additionally, Asthana (1999) notes that managers' likelihood of making PBO decreasing choices increased with the magnitude of pension underfunding. Furthermore, Houmes et al., (2011) find that firms use higher discount rates to estimate pension liabilities in order to offset the impact of reporting PBO. They also report that firms with high financial risk earn negative abnormal returns (and vice versa) on or near relevant event dates immediately preceding the adoption of SFAS No. 158. Rauh's (2006) findings suggest a negative relationship between underfunded DBPP and future cash flows thereby, limiting the ability to invest in capital projects as firms comply with pension funding requirements (Rauh, 2006).

Likewise, prior research documents highly leveraged firms' tendency to reduce retiree health care benefits after the implementation of SFAS No. 106 (Mittelstaedt et al., 1995). D'Souza et al., (2001) observe that companies with higher liabilities were more likely to select prospective adoption of SFAS No. 106, which allowed postponed recognition of PRB liability.

Jones (2013) finds that after the phase-in of SFAS No. 158, companies with debt contracting incentives made larger PBO decreasing changes to the assumptions used to estimate retirement plan obligations — one of the most commonly disclosed assumptions being PBO discount rate (Jones, 2013). Therefore, it appears that incentives to manage the PBO discount rate exist for managers of firms with high financial risk.

The tendency to manage financial reporting is consistent with agency theory, which posits that an inherent conflict of interest exists between the firm's principal (shareholders) and the agent hired to act on the principal's behalf (management). Jensen and Meckling (1976) propose that tying management compensation to firm performance attenuates this conflict of interest. Conversely, the opportunistic perspective of positive accounting theory argues that managers with compensation tied to firms' financial performance tend to manipulate the accounting methods employed in order to report financial performance that appears better than it actually is (Watts and Zimmerman, 1978). According to the report titled *CEO and Executive Compensation Practices: 2015 Edition*, performance-based components primarily comprise CEO compensation (Tonello, 2015).

The current study considers the opportunistic perspective of positive accounting theory where managers adopt accounting policies that result in the firm's and their own personal gain. Specifically, within the framework of the opportunistic perspective, this paper leans toward the debt-equity hypothesis, which contends there is a positive relation between managers' likelihood of exploiting accounting methods to increase accounting profit. In other words, as debt increases, so does managers' tendency to use accounting practices which appear to improve financial position. Thus, the ambiguity in SFAS No. 158 regarding the PBO discount rate stirs suspicion of heightened incentive for managers of firms with high financial risk to employ a PBO discount rate that reduces pension liability resulting in reported financial performance which appears better than it actually is.

3. EVENTS PRECEDING NEW DBPP REGULATION/LEGISLATION

In 1985, the FASB issued SFAS No. 87 requiring firms to report a more reliable pension liability through an annual accrual of pension expense determined by actuarial assumption and computation (FASB, 1985). Overall, SFAS No. 87 improved consistency in pension accounting by requiring a standardized method for measuring net periodic pension cost and immediate recognition of a liability (FASB, 1985). SFAS No. 87 did not require full recognition of pension assets or liabilities on the balance sheet—only disclosure in the footnotes.

Critics of the accounting standard argued that firms could hide pertinent information regarding the financial status of their pension plans in the notes to the financial statements. Indeed, during the twenty-year period between 1985 and 2005, several firms with supposedly healthy DBPP went bankrupt and bankruptcy proceedings revealed grossly underfunded pension plans. Bethlehem Steel's 2001 bankruptcy filing uncovered $3.7 billion in pension underfunding; in the wake of Bethlehem Steel's dissolution, estimates revealed that its work force lost approximately $400 million in retirement benefits (Walsh, 2003).

United Airlines, a sponsor of four DBPPs, filed bankruptcy and, in 2005, a bankruptcy court judge approved United Airlines' pension default, marking the largest corporate pension default in U.S. history (Greenblatt, 2006). United Airlines transferred its pension obligations, inclusive of a $10 billion deficit, to the PBGC, which, in that same year, reported its own underfunded status at $22.8 billion (Greenblatt, 2006).

Although General Motors did not file bankruptcy until 2009, its financial woes had been looming since its 1950 commitment to the United Automobile Workers (UAW) labor union to provide generous pensions and free healthcare benefits to retirees for life ("The Bankruptcy," 2009). Preceding General Motors' bankruptcy filing, financial reports exposed $13 billion in pension underfunding at the close of 2008 ("The Bankruptcy," 2009).

In response to the string of bankruptcy proceedings, the SEC released a report in June 2005 stating that pension accounting standards needed greater reporting transparency (U.S. Securities and Exchange Commission, 2005). In response, FASB issued SFAS No.158 in 2006 as an amendment to FASB Statement Nos. 87, 88, 106, and 132 R. A central objective of the new standard was to increase the transparency of pension accounting for financial statement users (FASB, 2006).

Concerned that the financial condition of private DBPP and the PBGC might lead to a taxpayer funded bailout of the nation's private pension system, the Bush Administration supported tightening pension-funding requirements and restricting sponsors of under-funded plans from promising additional pension benefits. This led to another significant change in the DBPP regulatory environment with Congress's enactment of the Pension Protection Act (PPA) of 2006. The two main provisions of the PPA include:

1. Firms must fully fund pension plans within seven years;
2. Firms get a tax deduction for contributions up to 150% of PBO (Purcell, 2006).

From an accounting standpoint, SFAS No. 158's concern was not only accruing pension expense, but also reporting the corresponding liability on the face of the balance sheet. The PPA's focus was to provide firms with incentive to substantially fund their pension plans—an incentive which, when acted upon, affects cash flow. Although the main provisions of the PPA may influence employers' cash contributions to their pension

funds and thereby, influence the funded status that SFAS No. 158 requires to be recognized on the balance sheet, the provisions do not affect the calculation of PBO.

Yet, fifteen years after the enactment of the PPA, a significant number of firms remain underfunded. Various factors contribute to the persistence of underfunded pension plans. First, demographic conditions exhibit longer life expectancies than actuarial calculations originally projected (Matthews, 2014). Second, the 2007 to 2009 financial crisis and ensuing economic downturn resulted in significant underperformance of pension plan assets (Yermo & Severinson, 2010). Finally, firms have leeway in choosing the PBO discount rate, which may lead to understated pension liability. Taken together, these factors may have created a ripe environment for underfunded pension plans.

Prior to the enactment of the PPA, firms offering DBPPs could take up to 30 years to fund their pension plans to 90% of PBO and could claim a tax deduction for contributions up to 100% of pension liability (Purcell, 2006). When comparing the previous requirements to the two main provisions of PPA, the updated legislation clearly implements stricter funding mandates while offering greater tax deductibility. It follows that stricter funding requirements likely exacerbate the financial distress of firms with underfunded pension obligations. Indeed, from 1995 through 2015, aggregate DBPP sponsored by Standard & Poor's 500 firms went from fully funded to under-funded by more than $375 billion (FactSet, 2016).

Examining the equity valuation effects of the PPA, Campbell et al., (2010) find that firms with larger underfunded pension liabilities have a more negative equity valuation while firms with higher marginal tax rates experience a positive equity valuation effect (presumably because of the potential PPA tax deduction). A likely consequence of these equity evaluation effects is that a growing number of DBPP firms have frozen their pension plans and converted to defined contribution plans, shifting the investment risk and funding burden from the employer to the employee (Wessel et al., 2006). Campbell et al. (2010) project an increase in DBPP freezes and terminations amongst firms with significant capital expenditure requirements due to the accelerated funding requirements of the PPA. Thus, it appears likely that the regulatory environment — including changes in accounting standards, affects managers' decisions regarding DBPP and ultimately may have led to further pension underfunding.

4. CONCLUSION

Implications and practical application.

The 2006 adoption of SFAS No. 158 and legislation of PPA created a more stringent DBPP regulatory environment with more prominent reporting of pension liability. Prior research documents that the discount rate used to determine PBO increased in the years following these legislative and regulatory changes and, furthermore, increased discount rate is positively correlated with highly leveraged firms (Houmes & Boylan, 2010). Building on prior research, this historical examination suspects that the intended improvements to pension accounting standards may have had the unintentional consequence of further understating pension liability possibly, exacerbating pension

underfunding—ultimately increasing the likelihood that pension plan sponsors will not be able to meet their pension obligations. Since firms' inability to meet their pension obligations affects investors, plan sponsors, plan participants, and the United States' economy overall, this overview of events in recent history can provide useful insights to regulators when devising accounting standards and federal statutes affecting DBPP.

Specifically, it might be beneficial to establish explicit guidelines for the assumed PBO discount rate used to calculate pension liability. Current FASB guidance stipulates that PBO discount rates should reflect the "rates of return on high-quality fixed-income investments" (FASB, 2006). Establishing precise guidelines for the assumed PBO discount rate would likely mitigate managers' incentives to report lower PBO, minimize pension underfunding, and to report financial performance that appears more favorable than it actually is. Explicit guidelines for assumed PBO discount rate may also diminish managers' opportunity to use the leeway in existing accounting standards to manipulate the financial reporting of pension liability.

Furthermore, financial reporting for DBPP might be improved by creating accounting standards and developing legislation designed to work in tandem. Within the current DBPP regulatory environment, SFAS No. 158 is concerned with accruing pension expense and reporting the corresponding liability on the face of the balance sheet. The PPA's focus is to mandate and incentivize firms to fund their pension plans beyond 100%, which, if acted upon, affects cash flow. Developing accounting standards and legislation that reinforce one another may assist regulators with achieving improved transparency in DBPP financial reporting and decreased pension underfunding.

Limitations and future research

This study historically reviewed the underfunded status of private DBPP over the time period from 2000 to 2014 by detailing economic/financial events leading to the enactment of the Pension Protection Act of 2006 and the 2006 adoption of SFAS No. 158. This historical overview examined prior research which found that the direct relationship between PBO discount rates and the inability to meet pension obligation persisted after the enactment of PPA and the adoption of SFAS No. 158 (Houmes & Boylan, 2010).

Even so, the current study has inherent limitations. Although it includes a review of the literature, the most apparent limitation is that the study is descriptive and anecdotal providing merely hypothetical insight. Another clear limitation of the study relates to SFAS No. 158 and PPA being implemented in the same year (2006), making it difficult to decipher whether the observed relationships are correlated more to one of the regulatory/legislative changes than the other. Yet, these limitations lend themselves to the most obvious opportunity for future research: empirical investigation. Extending this exploratory study to empirical examination of the underfunded status of private U.S. DBPP and the impact of new legislation/regulation on pension accounting and reporting would allow for more substantive support of its implications, potential application, and contribution to the literature.

Moreover, similar studies, perhaps case studies of public sector pension plans, could also provide worthwhile insights particularly since state and municipal pension funds have been widely reported as being underfunded. In any event, the current study, apart from its limitations and future research possibilities, offers insight to the enormous complexity of the DBPP regulatory environment.

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