

Research Title and Abstract as provided upon application to CERF

Research Title

Employees as Creditors: the Disciplinary Role of Pension Deficits in the Market for Corporate Control

Abstract

We aim to examine the disciplinary role of corporate pension deficits in the market for corporate control. We conjecture that companies with larger pension deficits are less likely to engage in diversifying mergers, experience higher merger announcement returns, pay lower premiums to targets, and use a higher percentage of cash in their payment. These results should be more evident for acquirers with pension plans that are dominated by actively working employees or collectively bargained by employees. Our findings would indicate that corporate pension deficits provide employees with strong incentives to monitor managerial performance and influence managers to make value-enhancing investment decisions.

Key Research Findings to date

I examine the disciplinary role of corporate pension deficits, as inside debt owed to employees, in the market for corporate control. We find that acquirers with larger pension deficits experience higher announcement returns. These results are more evident for acquiring firms where employees have stronger monitoring incentives and negotiation power. We also find that acquirers with larger pension deficits are more likely to experience an improvement in labor productivity but are less likely to become a target post acquisition. Our findings indicate that corporate pension deficits provide employees with strong incentives to influence managers to make value-enhancing investment decisions.

Project Update - Upload a Word Document

I have finished the empirical analysis and almost finish writing the paper. Using a large sample of M&As in the U.S. over the 1981 to 2013 period, we document that DB firms with larger pension deficits tend to make higher quality acquisitions. Specifically, we define pension deficits as the gap between pension liabilities and pension assets scaled by firms' total assets adjusted for pension related items. Our main results are that the ratio of pension deficits to total assets of a bidder is positively associated with the bidder's three-day cumulative announcement returns. This positive association is not only statistically significant but also economically significant. A one-standard deviation increase in pension deficits results in an approximately 0.34% increase in acquirer returns. We then conduct a battery of additional tests to ensure that our results are robust to alternative empirical specifications and variable definitions.

Furthermore, to establish the causal impact of pension deficits on acquisition quality, we adopt two approaches. First, we include a number of omitted variables that could potentially drive the positive relation between bidders' pension deficits and announcement returns such as bidders' financial constraints, marginal tax rates, managerial characteristics, and corporate governance as well as targets' characteristics. Second, following Shivdasani and Stefanescu (2009), we conduct

a three-stage procedure that corrects for the nonrandom choice of whether to sponsor a DB plan and the endogeneity of the size of pension deficits with industry unionization rate and pension plan age as the instrumental variables, respectively. The results still hold, suggesting that the disciplinary effect of pension deficits on managers in the market for corporate control is likely to be causal.

Next we evaluate the arguments for the disciplinary role of pension deficits by exploiting the cross-sectional heterogeneity in the results across firms. Specifically, we conduct several subsample analyses by partitioning the sample according to the importance of employees in acquiring firms, acquirers' agency issues and financial constraints, employees' monitoring incentives and negotiation power in acquiring firms, respectively. We find that the positive effect of acquirers' pension deficits on their announcement returns is stronger (1) when employees are more important for acquirers, i.e., labor expenses over capital expenditure or R&D expenditure per employee is higher, (2) when acquirers' managerial agency issues are more severe, i.e., long-term institutional ownership is lower or the number of anti-takeover provisions measured by Gompers, Ishii, Metrick's (2003) governance index is greater, (3) when acquirers are less likely to be financially constrained, i.e., Whited and Wu's (2006) or Hadlock and Pierce's (2010) financial constraint index is lower, (4) when employee retirement benefits in acquiring firms are more likely to be adversely affected by these firms' pension deficits, i.e., the percentage of active employees' benefits is higher or the percentage of vested benefits is lower, and (5) when acquirers' employees have stronger negotiation power, i.e., acquirers' DB plans are collectively bargained or acquirers are located in states where employees have stronger labor rights.

To provide additional evidence to our argument that pension deficits serve as an effective control mechanism that mitigates managers' incentive problems in making acquisition decisions, we investigate how pension underfunding affects acquirers' acquisition strategies such as the likelihood of engaging in diversifying acquisitions and takeover premiums paid to the target, and expected synergistic gains of the deal measured by the announcement returns for the value-weighted portfolio of the acquirer and the target. We find that acquirers with larger pension deficits are less likely to engage in value-destroying diversifying acquisitions and to pay higher takeover premiums to the target and are more likely to experience higher combined announcement returns of both the acquirer and the target. These results lend further supports to the disciplinary role of pension deficits in the market for corporate control.

Finally, we investigate the post-acquisition performance of acquirers with underfunded DB plans. We first examine how pension underfunding affects acquirers' post-acquisition workforce reductions and labor productivity. We find that acquirers with large pension deficits are not likely to cut labor force significantly but are more likely to experience a pronounced enhancement in labor productivity. These results indicate that the positive effect of acquirers' pension deficits on their announcement returns is primarily coming from acquirers choosing high quality targets in the market for corporate control, which improves employees' perceptions towards the security of their retirement benefits, rather than from a significant cut in the labor force. We then examine the probability of an acquiring firm becoming a target following the acquisition because if pension underfunding indeed curbs managers' empire building in making acquisition decisions, these managers are less likely to be disciplined by the market for corporate control (Masulis, Wang, and Xie, 2016). Consistent with our conjecture, we find that pension

deficits significantly reduce the probability of an acquirer becoming a target over the three years following the deal. Overall, these results supplement our main results by showing that acquisitions made by firms with underfunded pension plans have better post-acquisition performance in terms of labor productivity improvement and the probability of facing the discipline from the takeover market.

We will submit the paper to *Journal of Finance* or *Management Science* before 1 May 2017. During the CERF fellowship, I have presented my papers at FIRS 2016 conference, NTU 2016 conference, 2016 SMU Summer Institute of Finance Conference, and research seminars at Hitotsubashi University, the Research Institute of Capital Formation of Development Bank of Japan, and Tsinghua University.