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The evolution of capital structure and operating performance after leveraged buyouts: Evidence from U.S. corporate tax returns ☆

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ABSTRACT

This study uses corporate tax return data to examine the evolution of firms' financial structure and performance after leveraged buyouts (LBOs) for a comprehensive sample of 317 LBOs taking place between 1995 and 2007. We find little evidence of operating improvements subsequent to an LBO, although consistent with prior studies, we do observe operating improvements in the set of LBO firms that have public financial statements. We also find that firms do not reduce leverage after LBOs, even if they generate excess cash flow. Our results suggest that effecting a sustained change in capital structure is a conscious objective of the LBO structure.

1. Introduction

A defining feature of the market for corporate control in recent years is the prominent role of private equity-led leveraged buyouts (LBOs). Kaplan and Strömberg (2009) report that private equity acquirers took almost 3% of the U.S. stock market (by market capitalization) private in LBOs in 2006 alone. Understanding the consequences of these transformative events for the firms that undergo them has long been regarded as important. However, the

☆ The Internal Revenue Service (IRS) provided confidential tax information to Mills and Towery pursuant to provisions of the Internal Revenue Code that allow disclosure of information to a contractor to the extent necessary to perform a research contract for the IRS. None of the confidential tax information received from the IRS is disclosed in this treatise. Statistical aggregates were used so that a specific taxpayer cannot be identified from information supplied by the IRS. We appreciate comments and suggestions received from Andres Almazan, Aydoğan Altı, Sugato Bhattacharyya, Merle Erickson, Peter Finley, Cristi Gleason, John Graham, Jay Hartzell, Justin Hopkins, Edith Hotchkiss, Michael Lemmon, Todd Milbourn, Bob Parrino, Uday Rajan, Matthew Rhodes-Kropf, Berk Sensoy, Doug Skinner, Matthew Spiegel, Laura Starks, Sheridan Titman, Toni Whited, Jaime Zender, two anonymous referees, and participants at the Utah Winter Finance Conference, UBC Winter Finance Conference, Texas Finance Festival, University of North Carolina Tax Symposium, Washington University in St. Louis Corporate Finance Conference, Financial Intermediation Research Society Conference, Caesarea Finance Conference, Western Finance Association, Texas Tech University, University of Waterloo, University of Kentucky, and University of Texas at Austin. We gratefully acknowledge research support from the McCombs Research Excellence Fund. Prasart Jongjaroenkamol, Jordan Nickerson, and Mitch Towner provided excellent research assistance.

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lack of public data for most private firms, at least in the United States, has remained an impediment to financial studies of LBO firms post-buyout.

This paper overcomes the lack of public financial data by instead relying on confidential federal corporate tax return data. Because all U.S. corporations must file tax returns, we are able for the first time to study the evolution of financial performance and structure post-LBO for a large, truly representative sample of U.S. public-to-private LBOs. Our primary sample consists of 317 previously publicly traded firms acquired in LBOs between 1995 and 2007 with assets of at least $10 million. This represents approximately 90% of LBO firms of this size during this period. We can therefore draw broad conclusions about the consequences of these important transactions that prior papers have been unable to draw.

We begin our analysis by studying changes in operating performance around LBOs. Using the tax return data, we find little evidence that LBOs in the 1990s and 2000s result in improvements in operating performance, on average. Mean and median pre-interest return on sales, return on assets, and a measure of economic value added (EVA) are all essentially flat from the two years before to the three years after LBOs. Relative to similar publicly traded firms that did not undergo LBOs, LBO firms experience at best a slight increase in pre-interest return on sales (less than 2%) but no improvement in the other performance measures.

While we find little evidence of improvements in operating performance after LBOs on average, one might imagine that the opportunity to improve operational performance is unlikely to have driven LBOs of firms that were already "healthy" pre-buyout.[1] We therefore separately examine changes in operating performance around LBOs of firms that were unprofitable pre-LBO. We do find some evidence that operating performance improves after LBOs of these "loss" firms, but not relative to firms with similar pre-LBO year operating performance that did not go private in LBOs. This suggests that any improvements we observe in operating performance for these loss LBO firms is driven by mean reversion in operating performance and would likely have occurred even in the absence of an LBO. Overall, our operating performance results appear inconsistent with the view that LBOs lead to improvements in operating performance, either through the disciplining effects of leverage and concentrated ownership (Jensen, 1989), or through operational expertise supplied by private equity acquirers.

These results contrast with the substantial improvements in operating performance found by papers that study samples of LBO firms that have public financial statements available for at least part of the time they are private, either because they have public debt outstanding or because they subsequently go public again and disclose historical financial information at that point. For example, using such samples, Kaplan (1989a), Smith (1990), and Smart and Waldfogel (1994) all find very large improvements after 1980s U.S. management buyouts (MBOs). Guo, Hotchkiss, and Song (2011) find an 11% increase in earnings before interest, taxes, depreciation and amortization (EBITDA)/sales relative to a matched sample of firms that did not go private in LBOs in a sample period similar to ours, though their results are sensitive to the measurement window.[2] One possible explanation for this discrepancy is that LBO firms with available public financial statements are systematically better performers than those without. This seems plausible, as LBO firms are only likely to go public if they have performed well, and, in general, only higher-quality corporate borrowers issue public debt (Chemmanur and Fulghieri, 1994).

To investigate this possible explanation, we analyze changes in operating performance using the tax return data for the subsample of 71 LBO firms in our sample that also have public financial statements available covering at least their first two years post-LBO. Consistent with prior studies, we find substantial improvements in operating performance for this subsample. For example, relative to firms in the same industry with similar performance in the year before the LBO, LBO firms with public financial data experience a mean (median) increase in pre-interest return on sales (ROS) from the year before the LBO to two years after of 9.0% (4.1%). This, combined with the relative lack of improvement in performance after LBOs more generally, suggests difficulty in generalizing from studies of performance changes around LBOs relying only on firms with public financial data available.[3]

We also examine how firms' growth rates change around LBOs. While our data do not include investment measures such as capital expenditures, we can observe firms' total asset levels and sales in the years before, during, and after LBOs. The patterns here are somewhat unclear. On average, LBO firms' assets grow in the first year after the buyout but then shrink in the second and third years after the buyout. Sales, in contrast, are lower the year after the buyout than the years before, but then grow in the second and third years after the buyout. The fact that LBO firms in the 1990s and 2000s do not systematically

[1] As an example, when Texas Pacific Group and Warburg Pincus acquired Neiman Marcus in 2005, "Neiman Marcus had nothing wrong with it. The chain was coming off its strongest year ever, thanks to a boom in the luxury retail market." The scope for improving operations was unlikely to have been very large in this case, and indeed "TPG and Warburg Pincus always said they wouldn't meddle, and (Neiman Marcus CEO Burt) Tansky said they've kept their word, allowing the company to move forward with long-term goals while continuing to dominate the red-hot luxury retail market." *Source*: "Hands-off approach at Neiman Marcus," *Dow Jones News Service*, November 20, 2006.

[2] Leslie and Oyer (2009) find no evidence of improvements after U.S. LBOs during a similar period, though their sample consists predominantly of LBOs of already private firms and they do not compare performance to a matched sample of firms that did not go private. Acharya, Gottschalg, Hahn, and Kehoe (2013) and Weir, Jones, and Wright (2008) find modest improvements in operating performance after LBOs in the UK during this period. Boucly, Sraer, and Thesmar (2011) and Bergstïm, Grubb, and Jonsson (2007), in contrast, find large improvements in operating performance after LBOs during this period in France and Sweden, respectively.

[3] Improvements in performance in LBO firms with public financial data are much smaller when compared to a sample of firms matched using propensity scoring, suggesting that the results are sensitive to the benchmark. However, the propensity-matched sample has significantly worse pre-LBO performance than LBO firms, and mean reversion in performance at these firms could cause underestimation of the relative improvement in LBO firms.