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Does Private Equity Create Wealth? The Effects of Private Equity and Derivatives on Corporate Governance

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Private equity has reaped large rewards in recent years. We argue that one major reason for this success is due to the corporate governance advantages of private equity over those of the public corporation. We argue that the development and trade of substantial derivative contracts have significantly weakened the governance of public corporations and has created a need for financially sophisticated directors and much closer supervision of management. The private-equity model delivers these benefits and allows corporations to be better governed, creating large wealth gains for investors.

INTRODUCTION

Does private equity create value when it acquires a company in a leveraged buyout (LBO)? If so, how? This question has fascinated scholars ever since the first big wave of buyouts occurred in the mid-1980s, but has yet to be resolved.¹ A second, even larger wave of LBO transactions from 2003 to 2007, brought to a shuddering halt by the recent subprime mortgage crisis, has raised the question again as the current market for private-equity deals has collapsed. While many of the old arguments about underlying rationales for private-equity deals have survived this dramatic downturn, we offer an important new motivation for future deals: private-equity investors are better risk moni-

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¹ The earliest and best-known paper is Michael C. Jensen, *Eclipse of the Public Corporation*, 67 Harv Bus Rev 61, 67 (Sept/Oct 1989) (positing that private-equity-owned firms would do a better job of managing free cash flow than public companies). For further discussion of this literature, see Part II.

tors with better incentives than public shareholders at firms with significant derivative² trading activity and derivative contract positions.

As the subprime mortgage and 2008 banking crises have vividly illustrated, the growing use of, and trading in, derivative instruments by corporations has eroded the effectiveness of several critical corporate governance mechanisms—the board of directors, the financial accounting system, and oversight by regulatory authorities—because firms lack effective means of monitoring derivative risk exposure on a real-time basis. This change has increased the importance of attracting financially sophisticated, highly motivated corporate directors who can deliver intensive monitoring of corporate risk management strategies, who are capable of independently and effectively controlling firm management to regulate derivative exposure, and who set senior management financial incentives to ensure that these executives' incentives and personal risk exposures are aligned with those of firm owners.

We argue that concentrated private-equity ownership is and will continue to be a very effective way of attaining the above objectives. Private-equity involvement strengthens board monitoring of derivative exposures by reducing board size, improving information flows to the board, increasing board control over managers, sharpening director financial incentives to monitor derivative exposure carefully, and attracting highly qualified, more financially sophisticated directors who are better able to understand the associated risks. It also creates incentives for managers to carefully evaluate risk-return tradeoffs. These strengths could be particularly important for financial firms that have experienced tremendous write-downs of their loan portfolios in recent months.³ In this regard, the Federal Reserve has relaxed its stringent regulations on private-equity investment in banks and bank holding companies to facilitate the flow of capital into banks.⁴ The Comptroller of the Currency has also permitted a private-equity fund manager to purchase a bank personally, rather than through the use of his fund, and thereby avoid having his fund classified as a bank hold-

² Derivatives are generally defined to include options, futures and forward contracts, and swaps, as well as financial products with derivative contracts embedded in them such as convertible securities, insurance, and reinsurance.

³ Dan Wilchins, *Private Equity Is Viewed As a "Shock Absorber,"* Intl Herald Trib 17 (July 1, 2008) (stating that banks are in "dire need of capital" and suggesting that private equity may be able to provide it).

⁴ See Board of Governors of the Federal Reserve System, *Policy Statement on Equity Investments in Banks and Bank Holding Companies* 9–10 (Sept 22, 2008), to be codified at 12 CFR § 225.144, online at <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20080922b1.pdf> (visited Jan 11, 2009). In certain circumstances, the new rules permit investors to hold up to 15 percent of the voting power and 33 percent of the total equity without being deemed a controlling shareholder (and thereby being subject to regulation as a bank holding company). See id at 10. They may also appoint one member of the board of directors. Id at 6.

ing company.⁵ These regulatory actions should facilitate greater investment in the sector by private-equity firms.⁶

Large increases in debt also create strong managerial incentives to improve firm efficiency because they: (1) make stock prices much more sensitive to improvements in firm value; and (2) motivate managers to use firm cash conservatively and to eliminate underutilized assets so as to minimize the risk of bankruptcy, financial distress, and the accompanying forced management turnover. Moreover, debtholders and institutional investors can further improve firm risk monitoring since they are large investors who frequently hold both debt and equity positions in private-equity-controlled firms.⁷ This gives them good access to and strong incentives to monitor proprietary firm information flows to accomplish this goal. Thus, the shift toward greater private-equity ownership in the economy can be viewed as a value-creating response to increased derivative activity and contract exposure levels, especially in less competitive industries where product market competition is a weaker alternative mechanism for motivating managers to improve firm efficiency and profitability.

This Article is structured as follows. In Part I, we explain the institutional details of private-equity investing in, and monitoring of, portfolio companies. Part II discusses prior theories explaining why private-equity investing creates value. We then turn in Part III to the implications of the increased usage of derivative securities for corporate governance at public companies, arguing that it has created important new challenges at these corporations, especially for financial institutions. Part IV analyzes how private equity benefits investors through improved monitoring of their portfolio companies' derivative risk management practices. We conclude with a brief summary and a discussion of future areas for private-equity investment.

⁵ Peter Lattman, *Flowers, Not His Firm, Buys a Bank*, Wall St J C6 (Sept 24, 2008).

⁶ See Peter Lattman and Damian Paletta, *Fed Gives Funds More Leeway to Buy Banks*, Wall St J A1 (Sept 23, 2008) (discussing how the increased flexibility given to private-equity firms will enable them to "make investments in some bank holding companies where they had been reluctant to do so over the last few months"); The Lex Column, *Beyond Buyouts*, Fin Times 12 (Apr 9, 2008) (describing a private-equity firm's "multi-billion dollar investment to recapitalize Washington Mutual" as indicating "where private equity's cash piles will go next").

⁷ Michael Jensen explains that this common practice is referred to as "strip financing," which Jensen defines as investors holding "roughly proportional 'strips' of all securities in the capital structure" and thereby reducing any conflicts of interest among the classes of claimants at firms. Michael C. Jensen, *Corporate Control and the Politics of Finance*, 4 J Applied Corp Fin 13, 25 (Summer 1991).

I. PRIVATE EQUITY'S GROWTH IN RECENT YEARS

A. Background

What is private equity? The categories of investments that fall within the general rubric of private equity include venture capital; midstage company finance; distressed firm investment; LBOs of firms, divisions, or subsidiaries of public and private companies; and going-private deals. In this Article, we are primarily concerned with private-equity buyout funds that, as repeat players in the buyout markets, facilitate LBOs and other going-private transactions.

Private-equity funds' relationships with their investors have not been studied extensively due to stringent data limitations. One important exception is a study by Andrew Metrick and Ayako Yasuda,⁸ who examined the structure of private-equity funds using a sample of 238 funds raised from 1992 to 2006. They documented that "virtually all" private-equity funds are set up as private limited partnerships with a ten-year term in which outside investors act as passive limited partners and the private-equity firm is the controlling general partner.⁹ Limited partners have limited or no withdrawal rights prior to the expiration of the ten-year term. They are also potentially subject to additional capital calls by the private-equity general partner.

Private equity management firms periodically raise capital for new funds, usually every three to five years.¹⁰ This system has the advantage of permitting investors in earlier funds to observe the private equity group's performance over time and to choose whether to invest in later funds based on the private equity firm's prior performance. Furthermore, each fund has a limited life, so the general partners must raise new funds to continue investing. In order to raise new funds, they are under great pressure to demonstrate good performance for their existing funds.¹¹

The buyout firms earn fees from a variety of different sources: management fees, which are typically 2 percent of committed and/or invested capital; carried interest, which is usually 20 percent of the profits earned by the fund on its investments, subject to various adjustments, thresholds, and hurdles; transaction fees, which are paid to

⁸ Andrew Metrick and Ayako Yasuda, *The Economics of Private Equity Funds* *2 (University of Pennsylvania, The Wharton School, Department of Finance Working Paper, Sept 2007), online at <http://finance.wharton.upenn.edu/~rlwctr/papers/0717.pdf> (visited Jan 11, 2009).

⁹ Id at *2.

¹⁰ Id at *3.

¹¹ This is especially the case since existing investors have been identified as interested in private-equity investments and are most likely to become limited partners in future funds, provided they did well in prior funds.

the fund when it buys or sells a portfolio company; and monitoring fees for its work helping to manage the portfolio company while it is owned by the buyout firm.¹²

Most private-equity firms use similar financing techniques in acquiring portfolio companies. The typical LBO or other going-private transaction is structured as a purchase of all of the publicly held stock of a corporation by a privately held acquisition vehicle.¹³ A private-equity buyout firm generally controls this entity, with other types of buyers being much less common.¹⁴ The private-equity firm sponsoring the transaction will obtain its capital from the equity contributions of its buyout fund and the managers of the target firm plus the cash proceeds from privately placed loans secured by target firm assets and expected cash flows. As part of the acquisition, managers of the target firm obtain a significant equity interest in the firm. Normally, top managers in private-equity-owned firms have equity interests that are ten to twenty times larger than those held by their public company counterparts.¹⁵

After the acquisition, the general partners in the private equity fund are actively involved in the strategic direction of the portfolio company.¹⁶ They normally have operational control over the company through their control of its board of directors. The general partners act as advisors to the portfolio company's management and as members of the company's board of directors, and draw on their expertise in corporate restructurings and their contacts throughout the industry to assist in creating value. However, when needed, the private equity partners can use their control to swiftly alter company policies, remove underperforming executives, or challenge management to perform better.¹⁷

¹² Metrick and Yasuda, *The Economics of Private Equity Funds* at *6–13 (cited in note 8) (developing an expected-revenue model for private-equity firms).

¹³ James F. Cotter and Sarah W. Peck, *The Structure of Debt and Active Equity Investors: The Case of the Buyout Specialist*, 59 J Fin Econ 101, 102–03 (2001) (discussing the various combinations of debt—subordinated, senior, long-term, and short-term—and third-party equity that leveraged buyout shops use to purchase the publicly held shares of target companies).

¹⁴ Id at 111–12 (finding that buyout specialists purchased a median 51.6 percent of the common stock of target companies in a sample of sixty-four LBOs, while target firm managers held 20 percent and third-party equity investors held the remaining 28.4 percent of the shares).

¹⁵ Steven N. Kaplan, *The Effects of Management Buyouts on Operating Performance and Value*, 24 J Fin Econ 217, 246 (1989). Jensen states that “[t]op-level managers frequently receive 15–20 percent of the equity.” Michael C. Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 Am Econ Rev 323, 326 (1986).

¹⁶ Michael C. Jensen, *The Economic Case for Private Equity (and Some Concerns)* *15 (Harvard NOM Research Paper No 07-02, Nov 2007), online at <http://ssrn.com/abstract=963530> (visited Jan 11, 2009).

¹⁷ See Brian Cheffins and John Armour, *The Eclipse of Private Equity*, 33 Del J Corp L 1, 13–14 (2008).

The boards of LBO portfolio companies are typically comprised of the CEO, private equity firm representatives, and outside industry experts, and they primarily act to advise management on strategic considerations.¹⁸ They are more effective than public company boards, as “even the best part-time independent directors are not the equivalent of full-time, highly incentivized private equity managers.”¹⁹ The CEO is a director, although not usually the board’s chair, while the other officers are active ex officio members of the board.²⁰ In addition, these boards tend to be small and meet frequently, facilitating rapid decisionmaking.²¹

Unlike public companies, boardroom activity in LBO firms is less concerned with regulatory compliance, committee work, and process.²² There is better information available to top management and board members because of initial extensive due diligence, specialized internal reporting requirements, and the board’s more intense operational focus.²³ Moreover, there is a different social dynamic on the board, such that anything can be discussed and all assumptions are subject to reconsideration.²⁴

Given the finite life of LBO limited partnerships, general partners manage their LBO firms with an eye toward ultimately liquidating their investment. The primary exit choices are to take the firm public in an IPO (reverse LBO), sell to a strategic buyer, sell to another private equity fund, or conduct a piecemeal liquidation. IPOs

¹⁸ Geoffrey Colvin and Ram Charan, *Private Equity, Private Lives*, Fortune 190 (Nov 27, 2006) (describing how private-equity-owned firms’ boards are different from public company boards and “far more involved in assisting the company”); Cotter and Peck, 59 J Fin Econ at 137 (cited in note 13) (“Thus, buyout specialists are likely to more effectively monitor managers by having more seats on the board and by having smaller boards.”).

¹⁹ Ronald J. Gilson and Charles K. Whitehead, *Deconstructing Equity: Public Ownership, Agency Costs, and Complete Capital Markets*, 108 Colum L Rev 231, 259–60 (2008) (suggesting that private ownership increases the value of a firm in part through “reduced agency costs” resulting from a more active board of directors).

²⁰ Jensen, *Economic Case* at *15 (cited in note 16).

²¹ See, for example, Viral V. Acharya and Conor Kehoe, *Corporate Governance and Value Creation: Evidence from Private Equity* *34 (London Business School Working Paper, May 2008), online at http://www.bvca.co.uk/pdf.php?id=901&filename=corporate_governance_and_value_creation_evidence_from_private_equity (visited Jan 11, 2009); Francesca Cornelli and Oguzhan Karakas, *Private Equity and Corporate Governance: Do LBOs Have More Effective Boards?*, in *Globalization of Alternative Investments Working Papers Volume 1: The Global Economic Impact of Private Equity Report 2008* 65, 72 (World Economic Forum 2008), online at http://www.weforum.org/pdf/cgi/pe/Full_Report.pdf (visited Jan 11, 2009); Robert Gertner and Steven N. Kaplan, *The Value-Maximizing Board* *13 (NBER Working Paper, Dec 1996), online at <http://faculty.chicagogsb.edu/steven.kaplan/research/gerkap.pdf> (visited Jan 11, 2009).

²² See Cheffins and Armour, 33 Del J Corp L at 14 (cited in note 17).

²³ Jensen, *Economic Case* at *16 (cited in note 16).

²⁴ See Michael C. Jensen, *The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems*, 48 J Fin 831, 863 (1993); Jensen, *Economic Case* at *16 (cited in note 16).

typically yield the highest return for the private equity fund's investors, while sales to strategic buyers are generally considered the second-best option.²⁵

B. The Development of Private Equity Capital

Private equity financing started from rather modest roots. Prior to 1980, the total amount of capital in the private equity market equaled between \$2.5 and \$3.0 billion, with new capital inflows at less than \$100 million per year.²⁶ Only in the 1980s, after deregulatory initiatives at the Department of Labor and the SEC removed important obstacles to institutional investors putting large amounts of capital into the asset class, did the first private equity boom begin.²⁷ The mid-to-late part of the 1980s was an active period for LBOs, before market conditions changed and LBO activity declined rather sharply in the early 1990s.

Over the past several years, there has been an explosion in private-equity fundraising. Recent estimates are that in 2005–2006, the private-equity/LBO market had reached 5 percent of the capitalization of the US stock market, or about 1.4 percent of global GDP.²⁸ The rapid growth in this market arose from favorable credit market conditions, a huge increase in the size of private-equity funds' resources, and the increased importance of hedge funds.

²⁵ These buyers would value any improvements in operating performance at the portfolio company created by the selling private-equity owners according to whether they believe that such gains will be temporary or permanent. This gives the private-equity seller an incentive to ensure that the changes will persist. In the case of a strategic buyer, this would mean that the acquirer would have to be convinced that its management could replicate the private-equity firm's success in improving risk management or any other sources of the improved operating performance. In a reverse LBO, potential investors would need to see that the newly public firm could duplicate its past success with a less concentrated ownership structure. In this regard, these investors could take comfort from evidence that operating performance improvements at reverse LBO firms persist for at least several years after the firm returns to public ownership. See Gertner and Kaplan, *The Value-Maximizing Board* table 1 (cited in note 21).

²⁶ Daniel A. Wingerd, *The Private Equity Market: History and Prospects*, Investment Policy Mag 26, 30 (Sept/Oct 1997) (describing how the weak stock market and inadequate supply of qualified entrepreneurs led to poor conditions for venture capital in the 1970s).

²⁷ See *id.* at 30–32 (arguing that regulatory changes in 1980 meant that “outside managers of plan assets in the venture arena could now be paid proportionately to their success, a vital element in the venture capitalists’ mode of doing business”); Valentine V. Craig, *Merchant Banking: Past and Present*, 14 FDIC Banking Review 29, 30 (Sept 2001), online at <http://www.fdic.gov/bank/analytical/banking/2001sep/br2001v14n1art2.pdf> (visited Oct 30, 2008) (describing the history of the private-equity market in the United States from the 1800s to the present).

²⁸ Viral V. Acharya, Julian Franks, and Henri Servaes, *Private Equity: Boom or Bust?*, 19 J Applied Corp Fin 44, 44 (Fall 2007) (describing how new private equity or LBO transactions amounted to \$500 billion globally, of which \$200 billion was spent in the United States and \$140 billion in Europe).

After mid-2007, however, private-equity-financed deals dropped off sharply. Increasing competition among bidders had driven deal prices higher, while accommodating credit markets permitted the average multiple of debt to cash flow to rise to historically high levels.²⁹ High prices and greater debt loads elevated default risks for the newly private firms. Things fell apart when the credit market for private-equity leveraged financing seized up around the same time as the subprime mortgage market collapsed. Not only did this stop new financing from being raised for new private-equity deals, but it also left huge inventories of debt instruments on the books of major banks from older deals that they had already completed, as well as a large pipeline of commitments to finance existing deals.

A related problem was the decline in the quality of many of the securities being used to finance these transactions. Financial institutions originating the bank loans that were financing the vast upsurge in private-equity deals were not retaining these loans on their own books, but rather were syndicating them and selling them into the secondary market. Because the originating banks were realizing large fees upfront and then reselling these securities to third parties, the originating banks' incentives to carefully assess the risks of each loan, to screen out weak applicants, and to monitor their ongoing health were significantly weakened.³⁰ This created incentives for excessive risk taking in the LBO market. Compounding this problem, many of these deals used "covenant-lite" debt, where, because of highly competitive credit market conditions, LBO lenders agreed to accept weaker contractual protections that reduced lenders' abilities to constrain or discourage opportunistic managerial conduct at these newly privatized firms.

While signs of a turnaround in the private-equity market recently have been detected by some observers, the timing and prospects of this recovery remain uncertain.³¹ One question that hangs over the future of the industry is: how strong are its claims that it increases value for investors? Equally importantly, assuming that private equity does create value for investors, what are the sources of that value? In the next Part, we address these questions.

²⁹ Steven Rattner, *How the Levers Fell Off the Buyout Machine*, *Fin Times* 13 (Mar 25, 2008) (noting how the value of leveraged buyouts announced between July 2007 and March 2008 equaled "less than half the amount achieved in June 2007 alone").

³⁰ Acharya, Franks, and Servaes, 19 *J Applied Corp Fin* at 53 (cited in note 28).

³¹ See Serena Ng and Liz Rappaport, *Is Debt Thaw on Borrowed Time? Buyout Bids, Stock Buybacks, Junk Issues Offer Hope, but Some See Short Window*, *Wall St J C1* (May 15, 2008) (summarizing leveraged-lending executives' worries that a March to May 2008 improvement in the credit markets was "a short-term window of opportunity for [private-equity] issuers").

II. DOES PRIVATE EQUITY CREATE VALUE?

Ever since private equity deals first became popular in the 1980s, academics have focused a substantial amount of attention on whether they create value for shareholders. Furthermore, the sources of the value that may be created by private-equity transactions are crucial because some of them may involve wealth transfers or tax subsidies rather than social welfare improvements.

A. Improvements in Corporate Governance and Reduction of Agency Costs

The most commonly cited argument for private equity creating value is that these transactions lead to improved corporate governance and therefore agency-cost reductions. However, the source of those agency-cost reductions has been subject to some dispute, and five main (overlapping) theories have been proposed, which focus on different improvements in corporate governance. First, some authors have claimed that LBOs reduce managers' discretion to misuse free cash flow by ensuring that they must make debt service payments, by focusing managers on more efficient operations, and by creating strong personal incentives to work hard to avoid bankruptcy. In this vein, Michael Jensen argues that going-private transactions reduce the agency costs of equity by cutting down on managers' discretion to misallocate cash into empire building, empire preservation, and excessive perquisites.³² Empire building and empire preservation in the face of poor performance are directly contrary to the interests of company shareholders. Thus, executives' single-minded concern for generating cash flow to pay down a company's high debt from an LBO shifts the focus of management from expanding the business in slow growth areas to growing a company's equity value as rapidly as possible, even if it involves reducing sales and shedding assets that have greater value outside the company.

Jensen argues that adding debt to a company's capital structure is a more credible commitment by management to pay out future cash flows, rather than investing them in negative present value projects.³³ In essence, by exchanging debt for equity, managers bond themselves to pay out future cash flows and not to retain or reinvest them in unprofitable ventures. Moreover, in Jensen's view, the increased risk of

³² Jensen, 67 *Harv Bus Rev* at 66–67 (cited in note 1) (noting how managers have “few incentives to distribute the funds”).

³³ See *id.* at 67.

financial distress motivates private-equity-owned firms' managers to make their companies more efficient.³⁴

A second source of potential agency-cost reductions in LBOs arises out of a strong realignment of managerial incentives, which focuses executives' efforts more sharply on performance and value.³⁵ Private-equity transactions give managers substantial equity ownership positions, resulting in strong financial incentives to work hard and ensure their companies perform well. Steven Kaplan estimates that after a private-equity transaction, the top two corporate officers of the target firm have increased their stock ownership to 4.41 percent on average, while the remaining more junior officers have increased their ownership positions to 9.96 percent.³⁶ Top managers also frequently receive large stock and cash bonuses when they perform well.

A third potential cause for reduced agency costs is the enhanced management incentives caused by heightened sensitivity of stock prices to firm performance. The rise in leverage, which occurs at the time of the LBO, raises the elasticity of stock price revisions to firm value changes.³⁷ Thus, managers holding large equity positions realize much greater wealth gains from improved firm profitability. This intensifies manager incentives both to reduce costs and to increase revenues so as to raise firm value.

A fourth source of agency-cost reductions in private-equity transactions arises from improved board monitoring of management as a result of much stronger financial incentives for directors and better internal reporting. Basically, the LBO creates a shareholder with a large block of shares, or blockholder, whose representatives are placed on the board and given majority control,³⁸ while management has

³⁴ See *id.* at 67.

³⁵ Luc Renneboog and Tomas Simons, *Public-to-Private Transactions: LBOs, MBOs, MBIs and IBOs* *10 (ECGI Finance Working Paper No 94/2005, Aug 2005), online at <http://ssrn.com/abstract=796047> (visited Jan 11, 2009).

³⁶ See Kaplan, *Effects of Management Buyouts*, 24 *J Fin Econ* at 245 (cited in note 15) (positing that the adjusted distribution of equity interest could "suggest that new incentives for junior managers play an important role in buyouts").

³⁷ This was demonstrated by Dan Galai and Ronald W. Masulis, *The Option Pricing Model and the Risk Factor of Stock*, 3 *J Fin Econ* 53, 58–61 (1976) (concluding that "the systemic risk of the firm [] and of its equity [] is not only a positive function of its leverage . . . but that it is a positive function of the face value of debt [as well as several other factors]"); Robert Merton, *On the Pricing of Corporate Debt: The Risk Structure of Interest Rates*, 29 *J Fin* 449, 466–67 (1974) (showing that until some inflection point, the return equity investors demand from a firm increases faster than the ratio of the firm's market debt to equity); Mark E. Rubinstein, *A Mean-Variance Synthesis of Corporate Financial Theory*, 28 *J Fin* 167, 176–77 (1973) (quantifying the effect of financial leverage on the risk of a firm and its corresponding expected equity rate of return).

³⁸ Cotter and Peck, 59 *J Fin Econ* at 111–12 (cited in note 13) (comparing the incentives of the three types of controlling investors—management, buyout specialists, and outside investors).

much more limited board representation.³⁹ This increased concentration of ownership and control rights eliminates the free rider problem of monitoring management that is endemic to most public corporations. Private-equity board members also have significant financial skills and experience from their prior LBO investments, while public directors generally do not; and they have better information to work with as well. All of these factors together result in better monitoring.

A fifth benefit of private equity, emphasized by Steven Kaplan and Per Strömberg,⁴⁰ is the replacement of ineffective senior managers with highly talented executives. The ability of a privately held firm to quickly replace management, who can be entrenched in a publicly held firm, and to locate and recruit highly talented executives to the firm by offering them much higher, performance-sensitive compensation is another important element of the LBO process.⁴¹ This enables the going-private firm to realize much greater levels of operational efficiency and sales and profit growth.

However, there is one important critique of the claim that private equity results in improved corporate governance and lower agency costs. Bengt Holmström and Kaplan⁴² argue that private equity only acts to restructure wayward public companies at one point in time. They believe that this is generally no longer necessary because top executives at public firms now get large amounts of stock options and incentive pay to focus them on creating value for their investors. Furthermore, public company management today is subjected to much closer monitoring by shareholders and directors so that they will pursue shareholder-friendly policies. As a result, they claim that public corporations are much more focused on maximizing shareholder value and the need for private equity to fill that role has diminished or even disappeared. Essentially, Kaplan and Holmström argue that corporate governance in US public companies has significantly improved over the last few years, substantially lowering the agency-cost savings that private-equity investors can attain from an LBO. The key issue then becomes: how much further does public company corporate governance need to go?

³⁹ Id.

⁴⁰ Steven N. Kaplan and Per Strömberg, *Leveraged Buyouts and Private Equity*, 23 J Econ Perspectives (forthcoming 2009).

⁴¹ Acharya and Kehoe, *Corporate Governance and Value Creation: Evidence from Private Equity* at *6 (cited in note 21) (reporting that one-third of CEOs are replaced within the first 100 days of an LBO and two-thirds are gone within four years).

⁴² See Bengt Holmström and Steven N. Kaplan, *Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s*, 15 J Econ Persp 121, 136 (2001) (arguing that LBOs disappeared in the 1990s because “they were no longer needed”).

Many commentators and researchers disagree with the Holmström and Kaplan position, arguing that senior management continues to dominate the corporate boards of most publicly held firms in the United States and elsewhere.⁴³ These commentators claim that there is substantial evidence of this dominance, including excess CEO compensation, low sensitivity between CEO pay and performance, low sensitivity between CEO performance and turnover, low debt levels leading to unnecessarily large tax payments, minimal restrictions on senior managers' sales or hedging of firm equity, and general support by boards for strong takeover defenses.⁴⁴

Why might this managerial domination persist? One possible answer is because the director nomination process at public companies has historically ensured that directors care more about what CEOs think than what shareholders think.⁴⁵ The existing nomination process is designed to give the existing board the right to nominate directors, to give CEOs significant influence over which candidates are nominated by the board and to place restrictions on outside investors' ability to make nominations. Going-private actions can result in improved corporate governance and agency-cost savings by addressing this problem.

While improved corporate governance and reduced agency costs are recognized by most researchers as benefits of going-private transactions, many other motivations have been suggested. These include transaction cost savings, reduced SEC regulatory constraints, takeover defenses, tax savings from high debt, expropriation of other corporate claimants by stockholders, and undervaluation of targets. We review the arguments and evidence on each of these alternative motivations below.

B. The Sarbanes-Oxley Burden and Transaction Cost Reductions

The compliance costs of the Sarbanes-Oxley Act⁴⁶ (SOX), especially § 404's mandate that all firms engage in costly documentation of

⁴³ Lucian Bebchuk has been an outspoken advocate of this position. See generally, for example, Lucian Bebchuk and Jesse Fried, *Pay without Performance: The Unfulfilled Promise of Executive Compensation* (Harvard 2004).

⁴⁴ See, for example, *id.* at 1–10.

⁴⁵ Melvin Aron Eisenberg, *The Structure of the Corporation: A Legal Analysis* 146–48 (Little, Brown 1976). The increase in hedge fund shareholder activism over the past decade may be pushing boards to a more balanced weighing of shareholder and manager interests. Hedge funds' high success rates in their activist endeavors have heightened director sensitivity to their interests. See Alon Brav, et al, *Hedge Fund Activism, Corporate Governance, and Firm Performance*, 63 J Fin 1729, 1733 (2008) (arguing that because hedge funds occupy an "important middle ground" between internal monitoring by large shareholders and external monitoring by buyout firms, they are in a "potentially unique position to reduce the agency costs associated with the separation of ownership and control").

⁴⁶ The Sarbanes-Oxley Act of 2002, Pub L No 107-204, 116 Stat 745, codified at 15 USC § 7201 et seq.

their internal control systems,⁴⁷ may be avoided if the company goes private.⁴⁸ However, a recent article by Robert Bartlett shows that many companies taken private are still subject to federal securities reporting requirements and SOX's restrictions.⁴⁹ Further, Christian Leuz reports a contemporaneous increase in private-equity transactions outside the United States that are not subject to SOX. He argues that a general boom in private-equity investment and the availability of debt for LBOs is a more likely explanation for rising LBO activity.⁵⁰ This evidence suggests that SOX compliance costs are not that significant a factor in going-private decisions for many firms.

Private-equity transactions are also claimed to reduce public companies' other regulatory compliance costs substantially.⁵¹ One commonly cited type of cost reduction is the elimination of stock exchange listing fees,⁵² which constitute future cost reductions over the period of time the newly privatized firm remains unlisted.⁵³ A related benefit is the elimination of listing requirements that constrain firm capital structures, ownership structure, and shareholder approval rights in mergers and acquisitions (M&A) and other major firm decisions. Moving out of the public eye may also permit firm managers to devote more of their time to managing the firm and less to investor relations efforts designed to educate public investors about managers' plans and actions at the firm.

Public disclosure requirements under securities laws can place firms at a competitive disadvantage with other firms that are privately held or are headquartered in countries with less demanding disclosure

⁴⁷ 15 USC § 7262.

⁴⁸ See, for example, Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 Yale L J 1521, 1588 (2005) (reporting that the cost of being public more than doubled after SOX and that it imposed a "far more significant burden" on small firms than on large companies).

⁴⁹ Robert P. Bartlett III, *Going Private but Staying Public: Reexamining the Effect of Sarbanes-Oxley on Firms' Going Private Decisions*, 76 U Chi L Rev XXX (2008) (discussing how most going-private transactions require the target firm to issue high-yield debt securities, which "effectively requires [the firm] to comply with SOX"). **[Cite on page starting at "In actuality, firms going private frequently remain subject to SOX's" to "formally incorporated into the periodic reports themselves." AML]**

⁵⁰ Christian Leuz, *Was the Sarbanes-Oxley Act of 2002 Really This Costly? A Discussion of Evidence from Event Studies and Going Private Decisions*, 44 J Acct & Econ 146, 161 (2007).

⁵¹ Luc Renneboog, Tomas Simons, and Mike Wright, *Why Do Public Firms Go Private in the UK?*, 13 J Corp Fin 591, 597-98 (2007) (discussing how going private results in "the elimination of the direct and indirect costs associated with maintaining a stock exchange listing").

⁵² See Harry DeAngelo, Linda DeAngelo, and Edward M. Rice, *Going Private: Minority Freezeouts and Stockholder Wealth*, 27 J L & Econ 367, 400 (1984).

⁵³ Renneboog and Simons, *Public-to-Private* at *13 (cited in note 35) (estimating savings of \$30,000 to \$200,000 in service costs from going private).

regimes. So a third benefit of going private is to reduce public disclosures by the firm.

At the same time that compliance costs have increased, the benefits of being public may have declined for some companies. Small cap public corporations were adversely affected by the collapse of the technology boom in 2001, which made the issuance of new equity more expensive for these companies while simultaneously reducing the trading volume in their stocks. The benefits of being public to many of these small firms may have disappeared when they experienced falling stock prices, reduced liquidity, minimal analyst coverage, and lower trading volume.⁵⁴

In sum, there seem to be significant regulatory cost savings that can be obtained by going private, and for at least some firms, particularly smaller firms, these cost savings may exceed the benefits of being a public company.

C. Takeover Defenses

Public companies that are threatened by the prospect of a hostile takeover may want strong antitakeover defenses. A going-private transaction is the ultimate defense against a hostile takeover because the private-equity firm and the target firm's managers buy out the public shareholders in order to ensure that they obtain or maintain control of the firm.⁵⁵ This removes the possibility of an unwanted bidder obtaining a controlling position in the firm through stock purchases without the target company management's approval. This motive seems more likely in management buyouts (MBOs) with large management representation on boards since in LBOs private-equity investors closely monitor management. Another important limitation of this hypothesis is that many companies that engage in LBOs are quickly taken public again, and at least in some cases, their management loses control at that point.

A more recent variation on this theme might be that target firm managers who are threatened by hedge fund activist shareholders may seek to take their firms private to retain control over them. This motivation is consistent with observed evidence suggesting that hedge fund attempts at interventions frequently lead to private-equity buyouts at targeted firms, especially at small- and mid-cap companies.⁵⁶

⁵⁴ Jana P. Fidrmuc, Peter Roosenboom, and Dick van Dijk, *Do Private Equity Investors Take Firms Private for Different Reasons?* *1 (Working Paper, Feb 2007), online at <http://ssrn.com/abstract=968101> (visited Jan 11, 2009).

⁵⁵ See Louis Lowenstein, *Management Buyouts*, 85 Colum L Rev 730, 780 (1985).

⁵⁶ Brav, et al, 63 J Fin at 1742 (cited in note 45).

While going private is one effective defense against takeovers, there are also less costly alternatives such as recapitalizing stock into dual class structures which include a class of publicly traded inferior shares.⁵⁷ Thus, one is left to wonder whether takeover protection can be a major force driving going-private transactions.

D. Tax Savings

Many scholars have observed that LBOs involve buying large amounts of publicly held stock using borrowed funds. The resulting highly leveraged capital structure creates high debt service obligations for the newly privatized companies. However, one benefit of the increase in interest payments is the enhanced corporate tax deductions available to the firm. For firms with significant positive cash flows from operations, tax benefits can play a major role in any wealth gains, although these benefits may vary across countries depending on the nation's particular tax system.⁵⁸

Kaplan estimated that US private-equity deals generated tax benefits equal to between 21 and 142.6 percent of the premium paid to shareholders during the first half of the 1980s.⁵⁹ Some scholars argue that these benefits overwhelm the other potential gains from LBOs and should therefore be restricted by governments.⁶⁰ Luc Renneboog and Tomas Simons question whether these benefits could be the real motive for going-private transactions because prebuyout investors can anticipate them and therefore should largely appropriate them in competitive markets.⁶¹ If correct, this undermines the argument that taxes are a major force for taking firms private.

⁵⁷ If a hostile offer is pending or imminent, however, it may be difficult to win a shareholder vote to approve a dual class recapitalization. Under these circumstances, an LBO or an MBO seems more likely to be a successful defense.

⁵⁸ See Renneboog and Simons, *Public-to-Private* at *16–17 (cited in note 35) (summarizing academic literature that found a positive correlation between potential tax savings and the likelihood of going private).

⁵⁹ See Steven N. Kaplan, *Management Buyouts: Evidence on Taxes As a Source of Value*, 44 J Fin 611, 623–24 (1989) (estimating the potential value of the tax benefits involved in an MBO for companies facing a 15 percent and a 46 percent marginal tax rate, respectively). Kaplan estimates that a company receives even higher benefits if it elects to make a step-up in basis. See id.

⁶⁰ George M. Frankfurter and Erdal Gunay, *Management Buy-Outs: The Sources and Sharing of Wealth between Insiders and Outside Shareholders*, 32 Q Rev Econ & Fin 82, 93 (1992); Lowenstein, 85 Colum L Rev at 731 (cited in note 55) (“Transactions of such suspiciously little economic and social value require reappraisal.”).

⁶¹ See Renneboog and Simons, *Public-to-Private* at *17 (cited in note 35) (arguing that going-private decisions by United States firms in the 1980s were frequently motivated by “anti-takeover defense strategies” rather than the opportunity to appropriate tax benefits).

E. Wealth Transfers to Shareholders from Other Stakeholders

Another theory about how private-equity transactions create value for shareholders is that they expropriate value from nonequity stakeholders, especially pre-LBO bondholders, either through increases in the level of risk associated with new projects undertaken by the firm, via large increases in dividend payments by the firm, or most likely from a firm taking on more debt and/or more senior debt to that which it had prior to the transaction. The value of existing bondholders' claims on the firm will be reduced if the firm engages in any one of these activities unless those bondholders have contractual protections against the firm's actions. One well-known example of an adverse impact on unprotected bonds is the \$25 billion RJR Nabisco Corporation going-private transaction, where pre-LBO bondholders claimed they lost billions of dollars when the company issued a large amount of additional debt to finance the deal. Subsequent litigation filed by disgruntled bondholders resulted in adverse court decisions for the plaintiffs that only emphasized how powerless bondholders are in this situation.⁶²

LBOs may also yield some offsetting benefits to debtholders. For instance, Laurentius Marais, Katherine Schipper, and Abbie Smith claim that debtholders may benefit from a decline in the value of other stakeholder claims if those declines result in increased firm assets.⁶³ Furthermore, Renneboog and Simons point out that the agency-cost reductions from increased debt and improved monitoring may raise the value of the firm and thereby benefit bondholders.⁶⁴

Overall, the empirical evidence about the effect of going-private transactions on bondholders tends to show systematic decreases in preexisting bonds' ratings, but this does not translate into reduced bond prices.⁶⁵ On the one hand, when bonds have weak protection against corporate restructurings, they do lose value after an LBO.⁶⁶ On

⁶² See *Metropolitan Life Insurance Company v RJR Nabisco*, 716 F Supp 1504, 1526 (SDNY 1989).

⁶³ See Laurentius Marais, Katherine Schipper, and Abbie Smith, *Wealth Effects of Going Private for Senior Securities*, 23 J Fin Econ 155, 159 (1989) (indicating that a buyout may allow management to reduce other stakeholders' claims on a firm's cash flows by, for example, cutting back staff).

⁶⁴ See Renneboog and Simons, *Public-to-Private* at *10 (cited in note 35).

⁶⁵ Marais, Schipper, and Smith, 23 J Fin Econ at 157 (cited in note 63) (finding "pervasive downgradings . . . of Moody's debt ratings following successful buyout proposals" but indicating that there was insufficient evidence to generalize about the effects of a buyout on bond prices); Yakov Amihud, *Leveraged Management Buyouts: Causes and Consequences* 5 (Dow Jones-Irwin 1989). See also generally Mark I. Weinstein, *Bond Systematic Risk and the Option Pricing Model*, 38 J Fin 1415, 1424-26 (1983).

⁶⁶ See Arthur Warga and Ivo Welch, *Bondholder Losses in Leveraged Buyouts*, 6 Rev Fin Stud 959, 979 (1993) (concluding that in successful LBOs from 1985-1989, the typical bondholder

the other hand, bonds with strong covenants actually gain in value because firms seek to renegotiate their terms in order to eliminate contractual restrictions on maximum debt levels, or because firms are forced to repurchase these bond issues at par, even when the issues are trading far below it. Thus, nonconvertible bonds on average suffer minimal losses in value.

A second, less well-documented reason why shareholders can benefit from LBOs is wealth transfers from other corporate stakeholders. Such transfers can occur if firms breach their “implicit” contracts with employees by firing them, or renegotiating their contracts, as part of a post-LBO restructuring. Andrei Shleifer and Lawrence Summers argue that employees have an implicit, unwritten agreement with their firms who promise to provide them with long-term (lifetime) employment in exchange for lower wages.⁶⁷ These agreements are breached if the company fires many of its workers after going private. However, workers are unable to recoup these losses from the firm because these implicit agreements with their firms are legally unenforceable.

There are several reasons to think that these benefits are not large. First, such a breach would only generate a one-time gain, because after it occurs the first time, workers will factor into their future employment decisions the nonenforceability of these implicit contracts, which can raise turnover, increase hiring costs, and lower worker quality. Second, on average, LBOs do not result in job losses.⁶⁸ Furthermore, firing employees reduces a firm’s production capacity and at some point lowers the quality and quantity of output as too few employees are involved in the production process.

A related potential wealth transfer opportunity involves pensioners and employees. When a firm executes an LBO, it often eliminates overfunded pensions and increases the default risk associated with its pension liabilities. However, Jeffrey Pontiff, Andrei Shleifer, and Michael Weisbach find that these wealth transfers are modest.⁶⁹ Thus, they are unlikely to represent a major motive for firms going private.

lost 6 percent of the risk-adjusted value of his bonds within four months of the LBO announcement); Paul Asquith and Thierry A. Wizman, *Event Risk, Covenants, and Bondholder Returns in Leveraged Buyouts*, 27 *J Fin Econ* 195, 212 (1990) (“Bonds that contain covenants . . . experience abnormal gains” while those “that do not . . . suffer abnormal losses.”).

⁶⁷ Andrei Shleifer and Lawrence H. Summers, *Breach of Trust in Hostile Takeovers*, in Alan J. Auerbach, ed, *Corporate Takeovers: Their Causes and Consequence* 33, 53 (Chicago 1988).

⁶⁸ The evidence shows that post-LBO firms report small increases in employment levels, but fail to expand employment levels as fast as the rest of their industry. See Steve Thompson and Mike Wright, *Corporate Governance: The Role of Restructuring Transactions*, 105 *Econ J* 690, 697 (1995); Kaplan and Strömberg, *J Econ Persp* at 17–18 (cited in note 40).

⁶⁹ See Jeffrey Pontiff, Andrei Shleifer, and Michael S. Weisbach, *Reversions of Excess Pension Assets after Takeovers*, 21 *RAND J Econ* 600, 601 (1990) (estimating that pension fund reversions account for approximately 11 percent of takeover wealth gains).

F. Undervaluation of the Targeted Firms

Given their superior access to information and greater involvement in the company's business, firm managers will generally have better information than public shareholders about the firm's prospects. This asymmetric information distribution can provide managers with superior understanding about the future value of the firm, allowing them to time their purchase of the company in a going-private transaction to take advantage of a temporarily depressed price for the company's stock. More perniciously, unfaithful managers may engage in techniques designed to depress artificially the stock price in order to facilitate an MBO deal.

There is also the possibility that firms follow selective disclosure policies in their financial reporting prior to going private. Specifically, senior managers have incentives to release bad information and to delay the release of good information until after the transaction is completed. Of course, if this selective disclosure is detected, the firm and its senior managers could be sued by shareholders as well as the SEC,⁷⁰ and courts are much more open to shareholder suits in going-private transactions.⁷¹

G. Availability of Derivatives Reduces the Risk-Sharing Benefits of Going Public

One impact of the vast growth in the use of derivative securities has been to reduce the risk-sharing benefits of being a public company. Robert Merton was the first to argue that the existence of derivative contracts raises the relative advantage of being private over being public by permitting private firms to spread risks more widely.⁷² He notes that one of the most important benefits of being public is risk-sharing. Since "private owners internalize parts of the firm's risks which are diversifiable with widespread ownership,"⁷³ they gain by shifting this risk more broadly. Another key benefit of being public is access to public capital markets to support firm investment and ex-

⁷⁰ 17 CFR 240.10b5-1.

⁷¹ *In re Topps Co Shareholders Litigation*, 924 A2d 951, 963 (Del Ch 2007) ("Few contexts are more important to stockholders than the pendency of a transaction in which they exchange their shares for cash and the company is taken private.").

⁷² See Robert C. Merton, *Financial Innovation and the Management and Regulation of Financial Institutions*, 19 J Banking & Fin 461, 462 (1995) (claiming that the "rise of derivative products could have just as easily been framed as greatly reducing risks in the system"). See also Gilson and Whitehead, *Deconstructing Equity* at 6 (cited in note 19) (suggesting that "risk management [focused] at the firm level may be more efficient than broadband risk-bearing by diversified shareholders"); Myron S. Scholes, *Derivatives in a Dynamic Environment*, 88 Am Econ Rev 350, 364, 366-67 (1998) (characterizing equity as a "risk-management device").

⁷³ Merton, 19 J Banking & Fin at 465 (cited in note 72).

pansion. As a private firm, expansion is limited by the firm's inability to fund all its projects with added debt, since the default rate on the debt is a positive function of a firm's assets' total risk (or return variability) and its leverage (or debt-to-asset ratio). Since the demand for equity of privately held firms has generally been quite limited, with large price discounts demanded, equity capital raising by private firms has generally been a very expensive option.

Merton then poses the following hypothetical scenario: "Consider such a firm with needs for funding and risk sharing that believes it must move to the public-ownership domain with all its costs (that reflect what the firm gives up by going public)."⁷⁴ However, if a firm can hedge these risks, "then it could reduce the total variation or riskiness of the business, without negatively impacting its profitability."⁷⁵ This will reduce the gains from risk-sharing and likely lower the future need to raise equity capital. Merton concludes that "[t]o the extent hedging becomes widespread, one may well observe a macro shift back toward greater private ownership of firms as these hedging tools are developed" and refined.⁷⁶ Given the tremendous growth in derivative markets since 1995, the relative benefits of public ownership as a means of risk-sharing and lowering the cost of capital appear to have substantially declined.

H. The Costs and Possible Adverse Incentives of LBOs

LBOs also have some costs. Not every firm should be taken private; a cost-benefit calculation must be made before such a course of action is pursued. In this regard, it is important to include at least the following expected costs of an LBO: higher expected bankruptcy costs, agency costs due to intensified conflicts of interest among firm stakeholders, the lack of stock liquidity, owners' reduced diversification of risk, the disappearance of timely stock price information, the lack of periodic financial disclosure, and a reduced ability to tap public capital markets. Most of these costs also apply to any private company.

Note that not all the benefits of being public are necessarily realized, especially for small public companies. For example, small firms may lack analyst coverage and general investor interest. As a result, they may have relatively illiquid stocks and find that making public offerings of securities is difficult and costly. This is a partial explana-

⁷⁴ Id at 466.

⁷⁵ Id.

⁷⁶ Id. See also Scholes, 88 Am Econ Rev at 366 (cited in note 72) ("Ways will be found through financial engineering to provide private entities with the advantages of the public market—risk sharing, liquidity, and pricing signals—while retaining the advantages of the private market—lower disclosure and agency costs.").

tion as to why many small companies faced with the higher fixed costs of meeting their SOX legal requirements have chosen to go private and why many small firms going private had only recently gone public.⁷⁷ Thus, we need to carefully assess the expected costs of being private against their expected benefits to know if going public, or remaining public, is optimal for a firm.

While many suggested reasons for valuation gains in LBOs exist, there is not a lot of evidence indicating that many of these suggested benefits are empirically important. Furthermore, most of these benefits represent private gains at the expense of other investors, corporate stakeholders, or the government. The primary exceptions are various agency-cost savings, which we argue are very valuable. Consistent with the importance of these agency-cost benefits, there is strong empirical evidence that LBOs lead to substantial improvement in firm operating efficiency, enhanced management and board incentives, much sharper focus on core operation, and substantial improvements in profitability and valuation.⁷⁸

I. Agency Costs Associated with LBOs

While LBO transactions reduce many agency costs, they can also create some agency costs. One serious agency problem with private-equity investments is that after an adverse economic event, managers of highly leveraged firms can have strong incentives to “bet the farm” to avoid potential bankruptcy. A similar problem was highlighted in the savings and loan crisis of the 1980s, in which adverse interest rate movements triggered high-risk investment activities by thrift managers who attempted to forestall likely bankruptcy.

⁷⁷ Many studies find that SOX has led many small US firms to go private. See, for example, Ellen Engel, Rachel M. Hayes, and Xue Wang, *The Sarbanes-Oxley Act and Firms' Going-Private Decisions*, 44 *J Acct & Econ* 116, 118 (2007). Another study documents that many LBO firms were small and had IPOs in the prior five years. See Hamid Mehran and Stavros Peristiani, *Financial Visibility and the Decision to Go Private* *3-4 (Federal Reserve Bank of New York Working Paper, July 2007), online at <http://www.newyorkfed.org/research/economists/peristiani/mehran-peristiani.pdf> (visited Jan 11, 2009).

⁷⁸ See, for example, David J. Denis and Diane K. Denis, *Leveraged Recaps and the Curbing of Corporate Overinvestment*, in Donald H. Chew and Stuart L. Gillan, eds, *Corporate Governance at the Crossroads* 318, 320 (McGraw-Hill 2005) (surveying twenty-nine leveraged recapitalizations completed between 1984 and 1988, and concluding that these companies outperformed the market by 26 percent, on average); Anju Seth and John Easterwood, *Strategic Redirection in Large Management Buyouts: The Evidence from Post-Buyout Restructuring Activity*, 14 *Strategic Mgmt J* 251, 258 (1993) (describing how conglomerates and other firms with unrelated divisions divested assets post-buyout in order to focus on their core businesses); Kaplan, 24 *J Fin Econ* at 251 (cited in note 15) (stating that empirical evidence “supports the hypothesis that management buyouts experience post-buyout operating improvements and value increases [that] appear to be generated by improved incentives”).

This managerial incentive problem is highlighted by Dan Galai and Ronald Masulis, who analyze firm decisionmaking from the perspective that stock in a leveraged firm is equivalent to a European call option.⁷⁹ Thus, if a leveraged firm experiences an adverse economic event that pushes it into financial distress, then regardless of whether it is closely or diffusely held, managers have incentives to substantially raise firm risk to increase the firm's equity's (call option) market value by raising volatility (a call option is a positive function of volatility since it raises the probability of a large gain in value), even though the debt's value suffers from a greater probability of default. This can lead to a loss in firm value when risk-increasing actions involve negative net present value projects.

This raises an important question: are there reasons why LBO firm managers who hold concentrated equity stakes are less likely to experience these moral hazard incentives relative to managers at diffusely held firms? We argue that several unique characteristics of LBO investors mitigate this problem for private-equity firms. First, private-equity investors have strong reputational constraints on their behavior because they are involved in a number of separate LBO deals at any point in time. Any actions they take that adversely affect debtholders in one of their firms are likely to harm the ability of their other portfolio companies to attract additional debt capital. Moreover, their ability to attract future LBO deals is likely to be adversely affected because their future access to debt will be constrained and potential firms considering going private will be wary of working with them as a consequence. A second reason that LBO firms may be less likely to engage in this behavior is that their private debt tends to have stronger and more extensive protective covenants, since renegotiating a private debt issue is generally much easier when it is held by several financially sophisticated investors who can also hold firm equity or derivatives. A third important reason why private-equity firms will not "bet the farm" is that many LBO investors finance these acquisitions in part with their own captive debt fund. This means that they hold both the equity and the debt securities of their portfolio companies, which better aligns their interests with those of the other debtholders of their portfolio companies and gives them greater incentives not to

⁷⁹ Galai and Masulis, 3 J Fin Econ at 57 (cited in note 37) (analogizing an optionholder who has "claim to the slice of a stock's price distribution to the right of the exercise price at maturity date[,] " to a firm's stockholder who has a "claim to the slice of the firm's price distribution to the right of the face value of the firm's debt at its maturity date"). See also Fischer Black and Myron Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J Pol Econ 637, 637 (1973) (defining a "European option" as a "security giving the right to buy or sell an asset, subject to certain conditions, . . . on a specified future date").

undermine the value of these debt investments. Finally, we note that private-equity firms have strong incentives to pay down the debt load on portfolio companies quickly in order to raise the value of their equity stake, so that this potential problem should arise only for a relatively short period of time.

Another agency problem highlighted in prior research occurs when private-equity firms take large fees on the front end but then hold smaller equity ownership positions. In these cases, it is argued that private-equity partners have weaker incentives to continue to closely monitor management once the LBO is completed. They also have greater incentives to take less promising candidates private because their primary compensation is transaction fee-driven and thus paid at the consummation of the transaction, regardless of how profitable the deal turns out to be.⁸⁰ Again, reputational concerns can generate strong incentives for private-equity managers not to exploit their private-equity investors in this way.⁸¹

A third potential agency cost arises out of the recent trend of multiple LBO shops sponsoring an LBO deal, so-called “club deals,” which create additional conflicts of interest between LBO sponsors.⁸² These conflicts could result in more agency costs in terms of free riding by some sponsoring private-equity firms and disagreements among others over a target company’s major policies or proposed policy changes, especially when a firm is performing poorly. However, this

⁸⁰ See Acharya, Franks, and Servaes, 19 *J Applied Corp Fin* at 52 (cited in note 28); Gregor Andrade and Steven N. Kaplan, *How Costly Is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions That Became Distressed*, 53 *J Fin* 1443, 1483 (1998); Steven N. Kaplan and Jeremy C. Stein, *The Evolution of Buyout Pricing and Financial Structure in the 1980s*, 108 *Q J Econ* 313, 313–14 (1993) (finding that fees taken by buyout shops, investment banks, and lenders trended upwards during the boom in buyouts during the late 1980s, growing from between 2.05 percent and 2.66 percent before 1985 to between 3.69 percent and 5.97 percent in 1988).

⁸¹ Evidence that this concern is not economically important has been found by Gregor Andrade and Steven Kaplan. They studied a sample of highly leveraged transactions that subsequently became financially distressed and estimated the effects of distress on firm value. They report that “[f]rom pretransaction to distress resolution, the sample firms experience a small increase in value. In other words, the net effect of the [highly leveraged transaction] and distress is to leave value slightly higher.” Andrade and Kaplan, 53 *J Fin* at 1487 (cited in note 80) (arguing that this evidence “strongly suggests” that highly leveraged transactions earned positive risk-adjusted returns).

⁸² Recent research suggests that these club deals may result in private-equity firms paying lower prices when acquiring firms unless the targeted firm has high institutional stock ownership. See generally Micah S. Officer, Oguzhan Ozbas, and Berk A. Sensoy, *Club Deals in Leveraged Buyouts* *2 (USC Marshall School of Business Working Paper MKT 10-08, July 2008), online at <http://ssrn.com/abstract=1128404> (visited Jan 11, 2009) (finding that target shareholders received on average 10 percent less in club deals and suggesting that these findings are “consistent with the view that club deals may be detrimental to passive, dispersed shareholders of publicly-traded corporations”).

potential cost can be minimized by limiting the size of club deals to two or three investors, which is the norm.⁸³ Another possible disadvantage of these syndicated LBO deals is that the future portfolio company's stock appears to experience more insider trading activity prior to the announcement of the transaction.⁸⁴

III. IMPLICATIONS OF THE RISE OF DERIVATIVES FOR CORPORATE GOVERNANCE

A. Weaknesses of Current Financial and Managerial Accounting Systems in the Face of Active Derivatives Trading

Board monitoring at public corporations has been seriously undermined by the growing use of derivatives.⁸⁵ These securities allow firms to acquire large financial risks (such as those that financial intermediaries are currently experiencing in the aftermath of the subprime mortgage crisis) on short notice. This situation differs greatly from the prederivative environment where a major change in firm risk exposure generally required either a highly visible M&A transaction or a large new investment initiative, both of which take a relatively long time to implement, are easy to observe, and need explicit board approval.

Financial engineering techniques allow a firm to change rapidly its risk exposure through the use of derivatives, which makes its risk profile much less transparent and much more dynamic. In fact, it is very easy to change these derivative positions on almost a moment's notice. Further, most firms appear to have inadequate internal accounting and control systems to track these derivative transactions on a timely basis or to police effectively any existing position limits. The many derivatives-related financial scandals are a testament to this

⁸³ See Audra L. Boone and J. Harold Mulherin, *Do Private Equity Consortiums Impede Takeover Competition?* *7 (AFA 2009 San Francisco Meetings Paper, May 2008), online at <http://ssrn.com/abstract=1104224> (visited Jan 11, 2009) (reporting that the median number of bidders in consortium deals is 2.84). Boone and Mulherin estimate that target returns for "private equity consortium bidders" from sixty-three days before the takeover until completion were "not measurably different" than for private-equity firms bidding alone. Id at *19–20.

⁸⁴ See Viral V. Acharya and Timothy C. Johnson, *More Insiders, More Insider Trading: Evidence from Private Equity Buyouts* *1 (London Business School Working Paper, Nov 2007), online at http://facultyresearch.london.edu/docs/Acharya_Johnson_Insider_Trading_Takeovers.pdf (visited Jan 11, 2009).

⁸⁵ To see a measure of the rapid growth of derivatives trading and outstanding contracts, see the summaries of annual levels of exchange-traded and over-the-counter (OTC) derivative contracts reported by the International Swaps and Derivatives Association, *Summaries of Market Survey Results*, online at <http://www.isda.org/statistics/recent.html> (visited Jan 11, 2009). For US bank derivatives activity, see Comptroller of the Currency Administrator of National Banks, *OCC's Quarterly Report on Bank Derivatives Activities*, online at <http://www.occ.treas.gov/deriv/deriv.htm> (visited Jan 11, 2009).

weakness. The problem has been compounded by the failure of many derivative traders to require highly detailed information on the assets underlying their financial contracts.

Derivative contracts enable firms to create equivalent investment positions by using a variety of alternative combinations of derivative instruments that can be executed within minutes in most cases.⁸⁶ Furthermore, each of these alternative (equivalent) investments is often regulated differently by separate regulatory authorities, including the SEC, the Commodities and Futures Trading Commission, the Federal Reserve, the Office of Thrift Supervision, the Comptroller of the Currency, and state insurance commissioners. In addition, financial accounting systems do not treat all these equivalent financial positions equivalently. Moreover, the lag in financial reporting can be as long as several months if the transaction is undertaken early in the quarter, since quarterly reports are released long after the quarter's end, and then there is a further lag before the firm files its Form 10-K or 10-Q.⁸⁷

Merton and Myron Scholes observe that current financial and regulatory accounting systems do a poor job of tracking the risks associated with derivatives. As a result, regulations are generally going to be ineffective, while financial accounting statements are often going to be misleading.⁸⁸ Merton notes, "Accounting as a structure is directed toward value allocations. On this dimension, it is effective."⁸⁹ However, he goes on to say that it is ineffective for identifying risk exposure:

As an example, consider a hypothetical financial institution which has fixed-rate-debt assets, floating-rate-debt financing and equity Suppose that this institution enters into a swap in which it agrees to receive the floating interest rate and pay the

⁸⁶ See Merton, 19 J Banking & Fin at 471 (cited in note 72) (contrasting innovations in derivative products, which can be implemented quickly, with changes in financial regulation, which take longer and require more coordination to implement).

⁸⁷ Companies have between sixty and ninety days after the end of their fiscal year to file their Form 10-K and between forty and forty-five days after the end of each fiscal quarter to file their Form 10-Q. See Form 10-Q, General Instruction A.1, online at <http://www.sec.gov/about/forms/form10-q.pdf> (visited Jan 11, 2009); Form 10-K, General Instruction A.2, online at <http://www.sec.gov/about/forms/form10-k.pdf> (visited Jan 11, 2009).

⁸⁸ Merton, 19 J Banking & Fin at 470 (cited in note 72) (arguing that the current accounting system only looks at value allocations and is, "therefore, an ineffective structure for identifying risk allocations"); Scholes, 88 Am Econ Rev at 367 (cited in note 72) (noting how standard accounting does not "decompose profitability into profits from market forces and profits from managerial efforts, nor does it describe the sensitivities of the firm's profit and loss to market factors"). In an earlier paper, Scholes states, "A whole new system of risk accounting must be developed. Current accounting systems concentrate on static valuations. Swaps, foreign exchange contracts, and other OTC derivatives have no initial value. As a result, they are 'off balance sheet.' There is no place for them in the current accounting world." Myron S. Scholes, *Global Financial Markets, Derivative Securities, and Systemic Risks*, 12 J Risk & Uncertainty 271, 284 (1996).

⁸⁹ Merton, 19 J Banking & Fin at 470 (cited in note 72).

fixed rate. What is the impact of that? It is, of course, to match the risk in terms of interest-rate exposure of its assets and liabilities by transforming . . . fixed-rate returns into floating-rate returns. But where would that drastic change in the risk exposure of the equity appear on the balance sheet? An accounting structure focused on valuations has no place for it. Why? Because the value of a swap when the firm enters into it is zero.⁹⁰

Thus, boards of directors and outside investors relying on traditional financial accounting statements will not learn about these potential risk exposures, undermining the board's monitoring role and the ability of investors to buy or sell shares in an informed manner. A major puzzle is why financial accounting has been so slow to address the problem of derivatives risk exposure in corporations.

The risk taking associated with derivative trading is further complicated by the fact that the default risk of counterparties in derivative contracts is also very dynamic. This default risk can be substantially affected by new derivative positions taken by counterparties, or by changes in the financial condition and risk exposure of these counterparties' derivatives positions with other counterparties. Changes to either of these can alter the default-risk exposure of otherwise unchanged derivative contract positions in the original firm. Disturbingly, real-time information on counterparty financial condition is generally unavailable. At best, a counterparty's general financial condition is only known quarterly after a lag of another forty-five to ninety days, provided it is a company subject to reporting requirements under US securities laws.⁹¹ If the counterparty is not a reporting company, or is a foreign company using less informative accounting reporting standards, then the problem is much worse. These disclosure problems are compounded when the assets underlying the derivative contracts are themselves not well documented or specified, or there is no active market in them.⁹²

A further concern is that the flexibility in derivative contract structures allows corporations and financial institutions to bypass disclosure requirements, creating incentives for greater risk taking.⁹³ Good

⁹⁰ Id.

⁹¹ See note 87 for a discussion of the time lags for filing Forms 10-K and 10-Q.

⁹² For example, the changing composition of mortgage pools, which many mortgage-backed securities allow, increases the difficulty of valuing these pools on a market-to-market basis.

⁹³ This is the one good reason for relying on an exchange-clearing corporation to be the counterparty in all trades. Unfortunately, most derivative trades occur off the floors of derivative exchanges. See International Swaps and Derivatives Association, *Summaries of Market Survey Results* (2008), online at <http://www.isda.org/statistics/recent.html> (visited Jan 11, 2009) (cited in note 85) (reporting that by mid-2008, the notional amount of off-exchange interest rate derivatives had grown to \$464.7 trillion).

examples of the problems created by large derivative positions that have fallen outside normal reporting requirements include Enron and a number of other financial scandals that involved firms assuming large risk exposures unbeknownst to their boards and sometimes even their senior management. As Brian Nocco and René Stulz observed, “Corporate failures to conduct thorough ‘inventories’ of their risks on a regular basis have been responsible for a striking number of major corporate disasters over the last 20 years.”⁹⁴

The reliability of financial reporting systems is an even more serious problem for financial institutions (FIs) because the vast majority of their assets are financial and thus more rapidly and easily changed through derivative transactions. Additionally, derivatives’ activity levels are typically high relative to firm asset values⁹⁵ as more fully discussed in Part III.D. Changing risk-bearing profiles in FIs due to derivatives are a particularly serious concern for several reasons: (1) FIs extensively use derivative contracts for hedging purposes, which means that they routinely execute large derivative transactions in the ordinary course of business without close scrutiny; (2) the large percentage of assets represented by financial claims at FIs makes it easier to change their risk characteristics; and (3) the high leverage employed by most FIs makes equityholders particularly vulnerable to shifts in risk exposure in an FI’s portfolio. These properties make it much more difficult to detect abnormal derivatives trading activity that can substantially raise FI risk exposure or increase their risk exposure to counterparties, even in derivatives trades which FIs rely on to hedge some of their risks.

Merton and Scholes both argue that FIs have much more sophisticated risk management control systems, which capture much of the firms’ derivative-related risk exposure, and advocate that other corporations adopt similar systems.⁹⁶ They also argue that if FIs take very different and offsetting derivatives positions, then the effect on the overall financial systems is likely to be minor, since some institutions will gain what others lose. However, this perspective is undermined if FIs herd in their investment decisions and if there are other investors, such as hedge funds, that can successfully bet against them. The recent subprime mortgage crisis suggests that relying on offsetting gains and losses by FIs is not particularly prudent. This crisis underlines a con-

⁹⁴ Brian W. Nocco and René M. Stulz, *Enterprise Risk Management: Theory and Practice*, 18 *J Applied Corp Fin* 8, 15 (2006).

⁹⁵ See Lisa K. Meulbroek, *A Senior Manager’s Guide to Integrated Risk Management*, 14 *J Applied Corp Fin* 56, 61 (Winter 2002).

⁹⁶ Merton, 19 *J Banking & Fin* at 472 (cited in note 72); Scholes, 88 *Am Econ Rev* at 364 (cited in note 72).

tinued need to improve on the sophisticated systems used by FIs to reflect better their risk exposures.

Unfortunately, current risk-management control systems appear to leave FI boards with inadequate information about the actual risk exposures these FIs are taking. Two particularly serious areas of deficiency appear to be the assessment of counterparty default risk exposure and the adverse effects on insurers of potential macro events, which can overwhelm their reserves against losses. However, a more fundamental problem is that risks taken by counterparties can change quickly, but there is no real-time control or monitoring of these risk exposures. This can induce great uncertainty by market participants when large negative shocks hit the capital markets, causing some participants to take large observable losses and forcing other firms to sell assets at distressed prices.

To address the valuation needs of corporations and FIs holding or trading complex derivative contracts, various simulations and analyses of historical data are employed. However, given the extremely asymmetric nature of most derivatives' returns, and the tendency of many financial assets to suddenly become highly correlated in periods of capital market distress, it is extremely difficult to adequately assess the payoffs on these derivative contracts, especially from a short time series of historical derivative prices. This also implies that the risk associated with these contracts can be seriously understated, particularly when counterparty default risk is taken into account, while valuations may be simultaneously overstated. The current difficulty in determining the payoffs on various mortgage-related derivative contracts is a very good case in point. These problems are reinforced when the underlying assets are not traded, or the derivative itself is not traded due to its customized nature.

One result of this greater risk exposure is that FIs have a greater need for sophisticated directors who are knowledgeable about derivative contracts and markets. These directors need to monitor intensively these FIs on an almost continuous basis and implement rigorous internal risk controls and monitoring systems, which require updating as the financial engineering technology evolves. While regulatory authorities have tried to reduce these concerns through their own monitoring mechanisms, they have suffered from similar weaknesses.

B. Public Company Board Structures Need Strengthening

Public corporations are growing in size due to internal growth and global consolidation within industries. One result is smaller percentage shareholdings by their boards of directors, which results in lower director incentives to monitor firms carefully. This can be reinforced if directors are paid with short-term bonuses and stock options

because these forms of compensation have short time horizons, making directors less focused on the long-term value of the firm's stock.

At the same time, firms are becoming more complex (geographically and technologically) and bigger, making them more difficult to monitor. Greater derivatives usage further raises monitoring costs for directors because of these instruments' complexity, lack of transparency, and the potential they create for rapid changes in the firm's risk exposure.

An important implication of these two trends is that board oversight has been significantly weakened by poor incentives and higher monitoring costs. In addition, there has been a shift toward nominating directors based on their independence from management, rather than their strategic insights into the business, because of concerns about overall board independence from management. For example, corporate boards have been criticized as being too chummy with managers.⁹⁷ This allegedly makes them slow to react to poor firm performance and too willing to approve large compensation packages to senior executives when they are hired, renewed, or fired.⁹⁸ While recent reforms of stock exchange listing requirements have tried to encourage more financial and familial independence of outside directors, there continue to be serious concerns about the "social" independence of many directors. The fear is that members of the same country clubs and social circles may have trouble aggressively confronting their compatriots in the boardroom. The importance of social independence of directors is highlighted in a recent paper by Byoung-Hyoun Hwang and Seoyoung Kim, which finds that greater social independence, as compared to conventional independence, reduces measures of equity value and firm performance at Fortune 100 companies.⁹⁹ Unfortunately, while new, "independent" directors may not be financially beholden

⁹⁷ See, for example, Andrew S. Grove, *Stigmatizing Business*, Wash Post A23 (July 17, 2002) ("[S]tock exchanges should require that boards of directors be predominantly made up of independent members having no financial relationship with the company.").

⁹⁸ See, for example, Lucian Bebchuk and Yaniv Grinstein, *The Growth of Executive Pay*, 21 *Oxford Rev Econ Policy* 283, 284 (2005) (finding that compensation growth cannot be explained by changes in firm size, performance, or industry mix); Michael C. Jensen and Kevin Murphy, *Remuneration: Where We've Been, How We Got to Here, What Are the Problems, and How to Fix Them* *29 (Harvard Business School Working Paper No 04-28, ECGI Finance Working Paper No 44/2004, July 2004), online at <http://ssrn.com/abstract=561305> (visited Jan 11, 2009) (discussing how giving large compensation packages despite poor performance is not in the best interests of the firm); Jensen, 48 *J Fin* at 866-67 (cited in note 24) ("Without the direction of an independent leader, it is much more difficult for [a] board to perform its critical function.").

⁹⁹ See Byoung-Hyoun Hwang and Seoyoung Kim, *It Pays to Have Friends*, *J Fin Econ* (forthcoming 2009), online at <http://ssrn.com/abstract=1195313> (visited Jan 11, 2009) (finding that from 1996 to 2005, 87 percent of Fortune 100 boards could be classified as "conventionally independent," whereas only 62 percent could be classified as "socially independent").

to senior managers, they may also lack the knowledge and appropriate skill set to engage in effective risk monitoring.

Effective corporate governance relies on reliable and timely reporting of corporate performance measures for good internal board monitoring and outside investor evaluation. Without accurate and timely information on firm performance and risk taking, it is nearly impossible to evaluate how well a firm is performing and whether investors are getting an appropriate market return for the risk that they are bearing. Today's public company boards appear to lack the timely and accurate financial information that they need to monitor risk levels adequately.

Insiders may have better knowledge about the firm and be better able to process that information to create shareholder value.¹⁰⁰ The implication is that while many outside corporate directors appear to exhibit financial independence, this is often offset by these directors not being well informed about company operations. This information problem is minimized in LBO firms given their frequent board meetings and directors' close contact with management plus the significant board representation of LBO investors.¹⁰¹

Overall, these technological and institutional changes have increased the costs of board monitoring at public companies while lowering its effectiveness and requiring greater director expertise. As a result, directors with more specialized financial skills are needed on boards in general and their time commitments as directors are likely to continue rising.

¹⁰⁰ Ronald Masulis and Shawn Mobbs find that given their firm-specific knowledge, inside directors can be very beneficial to board decisionmaking, especially when they have some independence and serve on the boards of high-tech and other information-intensive firms. See Ronald W. Masulis and Shawn Mobbs, *Are All Inside Directors the Same? CEO Entrenchment or Board Enhancement* *3 (Third Annual Conference on Empirical Studies Paper, American Finance Association 2009 San Francisco Meetings Paper, Mar 2008), online at <http://ssrn.com/abstract=1108036> (visited Jan 11, 2009).

¹⁰¹ For evidence of LBO board activity, see generally Acharya and Kehoe, *Corporate Governance and Value Creation: Evidence from Private Equity* (cited in note 21) (finding that evidence from private-equity transactions in the United Kingdom from 1996–2004 indicates that buyout firms take an active stance on firm ownership and governance); Cornelli and Karakas, *Private Equity and Corporate Governance: Do LBOs Have More Effective Boards?* (cited in note 21) (finding that private-equity board members are more actively involved in complex transactions than board members backed by nonfinancial sponsors); Gertner and Kaplan, *The Value-Maximizing Board* (cited in note 21) (finding that as compared to public companies, the boards of private-equity-controlled firms are smaller, control larger equity stakes, and meet less frequently, while directors are younger and have shorter tenures).

C. Particular Implications of Increased Derivative Usage for Financial Institutions

Over the last half century, FIs have grown dramatically in their asset holdings and have become much more diffusely held. Shareholder oversight at these institutions has therefore become less effective since few shareholders own a large enough percentage of the outstanding shares to be strongly motivated to monitor carefully the firm's senior managers. Likewise, senior management's equity ownership is generally an extremely small percentage. Weaker monitoring creates further difficulties in terms of giving FI managers the appropriate incentives to maximize shareholder value.¹⁰²

For the last thirty years, FIs have been major players in an array of derivatives markets. Scholes offers one explanation for this rapid adoption by FIs of derivatives as a valuable and highly flexible financial tool:

To date the major growth in the use of derivatives has been fueled by trends toward securitization and the increased understanding of the role that derivatives can play in the unbundling, packaging, and transferring of risk. No longer do financial service firms only sell the same products they buy from clients. Instead, they break the products down into their component parts and either sell the parts or recombine them into new and hybrid custom-tailored financial instruments.¹⁰³

In fact, many large FIs act like markets in over-the-counter interest rate, currency and credit default swaps, and other more complex derivatives, being long and short similar contracts. This large degree of derivative exposure by FIs raises some serious questions and makes it all the more important to have strong board oversight of FIs' derivative risk exposure.¹⁰⁴

Merton asks the following question regarding the rise in the use of derivatives: "Why then is there now such an intensity of concern among managers, regulators, politicians, and the press over the *new* activities and risks of financial institutions—relative to their *traditional* risks such as real estate loans or LDC debt?"¹⁰⁵ He goes on to say:

¹⁰² One implication of this is that FIs are unlikely to be serious competitors to the private-equity firms. This is especially true given the various regulatory constraints they face in holding significant amounts of equity in illiquid, privately held firms. The one exception to this statement is the creation of venture capital subsidiaries by some major commercial banks.

¹⁰³ Scholes, 88 *Am Econ Rev* at 360 (cited in note 72).

¹⁰⁴ It is surprising that banking authorities have not required banks to move this derivatives market-making activity to a centralized exchange where transparency is enhanced and bank exposure to counterparty default risk is greatly reduced.

¹⁰⁵ Merton, 19 *J Banking & Fin* at 462 (cited in note 72).

My conjecture as to why there is this anxiety or strong focus on the risks of the new activities is that their implementation has required major changes in the basic institutional hierarchy and in the infrastructure to support it and that the knowledge base required to manage this part of the system is significantly different from the traditional training and experience of many private-sector financial managers as well as regulators.¹⁰⁶

Having offered both the question and the answer, Merton then claims that these are overstated concerns. He is optimistic about how quickly institutions and regulators can adapt to the widespread use of derivatives.¹⁰⁷ However, given the 2008 banking crisis, many of these concerns seem well justified.

So where may the problems lie for FIs? Some major areas of vulnerability arise out of the increased inadequacy of current quarterly disclosure requirements for banks, mutual funds, and insurance companies that fail to illuminate problems or large risk exposures at FIs. Inadequate disclosure can have predictable negative consequences, such as: (1) insufficient incentives for FIs to avoid taking short-term, high-risk positions between quarterly disclosure points; (2) incentives to shift risk exposure to undercapitalized firms; and (3) incentives to take on more risk that is unrecognized in their financial reports to exploit formal or informal government guarantees to insure these FIs against default.

Financial engineering techniques also make it much easier for FIs to circumvent portfolio restrictions designed to limit their risk taking.¹⁰⁸ This means that unless FIs' derivative positions are continuously monitored, huge changes in risk-bearing can occur for them in relatively short periods of time. The result is that regulatory efforts to limit the risk exposure of FIs can become ineffectual, enabling them to take on much greater risks and increasing the chances of insolvency by large FIs, with the associated potential for seriously disrupting the normal functioning of capital markets.

Other major problems highlighted by the subprime mortgage crisis are the difficulty in evaluating the risks associated with complex derivative contracts, the pricing of derivatives lacking an active mar-

¹⁰⁶ Id.

¹⁰⁷ Id at 477 (predicting that central banks and other government policymakers are "likely to become increasingly familiar" with derivatives and the "advanced financial technology" used by financial institutions).

¹⁰⁸ Scholes, 12 J Risk & Uncertainty at 284 (cited in note 88) (noting that, given the growth and evolution in derivative contracting, "[t]he speed of institutional change has increased in recent years. As new financial innovations have succeeded, regulatory conventions have become obsolete, or lagged behind the new innovations").

ket in the underlying assets or the derivatives themselves, and the importance of taking into account counterparty default risk when one is trying to hedge away a particular risk through a derivatives trade. This makes the evaluation of an FI's risk exposure from its financial statements much more problematic when it has undertaken substantial derivatives positions, even if this activity is solely for the purpose of hedging risks in its overall portfolio position.¹⁰⁹ One result of this uncertainty is the potential breakdown of trust between FIs, which can seriously undermine liquidity in capital markets, especially when there are major economic shocks or when markets are substantially volatile.¹¹⁰ The recent turmoil in the London Interbank Offered Rate (LIBOR) market, commercial paper market, and government securities market around major investment bank and commercial bank financial problems illustrates this point.

D. The Benefits of Firm Risk Management and the Need for Manager and Board Involvement

Enterprise risk management has been widely adopted by companies in the United States.¹¹¹ Enterprise risk management requires an evaluation of the firm's total risk exposure so that the firm can choose the optimal level of risk to maximize shareholder value.¹¹² At most firms today, there is a senior management officer called the chief risk officer who is directly responsible for the enterprise risk management

¹⁰⁹ For a detailed discussion of the accounting treatment of derivatives, see generally Mark A. Trombley, *Accounting for Derivatives and Hedging* (McGraw-Hill 2003).

¹¹⁰ See General Accounting Office (GAO), *Financial Derivatives: Actions Needed to Protect the Financial System*, Report No GAO/GGD-94-133 to Congressional Requesters 12 (May 1994), online at <http://archive.gao.gov/t2pbat3/151647.pdf> (visited Jan 11, 2009), which earlier raised these concerns, and Scholes, 12 J Risk & Uncertainty at 273 (cited in note 88), which gave a critical response to the GAO report. More recently, see International Monetary Fund, *Global Financial Stability Report: Containing Systemic Risks and Restoring Financial Soundness* 87 (Apr 2008), online at <http://www.imf.org/External/Pubs/FT/GFSR/2008/01/pdf/text.pdf> (visited Jan 11, 2009) (summarizing evidence that from July 2007 to April 2008, increased market volatility and higher default risks of potential counterparties made prices so unreliable that "no trading took place at those prices").

¹¹¹ Kenneth Scott argues that this trend is driven in part by legal liability from the *Caremark* decision of the Delaware Chancery Court and SOX's emphasis on internal controls and audit committees, but perhaps more importantly by the financial advantages to firms from adopting risk management. See Kenneth E. Scott, *The Role of Corporate Governance in Coping with Risks and Unknowns*, *7-8 (Stanford Law and Economics Olin Working Paper No 356, Apr 2008), online at <http://www.law.stanford.edu/publications/details/3993> (visited Jan 11, 2009), citing *In re Caremark International Inc Derivative Litigation*, 698 A2d 959 (Del Ch 1996). See also Gilson and Whitehead, *Deconstructing Equity: Public Ownership, Agency Costs, and Complete Capital Markets* at 16 (cited in note 19) (stating that corporate risk management has only emerged in the last thirty years).

¹¹² Meulbroek, 14 J Applied Corp Fin at 64 (cited in note 95).

system, which tracks some of the major risks that the firm faces.¹¹³ A well-designed risk management system ensures that “all material risks are ‘owned,’ and risk-return tradeoffs carefully evaluated, by operating managers and employees throughout the firm.”¹¹⁴ The best way to do so is to ensure that managers have large equity positions so that they are incentivized to avoid creating excessive risk exposures for their firm. This addresses the problem of managers engaging in high-risk transactions in order to meet short-term performance goals. However, risk management systems are still in their early stages and have only recently “expanded to include operating and reputational risks.”¹¹⁵

Private-equity portfolio companies’ managers have large, illiquid stakes in their firms and therefore strong incentives to monitor firm risk levels. In addition, private-equity directors may be better able to manage risk by, among other things, more intensive board monitoring, better compensation systems that strongly motivate directors to monitor risk intensively, and better information flows to the board.

IV. BENEFITS OF PRIVATE EQUITY IN THE CURRENT DERIVATIVE-INTENSIVE ENVIRONMENT

Private equity creates more high-powered incentives for directors and gives the boards of its portfolio companies increased control rights over management. This makes these boards much better able to monitor managers at their companies intensively and to recruit financially sophisticated individuals to become directors. It also enables boards to more effectively monitor firms’ rapidly changing risk exposure, which is facilitated by derivatives trading. At the same time, private-equity investors institute various enhancements to their portfolio companies’ corporate governance such as stronger and timelier internal management reporting and control systems, increased equity ownership by managers and directors, and more equity-based executive compensation systems.¹¹⁶

A. Closer Monitoring by Private-Equity Investor-Directors

Private-equity transactions concentrate equity ownership. One implication is that management can have a large share percentage

¹¹³ Nocco and Stulz, 18 *J Applied Corp Fin* at 8 (cited in note 94).

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 10.

¹¹⁶ See Orit Gadiesh and Hugh MacArthur, *Lessons from Private Equity Any Company Can Use* 62–67 (Harvard Bus 2008) (discussing how private-equity investors focus on forward-looking operational metrics such as revenue churn, retention rates, and return on invested capital); Thompson and Wright, 105 *Econ J* at 701 (cited in note 68) (evaluating the extent that LBOs are an innovation in corporate governance and how far they remedy the agency problems associated with diffuse shareholdings and management control).

ownership stake, so they are highly motivated to work hard for their firm and focus intensely on creating value. The other large shareholders in these firms are sophisticated private-equity firms, who have strong incentives to monitor management carefully because their compensation is tied directly to creating firm value. At the same time, the private-equity firms typically have a dominant position on the board of directors, providing them with the power to discipline management as well.

A general prediction of the literature on optimal contracting is that as it gets more difficult and costly to monitor managers, there should be a greater reliance on risk-sharing through larger equity-based compensation contracts.¹¹⁷ Thus, the rise of derivatives, which undermines board monitoring, should lead to a greater use of equity-based compensation for management. This process is easier for private-equity portfolio companies because, by being private, they avoid public criticism for giving their senior portfolio company managers a large amount of equity-based compensation.

On the other hand, the use of stock options can have deleterious effects because the value of call options and warrants is a positive function of stock risk. This means that managers with significant levels of this form of compensation have greater incentives to take more risk. Derivatives are an attractive means to add risk due to their lack of transparency and the speed with which large positions can be taken. Likewise, high leverage raises management incentives to take on more risk. Both of these tendencies need to be counteracted by more intense, sophisticated board monitoring and greater director discipline, making more frequent board monitoring and evaluation of risk controls particularly important.

Directors able and willing to undertake these tasks are hard to find at public companies, where public scrutiny and relatively low compensation make the cost-benefit calculations for becoming a director unattractive. The same people, however, may find becoming directors at a private-equity portfolio company more attractive because these boards are small, their proceedings private, and director compensation can be much greater than in public companies. In terms of the latter, given the smaller equity base of these LBO firms, directors can be given larger percentage ownership positions, which can further sharpen their incentives.¹¹⁸ These incentives are again intensified by the

¹¹⁷ For the pathbreaking article on this point, see Bengt Holmström, *Moral Hazard and Observability*, 10 *Bell J Econ* 74, 75–80 (1979) (developing a model of optimal risk-sharing between principals and agents when the principal can monitor only the outcome of the agent's actions).

¹¹⁸ It is worth noting that a small board reduces the financial cost of creating good director incentives.

LBO's high leverage, which multiplies the potential payoffs from success substantially. In the final analysis, the directors at private-equity portfolio companies generally are either sophisticated outsiders with relatively large percentage ownership stakes, or they are partners or employees of the private-equity firm that holds a very large percentage ownership stake. Either way, these directors are motivated to monitor management carefully and intensively.

Bringing a firm private also makes it difficult, if not impossible, for managers to hedge away the risk of their stock and stock option holdings since there is no secondary market for their firm's stock. This improves the alignment of interests of managers and shareholders. The lack of a secondary market also makes insider trading in the firm's stock impossible, which is another benefit to other shareholders who could otherwise suffer adverse price effects. The lack of a secondary market gives the firm some ability to penalize managers who are prematurely leaving the firm for better opportunities, or because they have been fired, since the board has some discretion in valuing the firm's illiquid equity and the manager is generally forced to sell the equity back to the firm, often at the purchase price at the time of the LBO.

Another implication of the above analysis relates to the choice of directors. In a private-equity-controlled company, boards are smaller and directors with strong financial expertise can be more easily added to the board, even if they have financial ties to the firm. Since these private firm directors are well compensated, it becomes possible to attract financially sophisticated individuals, again leading to more effective director monitoring. In addition, private-equity firms, which generally have great influence over the selection of outside directors, have substantial incentives to choose industry-knowledgeable, financially sophisticated directors to ensure that their portfolio companies increase in value.¹¹⁹ This perspective leads to an interesting, testable prediction: do firms with more financially sophisticated directors tend to have fewer derivative-related problems?

One important trait of privately held firms is that outside investors and board members have excess control rights. These rights give a portfolio company CEO much stronger incentives to keep directors informed about the firm's financial condition, its investment opportunities, and its positions in derivatives markets. They also provide the CEO much stronger incentives to go along with the judgment of the directors and private-equity firm partners, as well as limiting their ability to shirk their duties, underperform, or to consume large amounts of perquisites.

¹¹⁹ An interesting issue worthy of empirical documentation is the percentage of private-equity directors who have substantial financial expertise.

Risk monitoring at private-equity-controlled portfolio companies should be better than at public companies for several reasons. First, enterprise risk management requires all company managers, especially at the more junior levels, to be focused on how their individual actions can affect the entire company's risk profile. At private-equity firms, all members of the management team have much larger ownership positions than their public company counterparts and therefore have greater incentives to worry about the firm's overall value. Furthermore, these private-equity managers' equity interests are much more sensitive to variance in firm value because of the relatively high debt burden carried by their firms, again strengthening their incentives to watch risk levels carefully. Finally, the board will exercise tighter monitoring of the managers' risk-inducing decisions, with more financially experienced directors acting on better information in a no-questions-barred environment to ensure that firm value is maximized. This should reduce the likelihood of undetected, large derivative-related risk exposure, especially at financial institutions.

Directors at private-equity portfolio companies have strong incentives to reduce the size of the corporate empire when the firm is no longer growing rapidly but has accumulated large amounts of assets, especially liquid assets. A key question that must be decided when a firm faces strong liquidity pressures from its maturing debt is how much to expend on research and development, and capital expenditures. Again, having a sophisticated board should allow these decisions to be made optimally. Without these liquidity pressures, there are clear management incentives to keep growing—and certainly no incentives to shrink—the firm. However, the combination of these liquidity pressures along with close board oversight means that efficient investment decisions are more likely to be made.

Another important element of effective board monitoring is the extent to which board members are given greater access to proprietary information in these private-equity firms, which can include more frequent and specialized financial reports. Greater internal financial reporting facilitates more intensive monitoring of management. Concomitantly, private-equity firms should also employ more sophisticated internal financial reporting and more reputable auditors, and should require more detailed audits to further strengthen board oversight.

Private-equity investing could play a valuable role in the FI industry. Having highly motivated and financially sophisticated directors closely monitoring FI managers and derivatives activity is likely to substantially improve their operations. However, when governments explicitly or implicitly guarantee these institutions' liabilities against default through deposit insurance, reinsurance pools, and "too big to fail" doctrines, the incentives of private-equity investors to invest in

the sector are seriously reduced. This is especially true if these guarantees can be lost when the FIs go private. In addition, a myriad of government regulations prohibit many of the actions and corporate governance changes that private-equity investors expect to implement, such as changes to the FI's assets, liabilities, and operations. For example, under prior Federal Reserve regulations, investors holding more than 10 percent of a bank's equity could not put a director on its board, thereby negating one of the most important benefits of having private-equity investment in FIs.¹²⁰ Although this was recently relaxed,¹²¹ LBOs of financial institutions do not generally occur.¹²² Instead, we see private-equity investors participate in improving the efficiency of the FI industry indirectly, by buying large portfolios of distressed financial assets from many large FIs, or by becoming substantial blockholders in FIs and acting as monitors largely in their capacity as shareholders.¹²³

B. Benefits of Private Debt in the Current Derivative-Intensive Environment

The sophisticated private-equity firms rely on large debt increases for their buyout transactions, with financing derived from a small number of large institutional investors (including the private-equity firm's debt funds) that buy the firm's private debt. This means that a small number of financially sophisticated investors will be the private firm's primary creditors.¹²⁴

This has several advantages. First, debtholders have strong incentives to monitor carefully firm risk and derivative exposures because it

¹²⁰ Editorial, *The Banks and Private Equity*, NY Times WK9 (Aug 3, 2008) (indicating that the previous rules discouraged private-equity investment in the financial sector because private-equity firms could not gain control over target banks).

¹²¹ See text accompanying note 4 for a discussion of this change.

¹²² The most likely reason for this is that private-equity firms are unwilling to be regulated by the Federal Reserve as financial holding companies, which would be one result of them acquiring an FI. If this is correct, then the Federal Reserve needs to consider relaxing this rule. Presumably it would make its decision by weighing the cost-benefit tradeoffs of allowing large, loosely regulated capital injections from private-equity firms and closer risk monitoring versus the potentially negative impact of a reduction in federal oversight of these institutions.

¹²³ Given the federal government's decision to become a large stakeholder in many FIs through its recent investments in those firms under the Troubled Assets Relief Program (TARP), it is interesting to speculate over whether the Federal Reserve should have considered creating much greater incentives for private-equity investors to invest in FIs. Presumably the private-equity firms would create stronger forward looking risk monitoring controls at FIs (as well as better monitoring of compensation levels) than what the federal government has been able to do as of the time that this Article went to press.

¹²⁴ Cotter and Peck find that sophisticated buyout shops use less short-term debt and need less senior debt because these private-equity investors do a better job of monitoring their portfolio companies. Cotter and Peck, 59 J Fin Econ at 123–24 (cited in note 13).

is easy for the value of their investment to be adversely affected if the firm does a poor job of managing its risk, given the extremely high leverage the LBO starts out with. For example, debtholders will care a lot about the firm's risk of financial distress, as it may reduce their likelihood of repayment. As a result, after an LBO, these large debtholders will monitor carefully the firm's actions and try to remain informed about all-important derivatives exposure. The private-equity form of ownership facilitates this process because it can provide debtholders with better information.

Second, use of private debt allows creditors to be more flexible in dealing with covenant violations, permitting more customized covenants to be used and potentially resulting in tighter contracts. As Charles Whitehead notes, there are two reasons for this: growth in the syndicated (private) loan market has allowed lenders to directly oversee borrowers and at the same time design borrower-specific covenants that mitigate the cost of this direct oversight.¹²⁵ The small number of large and sophisticated creditors can directly monitor the borrower's compliance with protective covenants, increasing their incentives to carefully monitor borrowers relative to the incentives of trustees of public bond issuers who may have little or no direct risk exposure in the bond issue.¹²⁶ In contrast, a debt violation in a public bond issue triggers the need to obtain the agreement of two-thirds of the bondholders to waive a violation, which can be both a difficult and a slow process.

Third, private debt enables creditors to have access to proprietary firm information to facilitate in-depth monitoring, while avoiding public transparency and the resulting competitive disadvantage borne by the firm. Disclosure of proprietary information is limited to the private-equity firm, the directors, and large creditors. By comparison, public investor monitoring requires firm transparency, which can give competitors without the need for such transparency a competitive advantage.

Further, many of these outside investors will hold both debt and equity¹²⁷ and therefore have access to information that is provided to

¹²⁵ Charles Whitehead, *The Evolution of Debt: Covenants, the Debt Market and Corporate Governance* *23–24 (Boston University School of Law Working Paper, Sept 2008), online at <http://www.bu.edu/law/faculty/scholarship/workingpapers/documents/WhiteheadC090208.pdf> (visited Jan 11, 2009).

¹²⁶ One seemingly contradictory piece of evidence is the recent popularity of covenant-lite debt when institutional investors were competing to lend to private-equity borrowers. This appears to represent a serious failure in the commercial bank decisionmaking process that has had adverse consequences. See Acharya, Franks, and Servaes, 19 *J Applied Corp Fin* at 52 (cited in note 28) (characterizing covenant-lite loans as “a manifestation of weak lending standards and incentives to monitor”).

¹²⁷ Thompson and Wright, 105 *Econ J* at 692–93 (cited in note 68).

debtholders, which can further inform them about an LBO firm's financial condition, as well as give them access to information that is provided to equityholders. In public firms, providing debtholders with this type of report gives them valuable proprietary information that they can trade on in the firm's stock.¹²⁸ But, in an LBO, this information-trading opportunity is nonexistent given the lack of a secondary market in the stock.

Another aspect of LBOs is that debtholders frequently receive large warrant holdings, conversion rights, or stockholdings, which align their incentives more closely with shareholders. This rarely occurs with publicly held debt, where convertible bond issues or straight debt with warrants are few in number. An important consequence of debtholders also being major equityholders in these same firms is that it makes them more amenable to debt restructuring in the case of a covenant violation. This follows since their overall payoff is not only debt-based but also rises with the value of the equity. Thus, they are concerned not only with maximizing the debt's value but also the value of their equity-related investment. So it is the joint maximization of the value of their holdings in the firm's debt and equity that should matter to these lenders. This allows the firm to take on greater leverage because its expected bankruptcy costs are not raised to the same extent that they would be if debtholders had no equity ownership.

To summarize, the advantages of debt structure in LBOs where there are a few large and sophisticated private lenders are: better monitoring, better information, less disclosure of private information to the marketplace, and debt/equity joint holdings that create incentives to maximize total firm value and give the firm more flexibility if restructuring is needed.

C. Institutionalization of Equity Holdings Supports Improved Risk Monitoring in Private-Equity-Financed Deals

With almost 60 percent of all equities held by institutional investors, it is fair to say that a majority of shares in most large US corporations is now primarily held indirectly through institutional investors, not directly by individual investors.¹²⁹ From a risk monitoring perspective, this is a positive development, as it leads to much larger block

¹²⁸ See, for example, Nishant Dass and Massimo Massa, *The Bank-Firm Relationship: A Trade-Off between Better Governance and Greater Information Asymmetry*, 4 (INSEAD Working Paper, Sept 2008), online at <http://fic.wharton.upenn.edu/fic/corporate%20finance%202006/Massa.pdf> (visited Jan 11, 2009) (finding that public firms that have a more exclusive relationship with their lending banks experience roughly a 1 percent increase in information asymmetry (insider trading) for every 10 percent increase in exclusivity).

¹²⁹ See Robert A.G. Monks and Nell Minnow, *Corporate Governance* 132 (Wiley 4th ed 2008).

holdings at public firms on average, which raises incentives for stockholder monitoring of the performance of the firm and its managers, and allows for more coordination of shareholder voting decisions.

This institutionalization of equity can improve shareholder monitoring at private firms through institutional investor investments in private-equity firms. The growth of these institutions means that they have a large presence in major capital markets, including at private-equity funds.¹³⁰ This dominant position of institutional investors has a positive effect for their smaller investors because these funds can invest large amounts in private-equity deals on behalf of the smaller investors, and can negotiate on their behalf for lower fees.¹³¹ These institutions monitor private-equity firms to ensure that they remain focused on producing value for their investors, sharpening the private-equity partners' focus on maximizing portfolio company value. Institutional investors often also take substantial debt positions in private-equity portfolio companies and act as monitors in that capacity as well.

Institutionalization may benefit private equity in other ways. Given the substantial number of large institutional investors, private-equity investors now have an alternative way to exit from their investments without the need for IPOs or acquisitions. Instead, private-equity firms can exit through a sale of their entire ownership position in the LBO firm through privately negotiated syndicated sales to other institutional investors. This alternative exit for private-equity investors means that they now have a greater ability to invest in firms that are unlikely over the following five years to either reemerge as public companies through an IPO or be acquired by other public or private companies.

CONCLUSION

With the advent of extensive derivative usage, boards and regulators are confronted with much more difficult monitoring problems. Financial reports do not report derivative contract exposure in a timely and transparent manner. At public companies, neither the senior management nor the directors generally have the financial incentives or ability to engage in continuous monitoring of a firm's derivative contract positions. This creates ongoing challenges for even a diligent board with strong financial expertise. Yet, few corporations have such highly motivated and financially sophisticated directors.

¹³⁰ See, for example, Martin Arnold, *USS Commits to US Buy-Out Fund*, *Fin Times* 21 (June 18, 2008) (describing UK pension funds joining the trend of US and Canadian pension funds by investing in private-equity buyout funds).

¹³¹ See *id.*

Private equity offers several attractive benefits to help offset these corporate governance problems. First, share ownership is heavily concentrated with the creation of a controlling, monitoring blockholder. Second, private-equity firms reduce board size, place control in the hands of directors representing large fractional owners in the firm, and ensure that these directors are financially sophisticated and strongly motivated to carefully monitor senior managers, to institute specialized reporting requirements, and to set management incentive contracts to closely align their interests with the blockholder and other outside shareholders. Third, boards at private-equity portfolio companies have the power and incentives to discipline and if necessary replace senior management. Fourth, the extensive debt used to finance most going-private transactions also raises the risk of bankruptcy and job loss for senior managers when a creditor takes over a financially distressed firm, motivating the managers to work harder and the other stakeholders to be more open to renegotiating contracts to strengthen the firm's financial condition.

Our analysis suggests that companies taken private by private-equity firms are more likely to be firms: (1) with diffuse ownership, low management shareholdings, and performance insensitive management compensation plans; (2) that exhibit poor operating performance due to weak board oversight; and (3) that periodically or actively engage in derivatives trading activity. Investors face a particularly serious agency problem with financial institutions, given their frequent and often heavy use of derivatives. There may be great opportunities for private equity to become involved in improving the operations of these institutions. The Federal Reserve Board's decision to ease the restrictions on private-equity investors should give the funds more freedom in making such investments, albeit with many restrictions on their ability to closely monitor these firms' managements' decisions.¹³²

¹³² See Board of Governors of the Federal Reserve System, *Policy Statement on Equity Investments in Banks and Bank Holding Companies* at 7 (cited in note 4).