

**Relax and Explode: How Financial Deregulation and Loose Monetary Policy
Contributed to the 2003-2007 LBO Boom**

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Abstract:

This paper first details the general academic theory behind leveraged buyouts and then explores the financial deregulation effort undertaken by Congress and the Federal Reserve Board throughout the 1980s and 1990s. The piece demonstrates how changes in governmental decisions, specifically this deregulatory effort, coupled with lax monetary policy conducted by the Fed during Alan Greenspan's reign, contributed to the 2003-2007 LBO boom.

In a leveraged buyout, a particular type of investment firm acquires a company using a relatively small share of their own equity and a relatively large portion of outside debt financing to fund the purchase. Known as private equity firms today, these buyout shops first began to emerge during the 1980s. This first buyout boom relied on the new high yield market for the requisite debt financing. While many financial economists predicted that these buyout organizations would eventually become the dominant corporate organizational form (Jensen 1989), with the crash of the junk bond market in late 1989 leveraged buyouts of public companies disappeared. Though this trend largely continued for the next ten years, by the mid-2000s another buyout boom had once again emerged and even surpassed the explosion of LBO activity in the late 1980s. This paper first details the general academic theory behind leveraged buyouts and then explores the financial deregulation effort undertaken by Congress and the Federal Reserve Board throughout the 1980s and 1990s. Finally, the piece demonstrates how changes in governmental decisions, specifically this deregulatory effort, coupled with lax monetary policy conducted by the Fed during Alan Greenspan's reign, contributed to the 2003-2007 LBO boom.

Theoretical Background:

In any type of private equity transaction, a buyout firm purchases a company. If the corporation is publicly traded on an exchange, it is customary for the firm to pay shareholders a premium anywhere between 15 and 50 percent over the company's closing stock price. Over the last thirty years, private equity shops have traditionally financed the purchase price with 60 to 90 percent debt. Arranged by an investment bank, the debt component is almost always partially comprised of a senior secured loan portion. While during the 1980s and 1990s the banks themselves primarily held these loans, as of late institutional investors, like hedge funds, have

purchased them from the banks after they have securitized the term loans. The other debt portion generally also includes a junior, unsecured component that is financed by high-yield, or junk bonds, mezzanine capital, or a combination of both. The remaining 10 to 40 percent of the transaction price is financed using equity from the private equity firm's raised fund (Kaplan and Stromberg 4-5). Given that debt is used as their major source of capital, the primary owners of the company after its purchase are institutional investors rather than typical households. However, like in the public corporation, the owners still designate agents to manage and monitor the company on a day-to-day basis on their behalf (Jensen 1989 1).

Given the heavy debt levels that these companies incur, private equity firms typically have a specific profile for potential buyout candidates. Buyout shops target firms or divisions of conglomerates that have relatively stable business histories and that generate substantial free cash flow. This means that they are looking for companies in cash-rich, low-growth, and stable sectors or industries (Jensen 1986 325). While leveraged buyouts have occurred across all industries, given the requisite characteristics the most common include the consumer retails, industrial, and oil sectors.

While much of the recent academic literature is quite technical and explores specific and particular components of leveraged buyouts, older work focuses on why buyouts should be considered the premier organizational form in terms of efficiency and value creation in comparison to public corporations. First, however, it is crucial to understand the conflict of interests that exist between managers and shareholders of any publicly traded firm. The issue arises due to the payout of free cash flow. According to Jensen, the premier scholar on this specific topic, free cash flow "is cash flow in excess of that required to fund all of a firm's projects that have positive net present values when discounted at the relevant cost of capital"

(1988 28). According to traditional theory, in order for a company to operate efficiently and maximize value for its shareholders, the free cash flow that is generated must be distributed rather than retained.

In practice, however, this rarely takes places, as corporate executives resist distribution for a number of reasons. First, if managers disseminated cash to shareholders, the resources under their control would shrink, effectively reducing their power and control. In addition, studies have linked increases in management compensation to increases in growth rather than value (Jensen 1989 9-10). Corporate executives are personally incentivized to take on wasteful projects that expand their company to a size that no longer maximizes value for shareholders (Jensen 1988 28-29). Thus the crucial problem concerning one of the main weaknesses of public companies—the control over resources between the owners, or shareholders, and executives—is how to “motivate managers to disgorge the cash rather than invest it” via inefficient projects (Ibid 29). The organization of leveraged buyouts solves this fundamental conflict over the payout of free cash flow that arises between owners and managers.

Leveraged buyouts partially resolve the inherent conflict of interest described above through their unique transaction structure, namely the high percentage of debt used to finance the purchase. First, the debt creation tied to any buyout limits the waste of free cash flow by forcing company executives to pay out cash that they would normally not distribute. Think of debt essentially as a substitute for dividends and share buyback programs, both of which are ways in which corporations return capital to shareholders rather than spending cash on inefficient projects with returns lower than the cost of capital. However, by leveraging a company up with debt in exchange for stock, companies bind their executives to pay out future cash flows. In comparison, dividend increase and stock repurchase programs do not involve the same

contractual commitment by managers (Jensen 1989 11). Thus the transaction structure of a leveraged buyout ensures a legal commitment on the part of management to distribute cash through debt in order to maximize company value for its owners.

In addition, the high leverage levels associated with any buyout puts an enormous amount of pressure on managers. Corporate executive can no longer waste cash because the company must service its required interest and principal payments to avoid default (Kaplan and Stromberg 11-12). Excessive debt loading forces companies that cannot meet their debt obligations out of cash flow from operations alone to reassess their strategy, structure, and projects that they undertake. Managers have to cut inefficient project initiatives, slash expenses, and sell off assets that can generate a higher return outside of the company. The cash generated from the restructurings and asset sales are then employed to pay down debt levels. The result is “a leaner, more efficient and competitive organization” that only focuses on a few core operations (Jensen 1989 12) to maximize ownership wealth. Thus in a number of ways, high debt levels employed by private equity firms solve the “free cash flow” problem that publicly traded corporations face.

Besides increasing efficiency and value as well as aligning interests to resolve the inherent conflict of interest found in publicly traded corporations through a highly leveraged capital structure, buyouts also include powerful incentives in order to maximize company worth. As was discussed above, a given company’s equity shrinks dramatically when it is loaded with debt levels found in the average buyout. As a result, the private equity firm’s partners and company managers are able to control a majority ownership stake without having to commit large pools of capital (Jensen 1989 17). This allows buyout shops to craft management detailed incentives in their portfolio companies. In almost any buyout, a private equity firm requires management to take a significant stake in the company using their own capital. Consequently,

not only does management now share in any financial gain associated with an increase in company value, but executives also have “skin in the game” in the case of a loss. Given that these companies are now private and all equity shares are untradeable, management can only exercise its stake upon an exit transaction, either by selling the company or taking it public again. The nature of this illiquidity “reduces management’s incentive to manipulate short-term performance” (Kaplan and Stromberg 11).

Instead executive equity ownership and compensation structures of portfolio companies align the interests of owners and managers and incentivize managers to find a way to meet its debt obligations while increasing the company’s value (Kaplan 218). Private equity firms structure management contracts around the relationship between pay and performance. In comparison to public corporations and their focus on accounting earnings, compensation systems found in portfolio companies not only have higher upper bounds, but also tie bonuses more closely to cash flow distribution, debt repayment, and performance. An academic studied every public company buyout with a minimum price tag of \$50 million during the early 1980s. In those companies, the divisional executives held a median equity position of 6.4% in their private unit. The academic found that “even without considering bonus and incentive plans, a \$1,000 increase in shareholder value triggered a \$64 increase in personal wealth” for the business-unit heads (Jensen 1989 15). Instead consider that the median CEO of a publicly traded corporation held only .25% of the company’s total equity. Including all sources of compensation, the personal wealth of this CEO increased only \$3.25 for a \$1,000 in shareholder value. With their salary nearly twenty times more sensitive to performance than the average CEO of a publicly traded firm, its clear why portfolio company managers will release more value for its owners (Ibid 15-16).

According to the literature, by solving the “free cash flow” problem, the operating performance of corporations after a buyout is extremely positive. Consider the following buyout operating statistics that Kaplan and Stromberg cite in one of their joint pieces:

- The ratio of operating income to sales increased by 10 to 20 percent
- The ratio of cash flow to sales increased by approximately 40 percent
- The ratio of capital expenditures to sales decreased

All of these changes occurred at the same time as both corporate value and total factor productivity increased after the leverage buyout (Kaplan and Stromberg 12-13). As Jensen eloquently states, private equity’s superior organizational form and “resolution of the owner-manager conflict explains how they can motivate the same people, managing the same resources, to perform so much more effectively under private ownership than in the publicly held corporate form” (Jensen 1989 7).

Historical Perspective:

Prior to the Banking Act of 1933, which is now commonly known as Glass-Steagall, both securities firms and commercial banks were allowed to participate in underwriting activities. In simplistic terms, an institution underwrites securities in order to assist corporations and other units in raising capital in the public markets through the issuance of new debt and equity. Along with principal trading activities and corporate advisory on mergers and acquisitions, underwriting is one of the crucial functions of what is known as investment banking (Papaioannou and Gauci 48). When a corporation wishes to issue new debt or equity, it goes to a bank (prior to 1933 usually a commercial bank), which prepares the specific issue. In underwriting, the bank guarantees to the company that it will sell the issue at a specified price. This bank arrives at the specific offering price after a thorough credit evaluation of the company, an assessment of overall market conditions, and gauging demand of potential buyers. If the issue

cannot be sold at the guaranteed price, the underwriter incurs the associated loss. Losses can incur for a number of factors, including an unforeseen event that causes the price of the issue to fall during the period in which the underwriter is trying to syndicate the product, a differing valuation opinion between the bank and investors, and poor overall market conditions (Mester 3-4). Thus, the underwriting process represents a fairly risky operation for banks, particularly for a commercial bank that employs customers' deposits in order to fund their capital market activities.

Constructed during the heart of the Great Depression, Glass-Steagall's passage was largely a result of the public's misconception that commercial banks were the chief culprits in the stock market crash. This conception garnered significant support after the Pecora Congressional Committee hearings exposed numerous abuses by these commercial banks in respect to their investment dealings (Slow but Steady Progress Toward Financial Deregulation 1). The act was directly designed to prevent a repeat of the scams of the 1920s, in which banks made highly speculative investments, turned the debts into securities, and in turn sold them off to unsuspecting investors with the bank's stamp of approval (Kuttner 6).

The Banking Act, like the rest of the Roosevelt financial regulation, centered around two distinct principles—disclosure and outright prohibition of inherent conflicts of interest (Ibid). The groundbreaking legislation addressed these principles in three important ways. First, it established the Federal Deposit Insurance Corp. (FDIC) in order to guarantee the safety of deposits in participating banks. Second, it gave the Federal Reserve's Federal Open Market Committee the power to conduct open market operations. Before this, monetary policy was only conducted through the discount window (Slow but Steady Progress Toward Financial Deregulation 1). Finally, in order to address the conflict of interest issue, sections 16 and 21 of

the Glass-Steagall Act prevent any bank that accepts commercial deposits from *directly* engaging in most securities activities except for those involving municipal general obligation bonds, U.S. government bonds, private placements of commercial paper, and real estate bonds. These four types were known as “eligible securities.” Sections 20 and 32 meanwhile address *indirect* securities activities through bank subsidiaries or affiliates and apply only to banks that are members of the Federal Reserve System. The former section explicitly prohibits these banks from affiliating with any entity “engaged principally” in underwriting securities. This specific measure was taken in order to address the inevitable conflicts of interest that arise when a bank holds equity of the same firm whose debt it underwrites (Hagendorff et al. 201). The latter section meanwhile bars director, officer, or employee interlocks between these banks and firms “primarily engaged” in securities activities (Mester 5). While many of these distinctions seem superfluous and exhaustive, they play crucial roles during the informal erosion of Glass-Steagall that takes place during the 1980s. By effectively precluding banks who accept deposits from engaging in the trading and underwriting of corporate securities, the 1933 Act effectively separated investment and commercial banking.

In addition to restricting the product mix that commercial banks could offer, the Banking Act of 1933 limited the geographical scope of these credit institutions. This piece of financial regulation “transferred branching regulations to the state level with the effect that each state had different degrees of restrictions” (Hagendorff et al. 202). In order to limit concentration in the commercial banking industry, the subsequent state legislation almost always discouraged interstate branching and even curbed intrastate branching in some regions.

The totality of this regulatory framework had a number of crucial implications. First, while the separation benefited securities firms by eliminating a significant number of its

competitors, commercial banks took a significant profitability hit. By banning underwriting activities, depository institutions lost a vital source of revenue and could no longer integrate their lending businesses with securities issuance (Papaioannoui and Gauci 48). Second, for nearly two decades after its enactment, the overall volume in the financial markets was far lower than in the 1920s. In particular, debt underwriting activities decreased even after the economy returned from its long recession (Kroszner and Strahan 21). Overall, Glass-Steagall led to a banking system with a tremendously high number of institutions who operated in a market that was highly fragmented along both regions and financial products (Hagendorff et al. 202). This description held true until the 1980s, when the gradual repeal of Glass-Steagall began to take place through bureaucratic, rather than formal legislative measures.

Deregulation Efforts & Its Effects:

Informal Bureaucratic Measures

Beginning in the 1960s, commercial banks began to persistently lobby Congress to relax the Glass-Steagall restrictions. With money market mutual funds and other engineered financial products blurring the distinction between what defines a deposit and a security, this group began to argue that the act's restrictions were becoming outdated. In particular, banks were looking to enter the municipal bond and other securities markets in order to boost revenue and remain competitive. While a number of regulators were sympathetic to the commercial bankers' anxieties and concerned that foreign financial deregulation would lure capital abroad, bureaucrats refused to address the loosening of Glass-Steagall's restrictions until the end of 1986 (Sherman 9).

Yet beginning in December of 1986, the Federal Reserve for the first time reinterpreted the limitations of Glass-Steagall. In a statement, the Fed issued a policy stating:

“government securities subsidiaries of bank holding companies may underwrite certain ‘bank ineligible’ securities without violating Section 20 of the Glass-Steagall as long as the underwriting revenues from ineligible securities did not exceed 5 percent of the subsidiaries’ gross revenues” (Mester 16).

While this seemed to directly conflict with the wording of the original act, the Fed argued that the original piece of legislature never precisely defined the meaning of “engaged principally” (Sherman 9). In the Board’s eyes, the five percent revenue threshold, which had to be met on an eight-quarter moving average basis, didn’t qualify as principally engaged. To limit the inherent conflicts of interest associated with the underwriting business, a number of “firewalls” were included. For example, one of these firewalls stated, “transactions between the affiliated bank and the securities subsidiary were limited” (Mester 16). Less than a year later, the Federal Reserve loosened the Glass-Steagall restrictions even further. Despite the opposition of its Chairman Paul Volcker, the Board allowed subsidiaries of commercial banks to underwrite commercial paper, municipal bonds, and mortgage-backed products, though participating banks were still subject to the five percent revenue restriction (Sherman 9).

In August 1987, Alan Greenspan was appointed Chairman of the Federal Reserve. A student of Ayn Rand’s “objectivist” thinking and an outspoken advocate of deregulation and the free market, Greenspan immediately pushed the Federal Reserve to reinterpret Glass-Steagall even further. Within six months of his tenure, the Fed ruled that Section 20 does not bar bank holding company subsidiaries from underwriting and dealing in both corporate debt and equity as long as the holding company was well capitalized. Greenspan pushed for this ruling despite the fact that it contradicted the crucial principal that motivated the act in the first place, conflict of interest. Consequently, the Board authorized five large bank holding companies to underwrite corporate debt, as long as the resulting revenue did not exceed new revenue limit of ten percent (Sherman 9). On January 8, 1989, J.P. Morgan Securities, the Section 20 subsidiary of J.P.

Morgan, Inc., became the first commercial bank affiliate to underwrite a publicly issued corporate bond. Only nine months later after the brief mandatory waiting period, J.P Morgan as expected underwrote the first publicly issued equities by a subsidiary of the holding company (Mester 17).

Under Greenspan's leadership, the Federal Reserve Board continued to marginalize Glass-Steagall's originally intended objective. By January 1993 several banks began reaching the ten percent revenue limit placed on underwriting activities. In order to provide many of these depository institutions with relief from this limit, the Fed introduced an alternative accounting method. This method allowed banks to index the revenue test to interest rate changes since September 1989. To account for changes in the slope of the yield curve, "the banks were allowed to calculate the revenue that would have been earned if the yield curve had been as it was in September 1989" (Mester 17). The Federal Reserve justified the rule change by noting that the unusual interest rate changes that occurred since the ten percent limited had been initially enacted made the revenue test more binding.

Yet, the Board decided to push their bureaucratic regulatory powers even further later in 1996. In what many scholars at the time deemed one of the Fed's most audacious acts, Greenspan and the rest of his directors now allowed bank holding companies to own investment banking operations that accounted for as much as 25 percent of their total revenues. Since nearly any institution at the time would unequivocally be able to stay within the elevated revenue limit, the decision rendered Glass-Steagall effectively obsolete (Sherman 9). In the span of less than ten years, the Federal Reserve Board, particularly under Greenspan's leadership, essentially repealed the Glass-Steagall Act without formal legislative approval by Congress. While financial scholars saw the Fed's bureaucratic actions as the effective repeal of Glass-Steagall,

bank executives certainly didn't share the same opinion. These financial leaders instead began to pursue the dismantling of the depression era regulatory effort.

Formal Legislative Measures

From the beginning of Clinton's presidency until his second reelection, a number of bills were drafted in subcommittees to officially repeal Glass-Steagall, yet each time Congress reached an impasse. Although powerful interest groups had always backed this piece of legislation in the past, "it had repeatedly failed to make it through Congress because of a maze of intra-industry disputes, turf fights between different parts of the federal regulatory structure, and the concerted efforts of consumer and community development advocates" (Mokhiber and Weissman 1). Yet by 1997, because of the Fed's decision at the end of 1996 to allow commercial banks to derive as much as 25 percent of a subsidiary's total revenue from underwriting activities, investment houses and brokerage firms were consolidating at a rapid pace. For example, in a largely defensive move, the investment house Morgan Stanley merged with Dean Witter, Discover & Co., a brokerage and credit card conglomerate (Suarez and Kolodny 92).

Unlike during the competitive environment after the passage of Glass-Steagall, the securities firms realized that the large commercial banks held a competitive advantage unless Congress repealed the act. Even insurance companies were hinting that they wanted to enter the commercial banking business. In July 1997, State Farm Mutual Automobile and Casualty Insurance, the largest insurance company in these two fields in the U.S. at the time, announced that it had filed an application with the Office of Thrift Supervision to create a commercial banking subsidiary. By the end of 1997, both securities firms and insurance companies began lobbying Congress to formally legislate the repeal of Glass-Steagall in order for these entities to

enter the commercial banking and securities business. At the same time, the two industries pressed for a lax regulatory over-sight of their new undertakings (Suarez and Kolodny 92).

Given their significant interest, the banking, insurance and brokerage industry lobbyists began mounting one of the best-financed campaign of influence-buying that had ever taken place in Washington. In 1997 and 1998 alone, two years before the repeal of Glass-Steagall, the three industries spent well over \$300 million on the issue. While \$58 million went directly to Democratic and Republican candidates' campaigns, over \$87 million was contributed in "soft money" to the two parties. Even more astonishing, proceeds used to lobby elected officials totaled \$163 million. For example, Phil Gramm, the Senate Banking Chair at the time, received more than \$1.5 million in cash from the three industries in the five years prior to the act's repeal (McLaughlin 1). As Edward Yingling, chief lobbyist for the American Banker Association, told the *New York Times* in 1999, "If I had to guess, I would say" the abolishment of Glass-Steagall is "probably the most heavily lobbied, most expensive issue" in a generation (Ibid 2).

By the fall of 1999, differing versions of the financial services deregulation bill passed the House and Senate. At this time, all that was left was for the conference committee to work out a consensus bill. The main issue in the Banking Committee before the final agreement was reached in fact had nothing to do with the central aim of the Gramm-Leach-Bliley Act, which practically had full bipartisan support (McLaughlin 2). The one hurdle that remained was Senator Gramm's refusal to compromise and include the Community Reinvestment Act in the bill. This 1977 law requires banks to make a certain percentage of their loans in minority and poor areas (Mokhiber and Weissman 1). Gramm's refusal to compromise on the privacy and community development issues threatened to derail the entire legislative effort.

While the failure of this act to pass threatened the future competitiveness of the majority of securities firms and insurance companies, Congress's inability to repeal Glass-Steagall endangered one company in particular. Citigroup, the product of the merger between Citibank and Travelers Insurance a year earlier, at the time was operating in "apparent violation of the bar on common ownership of banking, and insurance and securities, thanks to a loophole that provides for a two-year transition period" (Mokhiber and Weisman 1). Without the passage of Graham-Leach-Bliley, Citigroup most likely would have had to sell off its insurance underwriting subsidiary. Luckily for the conglomerate, in stepped Robert Rubin, who was currently still serving as Treasury Secretary. According to the *New York Times*, Rubin was the key player in helping broker the final compromise wording in the deregulation bill. The same source also indicated that while Rubin helped negotiate the final compromise to ensure the act's passage, he was also negotiating his own personal deal at Citigroup. Only a few days after the financial deregulation bill was finalized, Citigroup announced the hiring of Robert Rubin as co-chair of the financial-services conglomerate (Canova 7).

The end result was the Graham-Leach-Bliley Act of 1999. Also known as the Financial Services Modernization Act, the bill was acclaimed to streamline "the delivery of financial services to customers by changing the regulatory structure of financial services providers and rationalizing some of the ways in which they do business" (U.S. Congressional Research Service). For purposes of this paper, the bill simply achieved two major things. First, it formally repealed the Glass-Steagall Act of 1933. As a result, financial institutions were no longer limited to specific products and could now affiliate under a new financial holding company (FHC) structure. In addition, under the new regulatory structure, the Fed now served as the "umbrella supervisor" of an FHC while "industry-specific regulators monitor the company's individual

subsidiaries” (Sinkey Jr. 54). Although not granted complete regulatory authority over an FHC, the Federal Reserve did gain the power to oversee the consolidated operations of companies containing investment subsidiaries traditionally regulated by the SEC, and insurance subsidiaries regulated by state insurance departments. Through his forceful lobbying efforts, Greenspan was able to provide the Fed with the major share of the new regulatory power created by Graham-Leach-Bliley. Thus Greenspan created a powerful position to oversee the future of the financial industry in his specific vision of a deregulated marketplace (Holyoke 99).

The coupling of the repeal of Glass-Steagall and lax regulatory environment had significant implications for the type and quantity of capital now accessible. As expected, the Gramm-Leach-Bliley Act enhanced capital formation in the national economy, particularly at the largest financial institutions (U.S. Congressional Research Service) that now consolidated to form both investment and commercial banking arms. The highly profitable process of underwriting represented a new source of revenue that could be tapped most efficiently by firms who combined the two different types of banking. The shift post Graham-Leach-Bliley towards the integrated investment bank that attempts to combine strength in origination with placement abilities favors commercial banks. Not only do their previous lending relationships generate future opportunities for underwriting mandates, but their depth of deposits support their placement efforts. Furthermore commercial banks have another advantage in their access to their loan clients’ private information, which in theory provides them with an “information production cost advantage when they engage in price discovery for new issues” (Papaioannou and Gauci 50). Given their extensive deposit networks, commercial banks and the resulting integrated investment banks were better capitalized. As a result, these institutions have greater risk bearing

tolerance in the execution phase of underwriting and more willing to take a loss on an issue if it guaranteed future revenue opportunities (Ibid).

The numerous services, like origination, price discovery, placement, and corresponding operations, like market-making and other sales and trading activities, required for the underwriting business demonstrate the high costs and difficulty in entering the underwriting field. Besides significant capital allocation, underwriting services necessitate both specialized resources in human capital and a strong reputation. Both of these are terribly difficult to acquire cheaply and quickly (Papaioannou and Gauci 50). Therefore, it should come as no surprise that once commercial banks entered the underwriting business after the repeal of the Glass-Steagall Act, they did so through acquisitions of reputable securities firms. With the lines between commercial and investment banking becoming increasingly blurred since the passage of Gramm-Leach-Bliley, financial conglomerates came to dominate the market for debt underwriting. In 1996, the year in which the Fed raised the underwriting revenue limit to 25 percent, the top five debt underwriters were all the stand-alone investment banks Morgan Stanley, Salomon Brothers, Goldman Sachs, Merrill Lynch and First Boston. Yet by 2003, with the full repeal of Glass-Steagall a distant memory, four of the top five underwriters were owned by the full-service financial conglomerates Citigroup, JPMorgan Chase, Bank of America, and Merrill Lynch (Kroszner and Strahan 13-14). All four of these institutions combined strong commercial banking divisions with their investment banking platforms in order to enhance capital formation in the national economy. Consolidation let these institutions exploit cost-based synergies, which directly lead to higher market liquidity and access to capital, particularly in the debt markets (Hagendorff et al. 200).

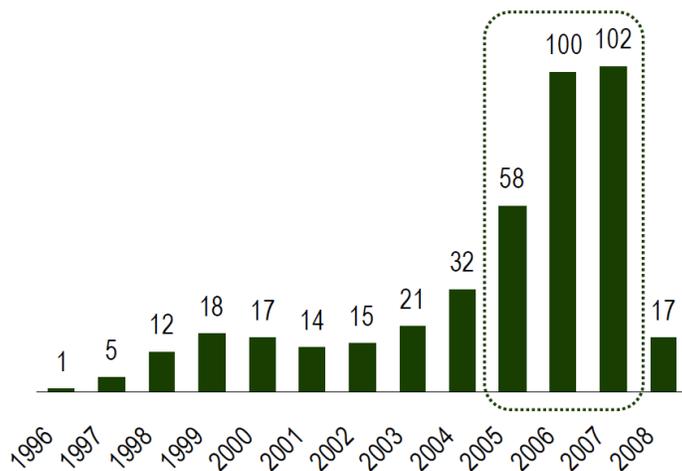
With the increased availability of debt following the repeal of Glass-Steagall, institutions were able to expand their financial services products. The financial industry subsequently developed a wide range of derivative instruments, most of which were not regulated. The rapid growth of this unregulated market raised concerns about the potential risks of many of the derivative instruments that were created. Unlike conventional securities like stocks and bonds, there was no clearinghouse for trades in the majority of these new instruments. Thus derivatives represented a potential source of uncertainty. When Brooksley Born, the chairwoman of the Commodity Futures Trading Commission (CFTC), raised concerns about the potential risks of these unregulated instruments, Greenspan and Rubin issued a report recommending no regulation on derivatives. In fact, the two went as far as praising the innovation (Sherman 10-11).

At the urging of Greenspan, Rubin, and later Rubin's successor, Lawrence Summers, Congress formally ensured the deregulation of the derivatives market through a piece of legislation. Once again, Senator Phil Gramm was one of numerous Congressmen to push the legislation that would result in the deregulation of the derivative market. Gramm above all wanted stringent language to limit the direct oversight of the market by the CFTC and the SEC. The heads of the CFTC and SEC, as well as Treasury Secretary Summers, arrived at a compromise with Gramm. Congress then moved swiftly to pass the bill. On December 13, 2000, the day after the Supreme Court issued their decision on the 2000 Presidential election, Congress passed the Commodity Futures Modernization Act of 2000 as a rider to an 11,000-page spending bill. Passed without debate or any type of review, the legislation hardly was a source of modernization. Instead, the bill simply exempted derivatives from any type of bureaucratic regulation or oversight (Sherman 11).

In a marketplace without any sort of regulatory restrictions as a result of the two pieces of financial legislation discussed above, the structuring of derivatives increased exponentially. While these instruments totaled an outstanding nominal value of \$106 trillion in 2001, by 2008 they were worth an estimated \$531 trillion, representing over a five-fold increase (Sherman 11). One of these securitized products that exploded onto the market during this period was collateralized debt obligations (CDOs) backed by corporate loans, which are commonly referred to as collateralized loan obligations (CLOs). Bank loans used to finance leveraged buyouts (LBO) were now often being placed in these CLO vehicles (Shivdasani and Wang 1292). The CLO vehicle, composed by any given bank, purchases a number of commercial loans and repackages them into tranches of rated debt securities. The necessary financing for the acquisition is generated by syndicating the CLO to the global debt markets (Heed 31). The sold risk is distributed in various tranches from senior (lower yield) to junior (higher yield). The creation of the CLO vehicle increased the supply of credit by allowing a wide range of institutional investors, like hedge funds, insurance companies and pensions funds that invest in CDOs to indirectly invest in LBO loans (Shivdasani and Wang 1292). Previously many of these institutional investors faced investment restrictions on exposure to non-investment grade credits, like the high yield bonds used to finance LBOs during the first buyout boom of the 1980s. However, structured products like the CLO vehicle allowed these funds to invest in high-risk transactions. “The tranching and securitization on different levels made it possible to create investment products with credit ratings” that met their funds’ required risk-return profile (Heed 31). At the time, it was believed that one of the benefits of the tranching found in CLOs is to spread default risk.

Historical evidence indicates that any type of acquisition activity is correlated with fundamental shifts in underlying economic forces. In this context, the growth of the CLO market represented the crucial economic driver needed to spark an LBO boom (Weston and Jawien). The CLO market effectively increased the supply of creditors willing to lend to businesses. While any type of acquisition wave occurs in response to specific industry shocks that require large scale reallocation of assets, the aforementioned shocks alone are simply not enough. In addition, there must also be sufficient levels of capital liquidity to facilitate the asset reallocation. “The increase in capital liquidity and reduction in financing constraints” must be present in order to drive the acquisition wave (Harford 529). This is precisely what the CLO product delivered. CLO vehicles allowed institutional investors, who never before could own pieces of LBO loans,

Chart 5: New CLO Volume (\$ Billions)



Source: Hudoff and Kennedy 2

to hold buyout financing.

Between 2004 and 2007, more than \$210 billion of loans were packaged into CLOs, up drastically from \$51 billion over the previous four years (Ng and Sender A1). Thus the growth in

the CLO market as a result of the

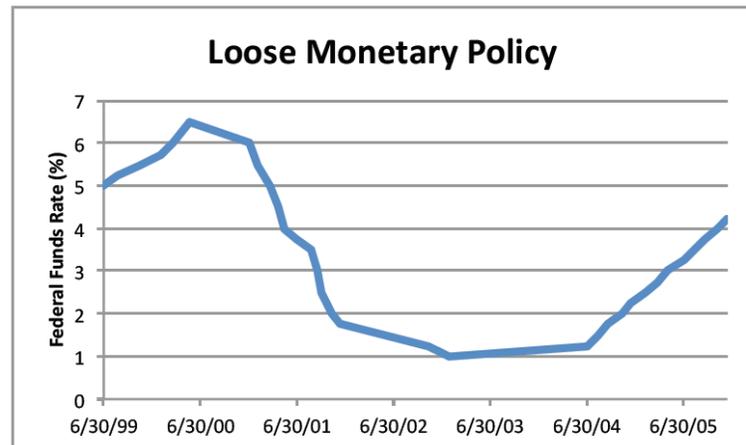
financial deregulation legislation generated the necessary financing that LBOs required.

According to the theories of acquisition waves presented above, the increased availability of debt capital served as one of the driving forces behind the buyout boom of the mid 2000s.

Monetary Policy & Its Effects:

In addition to the development of the CLO market and its ability to increase the availability of debt capital for buyout funds at the turn of the millennium, United States monetary policy at the time also spurred the buyout boom of the 2000s. Even before this time period, the Federal Reserve under the leadership of Alan Greenspan became “increasingly independent of elected branches and more captive of private financial interests” (Canova 2). This development was viewed as “sound economics” and necessary to keep both inflation low and economic growth high. In order to accomplish these two aims, the Fed relied on its main policy

instrument, its ability to set short-term interest rates. With the dot-com bubble, collapse of Enron, a wave of other corporate governance scandals, and the September 11, 2001, terrorist attacks all occurring within two years, economic activity and the performance of the overall stock market began to drag (Canova 9).



Source: Federal Reserve Bank of New York

In order to bolster the economy and prevent a recession, the Fed needed to utilize its policy instrument and began to slash interest rates beginning in 2001. Between January 2001 and June 2003, the Board through its policy arm, The Federal Open Market Committee, lowered interest rates from a high of six and a half percent all the way down to one percent by the end of 2003 (Shecter FP1). Yet even by mid-2003, with short-term rates having settled under two percent for over 18 months, the Fed claimed that according to their data, job creation and

business investment were still weak. Even more apparently troublesome to Greenspan was the inflation rate supposedly slipping toward 1%. Under his direction, the Board began to study Japan's fight with deflation during the end of the 1980s that made it harder to repay debts and left their monetary arm unable to

stimulate growth. In a statement in May 2003, Mr. Greenspan said, "Even though we perceive the risks [of deflation] as minor, the potential consequences are very substantial and could be quite negative" (Ip and Hilsenrath A1). Only a month later, which coincidentally almost directly coincided with the bottoming out of



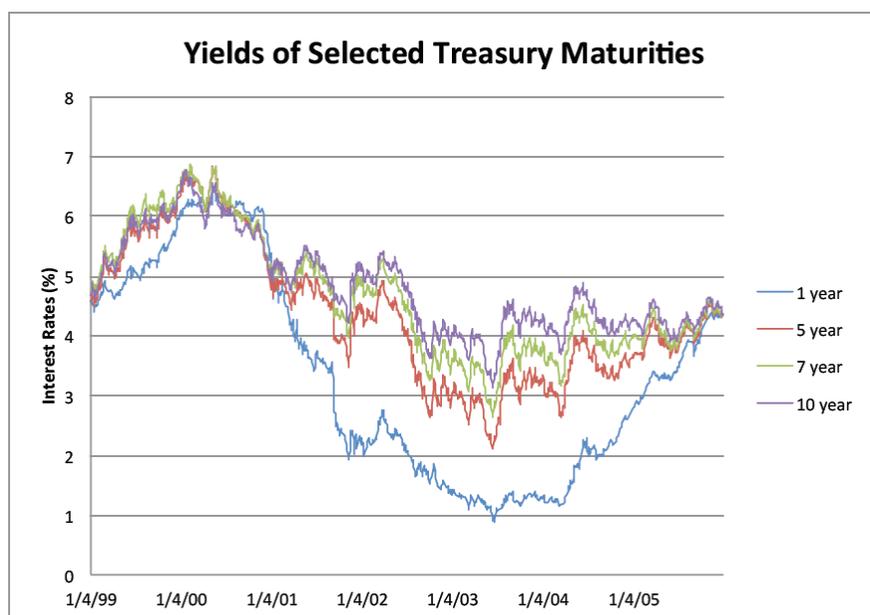
Source: Google Finance

the S&P 500, the Fed cut the target for the federal-funds interest rate, a benchmark for all short-term rates, to 1%. Additionally, the Board announced the rate would stay at this extraordinarily low level for as long as necessary in order to boost housing and consumer spending until the overall business environment turned around. The target ended up remaining at 1% for the entire year.

Yet not everyone agreed with Greenspan's perception that deflation was a serious threat to the economy's recovery. In general, monetary experts agree that the "neutral" rate of interest, or the rate that neither stimulates nor restrains the economy, for the key federal-funds rate falls anywhere between four and five percent (Hartcher). With short-term rates hovering around 1% throughout the latter half of 2003 and the beginning of 2004 and the rate of inflation estimated at

1% as well, the *real* interest rate (as supposed to the *nominal* rate that the Fed sets) was zero. In essence, the Fed was giving money away for free. John Taylor, the creator of the infamous Taylor Rule, was one of those critical of Greenspan's low interest rate policy. One of the most practical monetary tools, the Taylor Rule stipulates how much a central bank should alter the nominal interest rate in response to changes in inflation, output, and other economic conditions. Beginning in 2002, Taylor's model indicated that Greenspan should have tightened (raised) interest rates to just over the neutral rate of interest and kept it there through 2006. Instead, the Fed took a loose monetary stance, and rates fell precipitously from 2002 through 2004. In fact, the federal-funds rate wasn't raised until the middle of 2004 and didn't reach 5% until 2006 once the stock market had largely recovered its losses from the dot-com boom (Lee).

Similar to what occurred after the rounds of quantitative easing pursued by the Federal Reserve under Chairman Bernanke during the current recession, a low yield environment ensued



Source: Thomson Reuters via BondsOnline

from Greenspan's loose monetary policy. One of the primary consequences of declining short-term rates were lower yields on all types of interest-bearing products, from U.S. Treasuries to traditional corporate bonds. As foreign banks

in both Europe and Asia piled into U.S. Treasury bonds and other forms of debt, prices continued

to rise and yields continued to fall (Shecter 1). With such paltry return prospects, institutional investors went in search of higher returns in the form of riskier and more complex loans. As discussed earlier, “Wall Street had just the vehicle: securitization,” in the form of CLOs (Ng and Sender 6). Pension funds, university endowments, and other forms of traditionally prudent institutional investors began to pour their money into private-equity and hedge funds to get higher returns through these forms of securitized vehicles (Kuttner 4). Private equity firms were raising funds that were bigger than ever before. For the larger buyout shops, the typical fund that was once \$5 billion now totaled \$15-20 billion (Private Equity & Venture Capital). In 2006 and 2007 alone, private equity firms raised \$255 billion and \$302 billion, respectively, in new capital. Each of these figures at the time represented record fundraising amounts (Hudoff and Kennedy 2). The “global search for yield” as a result of the Fed’s loose monetary policy provided the private equity industry with an unprecedented quantity of capital to use for acquisition financing.

Besides increasing the quantity of debt available for private equity investments, the low interest rate environment created by Greenspan also enhanced the profitability of the leveraged buyouts themselves. The use of debt finance in private equity transactions is a crucial element to enhance the potential returns for investors. Financial leveraged magnifies “the potential positive or negative impact that any change in a company’s earnings has on the return on equity” (Heed 30). By ramping up levels of debt, private equity deals can boost returns for their equity holders. Because leveraged investors borrow capital to invest, the interest rate at which they borrow is a key cost of doing business for them. With the price of credit extremely low because of the Federal Reserve’s insistence on targeting low short-term rates, the profitability of private equity firms increased. These shops were able to service their debt obligations with ease and the

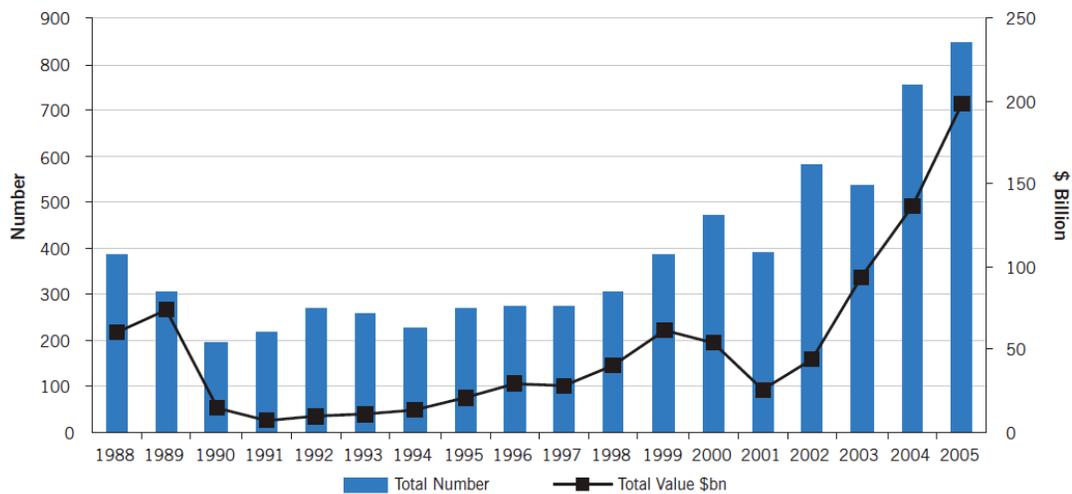
associated risk of default dropped significantly as a result of the lower cost of capital. If a private equity firm can borrow at a rate that is too low given the associated investment risk, the firm can create value by borrowing funds via CLO vehicles and other forms of debt. When interest rates, meaning the cost of debt, are low, this mispricing theory indicates that more transactions will occur when the debt markets are unusually favorable (Kaplan and Stromberg 139). Therefore, Greenspan's lax monetary policy not only created yield incentives for investors to flood their cash into leveraged buyout funds, but it also enhanced private equity profitability given the investment's debt-reliant structure.

The Buyout Boom of 2003-2007:

Abundant liquidity in the credit market through securitized products like CLOs, cheap debt, and the significant growth of private equity funds, all of which were discussed in depth above, contributed to the buyout boom. "From 2004 to 2007, \$535 billion of leveraged buyouts were completed, more than 10 times the \$50 billion of volume over the previous eight years from 1996 to 2003, and vastly eclipsing the \$227 billion (in 2007 dollars) of volume during the prior 1986 to 1989 LBO boom" (Shivdasani and Wang 1291). Not only did the value of these transactions increase four-fold during this period, but the number of buyouts also doubled over the four year span (Acharya et al. 1). Out of the 21,397 leveraged buyout transactions that took place between 1970 and 2007, more than 40% occurred since January 1, 2004 (Stromberg 4). Besides simply the number of leveraged buyout transactions completed, the underlying characteristics of the LBO boom were particularly significant. "Three previously-rare traits were commonplace among LBOs during this period:" titanic deal size, bank debt-laden capital structures, and excessive flexibility for debtors (Hudoff and Kennedy 2).

Figure 1 U.S. Buy-outs

Number and Value



Source: Thomson Financial and CMBOR

Source: Acharya et al. 1

Before the turn of the millennium, large leveraged buyouts were extremely rare.

Conventional wisdom contended that a maximum of \$5 billion could be attained for a

transaction. In 2000, 2001, 2002, and 2003, there was not a single transaction greater than this threshold amount. Yet in 2004 there were two deals that exceeded this amount, and from 2005 to 2008, there were 75 LBOs with price tags greater than this amount. From a historical perspective, as the chart to the left indicates, fourteen of the largest fifteen leveraged buyouts were announced during this period known as the buyout boom (Hudoff and Kennedy 2). As

Largest LBOs in History

Size (in \$bn)	Name	Year
\$43	Texas Energy Future (TXU)	2007
\$34	Equity Office Properties	2006
\$32	HCA	2006
\$30	RJR Nabisco	1988
\$27	First Data	2007
\$27	Kinder Morgan	2006
\$27	BAA Airports	2006
\$27	Harrah's Entertainment	2006
\$27	Alltel	2007
\$26	Hilton Hotels	2007
\$25	Clear Channel Communications	2006
\$23	Alliance Boots	2007
\$20	Archstone-Smith	2007
\$16	Intelsat	2007
\$16	Freescall Semiconductor	2006

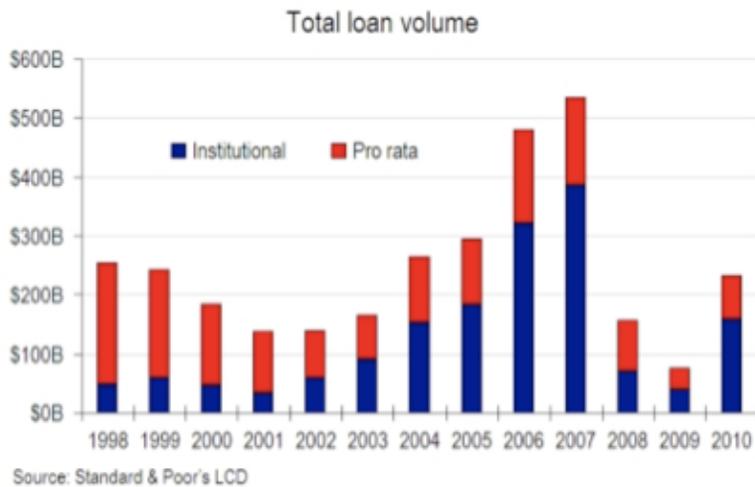
Source: Hudoff and Kennedy 2

discussed earlier, the creation of the CLO market coupled with institutional investors searching

for additional yield increased the supply of credit available for these colossal transactions. Rather than bank financing now simply just originating from banks, other institutions including hedge funds bought more than 60% of loans issued during this time period (Acharya et al. 3).

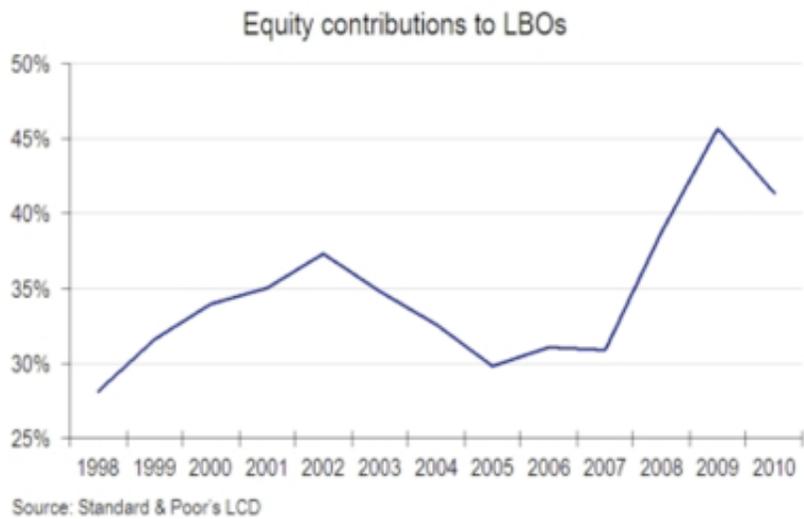
Bank debt-laden capital structures also were a hallmark of this buyout boom. Whereas the LBO boom of the late 1980s was aided by rising stock prices and the development of the high yield, or junk bond

market, this most recent buyout explosion was principally driven by the availability of syndicated bank debt via CLO vehicles. For example, in 2006, approximately \$125 billion of the \$233 billion of U.S. LBOs



were financed through structured bank loans (Acharya et al. 2-3). Prior to 2003, conventional practice held that bank debt

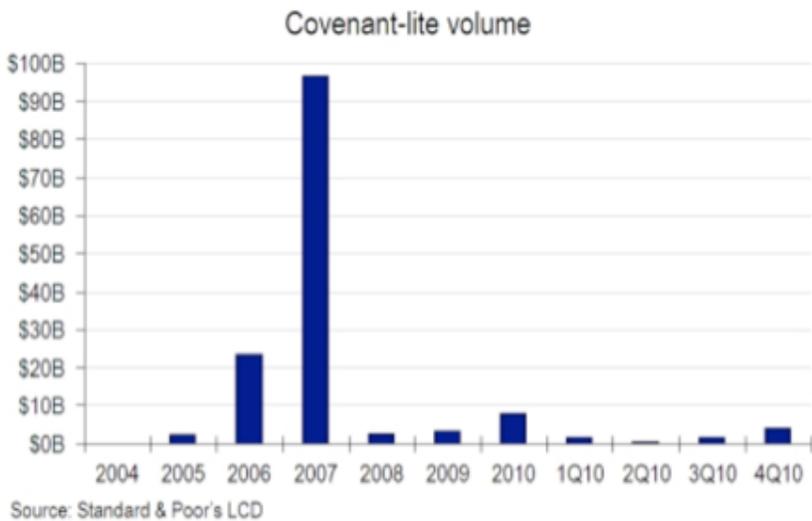
should represent more than 50% of the total LBO financing. With the increased supply of credit on account of CLOs, bank debt averaged 63% of LBO financing during the buyout boom, meaning 63



cents of every dollar of transaction value was funded through debt. Three-fourths of the largest

LBOs during this era were financed with EBITDA-to-capital ratios of 50% and even more shockingly, a third were financed with more than 75% bank debt (Hudoff and Kennedy 2). As the chart on the previous page shows, leverage ratios skyrocketed with equity contributions falling throughout this buyout boom.

Lastly, even with leverage ratios at an all-time high, debt covenants were incredibly flexible and relaxed. The use of so-called “covenant-lite” loans was one of the most common loan structures during the buyout boom era. “Covenant-lite loans have none of the three standard



types of ‘maintenance’ covenants (cash flow coverage, interest coverage, and overall leverage)”

(Acharya et al. 6).

Maintenance covenants require that the borrower maintain certain financial criteria at

regular intervals (usually quarterly). These covenants are specifically designed to warn the lender that the borrower’s cash flows are deteriorating, and thus it may not be able to meet its debt service payments in the future. Without this form of protection in place, the lender exposed itself to higher default risk and the forfeiture of its loaned capital. In addition, PIK (pay in-kind)/Toggle notes became the industry standard. This feature allows the debtor, if they so choose, to make interest payment in-kind, meaning with additional debt, rather than in traditional cash form. If the borrower pursues this option, the owed interest payment increases in general by 50-100 basis points (0.5% to 1.0%). Sometimes sarcastically referred to as “pay if you want”

loans, investors during the buyout boom often were forced to agree to the PIK/Toggle structure if they wanted to receive an allocation during the syndication process. Throughout this buyout era, more than half of the largest leveraged transactions were structured using PIK/Toggle notes (Hudoff and Kennedy 3). Thus favorable conditions for the debtor were the final distinctive feature of the 2003-2007 buyout boom.

Yet bigger, more debt-laden capital structures, and flexible debtor conditions do not necessarily translate to so-called “better” leveraged buyouts. While a truly comprehensive study cannot yet be undertaken to examine the performance of the boom’s buyouts due to an incomplete time horizon, the results of those investments that have been completed are mixed. In comparison to the overall high yield market, thirteen of the twenty large LBOs outperformed the index by an average annualized returned of 2.1%. The other seven buyouts underperformed the high yield index by an average of 5.0% annualized. Even more interesting, the mega-LBOs were some of the worst performing. During the buyout boom, seven deals with purchase prices of more than \$15 billion were completed, and six underperformed the index by an average annualized return of 5.7% (Hudoff and Kennedy 3). Without even taking into account the subsequent financial crisis’s negative effect on LBO performance, the buyout boom of the mid-2000s didn’t exactly produce the abnormal returns that the industry came to expect.

Conclusion:

Both the gradual erosion of the Glass-Steagall Act during the 1980s and 1990s and its formal repeal in 1999 established the foundation for the leveraged buyout boom of the mid-2000s. By encouraging the consolidation of commercial and investment banks into one-stop financial conglomerates, these institutions enhanced the supply of capital available for investors. In particular, the enhanced levels of credit more and more took the form of structured products,

which the banks were now permitted to underwrite as a result of Glass-Steagall's repeal. With the Federal Reserve's low interest rate policy during the beginning of the millennium, institutional investors began to pour money into these riskier products, like CLOs, in search of higher returns. The CLO vehicles pooled unprecedented levels of capital and allowed investors to own portions of LBO loans for the first time in industry history. The availability of cheap debt and the record fundraising efforts of private equity firms due to the low-yielding environment resulted in the largest buyout boom to date, even surpassing those of the famed 1980s. Though more deals were completed and their transaction values were larger than ever before, only time will tell if they were successful investments with their CLO debt maturities nearing.

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