

# Mergers and Acquisitions

## What can we Learn from the “Wave” of the 1980s?



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### **Abstract**

During the 1980s, the US witnessed a merger wave that was much larger than those observed during the 1920s and the 1960s. This in itself may not be surprising, given that the market for corporate assets was much larger during the 1980s than ever before. However, the wave of the 1980s left its mark on US's financial-corporate history in two different ways. First, aided by banks and private investors, financial engineering in the form of LBOs and MBOs formed a key component of this wave. Second, despite the fact that the gains to acquirers were not significant, the wave continued unabated for nearly 7 years, from the beginning of the 1980s to 1987. An economist, therefore, is saddled with two concerns: the possible rationale for the sustenance of the wave, in the absence of significant gains to acquirers; and the extent of participation of the banks in the financial engineering, and the impact of such participation on the banks' asset risk. This paper addresses these two questions, drawing upon the theoretical and empirical literature on corporate governance, and the US merger wave of the 1980s. It argues that *ex ante* there were many reasons for the precipitation of a merger wave, but hindsight suggests that managerial hubris was a key driver of the merger wave. While M&As may have helped augment the allocational efficiency of the country's productive resources, empirical evidence cited in this paper suggests that there were few reasons, if any, for the persistence of the merger wave, especially since many of the mergers involved a high degree of leverage. Further, after taking into account the nature and extent of the exposure of US banks to the M&As, the paper argues that exposure to M&As was responsible for increasing the banks' financial fragility. It concludes that the risk notwithstanding, M&As can act as a vehicle for creative destruction that is an integral part of a competitive market. Hence, an agenda of economic liberalisation is inconsistent with anti-trust legislation aimed at eliminating M&As; rather, M&As should be supplemented by strong disclosure and prudential norms.

### **Introduction**

Mergers and acquisitions (M&A) seem to have become an integral part of recent Indian corporate culture.<sup>1</sup> The number of open bids/offers rose from 30 in 1996-97 to 66 in 1998-99, and has crossed 35 in the first seven months of the current financial year. In tandem, the amount associated with

<sup>1</sup> To begin with, note that from an economic point of view there is no difference between a merger and an acquisition. In both cases, one firm is acquired by another, either by paying cash for its shares, or by swapping equities in some well-defined manner. Irrespective of whether the fusion of two companies is a merger (which has a friendly connotation) or an acquisition (which often implies that the acquirer is hostile), an economist is interested in the impact of the fusion on the organisational structure of the post-M&A firm, and its impact on the company's agency problem and efficiency. Hence, in the rest of the paper, the terms *merger* and *acquisition* have been used interchangeably, unless otherwise specified.

... the causes underlying the merger wave, its financing and impart on productivity form the focus of this paper

the bids/offers rose from Rs 170 crore in 1996-97 to Rs 1,606 in 1998-99, and crossed the Rs 750 crore mark during the April-November period of 1999.<sup>2</sup> However, apart from acquisitions that involve spinning off divisions/assets of large companies, or acquisition of the share of Indian joint-venture partners by foreign companies, most M&As have involved relatively small companies. The market for M&As in India has quite a long way to go before we may see mega-mergers like those involving giants like Citibank and the Travelers group, as well as exotic varieties of M&A like leveraged buyout (LBO) and management buyout (MBO).

But before we have a M&A “wave” involving large companies, as seen in the United States and Western Europe, we should have a better understanding of certain important issues.

- First, why did these countries witness a merger wave involving many billions of dollars? Was there a compelling economic reason for the mergers/acquisitions, or can we ascribe much of it to the so-called managerial hubris?
- Second, how were the mega mergers financed, and how did the high degree of leverage affect the extent of financial fragility of the banking system?
- Third, did the M&As help augment the efficiency of the firms subsequent to the merger/acquisition, especially in light of the fact that the mergers typically increased their leverage ratios significantly, and did they serve any broad economic purpose in the process?

These are compelling issues. The empirical literature on M&As has focussed largely on the “wave” of the 1980s in the US.<sup>3</sup> The waves of the 1920s and the 1960s have mostly been mentioned in the passing, and it is too early to evaluate the impact of the wave of the 1990s on either the companies themselves or on the economy as a whole. This literature is supplemented by that on the phenomenon of junk bonds, and the well-developed theoretical literature on the nature of agency problems that arise

<sup>2</sup> The M&A market was relatively inactive during the April-October period, in terms of the value of the underlying assets. The market picked up after November, with several high-profile acquisitions, including that of Indiaworld by Satyam, the acquisition of Times Bank by HDFC Bank, the reported merger of ICICI Bank with Centurion Bank and the purchase by Gujarat Ambuja of the Tata’s shareholding in ACC.

<sup>3</sup> In part, this wave drew attention to itself by introducing an unprecedented extent of financial engineering involving junk bonds, mezzanine financing, LBOs and MBOs. However, the sheer magnitude of the M&As was stupendously large. During the peak years of 1984-86, the values of the concluded M&A deals were USD 122 billion, USD 180 billion and USD 180 billion. By another estimate, the gains to the shareholders of the acquired companies between 1977 and 1986 was USD 346 billion (in 1986 dollars). While it is difficult to obtain corresponding figures for the 1960s’ wave, there is general agreement among economists that the 1980s’ wave was much larger in value terms.

as a consequence of separation of management and ownership.<sup>4</sup> Using these three strands of literature, this paper aims at addressing the aforementioned issues as best as possible.

The next section introduces the nature of the M&A wave of the 1960s, the knowledge of which may prove essential for an understanding of the efficacy of the subsequent wave of the 1980s. This section would also highlight the macroeconomic, legal and institutional changes in the US during the 1980s that are likely to have precipitated the wave. In the following section, we would explore the possible rationale behind the M&As. Finally, we shall explore the role of banks in facilitating the wave, and the nature of risk management on the part of the banks who were exposed to merger related loans.

### **A Rationale for the Merger Wave of the 1980s**

#### *A Background: The Merger Wave of the 1960s*

In order to better understand the rationale for the 1980s' merger wave, we would have to briefly focus on the merger wave of the 1960s. The latter wave was marked by acquisition of companies that were not necessarily in the same line of business, and precipitated the formation of major conglomerates like ITT and Teledyne. *Ceteris paribus*, the acquisition of unrelated business during the 1960s can, to a significant extent, be explained by the existence of strong anti-trust legislation like the Celler-Kefauver Act of 1950. However, such legislation cannot explain the emergence of the wave *per se*.

A section of financial economists (for example, Hubbard and Palia, 1998) believe that the wave was aimed at the creation of internal capital markets. During the 1960s, the growth in the real sector of the US economy was not matched by a similar growth in its financial market and institutions. In particular, the financial market in the US was marked by severe informational asymmetry between the borrowers and the lenders, a problem that has since been significantly mitigated by the imposition of accounting and disclosure norms, and the emergence of investment information providers, such as credit rating companies. Given this asymmetry, it was difficult for US companies to raise money from the capital market without incurring significant costs.

If, however, a company acquired several other companies in many different lines of business, it effectively ensured the separation of the emerging conglomerate's cash flow from the upturns and downturns affecting a particular industry. Unfettered by the economics of any one industry, the management could then seamlessly transfer the surplus from one company to another, thereby insulating their investment decisions significantly from

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<sup>4</sup> The literature on agency problems, which *de facto* started with the seminal paper by Jensen and Meckling (1976), argues that the management, the owners and the other stakeholders of firms (like bond holders and creditors) have different objectives that are not necessarily in harmony with each other. Hence, while the owners of a firm might want to maximise its value, the management may have a completely different agenda that might involve maximisation of its own perks and power.

... it has been argued that in the event of separation of management and ownership, which is true for almost all modern joint-stock companies, the objectives of the managers are not in harmony with those of the owners and managers may be more interested in the enhancement of their own perks and the expansion of their own power bases

the credit and capital markets.<sup>5</sup> One major advantage of such a financial structure was that it enabled the companies to effectively utilise first-mover advantage without having to divulge the project-specific or market-specific information to competitors by way of disclosures to investors and/or financial intermediaries (Bhide, 1997).

Jensen (1987), however, argues that much of a M&A wave can be explained with the so-called “free cash flow” theory. The genesis of this theory lies in the stylised belief that in the event of separation of management and ownership, which is true for almost all modern joint-stock companies, the objectives of the managers are not in harmony with those of the owners. This phenomenon has been dubbed *agency problem* by economists. Specifically, while owners may desire the maximisation of net earnings, managers may be more interested in the enhancement of their own perks and the expansion of their own power bases.<sup>6</sup> A corollary of this view of the agency problem is that the management will always want to expand the companies’ operations.<sup>7</sup> If, therefore, a company is in a line of business that guarantees a substantial cash inflow, but makes intra-industry expansion difficult or impossible, its management is very likely to use the free cash flows to acquire companies in growing industries/market segments. Jensen’s argument is substantiated by the observation that during the 1960s a large number of the acquirers were in lines of business (like oil, for example) that generated huge cash inflows but where expansion was difficult.

#### *The Environment during the 1980s*

Let us abstract from the rationale for the M&A wave of the 1960s, a wave that witnessed a spurt in the acquisition of companies in unrelated

<sup>5</sup> Note that in much the same way, the management could set off the losses from one of the companies against the gains from another, and thereby derive significant tax benefit. Such a practice, which reduces the net earnings of a larger company would be unacceptable in a paradigm where maximisation of shareholder value is of paramount importance. But shareholder value was hardly the focus of the companies’ management during the 1960s (Donaldson, 1997)

<sup>6</sup> Economists have argued that one way of mitigating the agency problem is to offer the management shares of a company so that they have an ownership stake in it. It is felt that such a stake is likely to align the interests if the management and the (other) owners of the company, thereby reducing the extent of the agency problem. However, note that in a large company with a large number of shares outstanding, it may be difficult to provide the management with enough stake that will make them behave more like owners than like hired management. Perhaps in response to this problem, companies have started offering stock options to their management. However, the value of these options are maximised if the expected returns to the companies’ investments are high, a condition that is likely to be satisfied only if the projects themselves are risky (Bhide, 1997).

<sup>7</sup> Note that, ironically, the management of a company may want to diversify its operations through acquisition if they own a very high fraction of its shares. If the management behave as rational risk-return optimising agents, they may be much more comfortable with a company that is diversified in many areas of business than in a company that is focused on one line of business. [In other words, both very little and very significant management stake in the equity of a company may be detrimental to the interests of the owners. For information about the empirical support for this hypothesis see Shleifer and Vishny (1987).]

lines of business, and turn our attention back to the 1980s. Suffice to note that, as observed by a number of financial economists, a large number of the mega companies or conglomerates that were formed as a consequence of the M&A wave of the 1960s were performing poorly,<sup>8</sup> especially in the aftermath of the energy price shocks of 1974 and 1979.<sup>9</sup>

The 1980s were marked by the emergence of macroeconomic and other trends that were clearly favourable for M&As. First, the high inflation rate had increased the nominal value of all fixed assets, and companies could benefit significantly by acquiring the assets of other companies and setting off their depreciation against their earnings at a higher rate (Shleifer and Vishny, 1997).<sup>10</sup> Further, the high rate of inflation substantially reduced the real rate of interest payable on past (fixed coupon) loans, thereby enabling companies to increase their leverage.

Second, the Reagan administration, which has since become a benchmark for *laissez faire* economic policies, was lax in its enforcement of anti-trust laws (Shleifer and Vishny, 1997; Jarrell, 1997). Hence, after many decades it was once again possible to acquire firms in the same line of business, thereby paving the way for horizontal mergers.

Third, since the 1970s, the cohort of shareholders in the US was increasingly dominated by institutional shareholders. Unlike individual shareholders, these institutional investors were much less tolerant in so far as under-performance was concerned, and sold the shares of a company as soon as it failed to live up to the expectations that it had previously generated. At the same time, if a company or entrepreneur wanted to take over an under-performing company, it/(s)he could now purchase a significant proportion of the latter's equity from just one or two (institutional) shareholders who were offloading its shares.<sup>11</sup>

Finally, a profound change was taking place in the US banking industry. Subsequent to the deregulation of the (bank) deposit rates, and the abolition of Regulation Q, the US banks, which were competing with the money market mutual funds, faced a sharp reduction in their borrowing-

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<sup>8</sup> This is hardly surprising, even if we assume that the conglomerate creating M&A wave of the 1960s was driven by the need for an internal capital market rather than by agency problems. Given that the companies did not have to raise much capital from the market, the (internal) capital used by these companies for investments was typically under-priced, a phenomenon that usually leads to a significant exposure to non-viable projects.

<sup>9</sup> The stock prices in the US, as indicated by the DJIA, started falling from mid 1970s, and did not recover to their 1976 levels until 1983 (Ravenscraft, 1987).

<sup>10</sup> Some economists (Auerbach and Reishus, 1997; Bhide, 1997) have argued that there was incentive for the management to take over poorly performing companies, and directly use the latter as a tax shield. It is not obvious how depreciation of newly acquired assets can necessarily enhance a company's earnings, and hence its shareholder value. But, as we have noted later in the paper, maximisation of shareholders' wealth was perhaps not a priority of the management of the acquiring firms.

<sup>11</sup> At the very least, this enabled the predator to take a toehold in the under-performing company, thereby making it perceptibly easier for the predator to assume control of the company at a later date (Bulow, Huang and Klemperer, 1996).

## JUNK BONDS

It is well known that “junk” bonds are non-investment grade bonds, and the conventional wisdom is that junk bonds were a significant force driving the merger and acquisition boom in the US during the 1980s. Indeed, Drexel Burnham began selling junk bonds to provide financing for leveraged buyouts as early as 1981, and in 1983 the firm introduced the concept of junk bond financing into the market for hostile takeovers. Why, however, did the junk bond market grow? And how important a role did these bonds play in the eighties merger and acquisition history of the United States?

The relatively high inflation rate in the US during much of the 1970s, and increased competition in its financial sector had significantly lowered the operating margins of a section of the country's financial institutions, namely, conventional and investment banks. These institutional investors were, therefore, looking for securities that would have added to the returns on their investments. This latent demand for high-yield securities enabled institutions like Drexel create a liquid market for junk bonds involving banks, and other institutional investors. Junk bonds, therefore, not only offered higher returns, but also enabled the financial institutions to substitute high risk and illiquid term loans with such bonds. Indeed, the relative liquidity and divisibility of the debt raised through junk bonds helped mitigate liquidity risks and thereby made them preferable *vis-à-vis* high yield term loans.

Why, however, were the companies willing to issue junk bonds, given that the issue of such bonds might have sent undesirable signals to the investors? Essentially, the acquirers benefited from the speed at which they could obtain funds through the junk bond route, timing being an important consideration during a takeover attempt. Indeed, in the hands of an able investment banking firm, the issue of junk bonds by a company was not held back by procedural delays.

How, therefore, were junk bonds placed in the market? Through an investment banker, the acquiring firm obtained financing commitments from investors and, on the basis of these commitments, made a tender offer for the target firm. The investors were expected to honour their commitments so long as the acquirer was able to purchase some pre-specified fraction of shares, often using a shell corporation as a front. Importantly, the junk bonds were not collateralised by the shares of the target company. If the tender offer succeeded, these shares could be used as collateral to obtain more funds, if required, to complete the acquisition. Irrespective of whether the takeover attempt was successful, the investors in the junk bonds received commitment fees: between 3/8<sup>th</sup> of a percent and 1 percent of the funds committed.

To what extent did junk bonds facilitate mergers and acquisitions in the US during the 1980s? There is no clear answer to this question. For example, Drexel Burnham estimated that only 11 per cent of junk bonds issued during 1984, valued at USD 1.7 billion, was used for mergers and acquisitions. In other words, junk bonds accounted for only 1.4 per cent of all merger and acquisition activity recorded during 1984. The Federal Reserve Bank, on the other hand, estimated that 41 per cent of the junk bonds issued during 1984 was used for mergers and acquisitions, accounting for about 9 per cent of the merger and acquisition activity for that year. Finally, according to Merrill Lynch, the corresponding figures for 1984 are 21-31 per cent and 2.6-4.5 per cent. However, irrespective of the relative accuracy of these figures, it is evident that the junk bonds accounted for a very small fraction of the merger and acquisition activity in the US during the 1980s. In other words, while the rise of junk bonds as financial instruments had certainly helped acquirers in specific cases, they did not play as big a role in facilitating mergers and acquisitions as they are often believed to have done.

*Source:* Taggart (1988)

lending spreads, a phenomenon that adversely affected their profitability.<sup>12</sup> At the same time, there was a significant erosion of the banks' lending business as good corporate borrowers bypassed the banks and raised capital directly from the capital market using debentures and commercial papers (Borio, 1990). The loss of market share in the deposit and credit markets was further aggravated by competition from the foreign banks (Borio, 1990; Taggart, 1988). Hence, as many economists have argued, the banks were both willing to take risks that are typically associated with lines of business that yield high returns, and were looking for alternative business activities.<sup>13</sup> In other words, the stage was set for introduction of banking products like bridge and mezzanine financing, as well as high risk-high yield financial instruments like LBO-financing junk bonds.

### *Search for a Rationale for the 1980s' M&A Wave*

It is evident that during the 1980s there existed both opportunities and some incentive, in the form of tax related gains, for (predator) companies to acquire others. However, the mere *existence* of opportunities, and tax related gains cannot possibly account for the large number of M&As involving hundreds of billions of dollars! Hence, an explanation for the "wave" lies elsewhere.

A compelling, and intuitively appealing, explanation for the wave is that predator companies wanted to acquire companies that were undervalued in the stock market because of under-performance. The implicit assumption underlying this line of argument is that the acquired companies, or at least their core lines of businesses, could be turned around and made profitable subsequent to changes in organisational structure and the style of functioning of the management.<sup>14</sup> If this is indeed a valid explanation for the M&A wave of the 1980s, we would expect to witness a significant amount of post-acquisition divestitures and, in some cases, sale of "non-core" lines of business by conglomerates to companies in the same lines of business as the sold units.

Both cross-sectional evidence, and case studies suggest that this indeed was the case. For example, Shleifer and Vishny (1997), for example, find that in a sample of 62 hostile takeovers between 1984 and 1986 about

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<sup>12</sup> Specifically, while the borrowing/deposit rates were raised to maintain the market share of the banks *vis a vis* the money market mutual funds, a substantial proportion of the banks' assets were locked into low interest yielding securities that had been issued in the 1960s.

<sup>13</sup> Indeed, as noted in *Box 1*, only about 11 per cent of M&A activities was financed with junk bonds. In other words, about 89 per cent of such activities was financed by conventional and investment banks.

<sup>14</sup> Note, however, that while organisational changes can be effected to offer the incumbent management of the acquired company a better incentive structure to perform well—contracts involving both significant rewards and severe penalties—disbanding of the entire team of incumbent managers can adversely affect the health of the company because these managers possess "managerial rents" in the form of firm-specific and unique talents and skills (Zollo, 1998).

### SUMMARY OF PRE-OFFER TAKEOVER DEFENSES

<i>Type of Defense</i>	<i>Description</i>	<i>Defensive Impact</i>	<i>Share holder Approval</i>	<i>Potential Effective-ness</i>
STAGGERED BOARD	Board is classified into 3 equal groups. Only one group is elected each year.	Bidder cannot obtain control of the target immediately after obtaining a majority of shares.	Required	Moderate
SUPER-MAJORITY	A high proportion of shares required to approve a merger, usually 80 per cent. Board can void the clause.	Increase the number of shares required to obtain control in hostile takeovers.	Required	Mild
FAIR PRICE	Super-majority provisions waived if bidder pays all stockholders the same price.	Prevent two-tier takeover offers.	Required	Mild
POISON PILLS	Rights to preferred stock issued to shareholders. Rights can be exercised after a tender offer or the accumulation of a large block of shares by an outside party. In flip-over plans exercised rights can be used to purchase stock in the bidder on favourable terms. In flip-in plans, exercised rights are re-purchased by the issuing firm at a substantial premium. The bidding firm or large shareholder is excluded from the repurchase.	Makes hostile tender offers prohibitively expensive.	Not required	Severe
DUAL CLASS RECAPITALISATION	Distributes a new class of equities to shareholders with superior voting rights but inferior dividends or marketability. Allows shareholders to exchange the new shares for ordinary common stock.	Allows incumbent managers to obtain a majority of votes without owning a majority of the common stock.	Required	Severe

*Source:* R.S. Ruback, "An Overview of Takeover Defenses," (in) A.J. Auerbach (ed.) *Mergers and Acquisitions*, The University of Chicago Press, 1988, pp. 54-55.

30 per cent of the assets of the acquired companies was sold off within three years of acquisition.<sup>15</sup> In as many as 70 per cent of cases, the sell-offs were to companies that were in the same lines of business. The findings of the illuminating case study about the 1984 sell-off of O. M Scott and Sons Company, a part of the ITT “empire,” in the form of a divisional leveraged buyout, is in agreement with this empirical evidence. Bakers and Wruck (1997), the authors of the case study, have noted that the divestiture decision was prompted by decline in O. M. Scott’s financial performance during the period in which it was a fully owned subsidiary of ITT.

Finally, there is agreement about the fact that, in general, the financial performance of the acquiring companies was superior to the performance of the acquired companies, after controlling for the respective industry performances.

Can we, therefore, hypothesise that M&A was a process aimed at realising the potential of (acquired) companies through reallocation of their assets to those that could best use them? Unfortunately, such a hypothesis does not stand the trial of close scrutiny. Economists have attempted to identify potential gains from M&A activities using three different research methodologies (Rhoades, 1994; Peristiani, 1997). First, they have compared the pre-merger and post-merger financial performances of the acquiring company. Second, they compare the performance of the stock prices of the predator firms before and after the announcement of M&As.<sup>16</sup> The assumption underlying this line of research is that in an efficient capital market all information and expectation about a company’s future performance will be accurately reflected by its stock price. Third, they have constructed “efficient” cost curves/frontiers for the predator and the acquired companies, and have compared the deviations of the pre- and post-merger costs from the respective minimum costs implicit in the efficient frontier. It is obvious that if a merger is efficiency enhancing, the post-merger deviation will be smaller than the pre-merger deviation.

The research methodologies are not devoid of shortcomings. For example, while it may take a company a few years to reap the benefits of M&A by way of economies of scale and scope, and perhaps better governance, after a couple of years it becomes difficult to distinguish gains and losses arising out of mergers from those arising out of other factors like productivity gains on account of technological advancement. Moreover, samples used in empirical research typically do not include companies that have acquired more than one company during the target period. Now, these companies may go through the process of M&A more than once either because *ex ante* they were good at assimilating other companies in similar

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<sup>15</sup> The proportion of assets sold off was higher in the case of LBOs and stood at 44 per cent in the sample of Shleifer and Vishny (1997).

<sup>16</sup> The average size of the “window” over which the stocks’ performances are observed is about 20 days, from 10 days prior to the announcement of the merger/acquisition till 10 days after it. However, the window has been as small as 10 days, and as large as 40 weeks.

**Box 3**  
**Summary of Post-Offer Takeover Defenses**

Type of Defense	Description	Defensive Impact
TARGETED RE-PURCHASE	Repurchase of block of issues held by a shareholder, usually at a premium.	Eliminates a potential bidder.
STANDSTILL AGREEMENT	Limits ownership by a given firm for a specified time period. May include an agreement with a large shareholder to vote holdings with the board.	Eliminates a potential bidder.
LITIGATION	Suit filed against bidder for violating antitrust or securities laws.	Delays bidder.
ASSET RESTRUCTURING	Assets bought that a bidder does not want or that will create antitrust problems. Assets sold that the bidder wants.	Makes the target less valuable.
LIABILITY RESTRUCTURING	Shares issued to a friendly third party or number of shareholders increased. Shares repurchased at a premium from the existing shareholders.	Makes it more difficult to obtain the number of shares required for a hostile bidder to achieve control.

Source: R.S. Ruback, "An Overview of Takeover Defenses," (in) A.J. Auerbach (ed.) *Mergers and Acquisitions*, The University of Chicago Press, 1988, p. 62.

... both operating performance studies and event studies indicate that post-M&A companies in the respective samples did not witness statistically significant efficiency gain ...

lines of business, or because they rapidly learnt through initial acquisitions how to assimilate two or more companies optimally. In such an event, omitting such companies from a sample might bias the conclusions drawn from the empirical exercises (Pilloff and Santomero, 1996).

But no research methodology is fully secure against pitfalls, and hence the empirical results cannot be completely overruled on the basis of their methodological shortcomings. However, taken as a whole, these results bring into question the efficacy of M&As from the individual companies' perspective. Both operating performance studies and event studies indicate that post-M&A companies in the respective samples did not witness statistically significant efficiency gain (Rhoades, 1994, p. 10-35). Indeed, in many cases the acquiring company's efficiency change as well as returns on its equity were *negative*. Even more revealing is the fact that post-M&A efficiency gains have not observed even in the banking sector, where the economies of scale and scope can be reaped easier and faster as compared

to the non-financial sector (Pilloff and Santomero, 1996; Peristiani, 1997).<sup>17</sup>

Sans efficiency gains, and gains in shareholder value, why would a company want to acquire another company that is presumably not in the pink of health? Indeed, early M&A attempts may have been precipitated by visions of post-merger efficiency gains, but if we are to assume that the managers act as rational economic agents, it is difficult to justify why the merger wave continued through 1987,<sup>18</sup> when evidence of actual gains were hard to come by. In line with Jensen's (1987) view, there seems to be a general agreement among economists that acquisitions during the 1980s were often fuelled by the coexistence of the managers' desire to expand operations and hence their own horizons of influence, and the willingness of banks and private financiers to provide funding for purchase of the target companies' equity. Pilloff and Santomero (1996) suggest that the attempts to maximise the utility of the acquiring managers resulted in an accommodation of the management and shareholders of the target companies in the form of high takeover premia over the market prices of the shares. The high premia, which resulted in high leverage and high levels of interest payment, is said to have been responsible for the sub-expectation post-M&A performance of the companies.<sup>19</sup>

### **Banks' Role in Mergers and Acquisitions**

As indicated above, banks and private financiers played an important role in facilitating mergers and acquisitions during the 1980s. Indeed, by 1986, credit used for M&As accounted for more than 15 per cent of the banks' outstanding advances to the commercial and industrial sectors, and of this LBOs accounted for about 13 per cent [see *Table 1* in the Appendix]. By the end of 1988, the credit outstanding of the 50 largest bank holding

<sup>17</sup> Pilloff and Santomero (1996), however, cite a paper that has claimed to have found evidence of post-M&A profitability gains in the banking sector, using frontier analysis. But, according to the same paper, evidence of profitability gains was not found using stylised analysis of financial ratios.

<sup>18</sup> For all we know, the M&A wave may have been brought to a halt by the emergence of the "second generation" anti-takeover laws enacted by the state governments, the granting of legal sanctity to poison pills [see box 2 for a description of pre-bid defensive tactics], the collapse of the junk bond market, and the increased fragility of the US banking system towards the end of 1980s.

<sup>19</sup> In other words, the present value (or more!) of the entire expected gain from merger between two companies was paid in the form of a premium by the acquiring company to the shareholders of the target company. Andrade and Kaplan (1998) argue that high leverage was the main reason for financial distress among post-M&A companies. In their sample, highly leveraged firms had a median coverage ratio of 0.98, against the industry median of 3.87. The impact of operating margins on the extent of the distress was found to be marginal; in the absence of a reduction of operating margins, the coverage ratio of distressed firms would have been 1.08. However, the negative impact of high leverage possibly kicked in if it was above some threshold level. Several studies have confirmed that subsequent to an increase in leverage, either for acquisition or to effect a poison pill strategy, a company's investment in non-core areas declined significantly, and thereby had a salutary impact on its operating performance (Safieddine and Titman, 1997).

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... the banks' participation in highly leveraged transactions marked the beginning of a new paradigm in lending. The banks were lending money not so much on the basis of the strength of the balance sheets of the companies, but on the basis of their expectations about the future cash flows of the companies, subsequent to mergers

companies (BHCs) in the US, on account of highly leveraged transactions, stood at USD 49 billion, i.e., 29 per cent of the combined equity capital of these BHCs [see Table 2].<sup>20</sup>

Apart from term loans and revolving credit, the banks' exposure to companies involved in M&As included bridge loans (Borio, 1990). These loans, an innovation of the M&A era of the 1980s, were usually of short to medium term maturity, and were typically repaid out of proceeds from sale of financial and/or real assets. They served two important purposes. First, they helped a predator company add credibility to its tender offer for a target company's shares by backing up the offer with ready cash, till the predator could arrange for funds by way of issue of debt instruments and/or equity. Second, bridge loans could be used to meet post-merger financial obligations till the new entity could sell its assets to raise the necessary amount.<sup>21</sup>

Bridge loans were typically collateralised, the collateral for such loans being the assets of the target companies and/or the equity of subsidiaries of the predator companies. However, the US banks also sold loans associated with highly leveraged transactions to other banks.<sup>22</sup> The sale of loans took two different forms. In case of an *assignment*, the original lender gave up all its rights and obligations with respect to the relevant loan to the purchasing bank. In other words, subsequent to the sale, there was no further relationship between the original lender and the borrowing company. The "purchasing" bank could resell the loan subsequently to a third bank. In case of an inter-bank *participation* contract, on the other hand, the original borrower continued to be involved with the payment schedule and the terms of the loan. The bank "purchasing" the loan, however, was given the sole right to determine the interest rate and length of maturity; but it could not resell the loan.<sup>23</sup>

The banks' participation in highly leveraged transactions marked the beginning of a new paradigm in lending. The banks were lending money not so much on the basis of the strength of the balance sheets of the companies, but on the basis of their expectations about the future cash flows of the companies, subsequent to mergers. Further, actual loans were being supplemented by off-balance-sheet commitments that substantially increased the exposure of the banks to the companies in question. Given the *ex post* evidence that the highly leveraged companies were often in financial distress (Andrade and Kaplan, 1998), it was safe to presume that the riskiness of the

<sup>20</sup> The implication of this observation for the capital requirement of a bank that is subject to minimum capital adequacy ratio, *a la* Basle norms, is fairly obvious.

<sup>21</sup> A 1989 study involving sixty large US banks indicated that about 10 per cent of bridge loans were repaid by issue of bonds, while 30 per cent were repaid using funds generated from asset sales.

<sup>22</sup> However, as a consequence of the heterogeneity in the nature of the underlying loans, this *de facto* asset backed securities market did not take off. As late as 1990, loans valued at only about USD 1.5 billion were securitised.

<sup>23</sup> Given the difference with respect to the extent of involvement of the "purchasing" bank, in case of participation contracts the original banks were not allowed to remove the loans from their balance sheets.

banks' credit portfolio was on the rise. The manifestation of the higher risk was the higher interest rates on the credit disbursed for highly leveraged transactions.

The US banking industry was marked by widespread financial distress between the late 1980s and the early 1990s. Its exposure to highly leveraged transaction was certainly not the only reason for its distress. The banking system was also over-exposed to real estate, especially in regions like New England, and other high risk assets (Randall, 1993). However, it is difficult to get away from the possibility that the banks' exposure to M&A related credit and junk bonds may have facilitated the banking crisis, at least in part. At the very least, there was a case for establishing prudential norms aimed at regulating the banks' exposure to M&A.<sup>24</sup>

### Summing Up

The M&A wave in the US increased the leverage ratio of many companies beyond reasonable thresholds, and it is safe to assume that it contributed to the fragility of the banking system in the US during the 1980s. However, from a "macro" economic point of view, the M&A wave did serve a useful purpose. The internal capital markets created by the 1960s' wave led to underpricing of capital, and hence encouraged investments in projects that were not necessarily viable. At the same time, the size of the diversified companies helped obscure the managements' performance, and hence paved the way for managerial moral hazard. As we have seen, an important characteristic of the M&A wave of the 1980s was the breaking up of conglomerates, and the sale of the acquired companies' units to other companies that were in related lines of business. In other words, the M&A wave served the useful purpose of reallocation of the economy's industrial resources to those that could use these resources most efficiently. At the same time, the wave forced companies to raise funds from the "external" capital market, thereby eliminating the problem of underpricing of financial resources.

Even if M&A is efficiency augmenting in a "macro" sense, one can justifiably seek clarification about the impact of M&As like employment and investment in areas like research and development. Indeed, there is widespread apprehension about the possibility of post-merger layoffs and wage-cuts, and underinvestment in research and development, given the capital intensive nature of such activities and the cash crunch facing highly leveraged post-merger corporate entities. The US experience during the 1980s, which cannot necessarily be generalised, suggests that M&A does not *always* lead to wide spread layoffs. Specifically, as argued by Shleifer and Vishny (1997), there is no evidence of a reduction in research and development related investments of companies that were involved in M&A during the 1980s; nor evidence of substantial wage cuts for employees of

... it is difficult to get away from the possibility that the banks' exposure to M&A related credit and junk bonds may have facilitated the banking crisis, at least in part

<sup>24</sup> Indeed, some of the later norms did attempt to regulate the banks' exposure in the form of off-balance-sheet activities, and the riskiness of the banks' exposures to M&A related lending is at least partly endogenised by the introduction of the (minimum) capital adequacy ratio.

... with the growth of global trade and the abolition of a licensing system, it is difficult for any company to acquire monopolistic powers and, more importantly, sustain it for a reasonable length of time . . . it is today difficult for the management of companies to hide under-performance and (collective) myopia using size as a barrier to effective monitoring

## POST-MERGER EFFICIENCY IN THE BANKING SECTOR

Several financial economists have attempted to identify the impact of M&A activity within the banking sector, on the efficiency of the banks. The sample sizes for these empirical exercises have been as small as 11 and as large as 469, the average size being in excess of 100. These economists verified the impact of M&As on several performance indicators: returns on assets and equity, ratios of total expense to assets and non-interest expenses to assets, abnormal return on stock within a time period that includes the date of announcement of the merger/acquisition, and even X-efficiency. Interestingly, most of the studies undertaken during the 1980s have focused on abnormal returns on stock, while the studies conducted during the 1990s used financial ratios as the basis for their evaluation (see Rhoades, 1994).

Some of the interesting findings of these empirical investigations that were replicated across studies are as follows:

- While the acquired firms' shareholders sometimes enjoyed abnormal returns on their equity investment after the announcement of the merger/acquisition, the shareholders of the acquiring firms rarely gained significantly.
- The returns on assets and equity of the merged bank were rarely significantly higher than the combined returns of the acquiring and the acquired banks prior to merger, if at all.
- With a few exceptions – largely in the context of mergers among banks belonging to the same holding companies – there was no significant improvement in cost efficiency of the banks subsequent to merger.
- While the acquiring banks were, in general, more efficient and profitable than the acquired banks, both were typically less efficient and profitable than the most efficient or “best practice” banks.

As discussed in the paper, the methodologies associated with these empirical investigations were not devoid of shortcomings. However, the similarity of the findings across studies and samples suggests that it would perhaps be reasonable to conclude that mergers involving two banks in the US, during the 1980s, were by and large not successful in augmenting either the profitability or the efficiency of the acquiring and the acquired banks. While the rationale for such an experience is not obvious, history does not seem to be on the side of bank mergers in the US.

these companies. Further, while there were layoffs, the magnitude of the layoffs was not alarming. For example, between 1984 and 1986, a total of 26,000 employees lost their jobs subsequent to mergers. They accounted for 2.5 per cent of the total employees of the companies involved in M&A during that period. Importantly, layoff was much more significant among white collared workers than among blue collared employees.

At some point of time in history, when formation of monopolies and oligopolies was a viable threat, the efficacy of M&A as an economic activity was perhaps questionable, especially because acquisition during the earlier part of the 20<sup>th</sup> century resulted in consolidation of economic power.

However, two significant changes have taken place in most major economies since then. First, with the growth of global trade and the abolition of a licensing system, it is difficult for any company to acquire monopolistic powers and, more importantly, sustain it for a reasonable length of time.<sup>25</sup> Second, the emergence of capital markets as the main source of finance, and increased concentration of equity in the hands of institutional investors have brought market discipline to the fore, and, at the same time, there has been a significant improvement in the disclosure norms facing the companies. These changes have made it difficult for the management of companies to hide under-performance and (collective) myopia using size as a barrier to effective monitoring. In other words, in this day and age, any economic or political ideology that attempts to restrict or eliminate M&A may be anachronistic.<sup>26</sup>

The entire purpose of having a competitive market economy is to attain a high level of allocative efficiency. At the same time, the high level of efficiency can be preserved only with the help of “creative destruction.” In a textbook example, creative destruction is facilitated by free entry and exit of companies to and from the market. In the more real world, M&A is another way of facilitating creative destruction—and achieving economies of scale and scope—one that reduces the costs associated with entry and exit. This view does not waive away the problems and risks that are associated with managerial hubris, high leverage ratios of companies, and fragility of the financial system. But the solution does not lie in the elimination of M&A activities, with or without the help of anti-trust legislation. It has to involve strong disclosure norms and pro-active prudential regulation governing M&A, issue of M&A-related securities, and bank lending, not to mention the creation of a social safety net. To recapitulate, economic liberalisation is a process of evolution where risks are inevitable but where decisions have to be taken on the basis of the risk-reward ratio, not on the basis of risks alone. If M&As improve allocational efficiency significantly, therefore, such that the risk-adjusted gain from such activity is perceived to be fairly high at an aggregate level, they should be viewed as an integral and important part of the process of economic liberalisation, without malice.

<sup>25</sup> Shleifer and Vishny (1997) highlight an indirect evidence that suggest that by the 1980s M&As were no longer being viewed as events facilitating concentration of monopolistic and oligopolistic powers in the hands of the acquiring companies. Economic theory suggests that if competition within an industry is expected to decline, then the investors should expect an increase in the future earnings of the incumbent companies, thereby having a salutary impact on the share prices of these companies. However, it was seen that, more often than not, share prices of companies within an industry fell across the board when an anti-competitive merger was blocked by the antitrust authorities. In other words, *prima facie* it can be argued that investors felt that the possible efficiency gains arising out of M&A would far outweigh the losses on account of decrease in competition.

<sup>26</sup> Note that such a possibility exists even in market friendly countries. In the US, for example, the initial wave of M&As during the 1980s was followed by the rise of the “second generation” anti-trust legislation at the state level which aimed at making acquisition of companies difficult, especially in the case of cross-border acquisitions.

. . . in the more real world, M&A is another way of facilitating creative destruction—and achieving economies of scale and scope—one that reduces the costs associated with entry and exit

## REFERENCES

- Andrade, G. and S. N. Kaplan (1998) "How Costly is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions that Became Distressed," *Journal of Finance*, LIII(5): 1443-94.
- Auerbach, A. J. and D. Reishus (1988) "The Impact of Taxation on Mergers and Acquisitions," (in) A. J. Auerbach (ed.) *Mergers and Acquisitions*, The University of Chicago Press.
- Baker, G. and K. Wruck, (1997) "Lessons from a Middle Market LBO: The Case of OM Scotty," (in) D. H. Chew (ed.) *Studies in International Corporate Finance and Governance Systems*, Oxford University Press.
- Bhide, A. (1997) "Reversing Corporate Diversification," (in) D. H. Chew (ed.).
- Bittlingmayer, G. (1998) "The Market for Corporate Control (Including Takeovers)," Working Paper, Graduate School of Management, University of California at Davis.
- Borio, C. E. V. (1990) "Banks' Involvement in Highly Leveraged Transactions," Economic Paper No. 28, Bank for International Settlements.
- Boyle, G. W., R. B. Carter and R. D. Stover (1998) "Extraordinary Antitrust Provisions and Insider Ownership Structure: The Case of Converting Savings and Loans," *Journal of Financial and Quantitative Analysis*, 33(2): 291-304.
- Brewer III, Elijah and W. E. Jackson III (1997) "Requiem for a Market Maker: The Case of Drexel Burnham Lambert and Below-Investment-Grade Bonds," Working paper No. WP-97-25, Federal Reserve Bank of Chicago.
- Brickley, J. A., J. L. Coles and R. L. Terry (1994) "Outside Directors and the Adoption of Poison Pills," *Journal of Financial Economics*, 35: 371-390.
- Browne, L. E. and E. S. Rosengren (1987) "Are Hostile Takeovers Different?" (in) L. E. Browne and E. S. Rosengren (eds.) *The Merger Boom*, Federal Reserve Bank of Boston.
- Bulow, J, M. Huang and P. Klemperer (1996) "Toeholds and Takeovers," Working Paper, Graduate School of Business, Stanford University.
- Caves, W. J. (1987) "Effects of Mergers and Acquisitions on the Economy: An Industrial Organization Perspective," (in) L. E. Browne and E. S. Rosengren (eds.).
- Donaldson, G. (1997) "The Corporate Restructuring of the 1980s – And Its Import for the 1990s," (in) D. H. Chew (ed.).
- Garvy, G. T. and G. Hanka (1999) "Capital Structure and Corporate Control: The Effect of Antitakeover Statutes on Firm Leverage," *Journal of Finance*, LIV(2): 519-546.
- Golbe, D. L. and L. J. White (1988) "Mergers and Acquisitions in the US Economy: An Aggregate and Historical Overview," (in) A. J. Auerbach, (ed.).
- Hotchkiss, E. S. (1998) "Acquisitions as a Means of Restructuring Firms in Chapter 11," *Journal of Financial Intermediation*, 7: 240-262.
- Hubbard, R. G. and D. Pulia (1995) "Benefits of Control, Managerial Ownership, and the Stock Returns of Acquiring Firms," NBER Working Paper No. 5079.
- \_\_\_\_\_ (1998) "A Re-examination of the Conglomerate Merger Wave in the 1960s: An Internal Capital Market's View," NBER Working Paper No. 6539.
- Jarrell, G. A. (1987) "Financial Innovation and Corporate Mergers," (in) L. E. Browne and E. S. Rosengren (eds.).
- Jensen, M. C. (1987) "The Free Cash Flow Theory of Takeovers: A Financial Perspective on Mergers and Acquisitions and the Economy," (in) L. E. Browne and E. S. Rosengren (eds.).
- Mahoney, P. and M. Weinstein (1999) "The Appraisal Remedy and Merger Premiums," Working Paper, School of Law, University of Virginia.
- Pilloff, S. J. and A. M. Santomero (1996) "The Value Effects of Bank Mergers and Acquisitions," Working Paper No. 97-07, Financial Institutions Center, The Wharton School.
- Peristiani, S. (1997) "Do Mergers Improve the X-efficiency and Scale Efficiency

of US Banks? Evidence from the 1980s," *Journal of Money Credit and Banking*, 29(3): 326-337.

Randall, R. E. (ed. 1993) *Safeguarding the Banking System in an Environment of Financial Cycles*, Federal Reserve Bank of Boston.

Ravenscraft, D. J. (1987) "The 1980s Merger Wave: An Industrial Organization Perspective," (in) L. E. Browne and E. S. Rosengren (eds.).

Rhoades, S. A. (1994) "A Summary of Merger Performance Studies in Banking, 1980-93, and an Assessment of the "Operating Performance" and "Event Study" Methodologies," Working Paper No. 167, Board of Governors of the Federal Reserve System.

Ruback, R. S. (1988) "An Overview of Takeover Defenses," (in) A. J. Auerbach (ed.).

Safieddine, A. and S. Titman (1997) "Debt and Corporate Performance: Evidence from Unsuccessful Takeovers," NBER Working Paper No. 6068.

Shleifer, A. and R. W. Vishny (1988) "Management Buyouts as a Response to Market Pressure," (in) A. J. Auerbach (ed.).

\_\_\_\_\_ (1997) "The Takeover Wave of the 1980s," (in) D. H. Chew (ed.).

Singh, R. (1995) "Takeover Bidding with Toeholds," Working Paper, Olin School of Business, Washington University at St. Louis.

Taggart, R. A., Jr. (1988) "The Growth of the "Junk" Bond Market and Its Role in Financing Takeovers," (in) A. J. Auerbach (ed.).

Zollo, M. (1997) "Strategies or Routines? Knowledge Codification, Path-Dependence and the Evolution of Post-Acquisition Integration Practices in the US Banking Industry," Working Paper No. 97-10-C, Financial Institutions Center, The Wharton School, University of Pennsylvania.

## APPENDICES

	1985	1986	1987	1988	1989
	as a percentage of total commercial and industrial loans outstanding				
<b>Merger related</b>	10.0	15.1	15.7	11.5	15.3
Larger banks					
Smaller banks	11.1	17.0	17.3	12.3	15.8
	4.9	7.4	8.5	9.7	13.9
<b>LBOS</b>	7.0	13.2	9.1	6.9	8.9
Larger banks	8.1	15.6	9.9	7.4	8.4
Smaller banks	3.2	4.6	5.5	5.8	10.2
	as a percentage of total merger related loans outstanding				
<b>LBOs</b>	66.2	72.5	63.4	62.1	57.7
Larger banks	68.7	77.3	63.7	62.4	54.0
Smaller banks	57.7	57.0	62.0	61.5	68.2

*Note:* The threshold value of assets beyond which a bank is considered to be large is USD 7.5 billion for the 1985-87 period, and USD 10 billion for the 1988-89 period.

*Source:* C. E. V. Borio, "Banks' Involvement in Highly Leveraged Transactions," BIS Economic Paper no. 28, 1990, p. 14.

	1988		1989		1990	
	<i>Dec</i>	<i>June</i>	<i>Sept</i>	<i>Dec</i>	<i>March</i>	<i>June</i>
	In billions of US dollars					
Loans (senior debt)	78	92	96	118	119	113
Outstanding	49	57	59	77	81	78
Unfunded commitments	29	35	37	41	39	34
Others	5	9	7	7	7	7
Total	83	100	103	126	127	120
	As a percentage of Net Worth					
Loans	78	87	105	114	114	103
<i>of which outstanding</i>	29	54	65	74	77	72
Total	84	95	113	121	121	110

*Note:* Others include mezzanine financing (subordinated debt plus limited-life preferred stock) and equity investments (common and perpetual preferred stock, including unfunded commitments)

*Source:* C. E. V. Borio, "Banks' Involvement in Highly Leveraged Transactions," BIS Economic Paper no. 28, 1990, p. 18.

**TABLE 3**  
**LBO Example: Owens-Illinois**

	<i>Financing of transaction</i>				<i>Final Capital Structure</i>	
	<i>Tender offer</i>		<i>Merger date</i>		<i>USD billion</i>	<i>per cent share</i>
	<i>USD billion</i>	<i>per cent share</i>	<i>USD billion</i>	<i>per cent share</i>		
Senior bank debt	3.0	75	2.7	63	2.7	60
Subordinated debt	0.8	20	1.4	31	1.4	30
Senior			0.8	17	0.8	16
Junior zero-coupon	0.6	15	0.6	14	0.6	13
KKR notes	0.2	5				
Excess cash			0.1	2		
Equity	0.2	5	0.2	4	0.2	4
Remaining pre-existing debt					0.3	7
<b>Total</b>	<b>3.9</b>	<b>100</b>	<b>4.3</b>	<b>100</b>	<b>4.4</b>	<b>100</b>

*Note:* The transaction involved the purchase of the existing equity and over half of the pre-existing debt given that existing indentures prevented merger. Bridge financing was supplied by Kohlberg, Kravis, Roberts and Co. (KKR) and Morgan Stanley in the form of KKR subordinated notes and junior zero-coupon debt. On the merger date bridge financing and part of the senior bank debt was refinanced with subordinated debt.

*Source:* C. E. V. Borio, "Banks' Involvement in Highly Leveraged Transactions," BIS Economic Paper no. 28, 1990, p. 7.

**TABLE 4**  
**Characteristics of Bank Lending**

	<i>Maturity</i>	<i>Interest Rate</i>		<i>Collateral</i>	
		<i>Form</i>	<i>Margin</i>	<i>Existence</i>	<i>Form</i>
Bridge loans	0.5 – 2.0 years	Floating	Libor + 200–300 bps	Common	- Subsidiaries' stocks - Assets sold
Revolving credit	1 – 10 years	Floating	Libor + 200–300 bps	Common	- Receivables - Inventory
Term loans	4 – 10 years	Floating	Libor + 200–300 bps	Common	- Subsidiaries' stocks - Subsidiaries' guarantees - General lien on assets

*Source:* C. E. V. Borio, "Banks' Involvement in Highly Leveraged Transactions," BIS Economic Paper no. 28, 1990, p. 22.

**TABLE 5**  
Composition of US Short Term Business Credit

	1973	1977	1981	1985	1988	1989
<i>in percentage</i>						
Commercial banks	95	93	87	87	85	83
US	87	83	68	67	62	59
<i>of which: Large banks</i>	64	55	50	45	43	41
non-US	8	10	19	19	24	24
Commercial paper	5	7	13	14	15	17
Total	100	100	100	100	100	100
<i>Memorandum item:</i>						
Non-US banks' share of bank lending	8	11	21	22	28	29
<i>Source:</i> C. E. V. Borio, "Banks' Involvement in Highly Leveraged Transactions," BIS Economic Paper no. 28, 1990, p. 29.						

**TABLE 6**  
Top 10 Junk Bond Underwriters in 1989

Investment Bank	Amount	
	<i>In USD Million</i>	<i>Share</i>
Drexel Burnham Lambert	9,748.6	38.6%
Shearson Lehman	2,361.0	9.3%
Morgan Stanley	2,349.7	9.3%
Merrill Lynch	2,252.5	8.9%
Goldman Sachs	2,195.4	8.9%
First Boston	2,014.9	8.0%
Salomon Brothers	1,508.3	6.0%
Donaldson Lufkin	1,308.9	5.2%
Bear Stearns	547.0	2.2%
Kidder Peabody	375.0	1.5%
<i>Source:</i> E. Brewer III and W. E. Jackson III, "Requiem for a Market Maker: The Case for Drexel Burnham Lambert and Below-Investment-Grade Bonds," Working Paper No. WP-97-25, Federal Reserve Bank of Chicago, 1997, p. 40.		



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