

C A M B R I D G E   A S S O C I A T E S   L L C

## U.S. BUYOUTS INVESTING

2002

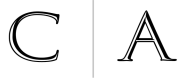
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## SUMMARY

## Recent Market Environment

By all measures, the U.S. buyout market had a tough row to hoe in 2001. The deteriorating economy and uncertain outlook for corporate earnings, coupled with an increasingly restrictive lending environment, made it extremely difficult to find sound, financeable deals. At the same time, unforgiving market conditions forced many companies to retrench and rethink their business models, often leaving buyout firms in the predicament of having to invest significantly more time and capital to revitalize existing investments. Finally, the substantial slowdown in both merger and acquisition (M&A) activity and initial public stock offerings (IPOs) made it difficult to liquidate mature portfolio companies, compounding the industry's problems. Despite these travails, however, there are now signs that the buyout business has bottomed out and is slowly picking up some momentum. Most notably, buyout managers are reporting a subtle improvement in the number and quality of investment opportunities, indications that reluctant lenders are becoming more accommodating, and increasing evidence that buyers and sellers are coming to terms on the divisive issue of pricing. But the pickup is precarious at best and much still depends on positive resolution of the uncertainty now hanging over the financial markets.

## Fund Raising and Commitments

Following several robust years, fund raising by private equity firms that specialize in buyouts and corporate finance declined sharply in 2001. According to data compiled by *Venture Economics*, an industry research firm, leveraged buyout and mezzanine firms raised \$40.5 billion through 102 funds in 2001, a decrease from the previous year when 155 funds closed on a record-setting \$79.8 billion. The slowdown in fund raising reflects several factors, not the least of which is that the massive amounts of capital raised during the last few years—nearly \$210 billion between 1998 and 2000—have not yet cycled through the market because of the lack of viable investments. Since there have also been few ways to exit investments, distributions back to investors have also slowed, which means that many investors whose public equity portfolios have declined in value now find themselves over-allocated to the asset class, suggesting that 2002 will be the weakest year for fund raising in almost a decade.

The downturn in commitments to buyout funds over the last year is highly correlated to recent performance. According to the Cambridge Associates LLC U.S. Non-Venture Private Equity Index®, the pooled mean net return for the year ended December 31, 2001 was -11.4%, the worst drop since 1986, when we began compiling such data. Unfortunately, because of the overhang of current holdings purchased during a time of high pricing (i.e., 1997-2000) and the continued weakness in the U.S. economy, it may be some time before performance figures recover.

## Financing

The slowdown in private equity fund raising has been accompanied by a contraction in the private debt market, reflecting a number of factors, including underperforming portfolios, uncertain economic conditions, regulatory pressure, and a dramatic reduction in the number of leveraged loan providers. According to data compiled by S&P/Portfolio Management Data, 2001 leveraged loan issuance totaled only \$139 billion, down 25% from 2000 and 43% from 1999. Of this amount, loans backing leveraged buyouts accounted for a paltry \$9.9 billion, which was 56% lower than the total for 2000. Because leveraged loans are an integral component of the LBO financing mix, the depressed state of that market is posing a real impediment to dealmaking.

In contrast to the illiquidity of the private debt market, conditions in the public high-yield bond market have improved as Federal Reserve interest rate cuts have stimulated inflows into bond funds. In 2001, 348 high-yield debt issues raised \$94 billion, compared to 185 issues raising \$53 billion in 2000. The expectation of improvement in the economy and credit quality (Moody's Investors Service projects the default rate to decline to 7.4% by year-end 2002) should bolster demand for new high-yield bond issues. However, investors' demand for liquidity has pushed the minimum size threshold for a high-yield bond offering in excess of \$125 million (compared to \$75 million to \$100 million in prior years) and this has created a funding gap for leveraged transactions requiring subordinated capital of less than \$125 million.

Several opportunistic equity sponsors, commercial banks, and investment banks have responded to these conditions by raising sizable pools of mezzanine capital. Market data indicate that the majority of mezzanine funds are either captive funds (controlled by an equity sponsor for that sponsor's deals) and therefore unavailable to companies or other equity investors, or "mega-funds" stepping into the current high-yield market breach and committing to larger financings (i.e., \$50 million to \$125 million). These factors have contributed to a shortfall of mezzanine capital available for significantly smaller transactions (i.e., less than \$40 million).

## Transaction Volume

The restrictive lending markets and faltering economy stifled leveraged transactions in 2001. According to *Venture Economics*, there were just \$23.1 billion of deals in 2001, down 44% from the prior year's total of \$41.4 billion. Before the September 11 terrorist attacks, buyers had been anticipating a pickup in activity as corporate executives grappling with the effects of the slowing economy were turning to the auction block. However, negotiations stalled in the aftermath of September 11, leaving

many deals in suspended animation as buyers and sellers re-evaluated business models. While deal volume remained subdued during the first quarter of 2002 (32 transactions valued at \$3.7 billion, according to *Venture Economics*), industry observers are optimistic that deal flow will increase as the year progresses. The primary reasons cited include the trend among public companies to sell non-core assets to help deal with accounting issues and to pay down debt (i.e., the "Enron effect"), and the continued absence of liquidity options for private companies due to reduced M&A and IPO activity. Furthermore, many strategic buyers are fixated on depressed stock prices and internal operational issues and hence are unlikely to compete as aggressively for acquisitions as they did in the most recent cycle.

### **Valuations**

Those transactions that did get financed in 2001 often required high equity-to-debt ratios. In the current lending market, buyout firms are finding that bank lenders are rarely willing to provide more than 2.5 times EBITDA (earnings before interest, taxes, depreciation and amortization) in senior financing, down from 3.2 times a year ago according to S&P/Portfolio Management Data. Lenders are also holding the line on total leverage, at 3.7 times EBITDA, compared to 4.2 times EBITDA in 2000 and 5.5 times as recently as 1998. Less debt has meant that buyout firms are finding themselves putting more equity into deals: S&P/Portfolio Management Data suggests that the average equity contribution to leveraged buyouts has increased from less than 10% in the late 1980s to about 40% currently.

However, as debt multiples have fallen, overall purchase price multiples have also declined. According to a recent survey conducted by *Buyouts*, an industry newsletter, the average deal in 2001 cost 6.0 times EBITDA, which is a 10% decrease from the 2000 average of 6.7 times and a 19% decline from the 1999 average of 7.4 times. Given the otherwise bleak landscape, it is understandable why buyout firms are pointing to this decline as the best evidence that conditions in the leveraged transaction market are poised to change for the better. Mitigating this somewhat is the fact that the weakened condition of many companies last year forced some owners to sell at low multiples, while the restrictive debt markets severely limited the ability of financial buyers to bid aggressively. Moreover, because buyout firms have significant capital that has not been spent and some are feeling pressure to put it to work, the ensuing competition among financial buyers may push up prices.

### **Exit Opportunities**

Present exit opportunities are limited at best. U.S. M&A activity ground almost to a halt in 2001 as the recession, volatile stock market, and Enron contagion battered corporate confidence. Specifically, announced U.S. M&As fell 57% from \$1.83 trillion in 2000 to \$795.5 in 2001, according to Thomson

Financial. The number of U.S. transactions also fell, from 10,754 in 2000 to 7,385, representing a decline of 31%. Conditions were even worse in the market for IPOs: for all of 2001, only 85 U.S. companies went public, down from 419 a year earlier, according to Commscan/Equidesk, with proceeds declining 59%, from approximately \$99 billion to \$41 billion. With the economy still crawling out of recession, investors as cautious as ever, and corporate boards putting deals under closer review, neither M&A nor IPO activity is likely to rebound significantly any time soon. In response, buyout firms are increasingly looking to realize a portion of the value created in an investment to date through the payment of a dividend, cash for which may be generated by recapitalization. However, although "recaps" of this type give buyout sponsors more time to explore the possibility of a strategic sale or IPO, it is important to note that the additional debt constrains the company's ability to expand through acquisitions.

### **Industry Outlook**

Given the challenges presented by the current investment environment, buyout firms are increasingly evaluating how they will achieve superior returns in the future. One view on which there seems to be relatively broad consensus holds that because buyout firms can no longer count on simply buying and selling at the right price or dependably buy and build solely through acquisitions, operational performance improvement will be the most effective means of generating strong returns. Unfortunately, many buyout firms do not possess the requisite skill set and some have sought to remedy this lack by expanding strategic alliances with management consulting firms. Others have placed larger, more concentrated bets by bringing an operating orientation, and operating skills, into the firm itself. Regardless of the approach, the incorporation of operational expertise into the traditionally finance-dominated buyout business has evident advantages beyond post-acquisition management, including enhanced deal flow, since owner/entrepreneurs are attracted to financial buyers with operating know-how. Still, there are issues involved in making the shift to an operating orientation, not the least of which is the need to strike a balance between, on the one hand, becoming a more informed, active owner, and on the other, becoming involved to a degree that company managers might view as excessive.

Some buyout managers have concluded that adopting a unique investment focus is necessary in order to thrive in today's competitive market. More often than not, this has meant formulating an investment thesis for a particularly substantial area of the economy (i.e., aerospace and defense, consumer products, health care, media, telecommunications). For other firms, however, it has meant developing specialized expertise in particular transaction types such as growth capital, structured equity (non-control equity investments that have debt characteristics such as current yield, collateral protection, etc.) or turnarounds. Investment focus brings with it several advantages, including the ability to react quickly to time-sensitive deal flow and an enhanced potential to maintain investment discipline and resist investment fads. That

said, concerns persist over the degree of focus that a buyout firm can adopt without overly restricting deal flow or exposing the firm to an unmanageable degree of volatility.

In contrast to the specialist firms, other buyout fund managers are looking beyond traditionally defined buyout approaches, as well as beyond the U.S. border, for promising opportunities. Some firms are retaining a U.S. geographic focus but adding new specialties, such as mezzanine, venture capital, high-yield, collateralized debt obligations, real estate, and even hedge funds. Others are sticking with their traditional buyout focus but extending their reach into new markets, primarily Europe. A handful of particularly ambitious firms are expanding along both axes, attempting to leverage U.S. buyout success into a global alternative asset capability. Although the broadly diversified firm may offer comfort and efficiency to the largest pools of institutional capital, it may not maximize long-term investment returns. Some specialties (e.g., venture capital) require a completely different skill set while others (e.g., European buyouts) are becoming increasingly competitive. Moreover, the additional complexity of multiple pools of capital implementing multiple investment strategies is likely to further dilute the management dedication required to achieve superior long-term results.

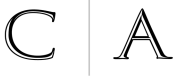
### **Prospects for Buyout Investors**

The challenges of the current environment complicate the task of devising a coherent buyout investment strategy, since the pace of deals has slowed, returns have been negative in recent quarters, and many firms, as outlined above, are actively re-casting their methods. In general, however, we believe that the long-term prospects for buyout investing remain reasonably attractive. Assuming the economy continues to improve, there should be a gradual increase in the number of attractive opportunities coming to market as good private companies regain confidence in the predictability of their cash flows and return to a mindset in which they are prepared to consider the sale of their businesses as well as other strategic transactions. In addition, public corporations will continue to aggressively rationalize their assets, selling divisions that are not critical to their core business, thereby creating attractive opportunities for buyout firms. Indeed, while the volume of new acquisitions made by buyout firms has fallen dramatically and is recovering only slowly, multiples on new investments appear to have become more reasonable. The critical issue is whether the "mountain" of capital available for investment will slow or reverse this trend.

Investors intent on investing in buyouts should focus on managers that combine financial skills and operational expertise with better sourcing or proactive origination and development of investment opportunities. Simply put, the days when a buyout firm could generate attractive returns largely through investment selection, negotiation, and financial structuring have ended. While financial expertise remains a critical component of buyout investing, operational buyers have advantages in deal generation and



evaluation and are less dependent on overall market conditions to realize good results. We strongly believe that individual firms that can combine these features will maximize investment performance and mitigate risk in a variety of economic environments. In addition, as the majority of transactions are now auctions or involve numerous strategic and financial investors, it has become increasingly important for firms to commit extra resources to marketing and deal sourcing—whether through the creation of in-house research teams, or the formation of strategic alliances with management consulting firms, or the establishment of advisory boards filled with distinguished members of the business community—in order to develop proprietary contacts beyond typical intermediary channels (e.g., investment bankers, business owners, other private equity investors, lenders and advisors). Finally, investors should concentrate on managers that have good track records, but continue to be motivated for future success, and on investment vehicles structured to align the interests of manager and investor.



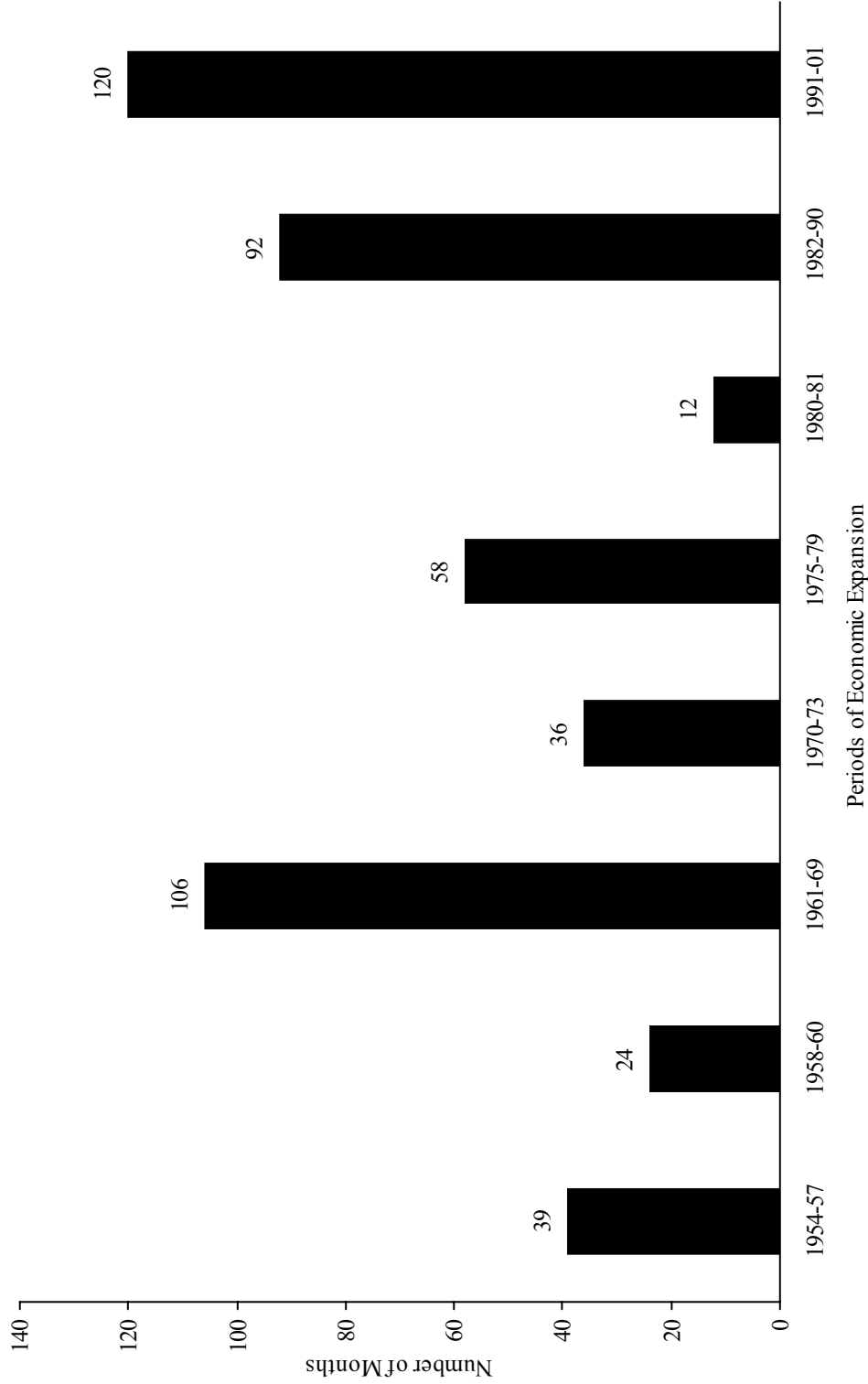
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**EXHIBITS**

**Exhibit 1**

**ECONOMIC EXPANSIONS**



Source: Bureau of Economic Analysis.

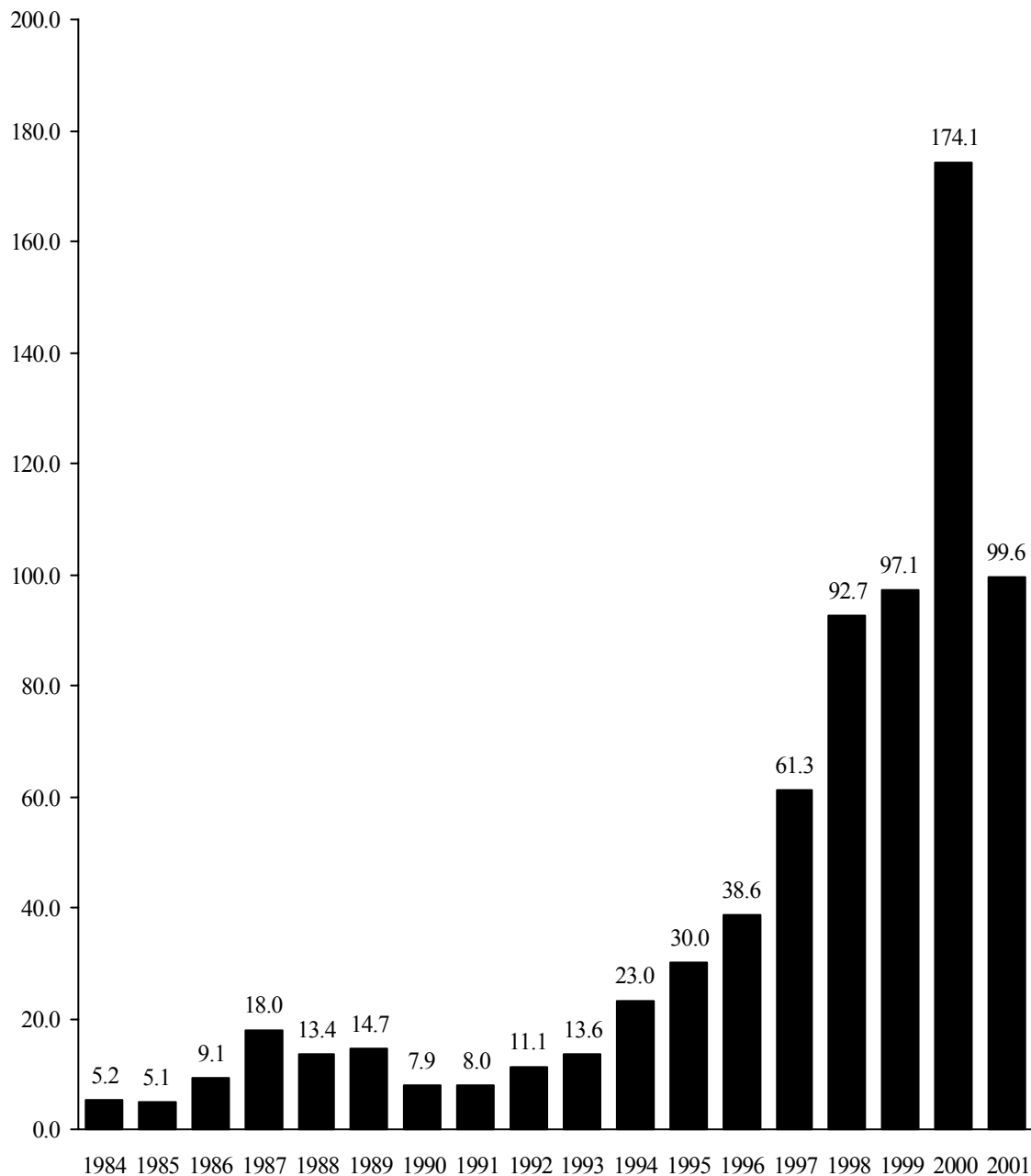
Note: Data for 2001 are through February 28.

## Exhibit 2

## CAPITAL COMMITMENTS TO PRIVATE EQUITY FUNDS

January 1, 1984 - December 31, 2001

(\$ billions)

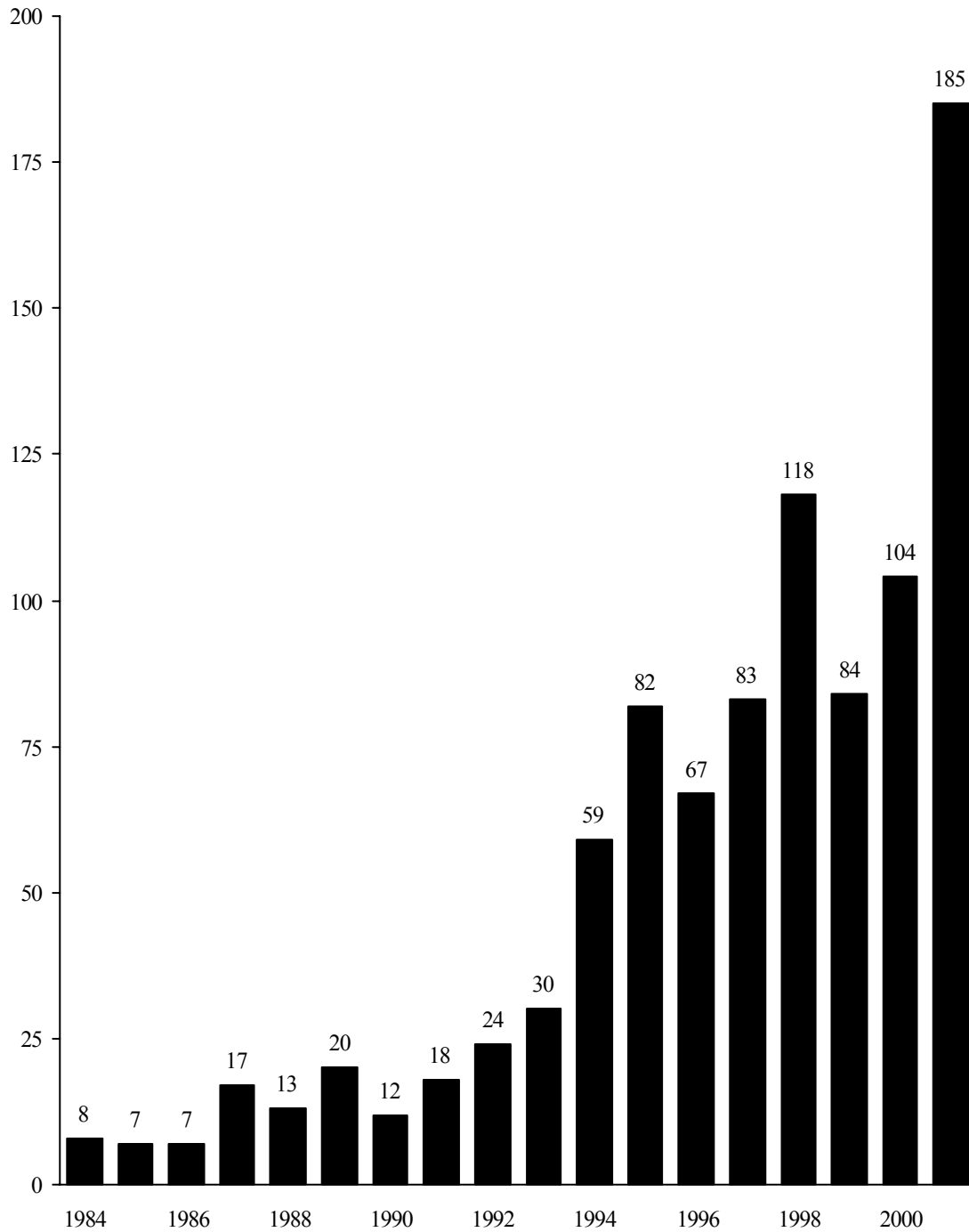
Sources: Asset Alternatives, Inc. and *The Private Equity Analyst*.

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**Exhibit 3**

**NUMBER OF U.S. LEVERAGED BUYOUT FUND CLOSINGS**

**1984-2001**



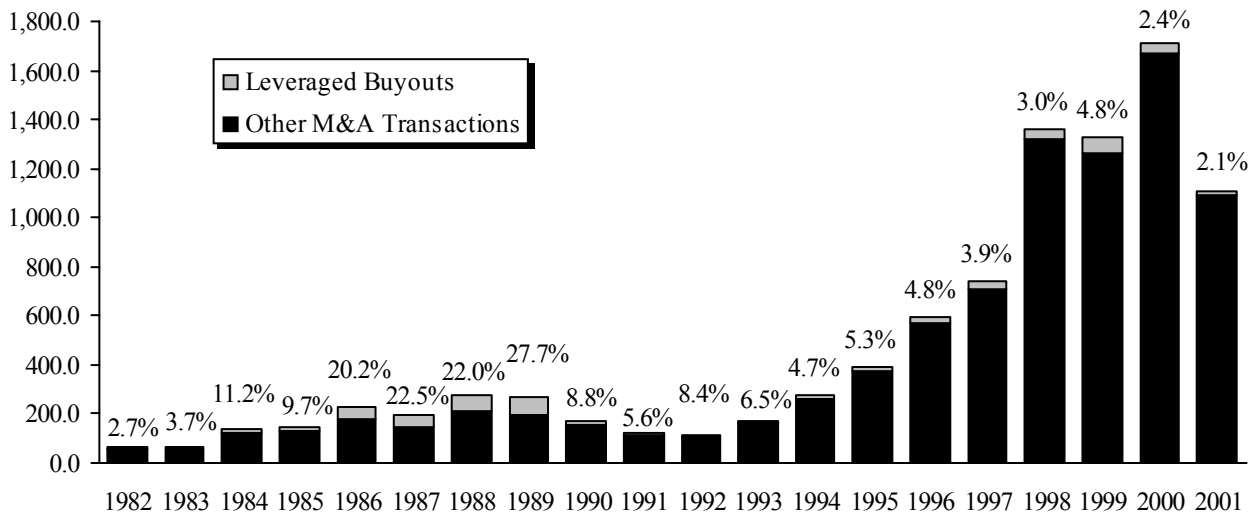
Sources: *Buyouts* and Securities Data Company, Inc.

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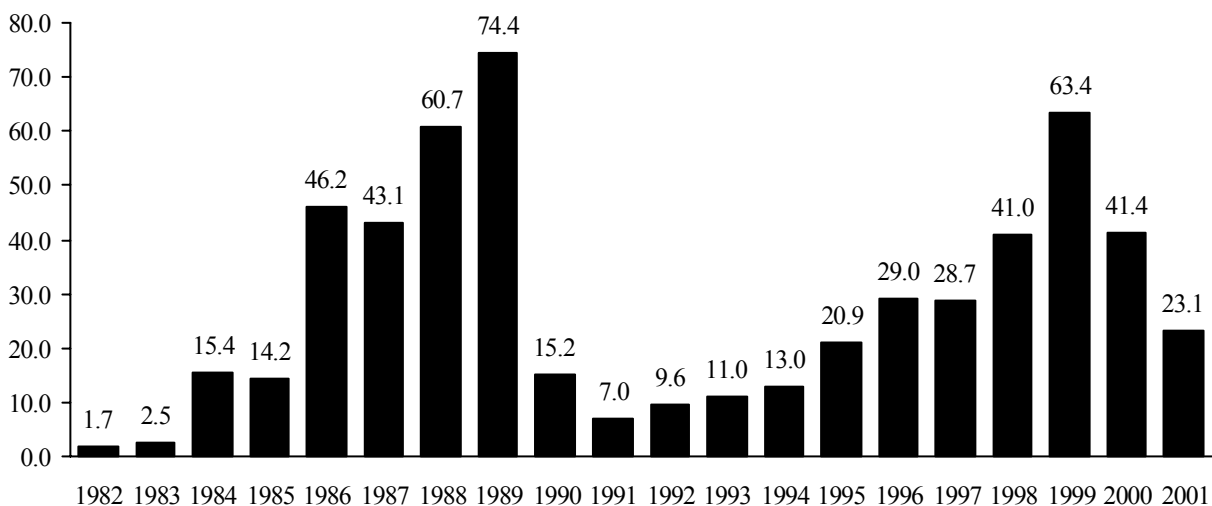
**Exhibit 4**

**COMPLETED MERGER AND ACQUISITION AND LEVERAGED BUYOUT ACTIVITY**

**Mergers and Acquisitions  
(\$ billions)**



**Leveraged Buyouts  
(\$ billions)**

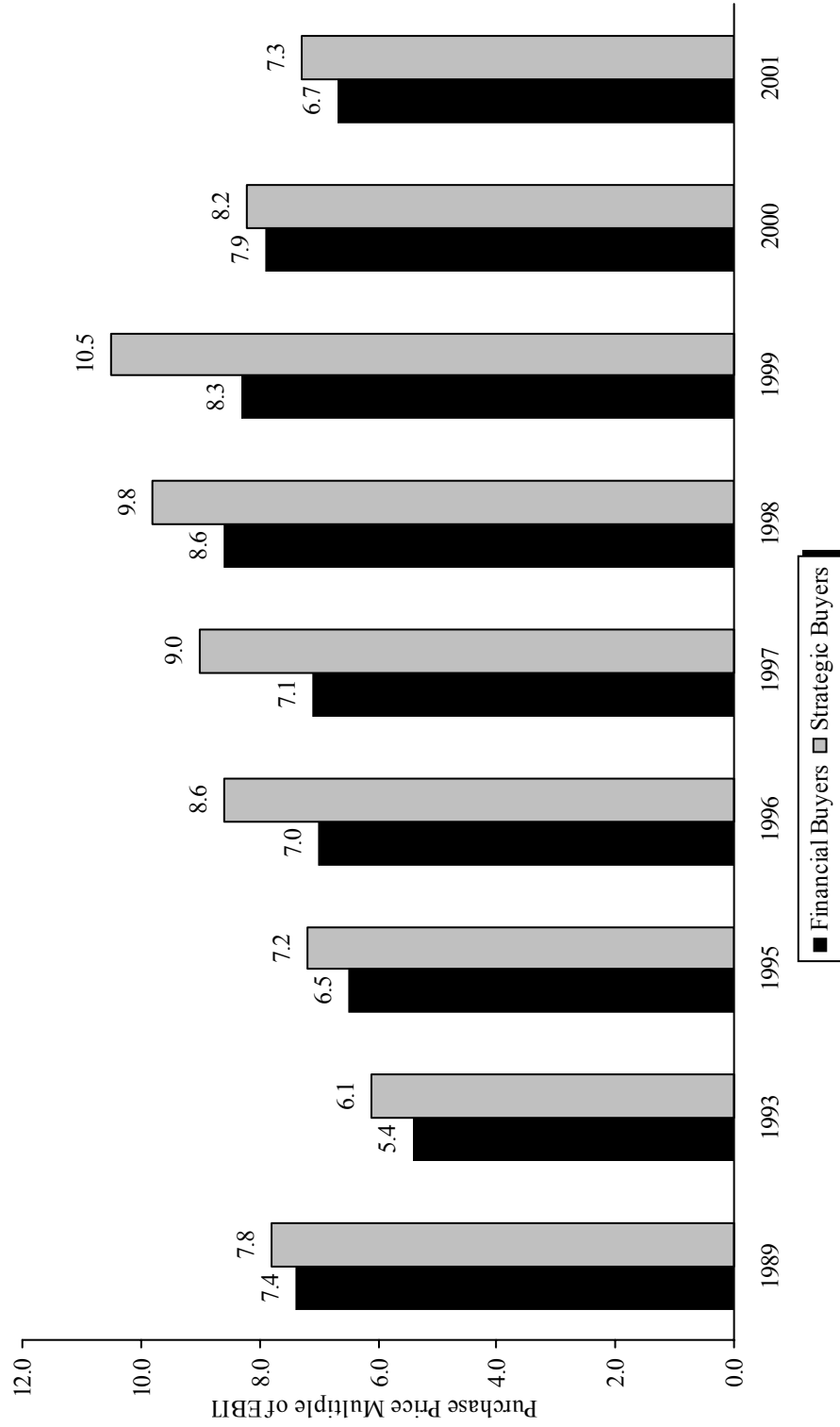


Sources: *Buyouts* and Securities Data Company, Inc.

Notes: Data for 2001 are as of December 31. Percentages show LBOs as a percent of total M&A transactions. All activity is on a completed basis. Other M&A transactions include mergers, acquisitions, spin-offs, and tender offers. The 1989 data include the RJR Nabisco leveraged buyout.

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**Exhibit 5**  
**ACQUISITION PRICING: STRATEGIC BUYERS COMPARED TO FINANCIAL BUYERS**



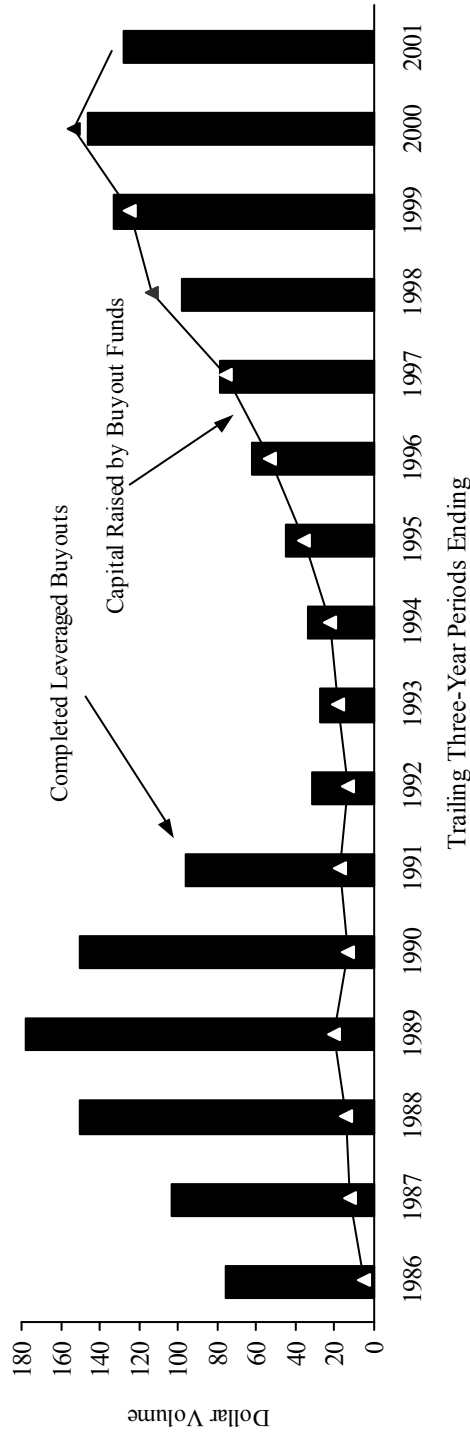
Source: *Buyouts*.  
 Note: Data reflect prices paid through February of the mentioned year.

Exhibit 6

COMPLETED LEVERAGED BUYOUTS AND CAPITAL RAISED BY BUYOUT FUNDS

1986-2001

(\$ billions)



Completed Leverage Buyouts (\$ billions) 75.8 103.5 150.1 178.2 150.3 96.6 31.8 27.6 33.6 44.9 62.9 78.6 98.7 133.1 145.8 127.9

Capital Raised by Buyout Funds (\$ billions) 5.2 12.0 14.4 20.2 13.6 16.9 13.7 18.1 22.7 35.9 53.3 76.2 113.2 124.5 153.3 133.3

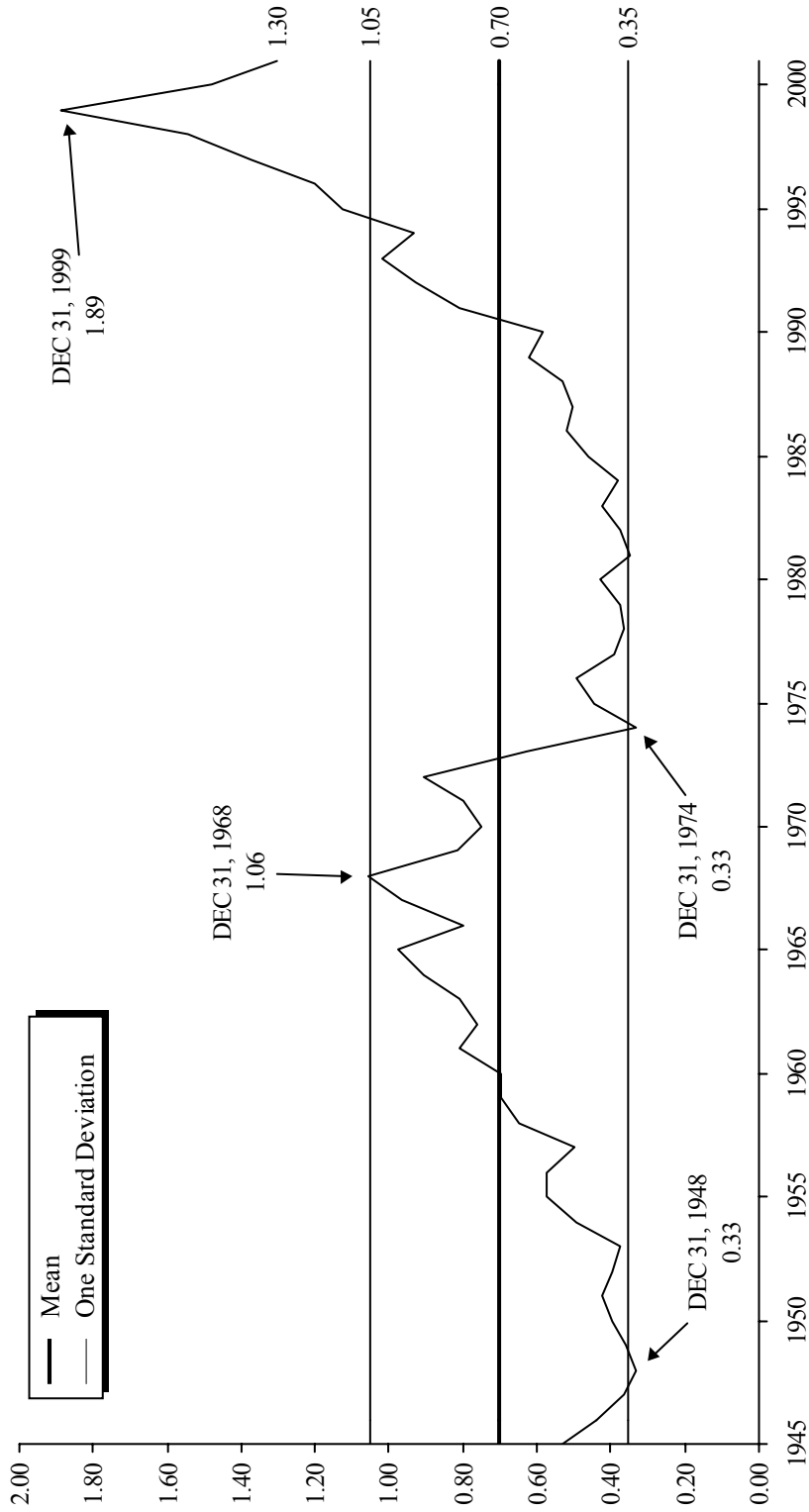
Analysis: For the trailing three-year period 1987-89 the debt-to-equity ratio was approximately ten-to-one compared to the trailing three-year period 1999-2001 when the debt-to-equity ratio was approximately three-to-one. Leveraged three-to-one, the \$133.3 billion raised by buyout funds during the period 1999-2001 would finance \$533.2 billion in future buyout transactions, which indicates that the increase in buyout demand could result in buyout managers having to pay substantially higher prices for acquisitions. Three-year periods are used because capital raised by buyout funds is usually drawn down over several years.

Source: *Buyouts*.

Note: Since not all completed leveraged buyout values are disclosed, the buyout supply figure understates the actual volume of supply.



**Exhibit 7**  
**TOBIN'S Q RATIO**  
**1945-2001**



Source: Federal Reserve.

Notes: The Tobin's Q ratio measures the market price to replacement cost of assets. A value at the mean implies perfect stock market valuation, a value greater than the mean implies overvaluation, and a value less than the mean implies undervaluation.

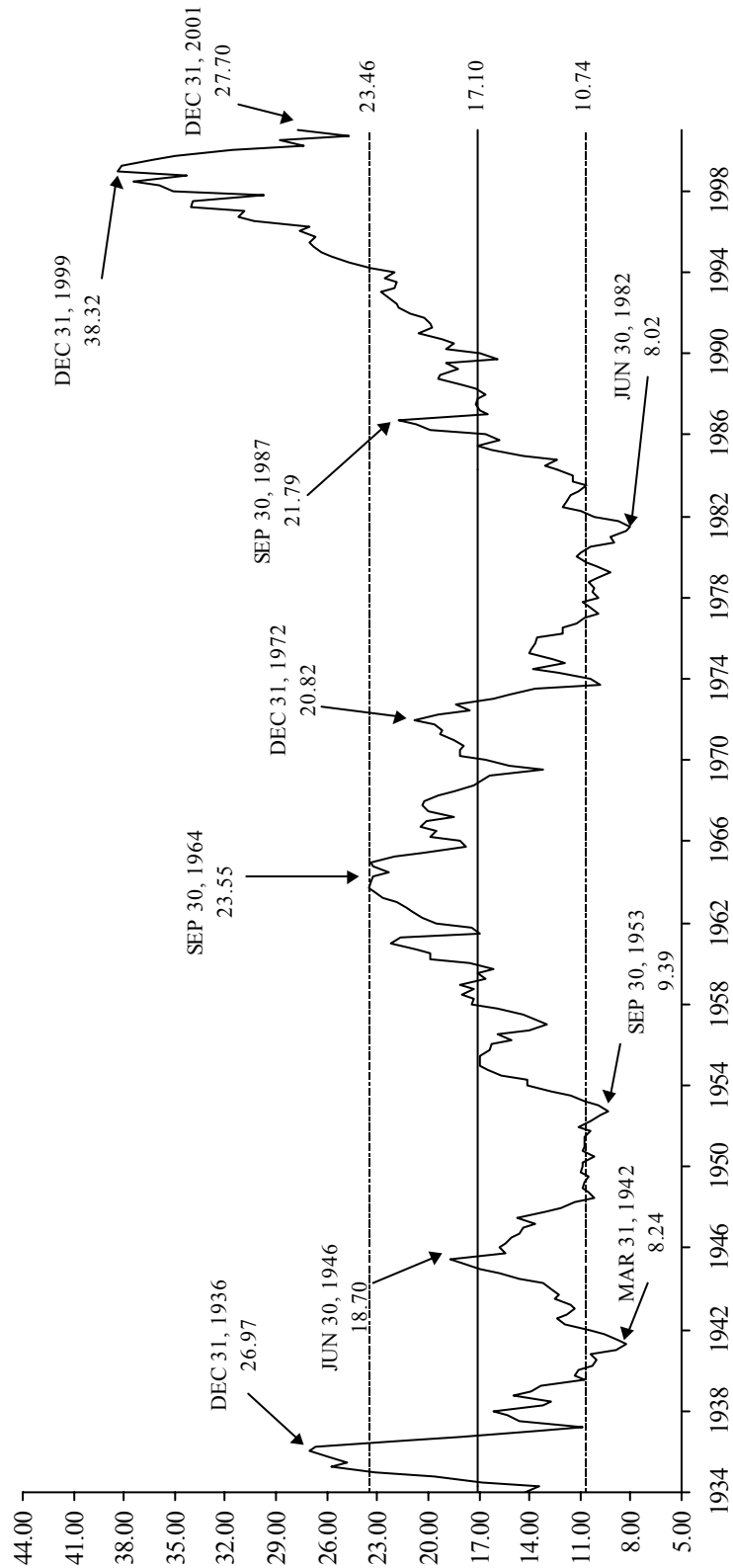
361q

Exhibit 8

S&P 500 NORMALIZED PRICE-EARNINGS RATIOS

January 1, 1930 - December 31, 2001

(Calculated on a Trailing Five-Year Basis)



Sources: Calculated from data provided by Standard & Poor's and Standard & Poor's Compustat.

Notes: Normalized price-earnings ratios for the S&P 500 are calculated by dividing the current index value by the annualized average earnings for the trailing five years.

085q

## Exhibit 9

**U.S. PRIVATE EQUITY TIME-WEIGHTED RETURNS (%) NET TO LIMITED PARTNERS COMPARED TO THE S&P 500**

**Funds Formed Between 1986 and 2001**

<u>Years Ended December 31</u>	<u>U.S. Non-Venture Private Equity Funds (%)</u>	<u>S&amp;P 500 (%)</u>
1986	1.2	18.6
1987	0.2	5.1
1988	12.9	16.6
1989	10.3	31.7
1990	4.4	-3.1
1991	8.6	30.5
1992	14.8	7.6
1993	24.6	10.1
1994	12.0	1.3
1995	23.3	37.6
1996	26.8	23.0
1997	30.1	33.4
1998	16.1	28.6
1999	33.9	21.0
2000	0.2	-9.1
2001	-11.4	-11.9
Average Annual Compound Return (1986-2001)	12.3	14.0
15-Year Median (1986-2001)	12.5	17.6
Ten-Year Median (1991-2001)	19.7	15.6
Five-Year Median (1996-2001)	16.1	21.0

Sources: Cambridge Associates LLC Non-Marketable Alternative Assets Database and Standard & Poor's.

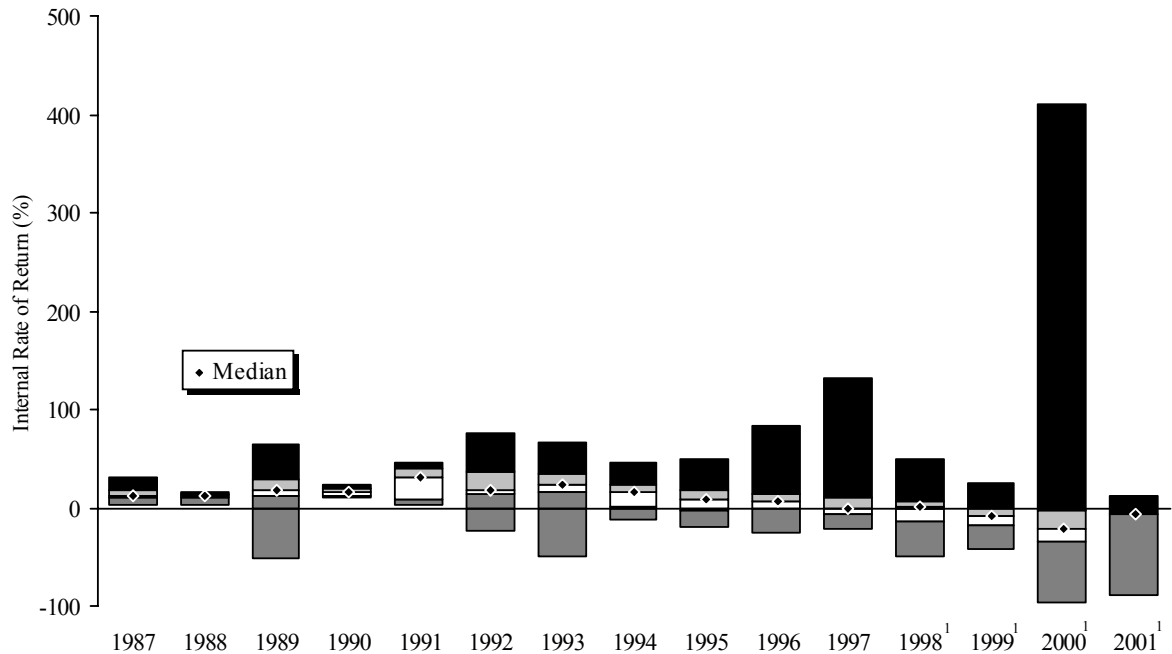
Notes: All returns are net of management fees, expenses, and carried interest. At December 31, 2001, the pooled net mean was calculated from the returns of 389 private equity funds (U.S. subordinated debt, leveraged buyouts, and special situation funds), including fully liquidated partnerships, formed between 1986 and 2001.

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**Exhibit 10**

**INTERNAL RATES OF RETURN (%) NET TO LIMITED PARTNERS  
OF PRIVATE EQUITY FIRMS BY QUANTILES**

**Vintage Years 1987-2001**



High	30.59	16.38	64.31	24.27	46.12	76.25	66.27	45.19	49.80	82.86	132.35	48.63	25.15	410.62	12.89
Upper Quartile	17.99	13.24	28.91	20.13	40.46	36.30	34.12	23.60	18.12	13.15	11.10	6.79	-1.79	-2.12	NM <sup>2</sup>
Median	11.50	11.69	18.03	15.15	31.47	17.59	24.26	15.05	9.22	6.22	-0.82	1.83	-9.29	-20.65	-5.91
Lower Quartile	9.82	9.91	11.61	12.90	8.74	13.84	15.07	0.66	-2.05	-0.28	-6.88	-13.11	-18.06	-34.99	NM
Low	3.70	1.87	-51.72	9.36	3.46	-23.30	-49.44	-11.72	-18.95	-24.65	-20.97	-48.82	-41.39	-96.07	-89.70
Number of Funds	13	15	18	10	8	18	28	19	28	33	40	51	33	57	7 <sup>3</sup>

Source: Cambridge Associates LLC Non-Marketable Alternative Assets Database.

Note: These internal rates of return have been compiled from 378 U.S. leveraged buyout, subordinated debt, and special situation funds with inception from 1987 through 2001 and are net of management fees, expenses, and carried interest.

<sup>1</sup> Most of these funds are too young to have produced meaningful returns. Analysis and comparison of partnership returns to these benchmark statistics may be irrelevant.

<sup>2</sup> NM represents Not Meaningful.

<sup>3</sup> Represents only those funds formed in 2001 that began investing by December 31, 2001.

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**Exhibit 11****U.S. PRIVATE EQUITY INTERNAL RATES OF RETURN (%) NET TO ALL PARTNERS AND LIMITED PARTNERS OF PRIVATE EQUITY PARTNERSHIPS****Periods Ended December 31, 2001**

<u>Vintage Year</u>	<u>Pooled Mean Net to Limited Partners</u>	<u>Median Net to Limited Partners</u>	<u>Number of Funds</u>
1986	17.8	10.9	11
1987	11.5	11.5	13
1988	12.8	11.7	15
1989	23.2	18.0	18
1990	17.7	15.2	10
1991	26.7	31.5	8
1992	27.7	17.6	18
1993	26.9	24.3	28
1994	9.9	15.1	19
1995	12.6	9.2	28
1996	9.6	6.2	33
1997	4.7	-0.8	40
1998 <sup>1</sup>	0.0	1.8	51
1999 <sup>1</sup>	-9.7	-9.3	33
2000 <sup>1</sup>	-16.8	-20.7	57
2001 <sup>1</sup>	0.6	-5.9	7 <sup>2</sup>

Source: Cambridge Associates LLC Non-Marketable Alternative Assets Database.

Notes: Based on data compiled from 389 U.S. private equity funds (subordinated debt, leveraged buyout, and special situation funds), including fully liquidated partnerships, formed between 1986 and 2001. Internal rates of return are net of fees, expenses, and carried interest.

<sup>1</sup> Most of these funds are too young to have produced meaningful returns. Analysis and comparison of partnership returns to these benchmark statistics may be irrelevant.

<sup>2</sup> Represents only those funds formed in 2001 that began investing by December 31, 2001.

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## Exhibit 12

**U.S. PRIVATE EQUITY INTERNAL RATES OF RETURN (%) ON VINTAGE-YEAR  
COMPANIES BY INDUSTRY, STAGE AND REGION**

**Pooled Gross Mean of Companies Receiving Initial Investment**

<u>Industry</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999*</u>	<u>2000*</u>	<u>2001*</u>
Communications	4.2	30.6	28.8	30.6	43.9	54.6	30.6	50.5	30.2	-1.5	-24.0	-12.5
Hardware/Systems	---	25.1	25.1	---	61.9	27.5	5.3	-34.8	-0.3	138.4	-6.5	0.0
Software/Services	---	---	68.3	70.1	45.5	0.7	6.9	72.6	8.2	-7.7	-19.1	18.7
Health care/Biotech	56.6	38.7	27.6	22.1	67.7	-1.4	6.0	16.7	16.8	18.9	19.6	13.2
Consumer/Retail	8.6	-11.4	49.7	22.0	28.7	28.8	13.2	12.0	3.0	-4.1	3.8	34.7
Financial	27.7	18.6	22.0	26.7	10.7	-3.6	40.9	17.9	7.9	1.8	10.2	-2.7
Electronics	28.3	-6.1	56.5	42.5	---	21.6	45.5	27.1	-38.0	197.4	-13.9	0.0
Industrial	18.8	-2.0	31.8	3.1	9.1	18.6	47.3	-10.2	4.8	15.9	1.5	-18.4
Energy	20.5	21.6	8.4	-0.9	10.3	17.1	17.0	4.2	26.3	9.5	-2.4	-0.4
Environmental	---	8.4	28.6	22.0	36.1	35.9	-100.0	-3.6	-41.4	5.4	3.7	4.2
Other/Funds of Funds	19.3	87.4	3.0	49.4	21.8	21.4	17.9	0.5	-4.5	1.8	8.4	-5.6
Chemical/Materials	37.1	39.0	-24.4	90.7	24.0	161.9	57.8	2.8	-0.3	-5.8	22.6	4.5
Manufacturing	6.6	27.6	22.2	49.0	34.3	14.6	3.1	13.8	-7.3	7.3	-10.2	2.4
 <b><u>Communications Sub-Group</u></b>												
Telecom Network/Systems	1.1	31.5	19.5	28.5	28.9	75.1	14.4	54.9	34.7	-12.8	-23.6	-2.4
Telecom Products	0.0	---	7.8	46.4	-2.9	---	129.4	108.9	3.3	628.7	-22.2	0.0
Telecom Services	-17.1	10.9	22.9	29.0	24.0	41.2	6.6	104.0	49.2	-9.8	-23.3	-45.0
Media	7.3	25.0	45.0	23.2	53.1	48.0	35.8	12.8	17.1	17.9	-18.0	-11.7
Internet-eCommerce	---	---	---	-1.0	-18.4	19.4	256.7	---	-34.8	-5.5	-20.8	---
Internet-eBusiness	---	---	43.7	---	103.9	---	46.7	47.5	104.1	-36.0	-32.1	19.2
 <b><u>Health Care/Biotech Sub-Group</u></b>												
Biotech/Biopharm/R&D	---	10.9	-40.7	5.7	44.2	31.6	28.6	-4.1	-18.3	0.0	16.6	35.0
Health Care Services	99.1	37.6	51.7	31.3	33.0	-19.3	-5.5	-3.9	21.6	19.5	23.9	4.6
Health Care Device	71.9	12.3	51.2	11.9	236.9	29.3	3.9	41.2	33.1	28.9	-5.8	6.2
Health Care Software/Systems	0.3	106.4	26.8	22.9	-10.6	36.3	13.3	0.0	-13.9	8.0	-14.2	-23.1
Pharmaceuticals	35.8	10.4	-10.6	5.8	60.3	15.9	191.3	55.3	9.7	8.7	56.3	20.3

## Exhibit 12 (continued)

## U.S. PRIVATE EQUITY INTERNAL RATES OF RETURN (%) ON VINTAGE-YEAR COMPANIES BY INDUSTRY, STAGE AND REGION

## Pooled Gross Mean of Companies Receiving Initial Investment

<u>Stage</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999*</u>	<u>2000*</u>	<u>2001*</u>
Start-up	---	---	17.1	-91.4	8.0	24.2	0.4	55.5	-4.9	-38.6	-30.3	-18.6
Early Stage	-93.1	-31.9	10.4	15.5	-8.6	26.6	26.1	7.0	0.6	-11.7	-14.0	-4.7
Expansion	13.7	3.6	17.5	24.2	55.6	24.5	30.6	12.2	13.4	-2.6	-10.8	16.0
Subdebt Financing	9.5	23.1	34.9	22.3	13.8	15.6	8.4	-1.2	5.5	-0.4	-20.7	-10.5
Public	17.6	13.7	24.9	14.5	28.7	25.8	-10.0	8.0	22.6	4.1	23.0	21.8
Equity LBO	27.9	20.8	38.3	33.5	39.3	31.8	16.1	32.2	10.6	14.4	-4.6	11.5
Senior Debt LBO	20.0	35.2	-6.2	39.2	34.8	29.1	17.5	25.4	-3.6	1.8	-4.6	3.4
Subordinated Debt LBO	11.8	20.1	23.2	29.4	33.1	8.3	-11.6	18.3	-1.8	32.2	-1.7	15.1
Restart/Turnaround	8.2	20.4	45.0	34.9	17.9	188.5	-4.8	-3.2	-21.4	477.2	0.0	-100.0
Acquisition/Shell	-4.7	28.0	54.8	45.4	34.3	89.2	25.2	10.0	9.1	4.6	-1.1	-5.6
Other/Funds of Funds	20.0	35.6	21.5	1.6	19.5	15.3	20.2	33.6	-17.5	17.0	-19.7	-1.2
<b><u>Region</u></b>												
Northeast	-0.3	32.8	36.1	23.0	31.2	22.5	16.1	14.6	7.1	18.8	-4.7	-4.8
Mid-Atlantic	26.9	13.5	37.9	39.9	31.2	19.8	-0.1	16.7	13.5	-6.1	-3.2	-14.8
Southeast	42.2	25.9	33.3	38.0	21.8	78.6	11.6	11.9	-6.6	7.4	-11.7	8.1
Midwest	21.0	-21.9	20.4	31.1	29.4	16.0	3.9	19.6	8.9	6.0	1.7	88.3
Northwest	-94.1	36.1	41.5	56.6	126.7	45.3	-11.5	-2.9	6.3	60.5	-11.6	-5.0
Southwest/Rockies	28.9	3.8	25.0	67.5	40.7	28.0	20.2	17.7	17.7	1.4	-11.2	8.9
California	17.8	7.5	28.7	14.7	32.1	38.8	36.2	17.1	-1.5	9.0	-16.4	-2.6
Global ex U.S.	-1.5	50.4	18.4	16.1	34.2	56.7	21.8	55.3	12.7	-11.3	-14.2	-11.2
Other/Funds of Funds	---	-100.0	-100.0	---	26.4	24.0	2.1	17.9	---	-16.8	-2.6	4.4
IRR of all Companies	20.3	19.5	30.6	30.9	33.7	35.7	17.3	20.8	9.2	5.6	-8.9	6.9
Number of Companies	106	92	162	205	220	275	359	511	621	805	1081	380

Source: Cambridge Associates LLC Non-Marketable Alternative Assets Database.

Notes: Internal rates of return are pooled gross means before management fees, expenses, and carried interest. Dashes indicate an inadequate number of companies to sample.

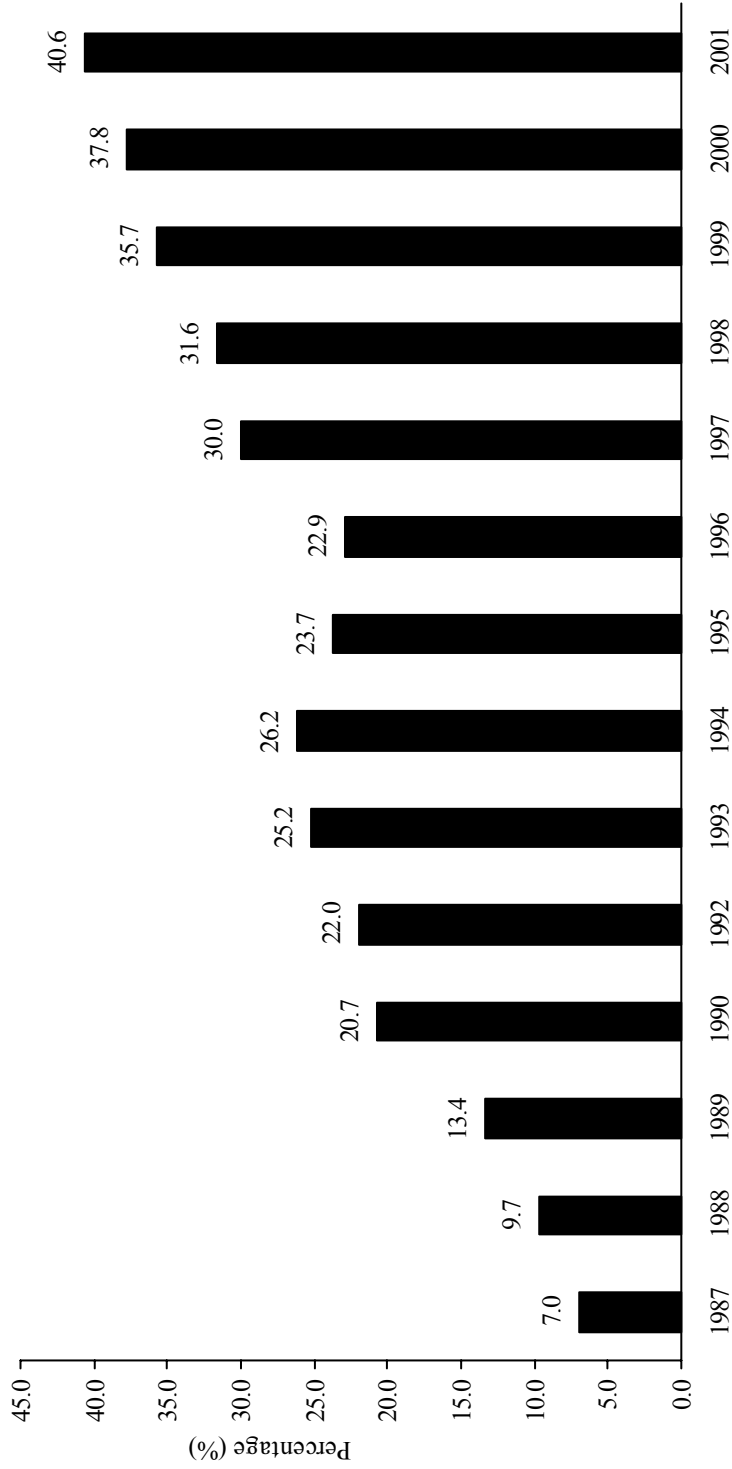
\* Most of these investments are too young to have produced meaningful returns. Analysis and comparison of partnership returns to these benchmark statistics may be irrelevant.

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**Exhibit 13**

**AVERAGE EQUITY AS A PERCENTAGE OF CAPITALIZATION IN LEVERAGED BUYOUTS**

**1987-2001**



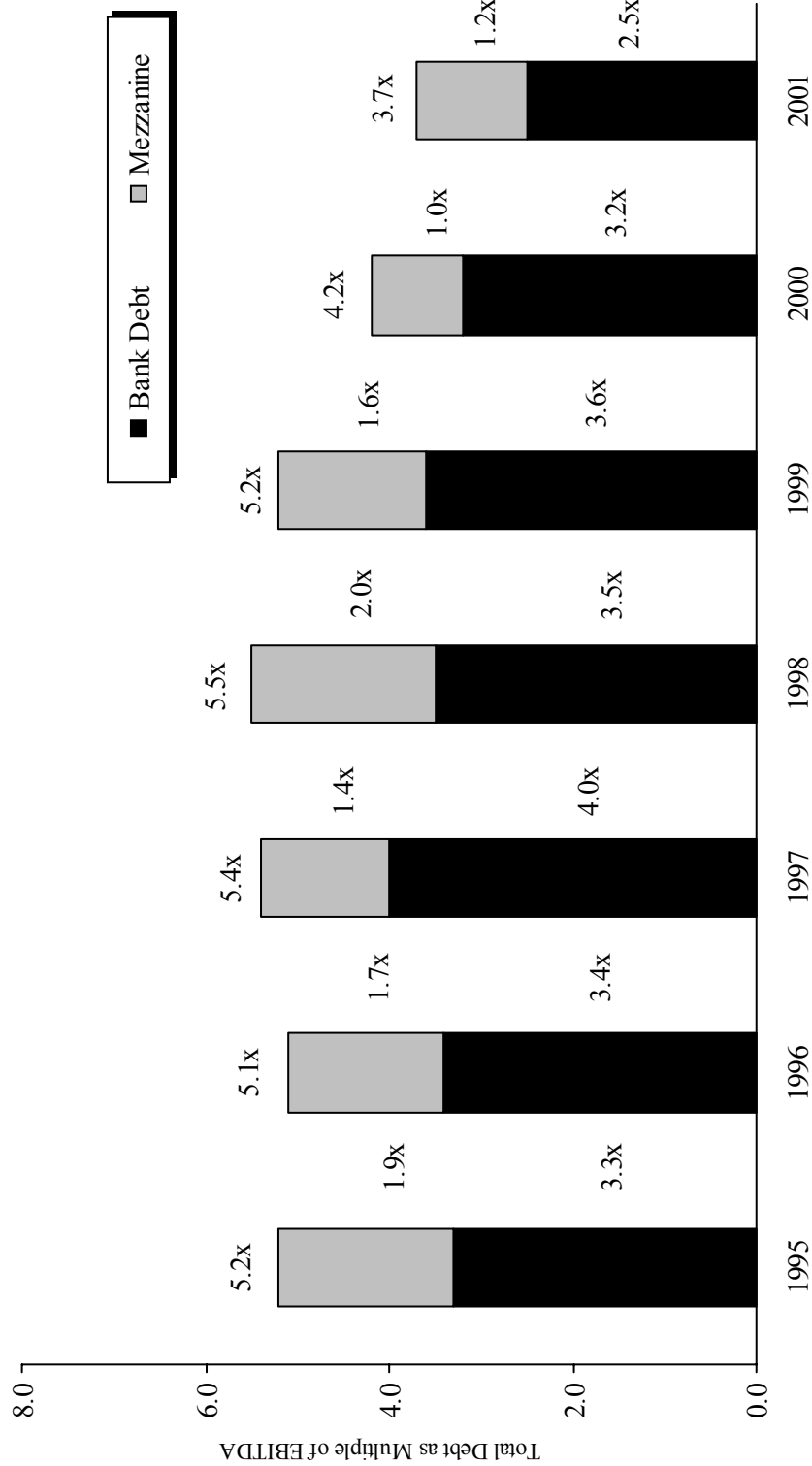
Source: Standard & Poor's Portfolio Management Data.



Exhibit 14

TOTAL DEBT ON HIGHLY LEVERAGED LOANS

As of December 31, 2001



Source: Standard & Poor's Portfolio Management Data.

Note: EBITDA is earnings before interest, taxes, depreciation, and amortization.