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DATA PATTERNS IN IPOS:
Explaining Cycles, Pricing, and Post-IPO Performance

Introduction

Bringing a company public involves many complex processes. Identifying patterns and cycles in IPO markets facilitates understanding of these processes, and there is a large body of academic literature devoted to this task. These carefully conducted studies are valuable to practitioners for two reasons. **First**, the **studies put recent IPO markets into perspective**. The data used in these studies involve many thousands of public offerings spanning decades that are analyzed using sophisticated methodological techniques. The data show that most characteristics of recent IPO markets have occurred many times before, and that these characteristics can have many different causes. **Striking commonalities emerge across many different IPO markets**, as do recurring patterns reflecting macro-level business conditions,
as well as industry-specific and firm-specific conditions. **Second**, the studies are valuable to practitioners because the data shows that depending on how and when a company is brought public, there are **predictable effects on the pricing** of that issue, **and** on elements of the company's post-IPO performance, such as **stock returns and operating performance**. The first section of this paper reviews why there are "hot" and "cold" cycles in IPO markets. The second section reviews the factors that affect pricing a new issue. The third section reviews the factors that drive a company's post-IPO performance.

IPO Cycles

Even casual industry observers hear talk of "hot" and "cold" IPO market cycles. But what exactly do "hot" and "cold" mean in the IPO context? A **hot** IPO market is characterized by a relatively high numbers of offerings, though the issues themselves tend to be small.[1] Sometimes those offerings are concentrated in specific industries, are frequently oversubscribed, and tend to be underpriced. A **cold** IPO market is said to have larger offerings but lower issuance. Offerings in cold markets are less frequently oversubscribed, and there is a smaller degree of underpricing of issues. The basic question raised by the existence of hot and cold IPO cycles is **how does an issuer choose when to go public**? Some principal determinants of the timing of the decision to go public are the magnitude of **initial returns of IPOs**, general business conditions, and **internal firm characteristics**, such as structure of the firm, firm size, and balance sheet conditions.

Periods of high and rising initial returns tend to be followed by IPO spurts. In other words, there are cycles in average initial re-

turns per month, as well as cycles in the number of new issues per month, and these two cycles are related. A recent study confirming these findings uses firm-level data from 1985-97 to show, specifically, that there are more IPO filings and fewer IPOs withdrawals after periods that are characterized by high initial returns.[2]

This study also uses the data to show that there is a specific way that high initial returns cause the IPO spurts. During the **registration period and "road show**," the issuers and underwriters talk to informed investors about their interest in the company, and **this information feedback affects the new firm's range of valuation**. If this feedback is positive, it leads to a higher expected range of valuations, leading to higher initial returns, which in turn cause more IPO filings. Significantly, they also find that the **information about demand that the secondary market** provides through action on the first day of trading has **no effect** on either **pricing** of future IPOs or future IPO **volume**.

There are several other explanations for IPO cycles that involve general business conditions, such as expansion in specific industries due to innovations or new technologies. One study shows that private firms' **rising total demand for capital** positively affects IPO volume,[3] while another study's model shows that information about a specific industry's prospects revealed by one firm's IPO causes many **similar companies to go public** in that time period.[4] Some studies have shown that **positive investor sentiment** contributes to surges in IPO volume. Optimistic investors will pay a high premium for IPO shares, leading to more firms going public.[5]

If firms from the same industry tend to go public at similar times, are those firms also of similar quality? There has been an ongoing debate about **whether higher quality firms or lower quality firms tend to go public in hot markets**. A 1995 study shows that productivity shocks that lead to an increase in the value of the firm, lead to a greater incentive to go public, which leads to a hot IPO market involving "high quality" firms.[6] However, several other studies test certain IPO models, and find evidence that suggests that hot issue markets may not be populated by higher quality IPOs.[7]

A 1996 study uses data from the hot IPO market of 1983 and the cold IPO market of 1988 to show that, in fact, **neither set underperforms other firms** in the same industry.[8] These authors find no evidence that the hot market IPO firms are higher quality firms, as some models predict. They also, however, do not find that the hot market firms have a pattern of being lower quality, as other models predict. Specifically, they find no evidence that profit margins for the hot market IPOs fall faster than the profit margins of the cold market IPOs'. They also find that certain elements of both sets, such as levels of investment opportunities and debt, are similar for firms going public in both hot and cold markets. Furthermore, they show that the long-run (5 years, post-IPO) **operating performance of IPOs in these hot and cold markets does not differ** significantly.

There are also **firm-specific characteristics** that increase the likelihood of going public. For example, a 1994 study shows that **private finance** from a venture capitalist is **efficient for young companies** that are not as well known, while **going public** is **better suited to older**, **well-known companies**.[9] The authors' reasoning behind this involves the cost of educating large pools of investors about companies that are not known well or whose

types of businesses are not widely understood.

A 1995 Italian study also identifies firm-specific characteristics that make it more likely that they will go public.[10] This data looks at Italian firms' decision to go public in the 1982-1992 period, and the sample contains 19,817 firm-years. The authors make the point, first of all, that there are cross-sectional and cross-country differences in IPO behavior that indicate that **going public is not a stage in the growth of a company, but a choice**. They point to many large companies in Italy, Germany, and even the United States that have chosen not to go public.

Having said that, however, they do find several firm-specific characteristics related to going public. They find, for example, **that larger companies are more likely to go public**. Moreover, they find **that IPOs tend to be companies that grow faster and are more profitable**. They also expect that **companies with large investment outlays and high leverage to be more likely to go public**. Finally, they find that firm structure affects the IPO decision. A "**carve-out**," or piece of a company that goes public is **more likely to take advantage of a favorable market valuation** in its sector than an independent company. However, their data also show that the decision will only be taken when the company enjoys the benefit of sound economic and financial conditions.

Pricing IPOs

There are many studies that discuss how the price range for the new issue is agreed upon and updated, and the effects that these updates have on the rest of the IPO process. **Initial returns are significantly related to the price range update** between the expected offer price stated in the preliminary prospectus and the final offer price, and to **market returns before the IPO**.[11] Data from 1985-97 shows that the price update itself is also predictably affected by firm-specific and offer-specific statistics. Specifically, the **price update depends on information that is publicly available when the IPO is filed**. This information includes the **rank of the underwriter, the industry of the IPO firm, and the exchange on which the stock will be listed**.

Market returns three months before the offer have more of an effect **on the price update** than returns during the time closer to when the firm goes public.[12] Several other factors have been identified that have a reliable effect on IPO pricing. One is that **IPOs underwritten by highly ranked investment bankers are likely to have larger price range updates**. Other findings include the observation that **technology firms are also likely to have larger price updates** than other types of firms, and that **larger firms tend to have smaller price updates**.

These studies also seek to explain why some IPOs appear to be underpriced. Earlier studies have found that **first day returns of IPOs average about 15%**.[13] Scholars claim that this statistic shows that **some issues are underpriced**, when compared to the price at which the shares subsequently trade in the secondary market.

Many studies explain the apparent underpricing by the fact that issues characterized by greater uncertainty are underpriced to **compensate investors for the uncertainty and the higher costs of learning** about the value of these firms.[14] Other authors, however, discuss the fact that in general, **underwriters value accurate pricing**, because hav-

ing that reputation will give them the highest quality issuers.[15]

There are some models that show that underpricing occurs in hot IPO markets when there are positive shocks to the expected profitability of firms. Firms accept underpricing to go public with other highly profitable firms to signal that they belong in the high quality category. These firms participate in the hot IPO market despite underpricing so that **later equity offerings will receive favorable pricing**.[16]

Post-IPO Performance

In examining how companies that have gone public perform after the IPO, a distinction is generally made between **initial stock returns** and **long-term performance**. Long-term performance can be measured not only by stock performance over time, but also by the company's operating performance. As with IPO cycles and pricing, studies find that many different factors affect post-IPO performance. Some of these factors include **IPO volume**, **market returns** before the IPO, **and size of the IPO firm**.

Early studies found that "hot" IPOs markets, and indeed going public in general, can lead to three outcomes: 1) relatively **high initial returns** at the beginning of the cycle; 2) a **decline in initial returns** in later IPOs; and 3) to a **decline in IPO firms' long-term operating performance**. Since then, scholars have either provided explanations for these apparent patterns, or shown that different ways of measuring such data actually leads to different results.

In general, IPO initial returns are driven by many different factors. Data has shown the size of the issuing firm, the **reputation of the lead underwriter**, and the risk of the IPO stock all help to explain initial returns.[17] This is information known at the time the IPO is filed. Regarding the size of the firm, it was found that **smaller firms**, and, as it happens, **technology firms**, tend to have **higher initial returns**.[18]

Initial returns are also, of course, directly related to how the issue is priced. In 1993 it was found that issues priced **within** the initial **filing range** had an average **initial return of 10%**.[19] In fact, for IPOs priced above their initial listed **filing range**, the average **initial return was 20.7%**. A 1991 study makes the case that investor over-optimism causes higher initial returns.[20]

In terms of initial returns after IPO cycles, early studies have found that "**hot" IPO cycles appear to be followed by a period of lower initial returns of later IPOs**.[21] However, other statistical tests show only **weak evidence** of that purported negative relation between IPO volume and future initial returns.[22] In terms of long-term IPO performance, some studies present evidence to the effect that **IPO firms are lower-quality** ones, particularly those who go public in a hot market.[23]

For example, a 1996 study looks at two sets of firms, one set that went public in the hot market of 1983, and one set that went public in the cold market of 1988. These two sets of firms were found to have **indistinguishable operating performance** for five years after the IPO, but **stock returns are worse** for firms that went public in the hot market.[24] Regarding firm characteristics, these authors show that in the year of the IPO, the earlier set of firms are less profitable and somewhat smaller than the firms that went public in 1988. The earlier set of firms also do not ap-

pear to have greater growth potential than the second set of firms. Poorer longer-term stock performance for the firms that went public in 1983 appears to be consistent with the view that investor optimism in hot markets is a contributing factor to some aspects of long-term performance. However, they note that their evidence does **not support the view that hot market issuers are low quality firms with opportunistic managers**. Both sets of firms show a downward trend in profits after the IPOs, but their key finding is that **neither set underperforms other firms in the same industry**. They, however, **find no evidence that hot market IPOs' profit margins**, for instance, **fall faster** than the profit margins of cold market IPOs'.

Some studies present results using **accounting data** that show that IPO firms, once public, do experience **declines in operating performance**.[25] This is perhaps due to the fact that the firms choose to go public at times of their peak operating performance. One 1994 study in particular finds that **operating ROAs** and operating cash flow to assets **fall** between the pre-IPO year and each of the four subsequent years.[26]

Other studies show that going public has other implications for the company's long-term performance as well. For example, one set of authors finds that firms with **high first-day returns spend more money on investment**.[27] A 1995 study shows that Italian firms use the capital raised through the IPO to **reduce leverage**.[28]

They also find that going public **reduces the cost of bank credit**. Following an IPO, firms begin to borrow from larger numbers of banks so that the **concentration of their borrowing is reduced**. This may be because the companies have reduced their leverage and so are safer borrowers. It also may be because more information, including information about the extent to which they are creditworthy becomes publicly available about them.[29] They also find that the process of going public is followed by a **higher turnover of control** than for other companies.

It is interesting that they also show that the structure of the firm matters for post-IPO performance. **Independent companies** go public, they find, in order to **rebalance their balance sheet** after periods of expansion and growth. Carve-outs, however, use the IPO to effectively **sell that subsidiary**. They show that there is a large percentage, 18%, of divestments for the carve-outs, whereas the initial owners of an independent company divest 6% of their holdings at that date and 3% more in the following three years.

One study in particular provides an extremely important insight about the long-term performance of IPO firms. The vast majority of studies that find underperformance in IPOs have been conducted about firms that went public **after the NASDAQ was formed**. A recent 2001 study, however, look at the five-year performance of 3,661 US IPOs between the years 1935 to 1972.[30]

This study finds that, pre-NASDAQ, there is **little evidence of a distinct IPO "underperformance" effect**. The authors find that IPOs have lower returns after periods with heavy IPO issue volume, but those effects are not statistically significant. Moreover, that **evidence of underperformance disappears when a different methodology is employed**. Using another methodology, they show **that IPOs return as much as the market** did over the whole sample period.

This raises the possibility that the **underperformance** of IPOs in the **post-NASDAQ era has been magnified**. They note that the underperformance documented by the studies mentioned above is **not uncontroversial, though their results have inspired countless articles in the popular press about the danger of investing in IPOs**. They show that the methodology used in some of the "underperformance" studies can **compound the effects of a single year's poor performance**.[31]

They note that to the extent that there is long-term underperformance of IPOs in the post-NASDAQ time period, it is possible that investor sentiment is moving stock returns. However, they note that this **sentiment** would not relate exclusively to IPO firms, but to a **much broader set of companies**.

This idea in particular lends credence to the fact that all of the processes surrounding a company's **IPO are affected by a very wide spectrum of factors**. These factors range from the state of the economy as a whole, to industry- or firm-specific characteristics. Moreover, these factors themselves interact dynamically to affect IPOs in different ways. However, all of the studies mentioned above show that there are **predictable patterns that result from issuer, underwriter, and investor choices**. It is the nexus of these choices that results in the successful US capital-raising process that allows American companies to expand and fuel our economy.

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Footnotes

[1] See Helwege and Liang (1996).

[2] See Lowry and Schwert (2000). Also see Ibbotson and Jaffe (1975) and Ibbotson, Sindelar and Ritter (1988,1994).

[3] See Lowry (2000). Lee and Henderson (1999) also find that these types of changing business conditions are strongly related to the variation in IPO volume.

[4] See Stoughton, Wong, and Zechner (2000). Pagano, Panetta, and Zingales (1995) show that, in the Italian market as well, stock market valuations of firms in the same industry cause more IPOs, due to this additional transparency in valuations.

[5] Among those who present evidence that IPO volume rises with investor sentiment are Rajan and Servaes (1997), Lee, Shlieifer and Thaler (1991), Lowry (2000), and Helwege and Liang (1996). Pagano, Panetta, and Zingales (1995) find that a similar relationship holds in Italy.

[6] See Chemmanur and Fulghieri (1995). Degeorge and Zeckhauser (1993) also suggest that issuers go public when experiencing high profitability. Bayless and Chaplinsky's (1996) model shows that a hot IPO market can result from any period in which companies are receiving favorable valuations, and that hot market issuers on average are expected to be better quality firms. Lucas and McDonald (1990) also present a model that demonstrates that a rise in IPO volume gives incentives for better quality firms to go public.

[7] See Jegadeesh, Weinstein, and Welch (1993), Michaely and Shaw (1994) and Speiss and Pettway (1995).

[8] See Helwege and Liang (1996).

[9] See Chemmanur and Fulghieri (1994).

[10] See Pagano, Panetta, and Zingales (1995).

[11] See Lowry and Schwert (2001).

[12] Loughran and Ritter (2000) show that market movements in general cause offering price range adjustments on the part of the underwriter.

[13] See Lowry and Schwert (2001).

[14] Among these studies are Lowry and Schwert (2001), Beatty and Ritter (1986), Rock (1986), and Baron (1982). Lowry and Schwert (2001) also note that many papers, including Beatty and Ritter (1986), Megginson and Weiss (1991), and Koh and Walter (1989) produce empirical evidence that learning costs help determine degree of underpricing.

[15] See Sherman and Titman (2000).

[16] These models include Allen and Faulhaber (1989), Welch (1989) and Grinblatt and Hwang (1989).

[17] These data have been analyzed by Beatty and Ritter (1986), Megginson and Weiss (1991), and Koh and Walter (1989).

[18] See Lowry and Schwert (2001).

[19] See Hanley (1993). Accordingly, Lowry and Schwert (2001) show that the size of the initial return tends to be **lower after negative price updates** than after positive price updates. Sharman and Titman (2000) present a model that implies that, as those percentages suggest, informed investors are on average earning excess returns from US IPOs.

[20] See Ritter (1991).

[21] See Ibbotson and Jaffe (1975) and Ibbotson, Sindelar and Ritter (1988,1994).

[22] See Lowry and Schwert (2000).

[23] See Spiess and Affleck-Graves (1995), and Loughran and Ritter (1995). Loughran and Ritter (1995) also find that the underperformance of IPOs does not tend to be offset by the high initial returns that are typical in hot IPO markets.

[24] See Helwege and Liang (1996).

[25] See Jain and Kini (1994) and Mikkelson and Shah (1994).

[26] See Jain and Kini (1994). Mikkelson and Shah (1994) report similar results for up to ten years after the IPO. Pagano, Panetta, and Zingales (1995) find that there is a reduction in profitability for Italian firms after the IPO.

[27] See van Bommel and Vermaelen (2000).

[28] See Pagano, Panetta, and Zingales (1995).

[29] Rajan (1992) also shows that being listed on the stock market can limit bargaining power of banks because the company now has access to an outside financing option.

[30] See Gompers and Lerner (2001).

[31] Brav and Gompers (1997) show that **IPO firms do not perform worse** than benchmarks matched based on size and book-to-market ratios. They also show that changing methodologies dramatically reduces measured underperformance.

BIBLIOGRAPHY

Allen, F. and G. Faulhaber (1989), "Signaling by Underpricing in the IPO Market," Journal of Financial Economics, 23, 303-323.

Baron, David (1982), "A Model of the Demand for Investment Banking Advising and Distribution Services for New Issues," Journal of Finance 37, 955-976.

Bayless, M. and S. Chaplinsky (1996), "Is There a Window of Opportunity for Seasoned Equity Issuance?," Journal of Finance, 50, 253-278.

Beatty, Randolph and Jay Ritter (1986), "Investment Banking, Reputation, and the Underpricing of Initial Public Offerings," Journal of Financial Economics 15, 213-232.

Benveniste, Lawrence M. and Paul A. Spindt (1989), "How Investment Bankers Determine the Offer Price and Allocation of New Issues," Journal of Financial Economics 24, 343-362.

Benveniste, Lawrence M., Walid Y. Busaba, and William Wilhelm (1999), "Information Externalities in Primary Equity Markets," University of Minnesota, working paper.

Booth, James R. and Lena Chua (1996), "Ownership Dispersion, Costly Information, and IPO Underpricing," Journal of Financial Economics 41, 291-310.

Brav, Alon, and Paul A. Gompers (1997), "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Ventur and Non-venture Capital-Backed Companies," Journal of Finance 52, 1791-1821.

Chemmanur, T. and P. Fulghieri (1995), "A Theory of the Going-Public Decision," unpublished paper, Columbia University and INSEAD.

Chemmanur, Thomas, and Paolo Fulghieri (1994),"Information Production, Private Equity Financing, and the Going Public Decision," mimeo Columbia University.

Choe, H., R. Masulis, and V. Nanda (1993), "Common Stock Offerings across the Business Cycle," Journal of Empirical Finance, I, 1-29.

Degeorge, François, and Richard Zeckhauser (1993), "The Reverse LBO Decision and Firm Performance: Theory and Evidence," Journal of Finance 48, 1323-1348.

Fama, Eugene F. (1998), "Market Efficiency, Long-Term Returns, and Behavioral Finance," Journal of Financial Economics 49, 283-306.

Gompers, Paul A. and Josh Lerner, (2001) "The Really Long-Run Performance of Initial Public Offerings: The Pre-Nasdaq Evidence," National Bureau of Economic Research Working Paper 8505, © October. See http://www.nber.org/papers/w8505.

Grinblatt, M. and C. Hwang (1989), "Signaling and the Pricing of New Issues," Journal of Finance, 44, 393-420.

Hanley, Kathleen Weiss (1993), "The Underpricing of Initial Public Offerings and the Partial Adjustment Phenomenon," Journal of Financial Economics 34, 231-250.

Helwege, Jean and Nellie Liang, (1996) "Initial Public Offerings in Hot and Cold Markets," Working Paper 34 in Finance and Economics Discussion Series of the Board of Governors of the Federal Reserve System, August. See http://www.federalreserve.gov/pubs/feds/1996/index.html.

Ibbotson, Robert G. and Jeffrey F. Jaffe (1975), "'Hot Issue' Markets," Journal of Finance 30, 1027-1042.

Ibbotson, Roger G., Jody L. Sindelar, and Jay R. Ritter (1988), "Initial Public Offerings," Journal of Applied Corporate Finance I, 37-45.

Ibbotson, Roger G., Jody L. Sindelar, and Jay R. Ritter (1994), "The Market's Problems with the Pricing of Initial Public Offerings," Journal of Applied Corporate Finance 7, 66-74.

Jain, B. and O. Kini (1994), "The Post-Issue Operating Performance of IPO Firms," Journal of Finance, 49, 1699-1726.

Jegadeesh, N., M. Weinstein, and I. Welch (1993), "An Empirical Investigation of IPO Returns and Subsequent Equity Offerings," Journal of Financial Economics 34, 153-175.

Koh, Francis, and Terry Walter (1989), "A Direct Test of Rock's Model of the Pricing of Unseasoned Issues," Journal of Financial Economics 23, 251-272.

Lee, Charles, Andrei Shleifer, and Richard Thaler (1991), "Investor Sentiment and the Closed-End Fund Puzzle," Journal of Finance 46, 75-110.

Lee, Jae Nam, and Glenn Henderson (1999), "The Hot Issue Market Phenomenon and Business Conditions," University of Cincinnati, working paper.

Leland, Hayne E., and David H. Pyle (1997), "Informational Asymmetries, Financial Structure, and Financial Intermediation," Journal of Finance 32, 371-387.

Loughran, Tim, and Jay R. Ritter (2001), "Why Don't Issuers Get Upset About Leaving Money on the Table in IPOs?" Review of Financial Studies, forthcoming.

Loughton, T. and J. Ritter, (1997), "The Operating Performance of Firms Conducting Seasoned Equity Offerings," Journal of Finance, Vol. 52, No. 5, December, pp. 1823-1850.

Lowry, Michelle and G. William Schwert, (2001), "Biases in the IPO Pricing Process," National Bureau of Economic Research Working Paper 8586, © November. See http://www.nber.org/papers/w8586.

Lowry, Michelle and G. William Schwert, (2000), "IPO Market Cycles: Bubbles or Sequential Learning?" National Bureau of Economic Research, Working Paper 7935, © October. See http://www.nber.org/papers/w7935.

Lowry, Michelle (2000), "Determinants of IPO Volume," Penn State University, Working Paper.

Lucas, D. and R. McDonald (1990), "Equity Issues and Stock Price Dynamics," Journal of Finance 45, 1019-1043.

Megginson, William, and Kathleen Weiss (1991), "Venture Capitalist Certification in Initial Public Offerings," Journal of Finance 46, 879-904.

Michaely, R. and W. Shaw (1994), "The Pricing of Initial Public Offerings: Tests of Adverse-Selection and Signaling Theories," The Review of Financial Studies, 7, 279-319.

Mikkelson, W. and K. Shah (1994), "Performance of Companies Around Initial Public Offerings," unpublished paper, University of Oregon and Auckland University.

Pagano, Marc and Fabio Panetta, Luigi Zingales, (1998), "Why Do Companies Go Public? An Empirical Analysis," Journal of Finance, Vol. 53, No. 1, February 1998, pp. 27-64.

Rajan, Raghuram and Henri Servaes (1997), "Analyst Following of Initial Public Offerings, Journal of Finance 52, 507-529.

Rajan, Raghuram G. (1992), "Insiders and Outsiders: The Choice between Informed and Arm's-Length Debt," Journal of Finance 47, 1367-1400.

Ritter, Jay R. (1991), "The Long Run Performance of Initial Public Offerings," Journal of Finance 46, 3-28.

Rock, Kevin (1986), "Why New Issues are Underpriced," Journal of Financial Economics 15, 187-212.

Sherman, Ann E. and Sheridan Titman, (2000), "Building the IPO Order Book: Underpricing and Participation Limits with Costly Information," National Bureau of Economic Research, Working Paper 7786, © July. See http://www.nber.org/papers/w7786.

Spiess, K. and J. Affleck-Graves (1995), "The Long-Run Performance of Following Seasoned Public Offerings," Journal of Financial Economics.

Spiess, K. and R. Pettway (1995), "The IPO and First Seasoned Equity Sale: Issue Proceeds, Owner/Managers' Wealth, and the Underpricing Signal," unpublished manuscript, University of Notre Dame and University of Missouri.

Stoughton, Neal M., Keith Wong, and Josef Zechner (2000), "IPOs and Product Quality," University of California at Irvine, Working Paper.

Van Bommel, Jos and Theo Vermaelen (2000), "Market Feedback During Initial Public Offerings: Do Managers Listen?" INSEAD, Working Paper.

Welch, I (1989), "Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings," Journal of Finance 44, 421-449.

SECURITIES INDUSTRY 2001 YEAR IN REVIEW AND 2002 OUTLOOK[1]

The US securities industry performed remarkably well considering the difficult operating environment it confronted in 2001. The industry weathered the challenges of recession, a major market correction and the terrorist attacks on September 11 and their aftermath. This was added to the ongoing impact of profound structural changes in the industry driven by a rapid pace of technological adoption and adaptation, the consolidation of the financial services industry and significant changes in the supervisory and regulatory environment, such as the shift to decimal pricing and the dramatic increase in disclosure and transparency.

The industry managed to remain profitable, despite a significant fall in revenues from the record levels seen in 1Q 2000. The relief provided by the dramatic reduction in interest rates and broad-based cost cutting efforts helped the industry trim expenses almost in line with the fall in revenues. As 2001 came to an end, the industry appears to have witnessed the bottom of the cyclical downturn and has restored growth in revenues. The year 2002 promises continued improvement and an increase in profitability.

The Economy — Underlying Assumptions

Confounding expectations, the US economy expanded, albeit marginally, in 4Q'01. The advance estimate showed the US economy grew 0.2% at seasonally adjusted annual rates (s.a.a.r.) from 3Q 2001 levels, compared to a decline of 1.3% in real GDP in 3Q 2001 and the "consensus" forecast of a decline of 1.1% for the final quarter of last year. This prompted many to herald the end of the recession, while others maintain that there was no recession to begin with, since by some definitions, a recession is consecutive quarters of negative growth. However, there are a number of reasons to be more cautious about elevating expectations. The "advance estimates" for real growth are based on incomplete data and subject to further, substantial revision. The average (without regard to sign) revision from this "advance release" to the final numbers is 0.6% of GDP, with 9/10 of all revisions falling in a range of –0.9% to 1.4%. Despite this a new consensus view is emerging of a quick, relatively robust recovery in economic activity.

[1] This article presents highlights of the January 28, 2002 issue of SIA's ***Securities Industry Trends*** of the same title: "**Securities Industry 2001 Year In Review And 2002 Outlook**." The *Trends* is a 26 page issue covering the quarterly and estimated annual financial performance of the US securities industry for 2001 and 2002. This includes discussion of both domestic and global revenues and profits, the financial impact of September Eleventh on the operating results of brokerages, industry employment nationally and in the New York metro area, and individual business line performance such as commissions, principal transactions, investment banking, interest income and expense and compensation. The full report is available for subscriber viewing, or for ordering, at: http://www.sia.com/reference_materials/html/securities_industrytrends.html

This newfound optimism is based on some key elements of this "advance" GDP estimate and the statement accompanying the FOMC decision to keep its target rate for Fed Funds unchanged at 1.75%. Two details of the GDP report are cited by most forecasters for their more upbeat outlooks that have emerged: a record liquidation of inventories and stronger than expected consumer spending. Private inventories plunged a record $120.6 billion, subtracting 2.2 percentage points from total real GDP growth. This is seen as positive for growth in 2002, with a reduced pace of inventory drawdowns and a subsequent move to restock fueling the upturn. The second element of the report focused on by forecasters was a surprisingly strong 5.4% s.a.a.r. growth in real consumer spending, reflecting a 38.4% spike in spending on consumer durables. This is seen by some as evidence of the continued resiliency of consumer spending which is expected to support the forecast bounce in overall activity. The Fed's statements that signs of weakness in demand are abating as forces restraining the economy begin to diminish provide comfort for these bullish views.

An alternative view presented here is more pessimistic about near-term prospects for the US. Prospects for any sustainable recovery hinge on the strength of final demand, which appeared to be generally weak, albeit with some hints of possible improvement, as the New Year began. Scattered signs of improvement are insufficient to support expectations for a recovery to start before mid-year, and uncertainty persists over its timing and strength. Personal consumption expenditures fell in both November and December and would have been negative for the quarter as a whole were in not for the October surge in consumer durables spending. Personal income while up in December, failed to offset a fall earlier in the quarter and with expectations of still higher unemployment, further declines are expected. This indicates that the large increase in consumer spending in 4Q'01 was financed by further increases in already worrisomely high levels of household indebtedness, spurred by cut-rate financing terms. Some "payback" on this "borrowing on future demand" should trim consumer spending growth in the early part of this year. This in turn, has led to conservative or reduced budgets for 1Q'02 and dampened near-term prospects further. Given weak order books firms appear unlikely to add to inventories or resume capital spending any time soon. Corporate earnings growth should resume in the second half of the year, but only at mid, single-digit rates.

If final demand does not pick up, the infamous "double-dip" or "W" shaped recovery, the pattern observed in five of the past six recessions, is likely to prevail. Growth is expected to be negligible to slightly negative in the current quarter before a modest upturn begins in the second half of the year. On an average annual basis, real GDP is projected to expand 0.5% in 2002, restrained by a decline in non-residential fixed investment of 5.5%.

Inflation should remain benign at 2.0% as was recorded in 2001, and labor markets soften further with unemployment expected to average 6.5% in 2002. The unexpected small gain in GDP reported for 4Q'01 led the Federal Reserve to end its monetary easing at its late-January meeting (but left the door open for further easing at its next meeting), which should signal the end of the current rate-cutting cycle and a move to a neutral stance until

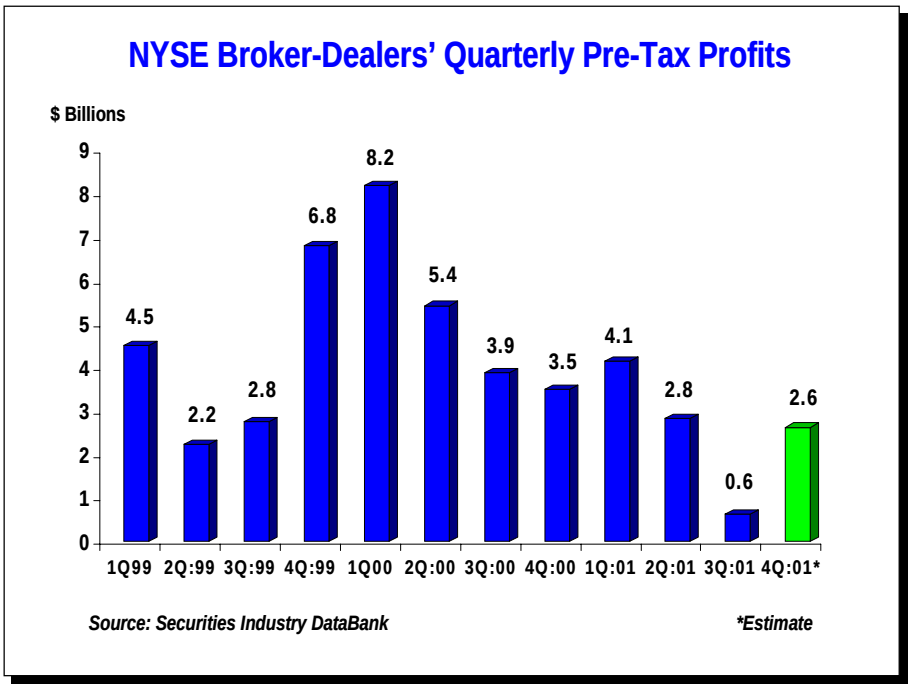
a recovery is visibly underway. The yield curve should steepen, as interest rates rise modestly across the course of the year, with the 10-year maturity Treasury yield rising from 5.07% per annum (p.a.) to 5.7% p.a. at end-2002.

	2000	2001	2002
Real GDP (yr/yr)	4.1 %	1.1 %	0.5% to 0.7%
Real GDP (4Q/3Q,s.a.a.r.)	2.8 %	0.2 %	2.0% to 2.5%
Personal Cons. (4Q/3Q,s.a.a.r)	4.8 %	5.4 %	1.4 %
Non-Res. Fixed Inv.(4Q/3Q,s.a.a.r.)	9.9 %	-12.8 %	-5.5 %
CPI (yr/yr)	3.4 %	2.9 %	1.5 %
CPI (4Q4Q)	3.4 %	2.0 %	2.0 %
Unemployment (yr. avg.)	4.0 %	4.8 %	6.5 %
Fed. Funds (% p.a., end yr.)	5.41%	1.52%	2.00%
2 yr. Treasury (‘’ ‘’)	5.11%	3.07%	3.50%
10 yr. Treasury (‘’ ‘’)	5.12%	5.07%	5.70%

The State of the Securities Industry

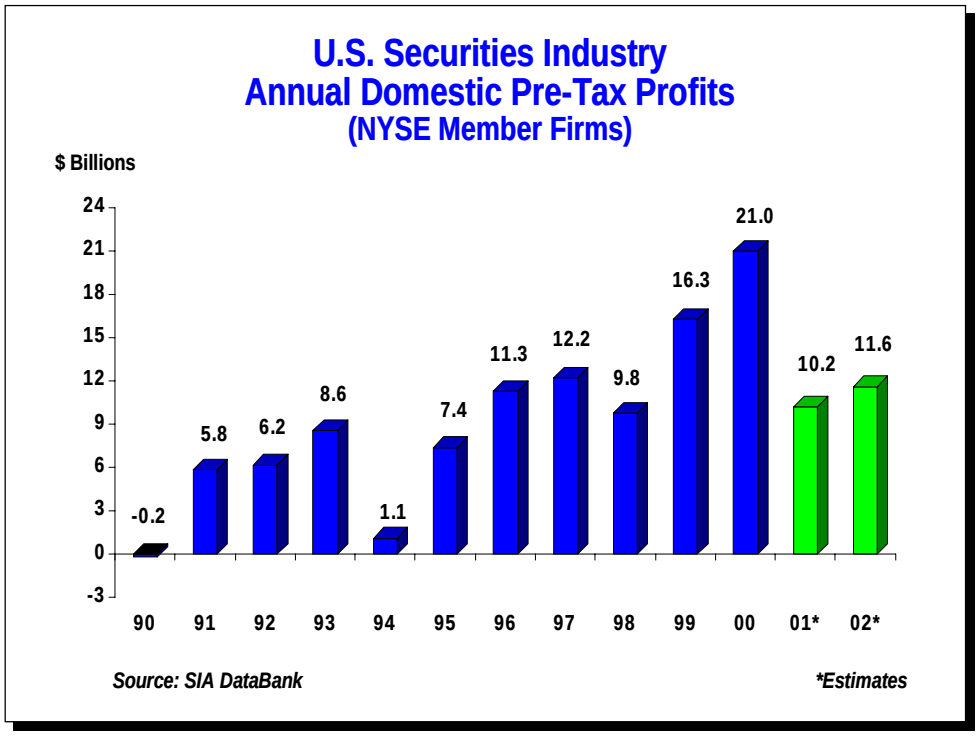
While it may be premature to declare the recovery underway, the US securities industry and US equity markets have already begun a rebound from the pronounced cyclical downturn. Although not all segments of the industry have recovered yet, the overall direction was positive in 4Q’01. Total revenues for New York Stock Exchange (NYSE) reporting member firms during 4Q’01, while still 25% below levels recorded during the same year earlier period, are estimated to have risen 5% from 3Q’01 levels. The industry remained profitable during the market correction as total expenses fell almost in line with revenue declines. Compensation and interest expenses account for three-quarters of total expenses. Total compensation fell 11.2% last year reflecting reduced headcount and sharply lower variable compensation (principally bonuses, off an estimated 50% from 2000’s record levels), and a 24% decline in interest expense, which reflects the Fed’s aggressive monetary easing (a record 11 cuts in one year to a 40-year low) and reduced leverage by securities firms. Excluding the impact of sharply lower interest rates over the past year, revenues in 4Q’01 remain some 11% below year earlier levels, but showed a marked improvement from results in 3Q’01. As a result, pre-tax net income for the domestic operations of US securities firms is estimated to have risen from $0.6 billion in 3Q’01 to $2.6 billion in the final quarter of last year.

Although corporate bond defaults hit a record last year and the collapses of Enron and the Argentine economy have dominated the headlines, the impact on the financial services industry was felt mainly in the commercial banking subsidiaries of financial holding companies. The exposure to securities firms was mainly concentrated in a small number of firms, and for these firms it was limited in size relative to overall revenue. For over 99% of all securities firms, the only impact was what these events have done to the overall bond and equity markets.

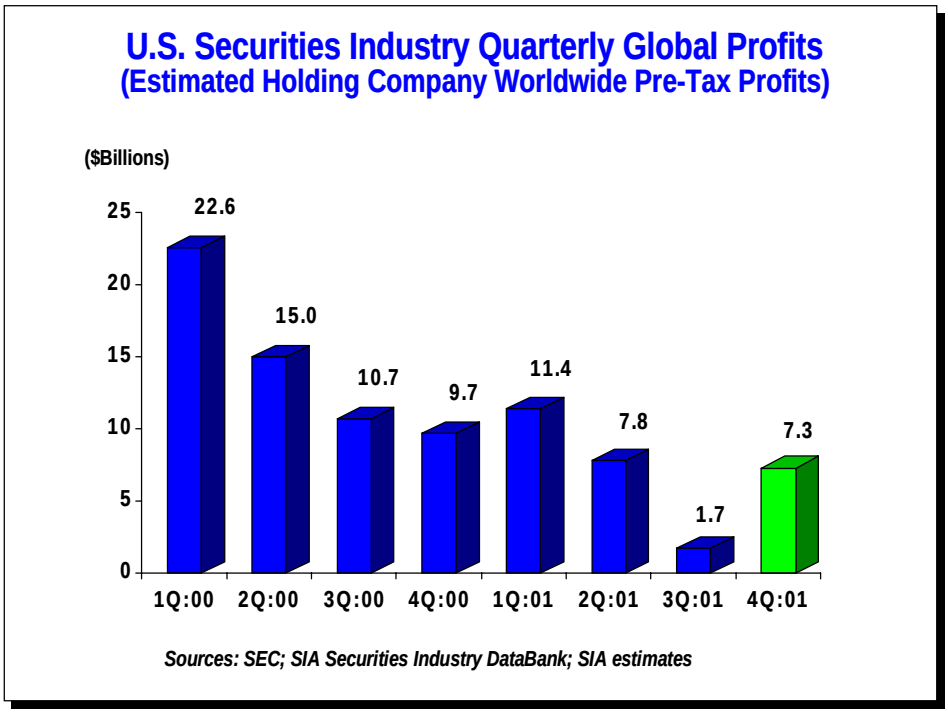


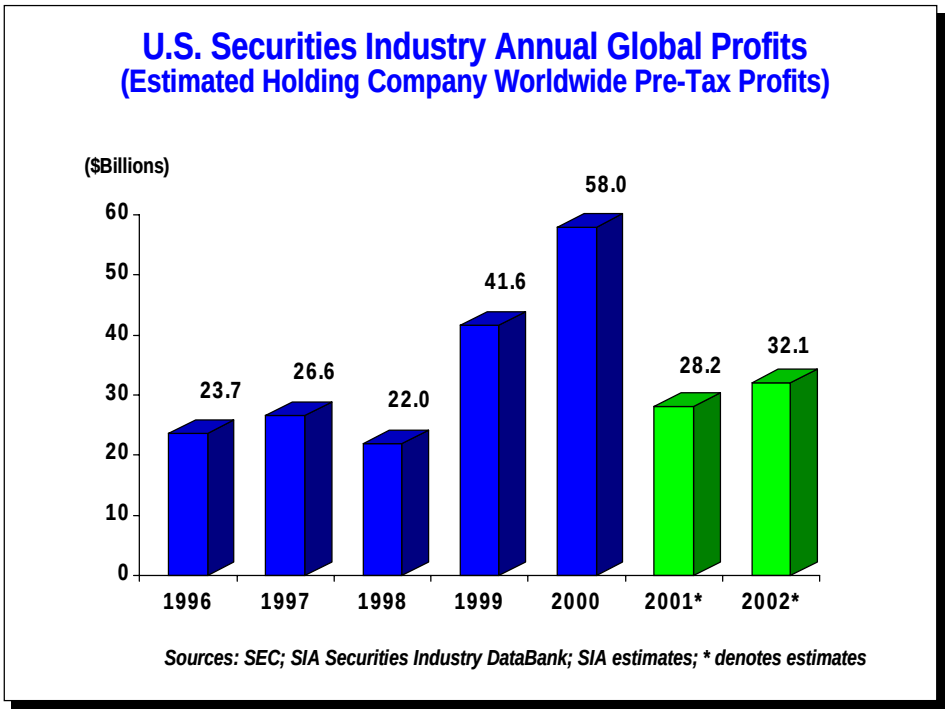
Although fourth quarter estimates will not be confirmed for another month, full-year 2001 domestic industry profits last year are estimated at $10.2 billion, a 51% decline from the previous year's record of $21.0 billion. This 2001 result is the US securities industry's fifth highest annual total, albeit non-inflation adjusted, but was largely due to drastic reductions in interest rates last year, and member firms' responses, as our highly leveraged industry reduced compensation costs, mainly from attrition, lower payouts and slashed bonuses.

Based on consensus analysts' estimates of 2002 earnings for publicly held brokerage firms, with the Securities Industry Association's adjustments to derive total domestic industry profits, we expect 2002 earnings to increase a modest 14% to $11.6 billion, which would make 2002 the fourth best year on record. However, it is early in the year and this number is subject to many variables, particularly the strength and timing of the economy's recovery. If our projections remain on target, the resumption of revenue growth may obviate the need for further cost cutting, which, in an industry whose capital is mostly human, may preclude further major layoffs beyond those already announced. Again, some individual firms will still need to cut costs to stabilize or even survive in an extremely competitive environment – but the industry as a whole appears to have put the worst behind it.



On a worldwide holding company basis, the US securities industry's quarterly and annual profits (shown on the following pages), revenues and expenses practically mirrored the smaller US domestic portion. Worldwide holding company profits of the US securities industry are projected to reach $28.2 billion in 2001, less than half the record $58.0 billion last year. For 2002, we expect worldwide holding company profits to rise to $32.1 billion.





Note: quarterly and annual tables and PowerPoints of domestic and global revenues and expenses are included in full issue of SIA's January 28, 2002 Securities Industry Trends. See footnote 1.

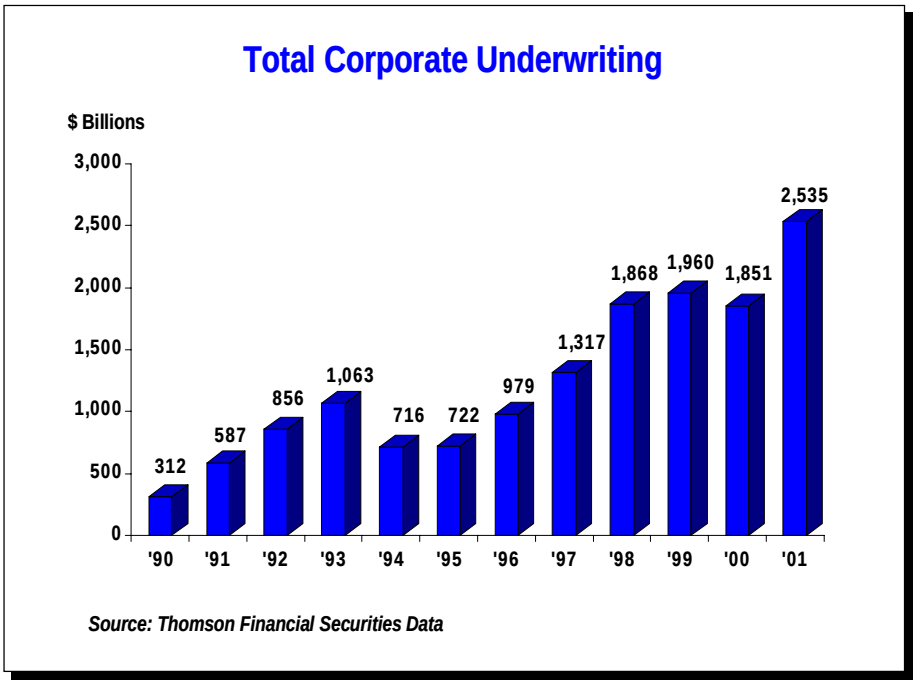
Corporate Underwriting Set Record in 2001

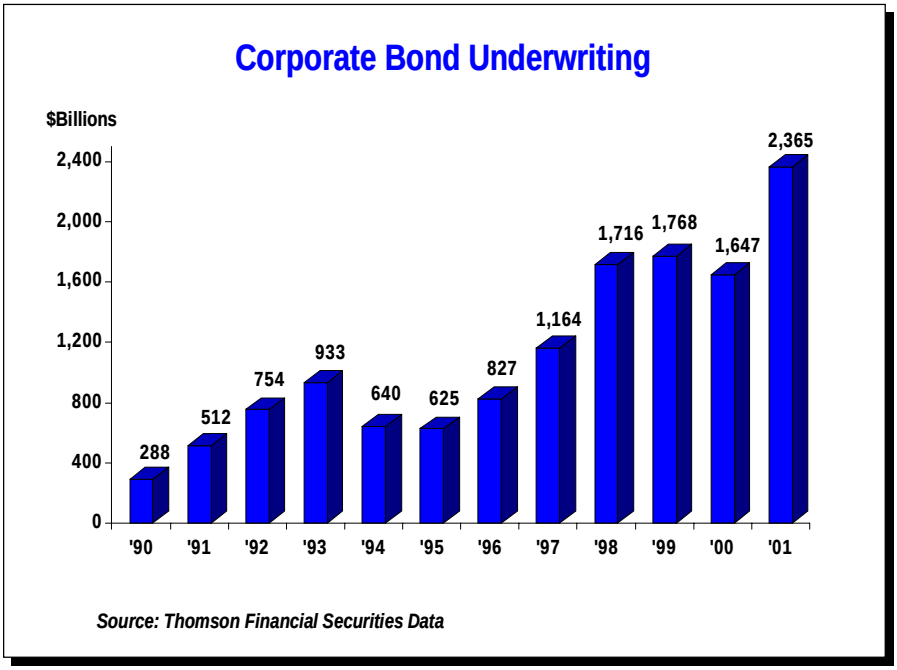
Total corporate underwriting in the US market set a record last year (in terms of both deal and dollar volume), driven by robust fixed income issuance. Corporate debt issuance in the United States reached $2.34 trillion in 2001, 43.7% higher than 2000's level and topping the previous record of $1.77 trillion set in 1999. Total underwriting came in at $2.54 trillion in 2001, 37.0% above 2000 and well ahead of the record 1999 pace of $1.96 trillion, despite a 17.0% decline in equity issuance. Underwritten equities, including straight and convertible preferred stock, follow-ons and initial public offerings (IPOs), totaled $169.7 billion in 2001, its lowest level since 1998's $152.7 billion.

- Among underwritten bond offerings, asset-backed bond issuance more than doubled to a record $832.5 billion from 2000's $393.4 billion as banks cleared their books by securitizing their mortgages to make room for the heavy volume of new home mortgages and extremely heavy refinancing as the Fed slashed rates 11 times in 2001. This total was 47% above the previous record of $566.8 billion for underwritten asset-backed bonds set in 1998.

- Underwritten convertible bonds also set a record, reaching $21.6 billion in 2001, up 27% from 2000's then record of $17.0 billion. If one takes into account underwritten

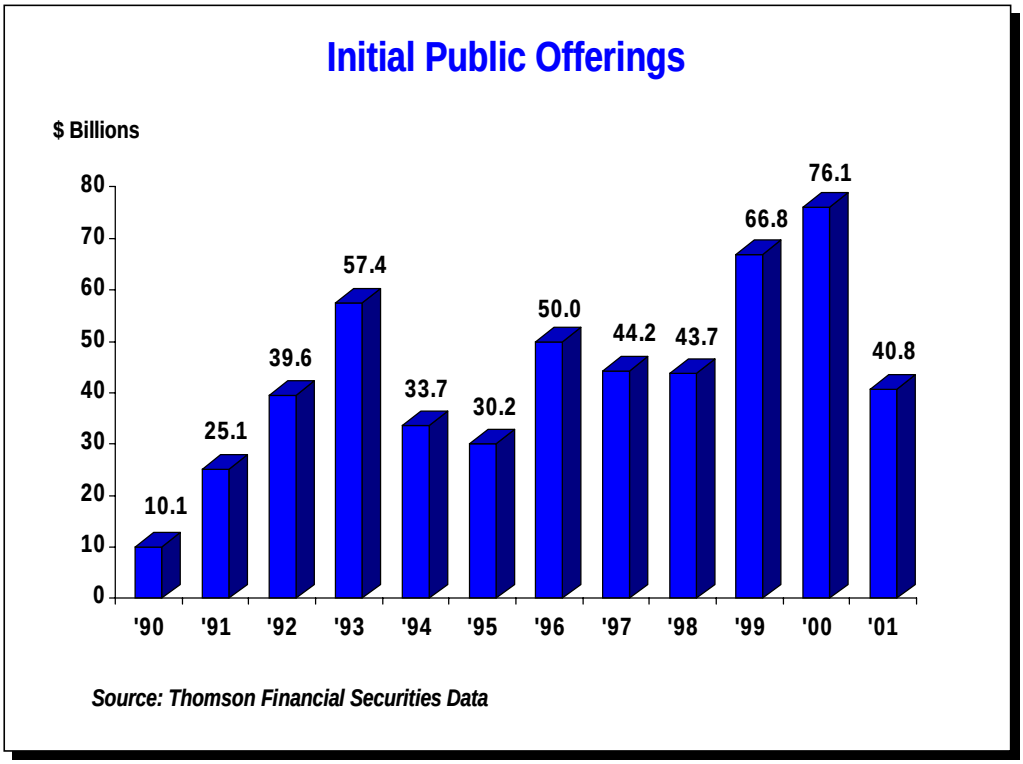
convertible bonds, preferred stock, privately placed 144A convertible bonds and preferreds, a record for all types of converts of $103.4 billion issued in all US primary markets was set. This broader total is nearly double 2000's level of $55.8 billion. This was also the first time this aggregated total broke the $100-billion barrier.





Accounting for most of the weakness in primary equity markets was the sharp fall-off in IPOs. During 2001, only 122 IPOs (including closed-end funds) came to market, a 73.2% decline from 2000's total. Dollar proceeds from IPOs totaled $40.8 billion in 2001, 46.4% below the record $76.1 billion set in 2000 and the lowest amount raised since 1995's $30.2 billion. However, the IPO market came back to life in the fourth quarter and as a flurry of deals was offered in December, just prior to the holidays. The IPO market slumped again in January with no IPOs until January 28, and then just three deals for the full month totaling $1.2 billion (excluding one closed-end muni bond fund), although it is expected to pick up steam in February.

In the public financing sector, underwritten municipal bond issuance totaled $283.5 billion in 2001, a 46% increase over 2000's $194.0 billion but just shy of 1993's record $287.9 billion of underwritten municipal bonds. State and local financing needs are expected to grow in 2002 and this sector should remain strong.

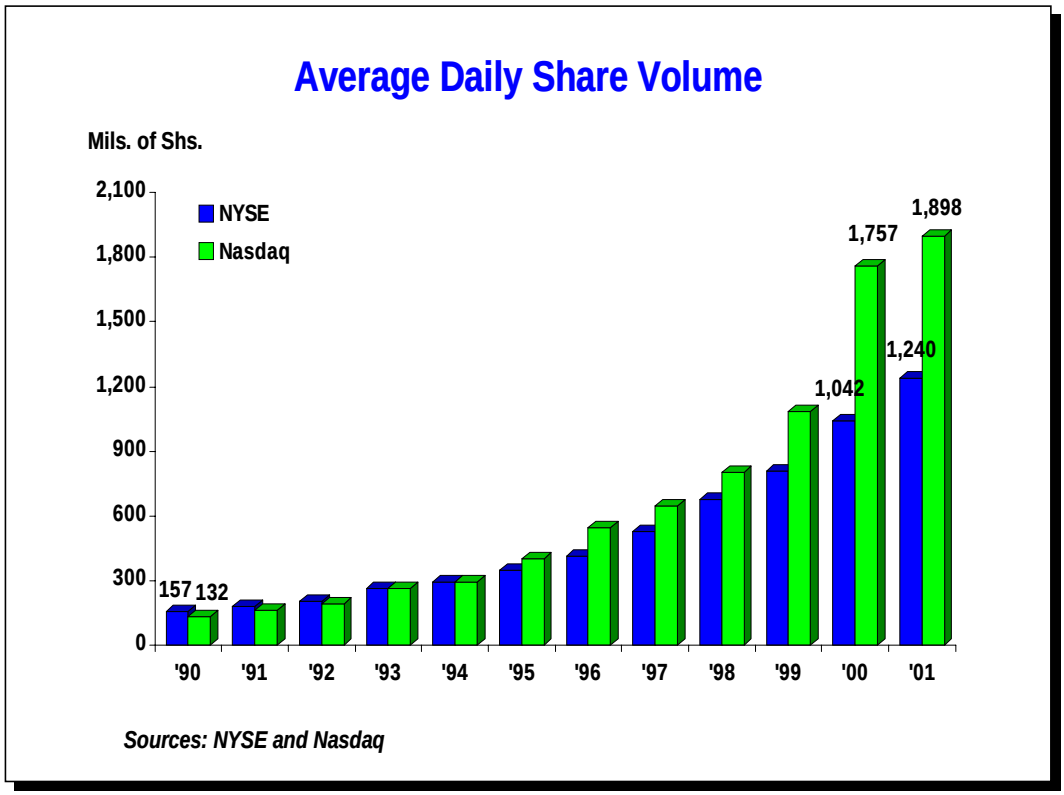


Note: see tables in the" Monthly Statistical Review" section at the end of this report for full underwriting data.

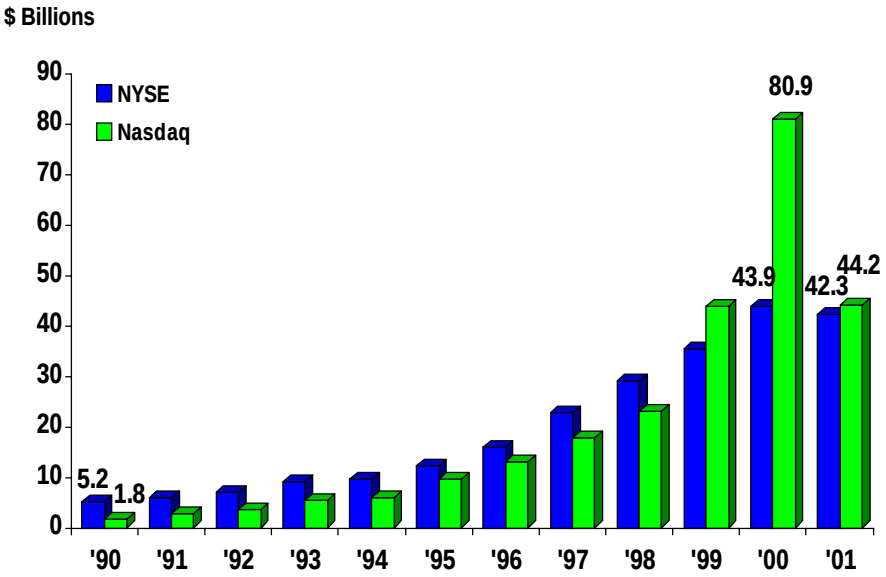
Secondary Markets

- Trading activity stayed strong in the aftermath of September 11 and reached record levels in 2001. Average daily share volume on the NYSE rose 19.0% to 1.24-billion shares daily and shattered the prior record of 1.04-billion shares per day set in 2000. Nasdaq's volume increased 8.0% to 1.90-billion shares daily from 1.76-billion shares daily in 2000. The number of institutional trades executed averaged a record 656,888 daily, topping 2000's previous record pace by 11.5%. However, reflecting the decline in stock prices, the value of trading was 3.6% lower on the NYSE and 45.4% lower on Nasdaq. These were the first annual declines in dollar volume since 1990 and 1988 on the NYSE and Nasdaq, respectively.

- The value of equity mutual fund assets fell for the second straight year and stood at $3.4 trillion at the end of December 2001, 13.9% below the just revised year-end 2000 level. Net flows into equity mutual funds, despite turning positive in 4Q'01 after being in negative territory during 3Q'01, totaled a mere $32.3 billion for the full year, its lowest level since 1990 and just one-tenth of 2000's record $309.4 billion.

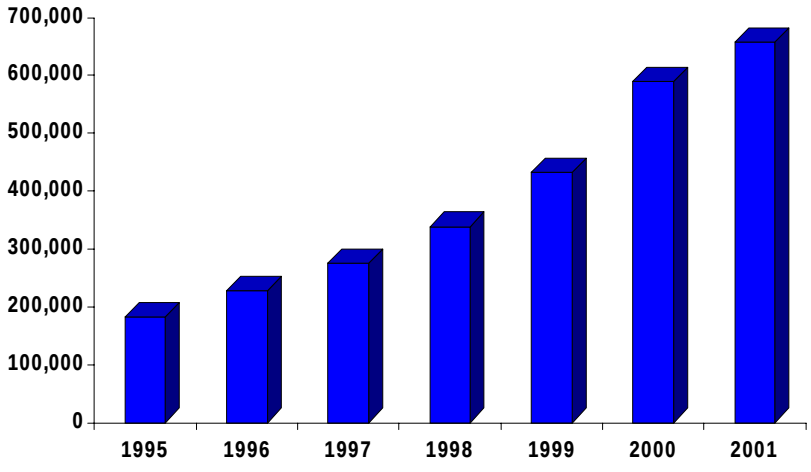


Average Daily Dollar Volume



Sources: NYSE and Nasdaq

Average Daily Institutional Trades Executed



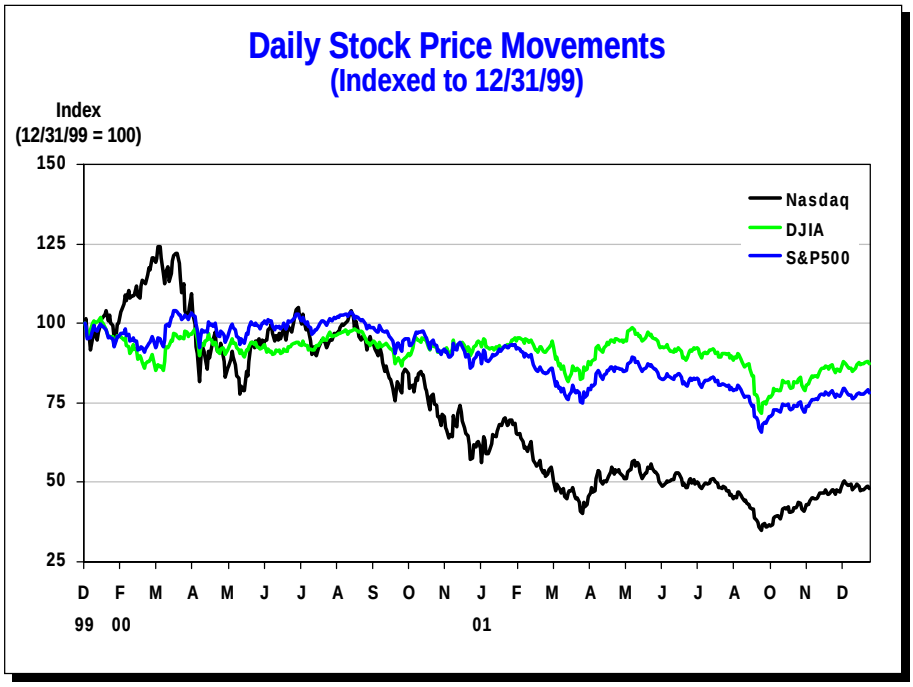
Source: DTCC

- The US stock market suffered the first back-to-back annual losses since the 1970s (1973-74 for the S&P 500 and Nasdaq, and 1977-78 for the Dow Jones Industrial Average). The trough, a three-year low, occurred on September 21, before markets posted double-digit gains in 4Q'01 to narrow full-year losses.

	Nasdaq	DJIA	S&P 500
Peak date	3/10/00	1/14/00	3/24/00
Peak level	5048.62	11722.98	1527.46
Trough (9/21/01)	1423.19	8235.81	965.80
2000 close	2470.52	10786.85	1320.28
2001 close	1950.40	10021.50	1148.08
Jan. 31, 2002	1934.03	9920.00	1130.20
2000 % change	-39.3%	-6.2%	-10.1%
2001 % change	-21.1%	-7.1%	-13.0%
Peak-Trough	-71.8%	-29.7%	-36.8%
Peak-end 2001	-61.4%	-14.5%	-24.8%
Trough-end 2001	37.0%	21.7%	18.9%
YTD 2002	-0.8%	-1.0%	-1.6%

Despite the downturn, secondary market volume set records in 2001, both in volume of shares and number of trades. Records were set for a single day (September 17), a single week (September 17-21), a month (January 2001) and for the year as a whole. However, reflecting the decline in stock prices, the value of trading was 3.6% and 45.4% lower, respectively, on the NYSE and Nasdaq — the first annual declines since 1990 and 1988, respectively, for the two markets.

		2000	2001	% change
NYSE	– avg. daily # shares (millions)	1,041.6	1,240.0	19.0%
	– avg. daily $ value (billions)	$ 43.9	$ 42.3	-3.6%
Nasdaq	– avg. daily # shares (millions)	1,757.0	1,897.5	8.0%
	– avg. daily $ value (billions)	$ 80.9	$ 44.2	-45.4%
Inst. Vol.	– avg. daily # trades (thousands)	589.1	656.9	11.5%



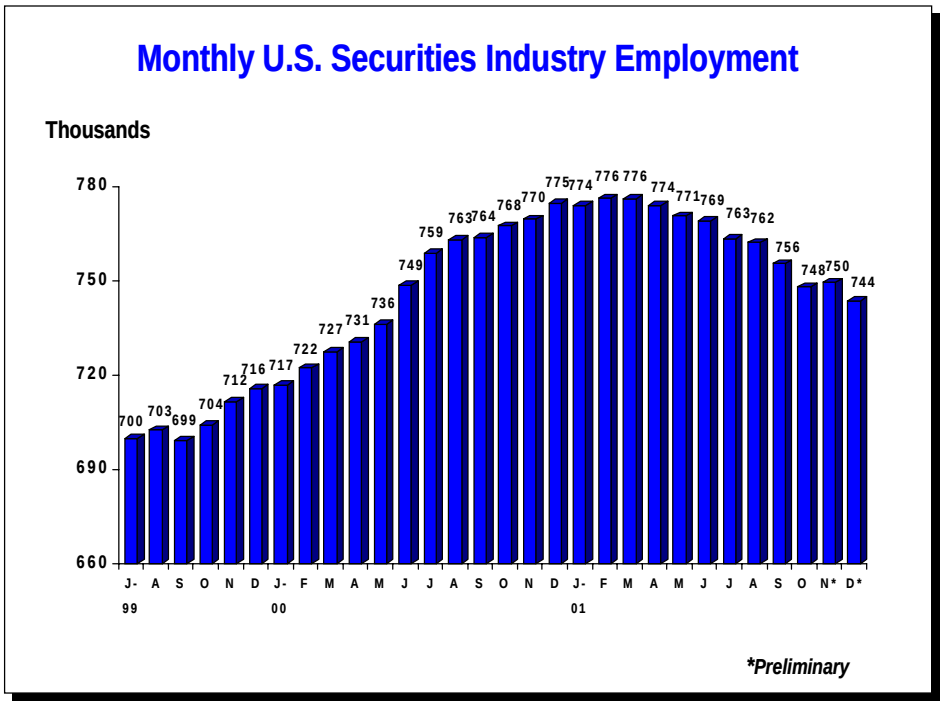
Note: see tables in the "Monthly Statistical Review" section at the end of this report for secondary market data.

- For the first time since 1992-93, bonds outperformed stocks for the second straight year. Although returns were impressive last year, the bond market was exceptionally volatile. For example, yields on 10-year Treasuries began the year at 5.12%, and climbed to 5.54% by the end of May. Yields on this benchmark instrument fell 132 basis points to 4.22% in early November, before shooting back up to end the year at 5.07%. The late-year sell off wiped out a big portion of the gains bonds had made up to that point last year. At the November low, the total return on 10-year Treasuries was 13.1%, but by the end of the year, this was nearly halved to 6.7%. Investment-grade bonds overall, including Treasuries, corporates, mortgages and agencies, had a return of 8.3% last year, according to Merrill Lynch's US Broad Market Index, down from a cumulative total return of 12.9% for the year through November 7.

- Corporate bond defaults soared to record levels in 2001, with 211 issuers defaulting on approximately $115.4 billion of debt, according to Standard & Poor's. This dwarfed the previous record of 132 issuers defaulting on $42.3 billion of debt set in 2000. The default rate for all issuers stood at 3.99% during 2001, nearly equaling the record of 4.01% set in 1991 and far surpassing 2000's global default rate of 2.56%.

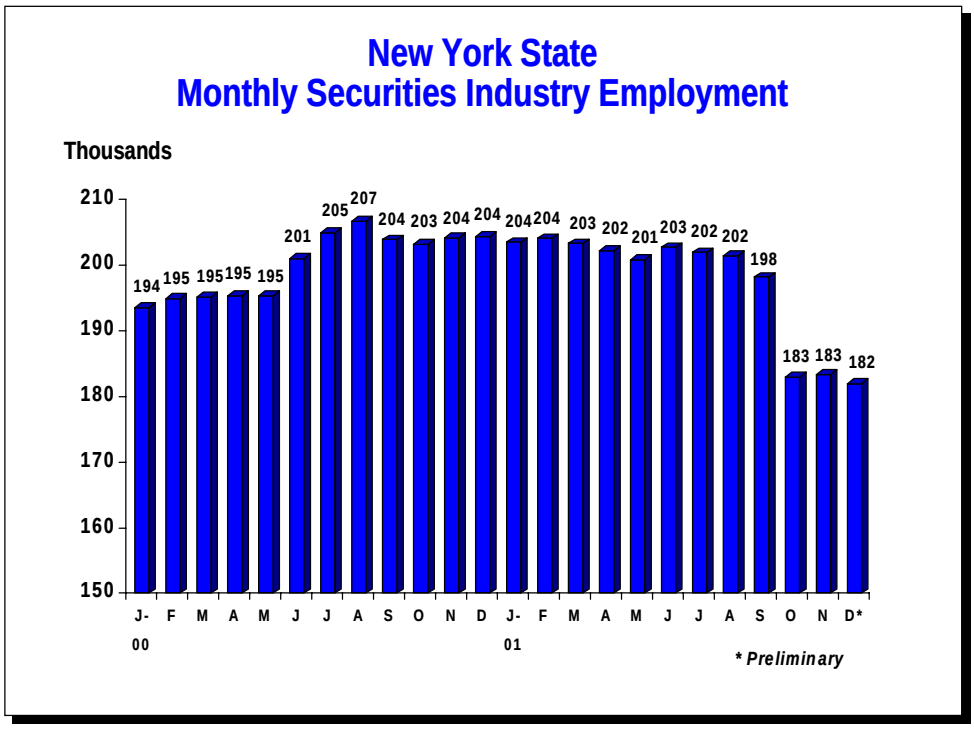
Employment Trends

The US domestic securities industry reached an all-time peak of 776,400 employees in February 2001, before retreating just 10 months later to a recent trough of 743,700 securities positions (preliminary) by year-end 2001. This is expected to be revised downward, as have all the federal and state monthly employment reports during 2001. The decline nationwide between February and December 2001 was 32,700 domestic securities industry positions, or a drop of 4.2%. The current bear market was the main culprit for the position cuts, but job reductions were accelerated by the World Trade Center (WTC) terrorist attacks. Still, on a year-end to year-end basis, 2001 will remain the second highest year for nationwide securities industry employment behind December 2000's 774,700.

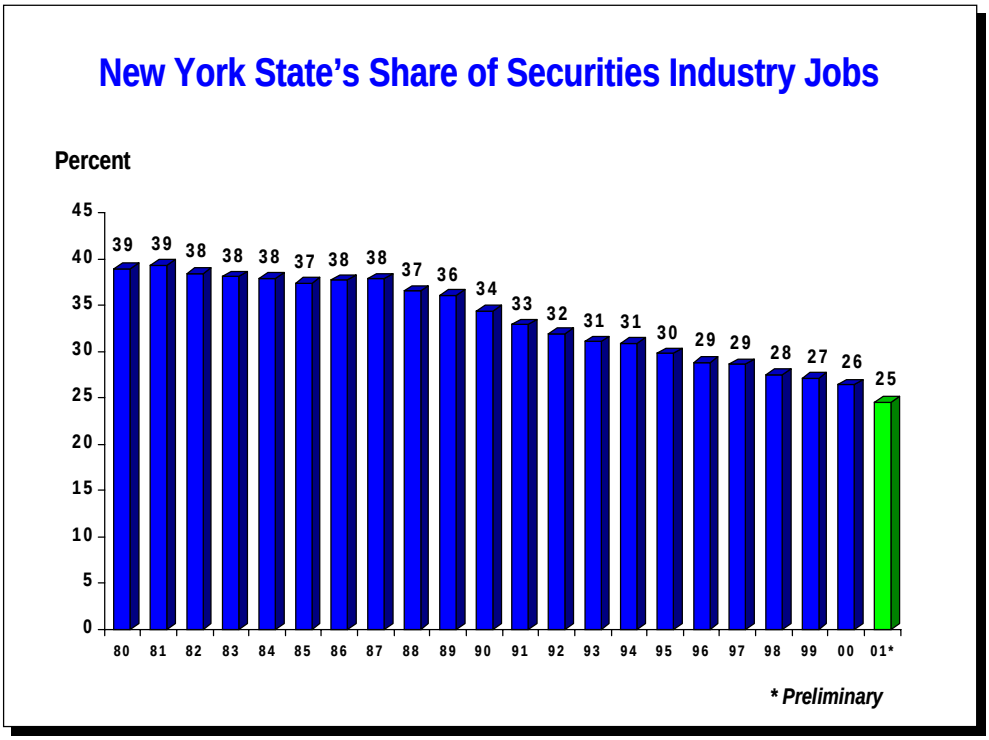


New York State Securities Industry Employment

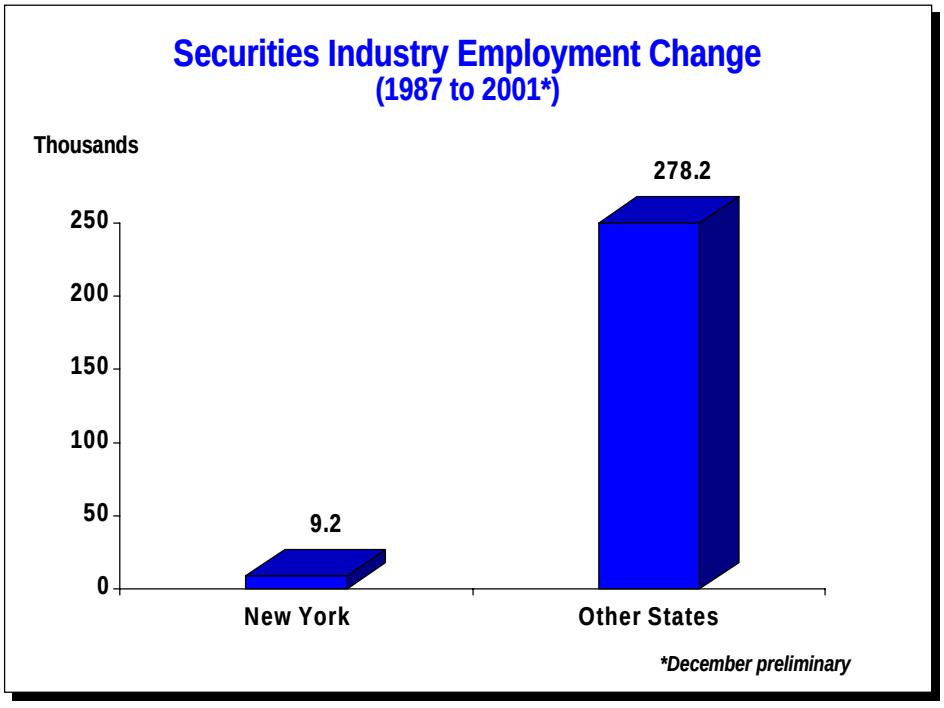
From the present all-time peak of 206,800 New York State's securities industry job base attained in August 2000, to the current, but deepening, recent trough of 181,900 state securities industry positions as of December 2001, the state lost 24,900 of its critical base of highly prized and coveted securities professionals. The unfortunate fatalities and job relocations across the river (to New Jersey) played as large a part in this as did the bear cycle. This is having a devastating effect on state government tax receipts, as many of the state's highest quality and highest tax-generating jobs have been eliminated in slightly more than one year. With 91% of the state's securities industry job base located within New York City, the effects on the city have been, and will continue to be, even more profound. This 24,900 statewide securities industry personnel job accretion was a 12% drop in just over one year. Furthermore, this equates to 80% of all of the US securities industry job losses nationwide last year.



Although direct securities industry employment nationwide has more than tripled since the beginning of 1980, New York State's share of that employment has steadily declined from 39% to just 24.5% during the same time frame. These changes also brought a new awareness of the critical importance of controlling costs in a competitive and cyclical atmosphere.



New York, in most respects, has higher rent, labor, tax and other costs of doing business than many other locations. Since year-end 1987 through December 2001, New York has recorded a net gain of a mere 9,200 jobs vs. 278,200 jobs in the other 49 states, particularly large or neighboring states. That's a frightening 30-fold larger growth for domestic securities industry jobs in the other 49 states.



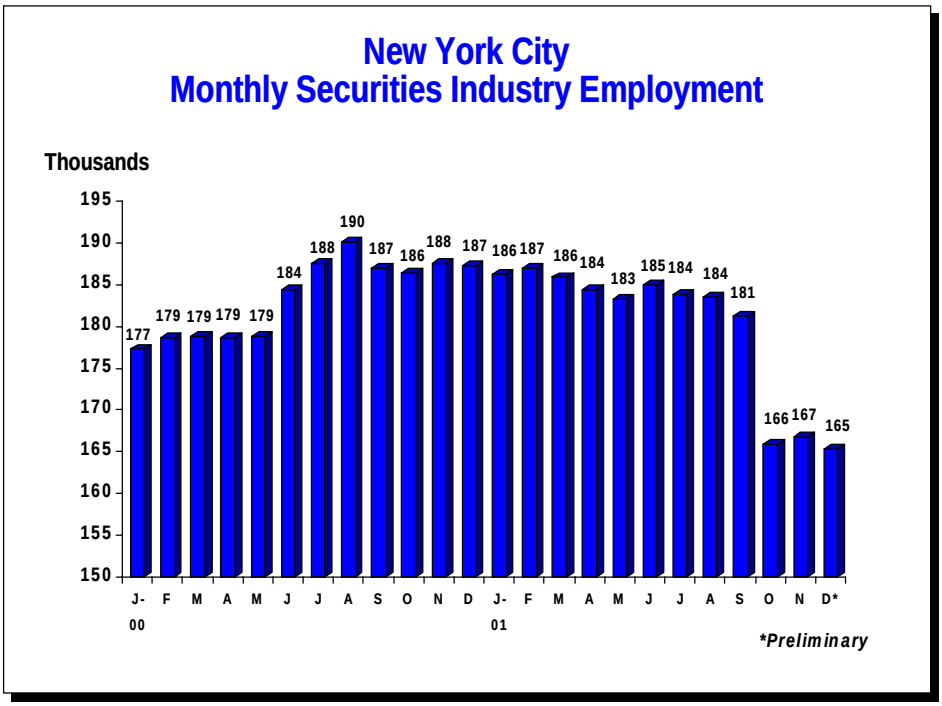
Although New York securities industry job migration out of state has long been the case, the cost and other disadvantages that New York now faces are far more significant in today's post September 11 environment. Particular challenges come from forced relocations across the Hudson River or elsewhere, continued intense competition between both domestic and global financial service conglomerates for New York brokerages, and borders that are meaningless because of technological developments.

The terrorist attacks on September 11 have exacerbated the need for, and accelerated the trend toward, geographic dispersal for back-up or redundant facilities for technology, communications infrastructure, physical plants and, of course, personnel. These, along with transportation problems downtown and psychological reactions to the WTC site, are just some of the many issues that need to be addressed to prevent further permanent relocations from downtown for both the securities industry and others. Even if migration continues from lower, or even midtown, Manhattan, these positions do not necessarily have to leave New York State if addressed immediately.

This exodus will also severely impact the many other New York industries serving the securities industry such as publishing, accounting, marketing, legal, computer, and business services companies that supply key inputs to financial firms and tend to be located in proximity to their customer base. Further, the fluctuations in Wall Street paychecks tend to influence the fortunes of the retail, restaurant, and entertainment industries in New York. These are challenges that need to be addressed immediately, in particular, as well as long-term by the state and city.

New York City Securities Industry Employment

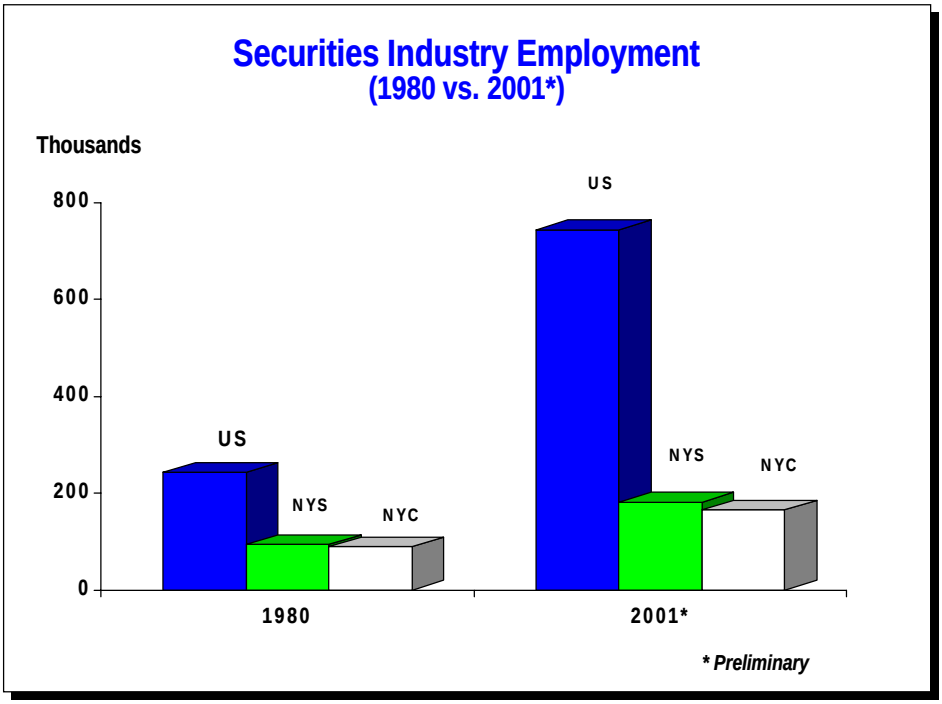
With the New York State securities industry totally concentrated in New York City (91% of statewide securities jobs are in the city, mainly in Manhattan), and 22% of nationwide securities positions are also in New York City, the picture is even bleaker for the city than for the state. Wall Street's woes a decade ago was one of the overriding causes of a deep city depression that far outlasted and was far more severe than the nation's relatively minor and short downturn.



Following the WTC attacks, NYC securities industry employment plummeted to 165,900, a loss of 15,300 jobs (or 8.4%) in one month's time – a record loss for any month both in terms of numbers and percentages. By year-end 2001, another 500 jobs were gone. From New York City's all-time peak of 190,100 posted in August 2000 to 165,400 jobs by year-end 2001 (preliminary, and likely to be revised downward next month), there was a devastating and unprecedented loss of 24,700 securities professionals in the city in just 16 months, a 13% rapid downward spiral – again, from adverse business conditions exacerbated by fatalities and out-of-town relocations. Although November's preliminary data showed a slight uptick of jobs back into the city, December's preliminary data is a recent nadir of 165,400 securities positions which will continue to decline as previously announced layoffs become fact on the state and city's payroll rosters as these employees severance packages expire over the coming months.

Not surprisingly, the city's headcount drop of 24,700 (since August 2000's peak) was nearly identical to the state's industry losses of 24,900 during this same time period. As we mentioned for New York State, the city's job losses will have a much greater outsize impact on New York City's economy and will even more severely impact many other New York industries. Taking into account the industries that directly

support Wall Street or benefit from Wall Street income, the Commerce Department has estimated that each job in the city's securities industry generates about two additional city jobs. According to this estimate, roughly 14% of total employment in New York City is related, either directly or indirectly, to the securities industry.



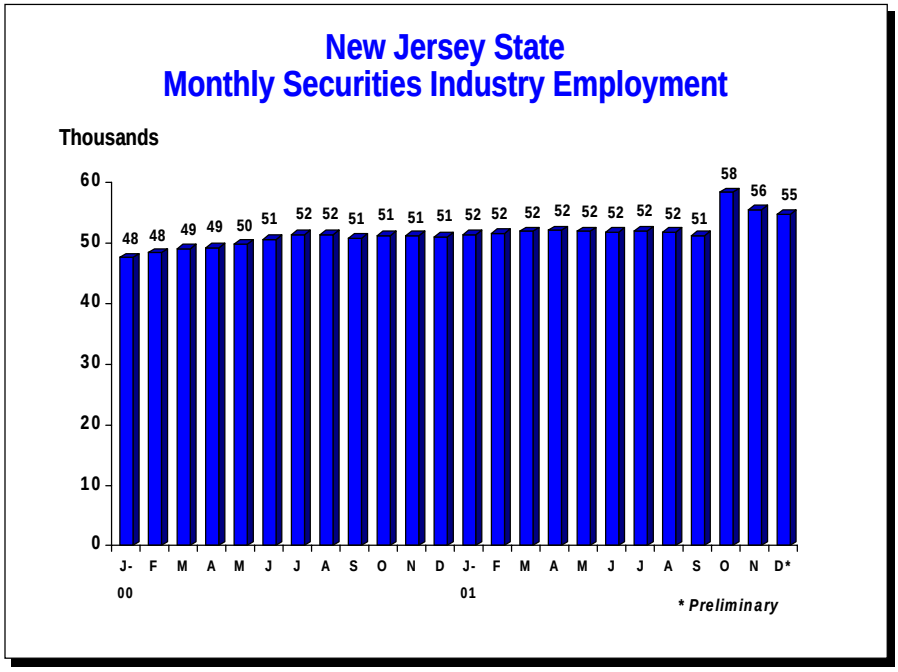
As mentioned for New York State, the US Commerce Department noted that for New York City in particular, publishing, accounting, marketing, legal, computer, and business services companies all supply key inputs to financial firms, and fluctuations in Wall Street paychecks tend to influence the fortunes of the city's retail, restaurant, and entertainment industries. These are challenges that need to be addressed immediately.

New Jersey, the Hands-Down Winner

New Jersey's securities industry job base has steadily grown for years but shot up massively in October following the WTC-necessitated relocations. Some of these jobs have migrated back to New York City (as November's data and December's preliminary data indicate), but many will not and groups of securities firms (and their vendors) are planning new buildings across the Hudson, or signing new leases, for redundant back-up facilities. Following a dip of 600 securities jobs in New Jersey in September, in October the state gained 7,200 new securities industry positions. That is a one-month gain of 14% for New Jersey at the expense of New York City, which lost 15,300 jobs, or 8.3% of its securities industry employment in October.

Put another way, New Jersey's securities industry's job gain of 7,200 in October equaled nearly half (47.1%) of New York City's October job loss of 15,300 securities professionals. On an annual basis, in just eight years (1994 through 2001), New Jersey's securities industry job market has more than doubled. But only half of New Jersey's

gains in October lasted through year-end 2001; 3,700 of October's gain of 7,200 securities industry jobs were gone by the end of December. This reflects both a migration of temporary relocations back to New York and the current layoff cycle affecting both the New York City metro area as well as the nation.



Note: for the full article's text, including quarterly and annual income statements, PowerPoint slides on all of the quarterly and annual data discussed in the full article, see the January 28, 2002 issue of SIA's *Securities Industry Trends* entitled "Securities Industry 2001 Year In Review And 2002 Outlook." This 26-page *Trends* covers quarterly and estimated annual financial performance of the industry for 2001 and 2002. This includes discussion of both domestic and global revenues and profits, coverage of both primary and secondary markets in the US, the financial impact of September Eleventh on the operating results of brokerages, industry employment nationally and in the New York metro area, and individual business line performance such as commissions, principal transactions, investment banking, interest income and expense and compensation. The full report is available for subscriber viewing, or for ordering, at: http://www.sia.com/reference_materials/html/securities_industrytrends.html.

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MONTHLY STATISTICAL REVIEW

US CORPORATE UNDERWRITING ACTIVITY

(In $ Billions)

	Straight Corporate Debt	Con-vertible Debt	Asset-Backed Debt	**TOTAL DEBT**	High-Yield Bonds	Common Stock	Preferred Stock	**TOTAL EQUITY**	All IPOs	Follow-Ons	**TOTAL UNDER-WRITINGS**
1985	76.4	7.5	20.8	104.7	14.2	24.7	8.6	33.3	8.5	16.2	138.0
1986	149.8	10.1	67.8	227.7	31.9	43.2	13.9	57.1	22.3	20.9	284.8
1987	117.8	9.9	91.7	219.4	28.1	41.5	11.4	52.9	24.0	17.5	272.3
1988	120.3	3.1	113.8	237.2	27.7	29.7	7.6	37.3	23.6	6.1	274.5
1989	134.1	5.5	135.3	274.9	25.3	22.9	7.7	30.6	13.7	9.2	305.5
1990	107.7	4.7	176.1	288.4	1.4	19.2	4.7	23.9	10.1	9.0	312.3
1991	203.6	7.8	300.0	511.5	10.0	56.0	19.9	75.9	25.1	30.9	587.4
1992	319.8	7.1	427.0	753.8	37.8	72.5	29.3	101.8	39.6	32.9	855.7
1993	448.4	9.3	474.8	932.5	55.2	102.4	28.4	130.8	57.4	45.0	1,063.4
1994	381.2	4.8	253.5	639.5	33.3	61.4	15.5	76.9	33.7	27.7	716.4
1995	466.0	6.9	152.4	625.3	28.9	82.0	15.1	97.1	30.2	51.8	722.4
1996	564.8	9.3	252.9	827.0	37.2	115.5	36.5	151.9	50.0	65.5	979.0
1997	769.8	8.5	385.6	1,163.9	31.4	120.2	33.3	153.4	44.2	75.9	1,317.3
1998	1,142.5	6.3	566.8	1,715.6	42.9	115.0	37.8	152.7	43.7	71.2	1,868.3
1999	1,264.8	16.1	487.1	1,768.0	36.6	164.3	27.5	191.7	66.8	97.5	1,959.8
2000	1,236.2	17.0	393.4	1,646.6	25.2	189.1	15.4	204.5	76.1	112.9	1,851.0
2001	1,511.2	21.6	832.5	2,365.4	30.6	128.4	41.3	169.7	40.8	87.6	2,535.1
2000											
Jan	123.9	0.5	20.5	144.9	4.1	15.3	0.5	15.8	3.5	11.8	160.7
Feb	118.8	1.8	33.4	153.9	3.1	27.9	3.3	31.2	7.1	20.9	185.1
Mar	134.0	2.7	41.2	177.9	3.3	26.7	1.7	28.3	12.1	14.6	206.3
Apr	87.2	0.7	20.4	108.3	0.4	21.4	2.3	23.8	14.9	6.5	132.0
May	109.8	3.2	27.3	140.3	0.8	8.5	0.1	8.6	2.2	6.3	148.9
June	118.0	0.3	38.3	156.5	1.9	16.5	1.4	17.9	6.5	10.0	174.4
July	112.5	1.1	19.0	132.6	4.5	12.6	0.6	13.2	8.7	3.9	145.8
Aug	94.6	0.4	34.3	129.3	1.9	15.7	2.0	17.6	7.1	8.6	146.9
Sept	104.5	0.3	52.9	157.7	3.8	10.2	0.6	10.9	5.1	5.1	168.6
Oct	77.3	1.6	33.0	111.9	0.7	17.5	0.9	18.4	5.7	11.8	130.3
Nov	86.9	3.6	43.5	134.0	0.0	12.9	0.9	13.8	2.3	10.6	147.8
Dec	68.8	1.0	29.7	99.5	0.6	3.8	1.2	4.9	1.0	2.8	104.4
2001											
Jan	149.6	1.7	41.7	193.0	5.9	5.4	2.7	8.1	0.5	4.9	201.1
Feb	127.5	3.3	40.5	171.3	4.1	11.3	1.5	12.8	3.2	8.1	184.1
Mar	135.5	2.3	83.8	221.6	1.3	10.1	1.4	11.5	5.0	5.1	233.1
Apr	119.3	1.1	42.9	163.4	3.1	5.0	1.5	6.5	2.2	2.8	169.9
May	164.8	4.8	67.0	236.6	3.1	14.4	3.3	17.8	2.7	11.7	254.4
June	126.1	1.0	71.9	199.0	3.6	21.4	3.5	24.9	10.5	10.9	223.8
July	106.8	2.6	63.9	173.3	0.2	10.6	3.3	13.9	2.5	8.1	187.2
Aug	121.2	0.2	63.0	184.4	2.7	7.6	4.7	12.3	0.6	6.9	196.7
Sept	121.8	0.0	104.6	226.5	0.2	2.9	3.4	6.3	0.0	2.9	232.8
Oct	142.8	2.7	70.8	216.4	1.9	13.7	6.7	20.4	4.8	9.0	236.8
Nov	129.3	1.9	102.9	234.2	3.1	12.4	5.2	17.6	2.9	9.5	251.8
Dec	66.4	0.0	79.4	145.8	1.4	13.6	4.1	17.7	6.0	7.6	163.4
YTD '00	1,236.2	17.0	393.4	1,646.6	25.2	189.1	15.4	204.5	76.1	112.9	1,851.0
YTD '01	1,511.2	21.6	832.5	2,365.4	30.6	128.4	41.3	169.7	40.8	87.6	2,535.1
% Change	22.2%	27.4%	111.6%	43.7%	21.1%	-32.1%	168.3%	-17.0%	-46.4%	-22.4%	37.0%

Note: High-yield bonds is a subset of straight corporate debt. IPOs and follow-ons are subsets of common stock.
Source: Thomson Financial Securities Data

	MUNICIPAL BOND UNDERWRITINGS (In $ Billions)							INTEREST RATES (Averages)		
	Compet. Rev. Bonds	Nego. Rev. Bonds	**TOTAL REVENUE BONDS**	Compet. G.O.s	Nego. G.O.s	**TOTAL G.O.s**	**TOTAL MUNICIPAL BONDS**	3-Mo. T Bills	10-Year Treasuries	SPREAD
1985	10.2	150.8	161.0	17.6	22.8	40.4	201.4	7.47	10.62	3.15
1986	10.0	92.6	102.6	23.1	22.6	45.7	148.3	5.97	7.68	1.71
1987	7.1	64.4	71.5	16.3	14.2	30.5	102.0	5.78	8.39	2.61
1988	7.6	78.1	85.7	19.2	12.7	31.9	117.6	6.67	8.85	2.18
1989	9.2	75.8	85.0	20.7	17.2	37.9	122.9	8.11	8.49	0.38
1990	7.6	78.4	86.0	22.7	17.5	40.2	126.2	7.50	8.55	1.05
1991	11.0	102.1	113.1	29.8	28.1	57.9	171.0	5.38	7.86	2.48
1992	12.5	139.0	151.6	32.5	49.0	81.5	233.1	3.43	7.01	3.58
1993	20.0	175.6	195.6	35.6	56.7	92.4	287.9	3.00	5.87	2.87
1994	15.0	89.2	104.2	34.5	23.2	57.7	161.9	4.25	7.09	2.84
1995	13.5	81.7	95.2	27.6	32.2	59.8	155.0	5.49	6.57	1.08
1996	15.6	100.1	115.7	31.3	33.2	64.5	180.2	5.01	6.44	1.43
1997	12.3	130.2	142.6	35.5	36.5	72.0	214.6	5.06	6.35	1.29
1998	21.4	165.6	187.0	43.7	49.0	92.8	279.8	4.78	5.26	0.48
1999	14.3	134.9	149.2	38.5	31.3	69.8	219.0	4.64	5.65	1.01
2000	13.6	116.2	129.7	35.0	29.3	64.3	194.0	5.82	6.03	0.21
2001	17.6	164.2	181.8	45.5	56.3	101.8	283.5	3.39	5.02	1.63
2000										
Jan	1.0	5.2	6.2	2.0	1.3	3.4	9.5	5.32	6.66	1.34
Feb	0.8	7.0	7.8	3.3	1.2	4.5	12.3	5.55	6.52	0.97
Mar	1.3	11.1	12.4	2.4	2.3	4.7	17.1	5.69	6.26	0.57
Apr	0.6	9.9	10.5	3.1	1.8	4.9	15.5	5.66	5.99	0.33
May	0.8	8.8	9.7	2.6	3.0	5.6	15.3	5.79	6.44	0.65
June	1.4	12.7	14.0	4.5	4.1	8.6	22.6	5.69	6.10	0.41
July	1.2	9.5	10.7	2.4	1.6	4.0	14.7	5.96	6.05	0.09
Aug	0.8	10.3	11.2	2.8	2.8	5.5	16.7	6.09	5.83	(0.26)
Sept	1.4	7.8	9.2	3.0	3.8	6.8	16.0	6.00	5.80	(0.20)
Oct	1.8	11.8	13.6	3.6	2.2	5.8	19.4	6.11	5.74	(0.37)
Nov	1.5	12.6	14.0	3.7	2.2	5.8	19.9	6.17	5.72	(0.45)
Dec	1.0	9.4	10.4	1.6	3.1	4.6	15.1	5.77	5.24	(0.53)
2001										
Jan	1.2	4.9	6.1	4.4	1.9	6.3	12.4	5.15	5.16	0.01
Feb	0.9	10.3	11.2	4.7	5.1	9.8	21.0	4.88	5.10	0.22
Mar	1.2	16.2	17.4	2.7	5.1	7.8	25.1	4.42	4.89	0.47
Apr	1.0	10.5	11.5	3.6	3.5	7.1	18.6	3.87	5.14	1.27
May	1.2	18.5	19.7	4.4	4.5	8.9	28.6	3.62	5.39	1.77
June	1.8	18.1	19.9	5.1	4.8	9.9	29.9	3.49	5.28	1.79
July	1.5	13.1	14.7	3.8	2.3	6.1	20.8	3.51	5.24	1.73
Aug	1.6	12.6	14.2	3.9	5.8	9.7	23.9	3.36	4.97	1.61
Sept	0.9	9.1	10.0	2.2	2.0	4.2	14.1	2.64	4.73	2.09
Oct	3.1	15.1	18.2	4.8	9.0	13.8	32.0	2.16	4.57	2.41
Nov	2.0	18.2	20.2	3.4	5.8	9.2	29.4	1.87	4.65	2.78
Dec	1.1	17.6	18.8	2.5	6.5	9.0	27.8	1.69	5.09	3.4
YTD '00	13.6	116.2	129.7	35.0	29.3	64.3	194.0	5.82	6.03	0.21
YTD '01	17.6	164.2	181.8	45.5	56.3	101.8	283.5	3.39	5.02	1.63
% Change	29.7%	41.3%	40.1%	29.9%	92.0%	58.2%	46.1%	-41.7%	-16.8%	664.6%

Sources: Thomson Financial Securities Data; Federal Reserve

	STOCK MARKET PERFORMANCE INDICES (End of Period)				STOCK MARKET VOLUME (Daily Avg., Mils. of Shs.)			VALUE TRADED (Daily Avg., $ Bils.)	
	Dow Jones Industrial Average	S&P 500	NYSE Composite	Nasdaq Composite	NYSE	AMEX	Nasdaq	NYSE	Nasdaq
1985	1,546.67	211.28	121.58	324.93	109.2	8.3	82.1	3.9	0.9
1986	1,895.95	242.17	138.58	348.83	141.0	11.8	113.6	5.4	1.5
1987	1,938.83	247.08	138.23	330.47	188.9	13.9	149.8	7.4	2.0
1988	2,168.57	277.72	156.26	381.38	161.5	9.9	122.8	5.4	1.4
1989	2,753.20	353.40	195.04	454.82	165.5	12.4	133.1	6.1	1.7
1990	2,633.66	330.22	180.49	373.84	156.8	13.2	131.9	5.2	1.8
1991	3,168.83	417.09	229.44	586.34	178.9	13.3	163.3	6.0	2.7
1992	3,301.11	435.71	240.21	676.95	202.3	14.2	190.8	6.9	3.5
1993	3,754.09	466.45	259.08	776.80	264.5	18.1	263.0	9.0	5.3
1994	3,834.44	459.27	250.94	751.96	291.4	17.9	295.1	9.7	5.8
1995	5,117.12	615.93	329.51	1,052.13	346.1	20.1	401.4	12.2	9.5
1996	6,448.27	740.74	392.30	1,291.03	412.0	22.1	543.7	16.0	13.0
1997	7,908.25	970.43	511.19	1,570.35	526.9	24.4	647.8	22.8	17.7
1998	9,181.43	1,229.23	595.81	2,192.69	673.6	28.9	801.7	29.0	22.9
1999	11,497.12	1,469.25	650.30	4,069.31	808.9	32.7	1,081.8	35.5	43.7
2000	10,786.85	1,320.28	656.87	2,470.52	1,041.6	52.9	1,757.0	43.9	80.9
2001	10,021.50	1,148.08	589.80	1,950.40	1,240.0	65.5	1,897.5	42.3	44.2
2000									
Jan	10,940.53	1,394.46	621.73	3,940.35	1,074.2	49.5	1,693.0	47.6	87.5
Feb	10,128.31	1,366.42	592.64	4,696.69	1,045.9	52.9	1,812.0	44.3	91.4
Mar	10,921.92	1,498.58	647.70	4,572.83	1,138.4	61.4	1,902.8	51.0	106.4
Apr	10,733.91	1,452.43	644.16	3,860.66	1,060.0	65.5	1,876.2	48.8	92.0
May	10,522.33	1,420.60	643.60	3,400.91	905.4	46.2	1,417.5	39.4	64.2
June	10,447.89	1,454.60	642.93	3,966.11	986.5	44.3	1,537.5	41.8	73.3
July	10,521.98	1,430.83	640.63	3,766.99	953.8	38.5	1,567.9	40.0	80.4
Aug	11,215.10	1,517.68	674.53	4,206.35	886.1	37.5	1,458.7	36.9	65.0
Sept	10,650.92	1,436.51	663.04	3,672.82	1,041.3	48.9	1,756.7	44.0	82.4
Oct	10,971.14	1,429.40	666.02	3,369.63	1,180.6	59.7	2,026.9	47.4	88.3
Nov	10,414.49	1,314.95	629.78	2,597.93	1,033.4	58.1	1,840.4	40.8	70.7
Dec	10,786.85	1,320.28	656.87	2,470.52	1,208.8	73.9	2,247.4	45.5	71.1
2001									
Jan	10,887.36	1,366.01	663.64	2,772.73	1,325.9	72.5	2,387.3	52.0	75.6
Feb	10,495.28	1,239.94	626.94	2,151.83	1,138.5	70.9	1,947.6	43.8	59.7
Mar	9,878.78	1,160.33	595.66	1,840.26	1,271.4	82.5	2,071.4	45.9	49.2
Apr	10,734.97	1,249.46	634.83	2,116.24	1,276.5	78.4	2,162.8	45.1	49.6
May	10,911.94	1,255.82	641.67	2,110.49	1,116.7	66.7	1,909.1	41.4	46.4
June	10,502.40	1,224.42	621.76	2,160.54	1,175.0	63.8	1,793.9	41.6	40.6
July	10,522.81	1,211.23	616.94	2,027.13	1,137.1	56.0	1,580.7	39.0	36.0
Aug	9,949.75	1,133.58	587.84	1,805.43	1,025.7	49.1	1,426.4	34.0	28.4
Sept	8,847.56	1,040.94	543.84	1,498.80	1,694.4	72.8	2,033.0	51.2	33.9
Oct	9,075.14	1,059.78	546.34	1,690.20	1,314.3	64.8	1,926.0	40.1	36.1
Nov	9,851.56	1,139.45	579.27	1,930.58	1,270.1	57.8	1,840.3	38.1	37.8
Dec	10,021.50	1,148.08	589.80	1,950.40	1,275.3	54.1	1,775.4	38.8	37.0
YTD '00	10,786.85	1,320.28	656.87	2,470.52	1,041.6	52.9	1,757.0	43.9	80.9
YTD '01	10,021.50	1,148.08	589.80	1,950.40	1,240.0	65.5	1,897.5	42.3	44.2
% Change	-7.1%	-13.0%	-10.2%	-21.1%	19.0%	24.0%	8.0%	-3.6%	-45.4%

MUTUAL FUND ASSETS
($ Billions)

	Equity	Hybrid	Bond	Money Market	**TOTAL ASSETS**
1985	116.9	12.0	122.6	243.8	495.4
1986	161.4	18.8	243.3	292.2	715.7
1987	180.5	24.2	248.4	316.1	769.2
1988	194.7	21.1	255.7	338.0	809.4
1989	248.8	31.8	271.9	428.1	980.7
1990	239.5	36.1	291.3	498.3	1,065.2
1991	404.7	52.2	393.8	542.5	1,393.2
1992	514.1	78.0	504.2	546.2	1,642.5
1993	740.7	144.5	619.5	565.3	2,070.0
1994	852.8	164.5	527.1	611.0	2,155.4
1995	1,249.1	210.5	598.9	753.0	2,811.5
1996	1,726.1	252.9	645.4	901.8	3,526.3
1997	2,368.0	317.1	724.2	1,058.9	4,468.2
1998	2,978.2	364.7	830.6	1,351.7	5,525.2
1999	4,041.9	383.2	808.1	1,613.1	6,846.3
2000R	3,962.0	346.3	811.1	1,845.2	6,964.7
2001	3,412.9	346.4	924.5	2,286.2	6,970.0
2000					
Jan	3,951.6	368.8	793.9	1,657.3	6,771.6
Feb	4,218.5	360.7	796.7	1,680.5	7,056.4
Mar	4,441.6	371.6	793.1	1,697.0	7,303.3
Apr	4,250.3	359.8	781.0	1,649.4	7,040.5
May	4,106.5	348.1	777.3	1,675.6	6,907.4
June	4,316.6	350.8	791.5	1,658.6	7,117.5
July	4,246.3	348.6	801.1	1,697.7	7,093.7
Aug	4,579.8	363.0	802.5	1,729.8	7,475.1
Sept	4,397.5	354.9	797.8	1,728.0	7,278.2
Oct	4,293.4	354.2	795.4	1,760.0	7,203.0
Nov	3,854.9	342.9	795.3	1,821.3	6,814.3
Dec	3,962.0	346.3	811.1	1,845.2	6,964.7
2001					
Jan	4,093.3	356.9	830.0	1,955.5	7,235.7
Feb	3,689.7	344.4	845.2	2,019.3	6,898.6
Mar	3,408.0	333.4	852.8	2,035.5	6,629.7
Apr	3,716.0	347.9	846.6	2,031.5	6,942.0
May	3,744.9	353.2	859.0	2,071.7	7,028.8
June	3,677.0	350.6	861.3	2,052.6	6,941.5
July	3,590.1	352.4	882.7	2,069.7	6,894.9
Aug	3,384.7	342.6	908.2	2,104.1	6,739.6
Sept	3,020.0	324.1	909.8	2,161.6	6,415.5
Oct	3,111.6	330.3	935.1	2,238.6	6,615.6
Nov	3,349.0	343.0	933.7	2,306.5	6,932.1
Dec	3,412.9	346.4	924.5	2,286.2	6,970.0
YTD '00	3,962.0	346.3	811.1	1,845.2	6,964.7
YTD '01	3,412.9	346.4	924.5	2,286.2	6,970.0
% Change	-13.9%	0.0%	14.0%	23.9%	0.1%

MUTUAL FUND NET NEW CASH FLOW*
($ Billions)

	Equity	Hybrid	Bond	Money Market	**TOTAL**	Total Long-Term Funds
1985	8.5	1.9	63.2	-5.4	68.2	73.6
1986	21.7	5.6	102.6	33.9	163.8	129.9
1987	19.0	4.0	6.8	10.2	40.0	29.8
1988	-16.1	-2.5	-4.5	0.1	-23.0	-23.1
1989	5.8	4.2	-1.2	64.1	72.8	8.8
1990	12.8	2.2	6.2	23.2	44.4	21.2
1991	39.4	8.0	58.9	5.5	111.8	106.3
1992	78.9	21.8	71.0	-16.3	155.4	171.7
1993	129.4	39.4	73.3	-14.1	228.0	242.1
1994	118.9	20.9	-64.6	8.8	84.1	75.2
1995	127.6	5.3	-10.5	89.4	211.8	122.4
1996	216.9	12.3	2.8	89.4	321.3	232.0
1997	227.1	16.5	28.4	102.1	374.1	272.0
1998	157.0	10.2	74.6	235.3	477.1	241.8
1999	187.7	-12.4	-5.5	193.6	363.4	169.8
2000R	309.4	-30.7	-49.8	159.6	388.6	228.9
2001	32.3	9.5	87.4	374.6	503.8	129.2
2000						
Jan	44.5	-6.3	-12.7	41.8	67.3	25.6
Feb	55.6	-5.1	-8.2	14.8	57.2	42.3
Mar	40.2	-5.7	-7.7	12.7	39.5	26.8
Apr	35.5	-1.9	-6.7	-52.2	-25.4	26.9
May	17.3	-2.1	-5.1	18.7	28.8	10.1
June	22.0	-1.9	0.1	-23.0	-2.8	20.2
July	16.8	-1.7	-0.2	33.7	48.5	14.9
Aug	24.0	-1.3	-1.8	22.5	43.3	20.9
Sept	17.6	-2.1	-3.6	-8.5	3.4	11.9
Oct	19.3	-1.2	-2.0	26.0	42.1	16.1
Nov	5.0	-0.3	-0.6	56.1	60.3	4.2
Dec	11.6	-1.0	-1.4	16.7	25.9	9.2
2001						
Jan	25.1	1.1	8.8	103.0	138.0	34.9
Feb	-3.3	1.2	8.8	58.0	64.7	6.7
Mar	-20.6	-0.4	7.9	13.6	0.6	-13.1
Apr	19.2	1.3	1.3	-10.5	11.3	21.9
May	18.1	1.4	6.2	35.0	60.8	25.8
June	10.8	1.2	2.2	-24.4	-10.2	14.2
July	-1.2	1.3	9.3	12.0	21.4	9.4
Aug	-4.8	-0.7	16.7	26.5	37.6	11.2
Sept	-29.4	-1.3	7.7	53.9	30.9	-23.0
Oct	0.9	1.5	13.5	73.9	89.8	16.0
Nov	15.3	1.0	6.9	60.3	82.7	22.5
Dec	3.0	1.0	-2.1	-25.6	-23.6	2.0
YTD '00	309.4	-30.7	-49.8	159.6	388.6	228.9
YTD '01	32.3	9.5	87.4	374.6	503.8	129.2
% Change	-89.6%	NM	NM	134.7%	29.7%	-43.6%

New sales (excluding reinvested dividends) minus redemptions, combined with net exchanges
Source: Investment Company Institute

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