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RESTORING INDUSTRY FUNCTIONALITY AFTER 9/11: LESSONS IN DISASTER RECOVERY AND THE VALUE OF CONTINGENCY PLANNING

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MONTHLY STATISTICAL REVIEW

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RESTORING INDUSTRY FUNCTIONALITY AFTER 9/11: LESSONS IN DISASTER RECOVERY AND THE VALUE OF CONTINGENCY PLANNING*

Introduction

The successful reopening of U.S. securities markets, their continuing functionality, and the mitigating of credit risk, operational risk, and systemic risk after the horrible events of September 11th was truly an amazing feat. It required the close cooperation of all parties that are involved in every aspect of our National Market System and in every phase of the trade cycle, from beginning to end. The securities industry was also well positioned relative to other industries to battle problems resulting from the attacks, due to its investment in disaster recovery, in redundancy of systems and of data, and in innovative technologies related to systems and connectivity, both for individual firms and for industry-wide projects.

Some of the key parties that were involved included: individual financial services companies, market centers, technological infrastructure companies, clearing firms, utilities, financial regulators, and trade associations. This article recounts some of the efforts that were made by representatives of all of these organizations, operating under conditions of intense stress, shock and grief, to ensure that all of the complex processes that make up our financial system continued to function together. The lessons learned about disaster recovery and the value of contingency planning may have future applications.

The results of their rapid response and contingency planning include the resumption of bond trading after two days, equity trading after four days, and the successful restoration of normal trade settlement and reconciliation of outstanding obligations. These results demonstrate that domestic and global public trust and confidence in the U.S. securities markets is well founded.

Restoring Connectivity

The first step toward reopening debt and equity markets was restoring lost connectivity between broker-dealers, investors, markets centers, clearing firms, and utilities. In many cases, systems themselves were not destroyed, but the ability for those systems to communicate with one another was.

Most now know of the damage sustained at the Verizon switching hub at 140 West Street. That facility served 300,000 phone lines and 4.5 million data circuits, 30% of the traffic in lower Manhattan. Seven World Trade Center, across from the twin towers, actually collapsed into the 140 West Street building. One Verizon worker reentered the phone company building several times in order to shut down power and the gas supply in order to conserve energy. Reports indicate that this action is one reason why that building is still standing.

The situation was exacerbated by the fact that immediately after the attacks on the World Trade Center, call volume exploded to as much as ten times above normal levels, due to

*Sources used in this article appear at its end.

people trying to reach loved ones and businesses downtown. In addition, each dedicated computer line to the World Trade Center had to be separately reprogrammed in order for those lines to stop automatically redialing.

SIAC, the Securities Industry Automation Corporation, which consolidates market data for a large part of the industry, reports that while their own proprietary fiber optic network redundantly connecting both its operational sites and the NYSE and AMEX was not affected, more than half of the 1,400 communications circuits that were incoming connections from individual brokerages went down at some point on September 11th. Throughout Tuesday, according to SIAC, those incoming lines dropped out one after another.

In order to begin reestablishing broad data connectivity to and from financial companies, however, displaced firms had to have some physical place for their key personnel to go. Some were able to work from home, some were offered spare office space in other firms, and some went to disaster recovery sites that either had redundant data systems or remote access to systems. The employees at one technology services company, for example, were not able to physically enter their offices, but were able to access their systems remotely from a New Jersey office, because the systems inside the inaccessible building were still functioning on emergency power.

Many firms did have disaster recovery sites. Just one large disaster recovery firm reports that it recovered 49 different clients as a result of the attacks on New York. Many firms located outside the affected area immediately opened up their doors to employees from

displaced firms, in some cases to their direct competitors, giving them use of office space, computers, and telephones. It is reported that within one day, offices were found for literally thousands of employees. Lehman Brothers even temporarily took over 665 rooms in the Sheraton Manhattan, owned by a client of theirs.

Some needed more than traditional office space, however; some were in need of whole trading floors. Fortunately, some organizations actually had previously set up whole backup trading floors. The commodity exchange New York Board of Trade (NYBOT), for example, had a “hot” backup site with two trading pits that allowed them to be ready to trade when the markets opened the following Monday. Existing phone lines at the hot site were augmented by the purchase of cell phones. A cold site, alternatively, would have provided a place to operate computers, but would not have allowed trading to resume. A delay in the resumption of trading for an exchange like NYBOT, for example, could mean the loss of business to European exchanges. While the price tag on the maintenance of their hot site is approximately \$300,000 a year, one study showed that the industry would lose \$3 million each day the exchange was not operational.

Some key industry utilities were also in need of office space. SIAC extended staff office space, phones, and support for 130 workers from the Depository Trust & Clearing Corporation (DTCC) until September 24, while DTCC was in the process of relocating to their backup site at the Brooklyn Army Battery. DTCC provides the primary infrastructure for the clearance, settlement and custody of the vast majority of equity,

corporate debt and municipal bond transactions in the United States.

Companies that offer services to guard against loss of data archives also played a key part in the continuing functioning of affected firms. There is a company, for example, that sends a fleet of trucks around to firms daily to collect data backup tapes, which are then placed in safe vaults. This company reports that 20 of their clients, including Cantor Fitzgerald, requested the delivery of these tapes soon after the attacks. All of the tapes were delivered on time.

One report suggests that the intensive planning and preparation for industry-wide projects such as Y2K and decimalization may have been of assistance in helping firms get back on their feet after these catastrophic events. For example, regularly inventorying hardware and software to determine what systems are crucial to the core business of a company allows companies to prioritize the repair or replacement of those systems correctly.

Multiple daily conference calls that involved companies, exchanges, utilities, trade associations, and regulators also played a key role in restoring communications among industry participants. These calls provided a status update on recovery efforts and a forum for raising issues. For example, the New York Clearing House, the New York Federal Reserve, DTCC, and FDIC held hourly calls beginning on September 11th in order to ensure the continuing integrity of the payment systems. Regulators also held conference calls to coordinate regulatory relief action; the results of those calls are described in the next section.

The committees of trade associations took the lead in coordinating some of these calls. The trade associations had ready access to lists of contact information of key people, both at member firms, and at other key industry organizations. The SIA Operations Committee, for example, provided a structure for quickly reaching an industry-wide consensus on how to resolve operational issues arising from the destruction of the World Trade Center and damage to the adjacent area. Mike Viviano, chair of the SIA Operations Committee, used the rosters of that committee to organize daily conference calls beginning on September 12th.

These calls largely dealt with clearance and settlement issues resulting from the attacks, such as how to reconstruct Cantor Fitzgerald's trades from Monday, September 10. In addition, participants discussed how to mitigate operational risk associated with the destruction of vaults containing physical certificates and how to replace these lost certificates, as well as how to resolve claims for lost interest. Those participating on these calls included: members of the SIA Operations Committee, members of the SIA Global Cross-Border Subcommittee, representatives of SIAC, DTCC, the Stock Transfer Association, and members of the banking community (i.e. Deutsche Bank, the Bank of New York, JPMorganChase, and Citicorp.)

The Bond Market Association also held conference calls. What was also extremely valuable was the fact that representatives of different industry associations participated on calls together, and brought specific status reports and perspective from their and their members' area of industry expertise. For example, Alexandra Lebenthal, a Board

member of the Bond Market Association, regularly participated in calls with the SIA and kept participants up to date on bond settlement and reconciliation issues. How settlement and reconciliation issues were dealt with is discussed below. Trade associations and their members are also continuing to work together to aid the U.S. government in its anti-money laundering efforts in particular to find and freeze terrorists' assets.

Yet another organization also facilitated coordination among industry participants. The Financial Services Information Sharing and Analysis Center (FS/ISAC) is an organization created during the Clinton Administration, but funded by private sector membership, to protect financial systems from hackers and terrorists. This organization shared vital information with other government agencies without violating the anonymity of the financial institutions' data. FS/ISAC was also able to provide members with a secure forum in which resources from office space to processing capability could be shared. Their goal was to contact its members within one half hour, coordinate recovery efforts and protect those members from further attacks. This organization also offered temporary membership to SIA members.

Actually restoring physical connectivity was an enormous challenge for phone companies. One of the first actions the phone companies took was to program pay phones and spare pay cell phones in Manhattan to work for free. They also began operating spare generators and cell phone relay stations. Time Warner Telecom activated thousands of fiber optic lines after the attack.

Verizon rerouted lines through other hubs, necessitating that thousands of data paths be redrawn. This was reportedly very difficult to do, in part because the NYSE and large securities firms had complicated and customized data input and output capabilities. In four days, Verizon managed to move 2 million lines so that those lines bypassed certain parts of lower Manhattan. The Verizon facility itself at 140 West Street was accessible again by September 14th.

The NYSE's own systems were operational at all times, but connectivity with other entities had been damaged. Verizon restored connectivity to the NYSE in less than a week by using trenches and windows as openings for fiber-optic lines. Verizon workers brought in additional servers to run the exchange's price-quotation system.

Industry utilities such as SIAC also played a crucial role in restoring physical connectivity. After having lost connections to more than half of the brokerages they serve on Tuesday the 11th, on Wednesday SIAC attempted to reach customers by testing each failed circuit individually. In the cases where companies moved to entirely new sites, new communications were established. SIAC was also able to give crucial information to vendors and customers, because customers located throughout the country were not able to reach their vendors to discuss the status of their connectivity with New York.

SIAC reports that what made reestablishing connectivity to brokerages a challenge was that some aspect of each individual company's connectivity situation was unique, and so SIAC had to develop unique solutions for each one. For example, SIAC routed one firm's data between itself and the firm's

location in Manhattan through Chicago. In one case, the actual customers of a firm were routed through SIAC into that firm. SIAC even used an internet-based solution that they developed for firms that had absolutely no direct connectivity in order for those firms to be able to deliver their data each day.

SIAC has two sites: one at 55 Water Street in Manhattan, and a duplicate site at Metro Tech in Brooklyn. At one point, almost all operating personnel were evacuated from the building at 55 Water Street to ensure their personal safety, and 75% of the computer load was shifted to MetroTech. Each site usually carries half of the load.

The MetroTech facility was also able to use its space to implement a request from AMEX to set up equity trading capability using the NYSE's facilities and trading floor. SIAC installed new physical connections between the AMEX and NYSE networks located at the MetroTech site. In one day, 220 devices such as specialist books and market data displays were installed and connected to the networks. SIAC was simultaneously building an options trading facility at the MetroTech site.

Individual brokerage firms also did what they could on their own to restore connectivity within the firm and with their customers. Merrill Lynch, for example, bought and installed a phone system to enhance capacity in its New Jersey facility, and is using lasers to beam data between New York and New Jersey locations. Companies such as SalomonSmithBarney were using Blackberries to help facilitate communication. Companies located in the affected zone that rely on phones for business had to come up with innovative solutions to enable them to stay in touch with their customers. Lebenthal, for

example, lost most of its phone lines. Therefore, calls were forwarded to an answering service, which sent emails about the call to Lebenthal employees, who would then call the customer back on a cell phone.

Mitigating Credit Risk, Operational Risk, and Systemic Risk

Even as connectivity was being reestablished, industry leaders needed to make sure to mitigate any credit risk and operational risk that could stem from the abrupt closing of the markets for a period of time, from physical damage to facilities, from cost connectivity, from the separate reopening of fixed-income and equity markets and from any general uncertainty surrounding the attacks. These risks were effectively mitigated in three ways: through regulatory action that ensured liquidity in crucial areas of the markets; through the thorough testing of trading systems before the markets were reopened; and through the continuation of the processes of settlement and reconciliation on the back end by clearing firms and utilities.

Regulators took decisive action in order to create an environment in which sufficient funds would be available for the resumption of business, and also an environment that would also allow firms time to focus on recovery efforts. The regulators held large conference calls in order to address the concerns of those involved in financial services. There were as many as seventy participants on these regulatory calls.

On these calls and in separate meetings, the SIA urged the SEC to grant emergency regulatory relief to the industry in four specific ways. They asked the SEC to waive or

extend deadlines for disclosure and reporting obligations for the new disclosure requirements related to order routing and order execution; to postpone the implementation date of a new requirement for disclosing options trade-throughs on the exchanges; to mitigate the impact of the market closure from September 11th-14th on calculating net capital requirements and on determining the level of required deposits into customer reserve accounts; and to extend deadlines for comments on the SEC Concept Release on Subpennies and for certain SRO rulemaking or implementation regarding several rule proposals. The SEC granted all four of these requests.

The SEC also implemented at least four other actions, including: emergency relief for issuer buy-backs; simplifying registration requirements for airline and insurance industries to raise capital; liberalizing current policies of the Division of Corporate Finance regarding the inclusion of price ranges and the size of that range in prospectuses filed for review; and the relaxation of certain rules affecting mutual funds.

Other regulatory agencies were also instrumental in creating the best financial atmosphere possible in which the markets could reopen. For example, the Federal Reserve was responsible for almost \$100 billion in liquidity in the marketplace that week. They gave commercial banks direct access to funds through its discount window, and helped security firms through repurchase operations. On the part of the Treasury Department, the supply of and access to government Treasury securities was increased. Relief from net capital charges levied on outstanding fails was also given. These fails are further discussed below. All of

these actions on the part of regulators helped to avoid an unnecessary credit squeeze.

The Bond Market Association and operations professionals from firms also agreed and recommended that that secondary market cash transactions in Treasury and federal agency securities, except discount notes, that occurred on Monday, September 17th settle on a T+5 basis in order to give market participants the opportunity to reconcile all outstanding transactions. Regulatory authorities approved this recommendation. Conference calls and press releases helped to ensure that this information was disseminated throughout the industry, so that people would not count on having the proceeds of the sale until five days after.

Mitigating operational risk in preparation for reopening the markets also required the careful industry-wide testing of both trading systems and connections. During the week after September 11th, SIAC tested floor devices, connectivity and systems in preparation for Friday, Saturday and Sunday's industry-wide tests. It was ensured that there would be sufficient capacity at the NYSE for normal trading, and that order flow anomalies would be accommodated.

Part of the weekend tests included all companies with a connection to SIAC sending test messages to SIAC, and receiving a message back. When the NYSE reopened that Monday, a record volume of trades was successfully handled. More than 14,000 of 15,000 circuits used by the exchange were operating. More were added as time went on. Most of the millions of data connections were also operational.

Nasdaq also conducted industry-wide testing. The Nasdaq electronic marketplace was not directly affected, but, like the NYSE, was affected by the connectivity problems of its members and market makers. The market makers are important providers of liquidity to Nasdaq. Moreover, Nasdaq and ECNs wanted to show solidarity with the industry by not starting to trade before the rest of the markets. Industry participants were very sensitive to make sure that they did not profit from the tragedy. ECNs such as Instinet also participated in the industry-wide testing.

The third way in which operational risk and credit risk were mitigated was through the careful settlement and reconciliation of trades and securities deliveries that had taken place prior to and around the time of the attacks. Not only was the lack of connectivity in downtown Manhattan creating challenges for clearing and settlement processes, but it was reported that in other areas of the city, computerized operations were 70% slower than usual due to capacity constraints, which was also reported to have delayed the reconciliation process.

Again, many different industry players collaborated to successfully solve this problem. For example, the New York Clearing House, the largest private sector payments processor, immediately joined together with the New York Federal Reserve and DTCC to consult with and assist banks in payment processing. The CEO of the New York Clearing House, Jeffery Neubert, reported that these organizations extended the processing day for federal funds payments through the Clearing House Interbank Payments System, Fed Wire and the automated clearinghouse by four hours in order to ensure an orderly close. This group

began by having hourly conference calls, which were in subsequent days extended to every hour and a half, and then every two and a half hours for status updates on the payment systems like Fed Wire, as well as Chips and Automated Clearing House (ACH).

Other utilities were involved in keeping post-trade processing running as well. Throughout the week that the equity markets were closed, SIAC's Shared Data Center ran a daily full production cycle for post-trade processing to accommodate the different instrument settlement cycles. It was also necessary to arrange for the extension of the government securities settlement cycle to T+5. SIAC also provided the service of canceling open orders for firms that could not do so themselves.

Utilities also came up with innovative solutions in order to avoid interruption in the reconciliation process. The Government Securities Clearing Corporation (GSCC), for example, which ensures orderly settlement in the Government securities marketplace, reports that on September 11th it was unable to receive data on trades executed by some interdealer brokers and other dealers. However, the GSCC was able to administratively create and compare the other side of the trade for these transactions based on input received from counterparty members. By doing that, systemic risk associated with thousands of unmatched trades was mitigated. The GSCC also assumed settlement responsibility for the existing blind broker failed trades reported to its facility by its clearing banks in order to maintain a normal processing cycle.

In addition, GSCC reports that securities worth \$31 billion dollars were delivered to

GSCC by members on September 11th and 12th, and bought into GSCC's account by the Bank of New York (BONY). However, BONY was unable to load GSCC settlement instructions due to loss of connectivity between BONY and GSCC. GSCC therefore reported all outstanding receive and deliver obligations as fails, because it had no information on which positions had been settled. In order to determine which of those transactions were incorrectly marked as fails, GSCC painstakingly compared fail reports sent to them by dealers with their own records. They also applied those deliveries from September 11th and 12th from BONY to outstanding obligations and checked to see if those transactions for which GSCC were still marked as fails.

We are all in debt to every individual and organization that successfully worked and continues to work to preserve the integrity of the fundamentally sound and reliable financial system of the United States of America.

Judith Chase

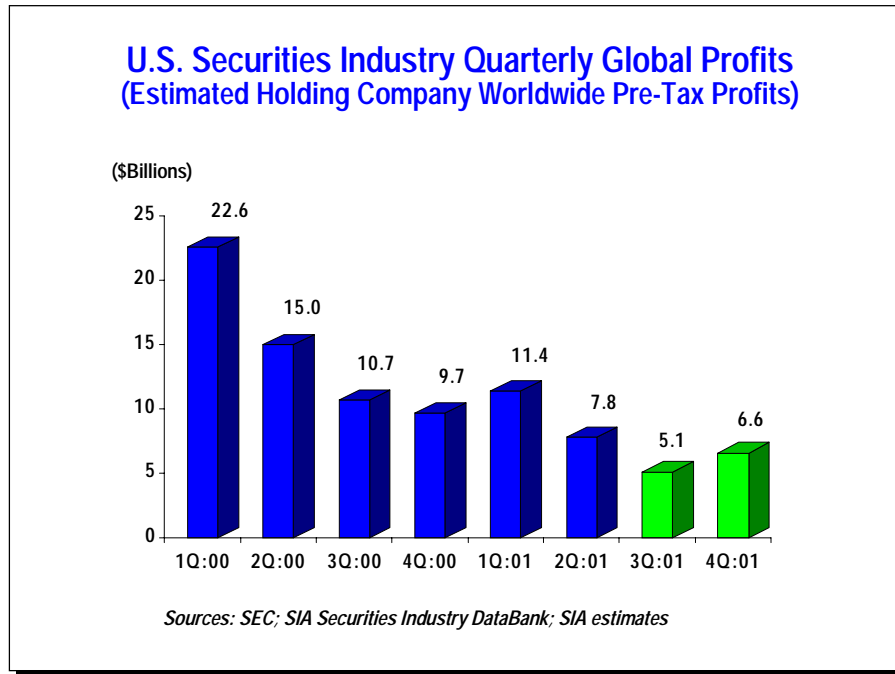
Vice President and Director, Securities Research

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THIRD QUARTER SECURITIES INDUSTRY PERFORMANCE¹

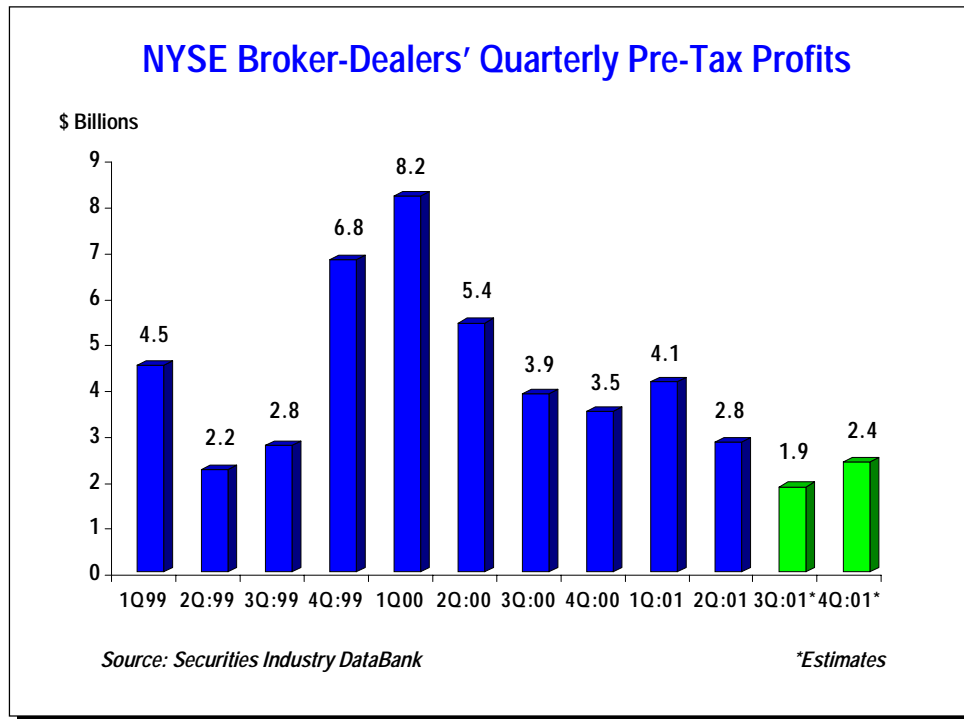
Through September, worldwide holding company revenues and profits of the U.S. securities industry reached \$278 billion and \$24.3 billion, respectively. This compares with first nine-month 2000 results of \$335 billion and \$48.3 billion, respectively. Based on indications of a slight improvement in 4Q, full year 2001 worldwide revenues and profit figures should be \$358 billion and \$31.0 billion, respectively. This represents a 20% decline from 2000 revenues of \$447 billion and a 47% decline from 2000 pre-tax profits of \$58.0 billion.



Domestically, nine-month revenue and profits are estimated at \$153 billion and \$8.8 billion, respectively. This is a 17% decline from 2000's January through September revenue of \$184 billion and a 50% decline from pre-tax profits of \$17.5 billion. Full year figures for domestic revenues are expected to be \$196 billion, down 20% from 2000's record \$245 billion. Full year profits are expected to drop 47% from 2000's record \$21.0 billion to \$11.2 billion, which would be the industry's fifth most profitable year.

¹ This article is a short highlight of the findings in the November 1st issue of SIA's *Securities Industry Trends* titled: "Third Quarter Securities Industry Performance." The *Trends* is a 16 page issue covering the quarterly and estimated annual financial performance of the U.S. securities industry. This includes discussion of both domestic and global revenues and profits, the financial impact of September Eleventh on the operating results of brokerages, and individual business line performance such as commissions, principal transactions, investment banking, interest income and expense and compensation. The report is available for subscriber viewing, or for ordering, at: http://www.sia.com/reference_materials/html/securities_industrytrends.html

In response to the slowing economy and market correction, firms had already developed plans to significantly reduce expenses, many of which were implemented in the second and third quarters. This resulted in a third quarter domestic pre-tax profit of \$1.85 billion, a \$1 billion or 34% decline from the second quarter's already anemic level. This is the poorest domestic result since 3Q98's loss of \$179 million.

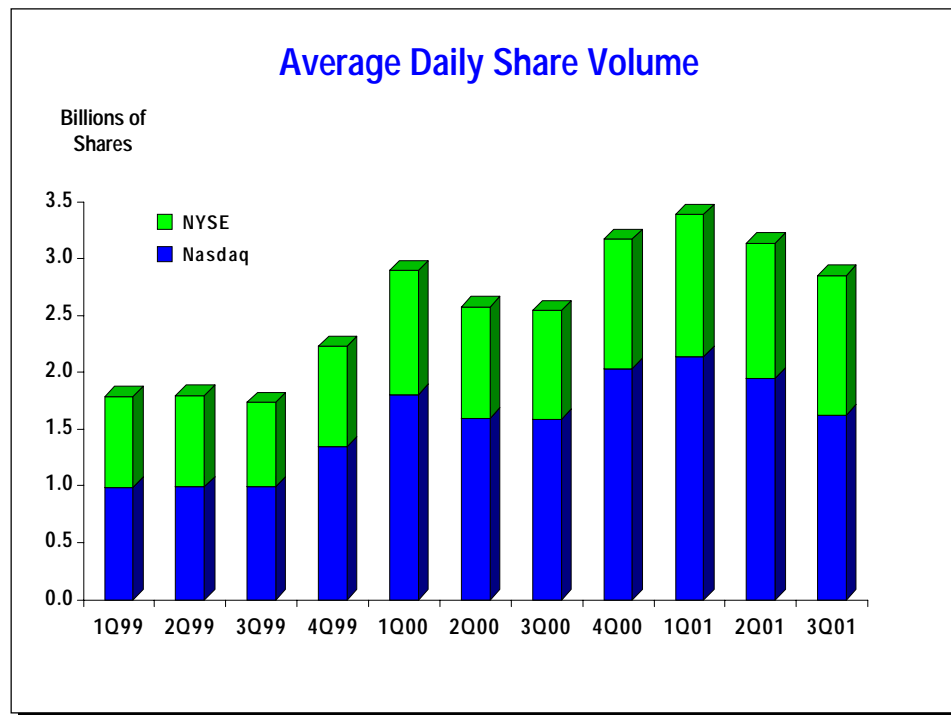


The securities industry was faced in 2001 with both an economy that was in a downturn, and the impact of 9/11, which closed the U.S. equity markets for four days, dislocated many of the industry's largest firms and exacerbated the industry's steady decline from record 1Q00 levels. During the first half of 2001, some firms held off on their expense reduction plans, hoping that there would be an upturn. When it failed to materialize, they took the steps necessary to keep their firms operating profitably and serve their clients. The Federal Reserve Board assisted firms with its series of interest rate cuts, which significantly reduced the firms' interest expenses. Total compensation, the firms' second largest expense, was reduced 10% in the second quarter, and an additional 10% in the third, largely from reduced payouts to producers, brokers, traders, and investment bankers resulting from reduced transaction volume, and reduced bonus accruals.

Commission revenue for NYSE broker-dealers has been in a sequential decline since the first quarter of 2000 when it peaked at \$10.6 billion. It dropped to \$5.6 billion in this year's third quarter, the lowest quarterly total since 4Q97.

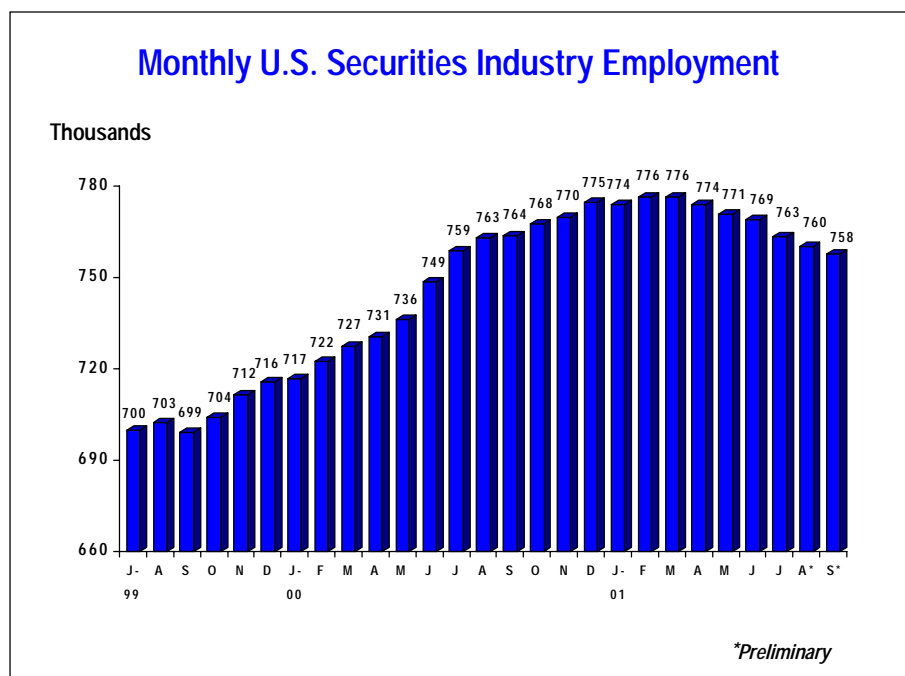
Revenues derived from principal transactions were \$7.1 billion in 1Q01, half of the amount recorded in the same quarter a year earlier. These revenues rose to \$9.0 billion in the second quarter before falling to just \$6.1 billion in the third quarter, the lowest level since 3Q98.

Annual share volume on the three national markets and the regional exchanges combined is projected, based on nine-month results, to reach a record 839 billion shares, an 11% increase over 2000's 759 billion shares and a 916% increase since 1990.



Domestic interest expense for securities firms continued to drop, falling from \$21.8 billion in 2Q01 to \$17.8 billion in the 3Q01, reflecting sharply lower interest rates and moderately lower borrowings. Further declines are expected in 4Q following additional Federal Reserve interest rate cuts. During 2001's first nine months, interest expense fell 41% and interest revenue fell a lesser 37%.

Employment in the U.S. securities industry dropped from 776,400 in February to 757,900 by September, based on preliminary figures released by the U.S. Department of Labor. This represents a reduction of 18,500, or 2.4%, in the workforce in just six months and we expect the figure to be revised substantially downward as September's job outlook becomes clearer. Of the total 18,500 net job cuts since February, two-thirds, or 11,300, were completed in the quarter just ended. Further, there is a lag time between announced layoffs and when these eliminated positions officially appear on the unemployment rosters. Since September, there have been announcements of an additional 9,000 more layoffs in the domestic operations of securities firms.



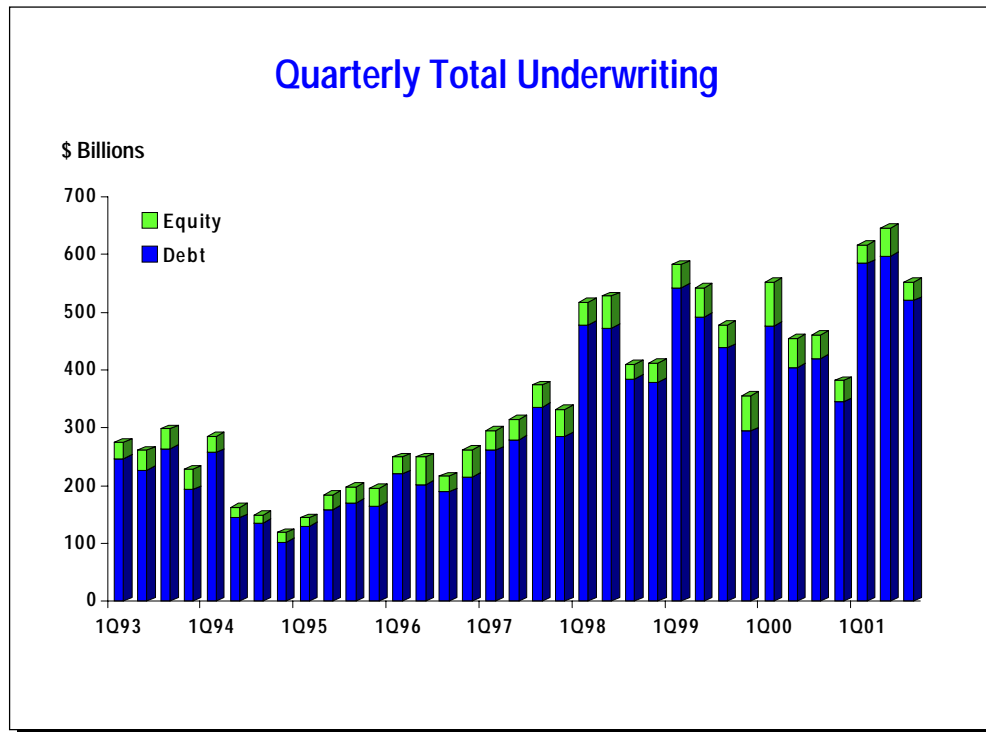
New York City accounts for one-quarter of all securities jobs nationwide and likewise accounted for one-quarter, or 4,900, of all the net job losses posted by the DOL this year. Again, we expect this to be revised downward over the next two months and a larger portion of the announced layoffs will be felt within the City.

Despite reductions in bonuses and other variable compensation, some firms reduced headcount to lower compensation expenses, which decreased 10% in the third quarter to \$13.97 billion. Because of prudent hiring practices during the 1990s, firms did not have to reduce their workforces to the degree that they did during the early 1980s.

Notwithstanding a 15% drop off in total corporate underwriting volume in the third quarter to \$552 billion, from \$646 billion in the second quarter, total underwriting rose 20% during the first nine months of 2001 compared to the same period a year earlier. Total underwriting volume through September was \$1.8 trillion vs. \$1.5 trillion for the first nine months of 2000, as fixed income issuance remained strong. Total equity underwriting (including preferred but excluding converts), fell 3%, or \$17 billion, to \$32.3 billion in 3Q01. For the first nine months, equity underwriting volume dropped 32% to \$114 billion from \$167 billion in the same period in 2000.

Initial public offerings (IPOs) of stock fell \$13 billion, or 81%, to a mere \$3 billion in the third quarter, the lowest quarterly total since 1Q91. Total underwriting revenue is fell approximately 16% from \$4.3 billion in 2Q01 to \$3.6 billion in 3Q01. From January through September, IPOs were off 60% to \$27 billion, compared with \$67 billion during the first nine months of 2000. Fixed income underwriting, which represents the bulk of the total volume

but a smaller share of underwriting fees, fell 13%, or \$77 billion to \$520 billion in 3Q01 from \$597 billion in 2Q01. From January through September, fixed income underwriting expanded 30% over 2000's like period.



The industry will have raised a record \$3.2 trillion in capital for U.S. businesses by year-end based on nine-month results annualized. This compares with 2000's \$2.6 trillion, and the previous record of \$2.7 trillion set in 1999.

George R. Monahan
Vice President and Director, Industry Studies

RECESSION, RECOVERY AND REBUILDING: BUDGET PLANNING IN CRISIS

Introduction

The following was prepared for the October 30 meeting of the Economic Advisory Board of the New York State Division of the Budget, to assist in development of economic and revenue forecasts for the upcoming budget. Members of the Advisory Board were asked to respond to specific questions on the economic outlook for the U.S., New York State and New York City, and prospects for employment compensation, capital gains realizations, and the direction of securities markets. Participants were asked to offer both baseline and pessimistic scenarios. This article describes the latter scenario. While the views expressed here take note of presentations of other members of the Advisory Board, the views expressed here are solely those of the author.

A view worth considering is that the current recession might well be more prolonged, and deeper, than the consensus forecast. Planning for this contingency now could help hasten recovery and mitigate the effects of the downturn. The contraction in the New York City and State economy will be more severe than in the nation as a whole, and sizable, recurring budgetary shortfalls are expected. Rebuilding in Lower Manhattan, while providing a badly needed stimulus to the area, is highly problematic and likely to be slow.

The Current Recession

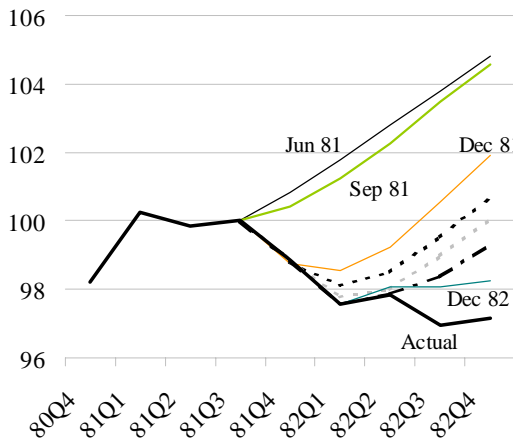
A recession is generally defined as at least two consecutive quarters of negative growth and is not “officially” declared to have begun until the National Bureau of Economic

Research (NBER) sets the date of its onset, which they have not yet done. However, the US economy shrank in the third quarter and almost certainly will in the current quarter. Real gross domestic product (GDP) contracted at a seasonally adjusted annual rate of 0.4% in 3Q’01, ending the longest expansion in US history, and offsetting the 0.3% increase in 2Q’01. Once more complete information on September is included, the preliminary 3Q estimate should be revised downward. For all practical purposes, the U.S. economy is in recession.

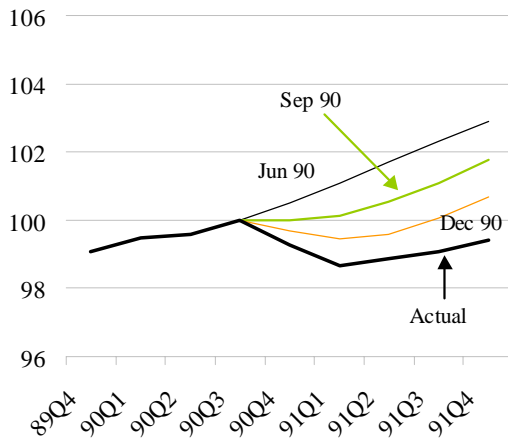
Most forecasters believed the U.S. economy would avoid a recession prior to 9/11, but subsequently revised their forecasts to include negative growth for the second half of this year. While it is common for forecasters to revise their projections downward following the onset of a recession, these revisions may not have gone far enough. Real GDP is expected to grow 1% in both 2001 and 2002. The current consensus forecast (a misnomer used for an average of individual forecasts) is now for a sharp, but relatively short recession, a “V” shaped slump, lasting two or at most three quarters. However, in the past, this consensus has tended to be too optimistic and a poor predictor of “extreme events”, erring on both the timing and magnitude of downturns¹. Individual forecasts became more dispersed and their average a less accurate predictor of actual activity during the periods associated with the onset of the last three recessions (1973-74, 1981-82 and 1990-91). Some theories have been advanced for this imprecision². One explanation is that if a recession is predictable, it should be preventable by prompt policy action.

Consensus GDP Forecasts during Recessions

Index (81Q3 = 100)



Index (90Q3 = 100)



LEHMAN BROTHERS

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The anticipated impact on GDP of stimulus (both fiscal and monetary) already in the pipeline, with still more expected to come, is the reason most often cited for expectations of a relatively brief recession. Without recent and expected fiscal and monetary stimulus, projections of real GDP would be 0.2% lower in 2001 and 0.8% lower in 2002 than in the absence of these policy actions. However, confidence in this view is eroding, as early October indicators appear dreadful and as concern rises that only a muted response to pending policy actions may occur. During October, non-farm payrolls plunged 415,000, the steepest of three successive monthly declines and the sharpest fall since May 1980. The household survey showed that total employment fell 619,000 and the unemployment rate jumped from 4.9% to 5.4%, its highest level since December 1996.

More industries are expected to fire workers than to hire them in the months ahead and unemployment will continue to climb.

This, along with general uncertainty, could drive already falling consumer confidence still lower. Consumer confidence³, although down sharply from very ebullient levels at the peak of the expansion, is still well above where it stood, on average, during the last five recessions⁴ and is expected to fall further as downside risk predominates in the near term. If, as expected, this leads to declining consumer spending, corporate profits would be depressed further, leading to more layoffs, and completing a "vicious cycle" common in recessions. Meanwhile, the housing sector, the other remaining source of growth in the economy, continues to show signs of weakness, as it has in the last three months.

Planned fiscal stimulus may well prove less stimulative than planned, just as this summer's tax rebates were largely saved rather than spent. While the final form of the economic stimulus package is not yet known, the expected distribution of tax relief and the types of spending increases contemplated could generate less additional activity than packages of comparable magnitude did in the past. Although monetary policy has been aggressively eased, there are arguments that it too could prove less efficacious than in the past, given the relatively high levels of corporate and household debt already outstanding⁵, rising risk aversion, and declining inflationary expectations⁶.

Yet another reason for a more conservative outlook is the relatively bleak external environment, with little prospect of any stimulus coming from abroad. With Japan again in recession and Europe headed in that direction, the probability of a globally synchronous recession has increased sharply. In the quarter just ended, both U.S. exports and U.S. imports fell sharply, and so, it appears, did net foreign portfolio investment in the U.S. As *The Economist* recently pointed out, "shrinking trade can amplify a recession. Last year the volume of world trade grew by 13%. This year growth may fall to zero".⁷

As a result of the 9/11 attacks, there is an increased probability that the national recession will not be relatively short and mild by historical standards, but this prospect existed well before the terrorist attack. In March⁸, we expressed concern that the downturn would be more severe and prolonged than the consensus forecast at that time. What appeared more likely then and now is that the recession would be "U"

shaped rather than "V" shaped. A recession four quarters in length (rather than two or three) is in line with the historical average and more reflective of the sizable economic imbalances which emerged in the late 1990's, which will act as a constraint on the recovery well into 2002. Real GDP growth in 2002 would, under the more pessimistic outlook, be negligible, if not slightly negative, while the unemployment rate would move still higher, averaging 6.5% next year.

Resetting the Baseline

One of the lessons learned from the securities industry's experience following the tragic events of September 11th is the value of disaster recovery and contingency planning that incorporates pessimistic, if not worst-case, assumptions. While incorporating these contingencies, the assumptions underlying these forecasts must be reasonable if a consensus of all involved parties is to be reached in a reasonable time frame. The accuracy of any forecast has taken on added importance after September 11th for budget planners hoping to mitigate the downturn and accelerate the recovery of the state and local economy of New York. However, reaching that objective "is complicated by private sector interests, disputes over insurance pay-outs, tensions between city, state and federal government, and a mayoral election"⁹ on November 6th.

On some points a common view appears to be emerging, such as on the need to arrive quickly at an agreement on "a supplemental budget with an agreed financial plan (to) assist federal officials in the process of establishing necessary aid levels for the State."¹⁰ Setting the baseline assumptions underlying these budget forecasts is the first

step. Without quick decisions regarding plans to rebuild Lower Manhattan, private sector jobs (along with the income base they support and the tax revenues they provide), particularly in the financial services industry (and its suppliers/vendors/service providers), will continue to migrate out of the city and state. This would lead to even greater fiscal stress on city and state budgets in the coming years.

For New York, there is no “good” outcome. Under assumptions of either a modest or a major recession, a sharper downturn in NY City and State activity and more severe employment losses are expected than in the nation as a whole. Even under optimistic assumptions, growth in calendar 2002 in both NY State and City will be negligible, while under pessimistic assumptions activity could decline 2% to 3%. Under optimistic assumptions, NY state employment is expected to decline at a 5% annual rate in 4Q’01 and not recover these lost jobs until late in 2003. Under pessimistic assumptions, job losses extend into the first half of 2002, with full recovery postponed into 2004. The impact of the terrorist attack exacerbated this trend. With 4,400 workers missing and presumed dead in the WTC attack, tens of thousands more relocated out of the state and many more laid off due to the ensuing disruption of business activity, overall job losses might well match those experienced in the 1990-91 recession.

The securities industry, which drives both activity and tax revenues for New York City and State, had already witnessed sequential quarterly declines in both revenues and profits from the record quarter of 1Q’00. Securities firms had held off on broader layoffs and deeper cuts in other spending in

hopes of a “V” shaped downturn. As hopes of quick recovery vanished in mid-September, firms begin to implement more austere business plans. U.S. securities industry employment fell 18,500 or 2.4% from its February peak by the end of September, with 2/3 or 11,300 job losses occurring in 3Q’01. A further reduction of 10,000 to 12,000 is expected in 4Q’01. NYC accounts for roughly a quarter of industry revenues as well as a quarter of these job losses to date, but is expected to account for a larger proportion in the near term.

In addition to the lost salaries and wages is a sharp expected decline in variable compensation in the coming fiscal year. Variable compensation in the securities industry is expected to be 50%-60% lower than the record payouts based on calendar year 2000 performance. Adding to these problems is the anticipated declines in capital gains and the negative wealth effects of the decline in equity values. Capital gains realizations are expected to fall by 25% nationally, but are expected to be 40%-45% lower in New York. All of these will undermine fiscal stability in the coming budget year.

Compounding the impact on NYC and NYS tax receipts of shrinking employment is the relocation (outside the state) of many firms displaced from Lower Manhattan. An estimated 14,000 jobs (of the approximately 30,000 displaced) shifted out of the state, principally to the tax rolls of New Jersey, however virtually all of the arrangements are short term in nature. Management of most, if not all, of these displaced operations will make a permanent decision on location of facilities within the next 3-4 months. Many factors mitigate against their return to Lower

Manhattan, including: security concerns encouraging dispersion of facilities to multiple, redundant sites, rather than continued concentration in one area; continued disruption of transportation facilities; long expected delays in debris removal (12 months), recovery (2 years to restore PATH train operations) and rebuilding (3 to 5 years for new office space construction); psychological problems associated with return to affected sites experienced by employees of some firms; the general undesirability of working adjacent to a major construction site for years to come, and; the absence of a commercially viable plan for the rebuilding. Overcoming these factors will be difficult at best and requires quick action.

The Need for a Clear Vision and Decisive Leadership

There appears to be an emerging consensus on a number of key issues. The first priority is to ensure the health and security of workers and residents of Lower Manhattan. In addition, government should move immediately to address the infrastructure issues that prevent a complete restoration of normal business activity in Lower Manhattan. This is particularly true with respect to impaired transportation systems. Efforts should be made to shorten the time needed to rebuild the PATH and subway facilities.

There is also a need for someone to take charge of the rebuilding effort and steer New York through its current fiscal crisis, much as occurred when the city confronted bankruptcy in the 1970's. Leadership is needed to coordinate and harmonize the disparate public and private interests that are

involved in rebuilding efforts. Individuals of the stature of Rudolph Giuliani or Robert Rubin have been mentioned. One view is that a new organization is needed with extraordinary powers to cut through the bureaucracy and red tape, while the opposing view is that current city agencies and private sector developers can manage these projects.

Unless a viable redevelopment plan for the area emerges quickly that is commercially viable and which is competitive with occupancy costs of alternative areas (such as the Hoboken-Jersey City waterfront), displaced firms will make their long term relocation decisions without considering anything more than a token representation ("marquee value") in the Wall Street area. Such a plan will require public subsidization, largely in the form of tax breaks and grants. To gain the support of Federal officials in this effort will require a viable, visionary plan that recognizes that the former WTC site represents "sacred ground" to many people, as well as a site that must accommodate both public space and commercial office space. To overcome the many factors listed above which impede the return of business to Lower Manhattan, the redevelopment plan for the WTC site will need to be grand and compelling. One hundred and thirty years ago the Great Fire destroyed much of Chicago, but what emerged from those ashes was a new architectural vision that transformed cities: the skyscraper. New York needs similar bold vision and innovative responses...and needs them now.

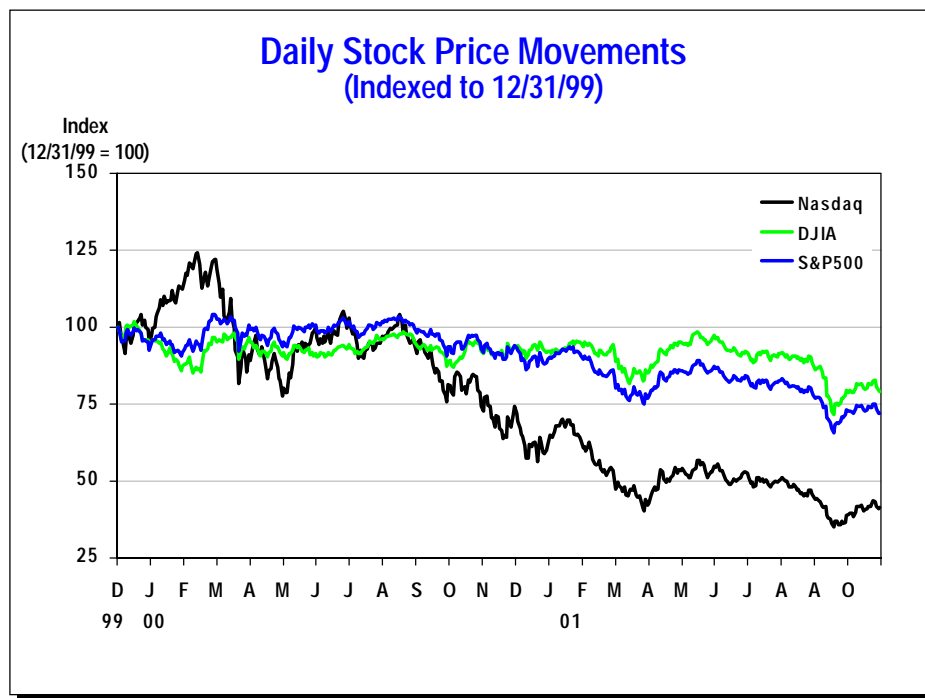
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*Senior Vice President, Chief Economist
and Director, Research*

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- ¹ Ethan Harris, "U.S. Recession Risks", August 2001, and "The Downside of the V", October 2001, Lehman Brothers.
- ² Marco Ottaviani and Peter N. Sorensen, "The Strategy of Professional Forecasting", October 2001.
- ³ The Conference Board Consumer Confidence Index.
- ⁴ David Greenlaw, Morgan Stanley Economics Report, October 2001.
- ⁵ SIA Research Reports, "Razor Edge Adjustment: Prospects for a Soft Landing", November 30, 2000.
- ⁶ Blue Chip Economic Indicators expects CPI to decline from 3.0% during 2001 to 2.2% in 2002.
- ⁷ The Economist, "The Recession: How Far Down?" October 20-26, pp.69-70.
- ⁸ SIA Research Reports, "The Aging of the New Economy", March 30, 2001.
- ⁹ Financial Times, "A new New York", November 1, 2001, p.16.
- ¹⁰ H. Carl McCall, NY State Comptroller, "After the World Trade Center Attack: Fiscal Uncertainties Facing the State and Local Governments", State of New York, October 2001.

MONTHLY STATISTICAL REVIEW

U.S. Equity Market Activity

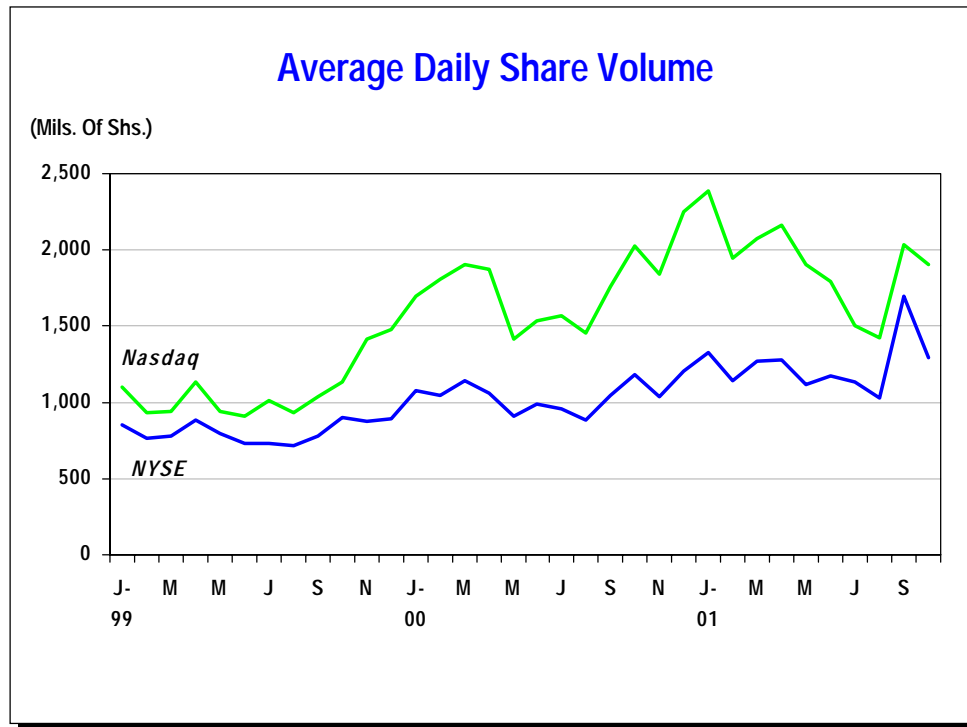
Stock Prices – When U.S. equity markets reopened the week following the WTC disaster, investors sent stock prices to levels not seen since October 1998. All major market indices ended the week sharply down with new lows set across the board on Friday, September 21. However, the ensuing five weeks, ending Friday October 26, witnessed the equity market's most powerful rally since last spring. The Dow Jones Industrial Averaged ballooned 15.9%, or 1,306 points, to close that week at 9075.1, while the S&P 500 and Nasdaq Composite each rose 14.4% over the same five weeks. However, this simply shifted each index back up to its early September level.



Despite the rally, the DJIA still stood 19% below its January 2000 highs, while the Nasdaq and the S&P 500 were 44% and 28%, respectively, below their March 2000 peaks. The markets reversed course once again in October's final three trading days, with all three indices giving back one-third of their five week gains, and ending the month only 10% above their September 21 nadirs. During October, a 13% gain for the Nasdaq was recorded, but only a 2% and 3% increase for the S&P 500 and Dow, respectively.

Seasonal factors, particularly mutual fund portfolio shifting as October's close neared, played a role in both the post 9/11 five week price run-up and October's final three days of lock-in sales. The 50 basis point cut in the Fed funds rate on October 2 helped equity prices and fixed income markets last month. It was the ninth cut by the Federal Reserve this year, and brought the benchmark down to 2.50%, a 39-year low.

Share Volume – August represented the month with the lowest average daily volume for the NYSE in 2001, with 1.0 billion shares changing hands per day. Average daily volume spiked 70% during September's shortened trading cycle to a monthly record of 1.7 billion shares per day. This reflected both several record trading days the week that markets reopened, as well as the elimination of 4 trading days from an already seasonally short 19 trading days occurring in September. Although leveling off in October to 1.3 billion shares per day during a normal 23-day cycle, this activity level still tied January 2001 as the second highest trading month ever on the Big Board for average daily volume.

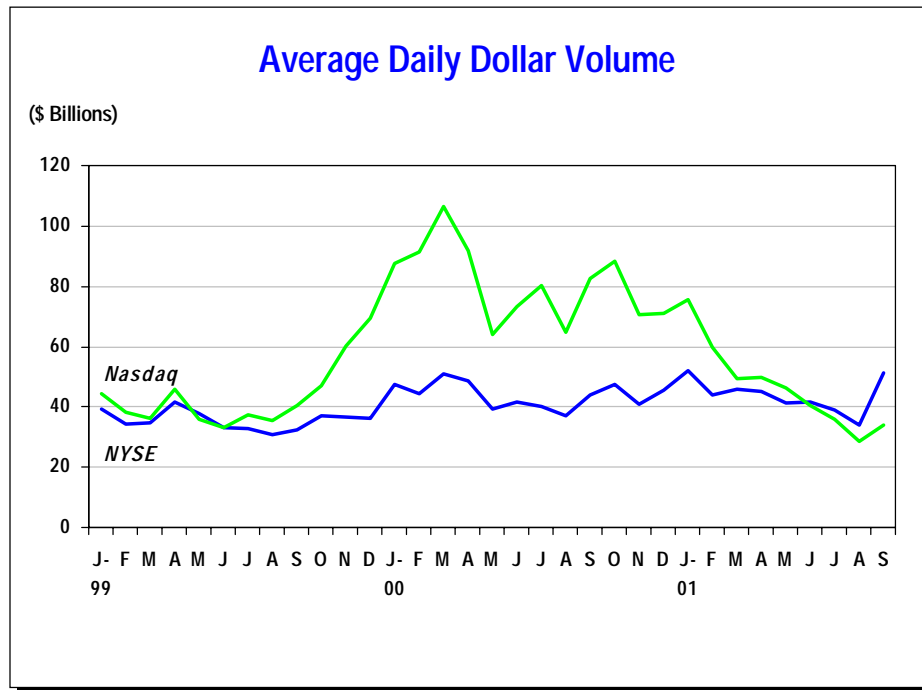


October lifted the NYSE's year-to-date average daily volume to a record 1.2 billion shares, 20% above the level of the comparable period last year and full-year 2000 records of 1.0 billion per day. Removing the trading-day cycle from the equation, total share volume on the NYSE for the month of October rose 17% to a record 29.7 billion shares from September's 25.4 billion shares. This is also 6% higher than the previous 28.0 billion record set this March. Cumulative Big Board volume for 2001 now stands at 225 billion shares, 4% ahead of last year's pace and easily within reach of last year's full-year record of 262 billion. This virtually guarantees that last year's record will be exceeded by early December.

Nasdaq's volume picture was similar to that of the Big Board. Average daily volume of 2.0 billion shares per day in September rebounded 40% above August's 15-month low of 1.4 billion per day, and then settled slightly to 1.9 billion for October. Again, taking the aberrant trading cycle out of last month's numbers, total monthly Nasdaq volume rose 44% to 43.8 billion in October from September's 2001 monthly low of 30.5 billion shares. This was second only to January's all-time monthly record of 50.1 billion shares. Year-to-date, Nasdaq volume totals 352

billion shares, nearly matching 2000's ten-month total of 359 billion shares and within striking distance of last year's full-year record of 443 billion.

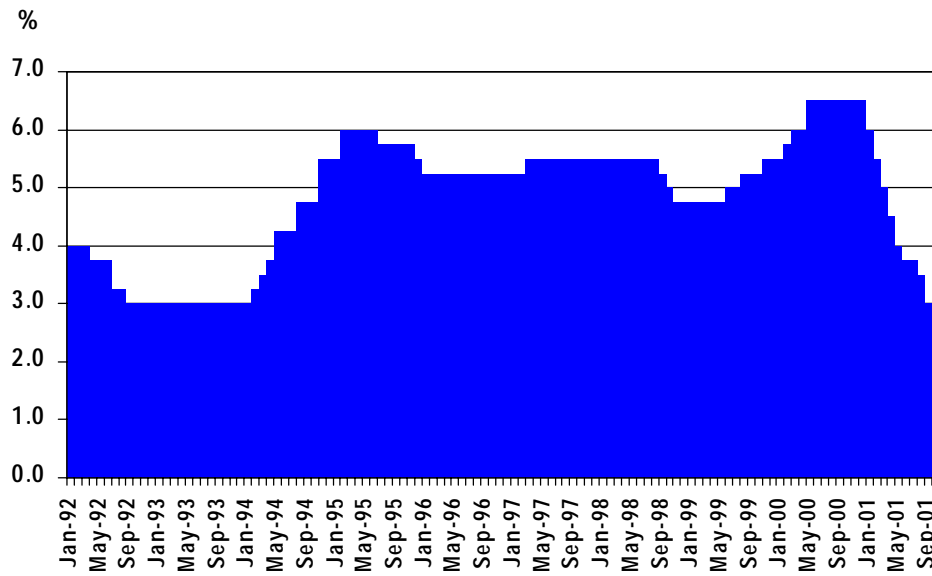
Dollar Volume – The average daily dollar volume of trading on the NYSE had fallen to a two-year low of \$34 billion in August, due to depressed price levels and anemic volume. This shot up 50% to \$51 billion per day during September's shortened, but heated, trading cycle. Even with September's 20% rebound in volume from August's three-year monthly low of \$28 billion per day, September was still the second lowest monthly showing since June 1999. October's dollar volumes are still unavailable.



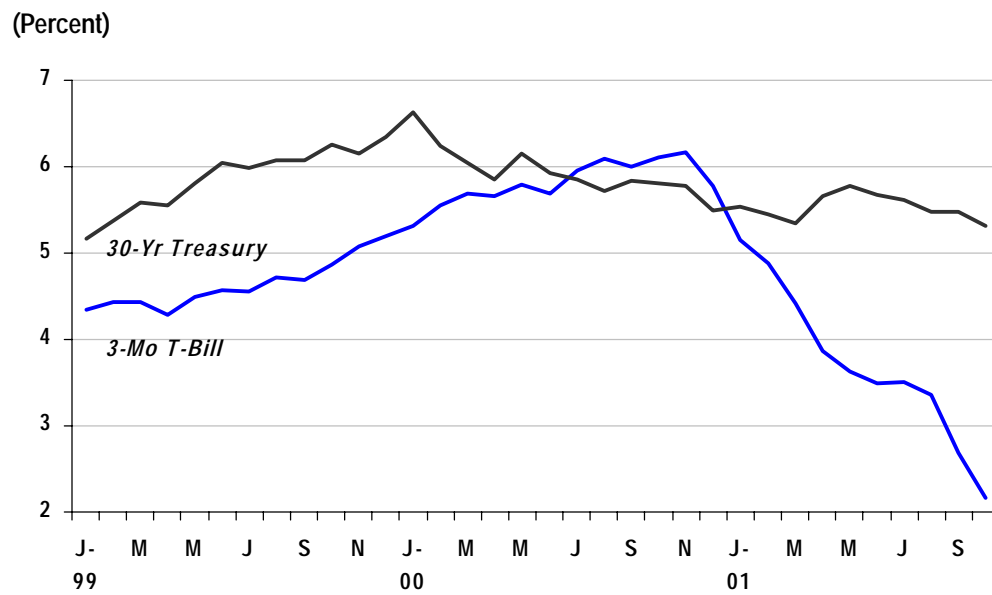
Interest Rates – The interest rate story has remained the same every month this year – Fed easing, Fed easing and more Fed easing. October opened with the Fed instituting its ninth cut in the Federal funds rate in as many months, and its seventh 50 basis point reduction of the year. The Fed funds target rate now sits at 2.5%, barely one-third of the 6.5% at which we began the year. All indicators point to another cut during November, probably of 50 basis points.

Both long-term and short-term interest rates are now at or near historic lows. At this extreme end of the interest rate cycle, the long bond, itself under supply pressures as the Treasury confirmed its intent to discontinue issuance of the 30-year bond, yielded a mere 5.32% average in October. However, that was still two and one-half times the 2.16% monthly average yield for three-month T-Bills.

Federal Funds Target Rate

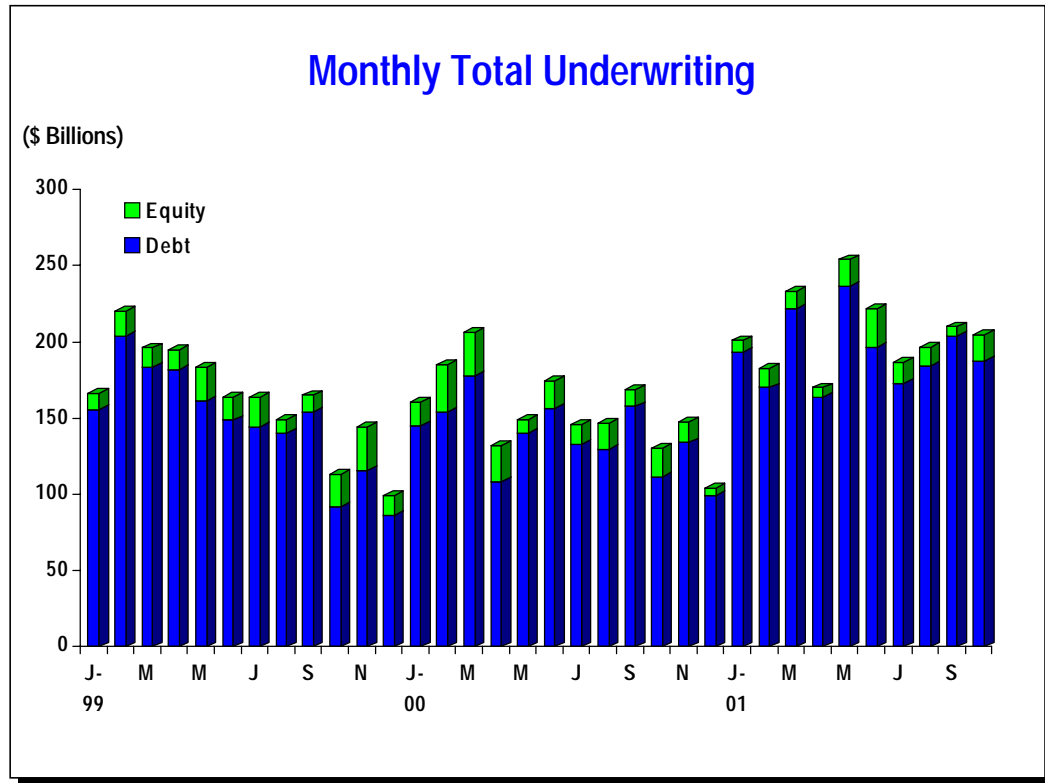


Short vs. Long-Term Interest Rates



U.S. Underwriting Activity

A sharp decline in asset-backed bond origination in October led to a slight fall in total underwriting activity for the month to \$205 billion from September's \$210 billion total. Still, this brought 2001's 10-month total to \$2.1 trillion, 29% above the same period last year. This is already an annual record, exceeding 1999's previous full-year record of \$2.0 trillion.

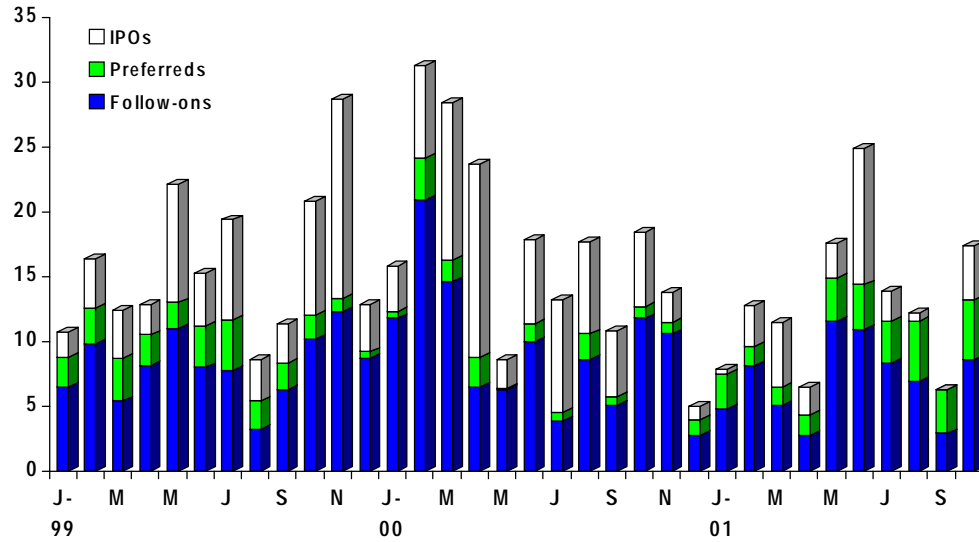


Equity Underwriting – October's \$17.3 billion of domestic equity syndication was three times September's nearly empty calendar. Year-to-date, equity underwriting totals \$131 billion, 29% below last year's 10-month total and well below last year's full-year record of \$205 billion. All equity classes are trailing last year's totals. Initial public offerings stand at \$31 billion through October, less than half their 10-month total last year and only 40% of last-year's record full-year total of \$76 billion. In fact, the calendar has been so light that Given Imaging's modest \$60 million IPO on October 3rd was the first US-registered IPO in nearly two months, since August 13. September was also the first month since 1975 where not a single IPO was offered.

Issuance of preferred stock reached \$5 billion in October, bringing the year-to-date total to \$30 billion. This is double last year's full-year total of \$15 billion and well within range of the all time record of \$36.5 billion raised in 1996. Total common stock offerings rose four-fold in October over September's lows and now total \$101 billion year-to-date, just 41% of last year's \$172 billion raised through October. Thus, there is no fear of last year's \$189 billion common stock issuance record being exceeded.

Monthly Equity Underwriting

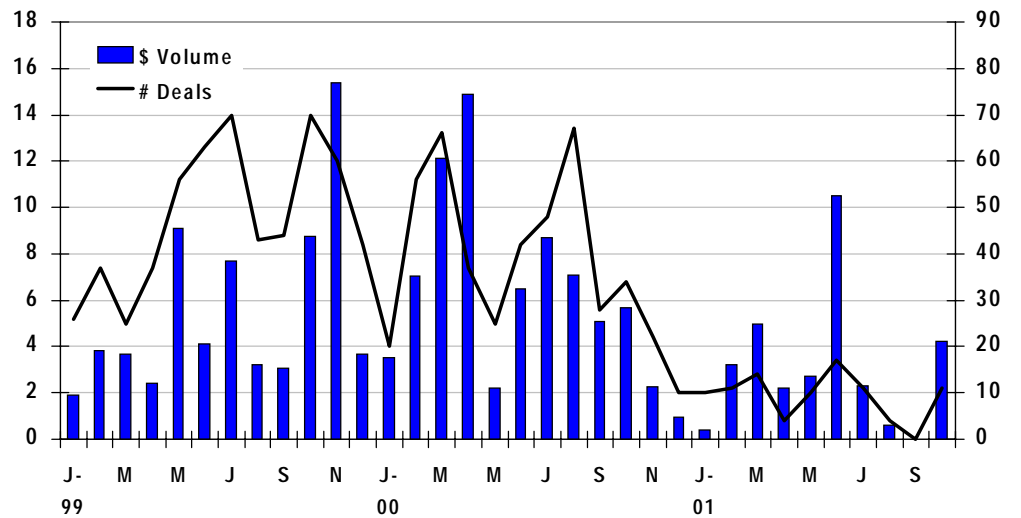
(\$ Billions)



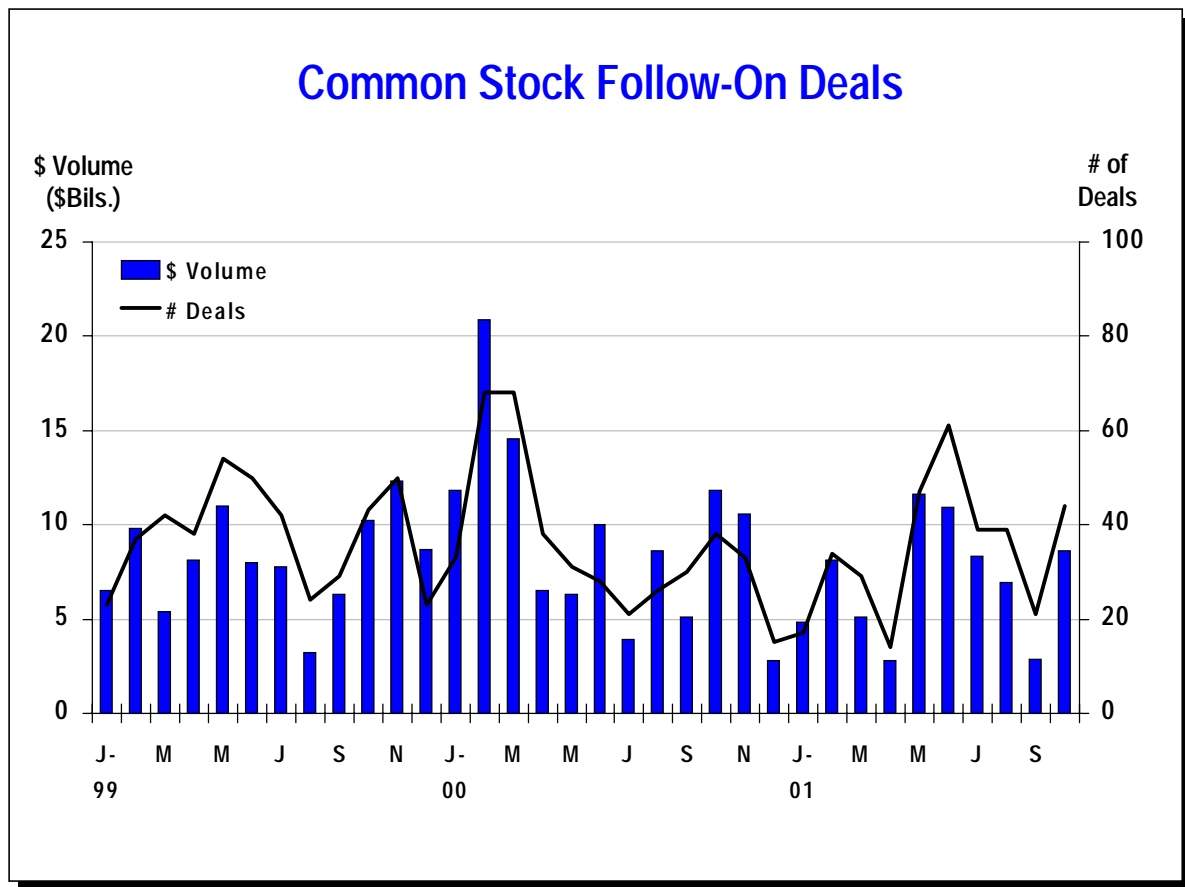
IPO Activity

\$ Volume
(\$Bils.)

of
Deals

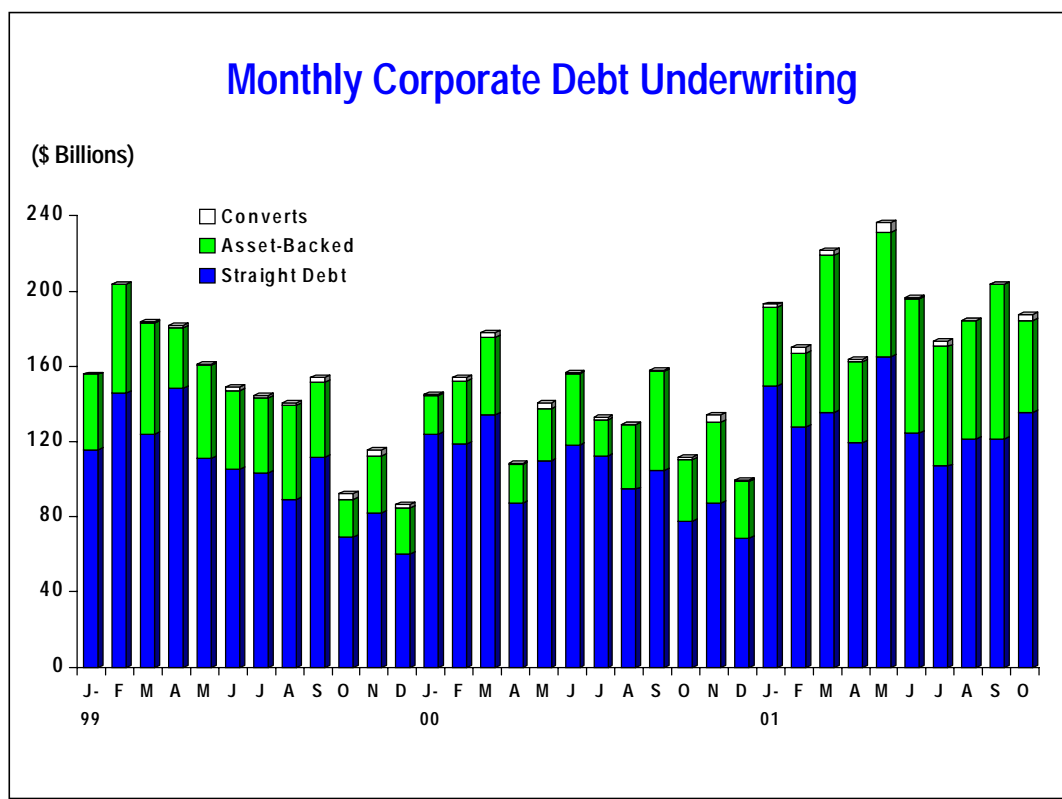


Follow-on deals now total \$70 billion through October, still 30% below last year's pace, which means last year's \$113 billion will also remain the record.



Corporate Debt Underwriting – A drop-off in asset-backed deals caused overall bond underwriting for October to fall 8% to \$188 billion from September's strong \$204 billion showing. Still, year-to-date, fixed income volume of \$1.9 trillion is running 37% ahead of the same period last year, and already exceeds the record domestic bond underwriting total of \$1.8 trillion set in 1999.

Straight corporate bond issuance increased to \$136 billion in October from September's \$121 billion, and was the second highest monthly total ever following this January's \$150 billion. For the first ten months of 2001, total corporate debt underwriting reached \$1.3 trillion, up 21% over the same period last year, and above 1999's full-year record of \$1.26 trillion.



Although no convertibles were offered in September, the 10-month year-to-date total of \$21 billion is up 73% over the same period last year, and already far exceeds last year's annual record of \$17 billion. Although asset-backed bonds were rare in October, year-to-date volume of \$603 billion is 88% ahead of last year's January-to-October level, and is already a new annual record, eclipsing 1998's previous record \$567 billion.

George Monahan

Vice President and Director, Industry Studies

U.S. 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
<u>2000</u>											
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
<u>2001</u>											
Jan	149.6	1.7	41.7	193.0	5.9	5.3	2.7	8.0	0.4	4.8	201.0
Feb	127.5	3.3	39.3	170.1	4.1	11.3	1.5	12.8	3.2	8.1	182.9
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	1.3	42.9	163.6	3.1	5.0	1.5	6.5	2.2	2.8	170.0
May	164.9	5.4	66.1	236.4	3.1	14.3	3.3	17.7	2.7	11.6	254.1
June	124.6	1.0	71.1	196.7	3.6	21.4	3.5	24.9	10.5	10.9	221.5
July	106.8	2.6	63.7	173.1	0.2	10.6	3.3	13.9	2.3	8.3	187.0
Aug	121.0	0.2	63.2	184.4	2.7	7.6	4.7	12.3	0.6	6.9	196.7
Sept	121.3	0.0	82.5	203.8	0.2	2.9	3.4	6.3	0.0	2.9	210.1
Oct	135.7	3.6	48.4	187.7	1.9	12.8	4.6	17.3	4.2	8.6	205.1
Nov											
Dec											
YTD '00	1,080.5	12.4	320.2	1,413.1	24.7	172.4	13.3	185.7	72.9	99.5	1,598.8
YTD '01	1,306.4	21.4	602.7	1,930.4	26.1	101.2	29.8	131.1	31.1	70.1	2,061.5
% Change	20.9%	72.9%	88.2%	36.6%	5.6%	-41.3%	124.3%	-29.4%	-57.3%	-29.6%	28.9%

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	30-Year Treasury	SPREAD
1985	10.2	150.8	161.0	17.6	22.8	40.4	201.4	7.47	10.79	3.32
1986	10.0	92.6	102.6	23.1	22.6	45.7	148.3	5.97	7.80	1.83
1987	7.1	64.4	71.5	16.3	14.2	30.5	102.0	5.78	8.58	2.80
1988	7.6	78.1	85.7	19.2	12.7	31.9	117.6	6.67	8.96	2.29
1989	9.2	75.8	85.0	20.7	17.2	37.9	122.9	8.11	8.45	0.34
1990	7.6	78.4	86.0	22.7	17.5	40.2	126.2	7.50	8.61	1.11
1991	11.0	102.1	113.1	29.8	28.1	57.9	171.0	5.38	8.14	2.76
1992	12.5	139.0	151.6	32.5	49.0	81.5	233.1	3.43	7.67	4.24
1993	20.0	175.6	195.6	35.6	56.7	92.4	287.9	3.00	6.59	3.59
1994	15.0	89.2	104.2	34.5	23.2	57.7	161.9	4.25	7.37	3.12
1995	13.5	81.7	95.2	27.6	32.2	59.8	155.0	5.49	6.88	1.39
1996	15.6	100.1	115.7	31.3	33.2	64.5	180.2	5.01	6.70	1.69
1997	12.3	130.2	142.6	35.5	36.5	72.0	214.6	5.06	6.61	1.55
1998	21.4	165.6	187.0	43.7	49.0	92.8	279.8	4.78	5.58	0.80
1999	14.3	134.9	149.2	38.5	31.3	69.8	219.0	4.64	5.87	1.23
2000	13.6	116.2	129.7	35.0	29.3	64.3	194.0	5.82	5.94	0.13
<u>2000</u>										
Jan	1.0	5.2	6.2	2.0	1.3	3.4	9.5	5.32	6.63	1.31
Feb	0.8	7.0	7.8	3.3	1.2	4.5	12.3	5.55	6.23	0.68
Mar	1.3	11.1	12.4	2.4	2.3	4.7	17.1	5.69	6.05	0.36
Apr	0.6	9.9	10.5	3.1	1.8	4.9	15.5	5.66	5.85	0.19
May	0.8	8.8	9.7	2.6	3.0	5.6	15.3	5.79	6.15	0.36
June	1.4	12.7	14.0	4.5	4.1	8.6	22.6	5.69	5.93	0.24
July	1.2	9.5	10.7	2.4	1.6	4.0	14.7	5.96	5.85	(0.10)
Aug	0.8	10.3	11.2	2.8	2.8	5.5	16.7	6.09	5.72	(0.37)
Sept	1.4	7.8	9.2	3.0	3.8	6.8	16.0	6.00	5.83	(0.17)
Oct	1.8	11.8	13.6	3.6	2.2	5.8	19.4	6.11	5.80	(0.31)
Nov	1.5	12.6	14.0	3.7	2.2	5.8	19.9	6.17	5.78	(0.39)
Dec	1.0	9.4	10.4	1.6	3.1	4.6	15.1	5.77	5.49	(0.28)
<u>2001</u>										
Jan	1.2	4.7	5.9	4.4	1.9	6.3	12.2	5.15	5.54	0.39
Feb	0.9	10.4	11.2	4.7	5.1	9.8	21.0	4.88	5.45	0.57
Mar	1.2	16.2	17.4	2.7	5.1	7.8	25.1	4.42	5.34	0.92
Apr	1.0	10.5	11.5	3.6	3.5	7.0	18.5	3.87	5.65	1.78
May	1.2	18.4	19.6	4.4	4.5	8.9	28.5	3.62	5.78	2.16
June	1.8	18.1	19.9	5.1	4.8	9.9	29.8	3.49	5.67	2.18
July	1.5	12.9	14.5	3.8	2.3	6.1	20.6	3.51	5.61	2.10
Aug	1.6	12.3	13.9	3.9	5.8	9.7	23.6	3.36	5.48	2.12
Sept	0.9	8.9	9.8	2.2	1.8	4.0	13.8	2.64	5.48	2.84
Oct	2.3	13.1	15.4	4.7	7.6	12.3	27.7	2.16	5.32	3.16
Nov										
Dec										
YTD '00	11.1	94.1	105.2	29.8	24.1	53.9	159.1	5.79	6.00	0.22
YTD '01	13.6	125.5	139.1	39.5	42.3	81.8	220.9	3.71	5.53	1.82
% Change	23.0%	33.3%	32.2%	32.5%	75.9%	51.9%	38.9%	-35.9%	-7.9%	732.0%

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
<u>2000</u>									
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
<u>2001</u>									
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	1,293.0	66.8	1,902.5	NA	NA
Nov									
Dec									
YTD '00	10,971.14	1,429.40	666.02	3,369.63	1,026.5	50.3	1,702.2	43.7	82.3
YTD '01	9,075.14	1,059.78	546.34	1,690.20	1,231.1	67.6	1,912.5	43.4	46.7
% Change	-17.3%	-25.9%	-18.0%	-49.8%	19.9%	34.3%	12.4%	-0.5%	-43.3%

MUTUAL FUND ASSETS

(\$ Billions)

MUTUAL FUND NET NEW CASH FLOW*

(\$ Billions)

	Equity	Hybrid	Bond	Money Market	TOTAL ASSETS	Equity	Hybrid	Bond	Money Market	TOTAL	Total Long- Term Funds
1985	116.9	12.0	122.6	243.8	495.4	8.5	1.9	63.2	-5.4	68.2	73.6
1986	161.4	18.8	243.3	292.2	715.7	21.7	5.6	102.6	33.9	163.8	129.9
1987	180.5	24.2	248.4	316.1	769.2	19.0	4.0	6.8	10.2	40.0	29.8
1988	194.7	21.1	255.7	338.0	809.4	-16.1	-2.5	-4.5	0.1	-23.0	-23.1
1989	248.8	31.8	271.9	428.1	980.7	5.8	4.2	-1.2	64.1	72.8	8.8
1990	239.5	36.1	291.3	498.3	1,065.2	12.8	2.2	6.2	23.2	44.4	21.2
1991	404.7	52.2	393.8	542.5	1,393.2	39.4	8.0	58.9	5.5	111.8	106.3
1992	514.1	78.0	504.2	546.2	1,642.5	78.9	21.8	71.0	-16.3	155.4	171.7
1993	740.7	144.5	619.5	565.3	2,070.0	129.4	39.4	73.3	-14.1	228.0	242.1
1994	852.8	164.5	527.1	611.0	2,155.4	118.9	20.9	-64.6	8.8	84.1	75.2
1995	1,249.1	210.5	598.9	753.0	2,811.5	127.6	5.3	-10.5	89.4	211.8	122.4
1996	1,726.1	252.9	645.4	901.8	3,526.3	216.9	12.3	2.8	89.4	321.3	232.0
1997	2,368.0	317.1	724.2	1,058.9	4,468.2	227.1	16.5	28.4	102.1	374.1	272.0
1998	2,978.2	364.7	830.6	1,351.7	5,525.2	157.0	10.2	74.6	235.3	477.1	241.8
1999	4,041.9	383.2	808.1	1,613.1	6,846.3	187.7	-12.4	-5.5	193.6	363.4	169.8
2000	3,962.3	349.7	808.0	1,845.3	6,965.2	309.6	-31.8	-48.6	159.6	388.8	229.2
<u>2000</u>											
Jan	3,951.6	368.8	793.9	1,657.3	6,771.6	44.5	-6.3	-12.7	41.8	67.3	25.6
Feb	4,218.5	360.7	796.7	1,680.5	7,056.4	55.6	-5.1	-8.2	14.8	57.2	42.3
Mar	4,441.6	371.6	793.1	1,697.0	7,303.3	40.2	-5.7	-7.7	12.7	39.5	26.8
Apr	4,250.3	359.8	781.0	1,649.4	7,040.5	35.5	-1.9	-6.7	-52.2	-25.4	26.9
May	4,106.5	348.1	777.3	1,675.6	6,907.4	17.3	-2.1	-5.1	18.7	28.8	10.1
June	4,316.6	350.8	791.5	1,658.6	7,117.5	22.0	-1.9	0.1	-23.0	-2.8	20.2
July	4,246.3	348.6	801.1	1,697.7	7,093.7	16.8	-1.7	-0.2	33.7	48.5	14.9
Aug	4,579.8	363.0	802.5	1,729.8	7,475.1	24.0	-1.3	-1.8	22.5	43.3	20.9
Sept	4,397.5	354.9	797.8	1,728.0	7,278.2	17.6	-1.7	-3.6	-8.5	3.8	12.3
Oct	4,293.4	354.2	795.4	1,760.0	7,203.0	19.2	-1.2	-2.0	26.0	42.0	16.0
Nov	3,854.9	342.9	795.3	1,821.3	6,814.3	5.5	-0.3	-0.6	56.1	60.7	4.6
Dec	3,962.3	349.7	808.0	1,845.3	6,965.3	11.6	-1.6	-0.7	16.4	25.8	9.3
<u>2001</u>											
Jan	4,093.3	356.9	830.0	1,955.5	7,235.7	25.1	1.1	8.8	103.0	138.0	34.9
Feb	3,689.7	344.4	845.2	2,019.3	6,898.6	-3.3	1.2	8.8	58.0	64.7	6.7
Mar	3,408.0	333.4	852.8	2,035.5	6,629.7	-20.6	-0.4	7.9	13.6	0.6	-13.1
Apr	3,716.0	347.9	846.6	2,031.5	6,942.0	19.2	1.3	1.3	-10.5	11.3	21.9
May	3,744.9	353.2	859.0	2,071.7	7,028.8	18.1	1.4	6.2	35.0	60.8	25.8
June	3,677.0	350.6	861.3	2,052.6	6,941.5	10.8	1.2	2.2	-24.4	-10.2	14.2
July	3,590.1	352.4	882.7	2,069.7	6,894.9	-1.2	1.3	9.3	12.0	21.4	9.4
Aug	3,384.7	342.6	908.2	2,104.1	6,739.6	-4.8	-0.7	16.7	26.5	37.6	11.2
Sept	3,020.0	324.2	909.7	2,163.3	6,417.2	-29.5	-1.3	7.6	53.2	30.0	-23.1
Oct											
Nov											
Dec											
YTD '00	4,397.5	354.9	797.8	1,728.0	7,278.2	273.4	-27.8	-45.8	60.4	260.2	199.8
YTD '01	3,020.0	324.2	909.7	2,163.3	6,417.2	13.8	5.1	68.9	266.5	354.3	87.8
% Change	-31.3%	-8.7%	14.0%	25.2%	-11.8%	-95.0%	NM	NM	341.3%	36.2%	-56.0%

New sales (excluding reinvested dividends) minus redemptions, combined with net exchanges

Source: Investment Company Institute



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