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PERSPECTIVE

Mutual Fund and Economic Developments in 2003

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SUMMARY

Mutual funds and their shareholders faced a year of contrasts in 2003. Industry assets rose by more than $1 trillion to $7.4 trillion, lifted by strong stock and bond fund returns. Yet, despite fund assets rising to near record levels, the industry had a modest net cash outflow, the first since 1988. While long-term funds experienced the largest net cash flow in three years, this inflow was more than offset by a record amount of cash redeemed from money market funds.

The large outflow from money market funds resulted from a period of low interest rates that had begun in 2001 and persisted through 2003. Many individual and institutional investors moved assets from money funds into bank and thrift deposits and open market instruments. At the same time, the low interest rates helped to spur economic growth and corporate profits in the U.S., all of which helped to boost investor demand for stocks and pull the stock market out of one of its worst bear markets since the Great Depression. Renewed investor interest in stocks also produced strong inflows to stock and hybrid funds.

During the last four months of the year, mutual funds were the focus of a series of well-publicized investigations undertaken by various state and federal officials, including the New York Attorney General's office and the U.S. Securities and Exchange Commission (SEC). These investigations primarily involved late-trading and abusive market-timing activities at mutual funds, brokerage firms, hedge funds, and third parties processing fund trades.

This issue of *Perspective* looks back on the economic developments that affected mutual funds in 2003. It examines the factors that influenced investor demand for mutual funds and the role that funds played in individual and institutional investors' portfolios. Highlights of the study include:

Financial Markets and Fund Flows

- Mutual fund assets rose 16 percent in 2003 to $7.4 trillion, just shy of the record $7.5 trillion reached in August 2000 (Figure 1). Strong returns on long-term funds—stock, bond, and hybrid funds—were responsible for most of the increase in assets.

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- By year-end 2003, stock funds held 50 percent of all mutual fund assets, up from 42 percent in 2002.
- Shareholders invested $216 billion in long-term mutual funds during 2003, nearly an 80 percent increase from 2002. The pickup in demand came from renewed investor interest in stock and hybrid funds that offset a drop in the net flow to bond funds. Individuals and households accounted for most of the new investment.
- Money funds had an outflow of $258 billion. The low interest rate environment eliminated the yield advantage money funds typically hold over many other short-term investments, especially bank deposits. As a result, some cash left money funds for other short-term financial instruments.
- The outflows from retail money funds in 2003 were largely the result of low interest rates and not because of renewed strength in the stock market.
- As investigations into late-trading and market-timing activities emerged over the last four months of the year, some concerns arose that mutual fund investors might move their assets out of mutual funds, creating a sell-off in stock, bond, and money markets. Some investors did sell shares in funds sponsored by fund complexes named in the investigations, but overall investor flows showed few signs of having been significantly affected.
- Investor demand for stock index funds picked up in 2003 to $29 billion, and $12 billion of this amount was invested in S&P 500 index funds. Net new cash flow and assets were concentrated in the lowest cost index funds. S&P 500 index funds with expense ratios under 0.40 percent attracted nearly all flows and held virtually all of the assets in 2003.
- A large share of stock fund flows went to lower cost funds. In 2003, 64 percent of the net new cash flow went to stock funds with expense ratios under 1 percent, and 60 percent of assets were in share classes with expense ratios below 1 percent.

Redemption Rate

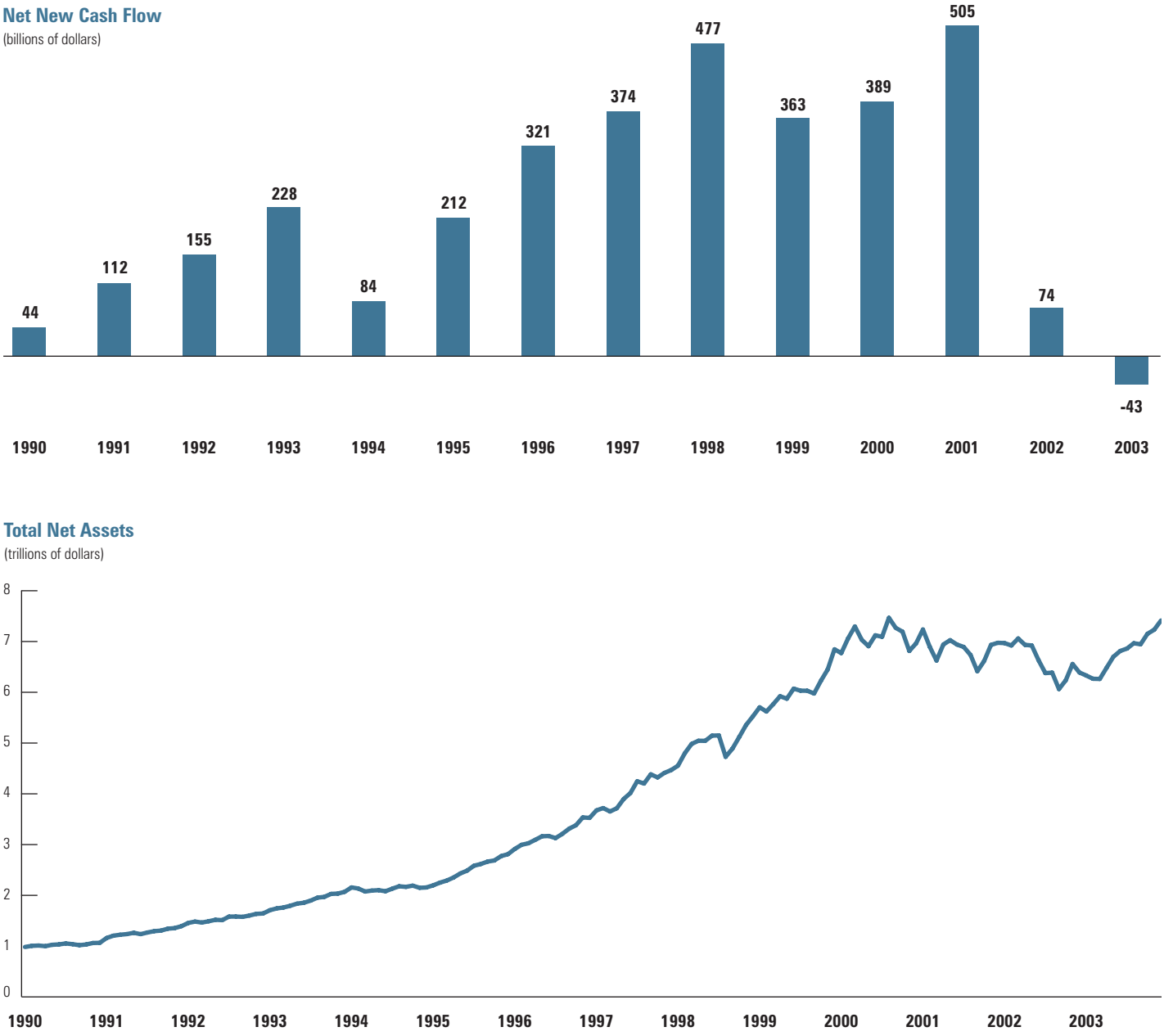
- Redemptions, including exchange redemptions, measured as a percent of assets, fell to 31 percent in 2003 from 41 percent in 2002. The decline began in early 2003 and accelerated after September. A large portion of the decline occurred in foreign stock funds, suggesting that market-timing activity had abated.
- The large decline in redemption rates among foreign funds served as a reminder that industry-level redemption rates cannot be used to infer average holding periods for mutual fund investors. A small number of shareholders can account for a disproportionate share of a fund's redemptions and overstate the activity of the typical shareholder.

Portfolio Turnover

- The rate at which stock mutual funds turned over the securities in their portfolios fell to its lowest level in more than 20 years in 2003. The overall turnover rate for stock funds fell to 55 percent, down from 62 percent in 2002. More than 60 percent of stock fund assets were held in funds with turnover rates of less than 50 percent.
- Turnover rates are sometimes reported as simple averages of all funds. Such averages overstate the actual turnover activity that shareholders experience in their funds. Funds with high turnover rates tend to be small.

FIGURE 1

Net New Cash Flow and Total Net Assets of Mutual Funds, 1990–2003



Source: Investment Company Institute.

Taxable Distributions

- Based on preliminary data, capital gain distributions were nearly unchanged in 2003 at an estimated $14 billion. About one third of these distributions were paid out to tax-deferred accounts, and shareholders owning funds in these accounts experienced no immediate tax consequences from these distributions.
- Income distributions totaled an estimated $103 billion. About half of these distributions were tax-exempt or were paid to tax-deferred accounts.

Market Concentration

- The fund industry remained highly competitive and unconcentrated. The largest 25 fund complexes managed 72 percent of industry assets, down from 76 percent in 1990.
- The number of mutual funds declined for the second consecutive year in 2003 to 8,126 funds. The decline was concentrated in stock funds. Stock funds that were liquidated or merged tended to be small, with a median size of $15 million. These funds had few assets in large part because of weak cash inflows, preventing the funds from attracting enough investor demand to remain viable.

FINANCIAL MARKETS AND MUTUAL FUND FLOWS

Interest rates fell to their lowest levels in nearly 50 years in 2003. Total returns on bond funds were high through the spring and early summer as falling bond yields caused bond prices to rise. These high returns supported a continuation of the strong demand for bond funds during the first half of the year.

Low interest rates, large increases in government spending, and the cumulative effects of several years of tax cuts spurred economic growth. U.S. corporate profits rose 17 percent,[2] which along with the growing strength of the U.S. economy, boosted stock prices worldwide during the second half of the year, and rekindled U.S. investor demand for stock and hybrid funds.

Households are estimated to have purchased $181 billion in mutual fund shares in 2003, including purchases through reinvested dividends, up from $138 billion in 2002 (Figure 2).[3] The increase reflected stronger demand for long-term funds. Household net purchases of long-term mutual fund shares, including purchases through reinvested dividends, rose to an estimated $261 billion from $167 billion in 2002.[4]

Households' increased demand for long-term funds was offset by a reduction in their holdings of money market funds. Low interest rates eliminated the yield advantage that money funds typically hold over bank and thrift deposits. Consequently, households pulled an estimated $80 billion out of money market funds in 2003, and increased their holdings of savings deposits and CDs by $280 billion.[5]

Businesses, state and local governments, and other institutional investors, which hold a large amount of assets in money market funds, significantly reduced their holdings of money market funds as well. The low interest rate environment led businesses to shift some of their short-term investments over to banks. Businesses alone reduced their money fund holdings by $61 billion, while they increased their deposits at bank and thrift deposits by $133 billion.[6] In addition, they added $26 billion to their direct holdings of money market instruments.

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[2] Growth is measured for corporate profits with inventory valuation and capital consumption adjustments as a year-over-year change in annual rates from 2002 to 2003. Data were obtained from the *Flow of Funds Accounts of the United States: Flows and Outstandings*, Fourth Quarter, 2003, Board of Governors of the Federal Reserve System, Washington, DC (March 4, 2004).

[3] Household purchases of mutual fund shares comprised an estimated $93 billion in net new cash and $88 billion in reinvested dividends.

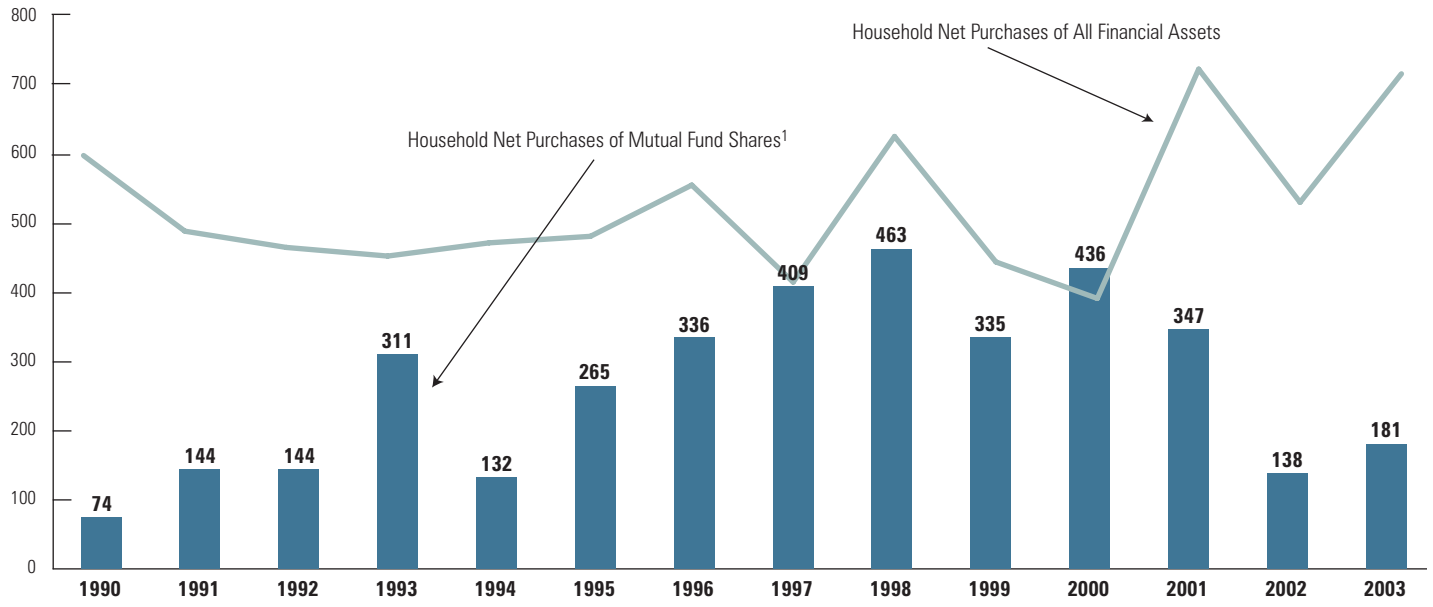
[4] Estimates are based on data reported in the *Flow of Funds Accounts of the United States* (March 4, 2004) and flow data gathered by the Investment Company Institute.

[5] *Flow of Funds Accounts of the United States* (March 4, 2004).

[6] *Flow of Funds Accounts of the United States* (March 4, 2004).

FIGURE 2

Household Net Purchases of Mutual Fund Shares and All Financial Assets, 1990–2003
(billions of dollars)



[1] *Household net purchases of mutual fund shares, as defined by the Federal Reserve, include reinvested dividends.*
Sources: Federal Reserve Board and Investment Company Institute.

Despite the government investigations of mutual funds that began in September, the overall net new cash flow to long-term funds was strong over the last four months of 2003. The monthly average inflow of $18.2 billion was slightly above the $17.9 billion monthly average over the first eight months of 2003 (Figure 3).

FIGURE 3

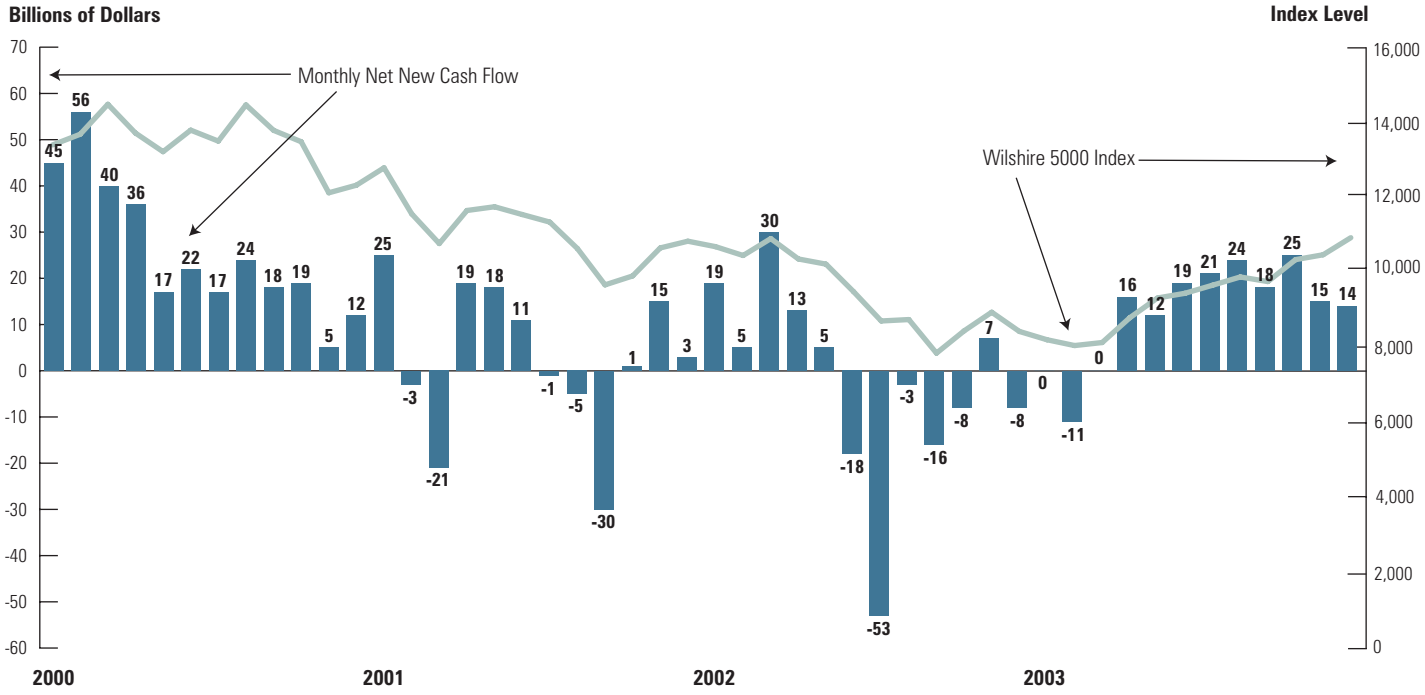
Monthly Average Net New Cash Flow to Long-Term Funds of Fund Companies Named and Not Named in Government Investigations, 2003
(billions of dollars)

Period	All Funds	Named in Government Investigations	Not Named in Government Investigations
Jan–Aug	17.9	-1.0	18.9
Sept–Dec	18.2	-10.7	28.9
2003	18.0	-4.2	22.2

Source: Investment Company Institute.

FIGURE 4

Net New Cash Flow to Equity Funds, Wilshire 5000 Index, 2000–2003



Sources: Investment Company Institute and Wilshire Associates.

While the pace of the inflows to all long-term funds held up, compositional changes did occur. Fund organizations not named in the investigations experienced an increase in flows, while those under investigation saw larger outflows. For fund companies not named, the average monthly inflow rose from $18.9 billion over the first eight months of the year to $28.9 billion after August. In contrast, outflows for fund companies named in the investigations increased from an average of $1.0 billion per month before September, to $10.7 billion per month during the last four months of the year.

The remainder of this section examines in more detail investor demand and net new cash flows into stock, bond and hybrid, and money market funds.

Stock Funds

As the U.S. stock market began to turn around in the spring, shareholder demand for stock funds strengthened in 2003 after nearly a year of outflows from these funds (Figure 4). Beginning in June of 2002, investors began to pull out money from their stock funds on a sustained basis, as the bear market eroded investor demand for stock funds. These outflows continued into the first quarter of 2003 when investors removed another $11 billion from stock funds as the stock market neared lows reached in 2002.

Stock markets began to recover in the spring of 2003, and investor demand for stock funds began to build. For the year as a whole, stock funds received a net inflow of $152 billion, the largest inflow of new cash since 2000. The turnaround in net flow occurred in both domestic and foreign stock funds. Domestic funds pulled in $129 billion in new investments in 2003 (Figure 5), compared with an outflow of $25 billion in 2002. The inflow to foreign stock funds was $23 billion, reversing an outflow of $3 billion in 2002.

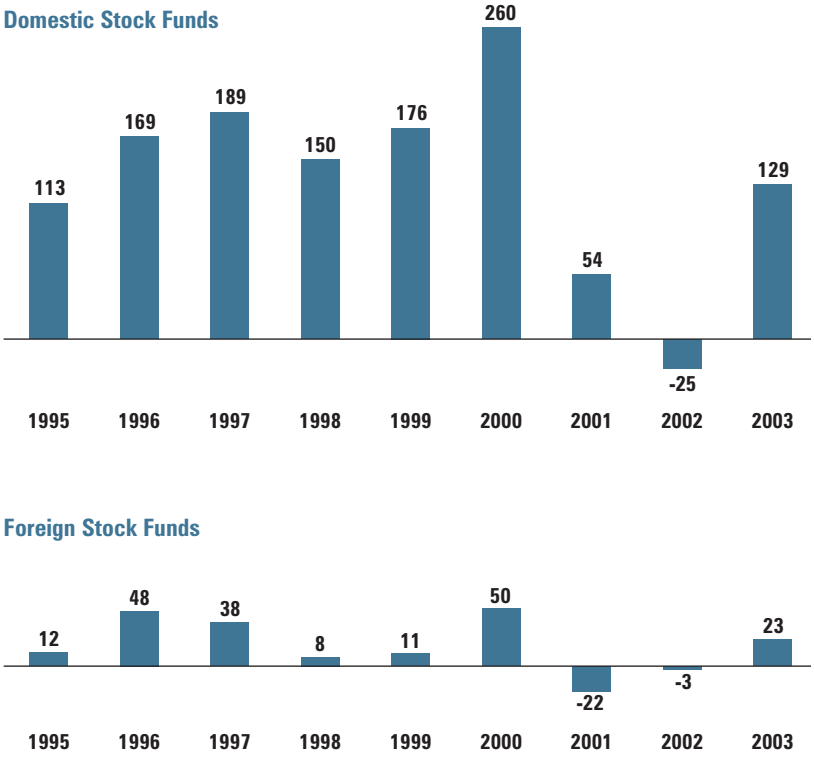
The overall net inflow in 2003 was the result of a reduction in redemptions. For the year as a whole, redemptions and exchange redemptions totaled $934 billion, a 25 percent drop from 2002. While sales also fell in 2003, the drop was considerably less than the decrease in redemptions. Sales were especially weak in the first quarter of 2003 when stock markets were under downward pressure, but moved upward as the year progressed. In contrast, redemptions declined over the first nine months of the year before ticking up slightly in the fourth quarter.

Domestic stock funds with investment styles focusing more on capital appreciation had inflows totaling $67 billion for the year, compared with an outflow of $37 billion in 2002. Those funds investing for total return or income had an inflow of $62 billion, up from a $12 billion inflow in 2002.

FIGURE 5

Net New Cash Flow to Domestic and Foreign Stock Funds, 1995–2003

(billions of dollars)

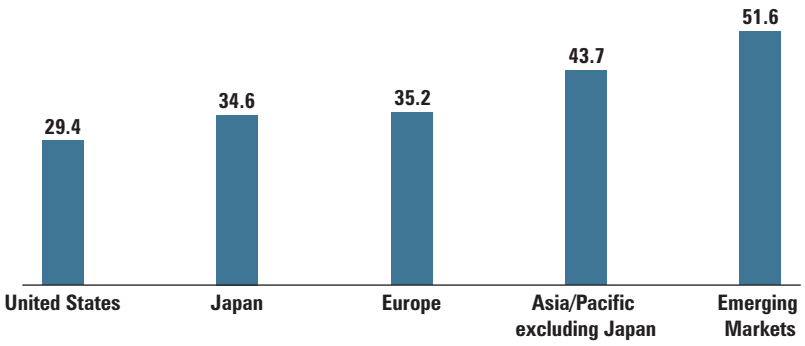


Source: Investment Company Institute.

FIGURE 6

Increases in World Stock Market Indexes,[1] 2003[2]

(percent change)



[1] The U.S. stock market is represented by the Wilshire 5000 Index. The European and Asia/Pacific stock markets are represented by the Morgan Stanley Capital International (MSCI) AC Europe and AC Asia/Pacific ex Japan Indexes, respectively. Emerging markets are represented by the MSCI EMF Emerging Markets Index. The Japanese stock market is represented by the MSCI Japan Index. All indexes are measured in U.S. dollars.

[2] The index changes are calculated from December 31, 2002 to December 31, 2003.

Sources: Bloomberg, Morgan Stanley Capital International, and Wilshire Associates.

Stock fund shareholders showed an increased demand for all types of stock funds investing in foreign stocks, but the largest inflows went to those funds investing in a broad range of international stock markets. The increased demand for foreign stock funds reflected the strong performance of foreign stock markets during 2003. In addition, the weakening of the U.S. dollar provided a further boost to foreign stock returns. Indeed, when measured in dollars, many foreign markets outperformed the U.S. stock market by a wide margin (Figure 6).

Flows and Expenses of Domestic Index Funds. Demand for domestic index funds strengthened along with other stock funds during 2003. Net new cash flow into these funds totaled $29 billion in 2003, up from $16 billion in 2002. Index funds tracking the S&P 500 were the most popular, attracting $12 billion in net new cash in 2003.

Net new cash flow and assets were concentrated in the lowest cost share classes of these funds. For example, among the S&P 500 index funds, more than 80 percent of the new cash went to funds with an expense ratio of 0.20 percent or less in 2003. Virtually all new cash went to funds with an expense ratio of less than 0.40 percent (Figure 7). Similarly, most stock index fund assets are in funds with expense ratios of 0.40 percent or less.

Several factors affect the expense ratios of index funds, with the most important being the level of the 12b-1 fee. These fees are used to compensate brokers and other financial planners that provide advice and assistance to fund shareholders. Investors in funds without 12b-1 fees either purchase fund shares without the assistance of a financial adviser or pay for this assistance directly.[7] The difference in average expense ratios

[7] The 12b-1 fee can also be used to pay for the services provided to 401(k) and other employer-sponsored retirement plans in which the employees share in the cost of operating the plan.

of the top quartile of S&P 500 index funds, ranked by expense ratios, and the bottom quartile was 1.24 percentage points in 2003.[8] All of the funds in the top quartile of expense ratios were sold through financial advisers and included compensation for their services in the expenses of the funds. In 1995, the difference in average expense ratios between the top and bottom quartiles was 0.72 percent.[9] The difference in expense ratios grew between 1995 and 2003 because most of the new funds started since 1995 are sold through financial advisers.

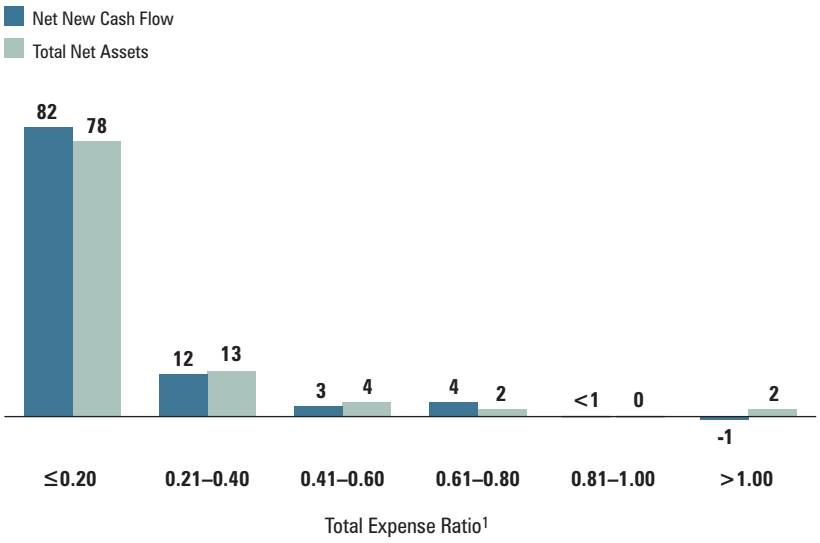
When one removes the 12b-1 fees and examines the cost of operating an index fund, the difference between funds narrows considerably. The difference in the average operating expense ratios of the top and bottom quartiles was 0.63 percent in 2003.[10] Differences in funds' operating expense ratios occur for a variety of reasons, including average fund size and average account size. Large funds and those with large average account sizes tend to have lower operating expenses than small funds and those with small average account sizes.

FIGURE 7

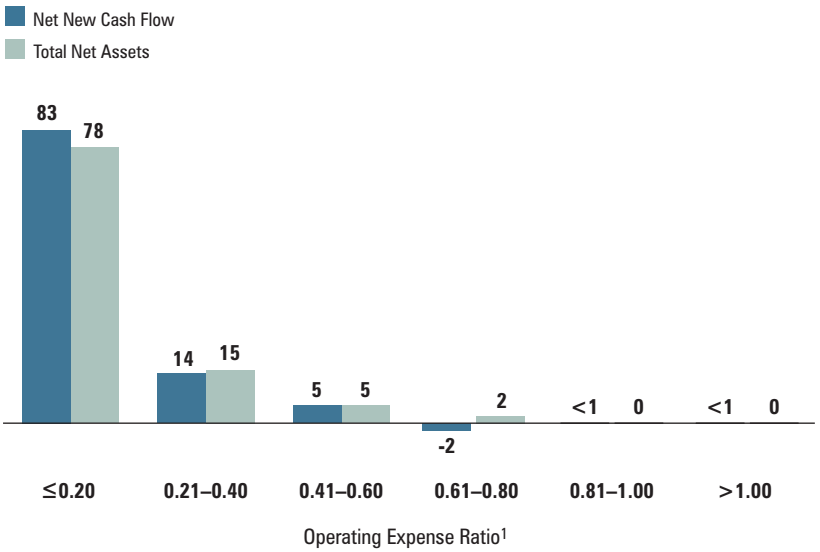
Net New Cash Flow and Total Net Assets to S&P 500 Index Funds, 2003

(percent)

Net New Cash Flow and Assets by Total Expense Ratio



Net New Cash Flow and Assets by Operating Expense Ratio



[1] *Fund expenses were based on preliminary 2003 data.*

Sources: Lipper Associates, Strategic Insight, Investment Company Institute.

[8] The average expense ratio for the bottom quartile of funds was 0.20 percent in 2003 and the average expense ratio for the top quartile of funds was 1.44 percent. Expense ratios were obtained from Morningstar® Principia® Pro Plus, December 2003.

[9] The 1995 expense data are a survivorship-bias free panel of data obtained from Lipper, Inc.

[10] The average operating expense ratio for the bottom quartile of funds was 0.14 percent in 2003 and the average operating expense ratio for the top quartile was 0.77 percent. Operating expense ratios were computed from data obtained from Morningstar® Principia® Pro Plus, December 2003.

FIGURE 8

Net New Cash Flow to Bond and Hybrid Funds, 1990–2003
(billions of dollars)

	Bond Funds						
	Corporate and Strategic-Income	Government and Mortgage-Backed	High-Yield	Global	Tax-Exempt	Total	Hybrid Funds
1990	2	-8	-5	8	10	7	1
1991	9	17	2	10	21	59	7
1992	11	30	5	-3	28	71	22
1993	17	6	8	1	38	71	44
1994	1	-40	-1	-7	-15	-62	23
1995	10	-14	8	-4	-7	-6	4
1996	12	-14	12	-2	-6	3	12
1997	21	-9	17	-1	1	28	16
1998	38	9	14	-1	15	75	10
1999	15	-2	-3	-2	-12	-4	-14
2000	-5	-16	-12	-2	-14	-50	-31
2001	42	28	7	-1	12	88	10
2002	54	59	11	0	16	140	9
2003	27	-19	26	3	-7	31	33

Note: Components may not sum to totals because of rounding.
Source: Investment Company Institute.

Bond and Hybrid Funds

Bond funds had a net inflow of $31 billion in 2003, down from $140 billion in 2002 (Figure 8). Taxable funds experienced a net inflow of $38 billion and tax-exempt funds recorded an outflow of $7 billion. Hybrid funds had an inflow of $33 billion, the largest inflow for these funds since 1993.

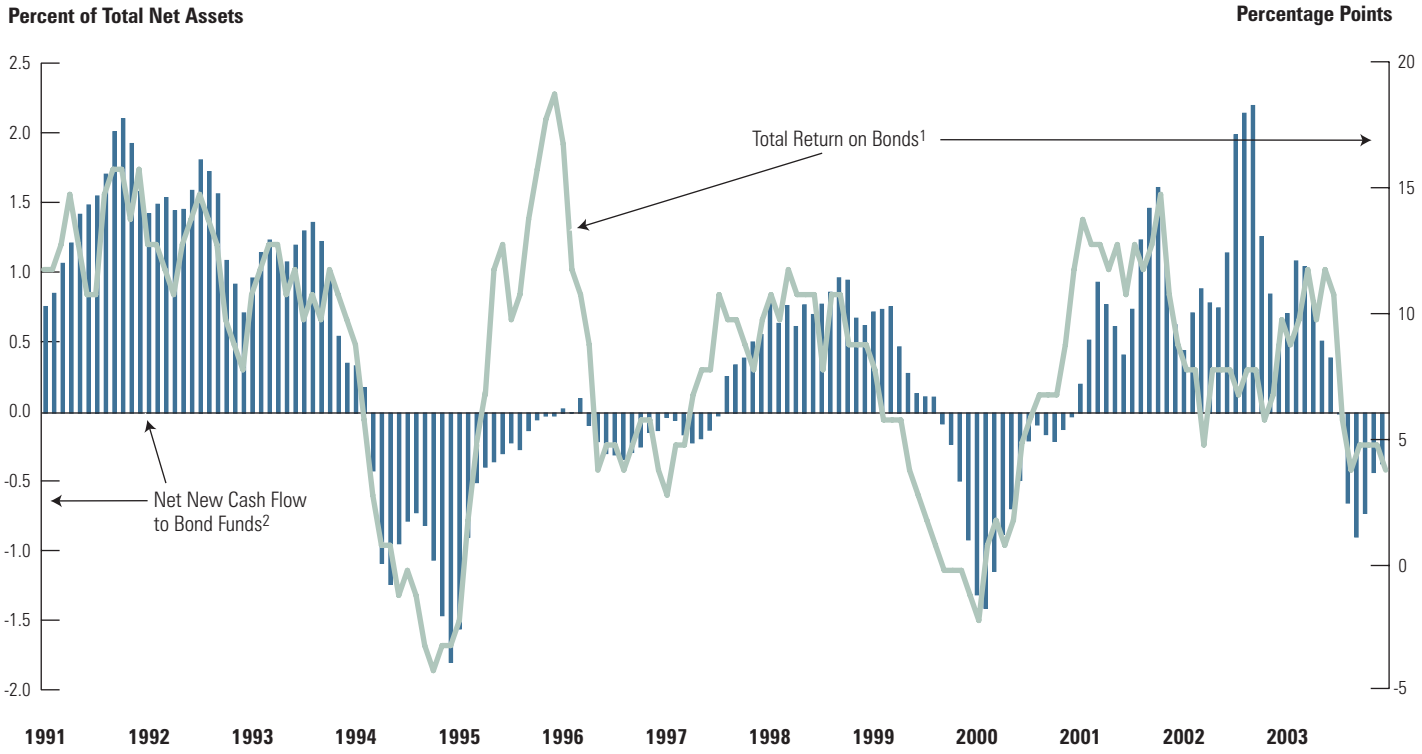
Bond Funds. Bond fund flows are highly correlated with performance (Figure 9),[11] and bond funds began 2003 with a high level of investor demand. Rising bond prices and high bond fund returns had attracted a record inflow of new cash in 2002. Bond fund returns remained high during the first half of 2003 as interest rates fell and bond prices rose. The yield on the 5-year Treasury note fell to its lowest level in nearly 50 years, pushing bond prices higher, and yields on high-grade corporate bonds dropped to 40-year lows. Inflows to bond funds during the first half of the year totaled $68 billion, higher than inflows reported over the same six months in 2002.

As the U.S. economy began to pick up steam in the third quarter, bond investors began to anticipate a growing demand for credit and a potentially higher pace of inflation. Yields on intermediate- and long-term Treasury securities rose and the higher long-term yields caused bond prices to fall, reducing returns on bonds and bond funds. Bond yields rose during the remainder of the summer, especially on Treasury securities, and drifted further upward in the fourth quarter. Investor demand weakened along with bond returns, and bond funds posted a $37 billion outflow during the second half of the year.

[11] Models of bond fund flows are explained in the Appendix.

FIGURE 9

Bond Returns and Net New Cash Flow to Bond Funds, 1991–2003



[1]*The total return on bonds is measured as the year-over-year change in the Citigroup Broad Investment Grade Bond Index.*

[2]*Net new cash flow to bond funds is plotted as a three-month moving average of net new cash flow as a percent of previous month-end assets. The data exclude flows to high-yield bond funds.*

Sources: Investment Company Institute and Citigroup.

Returns on bond funds can vary across funds depending on the types of bonds that are held by the fund. Yields fell the most on Treasury securities in the spring of 2003, providing a significant boost to returns for the funds investing in them. Subsequently, their yields rose more than those on corporate bonds, and outflows were the heaviest for bond funds investing in Treasury securities.

Municipal bond funds had weak inflows during the first half of the year, totaling about $3 billion. Yields on municipal bonds were fairly flat during 2003, so tax-exempt bond fund returns, unlike taxable bonds, were not helped by appreciating bond prices. The lower returns on these funds created less investor demand, and during the second half of the year, they had outflows totaling $10 billion. For the year as a whole, tax-exempt bond funds had $7 billion in outflows.

Hybrid Funds. Returns on hybrid funds, which invest in stocks and bonds, rose in 2003, lifted largely by the strong performance of the stock market. Inflows to hybrid funds rose to $33 billion in 2003, the highest level since 1993.

FIGURE 10

Net New Cash Flow to Money Market Funds, 1993–2003
(billions of dollars)

Year	Institutional	Retail	Total
1993	-3	-11	-14
1994	-17	26	9
1995	26	63	89
1996	37	53	89
1997	57	45	102
1998	104	131	235
1999	112	82	194
2000	117	43	160
2001	339	37	376
2002	32	-78	-47
2003	-107	-151	-258

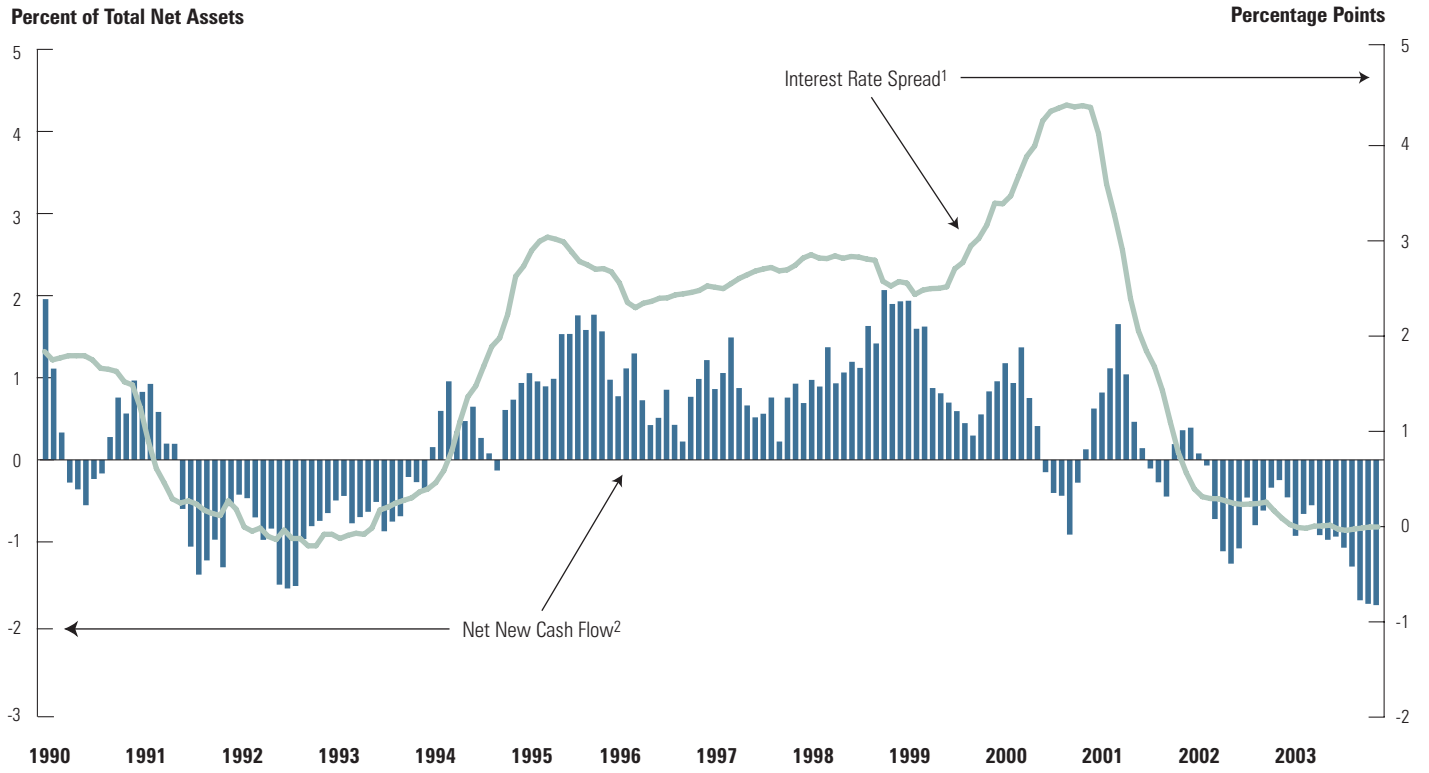
Source: Investment Company Institute.

Money Market Funds

Money market funds had a net outflow of $258 billion in 2003 (Figure 10) as both households and institutions shifted short-term assets out of money funds and into competing financial instruments such as bank deposits. The shift to alternative investments was the result of the low interest rates that prevailed throughout 2003. The year began with short-term interest rates at their lowest level since the 1958. Then, in June, the Federal Reserve cut its target interest rate by another 25 basis points, pushing short-term interest rates to around 1.00 percent. In this environment, the interest rates paid on bank deposits were at or above those offered on money funds, removing the premium that money funds traditionally pay above bank deposits.

FIGURE 11

Interest Rate Spread and Net New Cash Flow to Taxable Retail Money Market Funds, 1990–2003



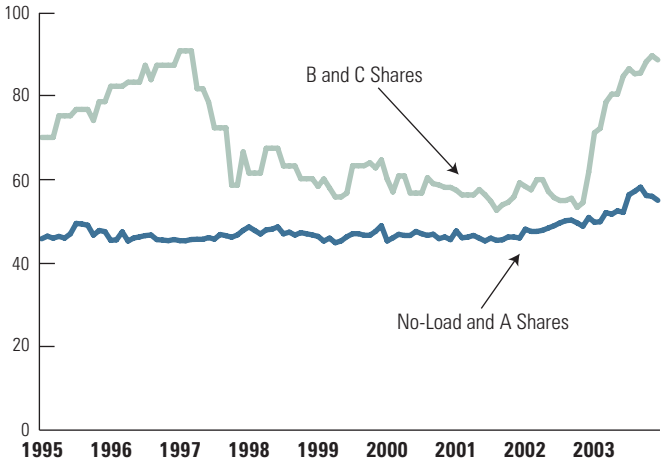
[1] The interest rate spread is the difference between the taxable retail money market fund yield and the average interest rate on money market deposit accounts.
[2] Net new cash flow is measured as a percent of previous month-end taxable retail money market fund assets and is shown as a six-month moving average.
Sources: Investment Company Institute, iMoneyNet, and Bank Rate Monitor.

Retail Money Market Funds. Retail money market funds, which are principally sold to individual investors, had net outflows totaling $151 billion for 2003 (Figure 10). The most important factor affecting retail money fund flows is the difference between money fund yields and those on bank savings deposits (Figure 11). These two financial instruments compete directly. In 2003, the yield spread fell to its lowest level since the early 1990s, and retail investors shifted toward bank deposits, resulting in outflows from money funds.

FIGURE 12

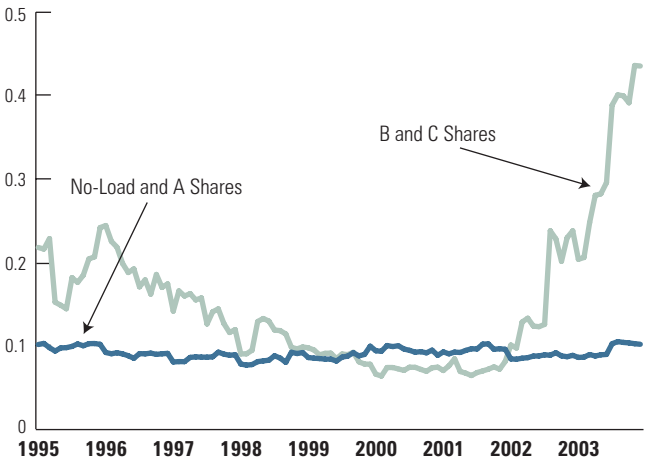
Fee Waivers, Expense Ratios, and Assets of Taxable Retail Money Market Funds by Share Class

Percent of Share Classes with Fee Waiver, 1995–2003



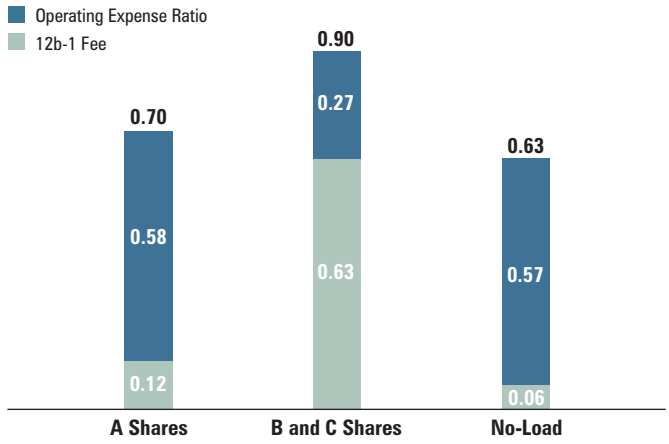
Average Fee Waiver, 1995–2003

(percent)

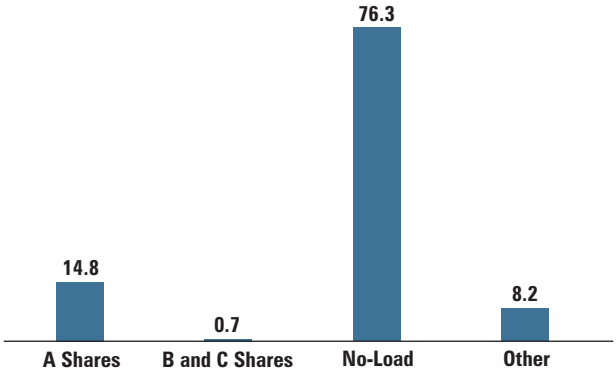


Average Expense Ratios, December 2003

(percent)



Percent of Assets, December 2003



Note: Operating expense ratios are calculated by subtracting the average 12b-1 fee from the average expense ratio.
Sources: Investment Company Institute and iMoneynet.

The low interest rate environment led many retail money funds to waive a portion of their fees in order to narrow the gap between their yields and rates on bank deposits and to avoid having negative yields. Fee waivers were larger and more common among B- and C-class shares, with more than 80 percent of these share classes waiving a portion of their fees by year-end (Figure 12). These share classes generally have higher fees than A-class shares and no-load funds because their expense ratios include a higher 12b-1 fee to pay brokers and other financial advisers for the advice and service that they provide to fund shareholders.

Generally, investors hold very few money market fund assets in B- and C-class shares; funds offer these share classes primarily to permit investors to move assets out of B- and C-class shares of long-term funds without paying back-end loads. Nearly all retail money fund assets are invested in no-load funds and A-class shares, and the A-class shares typically do not charge front-end loads.

The outflows from retail money funds in 2003 seem to have been largely the result of low interest rates rather than renewed strength in the stock market. Money fund flows tracked closely to those forecasted by a statistical model of mutual fund flows that captured the traditional response of money fund shareholders to interest rate and stock market movements. Although inflows increase to money funds when stock prices decline, there is no statistical evidence that money funds experience outflows when stock prices rise. Because actual flows tracked closely to those expected by the model, there is evidence that mutual fund shareholders overall did not react in a manner that departed from their typical behavior.[12]

Institutional Money Market Funds. Institutional money market funds, used by businesses, pension funds, state and local governments, and other large investors, had an outflow of $107 billion in 2003. Institutional money fund yields were below open-market rates, prompting some institutional investors to move money directly into money market instruments. Institutional money funds tend to earn a return that is slightly below the market interest rate on money market securities. The somewhat lower yield reflects the cost of managing the fund. In falling interest rate environments, the difference between money fund yields and money market rates can narrow, temporarily attracting new cash from institutional investors. As money fund yields return to their normal relationship to market rates, much of this new cash will leave money funds.

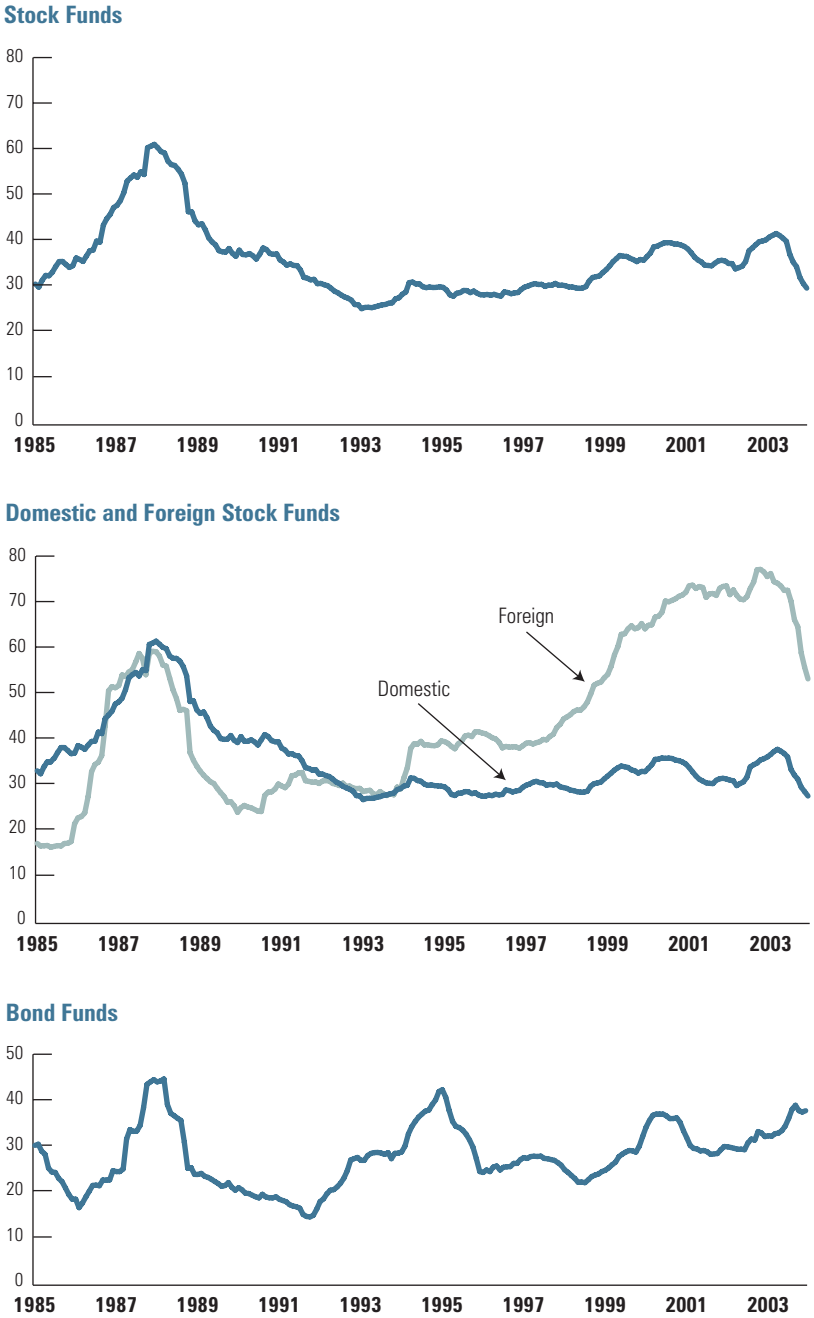
Institutional money funds saw significant outflows at the beginning of 2003. In November 2002, the Federal Reserve cut short-term interest rates, and money funds received sizeable inflows. As the yield difference between money funds and money market rates returned to normal levels, cash flowed back out of the funds. Outflows persisted throughout most of 2003, except for a brief period after the Federal Reserve cut short-term interest rates in June.

Another factor likely played a role in institutional investors removing cash from money funds. Businesses added $125 billion to bank checking accounts in 2003, and some of this additional cash likely came from money market funds. Banks are prohibited by law from paying interest on demand deposits, but institutional depositors earn credits based on an implicit interest rate on their deposits. These credits can be used to pay for banking services. When interest rates are low, businesses often increase their deposits to earn sufficient credits to pay for their bank services.

[12] The model of money market fund flows is explained in the Appendix.

FIGURE 13

Annual Redemption Rates[1] of Stock and Bond Funds, 1985–2003
(percent of assets)



[1] *The redemption rate is calculated as the sum of redemptions and exchange redemptions for the 12 months ending in the month plotted, divided by average total net assets during the same period.*

Source: Investment Company Institute.

SHAREHOLDER REDEMPTIONS AND PORTFOLIO TURNOVER

Redemptions, including exchange redemptions, measured as a percent of average assets, declined sharply in 2003 for stock funds (Figure 13). The decline reflects a slowdown in redemptions at both international and domestic stock funds. Redemptions peaked in late 2002 and declined throughout 2003. For stock funds as a group, the redemption rate declined to 31 percent in 2003 from 41 percent in 2002. The redemption activity among bond funds rose slightly in 2003.

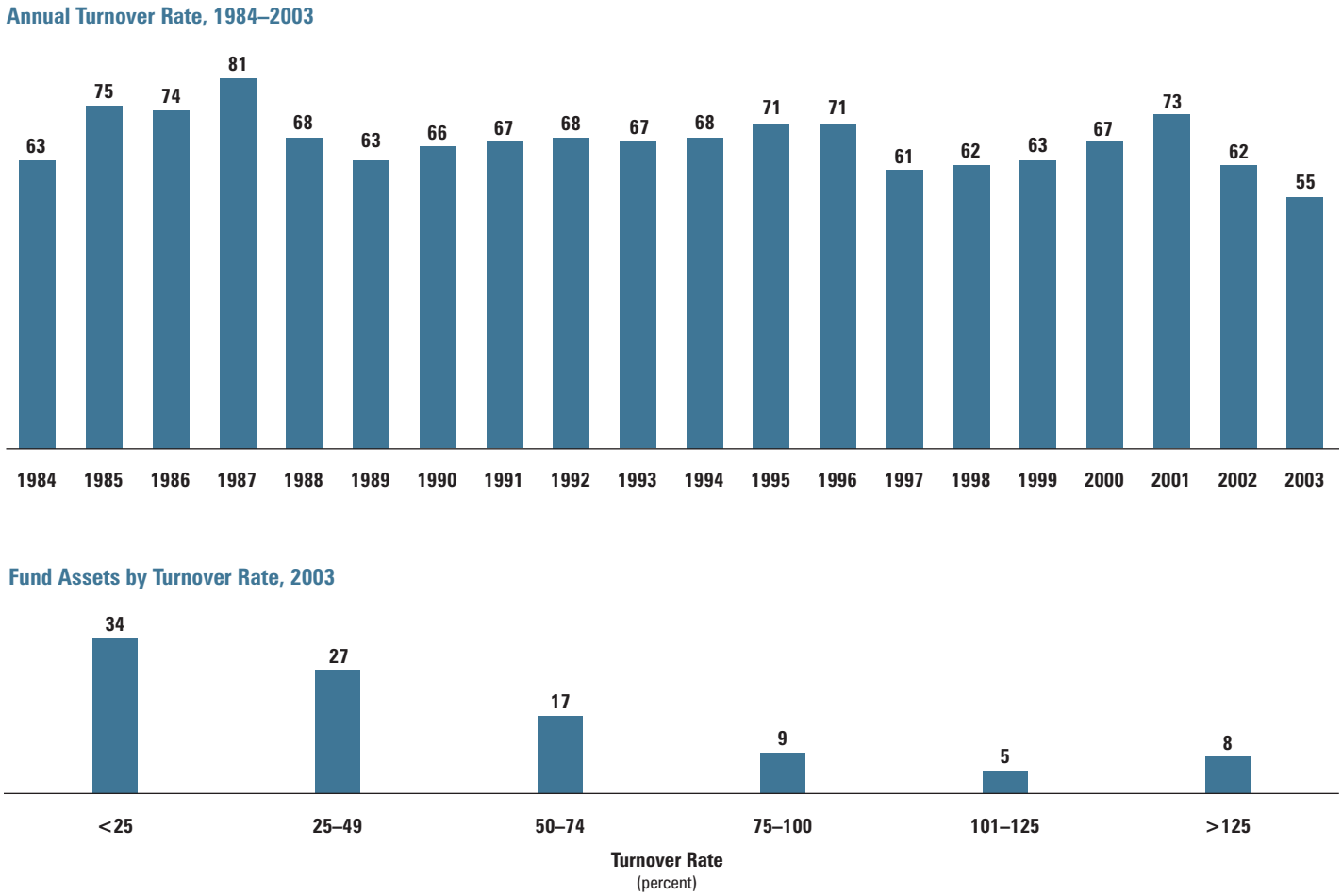
A large portion of the decline in redemption activity for stock funds occurred in foreign stock funds. In particular, the redemption rate for these funds peaked in 2002 at 76 percent and fell to 53 percent in 2003. Foreign stock funds have had higher redemption rates, in part, because a small percent of shareholders moved in and out of funds to try to time foreign stock market fluctuations. The decline in redemption rates suggests that the level of market timing likely has declined. Further evidence of reduced market timing in foreign stock funds is the decline in the annual redemption rate to 37 percent in the fourth quarter from 52 percent in the third quarter and 65 percent during the first half of 2003.

Available evidence suggests that market-timing activity was conducted by a relatively small portion of fund investors. For example, among household owners of stock funds, 84 percent made no redemptions in 2001.[13] High frequency traders can and have produced high redemption.

[13] *Equity Ownership in America, 2002,* Investment Company Institute and Securities Industry Association, Washington, DC, October 2002 (www.ici.org/pdf/rpt_02_equity_owners.pdf).

FIGURE 14

Annual Turnover Rate and Percent of Assets by Turnover Rates of Stock Funds
(percent)



Sources: © CRSP University of Chicago, Used with permission, all rights reserved (773.702.7467/www.crsp.com) and Lipper, Inc.

rates. Consequently, using the inverse of the redemption rate as an estimation of the holding period of the average shareholder, as some industry observers have done,[14] will significantly understate the actual holding period.[15]

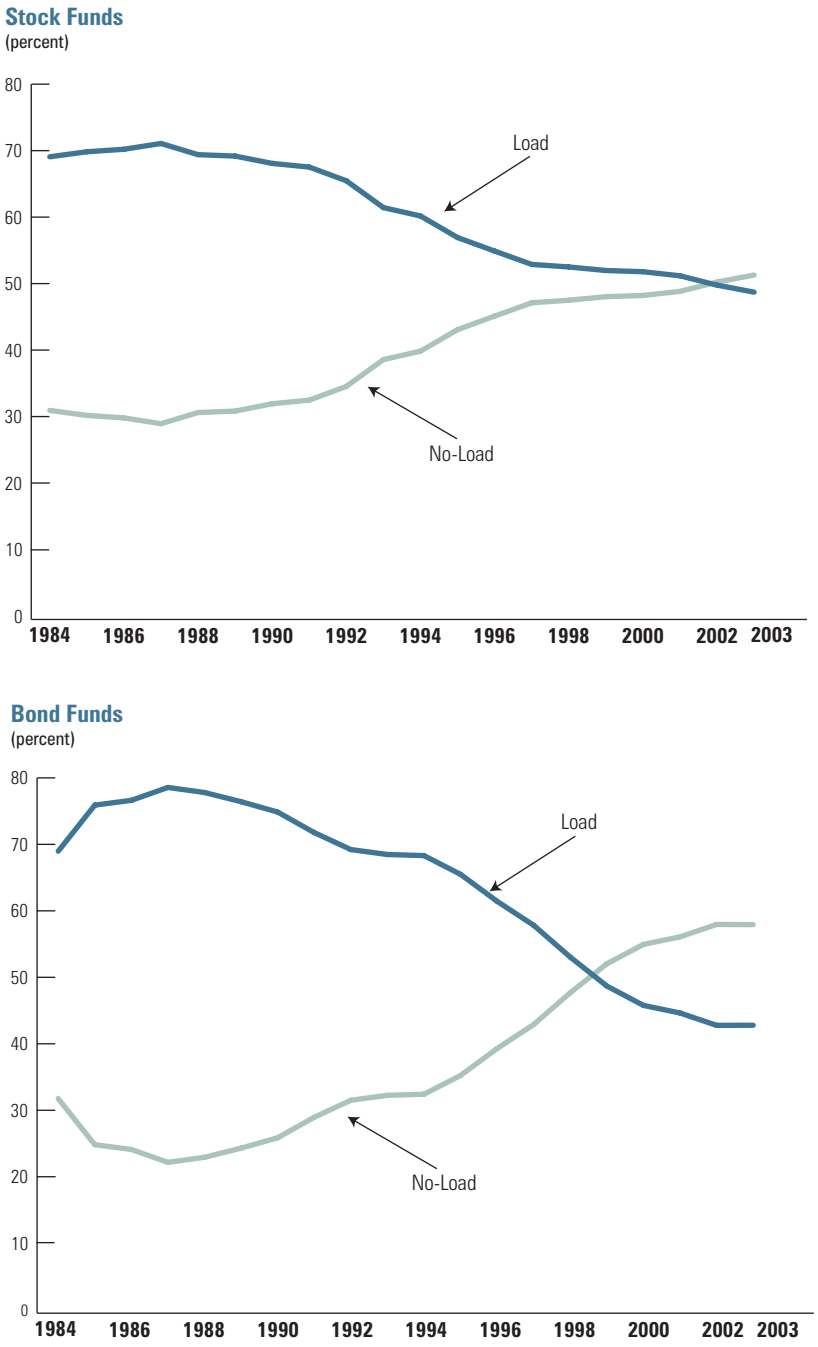
The drop in redemptions coincided with a fall in the rate of turnover in the securities held in mutual fund portfolios. The average portfolio turnover rate for stock funds, weighted by fund assets, fell to 55 percent in 2003, down from 62 percent in 2002 (Figure 14). The turnover rate in 2003 was the lowest in more than 20 years. The asset-weighted turnover rate provides an indication of potential trading costs borne by the average dollar invested in a stock fund.

[14] See, for example, "The Mutual Fund Industry in 2003: Back to the Future," Remarks by John C. Bogle Before the Harvard Club of Boston, the Harvard Business School Association of Boston, and the Boston Security Analysis Society (January 14, 2003).

[15] For a further discussion of these issues see "Redemption Activity of Mutual Fund Owners," *Fundamentals*, Vol. 10, No. 1, March 2001, Investment Company Institute (www.ici.org/pdf/fm-v10n1.pdf) and Brian Reid and Stefan Kimball, "Mutual Fund Industry Developments in 2002," *Perspective*, Vol. 9, No. 1, February 2003, Investment Company Institute, pp. 10–11 (www.ici.org/pdf/per09-01.pdf).

FIGURE 15

Load and No-Load Fund Assets as a Share of Total Fund Assets, 1984–2003



Sources: Investment Company Institute; Lipper, Inc.; Value Line Publishing, Inc.; CDA/Wiesenberger Investment Companies Service; © CRSP University of Chicago, Used with permission, all rights reserved (773.702.7467/www.crsp.com); Primary datasource & © Standard & Poor's Micropal, Inc. 1998 (617.451.1585/www.micropal.com); and Strategic Insight Mutual Fund Research and Consulting, LLC.

Turnover rates are sometimes reported as simple averages.[16] Such averages overstate the actual turnover activity that shareholders experience in their funds. Funds with high turnover rates tend to be small. Most stock fund assets are invested in funds with low turnover rates. In 2003, 61 percent of stock mutual fund assets were held in funds with turnover rates of less than 50 percent.

ASSETS AND FLOWS BY SHARE CLASS

The share of long-term fund assets in no-load share classes[17] continued to rise in 2003 (Figure 15). A large portion of the no-load assets are held through employer-sponsored pension plans and fund supermarkets. The growing reliance of shareholders on these third parties for mutual fund share purchases has contributed to the increase in assets in no-load share classes.

Nearly 60 percent of the net new cash flow into stock, bond, and hybrid funds in 2003 went to no-load share classes. Flows into these share classes have remained more stable than cash flow to load funds because of the steadier stream of net new cash from employer-sponsored pension plans, which are heavy users of institutional no-load share classes.

[16] See, for example, Ian McDonald, "Funds Adjust to Volatile Markets," *The Wall Street Journal*, February 2, 2002, p. R1.

[17] No-load share classes are those classes of funds that carry no front-end or back-end load and that have a 12b-1 fee of 0.25 percent or less.

Load share classes, which generally are sold through brokers and other financial advisers, had a net new cash flow of $51 billion in 2003 (Figure 16). A shares and C shares received most of the net new cash, while B shares had net outflows for the second year in a row. The net new cash flow to variable annuities rose to $42 billion, from a net outflow of $2 billion in 2002.

The flows by share class also reflect that shareholders tend to invest in funds with expense ratios that are well below average. Two-thirds of the net new cash flow went to stock funds with expense ratios under 1 percent, and 57 percent of assets were in share classes with expense ratios below 1 percent (Figure 17). Based on preliminary data, the average stock fund share class had an expense ratio of 1.66 percent in 2003.[18]

FIGURE 16

Net New Cash Flow to Long-Term Funds by Share Class, 2000–2003

(billions of dollars)

	2000	2001	2002	2003[e]
All Long-Term Funds[1]	229	129	121	216
Load	80	44	20	51
A Shares	35	25	16	40
B Shares	25	0	-16	-18
C Shares	26	20	23	27
Other Load	-6	-1	-3	2
No-Load	96	71	103	124
Retail	68	38	53	76
Institutional	28	33	49	48
Variable Annuities	51	13	-2	42

[1] Components may not sum to total because of rounding.

[e] Share class designations for 2003 are based on preliminary fund expense data.

Sources: Investment Company Institute; Lipper, Inc.; Value Line Publishing, Inc.; CDA/Wiesenberger Investment Companies Service; © CRSP University of Chicago, Used with permission, all rights reserved (773.702.7467/www.crsp.com); Primary datasource & © Standard & Poor's Micropal, Inc. 1998 (617.451.1585/www.micropal.com); and Strategic Insight Mutual Fund Research and Consulting, LLC.

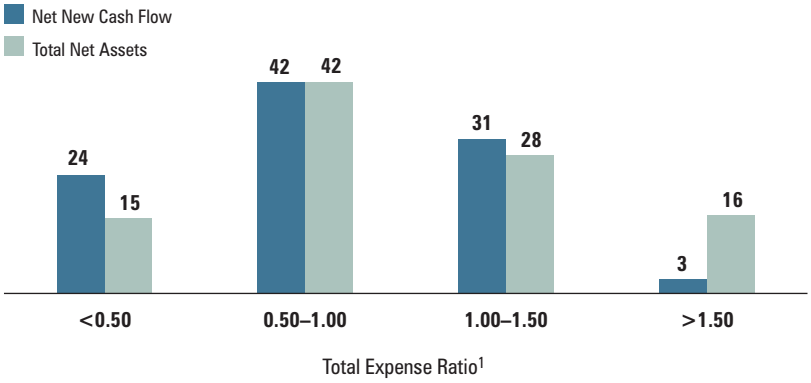
[18] Simple-average expense ratio computed from data provided by Lipper, Inc.

FIGURE 17

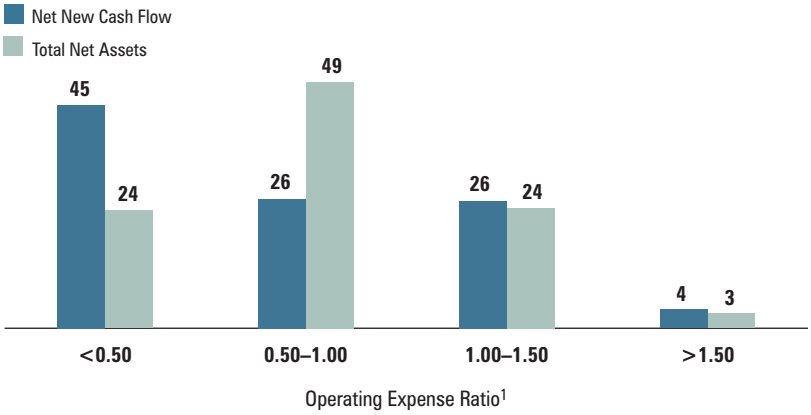
Percent of Net New Cash Flow and Assets of Stock Funds by Expense Ratio, 2003

(percent)

Net New Cash Flow and Assets by Total Expense Ratio



Net New Cash Flow and Assets by Operating Expense Ratio



[1]Fund expenses were based on preliminary 2003 data.

Sources: Lipper Associates, Strategic Insight, and Investment Company Institute.

Expense ratios include the 12b-1 fee, which is used to compensate financial advisers for advice and service and is not used to operate the fund. Removing 12b-1 fees leaves those expenses charged to the fund for its operation. In 2003, more than 70 percent of the net new cash flows of stock funds went to share classes with operating expense ratios of 1 percent or less, and nearly 75 percent of the stock fund assets were invested in these share classes.

CAPITAL GAIN AND INCOME DISTRIBUTIONS

Mutual funds distributed an estimated $14 billion in capital gains in 2003, the lowest level since 1990, and significantly less than the record level of $326 billion reached in 2000 (Figure 18). About one third of the capital gain distributions in 2003 are estimated to have been paid to tax-deferred accounts, such as 401(k) and other employer-sponsored pension plans, and IRAs. These distributions are not taxed until the shareholders withdraw money from these accounts.

The low level of capital gain distributions reflected the after-effects of the 2000–2002 bear market. By law, mutual funds must distribute by December 31 of each year virtually all capital gains realized during the 12 months ending on October 31 of that year.[19] Many stock funds had either realized losses during the bear market or their stocks were valued at prices below

[19] Mutual funds held through variable annuities are an exception to this law. These funds must distribute realized gains by the end of their fiscal year.

FIGURE 18

Capital Gain Distributions and Dividend Distributions by Mutual Funds, 1996[1]–2003

(billions of dollars)

Capital Gain Distributions (Long-Term Funds)

	Total	Non-Household	Taxable Household	Tax-Deferred Household	Memo: Undistributed Capital Gain/Loss on Equity Funds[2]
1996	100	17	30	53	25
1997	183	25	61	97	30
1998	165	18	50	97	25
1999	238	27	69	142	33
2000	326	35	96	194	30
2001	69	5	14	50	-7
2002	16	2	5	9	-28
2003	14[e]	2[e]	7[e]	5[e]	-4

Dividend Distributions (Short- and Long-Term Funds)

	Total	Non-Household	Taxable Household	Tax-Exempt and Tax-Deferred
1996	116	50	21	45
1997	129	54	25	50
1998	138	63	25	51
1999	164	75	29	60
2000	186	102	27	57
2001	162	84	24	54
2002	115	41	23	51
2003	103[e]	28[e]	25[e]	50[e]

[1] The distinction between taxable and tax-deferred capital gains of households is not possible before 1996.

[2] The undistributed capital gain/loss is measured as the cumulative realized and unrealized change in the value of portfolio securities that has not been distributed to shareholders. It is expressed as a percent of total net assets as of October of each year.

[e] Estimate based on preliminary data.

Note: Numbers may not sum to totals because of rounding.

Source: Investment Company Institute.

FIGURE 19

Mutual Funds That Distributed Capital Gains, 1996–2003
(percent of funds)

	Stock	Bond	Hybrid
1996	68	23	72
1997	74	30	78
1998	57	37	68
1999	57	22	64
2000	54	8	59
2001	28	15	30
2002	11	21	12
2003	10[e]	23[e]	7[e]

[e] *Estimate based on preliminary data.*
Source: Investment Company Institute.

their purchase price. Hence, by the end of October 2003, stock funds as a group still had embedded losses totaling 4 percent of assets. About 10 percent of all stock mutual funds paid a capital gain distribution in 2003 (Figure 19), whereas nearly 25 percent of bond funds paid a capital gain distribution. The higher percent of bond funds paying distributions was the result of bond funds realizing capital gains as bond prices rose in 2002 and 2003.

Mutual funds, including money market funds, distributed an estimated $103 billion in income in 2003. These distributions are derived from interest on bonds and other fixed-income securities held by funds and stock dividend payments. The decline in interest rates during the past several years has reduced the size of the dividend payments made by funds. An estimated $50 billion of these distributions were paid to tax-deferred accounts or were tax-exempt distributions because the underlying securities were tax-exempt securities. Taxable dividend distributions to households totaled $25 billion.

The Jobs and Growth Tax Relief Reconciliation Act of 2003 significantly reduced the tax burden on mutual fund shareholders by setting a maximum tax rate of 15 percent on certain dividends and all long-term capital gains. The dividend rate cut benefits shareholders in funds investing in U.S. and many foreign equities. The capital gains rate cut benefits all fund shareholders receiving capital gain distributions or redeeming fund shares held for more than one year.

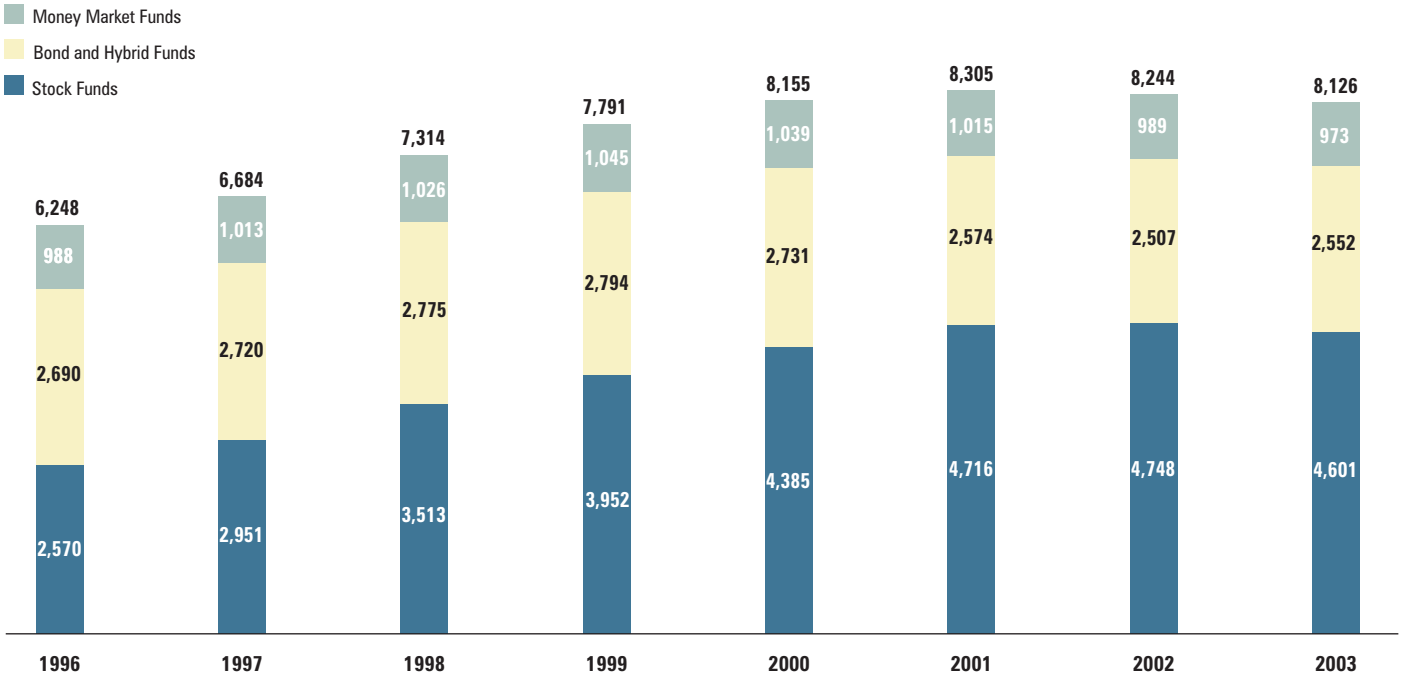
FUND CREATION AND LIQUIDATION

The number of mutual funds fell for the second straight year to 8,126 in 2003 (Figure 20). The decline in the number of funds in 2003 was concentrated in stock funds, reflecting the decline in demand for these funds during the bear market. The number of stock funds fell from a peak level of 4,748 funds in 2002 to 4,601 by the end of 2003. Money market funds also experienced net liquidations over 2003, while the number of bond and hybrid funds rose over the year.

Those stock funds that were merged or liquidated in 2003 tended to be small. The median size of stock funds liquidated or merged over the year was $15 million (Figure 21). Those funds remained small in large part due to weak cash flow. In fact, a large portion of fund mergers and liquidations result from new fund offerings not garnering enough cash flow to remain viable. Of the funds created from 1996 to 2003, those

FIGURE 20

Number of Funds by Type of Fund, 1996–2003



Source: Investment Company Institute.

FIGURE 21

Median Assets of Merged and Liquidated Funds by Year of Merger or Liquidation, 1996–2003

(millions of dollars)

Type of Fund	1996	1997	1998	1999	2000	2001	2002	2003
Equity	36	47	23	31	15	16	15	15
Hybrid	23	35	30	71	22	41	38	57
Bond	10	23	18	34	22	36	40	55
Money Market	94	195	155	411	106	189	96	64

Source: Investment Company Institute.

FIGURE 22

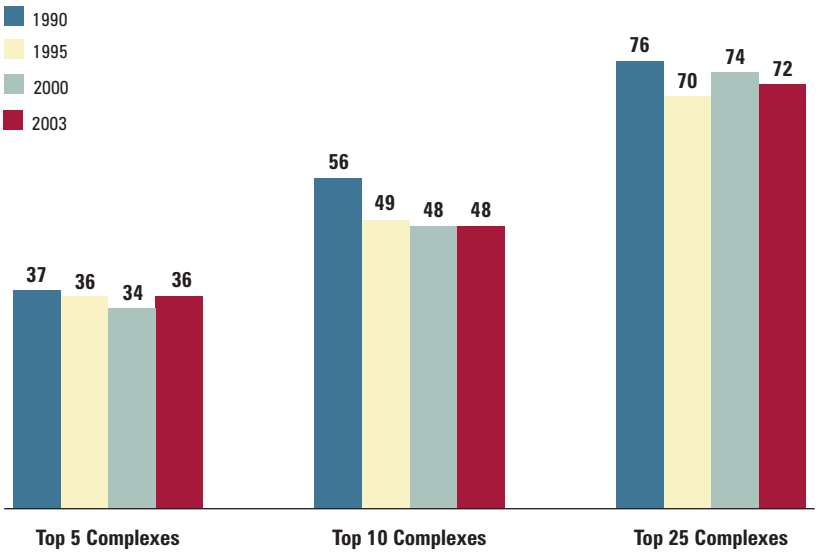
Total Net New Cash Flow to Funds by Year of Inception, 1996–2003

Year of Inception	Total Net New Cash Flow[1] to All Funds Created in Year	Funds Still Existing as of 2003	Funds Merged or Liquidated by 2003
1996	157	150	7
1997	222	207	15
1998	149	144	5
1999	116	113	3
2000	67	61	6
2001	40	37	3
2002	24	24	0
2003	10	10	0

[1] Cumulative net new cash flow from date of creation through 2003.
Source: Investment Company Institute.

FIGURE 23

Share of Assets at Largest Mutual Fund Complexes, Selected Years
(percent of industry total)



Note: Variable annuities are excluded.
Source: Investment Company Institute.

that remained open received $746 billion in cash flow over the period, while those that later closed received $39 billion (Figure 22).

Fund offerings change to meet investor demand. This is accomplished both by existing fund sponsors and new sponsors that enter the industry. Low barriers to entry allow new sponsors to offer funds and compete for assets and has kept concentration from rising over the past decade. The share of industry assets held by the largest 25 fund complexes has fallen from 76 percent in 1990 to 72 percent in 2003 (Figure 23). The decline in the number of funds over the past two years has not resulted in a higher level of consolidation in the fund industry.

CONCLUSION

Fund industry assets rose by more than $1 trillion to $7.4 trillion in 2003, lifted by strong stock and bond fund returns. Yet, despite fund assets rising to near record levels, the industry experienced a net cash outflow for the first time since 1988. A record amount of cash left money market funds, which more than offset the largest net cash inflow to long-term funds in three years.

Investors showed a renewed demand for stock funds in 2003. These funds received the largest net flow of new cash since 2000. Stock fund investors heavily favored low-cost funds. Among index funds, those with the lowest costs also received most of the net new cash. The net new cash flow to stock funds rose because the pace of redemptions slowed sharply in 2003. The slowdown started during the first part of the year and then picked up in the fall following the investigations of late-trading and abusive market-timing activity. The turnover of securities held in stock fund portfolios fell to its lowest pace in 20 years. Assets were predominantly invested in funds with low turnover rates.

The number of mutual funds declined for the second consecutive year in 2003. Nonetheless, the industry has remained highly competitive, with the concentration of assets among the largest fund organizations largely unchanged.

APPENDIX

Models of Bond Fund Flows

Statistical models can be used to analyze the relationship between bond fund flows and bond returns. Reid and Kimball (February 2003) presented three such models for bond fund flows. These models were modified for this issue of *Perspective*.

Three separate models are estimated to distinguish between the flow behavior for different types of bond funds. Net new cash flow to bond funds has been increasing over time, so fund flows are expressed as a percent of previous month-end assets in all three models. Government and mortgage-backed bond funds and corporate and strategic-income bond funds have less volatile cash flows than high-yield bond funds and can therefore be modeled using standard ARMA[20] specifications. Net new cash flows to high-yield bond flows have a large, time-varying variance suggesting the use of an ARCH[21] specification.[22]

In each model, bond return indexes are used as a proxy for the return on bond funds. The model of government and mortgage-backed bond fund flows uses an index of government and mortgage-backed bonds. An index of investment grade corporate bonds is used to measure returns on portfolios of corporate and strategic-income funds. The high-yield bond fund flow model uses a total return index for high-yield bonds. All returns are calculated as the percent change in the respective index minus the average percent change over the estimation period.

The model estimates show that returns on bonds are a major determinant of net new cash flow to bond funds (Figure 24). All three models reveal a positive correlation of bond fund flows to bond returns. However, the timing of this reaction differs between the three sectors of bond funds. The flows to government and mortgage-backed bond funds as well as to corporate and strategic-income bond funds exhibit some inertia in their reaction to returns. This is specifically true for corporate and strategic-income funds, where bond returns of the previous 12-month period help to explain current flows. On the other hand, flows in and out of high-yield bond funds are highly correlated to contemporaneous returns in the high-yield bond markets. A 1 percent increase in monthly returns, measured by the Merrill Lynch Master II Index, causes a 0.46 percent increase in net new cash flow to high-yield bond funds during the same month.

Monthly returns in stock markets are measured using the S&P 500 Index. Returns are expressed as their absolute percent value and are separated in two categories according to their sign. The results show that investors increase their holdings of government and mortgage-backed bond funds when stock prices fall and decrease their holdings of these funds when stock prices rise.

Net new cash flows to bond funds exhibit seasonal patterns. To avoid any distortions in the parameter estimates and to study the time varying pattern of bond flows throughout the year, 11 seasonal dummy variables are included in each model. They capture any unexplained seasonal pattern of bond flows relative to January, which is the reference category. Months with significant seasonal movements in their flows are listed for each model.

Model of Taxable Money Market Flows

Previous issues of *Perspective* have presented models for taxable retail money fund flows. This issue presents a slightly updated model for these flows (Figure 25).

As with the previous model, the dependent variable is net new cash flow to taxable retail money market funds as a percent of previous month-end assets. Since monthly cash flows have risen substantially during the last decade, normalizing by month-end assets controls for this trend.

[20] Autoregressive Moving Average.

[21] Autoregressive Conditional Heteroskedasticity.

[22] The fact that the coefficient on the ARCH(1)-term is significantly different from zero shows that the second moment of net new cash flows to high-yield bond funds has autoregressive dynamics.

FIGURE 24

Estimated Model Coefficients for Bond Fund Flows

	Dependent Variable		
Independent Variable	**NNCF[1] to Government and Mortgage-Backed Bond Funds**	**NNCF[1] to Corporate and Strategic-Income Bond Funds**	**NNCF[1] to High-Yield Bond Funds**
Constant	0.17	1.11***	1.50***
Monthly Total Return$_t$	0.16***		0.46***
Monthly Total Return$_{t-1}$	0.15***		
Monthly Total Return$_{t-2}$	0.14***		
Annual Total Return		0.10***	
Yield Curve	-0.71***	-0.29*	
Positive Percent Change in S&P 500	-0.04**		
Negative Percent Change in S&P 500	0.04**		
Seasonal Movements	December***	March,* April,* June,* November,*** December***	July,* September,* October**
First-Order Autoregressive Correction Term	0.94***	-0.89***	0.93***
Second-Order Autoregressive Correction Term		0.81***	
Third-Order Autoregressive Correction Term		0.72***	
First-Order Moving Average Correction Term	-0.17*	1.36***	-0.75***
Second-Order Moving Average Correction Term		-0.26	
Third-Order Moving Average Correction Term		-0.62***	
ARCH(1)			0.48**
Ljung-Box (16)	15.05	12.43	12.28
Log Likelihood			-197.51
R^2	0.87	0.72	

** significant at 10% level*

*** significant at 5% level*

**** significant at 1% level*

[1] Net New Cash Flow (monthly)

Note: The dependent variables are net new cash flows measured as a percent of previous month-end assets. The bond return figures are generated from different bond indexes that cover the bond market segment in question, namely the Citigroup Government/Mortgage Index, Citigroup Investment Grade Corporate Bond Index and the Merrill Lynch Master II Index. Monthly total returns are calculated as the monthly returns of the indexes minus their mean return. Likewise, total annual returns are calculated as the annual returns of the indexes minus their mean return over the estimation period. "Yield curve" is the first difference of the spread between 10-year Treasury securities and the yield on taxable retail money market funds, minus the average spread. The "Positive (Negative) Percent Change in S&P 500" is the absolute value of the monthly percent change of the S&P 500, whenever the index is positive (negative). The government/mortage-backed fund flow model and the corporate/strategic-income fund flow model are estimated using ordinary least squares. The high-yield bond fund flow model is estimated by employing ARCH-methodology (Autoregressive Conditional Heteroskedasticity). While the former two models are estimated using data from January 1990 through November 2003, the high-yield bond fund flow model is estimated from April 1990 to November 2003.

Sources: Investment Company Institute, Haver Analytics, iMoneynet, Citigroup, Merrill Lynch, Standard and Poor's Corporation.

The first explanatory variable, "Money Fund-MMDA Yield Spread," is the spread between yields on taxable retail money funds and money market deposit accounts. The logic of including this variable into the model is evident from Figure 11. Money market funds and deposit accounts are close substitutes in cash management. An increase in the spread will therefore have strong positive effects on net new cash flows to taxable retail money market funds, which is confirmed by the large and significant coefficient on this variable.

The variable "Bond Return-Money Fund Yield Spread" is included in the model to capture substitution effects between bond markets and money market funds. The results show that an increase in the spread of bond over money market yields decreases net new cash flows to taxable retail money market funds.

To account for the substitution effects between money funds and stock markets, the model includes positive and negative changes of the S&P 500. Both of them are expressed as absolute values of the monthly percent change since 1990. The results reveal that investors increase their holdings of money funds when stock market returns are negative but do not decrease their holdings in months in which stock prices rise. This asymmetric response of shareholders suggests that strong stock market performance in the past year did not contribute to the outflows from money market mutual funds.

The explanatory variable "Retail Sweeps" accounts for some brokerage firms relying less on money market funds and more on bank money market deposit accounts as cash accounts for their clients. Increased use of bank deposits has depressed money market fund cash flows in recent years.

FIGURE 25

Estimated Model Coefficients for Taxable Retail Money Market Fund Flows

	Dependent Variable
Independent Variable	**Net New Cash Flow to Taxable Retail Money Market Funds**
Money Fund-MMDA Yield Spread	0.580***
Bond Return-Money Fund Yield Spread	-0.014**
Positive Percent Change in S&P 500	-0.031
Negative Percent Change in S&P 500	0.191***
Retail Sweeps	-2.319***
January	0.903***
February	0.250
March	-0.455
April	-2.170***
May	-1.025***
June	-1.609***
July	0.366
August	-0.288
September	-1.475***
October	-0.107
November	-0.129
December	-1.776***
Number of Observations	164
Ljung Box (12)	19.755
R^2	0.671

*** significant at 5% level*

**** significant at 1% level*

Note: The model is estimated from January 1990–December 2003. The dependent variable is monthly net new cash flow to taxable retail money market funds measured as a percent of previous month-end assets. The "Money Fund-MMDA Yield Spread" is the spread of money fund yields over yields on money market deposit accounts. The "Bond Return-Money Fund Yield Spread" is the monthly change in the spread between the annualized monthly change in the Citigroup Broad Investment Grade Bond Index and the money fund yield. The "Positive Percent Change in S&P 500" is the percent change in the average monthly S&P 500 Index when the index is positive. The "Negative Percent Change in S&P 500" is the absolute value of the percent change in the average monthly S&P 500 Index level when the index is negative. "Retail Sweeps" is the net new cash flow from money funds with sweep accounts, measured as a percent of total net assets of all taxable retail money funds. The model is estimated using ordinary least squares.

Sources: Investment Company Institute, Haver Analytics, iMoneynet, Citigroup, Merrill Lynch, Standard and Poor's Corporation.

Twelve dummy variables are included in the model to account for seasonality effects in the net new cash flow to taxable retail money market funds. The results show that the month of January is generally characterized by higher-than-average net new cash flows to retail money market funds. In contrast, net new cash flow is generally lower than average in April, May, June, September, and December.

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