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Growth and Development of Bond Mutual Funds

by Brian Reid¹

SUMMARY

Bond mutual funds have become an important way for U.S. households to invest in the bond market.² This paper examines the growth of bond mutual funds, the economic forces that influence bond fund sales and redemptions, and the impact that drops in bond prices have on bond fund flows. The highlights of the review are as follows:

Growth of Bond Mutual Funds. During the past two decades, bond mutual funds have grown from a niche investment product with \$4.7 billion in assets offered by only a few mutual fund companies to a \$635.6 billion sector of the U.S. mutual fund industry, amounting to approximately 18 per-

cent of mutual fund assets. The growth of bond funds has made them an important source of capital to the municipal and high-yield bond markets.

Bond fund assets grew strongly in the 1980s and early 1990s as a result of changes in the tax law in 1976 that made municipal bond funds viable, a decline in inflation that boosted the price of bonds, and the introduction of a wide variety of bond funds.

Ownership of Bond Funds. Individuals owned about three-quarters of all bond fund assets at the end of 1995. The vast majority of individual holdings was held outside retirement accounts, such as IRAs and 401(k) plans. By contrast, households held over two-thirds of their equity fund assets in retirement accounts.

Bond Fund Shareholders. Bond fund shareholders are similar to the typical mutual fund shareholder, owning more than one type of mutual fund. Municipal bond fund shareholders tend to be slightly older and wealthier than the average mutual fund shareholder, reflecting a demand among retirees for tax-exempt income.

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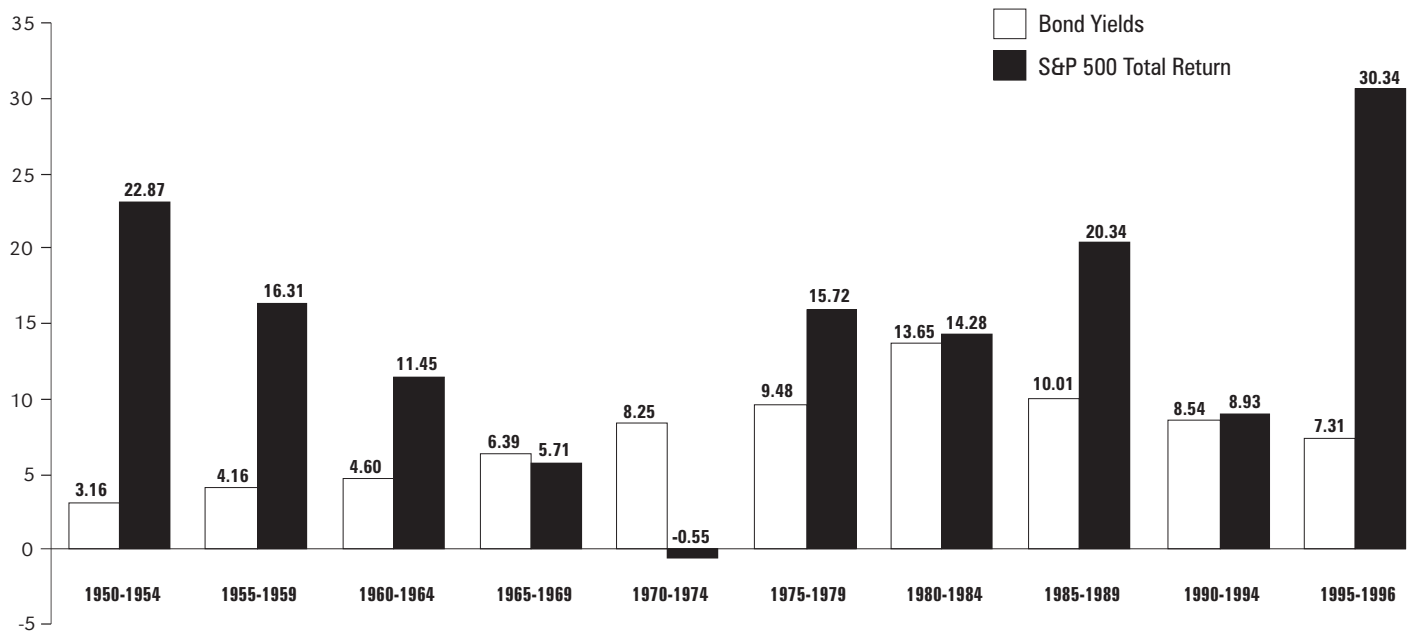
² Unless otherwise stated, bond mutual funds are only those funds with an investment objective to generate income by investing in bonds; they exclude income funds. The ICI currently identifies eight bond fund investment objectives. U.S. Government bond funds invest in Treasury securities, federally guaranteed mortgage-backed securities, and other government-backed issues. Ginnie Mae funds invest primarily in mortgage-backed securities. Corporate bond funds primarily purchase bonds of U.S.-based corporations, but they also invest in other fixed-income securities such as U.S. Treasury securities. Income-bond funds invest in a mixture of corporate and government bonds. High-yield bond funds seek a very high yield and must maintain at least two-thirds of their portfolios in corporate bonds rated BAA or lower by Moody's rating service and BBB or lower by Standard and Poor's rating service. National municipal bond funds invest primarily in bonds issued by states and municipalities. State municipal bond funds primarily contain issues of one state. Global bond funds seek a high level of income by investing in debt securities of companies and countries worldwide, including issuers in the U.S.

Balanced and flexible-portfolio funds, which can invest a large share of their portfolios in debt instruments, are excluded from this group because these funds have substantial holdings of corporate equities. Income-mixed funds, which invest primarily in bonds but also hold equities, are included in the bond fund data before 1984 because they cannot be separated out from income-bond funds for earlier years.

FIGURE 1

Total Return of the S&P 500 Stock Price Index and Average Yield on Corporate Bonds, 1950-1996

(percent)



Note: Data are five-year averages except for 1995-1996 which is a two-year average.
Source: Standard & Poor's Corporation, Moody's Investors Service

Effect of Interest Rates on Net Flows. Net flow of new cash into bond funds is affected by interest rates.³ Net flows are the heaviest during extended periods of declining interest rates and high returns on bond funds. On the other hand, negative net flows have been associated with rising interest rates and negative or low returns on bond funds.

The fluctuation in bond fund flows results more from changes in sales than from changes in redemptions.

Shareholder Behavior. Although there have been negative net flows from bond funds during bond market contractions since the mid-1980s,

there is no evidence that bond fund shareholders redeem *en masse*, even when interest rates rise sharply. This behavior is similar to that of equity fund shareholders, who have not redeemed *en masse* during any of the stock market contractions since World War II.⁴

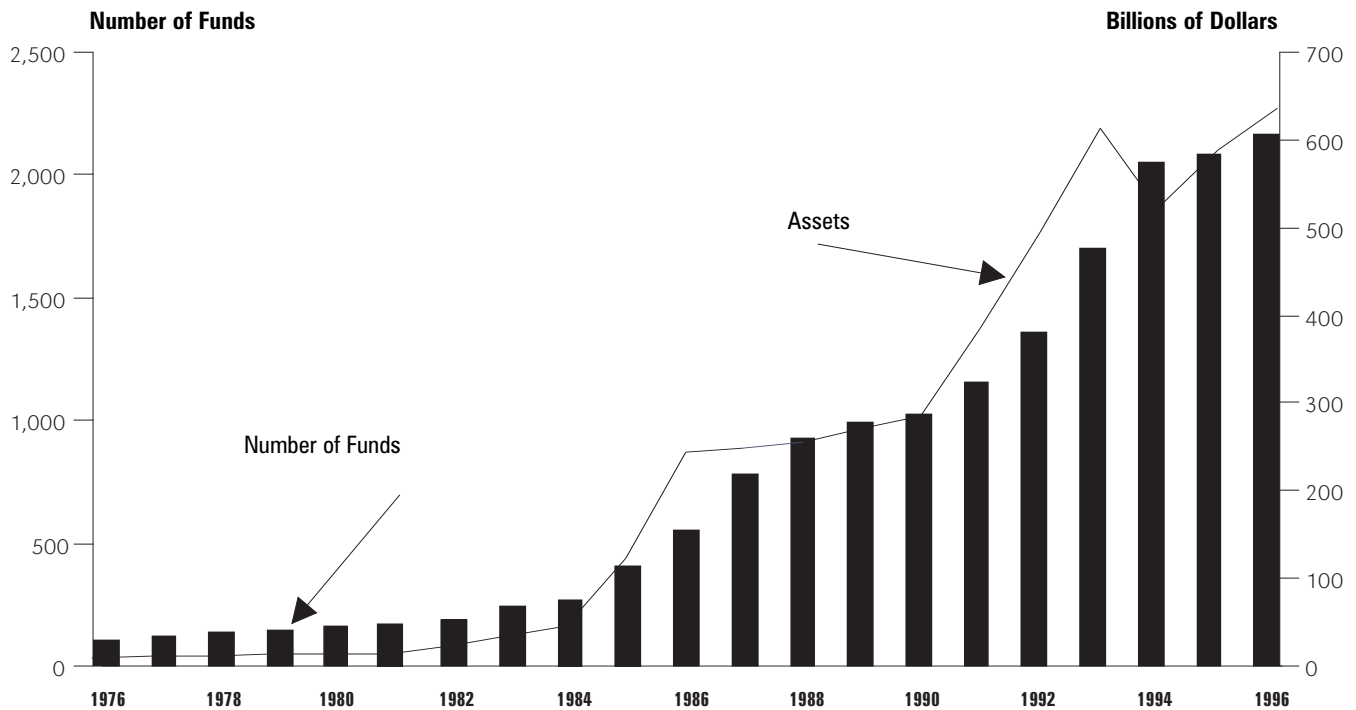
There is no evidence that bond fund outflows contribute to bond market downturns.

³ Bond fund flows refer to the net new cash flow by shareholders. It is calculated by the sales of shares including those through exchanges from other funds within the same family of mutual funds, but not including those through reinvested distributions, minus the redemptions of shares including those through exchanges into other funds within the same fund family. Unless otherwise noted, the term net flow refers to net new cash flow, inflow refers to a positive value of net new cash flow, and outflow refers to a negative value of net new cash flow.

⁴ See John Rea and Richard Marcis, "Mutual Fund Shareholder Activity During U.S. Stock Market Cycles, 1944-95," *Perspective*, Volume 2, Number 2 (March 1996) for a discussion of equity fund shareholder behavior during stock market contractions.

FIGURE 2

The Number and Assets of Bond Funds, 1976-1996



Source: Investment Company Institute

Growth of Bond Mutual Funds in the United States

When the Investment Company Act was enacted in 1940, there were six bond mutual funds.⁵ Between 1940 and 1965, only three new bond funds were introduced, likely reflecting low investor demand due to the much higher average return on equities (Figure 1). Not until the equity markets suffered declining prices in the late 1960s and early 1970s did mutual fund sponsors begin to organize more bond funds.

However, rising inflation, which eroded the value of bonds, and relatively high short-term interest rates, which made short-term debt instruments a more attractive investment alternative, discouraged

investors from purchasing intermediate- and long-term fixed income securities. By the end of 1975, there were only 35 funds with a total of \$2.2 billion of assets that the Investment Company Institute (ICI) categorized as corporate bond funds—funds investing in a mixture of corporate and Treasury securities. Income funds—those funds investing in bonds as well as corporate equities—totalled 41, with assets of \$2.5 billion.

Factors Contributing to Growth. Several factors contributed to the growth in the number and assets of bond funds (Figure 2). The first was the Tax Reform Act of 1976, which made municipal bond funds viable by allowing the income earned on municipal securities to pass tax-free through to mutual fund shareholders. During 1976, fund companies introduced 14 municipal bond funds, and by the end of that year, these funds accounted for 6.5 percent of bond and income

⁵ The Keystone group offered four bond funds that were organized in 1935, the Pilgrim group offered a bond fund that was organized in 1938, and National Securities Funds offered a bond fund that was organized in 1940. For further discussion of the development of bond mutual funds, see Werner Renberg, *All About Bond Funds*, New York: John Wiley & Sons, 1995.

FIGURE 3

Number and Assets of Bond Funds by Investment Objective, 1984 and 1996

Investment Objective	January 1984		December 1996	
	Number	Assets	Number	Assets
Corporate	28	3.07	102	35.57
Ginnie Mae	7	1.36	82	51.33
Global	1	0.04	167	37.46
High Yield	32	6.20	112	78.26
Income Bond	39	3.84	397	100.89
National Municipal	60	13.28	295	135.63
State Municipal	22	2.85	685	116.93
U.S. Government	22	0.93	330	79.51
Total	211	31.57	2,170	635.58

Note: January 1984 is the first month for which the Investment Company Institute classifies bond funds by these investment objectives. Before 1984, bond funds were categorized as corporate, income, or municipal bond funds. See footnote 2 for a description of the current investment objective categories. Assets are in billions of dollars.

Source: Investment Company Institute

FIGURE 4

Holders of Mutual Funds, 1995

(percent of assets)

Type of Fund	Individuals		Fiduciaries ²	Other ³	Total Assets (billions of dollars)
	Retirement ¹	Other			
Bond	13.2	62.8	16.6	7.4	587.2
Mixed	39.1	35.5	9.3	16.1	211.1
Equity	57.0	25.5	4.5	13.0	1269.0
Money Market	16.3	45.0	22.0	16.7	753.0

¹ Retirement assets are those in employer-sponsored pension plans and Individual Retirement Accounts (IRAs).

² Fiduciaries are banks and individuals serving as trustees, guardians, or administrators.

³ Other assets include those held by businesses, financial institutions, nonprofit organizations, and other organizations.

Source: Investment Company Institute

fund assets. Municipal bond funds continued to grow in popularity. By December 1996, there were 980 municipal bond funds with assets of \$252.6 billion, accounting for 39.7 percent of all bond fund assets (Figure 3).

A second factor contributing to bond fund growth was the change in the economic environment in the mid-1980s and early 1990s. As inflation

slowed and interest rates fell, bond prices rose sharply and net flows to bond funds rose. Between mid-1984 and early 1987, bond fund net flows amounted to \$195.0 billion, or about six times the assets held in bond funds at the beginning of the period. Between early 1989 and late 1993, net flows totaled \$207.2 billion or 80.7 percent of assets held at the beginning of the period.

A third source of growth was the result of new product introductions that provided investors with more options. For example, in January 1984 there were: one global bond fund with \$39.7 million in assets; seven Ginnie Mae funds with \$1.4 billion in assets; and 21 U.S. Government bond funds with \$931 million in assets. By December 1996, the number of global bond funds grew to 167 with \$37.5 billion in assets; Ginnie Mae funds grew to 82 with \$51.3 billion in assets; and U.S. Government bond funds grew to 330 with \$79.5 billion in assets.

The growth of bond funds has made them an important source of capital to the municipal and high-yield bond markets. At the end of 1996, bond funds held 19.1 percent of the \$1.3 trillion municipal government debt and 24.3 percent of the \$271 billion of high-yield bonds.⁶ By contrast, bond funds held 3.1 percent of the \$6.4 trillion of federal government and agency debt and only 4.0 percent of the \$3.8 trillion of corporate debt.⁷

Ownership of Bond Funds

Individuals are the principal owners of bond funds (Figure 4). Of the \$587.2 billion of bond fund assets outstanding at the end of 1995, individuals held \$446.3 billion or 76 percent. Individuals tend to concentrate their holdings outside tax-advantaged IRAs and employer-sponsored retirement plans, with over four-fifths held in nonretirement accounts. This reflects individual ownership of tax-exempt bond funds that are unsuitable for tax-sheltered retirement

⁶ Estimates are based on data from the Investment Company Institute and Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Flows and Outstandings First Quarter 1997* (June 12, 1997), and Merrill Lynch, *High Yield Market, First Quarter Update* (May 30, 1997).

⁷ Bond funds held \$599.9 billion of debt securities in December 1996; money market mutual funds held \$634.3 billion; income funds held \$113.6 billion; and equity funds held \$66.6 billion. Most of the debt held by bond and income funds is intermediate and long-term, whereas most of the debt held by money market and equity funds is short-term. In total, mutual funds held 7.6 percent of outstanding government and agency debt, 30.2 percent of municipal debt, and 6.9 percent of corporate debt (including commercial paper).

accounts. Within retirement accounts, individuals have shown a preference for equity funds because equity funds have a greater long-term potential for asset appreciation. Moreover, guaranteed investment contracts (GICs) have captured a large portion of the fixed-income investments in defined contribution plans.

Bond Fund Shareholders. Owners of bond funds are similar to the typical mutual fund shareholder (Figure 5) and reflect the tendency of mutual fund shareholders to own more than one type of mutual fund. More than 60 percent of mutual fund shareholders own at least two types of funds, and 80 percent of all bond and income shareholders also own equity funds. Bond mutual fund shareholders are slightly older than the average mutual fund shareholder. As a result, they have a higher median level of financial assets than the average shareholder—

FIGURE 5

Characteristics of Mutual Fund Owners

	All Mutual Fund Shareholders	Bond Fund Shareholders ¹	Municipal Bond Fund Shareholders ²
Age (median)	44	46	50
Household Income (median)	60,000	60,000	65,000
Household Assets (median)	50,000	75,000	150,000
Retired (percent)	18	20	30
Completed College (percent)	58	64	69

¹ Includes shareholders of income funds.

² All shareholders who own municipal bond funds including those who may also own other types of funds.

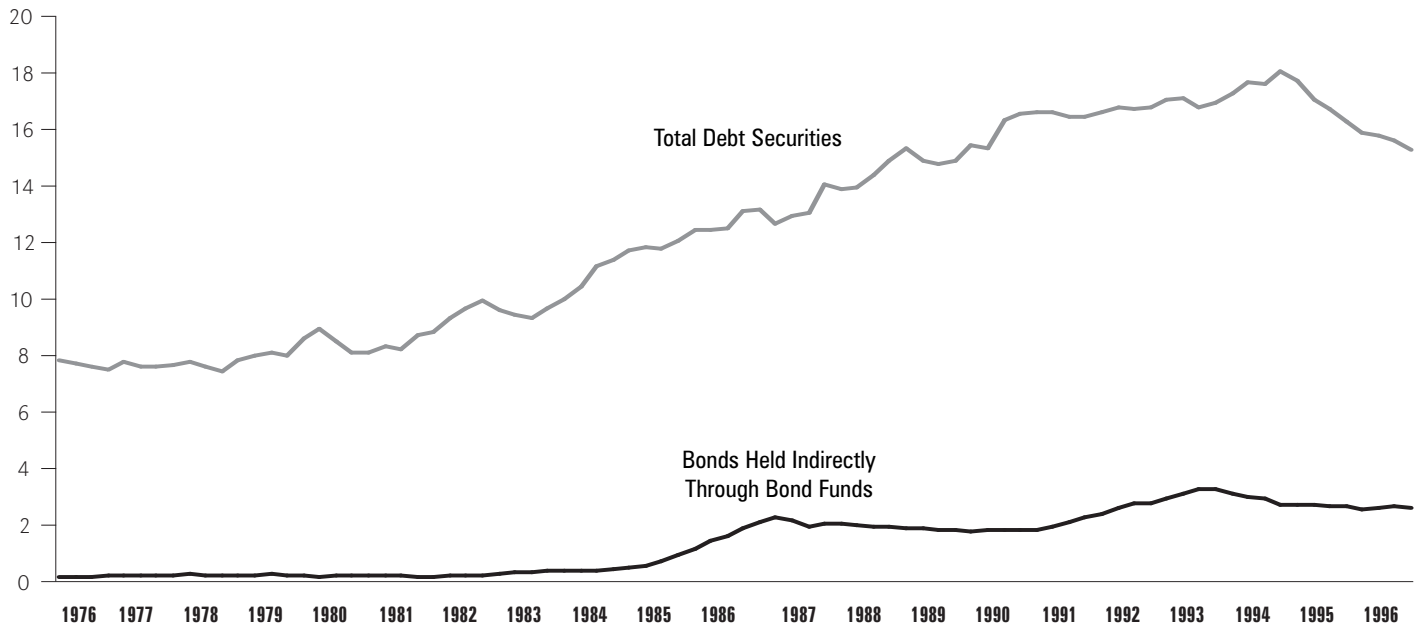
Source: Investment Company Institute

\$75,000 compared with \$50,000—and are more likely to be retired and to have a four-year college degree.⁸ One reason that bond fund shareholders are slightly older than the average shareholder is that only 4 percent of mutual fund shareholders born in 1965 or later own bond and income

FIGURE 6

Household Holdings of Debt Securities as a Share of Household Financial Assets, 1976-1996

(percent)



Note: Household holdings of debt securities include direct holdings plus holdings through trusts, defined contribution plans, and mutual funds.

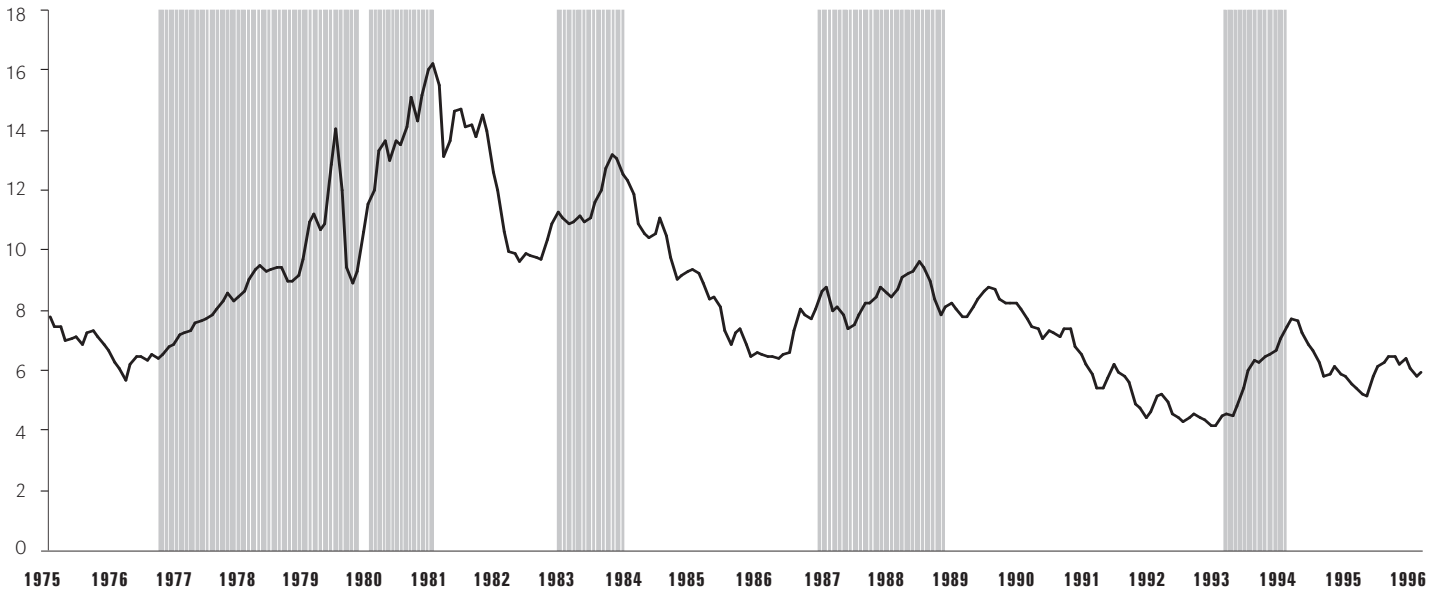
Source: Federal Reserve Board and Investment Company Institute

⁸ Financial assets exclude primary residence and assets in employer-sponsored retirement plans.

FIGURE 7

Three-year Treasury Note Yield During Interest Rate Cycles, 1975-1996

(percent)



Note: Shaded regions represent the contraction phases of the interest rate cycle. First observation is October 1975; last observation is December 1996.

Source: Federal Reserve Board and Investment Company Institute

mutual funds, compared with approximately half of the shareholders born before 1965. Another reason is that municipal bond funds are attractive investments for individuals, such as retirees, seeking investments that earn tax-exempt income. Indeed, the median age of municipal bond fund holders is 50, and 30 percent are retired.

Improving Access to the Credit Markets. Bond funds have provided individuals with greater access to credit markets at the same time that debt securities have become a more important financial asset for individuals (Figure 6). At yearend 1976, households held \$301.2 billion of debt securities, accounting for 7.5 percent of household financial assets; 20 years later households held \$3,533.2 billion in debt securities that accounted for 15.5 percent of household financial assets.⁹ Meanwhile, the portion

of debt securities that households held through bond funds rose from 2.7 percent in 1976 to 16.9 percent in 1996.

The Effect of Interest Rate Cycles on Net Flows into Bond Funds

Interest Rate Cycles. During the past two decades, there have been five complete interest rate cycles (Figure 7).¹⁰ Each cycle begins with an expansion during which interest rates fall and bond prices rise from a trough reached at the end of the preceding cycle. The start of an expansion is typically associated with a decline in inflation and an

⁹ Estimates are based on data from the Investment Company Institute and the Federal Reserve Flow of Funds Accounts. Household ownership of debt securities includes holdings by nonprofit organizations and is comprised of direct holdings and indirect holdings through personal trusts, closed-end funds, defined-contribution plans, and mutual funds.

¹⁰ There is no agreed upon benchmark for dating interest rate cycles, and interest rates typically peak before the beginning of a recession and bottom out when economic activity is still strong. For the purposes of this paper, the dating of cycles relies on two measures. First, cycle peaks and troughs generally coincide with lows and highs, respectively, of interest rates on intermediate-term government securities. However, interest rates do not move in lock step. Second, when there was an ambiguity in the date of a peak or trough, the peak or trough of the Merrill Lynch Master Index of Government Securities was used. The March 1987 to March 1989 cycle was treated as one cycle even though some bond yields peaked in October 1987. However, the Merrill Lynch price index reached a low in March 1989.

The Merrill Lynch Master Government Index is for all U.S. government securities, and in May 1997 had a modified duration of about five years and an average maturity of 8¼ years. Securities with shorter durations will have smaller price movements for a given change in interest rates, and securities with longer durations will have larger price movements. Hence, price changes and total return data cited are generally reflective of the bond market, but returns will vary across bond funds based on their portfolios' asset mix.

FIGURE 8

Interest Rate Cycles

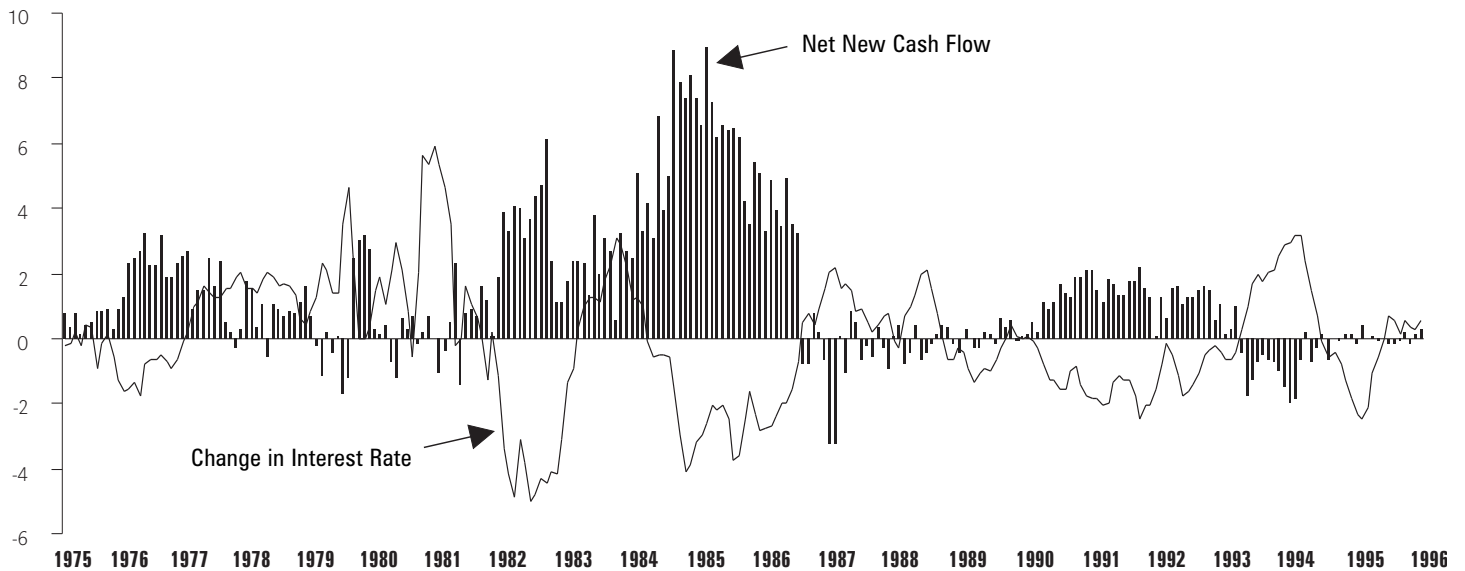
Trough	Peak	Trough	Duration (Months)		Change in Price (percent)		Total Return (percent)	
			Expansion	Contraction	Expansion	Contraction	Expansion	Contraction
Sep-75	Dec-76	Mar-80	15	39	8.4	-18.1	17.6	3.2
Mar-80	Jun-80	Sep-81	3	15	14.4	-13.6	15.9	-3.8
Sep-81	Apr-83	Jun-84	19	14	25.2	-11.8	45.7	1.9
Jun-84	Feb-87	Mar-89	32	25	22.2	-11.1	63.5	8.5
Mar-89	Oct-93	Nov-94	55	13	15.1	-13.7	69.2	-6.0

Note: See footnote 10 for a description of criteria used to identify the interest rate cycles.
 Source: Merrill Lynch Corporation

FIGURE 9

Net New Cash Flow into Bond Funds and Interest Rate Changes, 1975-1996

(percent)



Note: Net new cash flow is shown as a percentage of the previous month's outstanding assets. Interest rate changes are year-over-year changes in the constant maturity yield on the three-year Treasury note.

Source: Federal Reserve Board and Investment Company Institute

easing of monetary policy. During the longest expansion, March 1989 to October 1993, U.S. government security prices rose 15.1 percent and the total return on bonds was 69.2 percent (Figure 8). During the shortest expansion, March 1980 to June 1980, bond prices rose 14.4 percent and the total return on bonds was 15.9 percent.

The start of each contraction is marked by a peak in bond prices after which interest rates rise and bond prices decline, often in conjunction with an actual or anticipated tightening of monetary policy. During December 1976 to March 1980—the severest contraction as measured by the percentage change in bond prices—U.S. Government security prices fell 18.1 percent and investors earned only 3.2 percent. During the mildest contraction—February 1987 to March 1989—U.S. Government security prices

FIGURE 10

**Monthly Averages of Net New Cash Flow, Sales, and Redemptions
During Interest Rate Cycles**

(percent of previous monthend assets)

Cycle			Net New Cash Flow		Sales		Redemptions	
Expansion	Contraction		Expansion	Contraction	Expansion	Contraction	Expansion	Contraction
Trough	Peak	Trough						
Sep-75	Dec-76	Mar-80	1.03	1.04	2.31	3.03	1.28	2.00
Mar-80	Jun-80	Sep-81	2.87	0.17	4.70	2.59	1.83	2.43
Sep-81	Apr-83	Jun-84	2.41	2.15	4.79	5.25	2.38	3.09
Jun-84	Feb-87	Mar-89	5.41	-0.32	7.91	2.77	2.50	3.09
Mar-89	Oct-93	Nov-94	0.91	-0.71	3.24	2.60	2.33	3.30
Total			2.36	0.53	4.61	3.15	2.24	2.62

Note: Sales include exchanges into funds, and redemptions include exchanges out of funds but exclude reinvested dividends and capital gains distributions.

Source: Investment Company Institute

fell 11.1 percent and provided investors with an 8.5 percent total return, compared with a 63.5 percent return during the preceding expansion.

Net flow and interest rates. Net flows³ into bond funds are sensitive to movements in market interest rates (Figure 9). Net flows generally are high during bond market expansions when interest rates are falling and returns on bond funds are rising, whereas net flows are low or negative when interest rates are rising and returns on bond funds are low or negative. Monthly net flows averaged 2.36 percent of assets during the five expansions, compared with .53 percent of assets during the five contractions (Figure 10).

For example, inflows increased in 1985 and 1986 when interest rates moved sharply lower and bond returns increased. Inflows ended abruptly in the spring of 1987 when the Federal Reserve tightened monetary policy and did not resume until 1990 when interest rates began a sustained decline. Heavy inflows continued until early 1994, when the Federal

Reserve once again tightened monetary policy, producing outflows from bond funds. Since then, this relationship has been less pronounced, however, because bond fund flows were dampened by the 56.2 percent return on domestic equity funds over 1995 and 1996.¹¹

This positive association between bond returns and net flows into bond funds has also been documented in several recent studies. Warther (1995) demonstrated this correlation, and subsequent research by Remolona, Kleiman, and Gruenstein (1997) and Edwards and Zhang (1997) confirmed Warther's findings.¹² Furthermore, the latter two studies conclude that, although bond returns affect bond fund flows, there is no evidence that these flows affect bond market returns.

¹¹ Lipper Analytical Services, Inc., *Lipper Equity Fund Performance Analysis* (1996:Q4).

¹² Vincent A. Warther, "Aggregate Mutual Fund Flows and Security Returns," *Journal of Financial Economics* 29 (1995) 209-235. Eli M. Remolona, Paul Kleiman, and Debbie Gruenstein, "Market Returns and Mutual Fund Flows," *Federal Reserve Bank of New York Economic Policy Review*, July 1997, pp. 33-52 (forthcoming). Franklin Edwards and Xin Zhang, "Mutual Funds and Stock and Bond Market Stability," unpublished manuscript, Columbia Business School, 1997.

These studies examine both the returns on stocks and bonds and their effect on inflows to stock and bond funds. The findings for stock funds are similar to those for bond funds.

Sales and redemptions. The association between interest rates, bond returns, and net flows into bond funds is attributable more to changes in sales than to changes in redemptions. Sales increase when interest rates fall, and sales decline when interest rates rise (Figure 11). In fact, bond fund sales fluctuate more than redemptions: the standard deviation for sales across all cycles is 2.10 percent of assets, compared with .79 percent of assets for redemptions. The standard deviation of sales exceeds that of redemptions during each of the interest rate cycles (Figure 12).

The stronger association between interest rates and bond fund sales can also be seen by analyzing the average level of sales and redemptions during expansions and contractions. During the five interest rate cycles, monthly sales averaged 4.61 percent of assets during expansions, but fell to 3.15 percent of assets during contractions (Figure 10). By contrast, average monthly redemptions changed little, rising from 2.24 percent of assets in expansions to 2.62 percent of assets during contractions. The comparison is most pronounced for the 1984-1989 cycle, when monthly sales dropped from 7.91 percent of assets to 2.77 percent, while redemptions only rose from 2.50 percent of assets to 3.09 percent.

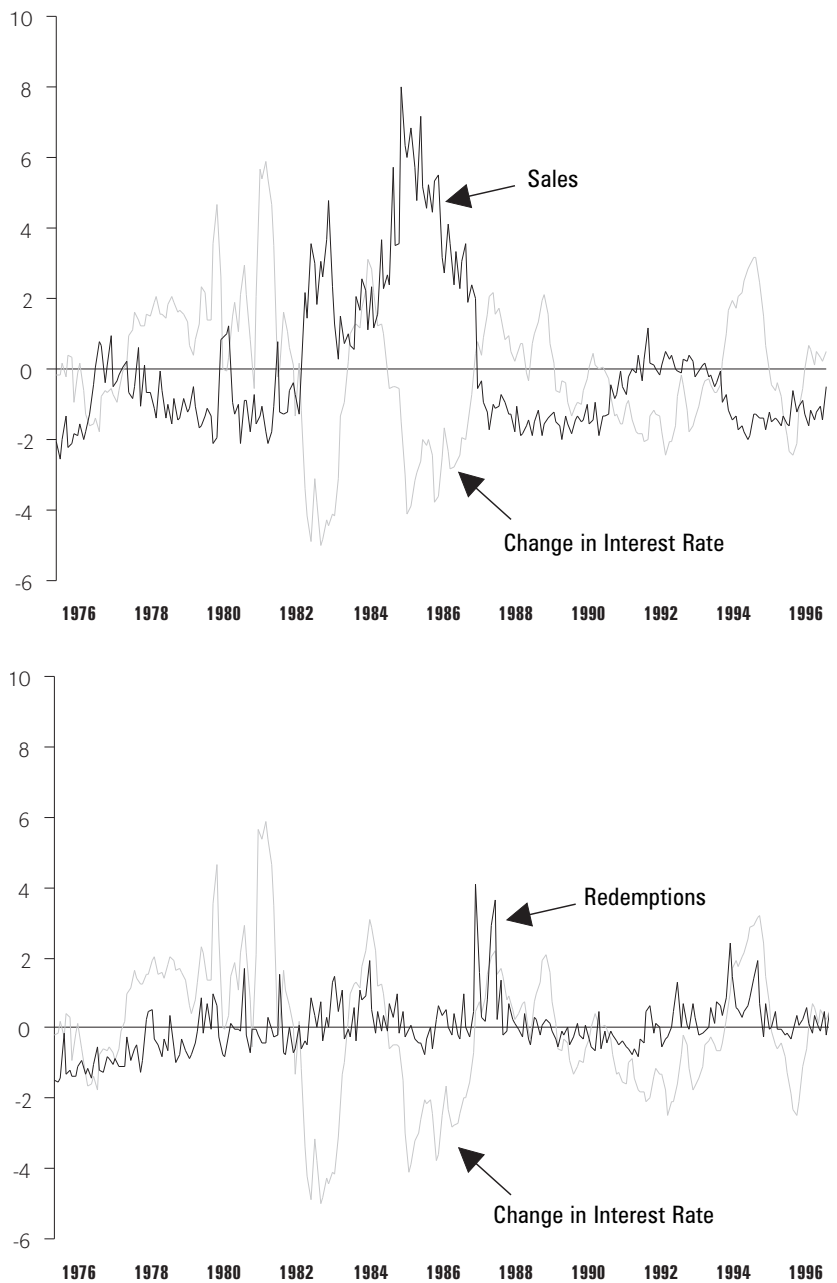
Specific Market Downturns

During the five bond market contractions examined in this paper, net flows to bond funds were positive during the three that occurred before the mid-1980s. Although net flows turned negative during the two most recent contractions, there was no mass departure from bond funds. (Stock fund shareholders also did not leave equity funds during any of the 14 stock market contractions that have occurred since World War II.⁴) Periods when bond funds experienced

FIGURE 11

Sales and Redemptions of Bond Funds and Interest Rate Changes, 1976-1996

(percent)



Note: Sales and redemptions are calculated as a percentage of the previous month's outstanding assets. Sales include exchanges into funds and redemptions include exchanges out of funds. Each series is shown as deviations from its mean. Interest rate changes are year-over-year changes in the constant maturity yield on the three-year Treasury note.

Source: Federal Reserve Board and Investment Company Institute

FIGURE 12

Standard Deviation of Net New Cash Flow, Sales and Redemptions During Interest Rate Cycles

(percent of previous monthend assets)

Cycle	Net New Cash Flow	Sales	Redemptions
September 1975 - March 1980	1.10	0.84	0.65
March 1980 - September 1981	1.34	1.10	0.54
September 1981 - June 1984	1.56	1.62	0.73
June 1984 - March 1989	3.29	2.96	0.90
March 1989 - November 1994	0.99	0.79	0.59
All Cycles	2.15	2.10	0.79

Note: Sales include exchanges into funds and redemptions include exchanges out of funds but exclude reinvested dividends and capital gain distributions.

Source: Investment Company Institute

larger than normal outflows during contractions have been brief so that average monthly outflows during contractions since the mid-1980s have been considerably less than one percent of assets.

1987 market contraction. The market contraction that began in 1987 contains several of the largest monthly outflows (Figure 13). The contraction started early in the year in conjunction with an escalation of trade tensions between the U.S. and Japan and a tightening of U.S. monetary policy. In April and May, bond prices fell 6.8 percent and monthly outflows averaged .75 percent of assets. Net flows turned positive in early summer as bond prices recovered somewhat with an easing of trade tensions. In August, however, net flows again became negative as bond prices fell after a larger-than-expected trade deficit report and a further tightening of monetary policy. The bond market weakened considerably in September, as prices of Treasury securities dropped 2.25 percent, and outflows from bond funds totaled 3.27 percent of assets, the second largest monthly outflow. The October stock market break created general uneasiness in the financial markets. Net outflow from bond funds during the month totalled 3.28 percent of assets. Outflows from bond funds eased during the remainder of the contraction. Monthly outflows averaged only 0.32 percent of assets during the entire contraction.

1994 market contraction. Outflows were also heavier than usual in 1994, which contained four of the ten largest monthly outflows during a contraction. In February, the Federal Reserve initiated an aggressive tightening of monetary policy. Interest rates, which began to increase in late 1993, rose further following the tightening of monetary policy,

FIGURE 13

Largest Monthly Net Outflows During Bond Market Contractions Over One-, Two-, and Three-Month Periods

(percent)

Net Outflow	
One-Month	
3.28	October 1987
3.27	September 1987
1.96	November 1994
1.79	March 1994
1.73	February 1980
1.52	October 1994
1.29	April 1994
1.22	December 1980
1.22	March 1980
1.10	October 1979
Two-Month	
6.35	September-October 1987
3.91	August-September 1987
3.43	October-November 1994
3.24	October-November 1987
3.02	March-April 1994
Three-Month	
6.96	August-October 1987
6.31	September-November 1987
4.41	September-November 1994
4.28	October-December 1987
3.73	July-September 1987

Note: Outflows are shown as a percent of previous monthend assets.

Source: Investment Company Institute

and net flows to bond funds turned negative, ending the strong inflows that began in 1990. Outflows increased to 1.79 percent of assets in March, the fourth largest outflow, but slowed a bit in April to 1.29 percent of assets. Outflows remained under 1 percent of assets until the fall, when interest rates increased sharply on investors' concerns about inflation. In September, outflows were 1.02 percent of assets, rising to 1.52 percent in October, and to 1.96 percent in November. During the entire contraction, outflows averaged .71 percent of assets per month.

Conclusion

The analysis of bond fund flows leads to two observations. First, the weakness in flows that has prevailed since early 1994 is a cyclical development. It is not an indication of future bond fund inflows. Interest rate relationships have not been conducive to large inflows of late. Should interest rates fall and a wider gap open up between long-term and short-term rates, inflows could strengthen, as they did in the mid-1980s and early 1990s.

Second, bond fund holders have reacted mildly to sharp increases in interest rates in the past. This response is similar to that shown by stock fund owners and points to a consistency in shareholder behavior during market setbacks. That is, mutual fund shareholders appear to be focused on the long-term movements of security prices rather than short-term market developments. Furthermore, that long-run focus is in line with surveys showing investors hold mutual funds primarily to achieve long-term objectives, such as saving for retirement or future education expenses.

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