

59th edition

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INVESTMENT COMPANY FACT BOOK

A Review of Trends and Activities in
the Investment Company Industry

19

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2018 Facts at a Glance

Total worldwide assets invested in regulated open-end funds*	\$46.7 trillion
United States	\$21.1 trillion
Europe	\$16.5 trillion
Asia-Pacific	\$6.4 trillion
Rest of the world	\$2.7 trillion

US-registered investment company total net assets	\$21.4 trillion
Mutual funds	\$17.7 trillion
Exchange-traded funds	\$3.4 trillion
Closed-end funds	\$250 billion
Unit investment trusts	\$70 billion

US-registered investment companies' share of:

US corporate equity	30%
US and foreign corporate bonds	20%
US Treasury and government agency securities	13%
US municipal securities	25%
Commercial paper	24%

US household ownership of US-registered funds

Number of households owning funds	57.2 million
Number of individuals owning funds	101.6 million
Percentage of households owning funds	44.8%
Median mutual fund assets of mutual fund-owning households	\$150,000
Median number of mutual funds owned	4

US retirement market

Total retirement market assets	\$27.1 trillion
Percentage of households with tax-advantaged retirement savings	62%
IRA and DC plan assets invested in mutual funds	\$8.2 trillion

*Regulated open-end funds include mutual funds, exchange-traded funds (ETFs), and institutional funds.

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The Investment Company Institute (ICI) is the leading association representing regulated funds globally, including mutual funds, exchange-traded funds (ETFs), closed-end funds, and unit investment trusts (UITs) in the United States, and similar funds offered to investors in jurisdictions worldwide. ICI seeks to encourage adherence to high ethical standards, promote public understanding, and otherwise advance the interests of funds, their shareholders, directors, and advisers. ICI carries out its international work through ICI Global, with offices in London, Hong Kong, and Washington, DC.

Although information or data provided by independent sources is believed to be reliable, ICI is not responsible for its accuracy, completeness, or timeliness. Opinions expressed by independent sources are not necessarily those of the Institute. If you have questions or comments about this material, please contact the source directly.

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LETTER FROM

**THE CHIEF
ECONOMIST**

LETTER FROM THE CHIEF ECONOMIST

Globalization has hit a few speed bumps in recent years in the form of the global financial crisis, Brexit, trade tensions, slowing growth, and other developments.

But none of this has slowed the globalization of the *Investment Company Fact Book*. Consistent with ICI's mission to represent the interests of regulated funds and their investors worldwide, *Fact Book* is expanding its international presence.

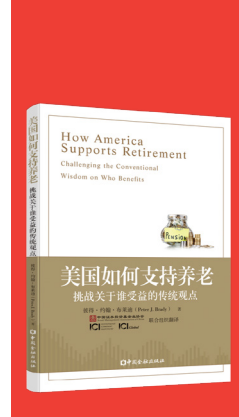


In November 2018, ICI President and CEO Paul Schott Stevens was present in Beijing as the Asset Management Association of China rolled out a version of ICI's 58th annual *Fact Book* in Mandarin. This translation will be made available publicly later this summer.

China's interest in our data is not unique. Across the world there are increasing demands for the kinds of data, analysis, and institutional detail presented in the *Fact Book* and other work ICI's Research Department produces. These demands reflect a range of concerns—how to structure nascent fund industries to best ensure their growth; what kinds of fund products and design features retirement savers may find most helpful and how to assess their preparedness for retirement; how households may respond to tax incentives to save; how regulations in one area may affect funds in another area or across the globe; how investors respond to financial market developments (such as business or interest rate cycles); how funds are reacting to heightened investor interest in environmental, social, and governance (ESG) matters, and, frankly, a thirst for a long, cool drink of hard facts in what—in some regions—may feel like a data desert.

Judy Steenstra, ICI senior director of statistical research, and her group continue to produce more than 300 reports annually on US fund assets, flows, and other characteristics. We summarize many of these reports in data tables in Part 2 of this book. On behalf of the International Investment Funds Association (IIFA) and its 40 member associations, ICI also serves as a repository of global data on fund flows and assets. This past year, under IIFA's direction and guidance, we were able to expand the historical data available on the websites of both IIFA and ICI.

Our work on retirement issues, long a staple interest for those focusing on the US market, also has gone global. Peter Brady, ICI senior economist, traveled to China this past year for the Mandarin-language launch of his groundbreaking book that challenges the notion of an “upside-down” retirement system that only benefits the wealthy, *How America Supports Retirement: Challenging the Conventional Wisdom on Who Benefits*. (A Japanese-language version will be published later this year.)



Sarah Holden, ICI senior director of retirement and investor research, and her group continue to produce a range of detailed surveys on households’ holdings of funds and sentiment about funds and fund investing. Household surveys also shed light on retirement savers’ motivations and views on choice and control of their retirement accounts. But their analyses and surveys do global duty as well, serving to promote understanding abroad (in venues such as the Organisation for Economic Co-operation and Development) about the nature and successes of the US retirement system and to help promote better understanding of the advantages and disadvantages of retirement systems in other countries.

Finally, the Research Department continues to project a global presence on key issues for financial markets. We have expanded our global chapter in *Fact Book* this year to include a more in-depth discussion of investor demand for funds in 2018 and a brief summary of the Chinese money market fund industry. Shelly Antoniewicz, ICI senior director of industry and financial analysis, in coordination with Jane Heinrichs, ICI associate general counsel, helped organize a London-based committee on the global exchange-traded fund (ETF) market. Its inaugural in-person meeting in fall 2018 assembled more than 40 participants in the European ETF ecosystem to explore ETF priorities. James Duvall, ICI associate economist, undertook significant work on trends in costs and charges on Undertakings for Collective Investments in Transferable Securities (UCITS). Other ICI economists made a range of visits to regulators, media, and academics around the globe to address policymakers’ concerns about funds and financial stability and about the “common ownership” hypothesis.

No matter how the process of globalization plays out, our efforts to improve understanding of funds and their investors—and to promote public policy that advances their interests—will continue. All too often, commentary about our industry is based on speculation, assumption, and ill-founded theorizing. Sherlock Holmes, perhaps the most globally famous literary detective, put it aptly when he said, “It is a capital mistake to theorize before one has data.” It should thus be no mystery that ICI devotes so much effort each year to putting together data in *Fact Book* to share with the world.

Sean Collins
Chief Economist

ICI RESEARCH STAFF AND PUBLICATIONS

ICI Senior Research Staff



Chief Economist

Sean Collins leads the Institute's Research Department. He oversees statistical collections and research on US and global funds, financial markets, the US retirement market, financial stability, and investor demographics. Before joining ICI in 2000, Collins worked at the US Federal Reserve Board and the Reserve Bank of New Zealand. He is a member of the Group of Economic Advisers (GEA) to the European Securities and Markets Authority (ESMA). He has a PhD in economics from the University of California, Santa Barbara, and a BA in economics from Claremont McKenna College.



Senior Director of Industry and Financial Analysis

Rochelle Antoniewicz is senior director of industry and financial analysis at ICI, where she conducts research on the structure and trends of the exchange-traded fund (ETF) and mutual fund industries and on the financial markets in the United States and globally. Before joining ICI, Antoniewicz spent 13 years at the Federal Reserve Board of Governors. She earned a BA in management science from the University of California, San Diego, and an MS and PhD in economics from the University of Wisconsin-Madison.



Senior Director of Retirement and Investor Research

Sarah Holden leads the Institute's research efforts on investor demographics and behavior and retirement and tax policy. Holden, who joined ICI in 1999, heads efforts to track trends in household retirement saving activity and ownership of funds as well as other investments inside and outside retirement accounts. Before joining ICI, Holden served as an economist at the Federal Reserve Board of Governors. She has a PhD in economics from the University of Michigan and a BA in mathematics and economics from Smith College.



Senior Director of Statistical Research

Judy Steenstra oversees the collection and publication of weekly, monthly, quarterly, and annual data on open-end mutual funds, as well as data on closed-end funds, exchange-traded funds, unit investment trusts, and the worldwide fund industry. Steenstra joined ICI in 1987 and was appointed director of statistical research in 2000. She has a BS in marketing from The Pennsylvania State University.

ICI Research Department

The ICI Research Department consists of 42 members, including economists and research analysts. This staff collects and disseminates data for all types of registered investment companies, offering detailed analyses of fund shareholders, the economics of investment companies, and the retirement and education savings markets.

2018 ICI Research and Statistical Publications

ICI is the primary source of analysis and statistical information on the investment company industry. In addition to the annual *Investment Company Fact Book*, the Institute's Research Department released 25 research and policy publications and more than 300 statistical reports in 2018.

The *Investment Company Fact Book* remains one of ICI Research's most visible products—garnering more than 70,000 visits and downloads in 2018. In its 59th edition, this ICI publication continues to provide the public and policymakers with a comprehensive summary of ICI's data and analysis. The *Fact Book* is available at www.icifactbook.org in both PDF and HTML formats. The HTML version contains downloadable data for all charts and tables.

Papers

Industry and Financial Analysis

- » “The Closed-End Fund Market, 2017,” *ICI Research Perspective*, April 2018
- » “Trends in the Expenses and Fees of Funds, 2017,” *ICI Research Perspective*, April 2018

Retirement and Investor Research

- » “American Views on Defined Contribution Plan Saving, 2017,” *ICI Research Report*, February 2018
- » “Defined Contribution Plan Participants’ Activities, First Three Quarters of 2017,” *ICI Research Report*, February 2018
- » *The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2015*, March 2018
- » “Who Participates in Retirement Plans, 2014,” *ICI Research Perspective*, April 2018
- » “Defined Contribution Plan Participants’ Activities, 2017,” *ICI Research Report*, May 2018
- » “The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2017,” *ICI Research Perspective*, June 2018
- » “What US Households Consider When They Select Mutual Funds,” *ICI Research Perspective*, August 2018
- » “Defined Contribution Plan Participants’ Activities, First Quarter 2018,” *ICI Research Report*, August 2018

- » “401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016,” *ICI Research Perspective*, September 2018
- » “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007–2016,” *ICI Research Report*, September 2018
- » “The IRA Investor Profile: Traditional IRA Investors’ Activity, 2007–2016,” *ICI Research Report*, September 2018
- » “Ten Important Facts About 401(k) Plans,” September 2018
- » *A Close Look at ETF Households*, September 2018
- » *Mutual Fund Investors’ Views on Shareholder Reports: Reactions to a Summary Shareholder Report Prototype*, October 2018
- » “Ten Important Facts About IRAs,” October 2018
- » “Ten Important Facts About Roth IRAs,” October 2018
- » “What Does Consistent Participation in 401(k) Plans Generate? Changes in 401(k) Plan Account Balances, 2010–2016,” *ICI Research Perspective*, November 2018
- » “Characteristics of Mutual Fund Investors, 2018,” *ICI Research Perspective*, November 2018
- » “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018,” *ICI Research Perspective*, November 2018
- » “Defined Contribution Plan Participants’ Activities, First Half 2018,” *ICI Research Report*, November 2018
- » *The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at ERISA 403(b) Plans, 2015*, December 2018
- » “The Role of IRAs in US Households’ Saving for Retirement, 2018,” *ICI Research Perspective*, December 2018
- » “Profile of Mutual Fund Shareholders, 2018,” *ICI Research Report*, December 2018

ICI’s papers and more are available at www.ici.org/research.

Analysis and Commentary: *ICI Viewpoints*

In addition to research papers, ICI staff produce analysis and commentary for the Institute's blog, *ICI Viewpoints*. Below are some examples of the analysis published in 2018. Please visit www.ici.org/viewpoints to find these and more.

- » Pointing Fingers at Index Funds Won't Explain Market Volatility
- » Fund Investors Will "Run"? Sorry, Charlie Brown
- » Americans: In Defined Contribution We Trust
- » A More Accurate Evaluation of Retirement Plan Participation
- » IRA Investors Are Concentrated in Lower-Cost Mutual Funds
- » "Common Ownership" Hypothesis Is Unconvincing
- » Stock Ownership in the United States: It's Main Street
- » Funds and Proxy Voting
 - » The Mix of Proposals Matters
 - » Who Submits Shareholder Proposals?
 - » Funds Vote Thoughtfully and Independently
- » Growing Better with Age: The 401(k) Turns Forty
- » Mutual Funds: Rated E for Everyone
- » Understanding Interest Rate Risk in Bond Funds
- » Debunking Assumptions About Bond Mutual Funds' Flows and Bond Sales
- » Even in Bear Markets, Equity Fund Investors Stay the Course

Statistical Releases

Trends in Mutual Fund Investing

Monthly report that includes mutual fund sales, redemptions, assets, cash positions, exchange activity, and portfolio transactions for the period by 42 investment objectives.

Estimated Long-Term Mutual Fund Flows

Weekly report that provides aggregate estimates of net new cash flows to 16 categories of equity, hybrid, and bond mutual funds.

Estimated Exchange-Traded Fund (ETF) Net Issuance

Weekly report that provides aggregate estimates of net issuance to six categories of ETFs.

Combined Estimated Long-Term Mutual Fund Flows and ETF Net Issuance

Weekly news release and report that provides aggregate estimates of net new cash flows and net issuance to six categories of long-term mutual funds and ETFs.

Money Market Fund Assets

Weekly report on money market fund assets by type of fund.

Monthly Taxable Money Market Fund Portfolio Data

Monthly report based on data contained in SEC Form N-MFP that provides insights into the aggregated holdings of prime and government money market funds and the nature and maturity of security holdings and repurchase agreements.

Retirement Market Data

Quarterly report that includes individual retirement account (IRA) and defined contribution (DC) plan assets, mutual fund assets inside retirement accounts, and estimates of mutual fund net new cash flows to retirement accounts by type of fund.

Mutual Fund Distributions

Quarterly report that includes paid and reinvested capital gains and paid and reinvested income dividends of mutual funds by broad investment classification.

Institutional Mutual Fund Shareholder Data

Annual report that includes mutual fund asset information for various types of institutional shareholders, broken out by broad investment classification.

Closed-End Fund Data

Quarterly report that includes closed-end fund assets, number of funds, issuance, redemptions, distributions, use of leverage, and number of shareholders by investment objective.

Exchange-Traded Fund Data

Monthly report that includes assets, number of funds, issuance, and redemptions of ETFs by investment objective.

Unit Investment Trust Data

Monthly report that includes the value and number of new trust deposits by type and maturity.

Worldwide Regulated Open-End Fund Data

Quarterly report that includes assets, number of funds, and net sales by broad investment classification of funds in 47 jurisdictions worldwide.

These and other ICI statistics are available at www.ici.org/research/stats. To subscribe to ICI's statistical releases, visit www.ici.org/pdf/stats_subs_order.pdf.

Acknowledgments

Publication of the *2019 Investment Company Fact Book* was directed by James Duvall, associate economist, and Judy Steenstra, senior director of statistical research, working with Miriam Bridges, editorial director; Candice Gullett, editor; and Stephanie Schuettenberg, senior designer. Contributors from ICI's research team who developed and edited analysis, text, and data are Steven Bass, Mike Bogdan, Sailesh Jha, Alex Johnson, Sheila McDonald, Morris Mitler, Doug Richardson, Julieth Saenz, Dan Schrass, and Christof Stahel.



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Methods and Assumptions

The following methods, unless otherwise specified, apply to all data in this book:

- » Data for US-registered investment companies only include those that report statistical information to the Investment Company Institute. Assets of these companies are at least 98 percent of industry assets.
- » Funds of funds are excluded from the data to avoid double counting.
- » Dollars and percentages may not add to the totals presented because of rounding.
- » Data for US-registered investment companies include exchange-traded funds that are not registered under the Investment Company Act of 1940.
- » Long-term funds include equity funds, hybrid funds, and bond funds.

Data are subject to revision. Although information or data provided by independent sources is believed to be reliable, the Investment Company Institute is not responsible for its accuracy, completeness, or timeliness. Opinions expressed by independent sources are not necessarily those of the Institute. If you have questions or comments about this material, please contact the source directly.

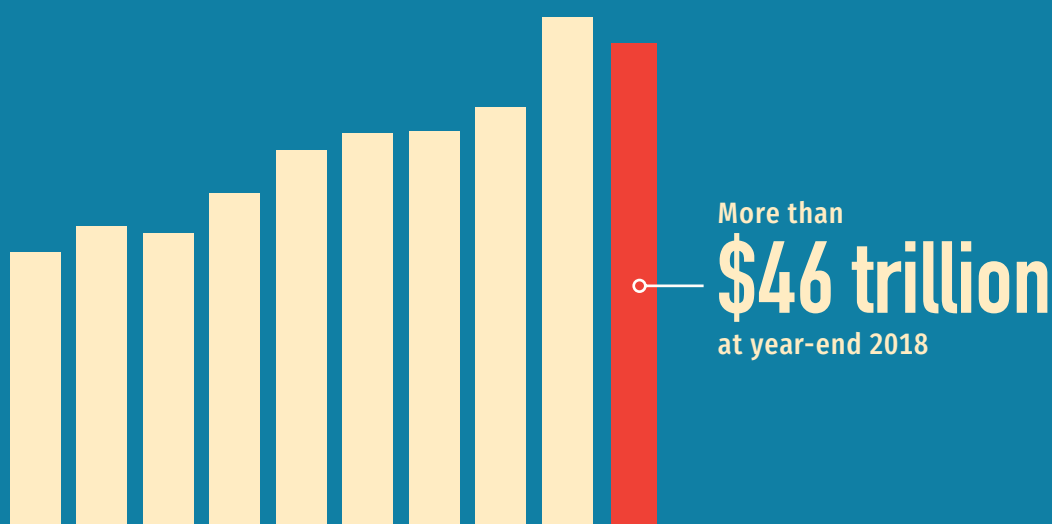
CHAPTER

01

WORLDWIDE REGULATED OPEN-END FUNDS

Investors across the globe have demonstrated strong demand for regulated open-end funds (referred to in this chapter as *regulated funds*). In the past 10 years, net sales of regulated funds have totaled \$12.7 trillion. This demand has been influenced by a number of long-term factors, as well as cyclical and macroeconomic factors. Fund providers have responded to the increasing interest in these funds, offering nearly 119,000 regulated funds that provide a vast array of choices for investors. In many countries, markets for regulated funds are well-developed and highly competitive. At year-end 2018, regulated funds had \$46.7 trillion in total net assets.

Total net assets of worldwide regulated open-end funds have grown substantially in the past decade



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What Are Regulated Funds?

ICI, following standards set by the International Investment Funds Association (IIFA), defines regulated funds as collective investment pools that are substantively regulated, open-end investment funds.* Open-end funds generally are defined as those that issue new fund shares (or units) and redeem existing shares (or units) on demand. Such funds are typically regulated with respect to disclosure, the form of organization (for example, as either corporations or trusts), custody of fund assets, minimum capital, valuation of fund assets, and restrictions on fund investments, such as limits on leverage, types of eligible investments, and diversification of portfolio investments.

In the United States, regulated funds include mutual funds and exchange-traded funds (ETFs).† In Europe, regulated funds include Undertakings for Collective Investment in Transferable Securities (UCITS)—ETFs, money market funds, and other categories of similarly regulated funds—and alternative investment funds, commonly known as AIFs.

In many countries, regulated funds also may include institutional funds (funds that are restricted to being sold to a limited number of non-retail investors), funds that offer guarantees or protection of principal (those that offer a formal, legally binding guarantee of income or capital), and open-end real estate funds (funds that invest directly in real estate to a substantive degree).

Investor Demand for Worldwide Regulated Funds

Worldwide regulated funds have seen robust growth in total net assets in the past decade across the United States, Europe, Asia-Pacific, and the rest of the world. Among other factors, rising demand for regulated funds has been driven by investors' demand for professionally managed and well-diversified products offering access to capital markets and by the increasing depth and liquidity of global capital markets. In 2018, macroeconomic events and other factors—including how investors use regulated funds to help achieve their goals—played a considerable role in shaping global financial markets.

*The primary data source for worldwide regulated funds is the IIFA. In 2018, the IIFA collected data on worldwide regulated funds from 47 jurisdictions. For data on individual jurisdictions, see the data tables on pages 256–261. For more details about the IIFA data collection, see Worldwide Definitions of Terms and Classifications at www.ici.org/info/ww_q3_18_definitions.xls.

† Two other highly regulated US investment products, unit investment trusts and closed-end funds, are discussed in chapter 2 and chapter 5, respectively.

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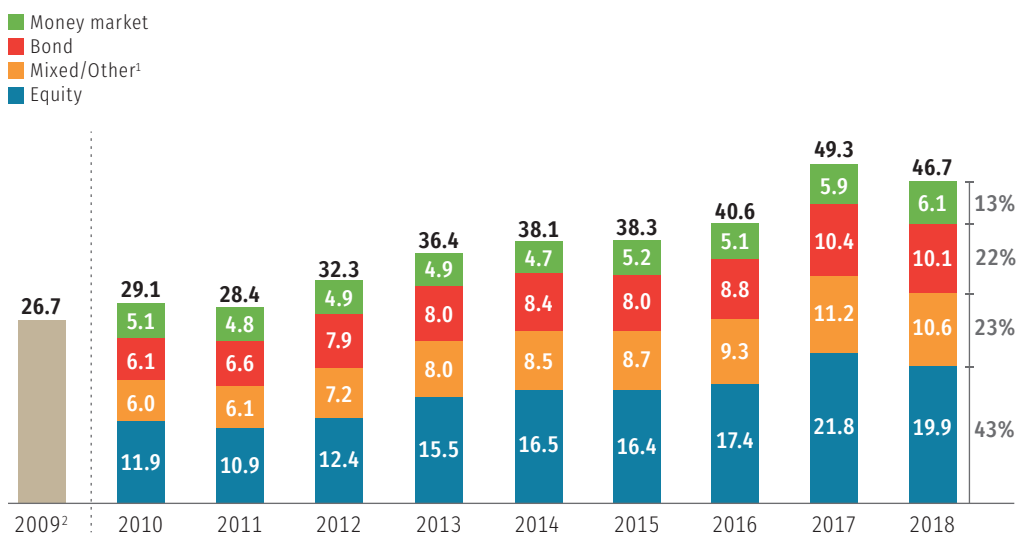
IIFA Presents Expanded Worldwide Regulated Open-End Fund Assets and Flows Report
www.ici.org/research/stats/worldwide/ww_q1_15_explanation

Total Net Assets of Worldwide Regulated Funds

A sharp drop in global stock prices halted regulated fund net asset growth in 2018. Net assets in worldwide regulated funds declined \$2.6 trillion in 2018 to \$46.7 trillion after having increased for the prior six years (Figure 1.1).^{*} Despite the hit to global equity markets, equity funds—which invest primarily in publicly traded stocks—remained the largest category of regulated funds, accounting for 43 percent of net assets at year-end 2018. Mixed/other funds[†] made up another 23 percent, while bond funds—which invest primarily in fixed-income securities—had 22 percent of net assets. Money market funds, which are generally defined throughout the world as regulated funds that are restricted to holding only short-term, high-quality money market instruments, accounted for 13 percent of net assets.

FIGURE 1.1

Total Net Assets of Worldwide Regulated Open-End Funds Fell to \$46.7 Trillion in 2018
Trillions of US dollars by type of fund, year-end



Total number of worldwide regulated open-end funds

82,991 86,301 92,074 94,398 97,939 101,686 106,675 110,790 113,646 118,978

¹ Mixed/other funds include balanced/mixed funds, guaranteed/protected funds, real estate funds, and other funds.

² Data for total net assets by type of fund are not available in 2009.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds.

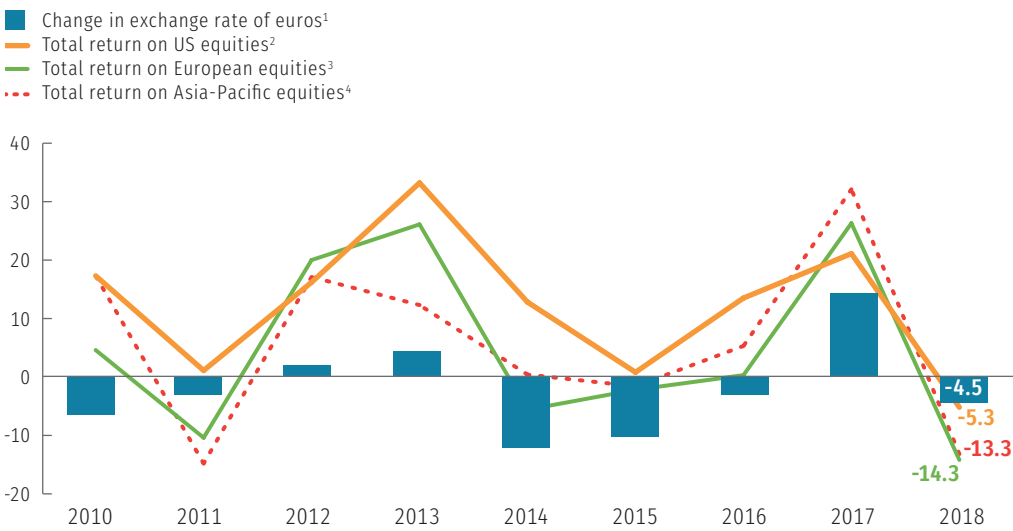
Source: International Investment Funds Association

^{*} In this chapter, unless otherwise noted, data for total net assets and net sales are denominated in US dollars.

[†] Mixed/other funds include balanced/mixed funds, guaranteed/protected funds, real estate funds, and other funds.

The decline in net assets in 2018 was driven by several factors that weighed on global stock markets and foreign exchange markets, particularly in the fourth quarter. Chief among them was the fear of a severe slowdown in global economic growth, stemming in part from lower-than-expected economic growth in China and deteriorating trade relations between China and the United States. In 2018, US stocks fell 5.3 percent (Figure 1.2). Stock markets elsewhere in the world also weakened. For example, European stock markets fell 14.3 percent in 2018, while Asia-Pacific stock markets fell 13.3 percent. In addition, the euro depreciated 4.5 percent against the US dollar in 2018, reducing the value of euro denominated assets when measured in US dollars (see page 13). In the Asia-Pacific region in 2018, the Australian dollar depreciated 10 percent and the Chinese renminbi depreciated 5 percent against the US dollar.

FIGURE 1.2
Stock Markets Fell Around the World in 2018
 Percent



¹ The change in the exchange rate of euros is measured as the year-over-year percent change in the exchange rate of US dollars per euro.

² The total return on US equities is measured as the year-over-year percent change in the Wilshire 5000 Total Market Index.

³ The total return on European equities is measured as the year-over-year percent change in the MSCI Daily Total Return Gross Europe Index (expressed in US dollars).

⁴ The total return on Asia-Pacific equities is measured as the year-over-year percent change in the MSCI Daily Total Return Gross AC Asia-Pacific Index (expressed in US dollars).

Sources: Bloomberg and MSCI

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Worldwide Regulated Open-End Fund Assets and Flows
www.ici.org/research/stats/worldwide

How Exchange Rates Can Influence Measurement of Total Net Assets Held by Worldwide Regulated Funds

For worldwide regulated funds holding assets denominated in currencies other than US dollars, fluctuations in US dollar exchange rates can significantly affect the value of these assets when they are expressed or measured in US dollars. For example, when foreign currencies depreciate against the dollar (or, equivalently, the US dollar appreciates against foreign currencies), it will have a negative impact on the value of assets not denominated in US dollars when those assets are measured in US dollars. Figure 1.3 illustrates this effect using two hypothetical scenarios.

FIGURE 1.3

Impact of Changes in the Exchange Rate on the US Dollar Value of a European Stock

Scenario 1: No change in exchange rate between euros and US dollars

	Year 1	Year 2	Percent change
1. Market value of European stock expressed in euros	€100	€110	10%
2. Exchange rate of euros (US dollars per euro)	1.00	1.00	0%
3. Market value of European stock expressed in US dollars	\$100	\$110	10%

Scenario 2: Market value if euro depreciates (US dollar appreciates)

	Year 1	Year 2	Percent change
4. Market value of European stock expressed in euros	€100	€110	10%
5. Exchange rate of euros (US dollars per euro)	1.00	0.80	-20%
6. Market value of European stock expressed in US dollars	\$100	\$88	-12%

In the first scenario, the market value of a European stock, measured in euros, rises from €100 in year 1 to €110 in year 2, an increase of 10 percent. The exchange rate between US dollars and euros, in this scenario, is unchanged at 1.00 in both years. In other words, one euro is worth one US dollar in both years. To convert the euro-denominated value of the European stock into US dollars, multiply by the exchange value of the euro (US dollars per euro). Because this is 1.00 in both years, the value of the European stock expressed in US dollars is exactly the same as when expressed in euros: \$100 in year 1 and \$110 in year 2. When the US dollar exchange rate with another country is unchanged between two years, any gain or loss in assets denominated in that country's currency translates into an identical percent gain or loss when the value of those assets is expressed in US dollars.

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Exchange rates, however, rarely remain unchanged. The second scenario illustrates what happens when a European stock experiences the same 10 percent gain as in the first scenario (€100 in year 1 to €110 in year 2), but at the same time, the euro depreciates 20 percent against the US dollar. As in the first scenario, in year 1 the market value of a European stock expressed in US dollars is \$100. In year 2, however, one euro is now worth 0.80 US dollars. To find the US dollar value of the European stock in year 2, multiply €110 by 0.80 (US dollars per euro) to get \$88. The US dollar return on the European stock is now -12 percent—lower than in the first scenario because it accounts for the depreciation of the euro relative to the US dollar.

Worldwide Net Sales of Regulated Long-Term Funds

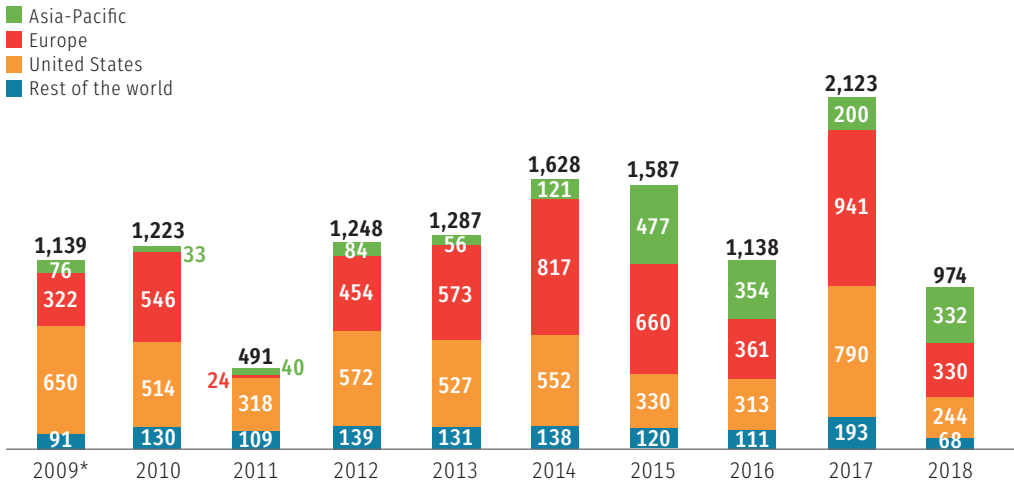
Despite challenging financial markets in 2018, overall demand for worldwide regulated long-term funds (equity, bond, and mixed/other) as measured by net sales—total sales less total redemptions plus net exchanges—remained positive, though lower than in previous years. Net sales of regulated long-term funds totaled \$974 billion in 2018, down from \$2.1 trillion in 2017, primarily due to weakening demand in Europe and the United States (Figure 1.4). In Europe, net sales fell from \$941 billion in 2017 to \$330 billion in 2018, and in the United States net sales dropped from \$790 billion to \$244 billion. By contrast, net sales in Asia-Pacific rose from \$200 billion in 2017 to \$332 billion in 2018.

Despite downward pressure on global stock prices and increased equity market volatility, investors worldwide continued to put money in equity funds in 2018, albeit at a reduced pace. Net sales of equity funds, which made up almost half of all net sales, totaled \$479 billion in 2018, down from \$724 billion in 2017 (Figure 1.5). The largest decline in equity fund investment occurred in the United States, where equity funds had \$85 billion in net sales in 2018 compared with \$306 billion in 2017. Although index equity funds in the United States had strong net sales in 2018, they were down from their historical peak in 2017. In addition, outflows from actively managed equity funds in the United States continued in 2018. In Europe, net sales of equity funds were strong at the start of 2018 as stock prices around the world were rising. As worldwide equity markets cooled off and then dropped in the fourth quarter, net sales of equity funds in Europe slowed. For the whole of 2018, net sales of equity funds in Europe totaled \$126 billion, down from \$201 billion in 2017.

FIGURE 1.4

Net Sales of Regulated Open-End Long-Term Funds in the United States and Europe Slowed in 2018

Billions of US dollars by region, annual



*Data for Ireland are not available in 2009.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds. Long-term funds include equity funds, mixed/other funds (balanced/mixed, guaranteed/protected, real estate, and other funds), and bond funds, but exclude money market funds.

Source: International Investment Funds Association

In contrast, net sales of equity funds in Asia-Pacific increased to \$239 billion in 2018 from \$175 billion in 2017. Much of this was attributable to Japan, where demand for equity ETFs has been bolstered since 2013 by the Bank of Japan’s asset purchase program. Another contributor to the rise in equity fund net sales in 2018 was increased demand in China—despite the Shanghai Composite Index falling by 25 percent, a slowing economy, and deteriorating trade relations between China and the United States in 2018.

Amid the backdrop of the more volatile global equity market landscape, changes in monetary policy and rising interest rates likely played a role in the lower demand for bond and mixed/other funds in 2018. Net sales of bond and mixed/other funds totaled \$494 billion in 2018, down from \$1.4 trillion in 2017 (Figure 1.5). This decline in net sales accounted for 79 percent of the total drop in net sales of regulated long-term funds in 2018 and was concentrated in the United States and Europe.

Bond funds started 2018 with strong inflows, likely reflecting a continuation of the demographic shift noted below. As the year progressed in the United States, however, tighter monetary policy and increased interest rates for corporate borrowing provided a counterbalance. In addition, long-term US Treasury rates did not rise commensurately with the increases in the federal funds rate, resulting in a flattening of the US Treasury yield curve—the difference between the yields on long-term US Treasury notes and short-term US Treasury bills. This development likely led some investors to redeem from intermediate-term and long-term bond funds and invest in funds with shorter durations. In 2018, net sales of US bond funds were \$214 billion, down from \$477 billion in 2017.

While developments in US interest rates may play a role in European bond fund investors' behavior, these effects likely were compounded by the announcement from the European Central Bank (ECB) in June that it intended to terminate its quantitative easing scheme at the end of 2018. Following this news, investors may have expected the value of longer-duration bonds to decline and interest rate volatility to increase once the ECB stopped purchasing long-dated bonds. Such concerns likely contributed, in part, to net outflows of \$29 billion from bond funds in Europe in 2018. In 2017, European bond funds had received \$328 billion in net sales.

Prior to 2018, net sales of bond funds and mixed/other funds had been particularly strong and generally far outpaced net sales of equity funds. Although a number of factors likely affected net flows in these years, two stand out as the most applicable. First, some investors, such as those nearing retirement, may have reassessed their tolerance for investment risk. The global population is aging—in 2018, individuals aged 50 and older were estimated to represent 23 percent of the world's population, up from 20 percent in 2008.* Some investors may have elected to weight their purchases toward regulated funds with less-variable returns. Returns on bonds tend to be less variable than those on stocks. Because of this, returns on bond funds, and some mixed/other funds that hold substantial proportions of their total net assets in bonds, tend to be less variable than those of equity funds.

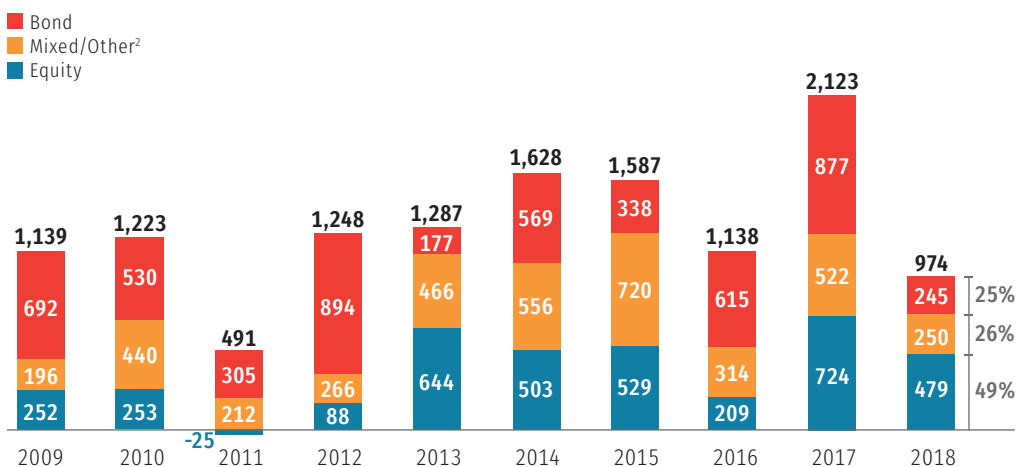
*United Nations, Department of Economic and Social Affairs, Population Division. 2017. "World Population Prospects: The 2017 Revision" (June). Available at <https://esa.un.org/unpd/wpp>.

Second, prior to 2018, investors likely were responding to favorable returns on bonds. In many countries, long-term interest rates declined during and after the financial crisis until 2017. To shore up their economies, major central banks cut short-term interest rates and held them at very low levels for most of the past decade. In addition, some major central banks, notably the US Federal Reserve and the ECB, undertook quantitative easing policies for most of the past decade, which added to the downward pressure on long-term interest rates. When interest rates fall, bond prices rise, boosting returns on bond funds and other funds that have substantial holdings of bonds, such as some mixed/other funds.

FIGURE 1.5

Worldwide Net Sales of Regulated Open-End Long-Term Funds Fell Across All Asset Classes in 2018

Billions of US dollars by type of fund, annual¹



¹ Data for Ireland are not available in 2009, are included in mixed/other in 2010, and are distributed by type of fund from 2011 to 2018.

² Mixed/other funds include balanced/mixed funds, guaranteed/protected funds, real estate funds, and other funds.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds. Long-term funds include equity funds, mixed/other funds, and bond funds, but exclude money market funds.

Source: International Investment Funds Association

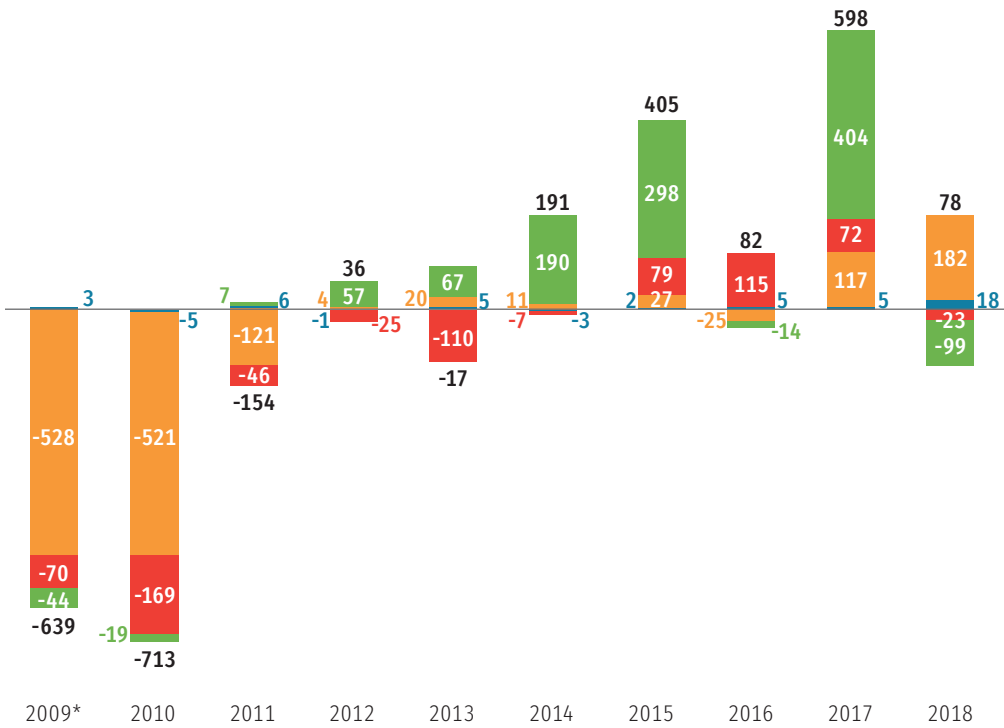
Worldwide Net Sales of Money Market Funds

Worldwide net sales of money market funds totaled \$78 billion in 2018, a decrease from the \$598 billion in net sales in 2017 (Figure 1.6), driven mostly by a sharp decrease in net sales in the Asia-Pacific region. Money market funds in the Asia Pacific region had net outflows of \$99 billion in 2018 after experiencing \$404 billion in net inflows in 2017.

FIGURE 1.6

Worldwide Net Sales of Money Market Funds Billions of US dollars by region, annual

- Asia-Pacific
- Europe
- United States
- Rest of the world



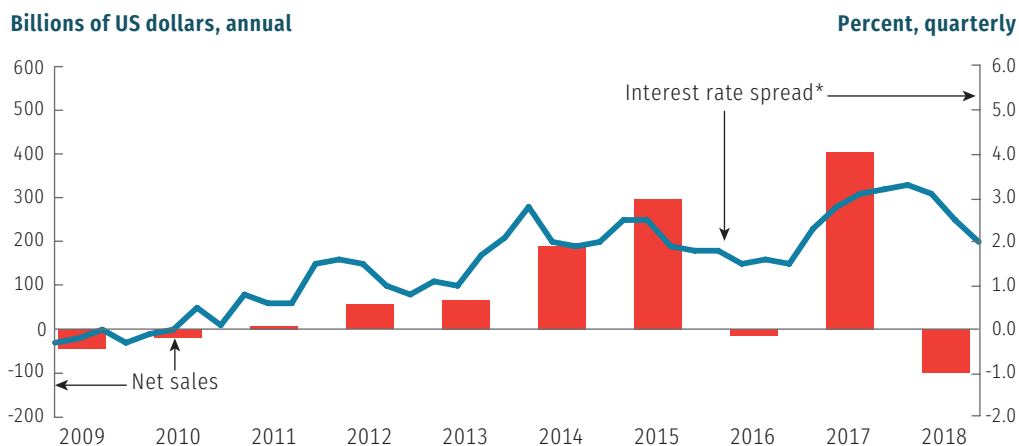
*Data for Ireland are not available in 2009.

Source: International Investment Funds Association

Investor demand for Chinese money market funds accounts for much of the net sales of money market funds in the Asia-Pacific region. Eighty percent of Asia-Pacific's total net assets in money market funds were held in funds domiciled in China at year-end 2018. Demand for money market funds in China weakened substantially in 2018 as the spread between money market fund yields and those on bank savings deposits narrowed from 3.1 percent at year-end 2017 to 1.9 percent at year-end 2018 (Figure 1.7). In 2018, money market funds in the Asia-Pacific region saw net outflows of \$99 billion compared with net inflows of \$404 billion in 2017.

FIGURE 1.7

Net Sales of Money Market Funds in the Asia-Pacific Region Are Related to Chinese Money Market Fund Interest Rate Spreads



*The interest rate spread is the difference between the annualized asset-weighted average quarterly return on money market funds and the 3-month benchmark deposit rate.

Sources: International Investment Funds Association and the Wind database

In Europe, money market funds saw outflows of \$23 billion in 2018 after three consecutive years of inflows (Figure 1.6). Europe, like the United States, has adopted reforms intended to increase the resilience of money market funds to financial shocks. US reforms, which were implemented in October 2016, had significant effects on the composition of net new cash flow to US money market funds in 2016. Although EU reforms for money market funds were adopted in 2017, existing funds are required to be in full compliance by March 2019. The deadline to comply with the 2017 regulatory changes may have caused net sales to fall significantly in France, Ireland, and Luxembourg—the three largest money market fund domiciles in Europe.

In the United States, money market funds had net sales of \$182 billion in 2018, up from \$117 billion in 2017 (Figure 1.6). Recently, as the Federal Reserve has tightened monetary policy, US money market funds have become more attractive relative to other cash management investments. In particular, the spread between money market fund yields and those on money market deposit accounts has widened by more than 170 basis points since year-end 2016 (Figure 3.18). In addition, the flattening of the US Treasury yield curve in 2018 may have spurred investors to use money market funds and short-term bond funds in an effort to minimize their interest rate risk. Prior to 2017, US money market funds were negatively affected by near-zero US short-term interest rates.

China's Money Market Fund Industry

The Chinese regulated fund industry is at a relatively early stage of its development. Prior to the 1980s, Chinese household assets consisted mainly of bank deposits, as most assets were owned by the state. China's financial market reforms started in the 1980s with the reintroduction of the government bond market and reopening of the stock market in the early 1990s. Despite being a relative newcomer, China's money market fund industry, with total net assets of \$1.1 trillion at year-end 2018, is the third largest in the world, behind the United States and Europe. Net assets in Chinese money market funds have increased 800 percent in the past five years, and their share of all Chinese regulated fund net assets has increased to 60 percent at year-end 2018 from 26 percent at year-end 2013.*

The rapid growth in Chinese money market assets is remarkable considering their relatively recent introduction as an investment product. The first money market fund in China was offered in 2004 after the China Securities Regulatory Commission (CSRC) published its first guidelines for money market funds. In 2015, the CSRC announced additional regulations that aimed to more closely align with the blueprint in more-developed markets. Nevertheless, there were significant differences between money market funds domiciled in China and money market funds domiciled in other jurisdictions, such as parameters on weighted average maturity, minimum daily liquidity requirements, eligible instruments, and ability to use leverage for investment purposes. In 2017 and 2018, to address some of these differences, the CSRC announced tighter regulations limiting leverage and daily redemptions, as well as limiting credit risk by reducing money market funds' ability to invest in lower-quality debt instruments. These changes narrowed the differences between Chinese money market funds and those offered in more-developed markets.

Money market funds offer Chinese households a lower-risk, income-oriented investment that can compete with bank deposits. Retail investors, who hold more than 55 percent of Chinese money market fund assets,* have found that money market funds are an attractive substitute for bank deposits. Until April 2018, bank deposit rates in China were effectively capped, and the yield on money market funds was considerably higher than the maximum rate set by the People's Bank of China (PBOC). Much like in the United States, net sales of money market funds increase as the yield spread between money market funds and bank deposits widens (Figure 1.7). Between 2014 and 2017, the yield spread was as wide as 320 basis points, helping net assets of Chinese money market funds grow by \$678 billion over this period.* Although the PBOC relaxed guidance for bank deposit rates in 2018, deposit rates did not rise rapidly, as the PBOC eased monetary conditions at the same time. As a result, money market fund yields fell due to looser monetary policy and the yield spread of money market funds to deposit rates narrowed considerably. This likely led to reduced net sales of money market funds in 2018.

* Calculated using the Wind database.

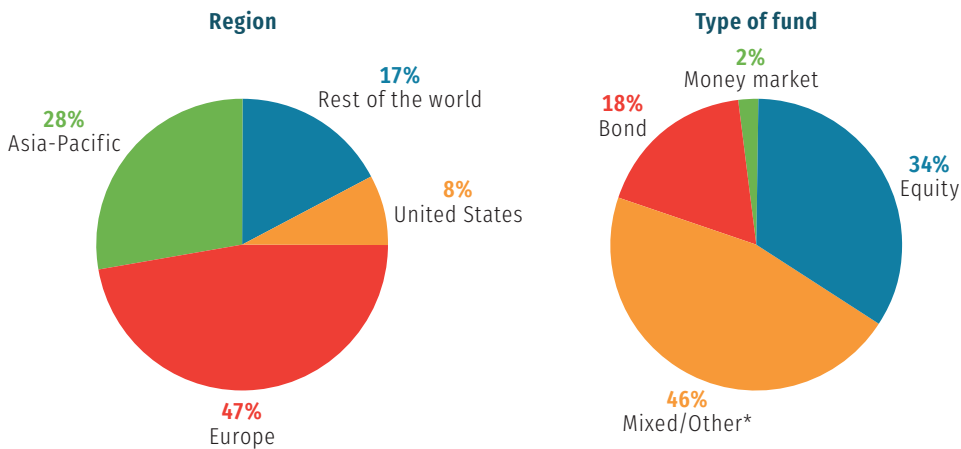
Number of Worldwide Regulated Funds

At year-end 2018, fund providers across the globe offered 118,978 regulated funds for sale, up 4.7 percent from 2017 and a 43.4 percent increase since 2009 (Figure 1.1). In 2018, nearly half (47 percent) of these funds were domiciled in Europe (Figure 1.8). The Asia-Pacific region accounted for 28 percent of regulated funds, the United States for 8 percent, and the rest of the world for 17 percent. Forty-six percent of regulated funds were mixed/other funds. Equity funds accounted for 34 percent of regulated funds, bond funds were 18 percent, and money market funds were 2 percent.

FIGURE 1.8

Number of Worldwide Regulated Open-End Funds

Percentage of funds by region or type of fund, year-end 2018



Number of worldwide regulated open-end funds: 118,978

*Mixed/other funds include balanced/mixed funds, guaranteed/protected funds, real estate funds, and other funds.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds.

Source: International Investment Funds Association

Total Net Assets of Worldwide Regulated Funds by Region

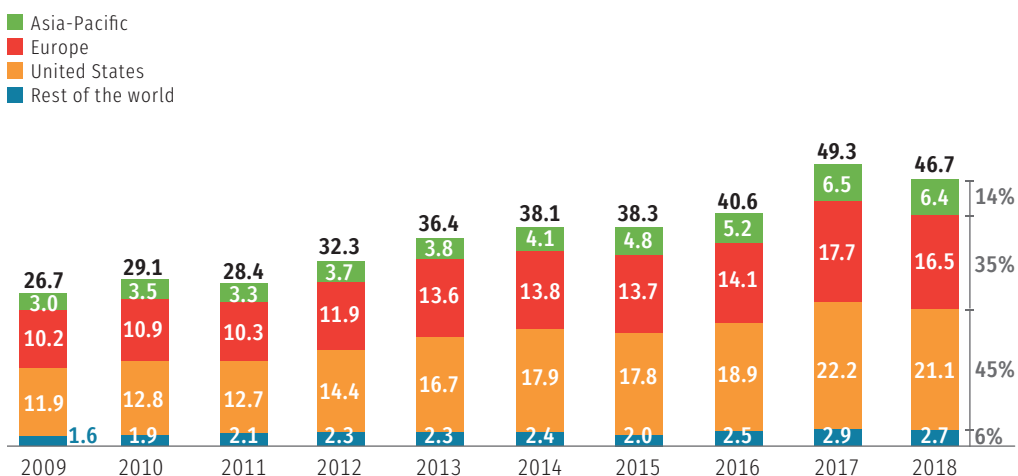
The total net assets of regulated funds vary widely by geographic region. These differences reflect preferences for specific asset classes, differences in risk tolerances, relative development of capital markets, demographics, macroeconomic developments, and other factors.

The United States and Europe have the world's largest regulated fund markets. In 2018, the United States maintained its position as the world's largest fund market, with \$21.1 trillion (45 percent) of the world's \$46.7 trillion in regulated fund total net assets (Figure 1.9). Funds domiciled in Europe held \$16.5 trillion, or 35 percent of the worldwide total. The Asia-Pacific region had \$6.4 trillion in total net assets, and \$2.7 trillion was in funds domiciled in the rest of the world.

FIGURE 1.9

Total Net Assets of Worldwide Regulated Open-End Funds

Trillions of US dollars by region, year-end



Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds.

Source: International Investment Funds Association

United States. The relatively large size of the US market stems from a number of factors. One factor is the longevity of US-regulated funds, which have been available in the United States for around 100 years. For example, mutual funds have been available to US investors since the 1920s. Another factor is the strong regulatory framework for securities markets and regulated funds in the United States that was established in the wake of the stock market crash of 1929 and the Great Depression—most notably, the Securities Act of 1933 and the Investment Company Act of 1940. Renewed investor confidence in securities markets and regulated funds led to steady growth in US-regulated funds’ assets.

In recent decades, US demand has been fueled by the availability of regulated funds as investment options in tax-advantaged accounts (for example, 401(k) plans), and by a wide and growing availability of types of funds that help investors meet their investment goals (for example, ETFs and target date funds). Also, assets of regulated funds in the past decade have been boosted by stock market appreciation and by reinvestment of dividends back into funds.

Europe. Europe’s regulated fund market has grown briskly over the past few decades. One important factor helping to drive this growth is the UCITS regulatory framework, which includes passporting—the ability for funds domiciled in one EU country to be offered for sale and purchased by investors in another EU country. Additionally, many countries outside of Europe, such as in the Asia-Pacific region, allow UCITS to be offered for sale to their citizens. The pooling of assets from investors in a range of countries allows for economies of scale that help to lower the costs of funds to individual investors. The UCITS framework further promotes asset pooling across countries by allowing an individual fund to offer share classes that are denominated in a range of different currencies (for example, euros, US dollars, British pounds sterling) and adaptable to tax structures that differ across jurisdictions.

Asia-Pacific. Although the Asia-Pacific region had only 14 percent (\$6.4 trillion) of the worldwide total net assets of regulated funds at year-end 2018, the market has been growing rapidly (Figure 1.8). Moreover, given the size of the population and the rapidly increasing economic development and wealth in many countries, there is potential for growth in the region’s regulated fund market.

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When Fund Investment Is Strong, Capital Markets Get Stronger
www.ici.org/pressroom/video/focus/190322_fof_capmrkts

Factors Influencing Demand for Worldwide Regulated Funds

Research indicates that the size of the regulated fund market in a particular country or region depends on a broad range of factors, including:

- » access to well-developed capital markets
- » household demand for well-diversified investments
- » strong and appropriate regulation of funds and financial markets
- » availability of distribution structures that facilitate access to regulated funds
- » regulated fund returns and costs relative to other available investment products
- » demographics
- » high or improving levels of economic development

Well-Developed Capital Markets

Demand for regulated funds is positively associated with the level of equity capital market development in a country. Residents of countries with more highly developed equity capital markets, such as the United States and those in the European Union, tend to hold a larger share of their household financial wealth in regulated funds.

Figure 1.10 illustrates the relationship between equity capital market development and the size of the regulated fund market in a given country. The horizontal axis provides a measure of a country's equity capital market development (a country's stock market capitalization relative to its gross domestic product [GDP]). The vertical axis plots a measure of the size of the regulated fund market in a given country, measured by the total net assets in regulated long-term funds relative to GDP.

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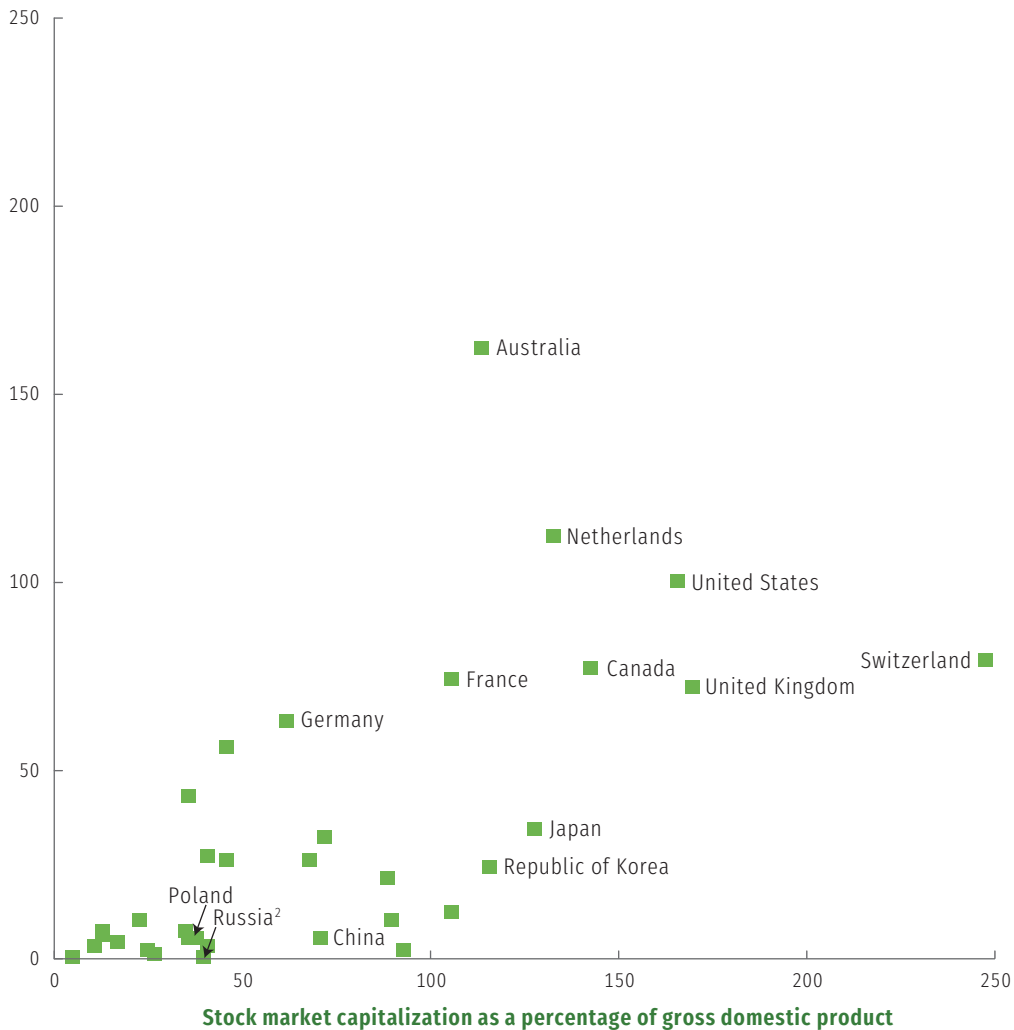
Trends in the European Investment Fund Industry
www.efama.org/statistics

FIGURE 1.10

Countries with More-Developed Equity Capital Markets Tend to Have More-Developed Fund Industries

Percent, 2017

**Regulated open-end long-term fund total net assets¹
as a percentage of gross domestic product**



¹ Regulated open-end funds include mutual funds, ETFs, and institutional funds. Long-term funds include equity funds, mixed/other funds (balanced/mixed, guaranteed/protected, real estate, and other funds), and bond funds, but exclude money market funds.

² Total net asset data for Russia are as of 2017:Q3.

Source: Investment Company Institute tabulations of data from the International Investment Funds Association, World Bank, and World Federation of Exchanges

Generally speaking, as stock market capitalization rises relative to GDP, so do total net assets in regulated funds. Countries with more-developed equity capital markets—such as the United States, the United Kingdom, the Netherlands, and Switzerland—tend to have a higher ratio of regulated long-term fund assets to GDP. For example, the Netherlands' stock market capitalization exceeds its GDP (133 percent, on the horizontal axis), indicating a highly developed equity capital market, while total net assets in regulated long-term funds are slightly above its GDP (at 112 percent on the vertical axis), indicating a more-developed fund industry. In contrast, countries with less-developed equity capital markets (lower ratios of stock market capitalization to GDP), such as Poland, Russia, and China, tend to have fewer total net assets in regulated long-term funds relative to GDP.

Other Factors Influencing Demand

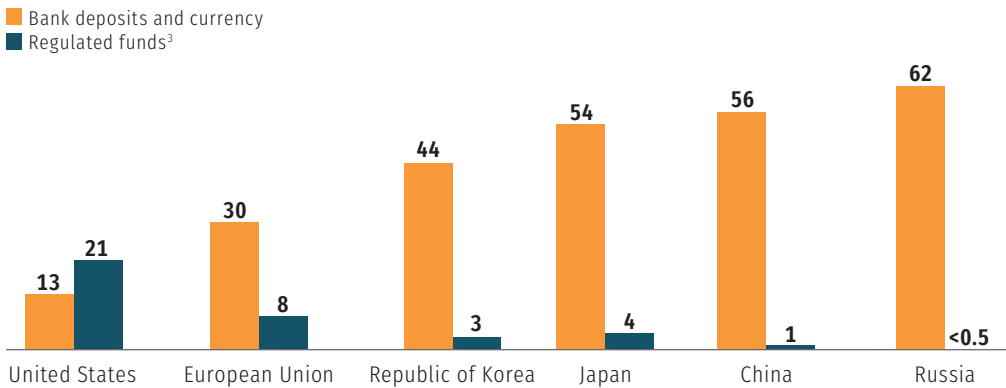
Other factors also influence the demand for regulated funds, and therefore, the size of the regulated fund market. For example, Japan's stock market capitalization is 128 percent of GDP, not much lower than the Netherlands (Figure 1.10). Nevertheless, Japan has substantially less net assets in regulated long-term funds as a proportion of its GDP (35 percent). This outcome reflects Japanese households' tendency to save in bank deposits rather than invest in regulated funds.

Japan is an example of the tendency in some countries—especially those where banks have historically dominated the financial landscape—for households to hold more of their financial assets in bank products, and less in regulated funds (Figure 1.11). Households in Japan, China, and Russia hold more than half of their financial assets in bank deposits and currency and very little in regulated funds. In the United States, banks compete with capital market instruments for households' financial assets; as a result, households hold a relatively small fraction of their assets in bank deposits (13 percent) compared with 21 percent in regulated funds. Europe is an intermediate case among industrialized nations, with 30 percent of households' financial wealth in bank deposits and 8 percent in regulated funds. Differences in public policy and tax regimes across countries also likely have contributed to the dispersion of deposits and regulated funds held by households.

FIGURE 1.11

US Households Have More of Their Wealth in Regulated Funds; Chinese Households Have a Lower Share

Percentage of households' financial wealth,¹ selected dates²



¹ Households' financial wealth includes households and nonprofit institutions serving households; data for China exclude nonprofit institutions serving households.

² Data for the United States and Japan are as of 2018:Q4; data for the European Union and the Republic of Korea are as of 2018:Q3; data for Russia are as of 2017:Q3; and data for China are estimated as of 2014:Q4.

³ For the United States and Russia, regulated funds include total net assets held by mutual funds and ETFs. For the European Union, Japan, the Republic of Korea, and China, regulated funds include investment fund shares as defined by their respective systems of national accounts.

Source: Investment Company Institute tabulations of data from the International Investment Funds Association, Federal Reserve Board, Eurostat, Bank of Korea, Bank of Japan, Chinese Academy of Social Sciences, and Central Bank of the Russian Federation

Size of Worldwide Regulated Funds in Global Capital Markets

Regulated funds are a growing source of capital for world financial markets, helping to finance businesses, governments, and household activities. As of 2018, worldwide capital markets, as measured by the value of equity and debt securities outstanding, totaled \$187 trillion (Figure 1.12). Total net assets of regulated funds constituted 25 percent (\$46.7 trillion) of the \$187 trillion in worldwide capital markets.

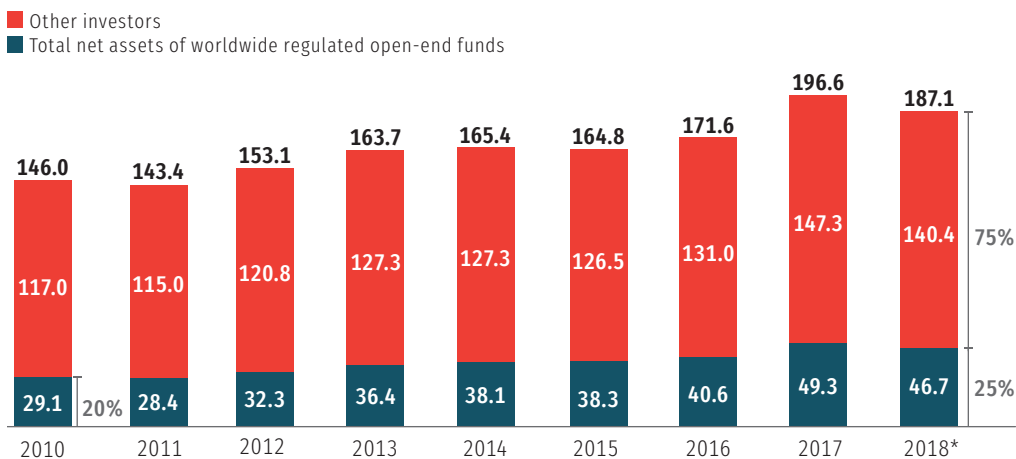
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Regulated Funds, Emerging Markets, and Financial Stability
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The share of worldwide capital markets held by regulated funds has grown over the past eight years. In 2010, worldwide regulated funds accounted for 20 percent of worldwide capital markets, rising to 25 percent in 2018. Despite this increase, regulated funds still accounted for a relatively small share of worldwide capital markets. The remaining 75 percent of worldwide capital markets are held by a wide range of investors, such as central banks, sovereign wealth funds, defined benefit pension plans, banks, insurance companies, hedge funds, broker-dealers, and households' direct holdings of stocks and bonds.

FIGURE 1.12

Worldwide Regulated Open-End Fund Share of Worldwide Equity and Debt Markets
Trillions of US dollars, year-end



*Data for worldwide debt markets are as of September 30, 2018.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds.

Source: Investment Company Institute tabulations of data from the International Investment Funds Association, World Federation of Exchanges, and Bank for International Settlements

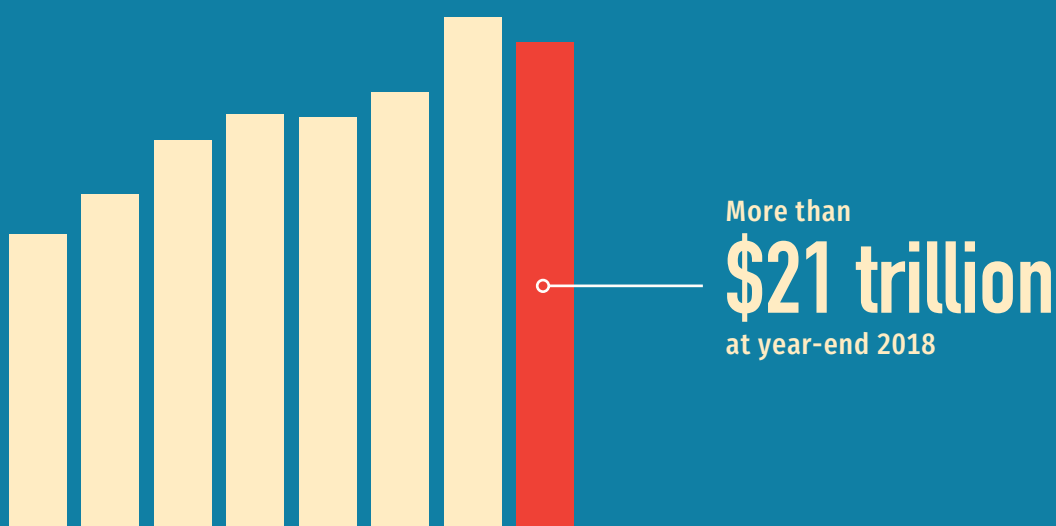
CHAPTER

02

US-REGISTERED INVESTMENT COMPANIES

Registered investment companies are an important segment of the asset management business in the United States. US-registered investment companies play a major role in the US economy and financial markets, and a growing role in global financial markets. These funds managed more than \$21 trillion in total net assets at year-end 2018, largely on behalf of more than 100 million US retail investors. The industry has experienced robust growth over the past quarter century from asset appreciation and strong demand from households due to rising household wealth, the aging US population, and the evolution of employer-based retirement systems. US funds supplied investment capital in securities markets around the world and were significant investors in the US stock and municipal securities markets.

The assets of US-registered investment companies decreased slightly in 2018



In this chapter

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Investment Company Assets in 2018

Total net assets in US-registered investment companies* declined by \$1.1 trillion in 2018, to a year-end level of \$21.4 trillion (Figure 2.1). With \$21.1 trillion in assets, mutual funds and exchange-traded funds (ETFs) accounted for the vast majority.

FIGURE 2.1

Investment Company Total Net Assets by Type

Billions of dollars, year-end

	Mutual funds	Closed-end funds ¹	ETFs ²	UITs	Total ³
1999	6,834	157	34	92	7,116
2000	6,956	150	66	74	7,245
2001	6,969	145	83	49	7,246
2002	6,380	161	102	36	6,680
2003	7,399	216	151	36	7,801
2004	8,093	255	228	37	8,614
2005	8,889	276	301	41	9,507
2006	10,395	299	423	50	11,167
2007	11,995	316	608	53	12,973
2008	9,619	185	531	29	10,364
2009	11,109	224	777	38	12,149
2010	11,831	239	992	51	13,113
2011	11,630	244	1,048	60	12,982
2012	13,054	265	1,337	72	14,728
2013	15,049	282	1,675	87	17,092
2014	15,877	292	1,975	101	18,244
2015	15,658	263	2,101	94	18,116
2016	16,353	265	2,524	85	19,227
2017	18,764	277	3,401	85	22,527
2018	17,707	250	3,371	70	21,398

¹ Closed-end fund data include preferred share classes.

² ETF data prior to 2001 were provided by Strategic Insight Simfund.

³ Total investment company assets include mutual fund holdings of closed-end funds and ETFs.

Sources: Investment Company Institute and Strategic Insight Simfund

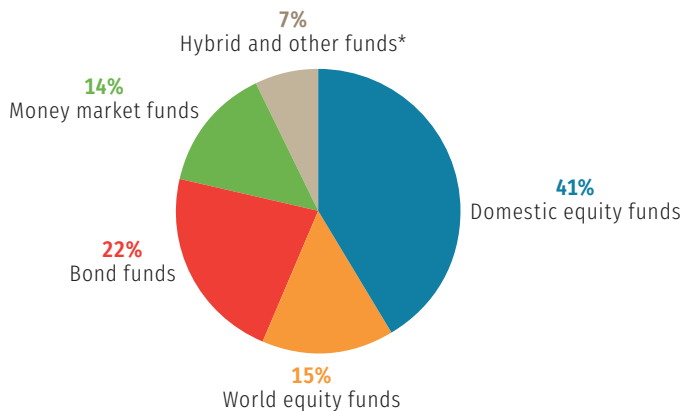
*The terms *investment companies* and *US investment companies* are used at times throughout this book in place of *US-registered investment companies*. US-registered investment companies are open-end mutual funds, closed-end funds, exchange-traded funds, and unit investment trusts.

The majority of US mutual fund and ETF net assets at year-end 2018 were in long-term funds, with equity funds constituting 56 percent (Figure 2.2). Domestic equity funds (those that invest primarily in shares of US corporations) held 41 percent of net assets and world equity funds (those that invest significantly in shares of non-US corporations) accounted for 15 percent. Bond funds held 22 percent of US mutual fund and ETF net assets. Money market funds, hybrid funds, and other funds—such as those that invest primarily in commodities—held the remainder (21 percent).

Mutual funds recorded \$191 billion in net outflows in 2018 (Figure 3.4). While long-term mutual funds saw net outflows of \$350 billion, money market funds received \$159 billion of net inflows. Mutual fund shareholders reinvested \$305 billion in income dividends and \$495 billion in capital gains distributions that mutual funds paid out during the year. Investors continued to show strong demand for ETFs with net share issuance (which includes reinvested dividends) totaling \$311 billion in 2018 (Figure 4.8). Unit investment trusts (UITs) experienced net new deposits of \$49 billion, about the same as the previous year, and closed-end funds issued a net \$597 million in new shares (Figure 5.3).

FIGURE 2.2

The Majority of US Mutual Fund and ETF Total Net Assets Were in Equity Funds
Percentage of total net assets, year-end 2018



US mutual fund and ETF total net assets: \$21.1 trillion

*This category includes ETFs—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

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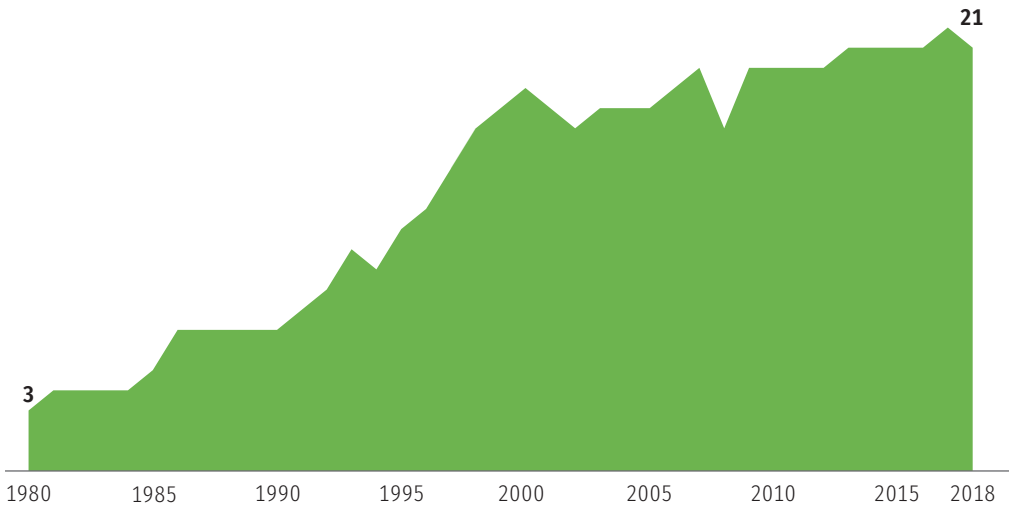
Americans' Continued Reliance on Investment Companies

Households make up the largest group of investors in funds, and registered investment companies managed 21 percent of household financial assets at year-end 2018 (Figure 2.3).

FIGURE 2.3

Share of Household Financial Assets Held in Investment Companies

Percentage of household financial assets, year-end



Note: Household financial assets held in registered investment companies include household holdings of mutual funds, ETFs, closed-end funds, and UITs. Mutual funds held in employer-sponsored DC plans, IRAs, and variable annuities are included.

Sources: Investment Company Institute and Federal Reserve Board

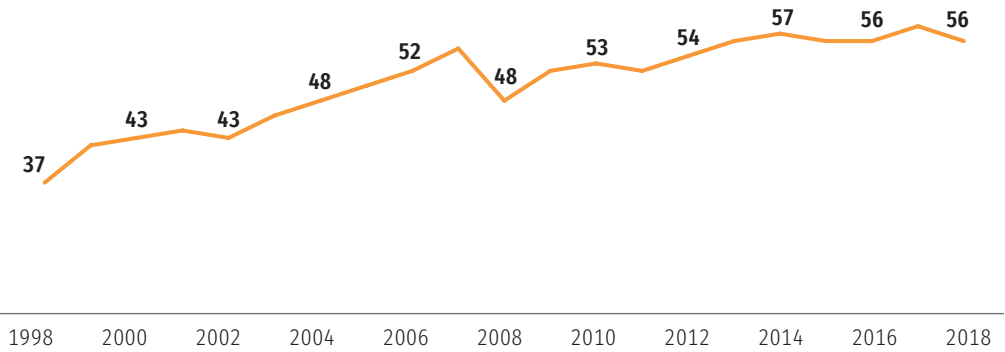
The growth of individual retirement accounts (IRAs) and defined contribution (DC) plans, particularly 401(k) plans, explains some of the increased household reliance on investment companies in the past three decades. IRAs made up 10 percent of household financial assets at year-end 2018, up from 3 percent in 1988, while DC plans have risen from 5 percent of household financial assets to 9 percent over the same period (with 401(k) plans accounting for 6 percent of household financial assets at year-end 2018). Mutual funds made up a significant portion of DC plan assets (56 percent) and IRA assets (45 percent) at year-end 2018 (Figure 2.4). In addition, the share of DC plan assets held in mutual funds has grown significantly over the past two decades, from 37 percent at year-end 1998 to 56 percent at year-end 2018. Mutual funds also managed \$1.2 trillion in variable annuities outside retirement accounts, as well as \$8.4 trillion of other assets outside retirement accounts.

FIGURE 2.4

Mutual Funds in Household Retirement Accounts

Percentage of retirement assets in mutual funds by type of retirement vehicle

DC plans*



IRAs



*This category includes private-sector employer-sponsored DC plans (including 401(k) plans), 403(b) plans, 457 plans, and the Federal Employees Retirement System (FERS) Thrift Savings Plan (TSP).

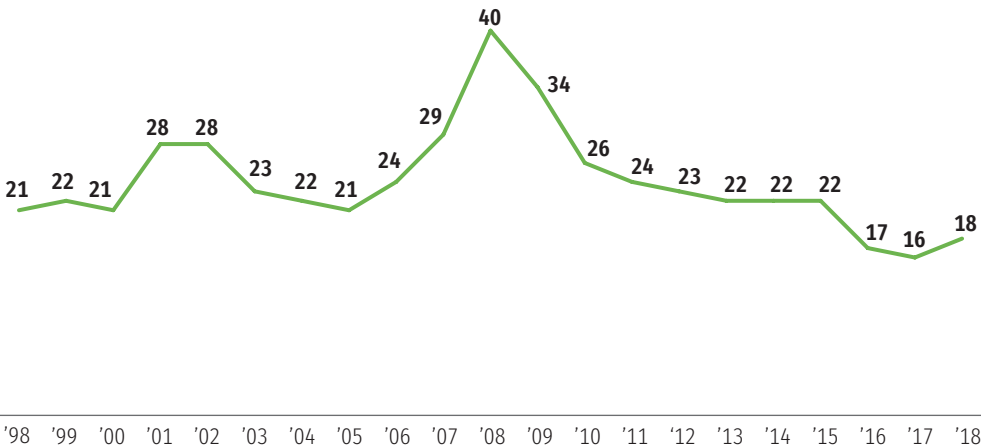
Sources: Investment Company Institute, Federal Reserve Board, Department of Labor, National Association of Government Defined Contribution Administrators, American Council of Life Insurers, and Internal Revenue Service Statistics of Income Division. See Investment Company Institute, "The US Retirement Market, Fourth Quarter 2018."

Businesses and other institutional investors also rely on funds. For instance, institutions can use money market funds to manage some of their cash and other short-term assets. At year-end 2018, nonfinancial businesses held \$616 billion (18 percent) of their short-term assets in money market funds (Figure 2.5). Institutional investors also have contributed to growing demand for ETFs. Investment managers—including mutual funds, pension funds, hedge funds, and insurance companies—use ETFs to invest in markets, to manage liquidity and investor flows, or to hedge their exposures.

FIGURE 2.5

Money Market Funds Managed 18 Percent of US Nonfinancial Businesses' Short-Term Assets in 2018

Percentage of short-term assets, year-end



Note: US nonfinancial businesses' short-term assets consist of foreign deposits, checkable deposits and currency, time and savings deposits, money market funds, repurchase agreements, and commercial paper.
Sources: Investment Company Institute and Federal Reserve Board

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Role of Investment Companies in Financial Markets

Investment companies have been among the largest investors in the domestic financial markets for much of the past 20 years. And in recent years, they have held a fairly stable share of the securities outstanding across a variety of asset classes. At year-end 2018, investment companies held approximately 30 percent of the shares of US-issued equities outstanding, little changed from 31 percent in 2015 (Figure 2.6). Investment companies also held 20 percent of bonds issued by US corporations and foreign bonds held by US residents at year-end 2018. The percentage of corporate bonds outstanding held by investment companies has also changed little since 2015, with mutual funds holding a significantly larger share relative to other registered investment companies.

Investment companies also held 13 percent of the US Treasury and government agency securities outstanding at year-end 2018, a share that has remained fairly stable over the past few years (Figure 2.6). As a whole, investment companies have been one of the largest groups of investors in US municipal securities, holding 25 percent of the municipal securities outstanding at year-end 2018.

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FIGURE 2.6

Investment Companies Channel Investment to Stock, Bond, and Money Markets

Percentage of total market securities held by investment companies, year-end

■ Mutual funds
 ■ Other registered investment companies



¹ The percentage of total US Treasury and government agency securities held by other registered investment companies was less than 0.5 percent in each year.

² Other registered investment companies held no commercial paper.

Sources: Investment Company Institute, Federal Reserve Board, and World Federation of Exchanges

Historically, mutual funds have been one of the largest investors in the US commercial paper market—an important source of short-term funding for major corporations around the world. Mutual fund demand for commercial paper arose primarily from prime money market funds. In 2016, however, assets of prime money market funds fell 70 percent (nearly \$900 billion) as these funds adapted to the 2014 SEC rule amendments that required the money market fund industry to make substantial changes by October 2016. Consequently, prime money market funds sharply reduced their holdings of commercial paper. From year-end 2015 to year-end 2016, mutual funds' share of the commercial paper market fell from 40 percent to 19 percent (Figure 2.6). By year-end 2017, mutual funds had increased their share of the commercial paper market to 25 percent, and their share was little changed (24 percent) at year-end 2018.

Growth in Index Funds

Index funds are designed to track the performance of a market index. To do this, the fund manager purchases all of the securities in the index, or a representative sample of them, so that the performance of the fund tracks the value of the index. This approach to portfolio management is the primary reason that index funds—which can be formed as either mutual funds or ETFs—tend to have below-average expense ratios.

Index mutual funds were first offered in the 1970s, followed by index ETFs in the 1990s. By year-end 2018, total net assets in these funds grew to \$6.6 trillion. Along with this growth, index funds have become a larger share of overall fund assets. At year-end 2018, index mutual funds and index ETFs together accounted for 36 percent of assets in long-term funds, up from 18 percent at year-end 2008 (Figure 2.7). Nevertheless, actively managed funds were the majority of fund assets (64 percent) in 2018.

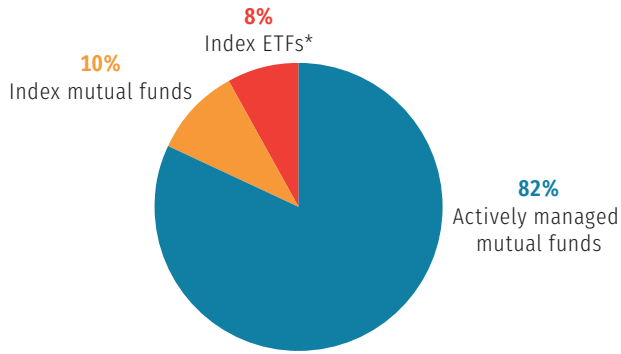
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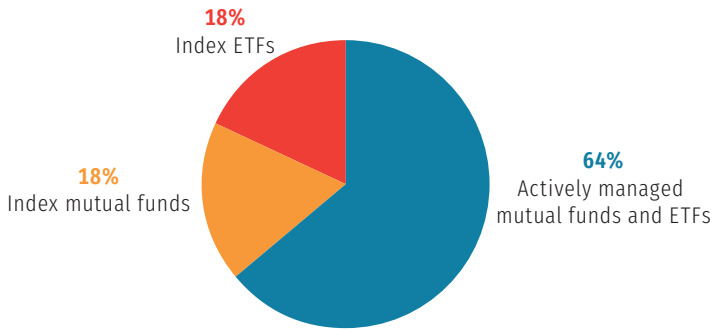
FIGURE 2.7

Index Funds Have Grown as a Share of the Fund Market

Percentage of total net assets, year-end



2008 total net assets: \$6.3 trillion



2018 total net assets: \$18.0 trillion

*This category includes a small number of actively managed ETFs.

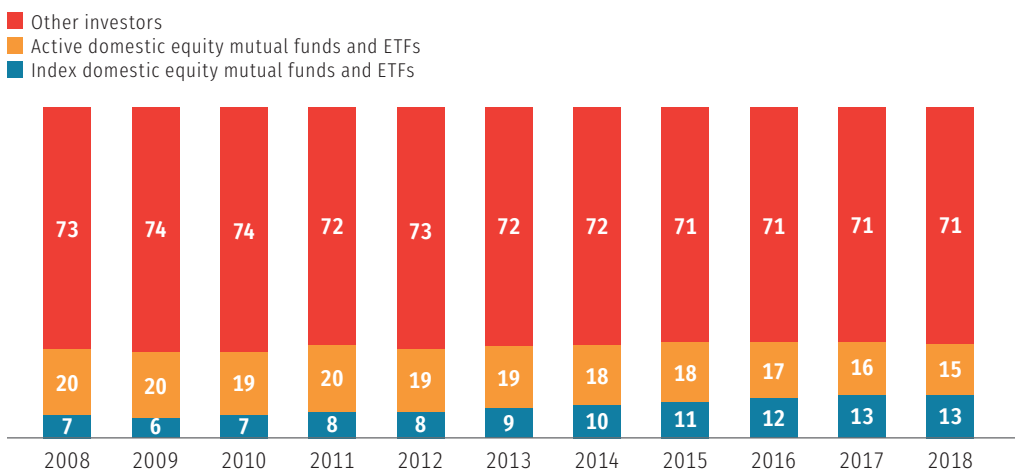
Note: The ETF category excludes non-1940 Act ETFs. The mutual fund category excludes money market funds.

Much of the growth in index funds over the past decade has been concentrated in funds that invest in domestic equities. During this time frame, 42 percent of inflows into index funds went to domestic equity funds, and domestic equity index funds accounted for 62 percent of index fund assets at year-end 2018. Despite their recent rapid growth, index domestic equity mutual funds and ETFs remain a relatively small part of US stock markets, holding only 13 percent of the value of US stocks at year-end 2018 (Figure 2.8). Actively managed domestic equity mutual funds and ETFs held another 15 percent, while other investors—including hedge funds, pension funds, life insurance companies, and individuals—held the remaining 71 percent.

FIGURE 2.8

Index Fund Share of US Stock Market Is Small

Percentage of US stock market capitalization, year-end



Note: In 2008 and 2009, data for index ETFs include a small number of actively managed ETFs.

Sources: Investment Company Institute and World Federation of Exchanges

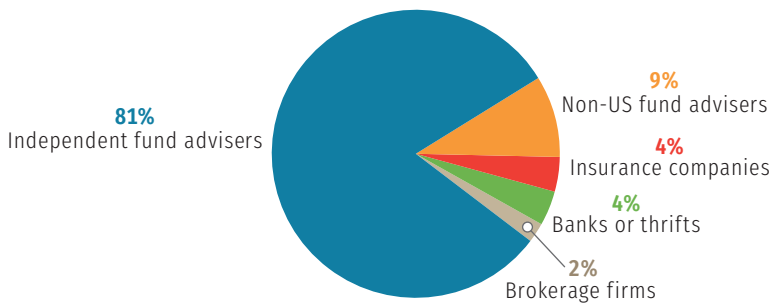
Types of Intermediaries and Number of Investment Companies

A variety of financial services companies offer registered funds in the United States. At year-end 2018, 81 percent of investment company complexes were independent fund advisers (Figure 2.9), and these firms managed 70 percent of investment company assets. Other types of investment company complexes in the US market include non-US fund advisers, insurance companies, banks, thrifts, and brokerage firms.

FIGURE 2.9

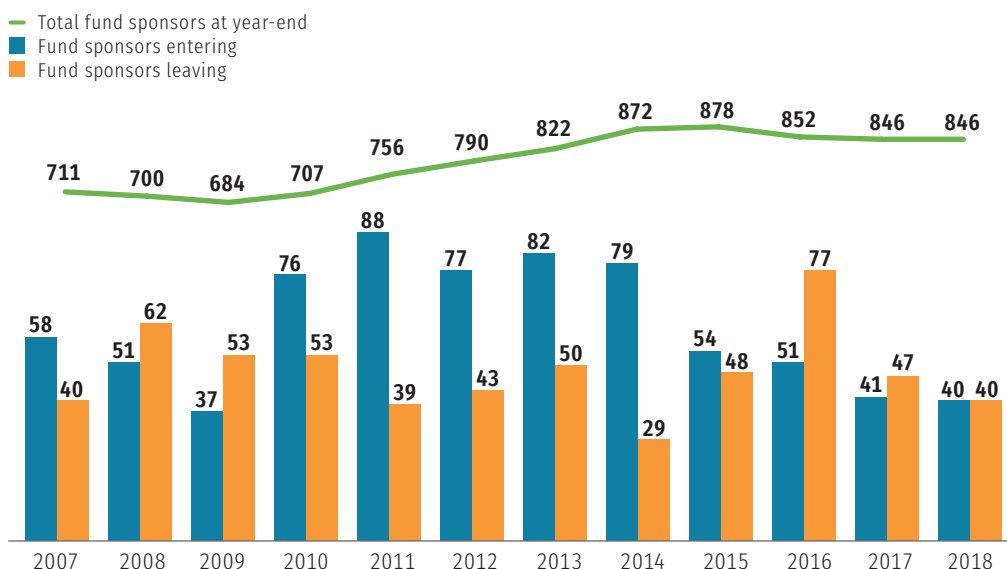
More Than 80 Percent of Fund Complexes Were Independent Fund Advisers

Percentage of investment company complexes by type of intermediary, year-end 2018



In 2018, 846 fund sponsors from around the world competed in the US market to provide investment management services to fund investors (Figure 2.10). The decline in the number of fund sponsors since year-end 2015 may be due to a variety of business decisions, including larger fund sponsors acquiring smaller ones, fund sponsors liquidating funds and leaving the business, or larger sponsors selling their advisory businesses. Prior to 2015, the number of fund sponsors had been increasing as the economy and financial markets recovered from the 2007–2009 financial crisis. As a whole, from 2010 through 2018, 588 sponsors entered the market while 426 left, for a net increase of 162.

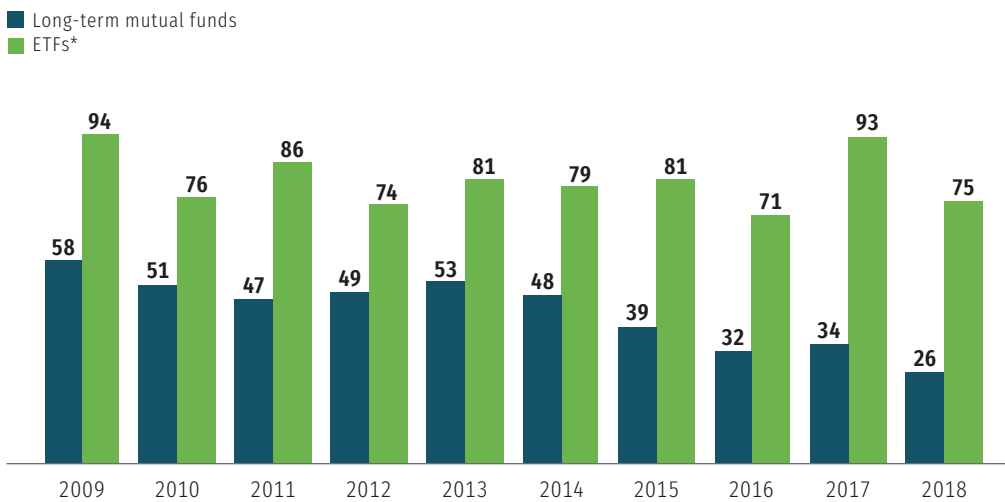
FIGURE 2.10
Number of Fund Sponsors



Many recent entrants to the fund industry have adopted solutions in which the fund’s sponsor arranges for a third party to provide certain services (e.g., audit, trustee, some legal) through a turnkey setup. This allows the sponsor to focus more on managing portfolios and gathering assets. Through an arrangement known as a series trust, the third party provides services to a number of independent fund sponsors under a single complex that serves as an “umbrella.” This can be cost-efficient because the costs of operating funds are spread across the combined assets of a number of funds in the series trust.

The increased availability of other investment products has led to changes in how investors are allocating their portfolios. The percentage of mutual fund companies retaining assets and attracting net new investments generally has been lower in recent years. In 2018, 26 percent of fund complexes saw inflows to their long-term mutual funds; 75 percent of ETF sponsors had positive net share issuance (Figure 2.11).

FIGURE 2.11
Positive Net New Cash Flow to Long-Term Mutual Funds and Positive Net Share Issuance of ETFs
 Percentage of fund complexes



*Data for ETF net share issuance include reinvested dividends.

In the past decade, the percentage of fund complexes attracting new money into their long-term mutual funds has decreased, while the concentration of mutual fund and ETF assets managed by the largest fund complexes has increased. The share of assets managed by the five largest firms rose from 35 percent in 2005 to 51 percent in 2018, and the share managed by the 10 largest firms increased from 46 percent to 61 percent (Figure 2.12). Some of the increase in market share occurred at the expense of the middle tier of firms—those ranked from 11 to 25—whose market share fell from 21 percent in 2005 to 18 percent in 2018.

FIGURE 2.12

Share of Mutual Fund and ETF Assets at the Largest Fund Complexes

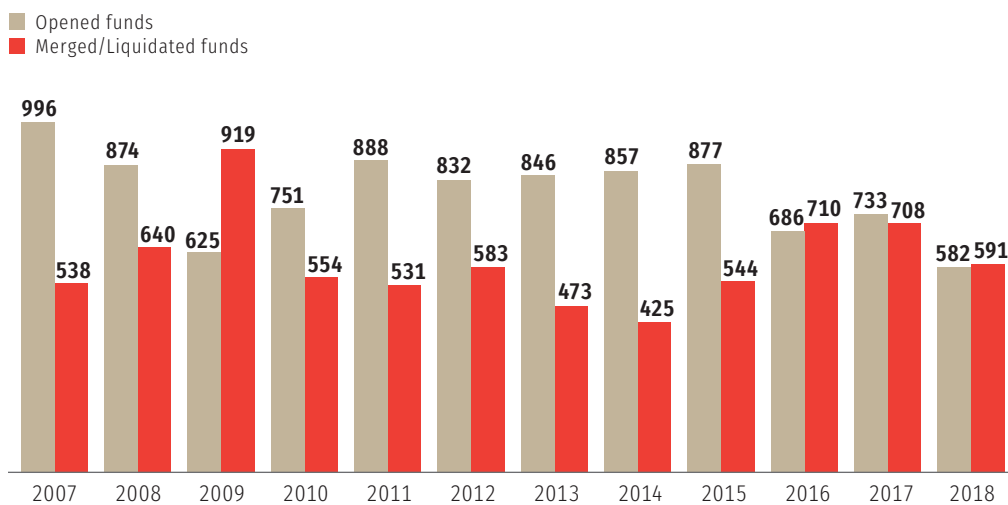
Percentage of total net assets of mutual funds and ETFs, year-end

	2005	2010	2015	2016	2017	2018
Largest 5 complexes	35	42	45	47	50	51
Largest 10 complexes	46	55	56	58	60	61
Largest 25 complexes	67	74	75	76	77	79

Note: Data include only mutual funds and ETFs registered under the Investment Company Act of 1940.

At least two factors have contributed to the rise in industry concentration. First, because the 10 largest fund complexes manage most of the assets in index mutual funds, the growing popularity of index funds has increased concentration. Actively managed domestic equity mutual funds had outflows in every year after 2005, while index domestic equity mutual funds had inflows and index domestic equity ETFs had positive net share issuance in each of these years. Second, strong inflows over the past decade to bond mutual funds (Figure 3.10), which are fewer in number and are less likely to be offered by smaller fund sponsors, helped boost the share of assets managed by large fund complexes.

Macroeconomic conditions and competitive dynamics can affect the supply of funds offered for sale. Fund sponsors create new funds to meet investor demand, and they merge or liquidate those that do not attract sufficient investor interest. A total of 582 mutual funds and ETFs opened in 2018, down from 733 in 2017, and well below the 2007–2017 annual average of 815 (Figure 2.13). The rate of mutual fund and ETF mergers and liquidations declined from 708 in 2017 to 591 in 2018.

FIGURE 2.13**Number of Mutual Funds and ETFs Entering and Leaving the Industry**

Note: Data include mutual funds that do not report statistical information to the Investment Company Institute and mutual funds that invest primarily in other mutual funds. ETF data include ETFs that invest primarily in other ETFs.

Unit Investment Trusts

Unit investment trusts (UITs) are registered investment companies with characteristics of both mutual funds and closed-end funds. Like mutual funds, UITs issue redeemable shares (called units), and like closed-end funds, they typically issue a specific, fixed number of shares. But unlike either mutual funds or closed-end funds, UITs have a preset termination date based on the portfolio's investments and the UIT's investment goals. UITs investing in long-term bonds might have a preset termination date of 20 to 30 years, depending on the maturity of the bonds they hold. UITs investing in stocks might seek to capture capital appreciation in a few years or less. When a UIT terminates, proceeds from the securities are paid to unit holders or, at a unit holder's election, reinvested in another trust.

UITs fall into two main categories: bond trusts and equity trusts. Bond trusts are either taxable or tax-free; equity trusts are either domestic or international/global. The first UIT, introduced in 1961, held tax-free bonds, and historically, most UIT total net assets were invested in bonds. Equity UITs, however, have grown in popularity over the past two decades. Assets in equity UITs have exceeded the combined assets of taxable and tax-free bond UITs in recent years and constituted 86 percent of the assets in UITs at year-end 2018 (Figure 2.14). The number of trusts outstanding has been decreasing as sponsors created fewer new trusts and existing trusts reached their preset termination dates.

Federal law requires that UITs have a largely fixed portfolio—one that is not actively managed or traded. Once the trust's portfolio has been selected, its composition may change only in very limited circumstances. Most UITs hold a diversified portfolio, described in detail in the prospectus, with securities professionally selected to meet a stated investment goal, such as growth, income, or capital appreciation.

Investors can obtain UIT price quotes from brokerage or investment firms and investment company websites, and some but not all UITs list their prices on NASDAQ's Mutual Fund Quotation Service. Some broker-dealers offer their own trusts or sell trusts offered by nationally recognized independent sponsors. Units of these trusts can be bought through their registered representatives. Units can also be bought from the representatives of smaller investment firms that sell trusts sponsored by third-party firms.

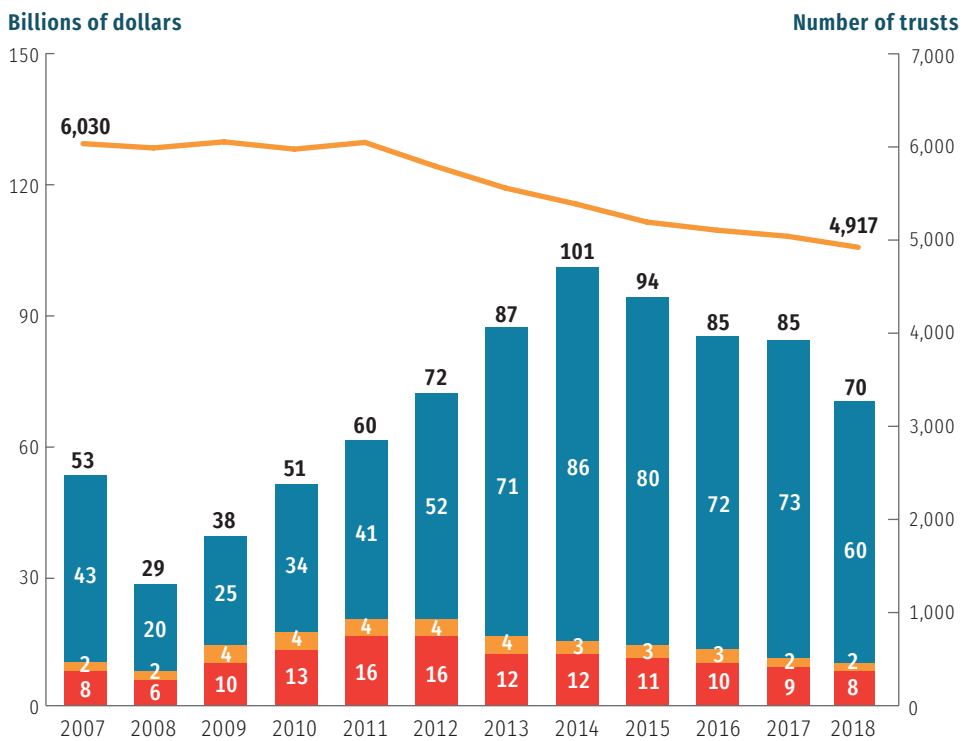
Though a fixed number of units of a UIT are sold in a public offering, a trust sponsor is likely to maintain a secondary market, in which investors can sell their units back to the sponsor and other investors can buy those units. Even absent a secondary market, UITs are required by law to redeem outstanding units at their net asset value (NAV), which is based on the underlying securities' current market value.

FIGURE 2.14

Total Net Assets and Number of UITs

Year-end

- Total number of trusts (right scale)
- Equity trust assets (left scale)
- Taxable debt trust assets (left scale)
- Tax-free debt trust assets (left scale)



The total number of investment companies has increased since 2005 (the recent low point), but it remains well below the year-end 2000 peak (Figure 2.15). This largely reflects the sharp decline in UITs in the early 2000s. The number of UITs declined to 4,917 at year-end 2018 from 5,035 at year-end 2017. The number of mutual funds increased in 2018 to a total of 9,599 funds from 9,354 at year-end 2017. The number of closed-end funds fell to 506 at year-end 2018, the lowest level since 2001. The number of ETFs continues to grow, with 2,057 ETFs at year-end 2018, nearly three times the total number of ETFs a decade ago.

FIGURE 2.15

Number of Investment Companies by Type
Year-end

	Mutual funds ¹	Closed-end funds	ETFs ²	UITs	Total
1999	7,970	512	30	10,414	18,926
2000	8,349	482	80	10,072	18,983
2001	8,480	490	102	9,295	18,367
2002	8,490	543	113	8,303	17,449
2003	8,406	581	119	7,233	16,339
2004	8,411	618	152	6,499	15,680
2005	8,439	635	204	6,019	15,297
2006	8,704	646	359	5,907	15,616
2007	8,723	664	629	6,030	16,046
2008	8,860	644	743	5,984	16,231
2009	8,594	629	820	6,049	16,092
2010	8,523	626	950	5,971	16,070
2011	8,662	634	1,166	6,043	16,505
2012	8,742	604	1,239	5,787	16,372
2013	8,970	601	1,332	5,552	16,455
2014	9,256	570	1,451	5,381	16,658
2015	9,515	561	1,644	5,188	16,908
2016	9,505	534	1,774	5,100	16,913
2017	9,354	533	1,900	5,035	16,822
2018	9,599	506	2,057	4,917	17,079

¹ Data include mutual funds that invest primarily in other mutual funds.

² ETF data prior to 2001 were provided by Strategic Insight Simfund. ETF data include ETFs that invest primarily in other ETFs.

Sources: Investment Company Institute and Strategic Insight Simfund

Investment Company Employment

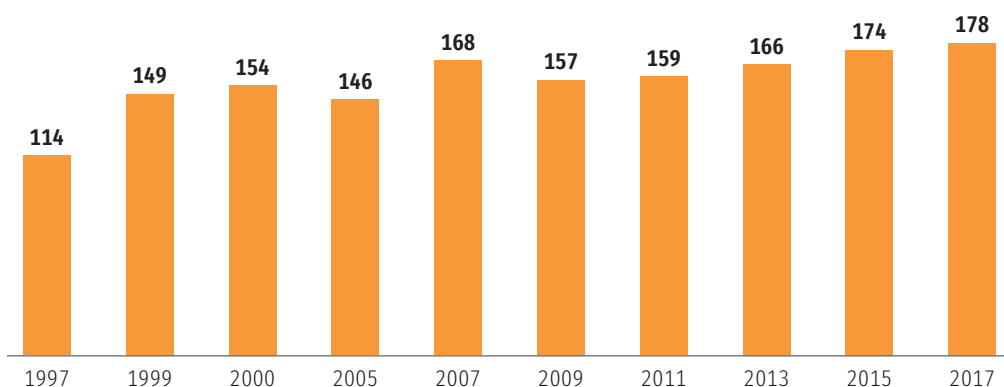
Registered investment companies typically do not have employees—instead, they contract with other businesses to provide services to the fund. Except for UITs, funds in the United States have fund boards that oversee the management of the fund and represent the interests of the fund shareholders. Fund boards must approve all major contracts between the fund and its service providers, including the advisory contract with a fund’s investment adviser, who is usually also the fund’s sponsor.

Fund sponsors and third-party service providers offer advisory, recordkeeping, administrative, custody, and other services to a growing number of funds and their investors. Fund industry employment in the United States has grown 56 percent since 1997, from 114,000 workers in 1997 to 178,000 workers in 2017 (Figure 2.16).

FIGURE 2.16

Investment Company Industry Employment

Estimated number of employees of fund sponsors and their service providers, thousands



Note: Years are those in which ICI conducted its employment survey.

Fund investment advisers are one of the prominent providers of services to funds. This group of service providers is responsible for managing the fund’s business affairs, ensuring compliance with laws and regulations, overseeing other third-party service providers the fund may rely on, and directing funds’ investments by undertaking investment research and determining which securities to buy and sell. The adviser will often undertake trading and security settlement for the fund. In March 2017, 39 percent of the industry worked in support of fund management functions such as investment research, trading and security settlement, information systems and technology, and other corporate management functions (Figure 2.17).

The second-largest group of workers (28 percent) provides services to fund shareholders and their accounts (Figure 2.17). Shareholder account servicing encompasses a wide range of activities to help investors monitor and update their accounts. These employees work in call centers and help shareholders and their financial advisers with questions about investor accounts. They also process applications for account openings and closings. Other services include retirement plan transaction processing, retirement plan participant education, participant enrollment, and plan compliance.

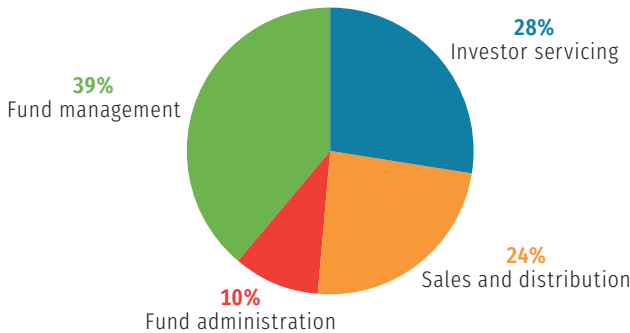
Distribution and sales force personnel together accounted for 24 percent of the workforce (Figure 2.17). Employees in these areas may work in marketing, product development and design, or investor communications, and can include sales support staff, registered representatives, and fund supermarket representatives.

Fund administration, which includes financial and portfolio accounting and regulatory compliance duties, accounted for 10 percent of industry employment (Figure 2.17). Employees performing those services are often affiliated with a fund’s investment adviser. Fund administration encompasses the middle- and back-office functions necessary to operate the fund, and includes clerical and fund accounting services, data processing, recordkeeping, internal audits, and compliance and risk management functions.

FIGURE 2.17

Investment Company Industry Employment by Job Function

Percentage of employees of fund sponsors and their service providers, March 2017



Total employment: 178,000 employees

Typically, employees with administration duties are responsible for regulatory and compliance requirements, such as preparing and filing regulatory reports, overseeing fund service providers, preparing and submitting reports to regulators and tax authorities, and producing shareholder reports such as prospectuses and financial statements of the funds. Administration services also help to maintain compliance procedures and internal controls, subject to approval by a fund’s board and chief compliance officer.

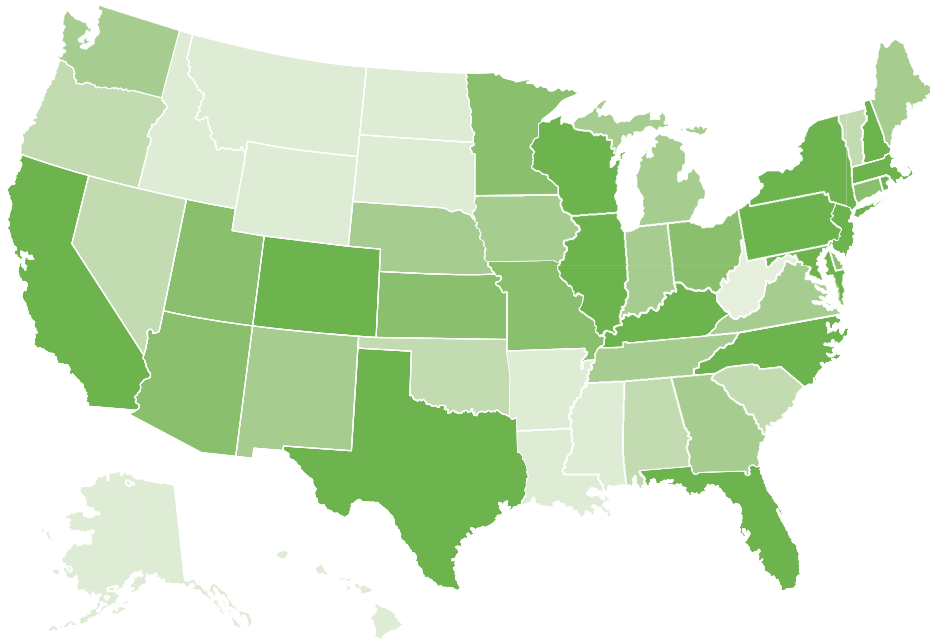
For many industries, employment tends to be concentrated in locations where the industry began. The same is true for investment companies: those located in Massachusetts and New York, early hubs of investment company operations, employ 23 percent of fund industry workers (Figure 2.18). As the industry has grown, other states—including California, Pennsylvania, and Texas—have become major centers of fund industry employment. Fund companies in these three states employed more than one-quarter of US fund industry employees as of March 2017.

FIGURE 2.18

Investment Company Industry Employment by State

Estimated number of employees of fund sponsors and their service providers by state, March 2017

- 4,000 or more
- 1,500 to 3,999
- 500 to 1,499
- 100 to 499
- 0 to 99



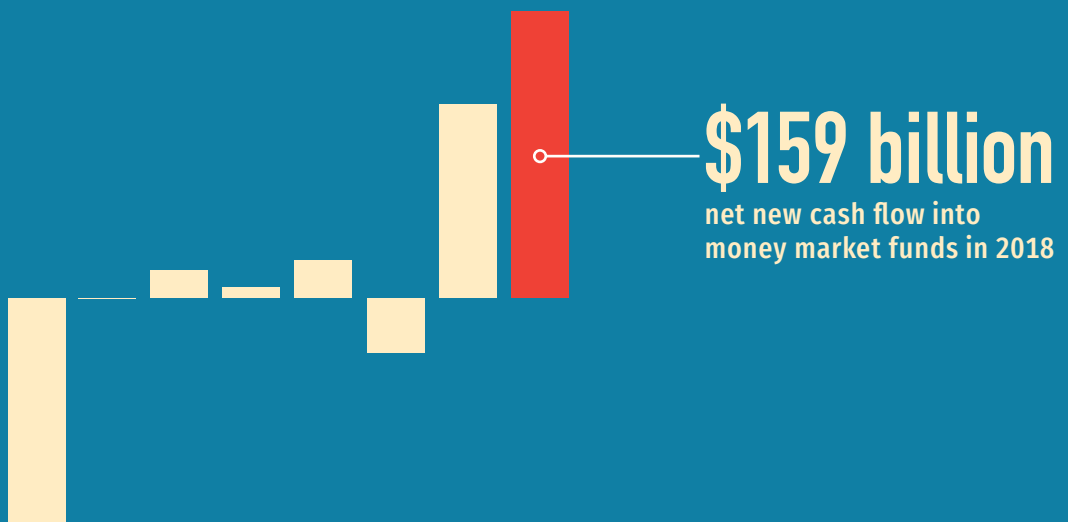
CHAPTER

03

US MUTUAL FUNDS

A mutual fund is an investment company that pools money from shareholders and invests in a portfolio of securities. In 2018, an estimated 99.5 million individual Americans in 56.0 million households owned mutual funds, relying on them to meet long-term personal financial objectives, such as preparing for retirement, saving for education, purchasing a house, or preparing for emergencies. Mutual funds had net redemptions of \$191 billion in 2018, or 1.0 percent of year-end 2017 total net assets. Changing demographics and investors' reactions to US and worldwide economic and financial conditions play important roles in determining how demand for specific types of mutual funds—and for mutual funds in general—evolves.

Money market funds had large inflows



In this chapter

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- 59 Developments in Mutual Fund Flows
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- 71 Hybrid Mutual Funds
- 76 Money Market Funds

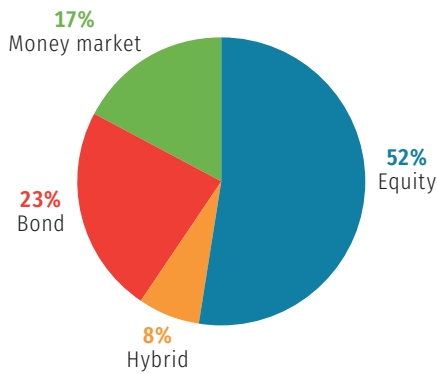
Mutual Fund Total Net Assets

With \$17.7 trillion in total net assets, the US mutual fund industry remained the largest in the world at year-end 2018. The majority of US mutual fund net assets at year-end 2018 were in long-term mutual funds, with equity funds alone making up 52 percent of US mutual fund net assets (Figure 3.1). Bond mutual funds were the second-largest category, with 23 percent of net assets. Money market funds (17 percent) and hybrid funds (8 percent) held the remainder.

FIGURE 3.1

Equity Mutual Funds Held More Than Half of Mutual Fund Total Net Assets

Percentage of total net assets, year-end 2018



US mutual fund total net assets: \$17.7 trillion

Investor Demand for US Mutual Funds

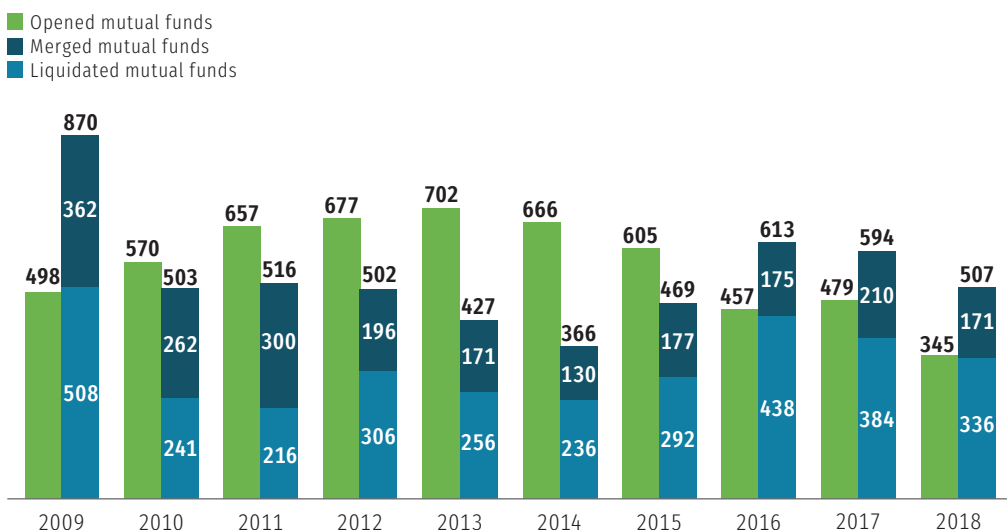
A variety of factors influence investor demand for mutual funds, such as funds' ability to assist investors in achieving their investment objectives. For example, US households rely on equity, bond, and hybrid mutual funds to meet long-term personal financial objectives, such as preparing for retirement. US households, as well as businesses and other institutional investors, use money market funds as cash management tools because they provide a high degree of liquidity and competitive short-term yields.

Domestic equity mutual funds continued to experience net outflows in 2018, likely reflecting the decline in US equity markets and an ongoing shift by investors to other index-based products. In addition, demand for certain types of bond mutual funds weakened as the Federal Reserve elected to raise the federal funds target rate four times in 2018. The increases in the federal funds rate led to higher demand for money market funds as the yields on short-term assets became more competitive.

Entry and Exit of US Mutual Funds

Mutual fund sponsors create new funds to meet investor demand, and they merge or liquidate those that do not attract sufficient investor interest. A total of 345 mutual funds opened in 2018 (Figure 3.2). Fewer equity and taxable bond fund launches contributed to the decline in the number of new mutual funds offered from 2017 to 2018. During the same time, the number of mutual funds that were either merged or liquidated also decreased.

FIGURE 3.2
Number of Mutual Funds Entering and Exiting the Industry



Note: Data include mutual funds that do not report statistical information to the Investment Company Institute and mutual funds that invest primarily in other mutual funds.

Investors in US Mutual Funds

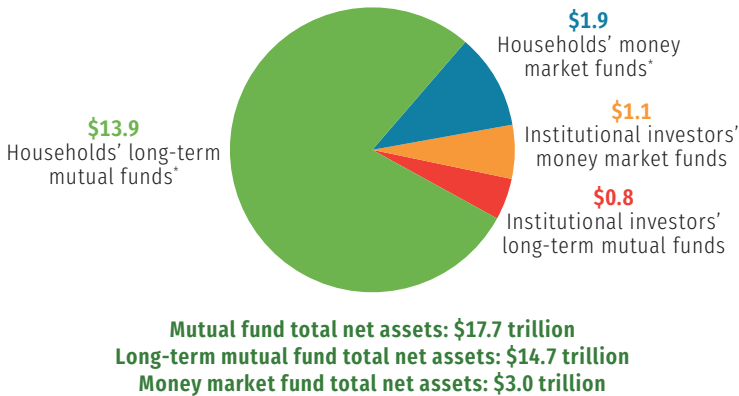
Demand for mutual funds is, in part, related to the types of investors who hold mutual fund shares. Retail investors (i.e., households) held the vast majority (89 percent) of the \$17.7 trillion in US mutual fund net assets at year-end 2018 (Figure 3.3). The proportion of long-term mutual fund net assets held by retail investors is even higher (95 percent). Retail investors also held substantial money market fund net assets (\$1.9 trillion), but that amounts to a relatively small share (12 percent) of their total mutual fund net assets.

In contrast, institutional investors such as nonfinancial businesses, financial institutions, and nonprofit organizations held a relatively small portion of mutual fund net assets. At year-end 2018, institutions held 11 percent of mutual fund net assets (Figure 3.3). The majority (58 percent) of the \$1.9 trillion that institutions held in mutual funds was in money market funds, because one of the primary reasons institutions use mutual funds is to help manage their cash balances.

FIGURE 3.3

Households Held 89 Percent of Mutual Fund Total Net Assets

Trillions of dollars, year-end 2018



* Mutual funds held as investments in individual retirement accounts, defined contribution retirement plans, variable annuities, 529 plans, and Coverdell education savings accounts are counted as household holdings of mutual funds.

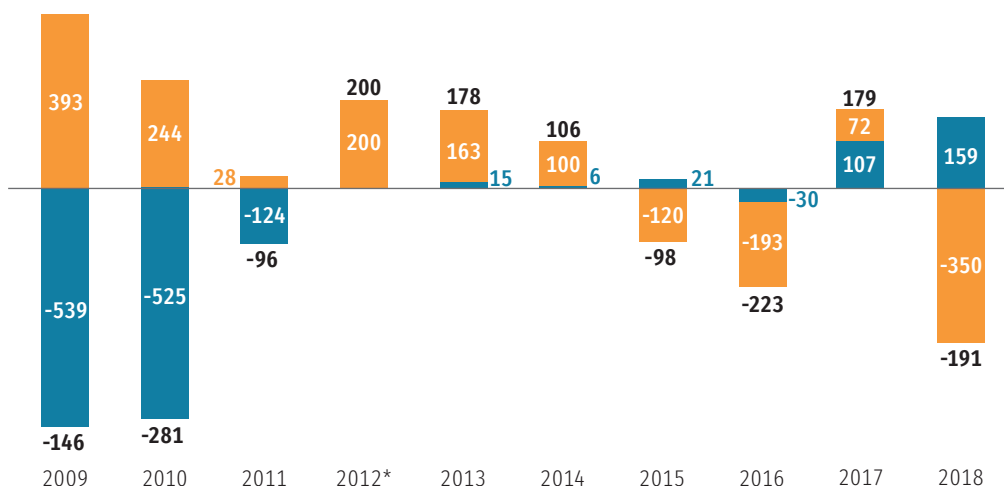
Developments in Mutual Fund Flows

Overall demand for mutual funds as measured by net new cash flow—new fund sales less redemptions plus net exchanges—weakened considerably in 2018 (Figure 3.4). In 2018, mutual funds had net outflows of \$191 billion (1.0 percent of year-end 2017 total net assets), following net inflows of \$179 billion in 2017. Long-term mutual funds experienced net outflows of \$350 billion in 2018, which were primarily concentrated in domestic equity and hybrid mutual funds. Money market funds received \$159 billion in net inflows, which were likely driven by the Federal Reserve’s decision to increase the federal funds rate four times in 2018. A number of factors—including broad-based declines in global financial markets, ongoing demographic trends, and increased demand for indexed products—appeared to influence US mutual fund flows in 2018.

FIGURE 3.4

Net New Cash Flow to Mutual Funds Billions of dollars, annual

- Equity, bond, and hybrid mutual funds
- Money market funds



*In 2012, investors withdrew less than \$500 million from money market funds.

The Global Economy and Financial Markets in 2018

The year proved to be challenging for financial markets and the global economy. Although global gross domestic product (GDP) grew at an estimated rate of 3.7 percent in both 2017 and 2018, concerns about international trade caused the International Monetary Fund (IMF) to revise its expectations for future economic growth downward. Economic activity picked up in the United States in 2018, with real GDP expanding at a 3.0 percent rate—up from 2.5 percent in 2017—but growth in other countries and regions began to slow. Europe, for example, saw economic growth decline from 2.5 percent in 2017 to an estimated 2.2 percent in 2018. Asia experienced a similar deceleration in economic activity, with real GDP declining from 5.7 percent in 2017 to an estimated 5.5 percent in 2018.

Despite the unevenness of global economic growth, a variety of metrics indicated that the US economy continued to improve in 2018. The labor market had sustained improvement, with the unemployment rate dropping from 4.1 percent at year-end 2017 to 3.9 percent at year-end 2018. In addition, average hourly earnings rose 3.3 percent in 2018. The Consumer Price Index rose 1.9 percent in 2018—down slightly from 2.1 percent in 2017—but remained close to the Federal Reserve’s target of 2 percent inflation.

The strength of economic growth in the United States prompted the Federal Reserve to increase the federal funds rate four times in 2018. Although this tightening in monetary policy was widely expected, forward guidance issued by the Federal Reserve left market participants unsure about the scope of future interest rate hikes and monetary policy. The four quarter-point increases in short-term rates in March, June, September, and December 2018, combined with falling yields at the longer end of the Treasury term structure, caused the Treasury yield curve—the difference between the yields on long-term Treasury notes and short-term Treasury bills—to flatten toward the end of the year. Typically, some market participants view this development as a signal of a looming recession.

All of these events combined to roil US financial markets in 2018. Equity markets experienced spikes in volatility both early and late in the year following a prolonged period of calm, during which central banks around the world had been providing accommodative monetary policy in the aftermath of the global financial crisis of 2007–2009. In late September 2018, US stock prices were up nearly 10 percent, but ultimately finished 2018 down 7 percent.* The yield on the 10-year Treasury mirrored the performance of equity markets, rising from its January lows during the first part of the year, before falling almost 40 basis points† in the fourth quarter of 2018.

*As measured by the Wilshire 5000 Price Index.

†Basis points simplify percentages written in decimal form. A basis point equals one-hundredth of 1 percent (0.01 percent), so 100 basis points equals 1 percentage point.

The performance of stock markets around the world in 2018 reflected similar concerns about international trade and global economic growth. In the United Kingdom, the Financial Times Stock Exchange (FTSE) 100 Index was down almost 13 percent for the year, while in Germany, the Deutscher Aktienindex (DAX) fell about 18 percent. In China, the Shanghai Composite Index was down nearly 25 percent, and the broader MSCI Emerging Markets Index indicated that stock prices in emerging market countries fell about 17 percent.

Long-Term Mutual Fund Flows

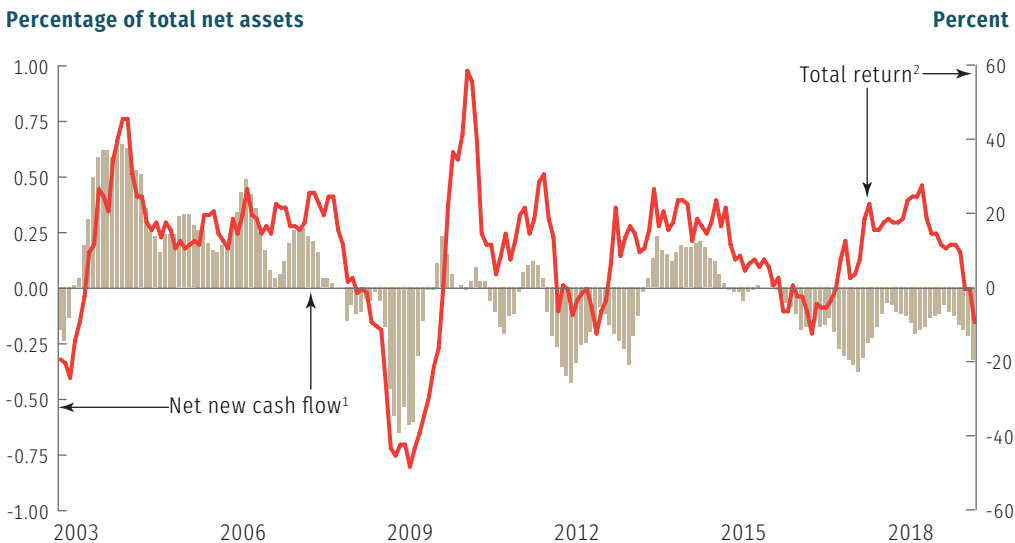
Net new cash flows into long-term mutual funds, though correlated with market returns, tend to be moderate as a percentage of total net assets even during episodes of market turmoil. Several factors may contribute to this phenomenon. One factor is that households (i.e., retail investors) own the vast majority of US long-term mutual fund assets (Figure 3.3). Retail investors generally respond less strongly to market events than do institutional investors. Most notably, households often use mutual funds to save for the long term, such as for college or retirement. Many of these investors make stable contributions through periodic payroll deductions, even during periods of market stress. In addition, many mutual fund shareholders seek the advice of financial advisers, who may provide a steadying influence during market downturns. These factors are amplified by the fact that net assets in mutual funds are spread across nearly 100 million investors and that fund investors have a wide variety of individual characteristics (such as age or appetite for risk) and goals (such as saving for the purchase of a home, for education, or for retirement). They also are bound to have a wide range of views on market conditions and how best to respond to those conditions to meet their individual goals. As a result, even during months when funds as a whole see net outflows, many investors continue to purchase fund shares.

Equity Mutual Funds

Net new cash flows to equity mutual funds tend to rise and fall with stock prices (Figure 3.5). The MSCI All Country World Daily Gross Total Return Index, a measure of returns on global stock markets, decreased 9 percent in 2018, following a 25 percent increase in 2017. With the decline in stock market performance around the globe, equity mutual funds experienced net outflows totaling \$261 billion in 2018 (less than 3 percent of year-end 2017 total net assets), compared with \$159 billion in net outflows in 2017. In both years, outflows from equity mutual funds were concentrated in domestic equity funds.

With the exception of March, equity mutual funds had net outflows in every month in 2018 (Figure 3.6). In the first three months of the year, investors had redeemed, on net, only \$15 billion from equity mutual funds. Flows to mutual funds, in general, tend to be higher in the first quarter than at other times of the year because investors who receive year-end bonuses may invest that money relatively quickly in the new year. In addition, some investors wait to make contributions to their individual retirement accounts (IRAs) before filing their tax returns. As the year progressed, net outflows from equity mutual funds accelerated, with investors redeeming, on net, \$245 billion from April through December.

FIGURE 3.5
Net New Cash Flow to Equity Mutual Funds Typically Is Related to World Equity Returns Monthly



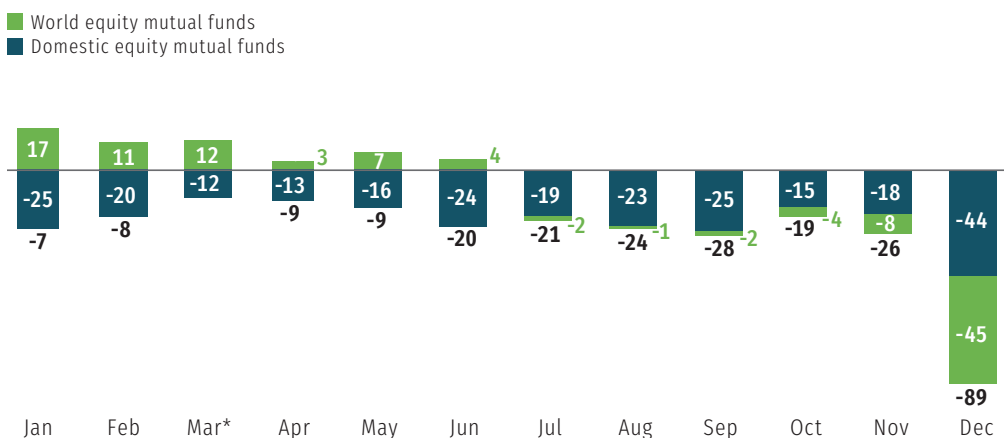
¹ Net new cash flow is the percentage of previous month-end equity mutual fund total net assets, plotted as a six-month moving average.

² The total return on equities is measured as the year-over-year percent change in the MSCI All Country World Daily Gross Total Return Index.

Sources: Investment Company Institute, MSCI, and Bloomberg

Although several major stock indexes hit record highs during the year, they also slid precipitously, particularly in the fourth quarter. Two spikes in volatility over the course of the year likely contributed, in part, to outflows in equity funds. The Chicago Board Options Exchange (CBOE) Volatility Index (VIX), which tracks the volatility of the S&P 500 index, is a widely used measure of market risk. Values greater than 30 typically reflect a high degree of investor fear and values less than 20 are associated with a period of market calm. The daily VIX was higher than 30 in both early February and late December and was higher than 20 for much of 2018 (almost 24 percent of the trading days). By comparison, the 2017 peak of the VIX was 16.

FIGURE 3.6
Net New Cash Flow to Equity Mutual Funds in 2018
 Billions of dollars; monthly, 2018



*In March 2018, equity mutual funds had net inflows of less than \$500 million.

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From December Outflows to January Inflows: Seasonal Factors in Mutual Fund Flows
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In addition to volatility, net outflows from domestic equity mutual funds in 2018 also may have been driven by investor demand for domestic equity exchange-traded funds (ETFs). As discussed in chapter 4, demand for ETFs has been very strong over the past several years. Domestic equity ETFs had net redemptions in only two months in 2018, February and March. Overall, demand for domestic equity ETFs resulted in \$139 billion in net share issuance in 2018 (Figure 4.9). In contrast, domestic equity mutual funds had net redemptions of \$253 billion (Figure 3.6) over the same period.

Demand for world equity mutual funds weakened as well in 2018, with investors redeeming \$7 billion (Figure 3.6), on net, down from net purchases of \$77 billion in 2017. Flows to world equity mutual funds in 2018 seemed to depend on a fund's investment objective. Global equity mutual funds, which usually hold US stocks, saw almost \$36 billion in net outflows in 2018, while international equity mutual funds, which help investors diversify away from US stocks, saw approximately \$33 billion in net inflows. In addition, emerging market equity mutual funds received \$3 billion in net inflows in 2018.

Investors may have been attracted to international equity mutual funds in 2018 for a variety of reasons. First, the growth between 2012 and 2018 in the prices of US stocks has made international equities look relatively attractive on a price-earnings basis. Second, some types of funds rebalance portfolios automatically as part of an asset allocation strategy. The assets in funds offering asset allocation strategies—such as target date funds (discussed in more detail on page 70)—have grown considerably over the past decade. These funds typically hold higher weights in foreign equities and bonds than many US investors had traditionally allocated to foreign investments. In addition, as the US domestic equity market rose over the past several years, these kinds of asset allocation funds rebalanced their portfolios away from domestic stocks toward foreign stocks.

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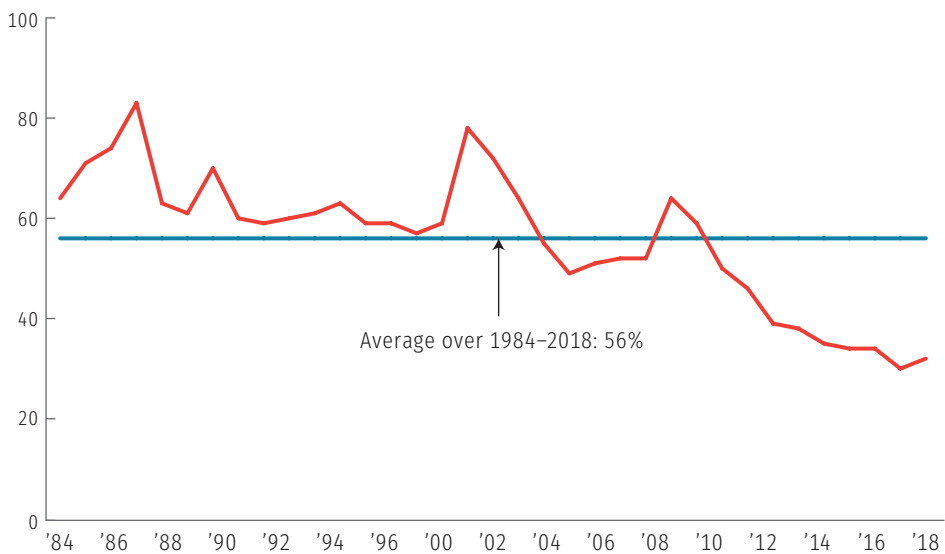
Asset-Weighted Turnover Rate

The turnover rate—the percentage of a fund’s holdings that have been bought or sold over a year—is a measure of a fund’s trading activity. The rate is calculated by dividing the lesser of purchases or sales (excluding those of short-term assets) in a fund’s portfolio by average total net assets.

To analyze the turnover rate that shareholders actually experience in their funds, it is important to identify those funds in which shareholders are most heavily invested. Neither a simple average nor a median takes into account where fund assets are concentrated. An asset-weighted average gives more weight to funds with more net assets, and accordingly, indicates the average portfolio turnover actually experienced by fund shareholders. In 2018, the asset-weighted annual turnover rate experienced by equity mutual fund investors was 32 percent, well below the average of the past 35 years (Figure 3.7).

Investors tend to own equity funds with relatively low turnover rates. In 2018, about half of equity mutual fund total net assets were in funds with portfolio turnover rates of less than 25 percent. This reflects the propensity for mutual funds with below-average turnover to attract shareholder dollars.

FIGURE 3.7
Turnover Rate Experienced by Equity Mutual Fund Investors



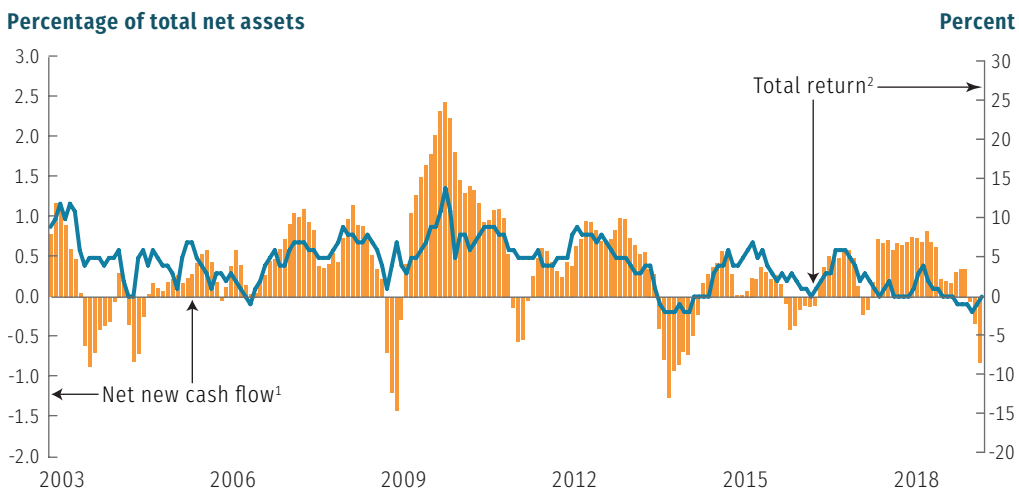
Note: The turnover rate is an asset-weighted average.

Bond Mutual Funds

Bond mutual fund net new cash flows typically are correlated with the performance of US bonds (Figure 3.8), which, in turn, is largely driven by the US interest rate environment. Long-term interest rates fluctuated in 2018, finishing the year about 30 basis points higher than at the beginning of the year. The 10-year Treasury started 2018 at 2.40 percent and rose 65 basis points by September 30. Over the same period, the total return on bonds fell below zero. Long-term interest rates continued to increase through early November of 2018 but fell sharply late in the fourth quarter, finishing the year at 2.69 percent.

FIGURE 3.8

Net New Cash Flow to Bond Mutual Funds Typically Is Related to Bond Returns
Monthly



¹ Net new cash flow is the percentage of previous month-end bond mutual fund total net assets, plotted as a three-month moving average. Data exclude high-yield bond mutual funds.

² The total return on bonds is measured as the year-over-year percent change in the FTSE US Broad Investment Grade Bond Index.

Sources: Investment Company Institute, FTSE Russell, and Bloomberg

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Fund Investors Will “Run”? Sorry, Charlie Brown
www.ici.org/viewpoints/view_18_charlie_brown

During the first three quarters of 2018, even though long-term interest rates were rising (meaning bond prices were falling), taxable bond mutual funds received \$109 billion in net inflows (Figure 3.9). During the fourth quarter of the year, investors withdrew \$112 billion, on net, from taxable bond mutual funds despite decreasing long-term interest rates (meaning bond prices were rising). This outflow may seem surprising, but investors may have been reacting to the abrupt flattening of the Treasury yield curve during the fourth quarter. The difference in yield between 10-year Treasury notes and 3-month Treasury bills was 1 percent in the early part of October, but the spread fell to 24 basis points by year-end 2018, its low point of the year.

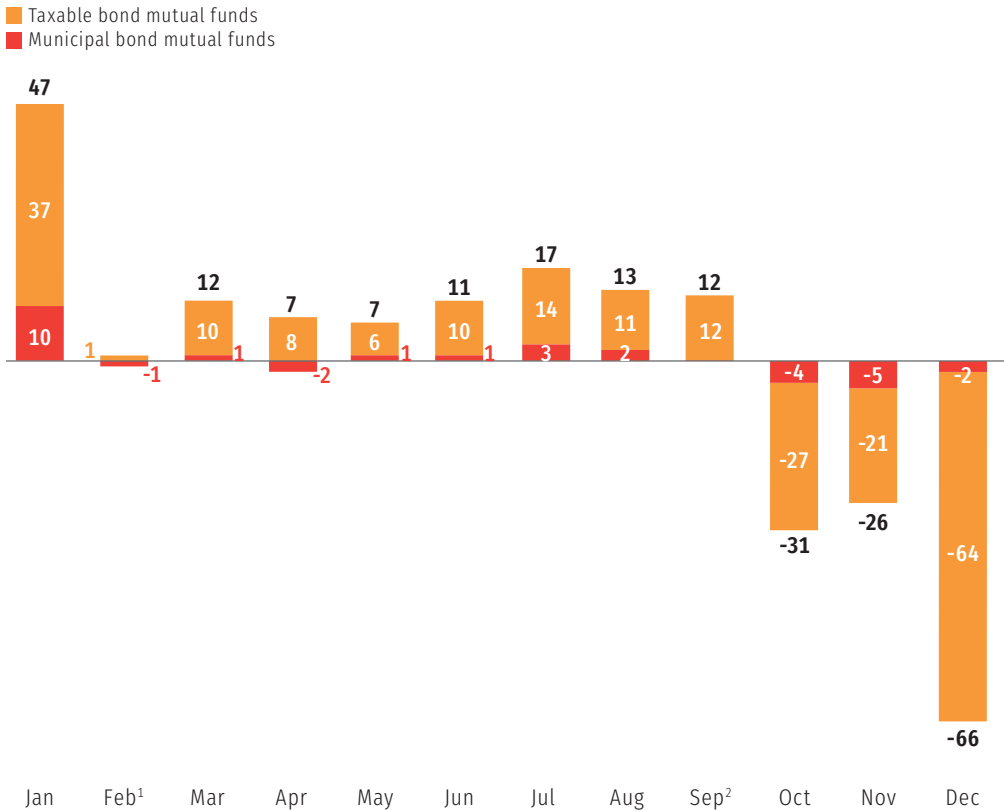
Investor demand varied across specific categories of taxable bond mutual funds in 2018. With interest rates rising, investors directed money toward investment grade and government bond mutual funds (especially into shorter-term bond mutual funds), which received \$22 billion in net inflows in 2018, while investors redeemed \$34 billion from high-yield bond mutual funds in 2018. World bond mutual funds, which typically hold a mix of bonds denominated in US dollars and foreign currencies, saw net inflows of \$7 billion.

Demand for municipal bond funds was mixed throughout the year, with inflows amounting to \$4 billion through year-end 2018 (Figure 3.9).

FIGURE 3.9

Net New Cash Flow to Bond Mutual Funds in 2018

Billions of dollars; monthly, 2018



¹In February 2018, bond mutual funds had net inflows of less than \$500 million.

²In September 2018, municipal bond mutual funds had net outflows of less than \$500 million.

How Bond Mutual Funds Manage Investor Flows

Since the 2007–2009 financial crisis, some observers have expressed concerns that outflows from bond mutual funds could pose challenges for fixed-income markets. There are many reasons to believe such concerns are overstated.

First, although US bond mutual fund total net assets have risen in the past decade, they held only 9 percent of the US bond market (US government bonds, corporate bonds, and tax-exempt bonds) in December 2018, up from 5 percent at year-end 2008. This means that 91 percent of the US bond market is held by investors outside of mutual funds.

Second, bond mutual fund managers have means of meeting redemption requests other than selling bonds. Each day, bond mutual funds receive cash in the form of interest income from bonds held in the portfolio and proceeds from matured bonds. Also, mutual funds in general have cash coming in from new sales of fund shares on any given day. Bond fund managers can often fulfill the vast majority of redemption requests using these cash sources.

In addition, bond fund managers employ a wide range of strategies to prepare to meet shareholder redemptions, including holding short-term assets or using derivatives. Derivatives can be more liquid than their physical counterparts, and funds are required to segregate liquid assets to support their derivatives positions. As these positions are closed, this cash collateral provides a ready source of liquidity to meet redemptions. This is especially true for many funds commonly referred to as *liquid alternative funds*, which are explicitly designed to allow frequent investor trading, and do so in large measure through the use of derivatives.

Finally, when meeting redemptions, managers use a nuanced approach in their bond trading, with their actions guided by market conditions, expected investor flows, and other factors. For example, during a market downturn, a manager might determine that the fund can add shareholder value by buying some less-liquid bonds. With liquidity at a premium, the manager might judge that the prices of such bonds are depressed relative to their fundamental values and thus represent a buying opportunity. On the other hand, the fund might seek to add shareholder value by selling some of its more-liquid bonds (which, being in high demand, are trading at a premium to fundamental value). Other fund managers may conclude that it is necessary and appropriate to meet outflows by selling a “slice” of the fund’s portfolio.

Demand for Bond Mutual Funds

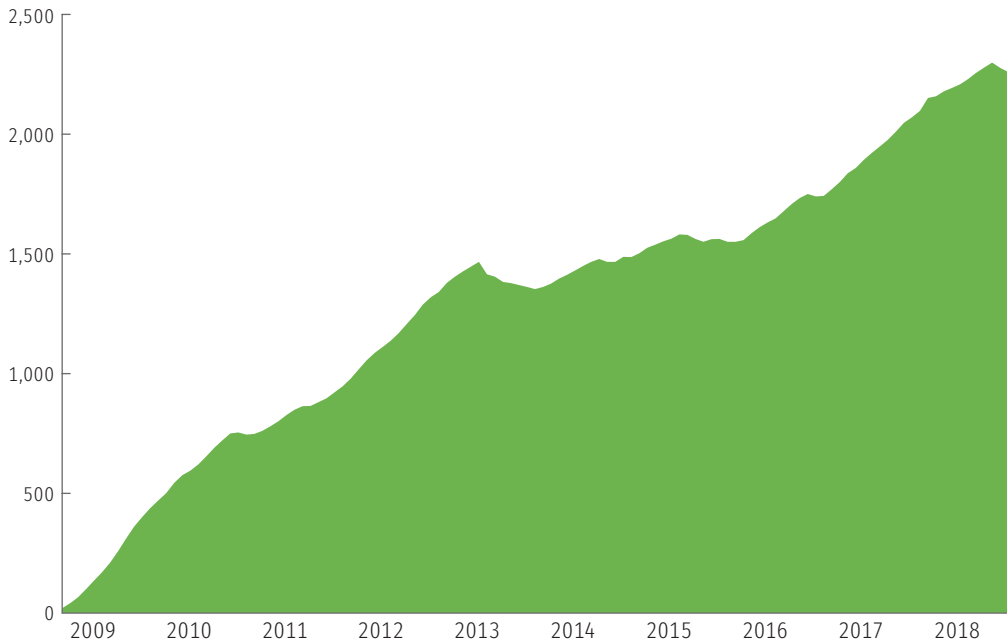
Despite several periods of market turmoil, bond mutual funds have experienced net inflows through most of the past decade. Bond mutual funds received \$2.2 trillion in net inflows and reinvested dividends from 2009 through 2018 (Figure 3.10). A number of factors have helped sustain this long-term demand for bond mutual funds.

For example, demographics influence the demand for bond mutual funds. Older investors tend to have higher account balances because they have had more time to accumulate savings and take advantage of compounding. At the same time, as investors age, they tend to shift toward fixed-income products. Over the past decade, the aging of Baby Boomers has boosted flows to bond funds. Although net outflows from bond funds would have been expected when long-term interest rates rose during the first three quarters of 2018, they were likely mitigated, in part, by the demographic factors that have supported bond fund flows over the past decade.

FIGURE 3.10

Bond Mutual Funds Have Experienced Net Inflows Through Most of the Past Decade

Cumulative flows to bond mutual funds, billions of dollars, monthly



Note: Bond mutual fund data include net new cash flow and reinvested dividends.

The continued popularity of target date mutual funds also likely helped to limit outflows from bond mutual funds in 2018. Target date funds invest in a changing mix of equities and fixed-income investments. As the fund approaches and passes its target date (which is usually specified in the fund's name), the fund gradually reallocates assets from equities to fixed-income investments, including bonds. Target date funds usually invest through a fund-of-funds approach, meaning they primarily hold and invest in shares of other equity and bond mutual funds or ETFs. Over the past 10 years, target date mutual funds have received net inflows of \$532 billion. In 2018, target date mutual funds had net inflows of \$53 billion and ended the year with total net assets of \$1.1 trillion (Figure 8.24). The growing investor interest in these funds likely reflects their automatic rebalancing features as well as their inclusion as an investment option in many defined contribution (DC) plans (Figure 8.14).

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Hybrid Mutual Funds

Hybrid funds (also called asset allocation funds or balanced funds) invest in a mix of stocks and bonds. This approach offers a way to balance the potential capital appreciation of stocks with the income and relative stability of bonds over the long term. The fund's portfolio may be periodically rebalanced to bring its asset allocation more in line with prospectus objectives, which could be necessary following capital gains or losses in the stock or bond markets.

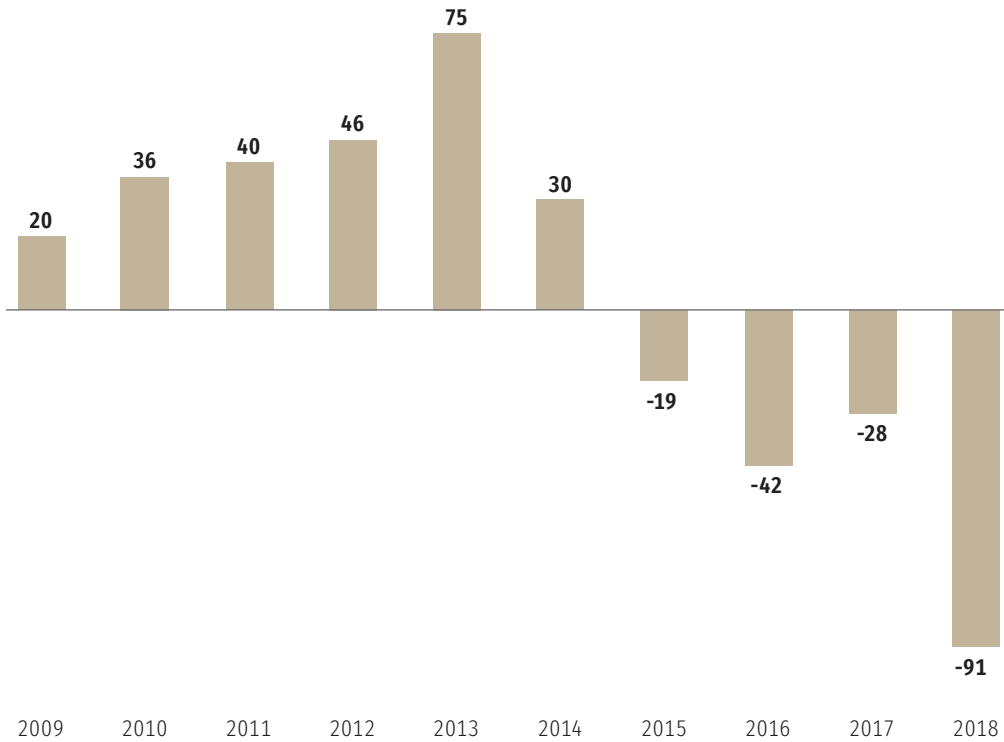
Over the past few years, investors have moved away from hybrid mutual funds, which had been a popular way to help investors achieve a managed, balanced portfolio of stocks and bonds (Figure 3.11). In 2018, hybrid mutual funds had negative net new cash flows of \$91 billion (or 6 percent of prior year-end total net assets), following \$28 billion of net outflows in 2017 and \$42 billion of net outflows in 2016. Many factors likely have contributed to this change in the use of hybrid mutual funds. Investors may be, for example, shifting out of hybrid funds and into portfolios of ETFs that are periodically rebalanced, often with the assistance of a fee-based financial adviser. In addition, investors may be shifting assets toward target date funds and lifestyle funds as an alternative way to achieve a balanced portfolio. For example, in 2018, assets in target date funds were \$1.1 trillion, up substantially from year-end 2005 (Figure 8.24).*

Net outflows from hybrid funds from 2015 through 2018 were concentrated in flexible portfolio funds, which can hold any proportion of stocks, bonds, cash, and commodities, both in the United States and overseas. Following the 2007–2009 financial crisis, many investors sought to broaden their portfolios and lower the correlation of their investments with the market or limit downside risk. Flexible portfolio funds can help investors achieve those goals. As a result, flexible portfolio funds saw net inflows of \$88 billion between 2009 and 2014. However, after a long bull market and comparably lower returns in funds offering downside protection, investors have redeemed, on net, \$110 billion from flexible portfolio funds in the past four years.

*ICI generally excludes funds of funds from total net asset and net new cash flow calculations to avoid double counting. Although target date funds are classified as hybrid funds by ICI, 99 percent of target date fund assets are in funds of funds, and therefore, their flows are excluded from the hybrid mutual fund flows presented in Figure 3.11.

FIGURE 3.11**Net New Cash Flow to Hybrid Mutual Funds**

Billions of dollars, annual

**The Growth of Other Investment Products**

Some of the outflows from long-term mutual funds in 2018 reflect a broader shift, driven by both investors and retirement plan sponsors, toward other pooled investment vehicles. This trend is reflected in the outflows from actively managed funds and the growth of index mutual funds, ETFs, and collective investment trusts (CITs) since 2007.

In 2018, index mutual funds—which hold all (or a representative sample) of the securities in a specified index—remained popular with investors. Of households that owned mutual funds, 36 percent owned at least one equity index mutual fund in 2018. As of year-end 2018, 497 index mutual funds managed total net assets of \$3.3 trillion. For 2018 as a whole, investors added \$156 billion in net new cash flow to these funds (Figure 3.12). Of the new money that flowed to index mutual funds, 40 percent was invested in funds tied to world stock indexes, 37 percent was invested in funds tied to domestic stock indexes, and the remainder (23 percent) went to funds tied to bond or hybrid indexes. Total net assets in index equity mutual funds made up 29 percent of all equity mutual fund assets in 2018 (Figure 3.13).

FIGURE 3.12

Net New Cash Flow to Index Mutual Funds

Billions of dollars, annual

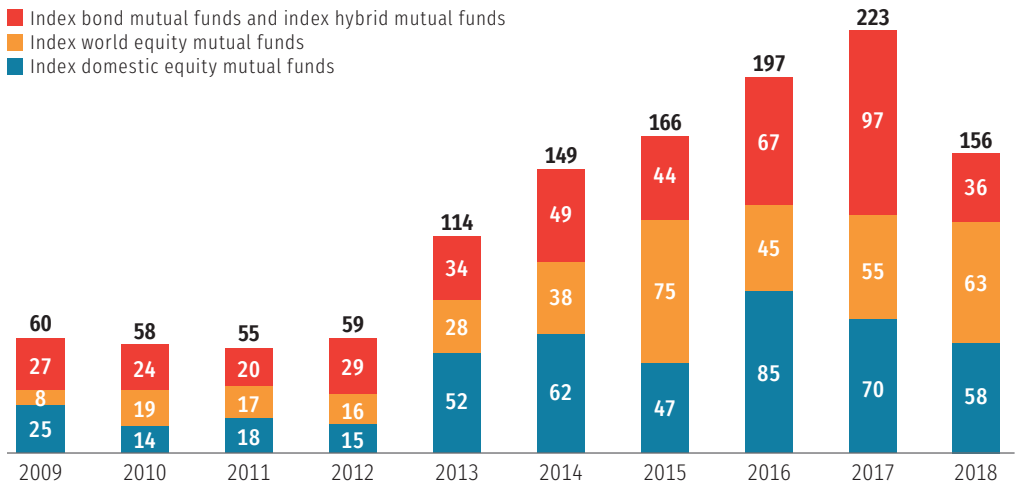
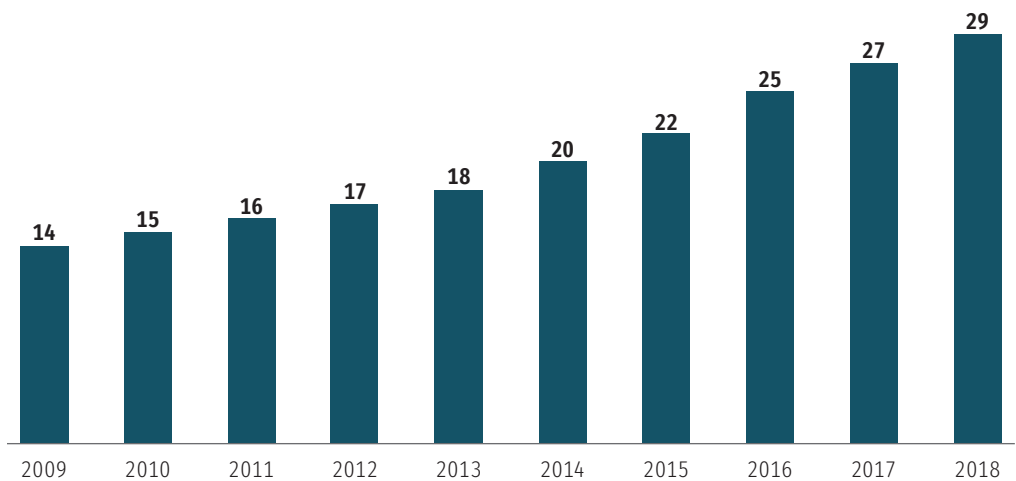


FIGURE 3.13

Index Equity Mutual Funds Continued Their Steady Growth

Percentage of equity mutual funds' total net assets, year-end

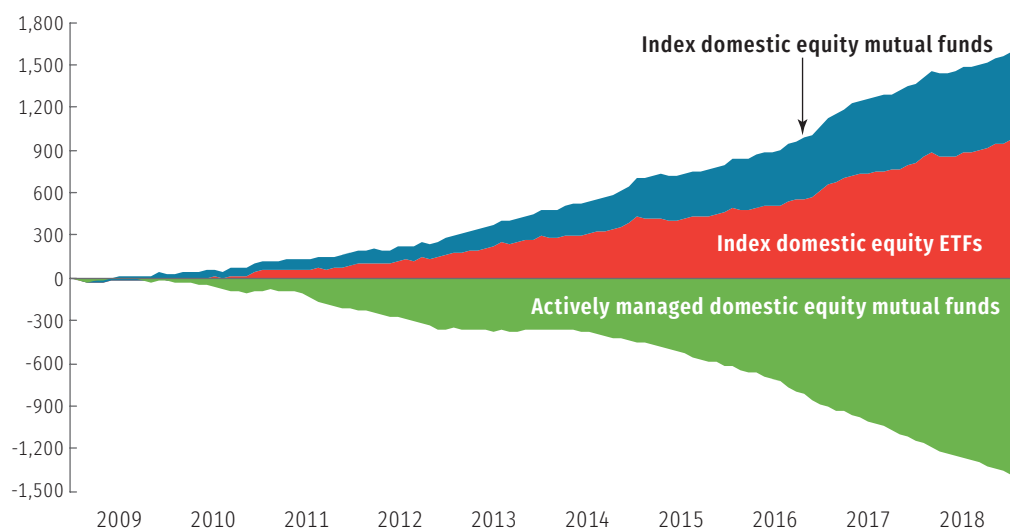


Index domestic equity mutual funds and index-based ETFs have particularly benefited from increased investor demand for index-based investment products. From 2009 through 2018, index domestic equity mutual funds and ETFs received \$1.6 trillion in net new cash and reinvested dividends, while actively managed domestic equity mutual funds experienced a net outflow of \$1.4 trillion (including reinvested dividends) (Figure 3.14). Index domestic equity ETFs have grown particularly quickly—attracting one and a half times the net inflows of index domestic equity mutual funds since 2009. Part of the recent increasing popularity of ETFs is likely attributable to more brokers and financial advisers using them in their clients’ portfolios. In 2017, full-service brokers and fee-based advisers had 17 percent and 28 percent, respectively, of their clients’ household assets invested in ETFs, up from 6 percent and 10 percent in 2011 (Figure 3.15).

FIGURE 3.14

Some of the Outflows from Domestic Equity Mutual Funds Have Gone to ETFs

Cumulative flows to domestic equity mutual funds and net share issuance of index domestic equity ETFs;* billions of dollars, monthly



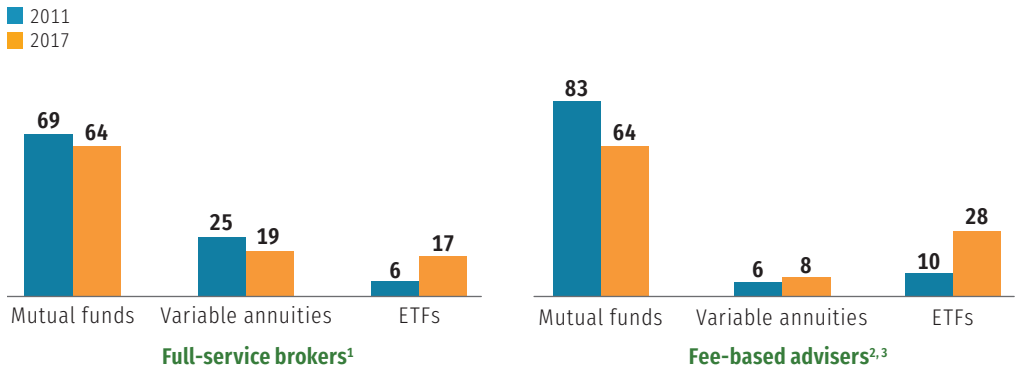
*Prior to October 2009, index domestic equity ETF data include a small number of actively managed domestic equity ETFs.

Note: Mutual fund data include net new cash flow and reinvested dividends; ETF data for net share issuance include reinvested dividends.

FIGURE 3.15

Fee-Based Advisers Are Driving Larger Portions of Client Portfolios Toward ETFs

Percentage of household assets invested in investment category by adviser type



¹ This category includes wirehouses as well as regional, independent, and bank broker-dealers.

² This category includes registered investment advisers and dually registered investment adviser broker-dealers.

³ This category excludes an unknown portion of assets from investors who received fee-based advice but implemented trades themselves through discount brokers and fund supermarkets.

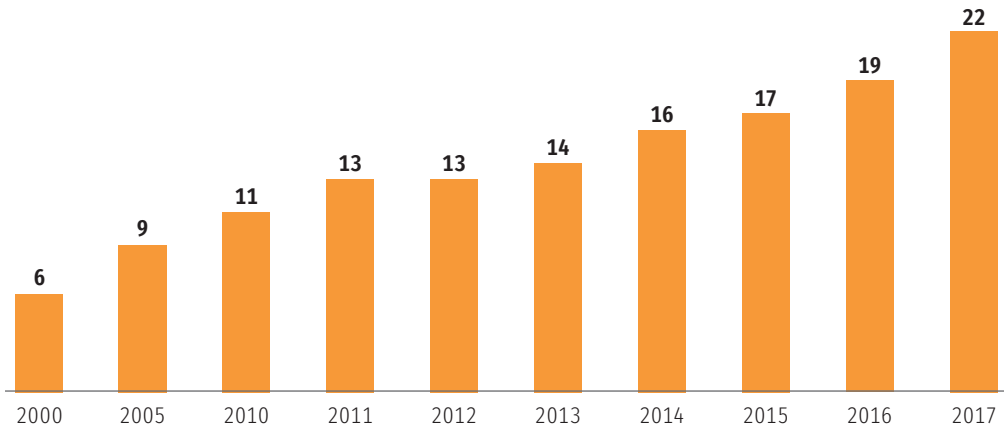
Source: Cerulli Associates, "The State of US Retail and Institutional Asset Management, 2018"

CITs are an alternative to mutual funds for DC plans. Like mutual funds, CITs pool the assets of investors and (either actively or passively) invest those assets according to a particular strategy. Much like institutional share classes of mutual funds, CITs generally require substantial minimum investment thresholds, which can limit the costs of managing pooled investment products. Unlike mutual funds, which are regulated under the Investment Company Act of 1940, CITs are regulated under banking laws and are not marketed as widely as mutual funds; this can also reduce their operational and compliance costs as compared with mutual funds.

More retirement plan sponsors have begun offering CITs as options in 401(k) plan lineups. As Figure 3.16 demonstrates, this trend has translated into a growing share of assets held in CITs by large 401(k) plans. That share increased from 6 percent in 2000 to an estimated 22 percent in 2017. This recent expansion is due, in part, to the growth in target date CITs.

FIGURE 3.16

Assets of Large 401(k) Plans Are Increasingly Held in Collective Investment Trusts
Percentage of assets in 401(k) plans with 100 participants or more



Note: Assets exclude Direct Filing Entity assets that are reinvested in collective investment trusts. Data prior to 2017 come from the Form 5500 Research data sets released by the Department of Labor. Data for 2017 are preliminary, based on Department of Labor 2017 Form 5500 latest data sets.

Source: Investment Company Institute tabulations of Department of Labor Form 5500 data

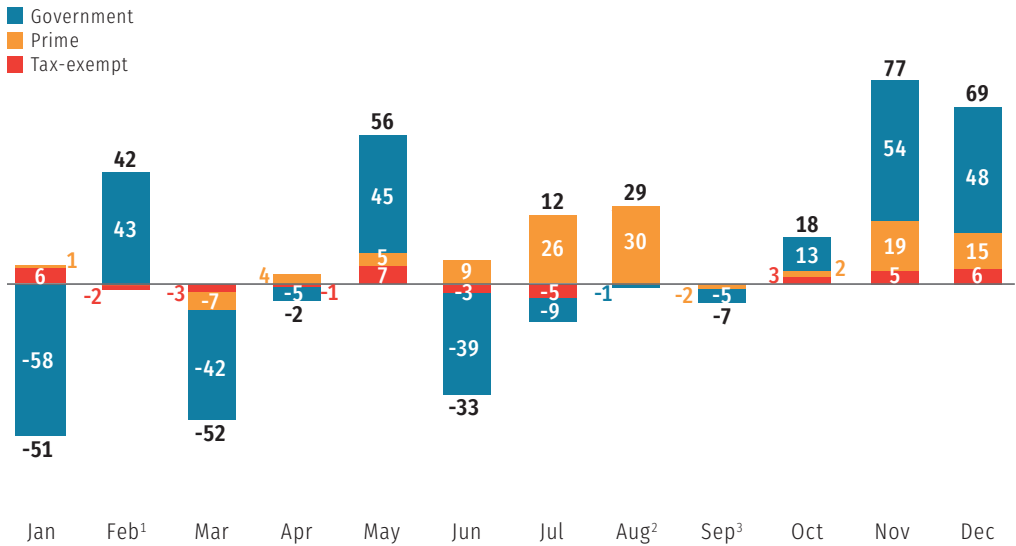
Money Market Funds

In 2018, money market funds received \$159 billion in net new cash flows (Figure 3.17), up from \$107 billion in 2017. Prime money market funds received the bulk of the inflows (\$103 billion), followed by government money market funds with \$43 billion in inflows. The increased demand for money market funds likely stems from the Federal Reserve’s decision to raise the federal funds target rate four times in 2018, which increased the attractiveness of money market funds as an investment for excess cash. Yields on prime and government money market funds ratcheted up in 2018 and far exceeded the stated rate on money market deposit accounts (MMDAs) (Figure 3.18).

FIGURE 3.17

Net New Cash Flow to Money Market Funds

Billions of dollars; monthly, 2018



¹ In February 2018, prime money market funds had net inflows of less than \$500 million.

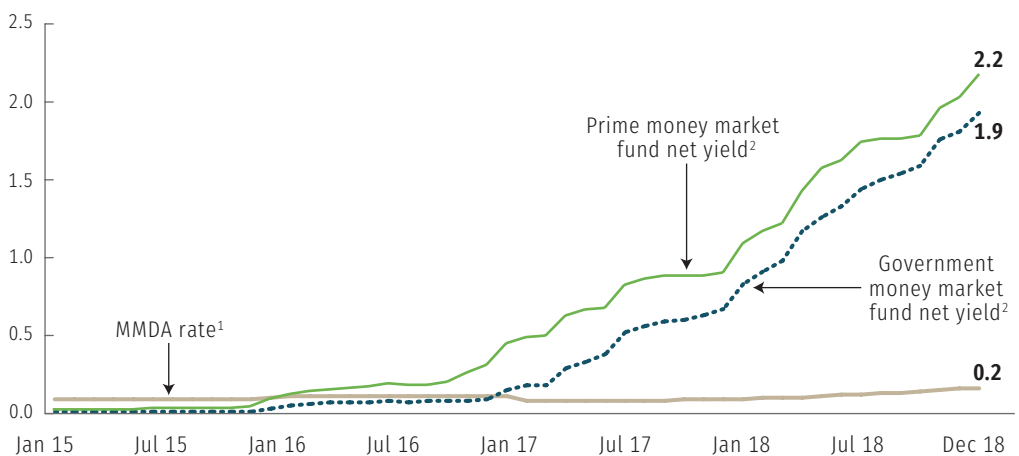
² In August 2018, tax-exempt money market funds had net outflows of less than \$500 million.

³ In September 2018, tax-exempt money market funds had net inflows of less than \$500 million.

FIGURE 3.18

Net Yields of Money Market Funds Far Exceeded MMDA Rates by the End of 2018

Percent; month-end, 2015–2018



¹ The money market deposit account (MMDA) rate is calculated based on a simple average of rates paid on high-yield savings accounts by all insured depository institutions and branches for which data are available.

² Net yields of money market funds are annualized seven-day compound net yields.

Sources: iMoneyNet, Bank Rate Monitor, and the Federal Deposit Insurance Corporation

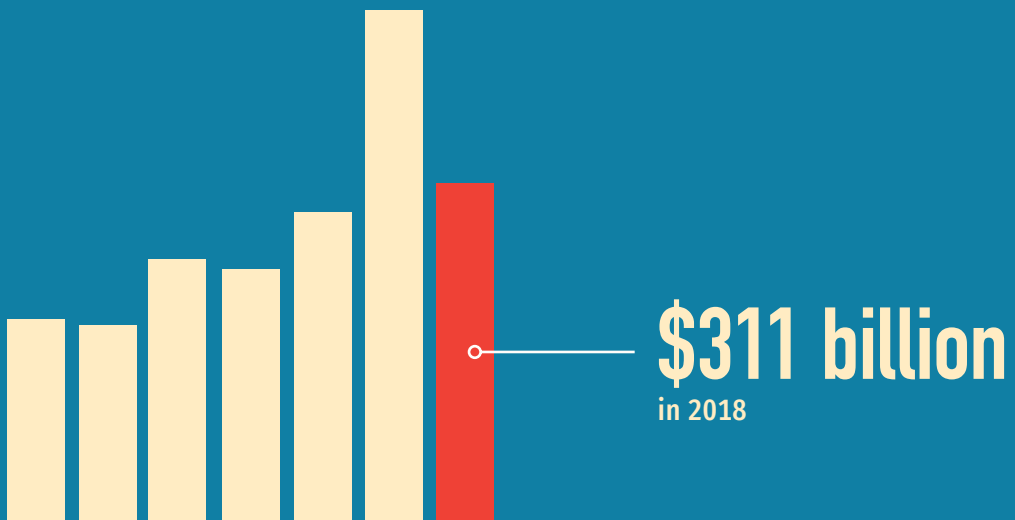
CHAPTER

04

US EXCHANGE-TRADED FUNDS

ETFs are a convenient, cost-effective tool for investors seeking to gain or shed exposure to broad market indexes, particular sectors or geographical regions, or specific rules-based investment strategies. Over the past decade, demand for ETFs has grown markedly as investors—both institutional and retail—increasingly turn to them as investment options. In the past 10 years, net share issuance of ETFs has totaled \$2.3 trillion. As investor demand has increased, sponsors have offered more ETFs with a greater variety of investment objectives. With \$3.4 trillion in total net assets at year-end 2018, the US ETF industry remained the largest in the world. Though ETFs share some basic characteristics with mutual funds, there are key operational and structural differences between the two types of investment products.

Net share issuance remained strong in 2018



In this chapter

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What Is an ETF?

An exchange-traded fund (ETF) is a pooled investment vehicle with shares that investors can buy and sell throughout the day on a stock exchange at a market-determined price. Investors may buy or sell ETF shares through a broker or in a brokerage account just as they would the shares of any publicly traded company. In the United States, most ETFs are structured as open-end investment companies, like mutual funds, and are governed by the same regulations. Other ETFs—primarily those investing in commodities, currencies, and futures—have different structures and are subject to different regulatory requirements.

ETFs have been available as an investment product for more than 25 years in the United States. The Securities and Exchange Commission (SEC) approved the first ETF—a broad-based domestic equity fund tracking the S&P 500 index—in 1993. Until 2008, the SEC had only approved ETFs that tracked specified indexes. These ETFs, commonly referred to as index-based ETFs, are designed to track the performance of their designated indexes or, in some cases, a multiple or an inverse (or a multiple of an inverse) of their indexes. At year-end 2018, there were 1,660 index-based ETFs with \$3.2 trillion in total net assets.

In early 2008, the SEC granted approval to several fund sponsors to offer fully transparent, actively managed ETFs meeting certain requirements. Each business day, these actively managed ETFs must disclose on their publicly available websites the identities and weightings of the component securities and other assets held by the ETF. Actively managed ETFs do not seek to track the return of a particular index. Instead, an actively managed ETF's investment adviser, like that of an actively managed mutual fund, creates a unique mix of investments to meet a particular investment objective and strategy. At year-end 2018, 259 actively managed ETFs—with \$69 billion in net assets—were registered with the SEC as investment companies.

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Exchange-Traded Funds Resource Center
www.ici.org/etf_resources

ETFs and Mutual Funds

An ETF is a registered investment company that is similar to a mutual fund because it offers investors a proportionate share in a pool of stocks, bonds, and other assets such as derivatives or bank loans. Like a mutual fund, an ETF is required to post the mark-to-market net asset value (NAV) of its portfolio at the end of each trading day and must conform to the main investor protection mechanisms of the Investment Company Act of 1940, including limitations on leverage, daily valuation and liquidity requirements, prohibitions on transactions with affiliates, and rigorous disclosure obligations. Also, like mutual funds, creations and redemptions of ETF shares are aggregated and executed just once per day at NAV. Despite these similarities, key features differentiate ETFs from mutual funds.

Key Differences

One major difference is that retail investors buy and sell ETF shares on the secondary market (stock exchange) through a broker-dealer, much like they would any other type of stock. In contrast, mutual fund shares are not listed on stock exchanges, but are purchased and sold through a variety of distribution channels, including through investment professionals—full service brokers, independent financial planners, bank or savings institution representatives, or insurance agents—or directly from a fund company or discount broker.

Pricing also differs between mutual funds and ETFs. Mutual funds are “forward priced,” which means that although investors can place orders to buy or sell shares throughout the day, all orders placed during the day will receive the same price—the NAV—the next time it is computed. Most mutual funds calculate their NAV as of 4:00 p.m. eastern time because that is the time US stock exchanges typically close. In contrast, the price of an ETF share is continuously determined on a stock exchange. Consequently, the price at which investors buy and sell ETF shares on the secondary market may not necessarily equal the NAV of the portfolio of securities in the ETF. Two investors selling the same ETF shares at different times on the same day may receive different prices for their shares, both of which may differ from the ETF’s NAV, which—like a mutual fund—is calculated as of 4:00 p.m. eastern time.

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Understanding Exchange-Traded Funds: How ETFs Work
www.ici.org/research/industry_research/etfs

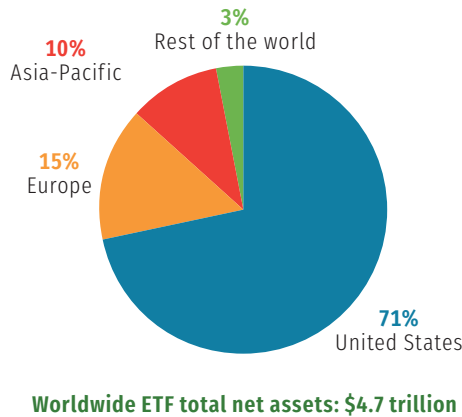
ETF Total Net Assets

The US ETF market—with 1,988 funds and \$3.4 trillion in total net assets at year-end 2018—remained the largest in the world, accounting for 71 percent of the \$4.7 trillion in ETF net assets worldwide (Figures 4.1 and 4.2).

The vast majority of assets in US ETFs are in funds registered with and regulated by the SEC under the Investment Company Act of 1940 (Figure 4.2). At year-end 2018, 2 percent of net assets were held in non-1940 Act ETFs, which are not registered with or regulated by the SEC under the Investment Company Act of 1940; these ETFs invest primarily in commodities, currencies, and futures. Non-1940 Act ETFs that invest in commodity or currency futures are regulated by the CFTC under the Commodity Exchange Act and by the SEC under the Securities Act of 1933. Those that invest solely in physical commodities or currencies are regulated by the SEC under the Securities Act of 1933. At year-end 2018, there were 69 of these funds with \$62 billion in net assets.

FIGURE 4.1

The United States Has the Largest ETF Market Percentage of total net assets, year-end 2018

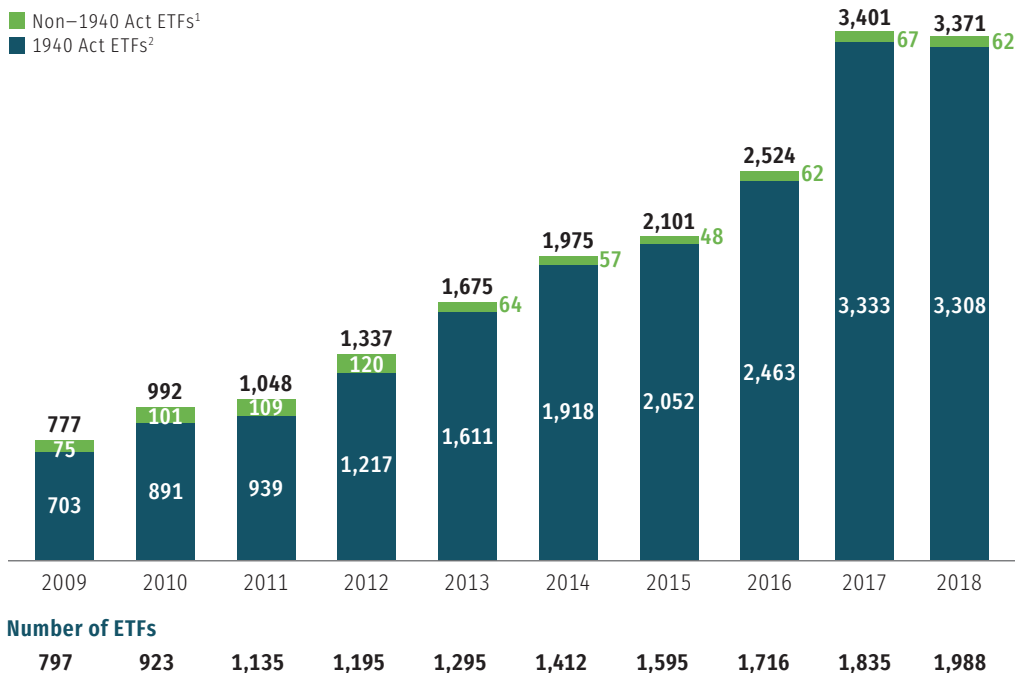


Sources: Investment Company Institute and ETFGI

FIGURE 4.2

Total Net Assets and Number of ETFs

Billions of dollars, year-end



¹ The funds in this category are not registered under the Investment Company Act of 1940 and invest primarily in commodities, currencies, and futures.
² The funds in this category are registered under the Investment Company Act of 1940.

Origination of an ETF

An ETF originates with a sponsor—a company or financial institution—that chooses the investment objective of the ETF. In the case of an index-based ETF, the sponsor chooses both an index and a method of tracking its target index. Many early ETFs tracked traditional indexes, mostly those weighted by market capitalization. More-recently launched index-based ETFs follow benchmarks that use an array of index construction methodologies, with weightings based on market capitalization, as well as other fundamental factors, such as sales or book value. Others follow factor-based metrics—indexes that first screen potential securities for a variety of attributes, including value, growth, or dividend payments—and then weight the selected securities equally or by market capitalization. Other customized index approaches include screening, selecting, and weighting securities to minimize volatility, maximize diversification, or achieve a high or low degree of correlation with the market.

Index-based ETFs track their target index in various ways. An index-based ETF may replicate its index (that is, it may invest 100 percent of its assets proportionately in all the securities in the target index) or it may sample its index by investing in a representative sample of securities in the target index. Representative sampling is a practical solution for ETFs tracking indexes that contain thousands of securities (such as broad-based or total stock market indexes), that have restrictions on ownership or transferability (certain foreign securities), or that are difficult to obtain (some fixed-income securities).

The sponsor of an actively managed ETF determines the investment objective of the fund and may trade securities at its discretion, much like an actively managed mutual fund. For instance, the sponsor may try to achieve an investment objective such as outperforming a segment of the market or investing in a particular sector through a portfolio of stocks, bonds, or other assets.

Creation and Redemption of ETF Shares—Primary Market Activity

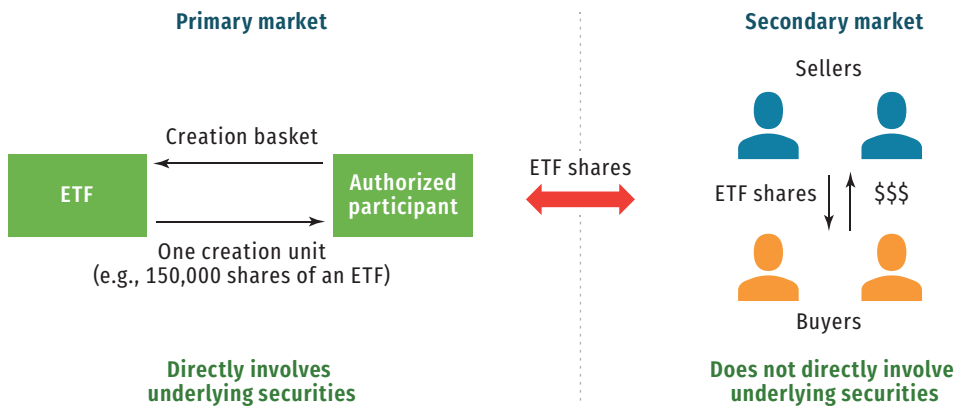
The creation or redemption of ETF shares—activity directly involving the ETF’s underlying securities—is categorized as primary market activity. The creation and redemption mechanism in the ETF structure allows the number of shares outstanding in an ETF to expand or contract based on demand (Figure 4.3). Each business day, ETFs are required to publish the creation and redemption baskets for the next trading day. The creation and redemption baskets are specific lists of names and quantities of securities, cash, and/or other assets. Often baskets will track the ETF’s portfolio through either a pro rata slice or a representative sample. At times, baskets may be limited to a subset of the ETF’s portfolio and contain a cash component. For example, the composition of baskets for bond ETFs may vary from day to day with the mix of cash and the selection of bonds in the baskets based on liquidity in the underlying bond market. Typically, the composition of an ETF’s daily creation and redemption baskets mirror one another.

Creation

ETF shares are created when an authorized participant, or AP (see page 86), submits an order for one or more creation units. A creation unit consists of a specified number of ETF shares, generally ranging from 25,000 to 250,000 shares. The ETF shares are delivered to the AP when the specified creation basket is transferred to the ETF. The ETF may permit or require an AP to substitute cash for some or all of the securities or assets in the creation basket. This generally occurs when an instrument in the creation basket is difficult to obtain or may not be held by certain types of investors (such as certain foreign securities). An AP also may be charged a cash adjustment or transaction fee to offset any transaction expenses the fund undertakes. The value of the creation basket and any cash adjustment equals the value of the creation unit based on the ETF’s NAV at the end of the day on which the transaction was initiated.

The AP can either keep the ETF shares that make up the creation unit or sell all or part of them to its clients or to other investors on a stock exchange, in a “dark pool” (private exchange), or in other trading venues. Purchases and sales of existing ETF shares among investors, including APs, are referred to as secondary market trading or activity.

FIGURE 4.3
Creation of ETF Shares



Note: The creation basket represents a specific list of securities, cash, and/or other assets.

Redemption

The redemption process in the primary market is simply the reverse of the creation process. A creation unit is redeemed when an AP acquires the number of ETF shares specified in the ETF’s creation unit and returns the creation unit to the ETF. In return, the AP receives the daily redemption basket of securities, cash, and/or other assets. The total value of the redemption basket and any cash adjustment is equivalent to the value of the creation unit based on the ETF’s NAV at the end of the day on which the transaction was initiated.

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The Creation and Redemption Process and Why It Matters
www.ici.org/viewpoints/view_12_etfbasics_creation

What Is an AP?

An authorized participant (AP) is typically a large financial institution that enters into a legal contract with an ETF distributor to create and redeem shares of the fund. In addition, APs are US-registered, self-clearing broker-dealers that can process all required trade submission, clearance, and settlement transactions on their own account; they are also full participating members of the National Securities Clearing Corporation (NSCC) and the Depository Trust Company (DTC).

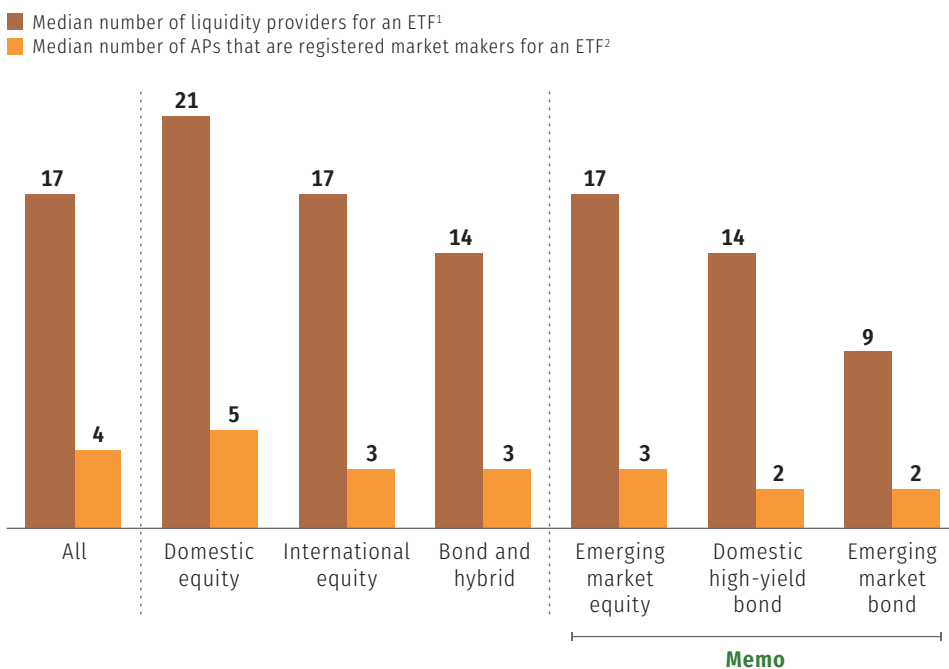
APs play a key role in the primary market for ETF shares because they are the only investors allowed to interact directly with the fund. APs do not receive compensation from an ETF or its sponsor and have no legal obligation to create or redeem the ETF's shares. Rather, APs typically derive their compensation from acting as dealers in ETF shares. Also, APs create and redeem shares in the primary market when doing so is a more effective way of managing their firms' aggregate exposure than trading in the secondary market. Some APs are clearing brokers (rather than dealers) and receive payment for processing creations and redemptions as an agent for a wide array of market participants such as registered investment advisers and various liquidity providers, including market makers, hedge funds, and proprietary trading firms.

Some APs also play another role in the ETF ecosystem by acting as registered market makers in ETF shares that trade on an exchange. Secondary market trading of ETFs, however, does not rely solely on these APs. In fact, a host of entities other than APs provide liquidity in the form of offering quotes to both buy and sell ETF shares. These other liquidity providers also help facilitate trading of ETF shares in the secondary market. Domestic equity ETFs have the most liquidity providers (Figure 4.4). But other types of ETFs—such as emerging market equity, domestic high-yield bond, and emerging market bond—also have multiple liquidity providers in the secondary market.

FIGURE 4.4

The Secondary Market Has Many ETF Liquidity Providers

December 2014



¹ For this figure, *liquidity provider* is defined as an entity that regularly provides two-sided quotes in an ETF's shares.

² A registered market maker is registered with a particular exchange to provide two-sided markets in an ETF's shares.

Source: Investment Company Institute, *The Role and Activities of Authorized Participants of Exchange-Traded Funds*

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The Role and Activities of Authorized Participants of Exchange-Traded Funds
www.ici.org/research/industry_research/etfs

How ETFs Trade

The price of an ETF share on a stock exchange is influenced by the forces of supply and demand. Though imbalances in supply and demand can cause the price of an ETF share to deviate from its underlying value, substantial deviations tend to be short-lived for many ETFs. Two primary features of an ETF's structure promote trading of its shares at a price that approximates its underlying value: portfolio transparency and the ability for APs to create or redeem ETF shares at the NAV at the end of each trading day.

Transparency of an ETF's holdings—either through full disclosure of the portfolio or through established relationships of the components of the ETF's portfolio with published indexes, financial or macroeconomic variables, or other indicators—enables investors to observe and attempt to profit from discrepancies between the ETF's share price and its underlying value during the trading day. ETFs contract with third parties (typically market data vendors) to calculate an estimate of an ETF's underlying value. This calculation, often called the intraday indicative value (IIV), is based on the prior day's portfolio holdings and is disseminated at regular intervals during the trading day (typically every 15 seconds). Some market participants also can make this assessment in real time using their own computer programs and proprietary data feeds.

When there are discrepancies between an ETF's share price and the value of its underlying securities, trading can more closely align the ETF's price and its underlying value. For example, if an ETF is trading at a discount to its underlying value, investors may buy ETF shares or sell the underlying securities or do both. The increased demand for the ETF should raise its share price and the sales of the underlying securities should lower their share prices, narrowing the gap between the ETF and its underlying value. If the ETF is trading at a premium to its underlying value, investors may choose to sell the ETF or buy the underlying securities or do both. These actions should bring the price of the ETF and the market value of its underlying securities closer together by reducing the ETF share price or raising the price of the underlying securities or both.

The ability to create or redeem ETF shares at the end of each trading day also helps an ETF trade at market prices that approximate the underlying market value of the portfolio. When a deviation between an ETF's market price and its underlying value occurs, APs (on their own behalf or on behalf of other market participants) may create or redeem creation units in the primary market in an effort to capture a profit. For example, when an ETF is trading at a discount, market participants may find it profitable to buy the ETF shares and sell short the underlying securities. At the end of the day, APs return ETF shares to the fund in exchange for the ETF's redemption basket, which is used to cover the short positions in the underlying securities. When an ETF is trading at a premium, market participants may find it profitable to sell short the ETF during the day while simultaneously buying the underlying securities. At the end of the day, the APs (on their own behalf or on behalf of other market participants) will deliver the creation basket to the ETF in exchange for ETF shares that are used to cover the short sales.

These actions by market participants, commonly described as *arbitrage*, help keep the market-determined price of an ETF's shares close to its underlying value.

Secondary Market Trading in ETF Shares

ETF investors trading in the secondary market (e.g., on an exchange) do not interact with the ETF directly and, for the most part, do not create transactions in the underlying securities, because only the ETF shares are changing hands. Although many large institutional investors can access ETFs in both the primary and secondary markets, retail investors generally can access them only in the secondary market. Many ETF investors trading in the secondary market generally are not motivated by arbitrage. They are using ETFs to gain or reduce exposure to particular asset classes or investment strategies. Thus, ETFs provide investors with an efficient means to transfer risk.

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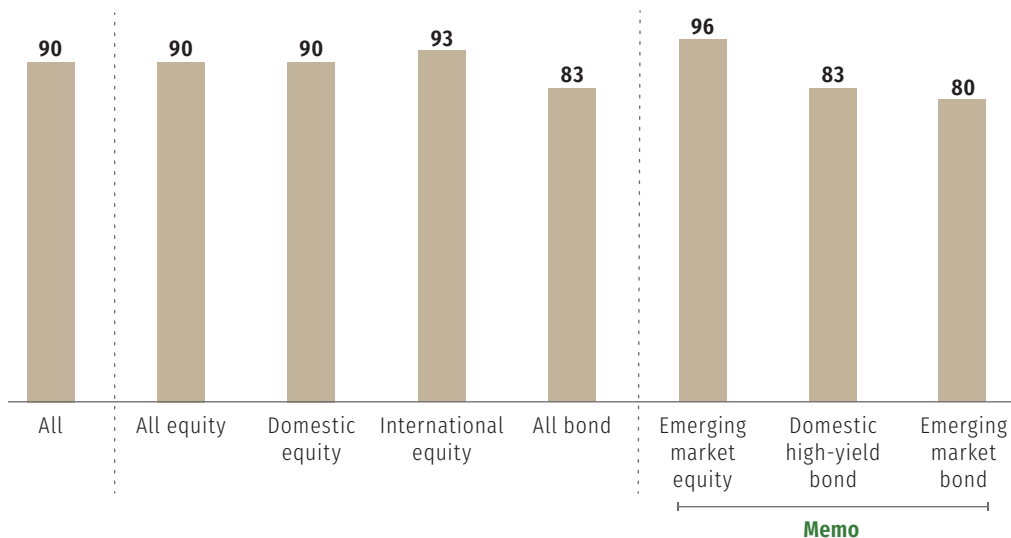
Does Liquidity in ETFs Depend Solely on Authorized Participants?
www.ici.org/viewpoints/view_15_aps_etfs

Across all ETFs, most ETF activity is conducted in the secondary market (trading ETF shares) rather than the primary market (creations and redemptions of ETF shares through an AP). On average, 90 percent of the total daily activity in ETFs occurs on the secondary market (Figure 4.5). Even for ETFs with narrower investment objectives—such as emerging market equity, domestic high-yield bond, and emerging market bond—the bulk of the trading occurs on the secondary market (96 percent, 83 percent, and 80 percent, respectively). On average, secondary market trading is a smaller proportion of total trading for bond ETFs (83 percent) than for equity ETFs (90 percent). Because bond ETFs are a growing segment of the industry, many small bond ETFs tend to have less-established secondary markets. As their total net assets increase, the secondary market for bond ETFs is likely to deepen.

FIGURE 4.5

Most ETF Activity Occurs on the Secondary Market

Percentage of secondary market activity¹ relative to total activity;² daily, January 2, 2015–December 31, 2018



¹ Secondary market activity is measured as average daily dollar volume of ETF shares traded in each category over the 1,005 daily observations in the sample.

² Total activity is measured as the sum of primary market and secondary market activity. Primary market activity is computed as daily creations or redemptions for each ETF, which are estimated by multiplying the daily change in shares outstanding by the daily NAV from Bloomberg. Aggregate daily creations and redemptions are computed by adding creations and the absolute value of redemptions across all ETFs in each investment objective each day. Average daily creations and redemptions are the average of the aggregate daily creations and redemptions over the 1,005 daily observations in the sample.

Sources: Investment Company Institute and Bloomberg

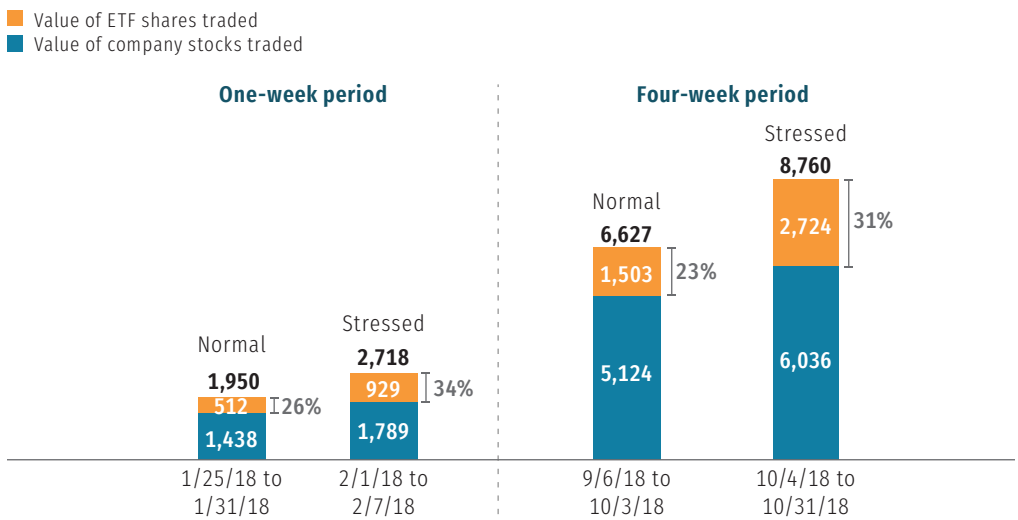
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Understanding the Regulation of Exchange-Traded Funds Under the Securities Exchange Act of 1934
www.ici.org/etf_resources/resources

Investors, especially institutional investors, use ETFs to quickly and efficiently transfer and hedge risks. It is, therefore, not surprising that during periods of market turbulence, ETF secondary market trading volumes (as measured by the value of shares traded) rise. In the first week of February 2018, US stock prices* declined by 5 percent and equity market volatility spiked after an extended period of historically low volatility. ETF secondary market trading volume amounted to \$929 billion, or 34 percent, of the \$2.7 trillion in US equity market trading in the week ended February 7, 2018 (Figure 4.6). In comparison, ETF trading volume was 26 percent of total US equity market trading the previous week—a week of relative calm in the equity market. This basic pattern repeated itself later in 2018 when US stocks slid 8 percent from October 4 to October 31 and equity market volatility surged. ETF secondary market volume totaled \$2.7 trillion, or 31 percent, of the \$8.8 trillion in US equity market trading over this four-week period. By contrast, ETF secondary market volume amounted to 23 percent of total US equity market trading over the previous four-week period. In both cases of stressed equity markets, the volume of company stocks traded rose as well.

FIGURE 4.6

Investors Use ETFs to Quickly and Efficiently Transfer and Hedge Risks in Stressed Markets
Total value of shares traded in US equity markets, billions of dollars



Memo: S&P 500 volatility (percent)*

7.7 14.1 6.6 14.4

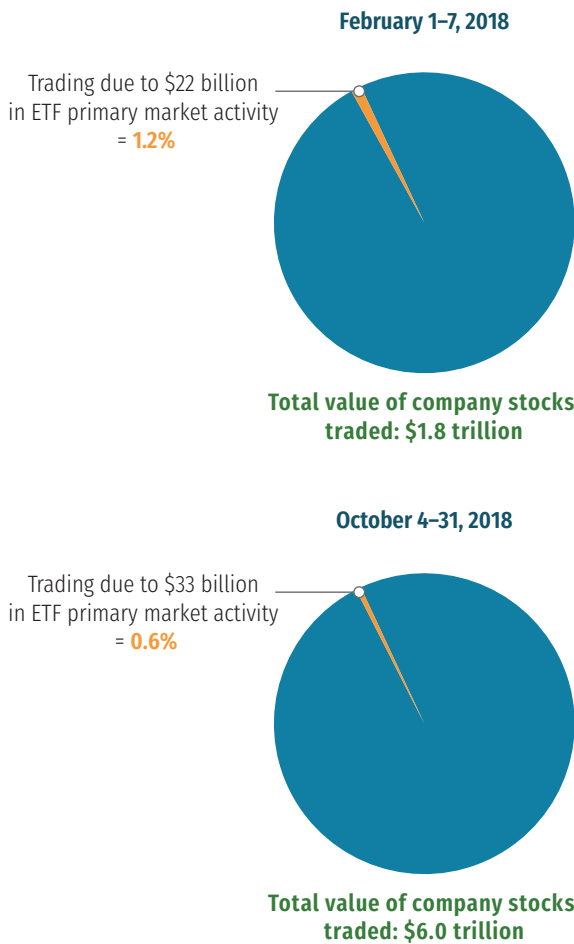
*Average over the period of daily annualized 30-day realized volatility of the S&P 500 index.

Source: Investment Company Institute tabulations of Bloomberg and Cboe Exchange, Inc. data

*As measured by the Wilshire 5000 Price Index.

Most ETF secondary market trades represent investors exchanging shares of ETFs among themselves. Such trades, which occur in the secondary market, do not “touch” the securities that ETFs hold—that only happens when there is primary market activity (creations and redemptions) of ETF shares. Looking at the first week of February 2018, domestic equity ETFs had \$22 billion in net redemptions (primary market activity), which represented just 1.2 percent of the \$1.8 trillion in company stock that changed hands that week (Figure 4.7). Over the four-week period of October 4 to October 31, domestic equity ETFs had a total of \$33 billion in primary market activity (total weekly net share issuance over the period), representing 0.6 percent of the \$6.0 trillion in company stock traded during the period. Though company stocks traded heavily during these volatile periods, only a very small fraction of that volume was attributable to ETFs.

FIGURE 4.7
ETFs Had Minimal Impact on Underlying Stocks and Did Not Drive Market Volatility in 2018
Selected dates



Source: Investment Company Institute tabulations of Bloomberg and Cboe Exchange, Inc. data

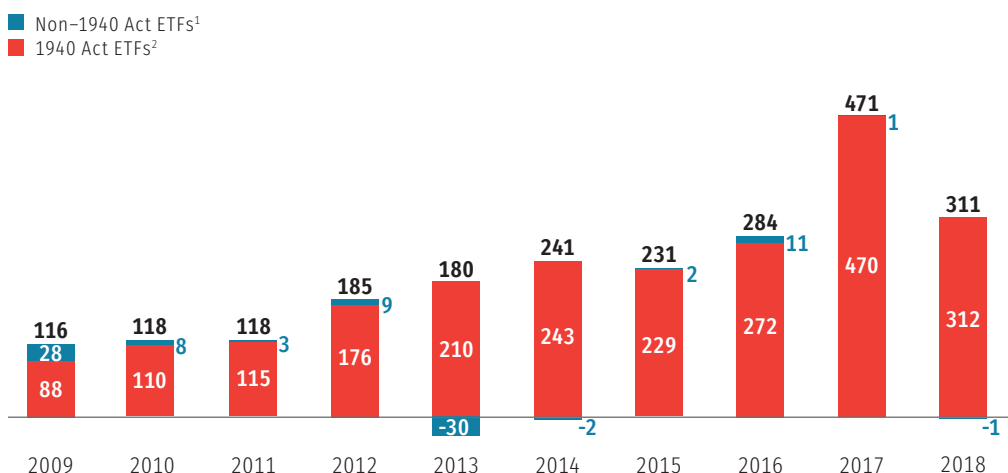
Demand for ETFs

In the past decade, demand for ETFs has increased as institutional investors have found ETFs to be a convenient vehicle for participating in, or hedging against, broad movements in the stock market. Increased awareness of these investment vehicles by retail investors and their financial advisers also has influenced demand for ETFs. Total net assets in ETFs accounted for about 16 percent of net assets managed by investment companies at year-end 2018. For 2018 as a whole, net share issuance of ETF shares (which includes reinvested dividends), though down from 2017's record pace, still was quite strong at \$311 billion (Figure 4.8).

FIGURE 4.8

Net Share Issuance of ETFs Remained Strong in 2018

Billions of dollars, annual



¹ The funds in this category are not registered under the Investment Company Act of 1940 and invest primarily in commodities, currencies, and futures.

² The funds in this category are registered under the Investment Company Act of 1940.

Note: Data for net share issuance include reinvested dividends.

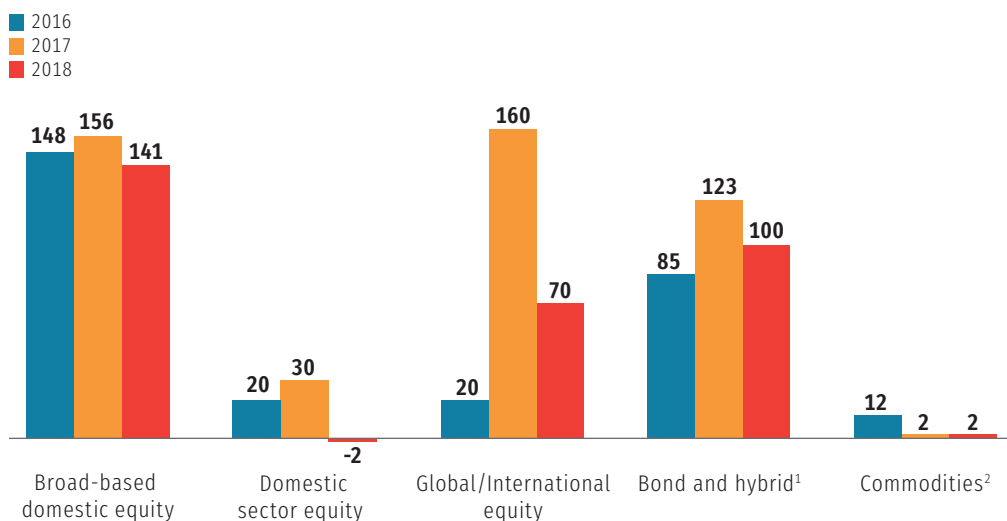
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Pointing Fingers at Index Funds Won't Explain Market Volatility

www.ici.org/viewpoints/view_18_index_volatility

In 2018, net share issuance of ETFs declined across all broad asset classes except commodities (Figure 4.9). Demand for global and international equity ETFs fell substantially in 2018 with net share issuance totaling \$70 billion, down from \$160 billion in 2017. This drop-off in demand likely reflected the weaker performance in international stocks,* which contracted 14 percent (including reinvested dividends) in 2018 compared with an increase of 28 percent in 2017, and an appreciation (7 percent) in the value of the US dollar,† which generally decreases the attractiveness of international investments to US investors. Despite poor returns on domestic stocks‡ (down 5 percent), net share issuance of broad-based domestic equity ETFs remained strong in 2018, with \$141 billion in net new shares issued, down slightly from \$156 billion in 2017. Demand for bond and hybrid ETFs fell somewhat in 2018, with net new share issuance totaling \$100 billion, down from \$123 billion in 2017. Much of this issuance was in short-term bond ETFs, likely reflecting higher short-term interest rates and a flatter US Treasury yield curve.

FIGURE 4.9
Net Share Issuance of ETFs by Investment Classification
 Billions of dollars, annual



¹ Bond ETFs represented 98 percent of net issuance in the bond and hybrid category in 2018.

² This category includes funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

Note: Data for net share issuance include reinvested dividends.

* As measured by the MSCI All Country World Daily ex-US Gross Total Return Index.

† As measured by the Trade Weighted US Dollar Index: Broad.

‡ As measured by the Wilshire 5000 Total Market Index.

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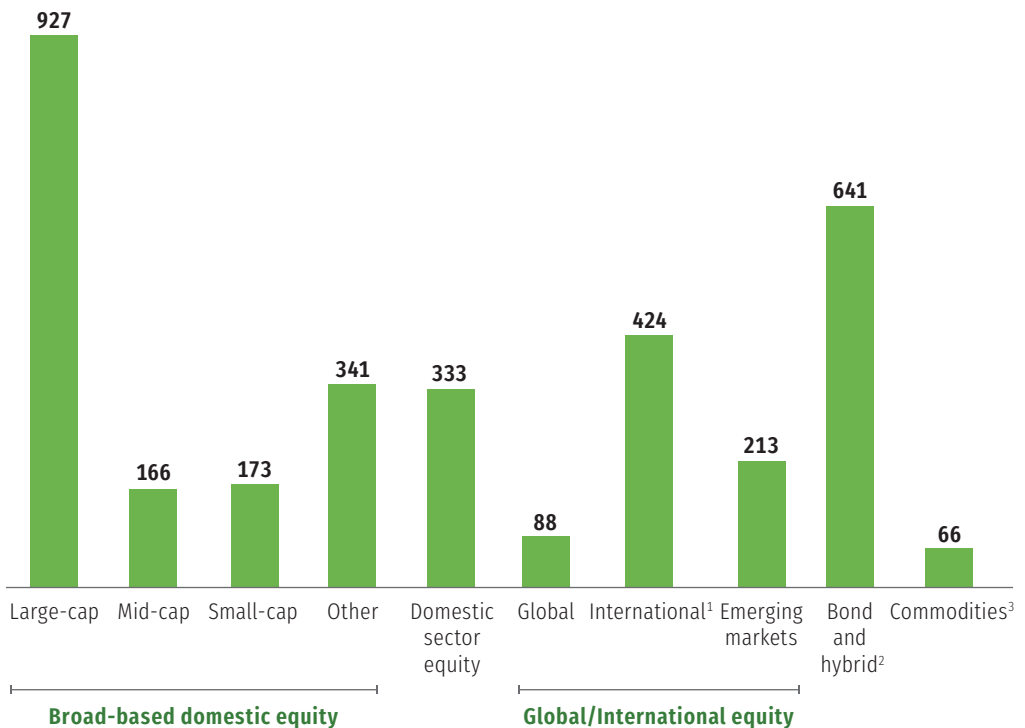
Plenty of Players Provide Liquidity for ETFs
www.ici.org/viewpoints/view_14_ft_etf_liquidity

ETFs have been available for more than 25 years, and in that time, large-cap domestic equity ETFs have accounted for the largest proportion of ETF net assets. At year-end 2018, net assets in large-cap domestic equity ETFs totaled \$927 billion, or 28 percent, of ETF net assets (Figure 4.10). Fueled by strong investor demand over the past few years, bond and hybrid ETFs held 19 percent (\$641 billion) of ETF net assets. International equity ETFs accounted for 13 percent, or \$424 billion, of ETF net assets.

FIGURE 4.10

Total Net Assets of ETFs Were Concentrated in Large-Cap Domestic Stocks

Billions of dollars, year-end 2018



¹ This category includes international, regional, and single country ETFs but excludes emerging market ETFs.

² Bond ETFs represented 99 percent of total net assets in the bond and hybrid category in 2018.

³ This category includes funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

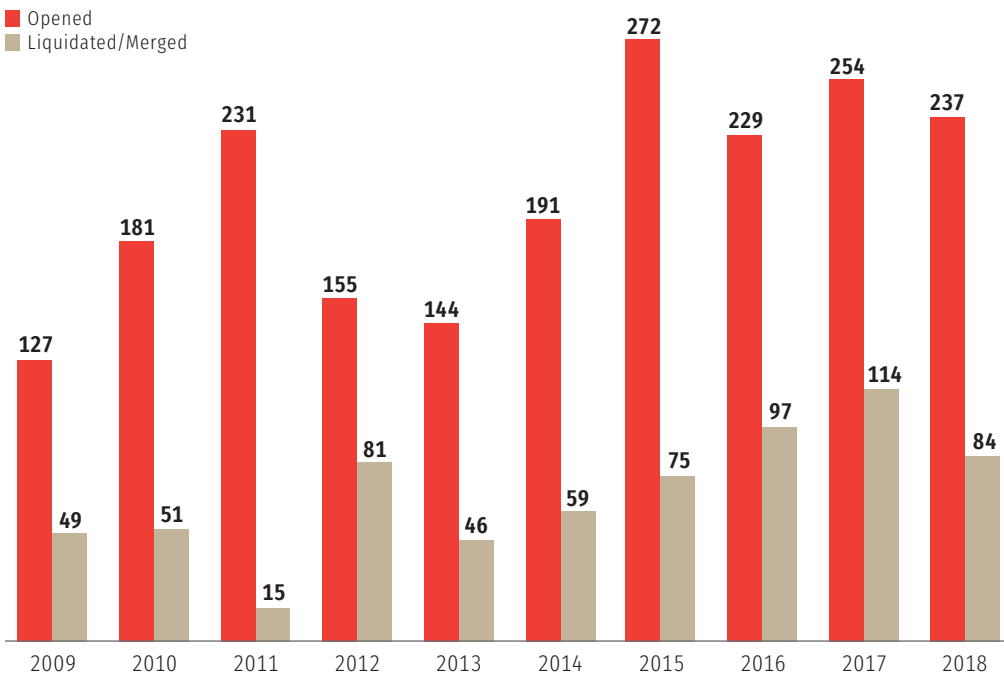
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ICI Seeks Market Improvements for ETFs and Their Investors

www.ici.org/fof_cap_mkts_etfs

Increased investor demand for ETFs has led to a rapid increase in the number of ETFs created by fund sponsors, with 2,021 new ETFs offered to investors in the past decade (Figure 4.11). In 2017 and 2018, domestic equity ETFs accounted for about half of newly offered ETFs. International/global equity ETFs and bond ETFs each accounted for about one-quarter of new ETFs in 2018. Few ETFs had been liquidated until 2008 when market pressures appeared to come into play and sponsors began liquidating ETFs that had failed to attract sufficient demand. In 2012, the number of liquidations jumped to 81 as two sponsors exited the index-based ETF market. Between 2013 and 2017, the number of ETF liquidations had risen steadily—a natural result of a maturing industry. In 2018, 84 ETFs liquidated, as sponsors eliminated some international/global equity and sector equity ETFs from their lineups.

FIGURE 4.11
Number of ETFs Entering and Exiting the Industry



Note: Data include ETFs that invest primarily in other ETFs.

Characteristics of ETF-Owning Households

An estimated 7.9 million, or about 6 percent of, US households held ETFs in 2018. Of households that owned mutual funds, an estimated 13 percent also owned ETFs. ETF-owning households tended to include affluent investors who owned a range of equity and fixed-income investments. In 2018, 93 percent of ETF-owning households also owned equity mutual funds, individual stocks, or variable annuities (Figure 4.12). Sixty-six percent of households that owned ETFs also held bond mutual funds, individual bonds, or fixed annuities. In addition, 48 percent of ETF-owning households owned investment real estate.

FIGURE 4.12

ETF-Owning Households Held a Broad Range of Investments

Percentage of ETF-owning households holding each type of investment, 2018

Equity mutual funds, individual stocks, or variable annuities (total)	93
Bond mutual funds, individual bonds, or fixed annuities (total)	66
Mutual funds (total)	90
Equity	87
Bond	53
Hybrid	44
Money market	57
Individual stocks	74
Individual bonds	26
Fixed or variable annuities	31
Investment real estate	48

Note: Multiple responses are included.

Some characteristics of ETF-owning households are similar to those of households that own mutual funds and those that own stocks directly. For instance, households that owned ETFs—like households owning mutual funds and those owning individual stocks—tended to have household incomes above the national median and to own at least one defined contribution (DC) retirement plan account (Figure 4.13). ETF-owning households, however, also exhibit some characteristics that distinguish them from other households. For example, ETF-owning households tended to have higher education levels and greater household financial assets; they were also more likely to own individual retirement accounts (IRAs) than households that own mutual funds and those that own individual stocks.

FIGURE 4.13
Characteristics of ETF-Owning Households
 2018

	All US households	Households owning ETFs	Households owning mutual funds	Households owning individual stocks
Median				
Age of head of household ¹	52	49	51	53
Household income ²	\$60,000	\$130,000	\$100,000	\$113,000
Household financial assets ³	\$80,000	\$500,000	\$250,000	\$400,000
Percentage of households				
<i>Household primary or co-decisionmaker for saving and investing</i>				
Married or living with a partner	57	71	70	69
College or postgraduate degree	35	65	53	57
Employed (full- or part-time)	62	76	76	72
Retired from lifetime occupation	29	25	23	28
<i>Household owns</i>				
IRA(s)	33	77	61	64
DC retirement plan account(s)	48	74	84	72

¹ Age is based on the sole or co-decisionmaker for household saving and investing.

² Total reported is household income before taxes in 2017.

³ Household financial assets include assets in employer-sponsored retirement plans but exclude the household's primary residence.

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A Close Look at ETF Households

www.ici.org/research/industry_research/etfs

ETF-owning households also exhibit more willingness to take investment risk (Figure 4.14). Fifty-one percent of ETF-owning households were willing to take substantial or above-average investment risk for substantial or above-average gain in 2018, compared with 24 percent of all US households and 35 percent of mutual fund-owning households. This result may be explained by the predominance of equity ETFs, which make up 79 percent of ETF total net assets (Figure 4.10). Investors who are more willing to take investment risk may be more likely to invest in equities.

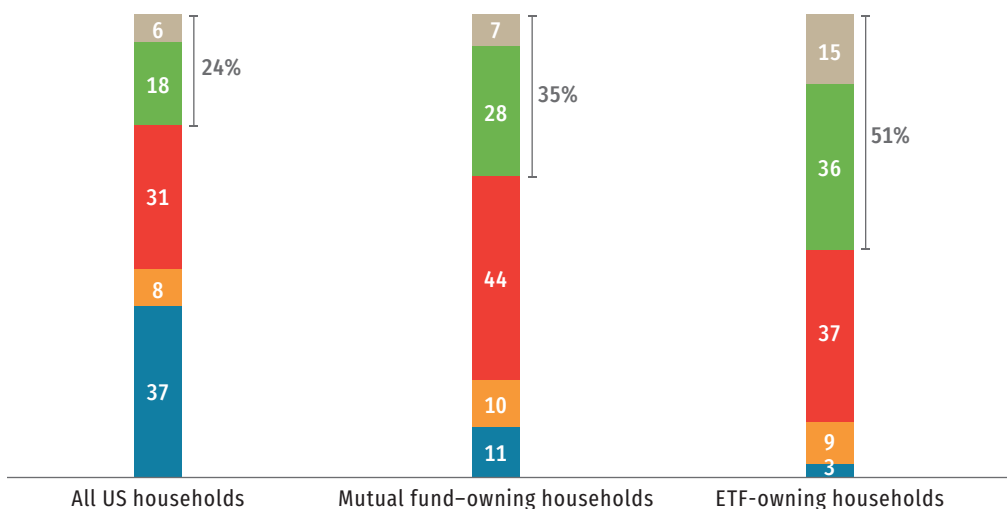
FIGURE 4.14

ETF-Owning Households Are Willing to Take More Investment Risk

Percentage of all US households, mutual fund-owning households, and ETF-owning households; 2018

Level of risk willing to take with financial investments

- Substantial risk for substantial gain
- Above-average risk for above-average gain
- Average risk for average gain
- Below-average risk for below-average gain
- Unwilling to take any risk



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ICI Explains: Understanding ETFs
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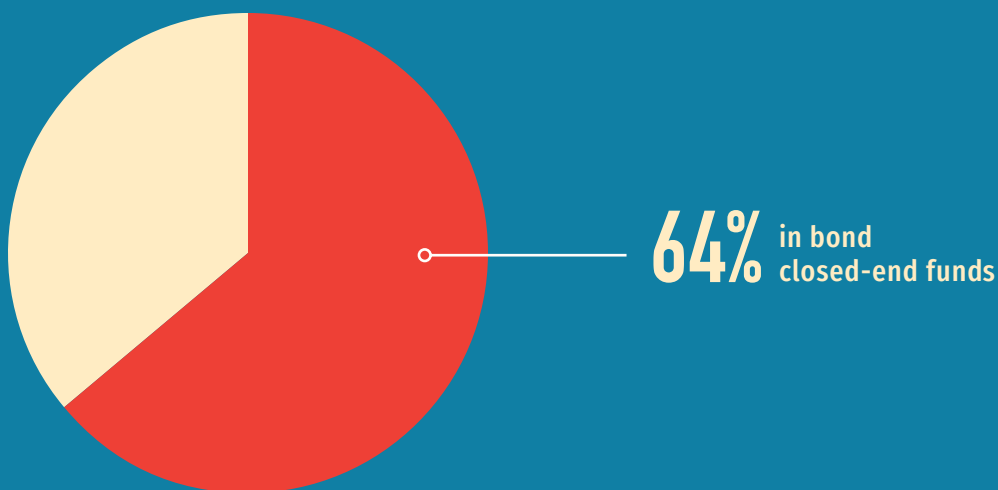
CHAPTER

05

US CLOSED-END FUNDS

Closed-end funds are one of four types of investment companies, along with mutual (or open-end) funds, exchange-traded funds (ETFs), and unit investment trusts. Closed-end funds generally issue a fixed number of shares that are listed on a stock exchange or traded in the over-the-counter market. The assets of a closed-end fund are professionally managed in accordance with the fund's investment objectives and policies, and may be invested in stocks, bonds, and other securities.

Nearly two-thirds of closed-end fund total assets were in bond funds at year-end 2018



In this chapter

- 102** What Is a Closed-End Fund?
- 103** Total Assets of Closed-End Funds
- 105** Net Issuance of Closed-End Funds
- 106** Closed-End Fund Distributions
- 107** Closed-End Fund Leverage
- 110** Characteristics of Households Owning Closed-End Funds

What Is a Closed-End Fund?

A closed-end fund is a type of investment company whose shares are listed on a stock exchange or traded in the over-the-counter market. The assets of a closed-end fund are professionally managed in accordance with the fund's investment objectives and policies, and may be invested in equities, bonds, and other securities. The market price of a closed-end fund share fluctuates like that of other publicly traded securities and is determined by supply and demand in the marketplace.

A closed-end fund is created by issuing a fixed number of common shares to investors during an initial public offering. Subsequent issuance of common shares can occur through secondary or follow-on offerings, at-the-market offerings, rights offerings, or dividend reinvestments. Closed-end funds also are permitted to issue one class of preferred shares in addition to common shares. Preferred shares differ from common shares in that preferred shareholders are paid dividends but do not share in the gains and losses of the fund. Issuing preferred shares allows a closed-end fund to raise additional capital, which it can use to purchase more securities for its portfolio.

Once issued, shares of a closed-end fund generally are bought and sold by investors in the open market and are not purchased or redeemed directly by the fund, although some closed-end funds may adopt stock repurchase programs or periodically tender for shares. Because a closed-end fund does not need to maintain cash reserves or sell securities to meet redemptions, the fund has the flexibility to invest in less-liquid portfolio securities. For example, a closed-end fund may invest in securities of very small companies, municipal bonds that are not widely traded, or securities traded in countries that do not have fully developed securities markets.

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Closed-End Fund Resource Center
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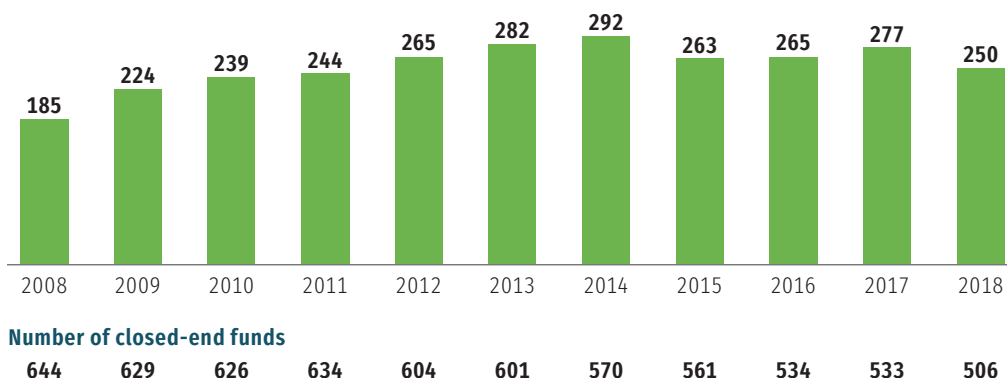
Total Assets of Closed-End Funds

At year-end 2018, 506 closed-end funds had total assets of \$250 billion (Figure 5.1). Total assets decreased by 9.8 percent from year-end 2017, largely driven by falling stock prices around the world.

FIGURE 5.1

Total Assets of Closed-End Funds Were \$250 Billion at Year-End 2018

Billions of dollars, year-end



Note: *Total assets* is the fair value of assets held in closed-end fund portfolios funded by common and preferred shares less any liabilities besides preferred shares.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

Historically, bond funds have accounted for a large share of assets in closed-end funds. At year-end 2008, 61 percent of all closed-end fund assets were held by bond funds, with the remainder held by equity funds (Figure 5.2). At year-end 2018, 64 percent of closed-end fund assets (\$159 billion) were held by bond funds. The remaining 36 percent of closed-end fund assets (\$91 billion) were held by equity funds. These shares have remained relatively stable, in part because of two offsetting factors. Over the past 10 years, cumulative net issuance of bond closed-end fund shares exceeded that of equity fund shares—offsetting the total returns on US stocks,* which exceeded those of US bonds† during this time.

* As measured by the Wilshire 5000 Total Market Index.

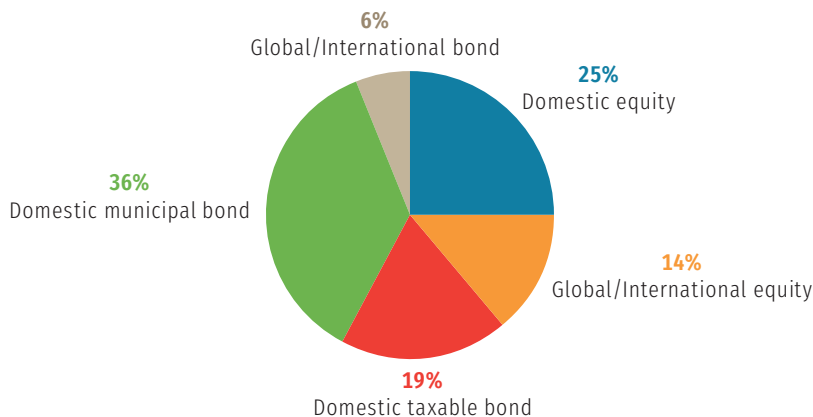
† As measured by the FTSE US Broad Investment Grade Bond Index.

The number of closed-end funds available to investors decreased in 2018, and remains well below its recent peak in 2011 (Figure 5.1). Over this period, more closed-end funds were liquidated, merged, or converted into open-end mutual funds or exchange-traded funds than were launched.

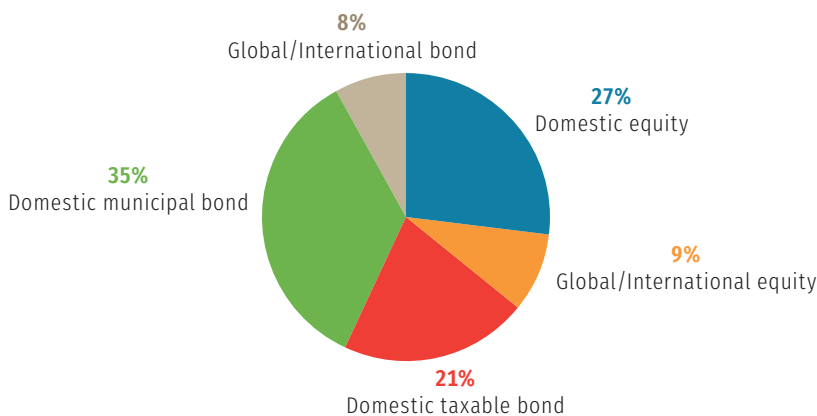
FIGURE 5.2

Composition of the Closed-End Fund Market by Investment Objective

Percentage of closed-end fund total assets, year-end



2008 total assets: \$185 billion



2018 total assets: \$250 billion

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

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The Closed-End Fund Market, 2018
www.ici.org/research/investors/closedend

Net Issuance of Closed-End Funds

Net issuance of closed-end fund shares was \$597 million in 2018 compared with \$570 million in 2017 (Figure 5.3). Bond closed-end funds had positive net share issuance of \$1.0 billion—the vast majority of which was in domestic municipal bond closed-end funds. Equity closed-end funds, however, had net redemptions of \$412 million in 2018.

FIGURE 5.3

Closed-End Fund Net Share Issuance

Millions of dollars

	Equity				Bond			
	Total	Total	Domestic	Global/ International	Total	Domestic taxable	Domestic municipal	Global/ International
2009	-3,259	-2,520	-2,366	-154	-739	-788	-238	287
2010	5,430	2,054	1,995	59	3,376	1,900	1,119	357
2011	6,018	4,466	3,206	1,260	1,551	724	825	2
2012	11,385	2,953	2,840	113	8,432	3,249	3,102	2,081
2013	14,515	3,605	4,097	-491	10,909	3,921	530	6,459
2014	4,935	4,314	3,819	494	621	266	567	-212
2015	1,829	1,267	224	1,043	562	678	-11	-104
2016	1,572	58	242	-184	1,515	1,437	576	-498
2017	570	-548	-147	-401	1,118	758	123	237
2018	597	-412	-352	-60	1,009	42	971	-4

Note: Net share issuance is the dollar value of gross issuance (proceeds from initial and additional public offerings of shares) minus gross redemptions of shares (share repurchases and fund liquidations). A positive number indicates that gross issuance exceeded gross redemptions. A negative number indicates that gross redemptions exceeded gross issuance.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

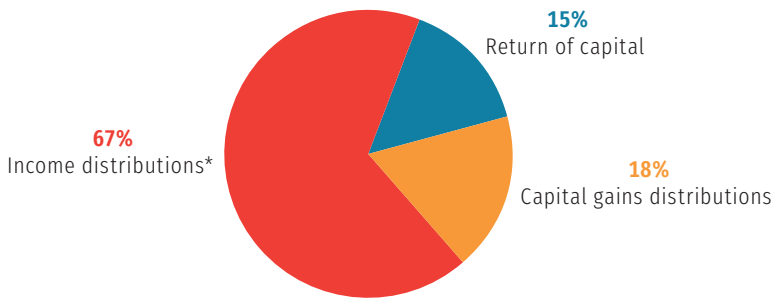
Closed-End Fund Distributions

In 2018, closed-end funds distributed \$16.7 billion to shareholders (Figure 5.4). Closed-end funds may make distributions to shareholders from three possible sources: income distributions, including payments from interest and dividends; realized capital gains; and return of capital. Income distributions made up 67 percent of closed-end fund distributions, with a relatively even share paid by both equity and bond closed-end funds. Capital gains distributions accounted for 18 percent of closed-end fund distributions, and return of capital constituted 15 percent.

FIGURE 5.4

Closed-End Fund Distributions

Percentage of closed-end fund distributions, 2018



Total closed-end fund distributions: \$16.7 billion

*Income distributions are paid from interest and dividends that the fund earns on its investments in securities.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

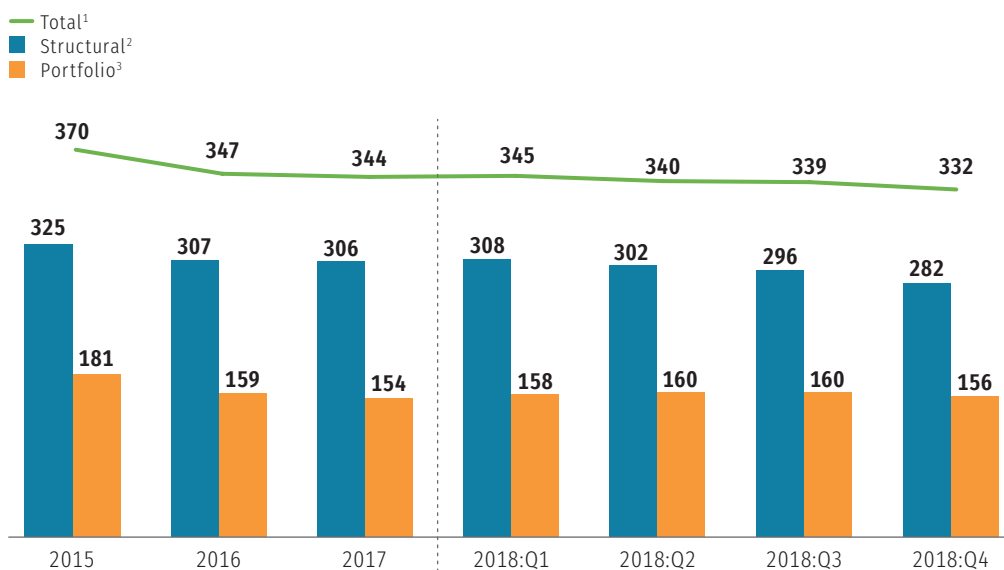
Closed-End Fund Leverage

Closed-end funds have the ability, subject to strict regulatory limits, to use leverage as part of their investment strategy. The use of leverage by a closed-end fund can allow it to achieve higher long-term returns, but also increases risk and the likelihood of share price volatility. Closed-end fund leverage can be classified as either structural leverage or portfolio leverage. At year-end 2018, at least 332 funds, accounting for 66 percent of closed-end funds, were using structural leverage, some types of portfolio leverage (tender option bonds or reverse repurchase agreements), or both as a part of their investment strategy (Figure 5.5).

FIGURE 5.5

Closed-End Funds Are Employing Structural Leverage and Some Types of Portfolio Leverage

Number of funds, end of period



¹ Components do not add to the total because funds may employ both structural and portfolio leverage.

² Structural leverage affects the closed-end fund's capital structure by increasing the fund's portfolio assets through borrowing and issuing debt and preferred stock.

³ Portfolio leverage is leverage that results from particular types of portfolio investments, including certain types of derivatives, reverse repurchase agreements, tender option bonds, and other investments or types of transactions. Data are only available for reverse repurchase agreements and tender option bonds. Given data collection constraints, and the continuing development of types of investments/transactions with a leverage characteristic (and the use of different definitions of *leverage*), actual portfolio leverage may be materially different from what is reflected above.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

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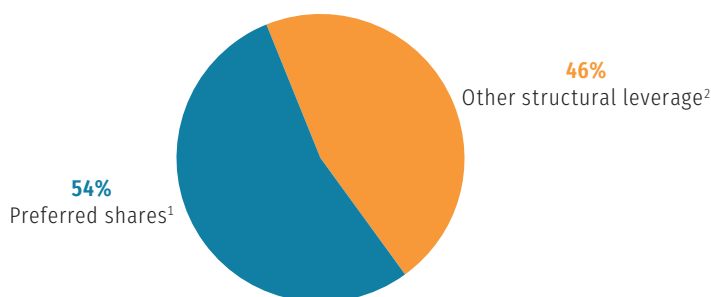
Frequently Asked Questions About Closed-End Funds and Their Use of Leverage

www.ici.org/cef/background/faqs_closed_end

Structural leverage, the most common type of leverage, affects the closed-end fund’s capital structure by increasing the fund’s portfolio assets. Types of closed-end fund structural leverage include borrowing and issuing debt and preferred shares. At the end of 2018, 282 funds had a total of \$51.4 billion in structural leverage, with slightly more than half (54 percent) from preferred shares (Figures 5.5 and 5.6). The remaining 46 percent of closed-end fund structural leverage was other structural leverage, which includes bank borrowing and other forms of debt. The average leverage ratio* across those closed-end funds employing structural leverage was 28 percent at year-end 2018. Among closed-end funds employing structural leverage, the average leverage ratio for bond funds was somewhat higher (30 percent) than that of equity funds (24 percent).

FIGURE 5.6

Preferred Shares Constituted the Majority of Closed-End Fund Structural Leverage
 Percentage of closed-end fund structural leverage, year-end 2018



Total closed-end fund structural leverage: \$51.4 billion

¹ A closed-end fund may issue preferred shares to raise additional capital, which can be used to purchase more securities for its portfolio. Preferred shares differ from common shares in that preferred shareholders are paid income and capital gains distributions, but do not share in the gains and losses in the value of the fund’s shares.

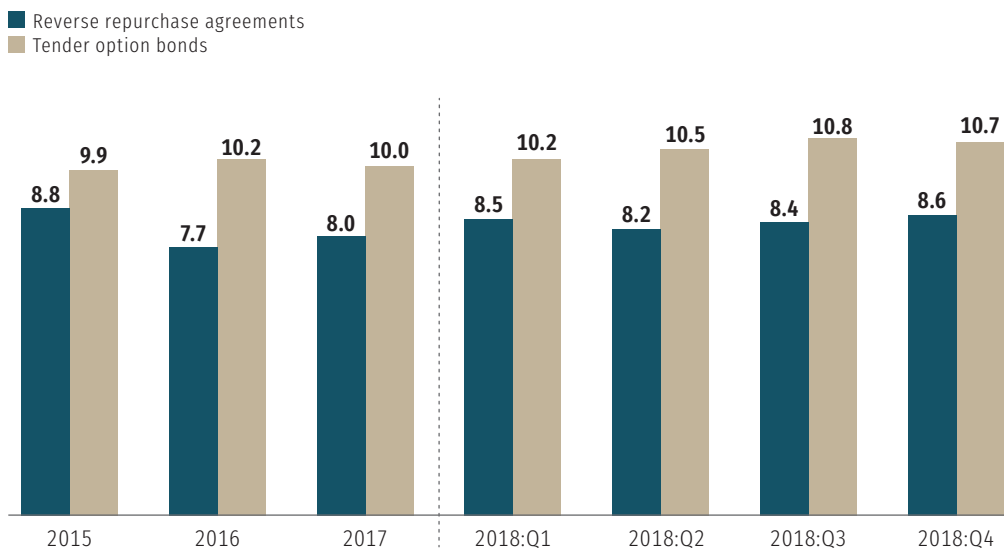
² *Other structural leverage* includes bank borrowing and other forms of debt.

Source: ICI Research Perspective, “The Closed-End Fund Market, 2018”

*The *leverage ratio* is the ratio of the amount of preferred shares and other structural leverage to the sum of the amount of common assets, preferred shares, and other structural leverage.

Portfolio leverage is leverage that results from particular portfolio investments, such as certain types of derivatives, reverse repurchase agreements, and tender option bonds. At the end of 2018, 156 closed-end funds had \$19.3 billion outstanding in reverse repurchase agreements and tender option bonds (Figures 5.5 and 5.7).

FIGURE 5.7
Use of Portfolio Leverage
 Billions of dollars, end of period



Note: Portfolio leverage is leverage that results from particular types of portfolio investments, including certain types of derivatives, reverse repurchase agreements, tender option bonds, and other investments or types of transactions. Data are only available for reverse repurchase agreements and tender option bonds. Given data collection constraints, and the continuing development of types of investments/transactions with a leverage characteristic (and the use of different definitions of *leverage*), actual portfolio leverage may be materially different from what is reflected above.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

Characteristics of Households Owning Closed-End Funds

An estimated 3.6 million US households owned closed-end funds in 2018. These households tended to include affluent investors who owned a range of equity and fixed-income investments. In 2018, 95 percent of households owning closed-end funds also owned equity mutual funds, individual stocks, or variable annuities (Figure 5.8). Eighty-one percent of households that owned closed-end funds also held bond mutual funds, individual bonds, or fixed annuities. In addition, 53 percent of these households owned investment real estate.

FIGURE 5.8

Closed-End Fund Investors Owned a Broad Range of Investments

Percentage of closed-end fund–owning households holding each type of investment, 2018

Equity mutual funds, individual stocks, or variable annuities (total)	95
Bond mutual funds, individual bonds, or fixed annuities (total)	81
Mutual funds (total)	89
Equity	86
Bond	53
Hybrid	38
Money market	52
Individual stocks	70
Individual bonds	44
Fixed or variable annuities	45
Investment real estate	53

Note: Multiple responses are included.

Source: ICI Research Perspective, “The Closed-End Fund Market, 2018”

Because a large number of households that owned closed-end funds also owned stocks and mutual funds, the characteristics of closed-end fund owners were similar in many respects to those of stock and mutual fund owners. For instance, households that owned closed-end funds (like stock- and mutual fund–owning households) tended to be headed by college-educated individuals and tended to have household incomes above the national median (Figure 5.9).

Nonetheless, households that owned closed-end funds exhibited certain characteristics distinguishing them from mutual fund-owning households. For example, households with closed-end funds tended to have greater household financial assets (Figure 5.9). Also, 37 percent of households owning closed-end funds were retired from their lifetime occupations, compared with 23 percent of households owning mutual funds.

FIGURE 5.9

Closed-End Fund Investors Had Above-Average Household Incomes and Financial Assets 2018

	All US households	Households owning closed-end funds	Households owning mutual funds	Households owning individual stocks
Median				
Age of head of household ¹	52	54	51	53
Household income ²	\$60,000	\$125,000	\$100,000	\$113,000
Household financial assets ³	\$80,000	\$500,000	\$250,000	\$400,000
Percentage of households				
<i>Household primary or co-decisionmaker for saving and investing</i>				
Married or living with a partner	57	63	70	69
College or postgraduate degree	35	55	53	57
Employed (full- or part-time)	62	65	76	72
Retired from lifetime occupation	29	37	23	28
<i>Household owns</i>				
IRA(s)	33	78	61	64
DC retirement plan account(s)	48	70	84	72

¹ Age is based on the sole or co-decisionmaker for household saving and investing.

² Total reported is household income before taxes in 2017.

³ Household financial assets include assets in employer-sponsored retirement plans but exclude the household's primary residence.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2018"

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A Guide to Closed-End Funds
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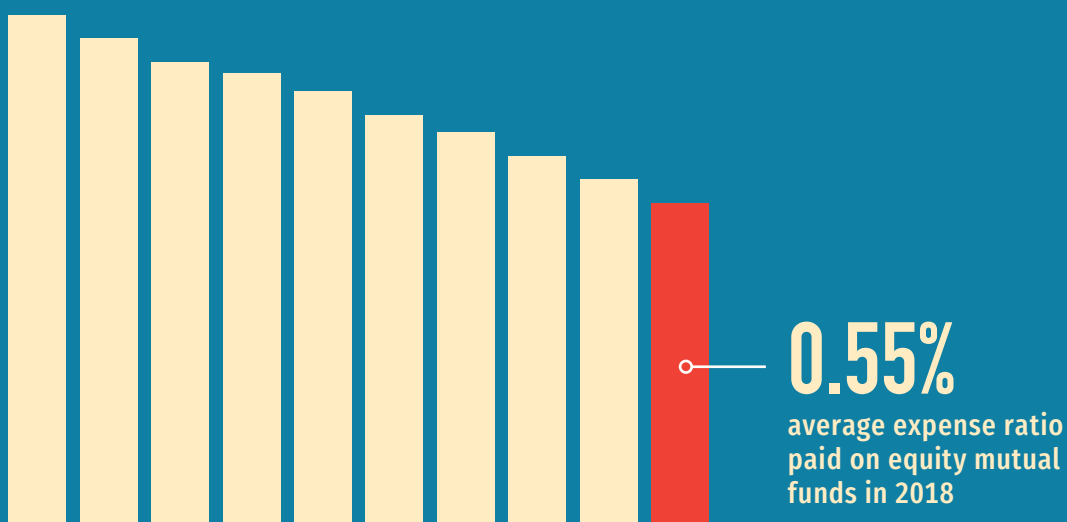
CHAPTER

06

US FUND EXPENSES AND FEES

Mutual funds provide investors with many investment-related services, and for those services investors incur two primary types of expenses and fees: ongoing expenses and sales loads. Average expense ratios (i.e., ongoing expenses) paid by mutual fund investors have fallen substantially over time. For example, on an asset-weighted basis, average expense ratios for equity mutual funds fell from 0.99 percent in 2000 to 0.55 percent in 2018, a 44 percent decline.

Expense ratios paid by equity mutual fund investors have fallen for nine consecutive years



In this chapter

- 114** Trends in Mutual Fund Expenses
- 121** Expense Ratios of Index Mutual Funds and Index ETFs
- 129** Mutual Fund Load Fees

Trends in Mutual Fund Expenses

Mutual fund investors incur two primary types of expenses and fees: ongoing expenses and sales loads. Ongoing expenses cover portfolio management, fund administration, daily fund accounting and pricing, shareholder services (such as call centers and websites), distribution charges (known as 12b-1 fees), and other operating costs. These expenses are included in a fund's expense ratio—the fund's annual expenses expressed as a percentage of its assets. Because expenses are paid from fund assets, investors pay these expenses indirectly. Sales loads are paid at the time of share purchase (front-end loads), when shares are redeemed (back-end loads), or over time (level loads).

On an asset-weighted basis, average expense ratios* incurred by mutual fund investors have fallen substantially (Figure 6.1). In 2000, equity mutual fund investors incurred expense ratios of 0.99 percent, on average, or 99 cents for every \$100 invested. By 2018, that average had fallen to 0.55 percent, a decline of 44 percent. Hybrid and bond mutual fund expense ratios also have declined. The average hybrid mutual fund expense ratio fell from 0.89 percent in 2000 to 0.66 percent in 2018, a reduction of 26 percent. In addition, the average bond mutual fund expense ratio fell from 0.76 percent in 2000 to 0.48 percent in 2018, a decline of 37 percent.

*In this chapter, unless otherwise noted, average expense ratios are calculated on an asset-weighted basis. ICI's fee research uses asset-weighted averages to summarize the expenses and fees that shareholders pay through funds. In this context, asset-weighted averages are preferable to simple averages, which would overstate the expenses and fees of funds in which investors hold few dollars. ICI weights the expense ratio of each fund's share class by its year-end assets.

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Trends in the Expenses and Fees of Funds, 2018
www.ici.org/research/industry_research/fees

FIGURE 6.1**Expense Ratios Incurred by Mutual Fund Investors Have Declined Substantially Since 2000**

Percent

Year	Equity mutual funds	Hybrid mutual funds	Bond mutual funds
2000	0.99	0.89	0.76
2001	0.99	0.89	0.75
2002	1.00	0.89	0.73
2003	1.00	0.90	0.75
2004	0.95	0.85	0.72
2005	0.91	0.81	0.69
2006	0.88	0.78	0.67
2007	0.86	0.77	0.64
2008	0.83	0.77	0.61
2009	0.87	0.84	0.64
2010	0.83	0.82	0.63
2011	0.79	0.80	0.62
2012	0.77	0.79	0.61
2013	0.74	0.80	0.61
2014	0.70	0.78	0.57
2015	0.67	0.76	0.54
2016	0.63	0.73	0.51
2017	0.59	0.70	0.48
2018	0.55	0.66	0.48

Note: Expense ratios are measured as asset-weighted averages. Data exclude mutual funds available as investment choices in variable annuities.

Sources: Investment Company Institute, Lipper, and Morningstar. See *ICI Research Perspective*, "Trends in the Expenses and Fees of Funds, 2018."

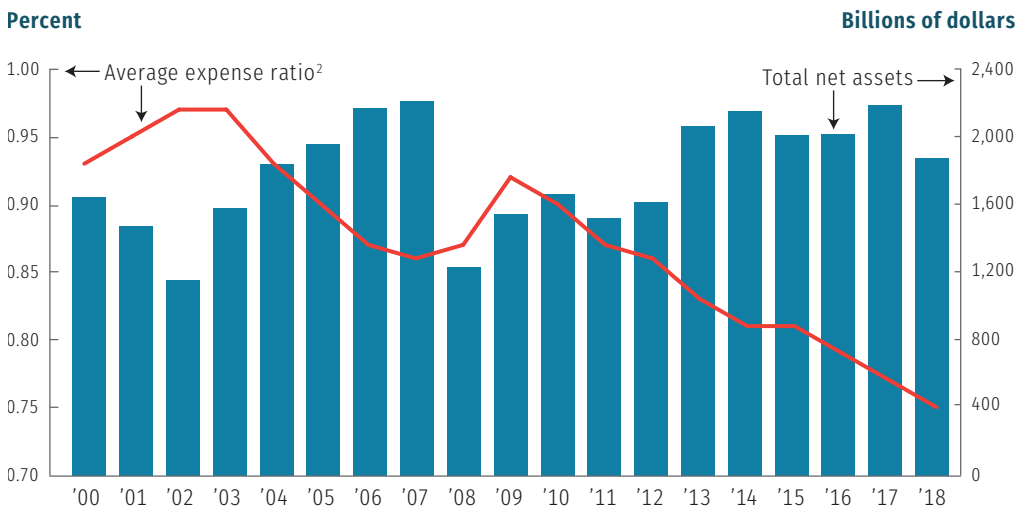
Understanding the Decline in Mutual Fund Expense Ratios

Several factors help account for the steep drop in mutual fund expense ratios. First, expense ratios often vary inversely with fund assets. Some fund costs included in expense ratios—such as transfer agency fees, accounting and audit fees, and directors’ fees—are more or less fixed in dollar terms. This means that when a fund’s assets rise, these costs contribute less to a fund’s expense ratio. Thus, if the assets of a fixed sample of funds rise over time, the sample’s average expense ratio tends to fall over the same period (Figure 6.2).

FIGURE 6.2

Mutual Fund Expense Ratios Tend to Fall as Fund Assets Rise

Share classes of actively managed domestic equity mutual funds continuously in existence since 2000¹



¹ Calculations are based on a fixed sample of share classes. Data exclude mutual funds available as investment choices in variable annuities and index mutual funds.

² Expense ratios are measured as asset-weighted averages.

Sources: Investment Company Institute, Lipper, and Morningstar. See *ICI Research Perspective*, “Trends in the Expenses and Fees of Funds, 2018.”

Another factor contributing to the decline of the average expense ratios of long-term mutual funds is the shift toward no-load share classes (see No-Load Share Classes on page 128), particularly institutional no-load share classes, which tend to have below-average expense ratios. In part, this shift reflects a change in how investors pay for services from brokers and other financial professionals (see Mutual Fund Load Fees on page 129).

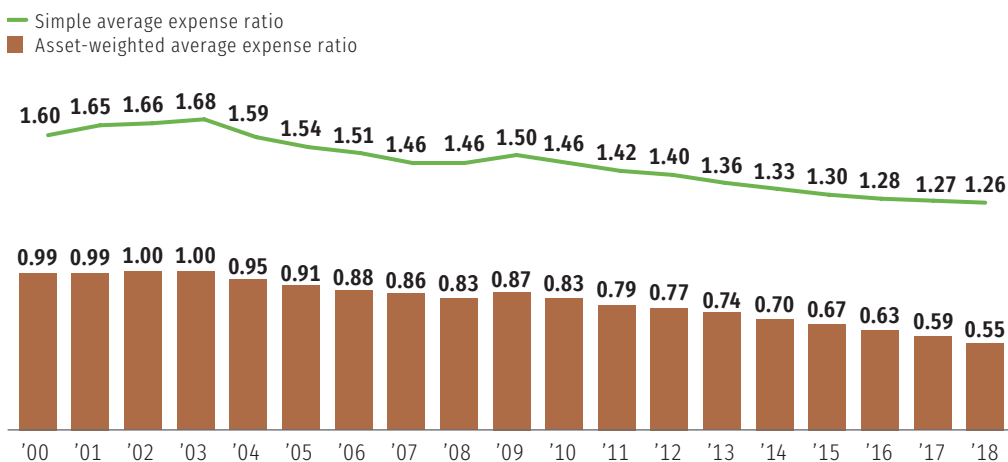
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IRA Investors Are Concentrated in Lower-Cost Mutual Funds
www.ici.org/viewpoints/view_18_ira_expenses_fees

Mutual fund expense ratios also have fallen because of economies of scale and competition. Investor demand for mutual fund services has increased dramatically in the past few decades. From 1990 to 2018, the number of households owning mutual funds more than doubled—from 23.4 million to 56.0 million (Figure 7.1). All else equal, this sharp increase in demand would tend to boost mutual fund expense ratios. Any such tendency, however, was mitigated by downward pressure on expense ratios—from competition among existing mutual fund sponsors, new mutual fund sponsors entering the industry, competition from products such as exchange-traded funds (ETFs) (see chapter 4 and page 124 of this chapter), and economies of scale resulting from the growth in fund assets.

Finally, shareholders tend to invest in mutual funds with below-average expense ratios (Figure 6.3). The simple average expense ratio of equity mutual funds (the average for all equity mutual funds offered for sale) was 1.26 percent in 2018. The asset-weighted average expense ratio for equity mutual funds (the average shareholders actually paid) was far lower at 0.55 percent.

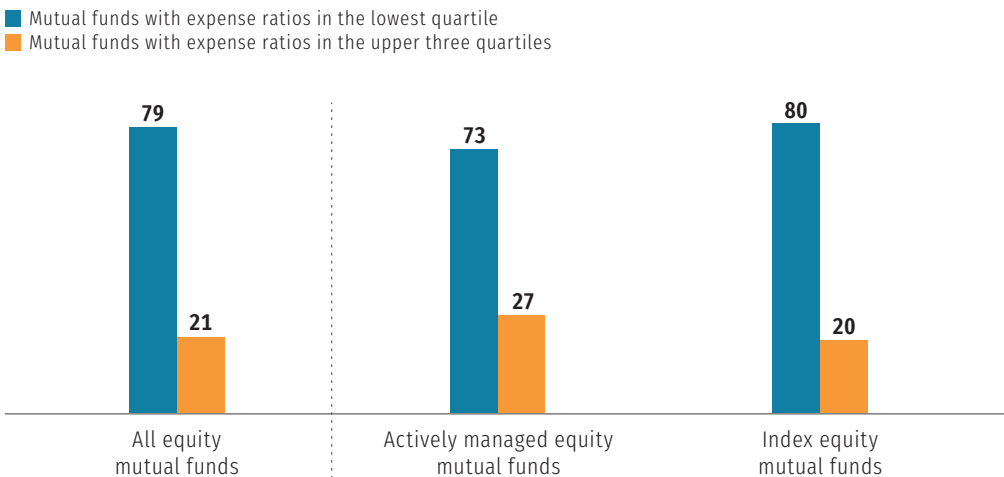
FIGURE 6.3
Fund Shareholders Paid Below-Average Expense Ratios for Equity Mutual Funds
 Percent



Note: Data exclude mutual funds available as investment choices in variable annuities.
 Sources: Investment Company Institute, Lipper, and Morningstar

Another way to illustrate the tendency for investors to gravitate to lower-cost funds is to examine how the allocation of their assets across funds varies by expense ratio. At year-end 2018, equity mutual funds with expense ratios in the lowest quartile held 79 percent of equity mutual funds' total net assets, while those with expense ratios in the upper three quartiles held only 21 percent (Figure 6.4). This pattern holds for both actively managed and index equity mutual funds. Actively managed equity mutual funds with expense ratios in the lowest quartile held 73 percent of actively managed equity mutual funds' net assets at year-end 2018, and lower-cost index equity mutual funds held 80 percent of index equity mutual funds' net assets.

FIGURE 6.4
Total Net Assets Are Concentrated in Lower-Cost Mutual Funds
 Percentage of total net assets, 2018



Note: Data exclude mutual funds available as investment choices in variable annuities.
 Sources: Investment Company Institute and Morningstar

Differences in Mutual Fund Expense Ratios

Like the prices of most goods and services, the expense ratios of individual mutual funds differ considerably across the array of available products. The expense ratios of individual funds depend on many factors, including investment objective (see below), fund assets (see page 122), and payments to financial intermediaries (see page 129).

Mutual Fund Investment Objective

Mutual fund expense ratios vary by investment objective (Figure 6.5). For example, bond and money market mutual funds tend to have lower expense ratios than equity mutual funds. Among equity mutual funds, expense ratios tend to be higher for funds that specialize in a given sector—such as healthcare or real estate—or those that invest in equities around the world, because such funds tend to cost more to manage. Even within a particular investment objective, mutual fund expense ratios can vary considerably. For example, 10 percent of equity mutual funds that focus on growth stocks have expense ratios of 0.66 percent or less, while 10 percent have expense ratios of 1.91 percent or more. This variation reflects, among other things, the fact that some growth funds focus more on small- or mid-cap stocks and others focus more on large-cap stocks. This is important because portfolios of small- and mid-cap stocks tend to cost more to manage since information about these types of stocks is less readily available, and therefore, active portfolio managers spend more time doing research.

FIGURE 6.5

Mutual Fund Expense Ratios Vary Across Investment Objectives

Percent, 2018

Investment objective	10th percentile	Median	90th percentile	Asset-weighted average	Simple average
Equity mutual funds¹	0.65	1.16	2.02	0.55	1.26
Growth	0.66	1.10	1.91	0.71	1.19
Sector	0.77	1.31	2.15	0.73	1.40
Value	0.68	1.10	1.88	0.66	1.17
Blend	0.39	0.98	1.77	0.33	1.03
World	0.77	1.25	2.10	0.68	1.35
Hybrid mutual funds¹	0.61	1.16	2.09	0.66	1.28
Bond mutual funds¹	0.44	0.81	1.63	0.48	0.94
Investment grade	0.35	0.69	1.50	0.34	0.79
World	0.64	1.00	1.81	0.60	1.13
Government	0.29	0.76	1.60	0.39	0.84
High-yield	0.62	0.95	1.75	0.73	1.05
Municipal	0.46	0.76	1.59	0.52	0.90
Money market funds¹	0.17	0.43	0.87	0.26	0.47
Memo:					
Target date mutual funds²	0.35	0.74	1.46	0.40	0.82
Index equity mutual funds¹	0.06	0.33	1.53	0.08	0.62

¹ Data exclude mutual funds available as investment choices in variable annuities.

² Data include mutual funds that invest primarily in other mutual funds, but exclude mutual funds available as investment choices in variable annuities. Ninety-five percent of target date mutual funds invest primarily in other mutual funds.

Note: Each fund's share class is weighted equally for the median, 10th, and 90th percentiles.

Sources: Investment Company Institute and Morningstar. See *ICI Research Perspective*, "Trends in the Expenses and Fees of Funds, 2018."

Expense Ratios of Index Mutual Funds and Index ETFs

An index fund generally seeks to replicate the return on a specified index. Under this approach, often referred to as passive management, portfolio managers buy and hold all, or a representative sample of, the securities in their target indexes. This approach to portfolio management is a primary reason that index funds—whether mutual funds or ETFs—tend to have below-average expense ratios. By contrast, under an active management approach, managers have more discretion to increase or reduce exposure to sectors or securities within their funds' investment mandates. Active managers may also undertake significant research about stocks or bonds, market sectors, or geographic regions. This approach offers investors the chance to earn superior returns, or to meet other investment objectives such as limiting downside risk, managing volatility, under- or over-weighting various sectors, and altering asset allocations in response to market conditions. These characteristics tend to make active management more costly than management of an index fund.

Index Mutual Funds

Growth in index mutual funds has contributed to the decline in asset-weighted average expense ratios of equity and bond mutual funds. From 2008 to 2018, index mutual fund total net assets grew significantly, from \$619 billion to \$3.3 trillion (Figure 6.6). Consequently, over the same period, index mutual funds' share of long-term mutual fund net assets more than doubled, from 10.7 percent in 2008 to 22.6 percent in 2018. Within index mutual funds, index equity mutual funds accounted for the lion's share (80 percent) of index mutual fund net assets in 2018.

Index mutual funds tend to have below-average expense ratios for several reasons. First, their approach to portfolio management—in which managers generally seek to replicate the return on a specified index by buying and holding all, or a representative sample of, the securities in their target indexes—lends itself to being less costly. This is because index funds' portfolios tend not to change frequently, and therefore, have low turnover rates.

Second, index mutual funds tend to have below-average expense ratios because of their investment focus. Net assets of index equity mutual funds are concentrated more heavily in large-cap blend funds that target US large-cap indexes, such as the S&P 500. Net assets of actively managed equity mutual funds, on the other hand, are more widely distributed across stocks of varying capitalization, international regions, or specialized business sectors. Managing portfolios of mid- or small-cap, international, or sector stocks is generally acknowledged to be more expensive than managing portfolios of US large-cap stocks.

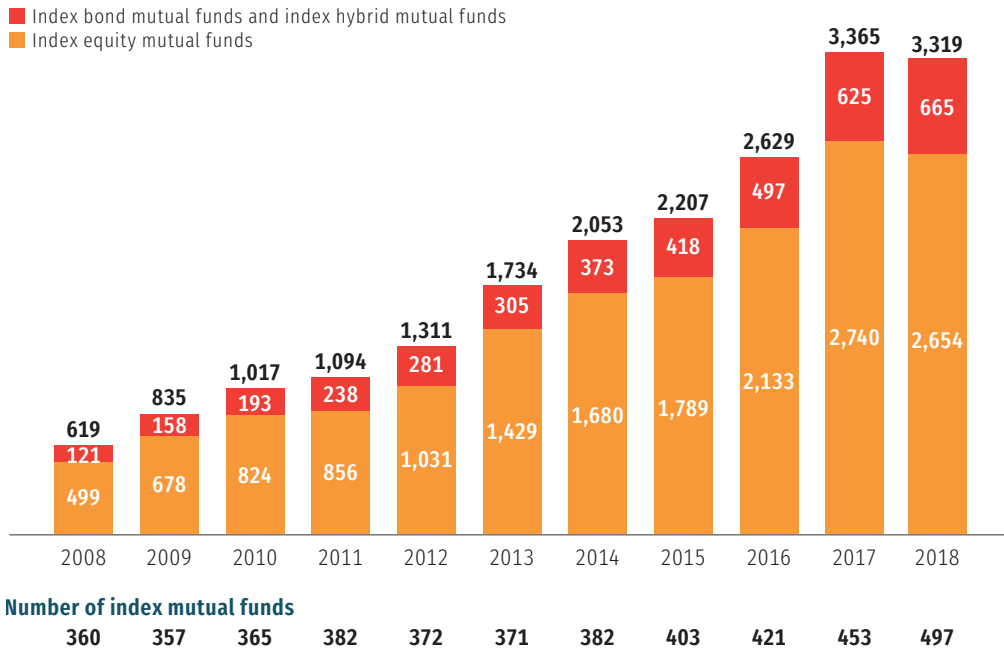
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Pointing Fingers at Index Funds Won't Explain Market Volatility
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FIGURE 6.6

Total Net Assets and Number of Index Mutual Funds Have Increased in Recent Years

Billions of dollars, year-end

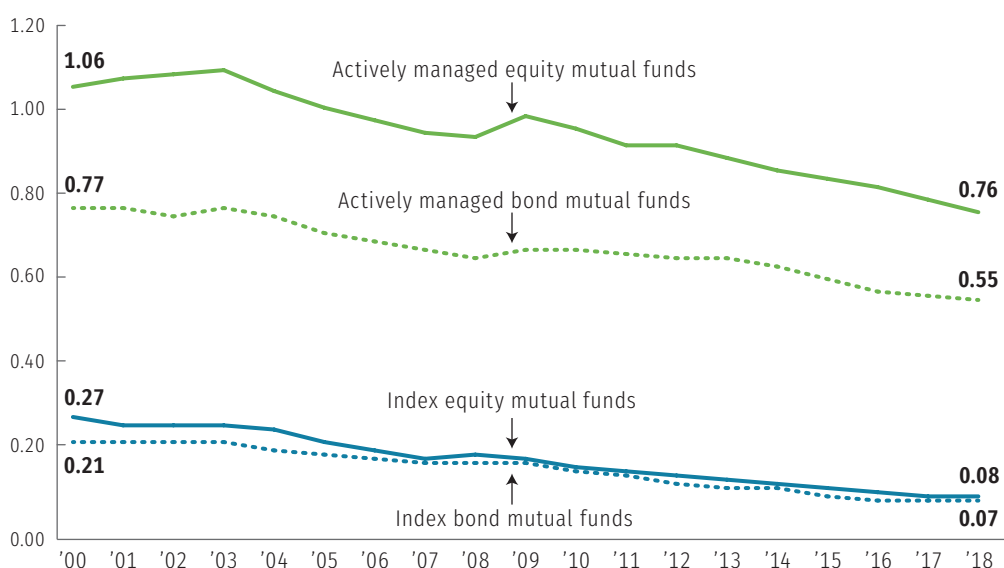


Third, index mutual funds are larger on average than actively managed mutual funds, which, through economies of scale, helps reduce fund expense ratios. In 2018, the size of the average index equity mutual fund (\$6.3 billion) was four times as large as the size of the average actively managed equity mutual fund (\$1.5 billion).

Finally, index mutual fund investors who hire financial professionals might pay for that service out of pocket, rather than through the fund’s expense ratio (see Mutual Fund Load Fees on page 129). In contrast, actively managed mutual funds more commonly have share classes that bundle those costs into the expense ratio.

These reasons, among others, help explain why index mutual funds generally have lower expense ratios than actively managed mutual funds. It is important to note that both index and actively managed mutual funds have contributed to the decline in the average expense ratios of mutual funds (Figure 6.7). From 2000 to 2018, the average expense ratio of index equity mutual funds fell from 0.27 percent to 0.08 percent, while the average expense ratio for actively managed equity mutual funds fell from 1.06 percent to 0.76 percent. Over the same period, the average expense ratio of index bond mutual funds fell from 0.21 percent to 0.07 percent and the average expense ratio of actively managed bond mutual funds fell from 0.77 percent to 0.55 percent.

FIGURE 6.7
Expense Ratios of Actively Managed and Index Mutual Funds Have Fallen
 Percent



Note: Expense ratios are measured as asset-weighted averages. Data exclude mutual funds available as investment choices in variable annuities.

Sources: Investment Company Institute, Lipper, and Morningstar. See *ICI Research Perspective*, "Trends in the Expenses and Fees of Funds, 2018."

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The downward trend in the average expense ratios of both index and actively managed mutual funds reflects, in part, investors' increasing tendency to buy lower-cost funds. Investor demand for index mutual funds is disproportionately concentrated in funds with the lowest costs. This phenomenon is not unique to index mutual funds, however; the proportion of assets in the lowest-cost actively managed mutual funds is also high (Figure 6.4).

Index ETFs

The trends in ETFs over the past decade have influenced asset-weighted average expense ratios of index equity and index bond ETFs. ETF total net assets have grown rapidly in recent years, from \$531 billion at year-end 2008 to \$3.4 trillion at year-end 2018 (Figure 2.1). During this time, ETFs have become a significant market participant, with net assets now accounting for about 16 percent of total net assets managed by investment companies at year-end 2018. ETFs are largely index-based and generally registered with the Securities and Exchange Commission (SEC) under the Investment Company Act of 1940. Actively managed ETFs and non-1940 Act ETFs represented only 4 percent of ETF net assets at year-end 2018. Like index mutual funds, most of the net assets in ETFs are in funds that focus on equities. Equity ETFs account for 79 percent of the total net assets of ETFs.

Part of the strong growth in ETFs is attributable to their distribution structure, in which the ETF generally charges an expense ratio that provides no compensation to financial professionals. Compensation to financial professionals for distribution or account servicing and maintenance is typically paid by the investor directly.*

Financial professionals often provide programs that offer investors a suite of ETFs suited to their investment goals. In such cases, investors would typically pay financial professionals an asset-based fee in addition to the expense ratios of the ETFs in the suite of ETFs selected. Also, because ETFs are generally index funds, they typically have lower expense ratios.

*Some ETFs bundle distribution fees in the expense ratio to cover marketing and distribution expenses. These fees are usually small, typically ranging between 0.01 and 0.06 percent.

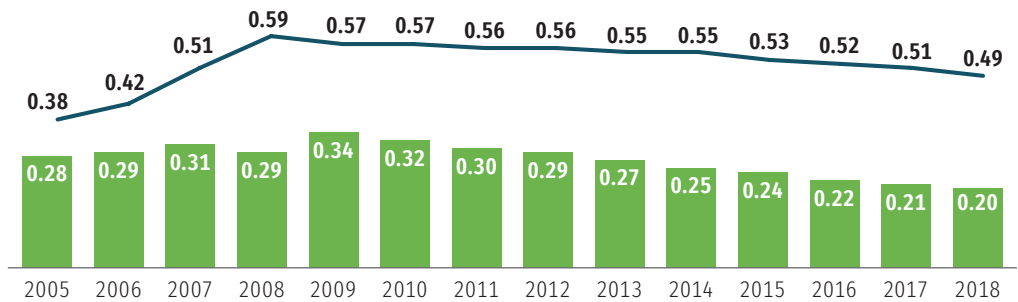
Like mutual fund investors, ETF shareholders tend to invest in funds with below-average expense ratios (Figure 6.8). The simple average expense ratio of index equity ETFs (the average for all index equity ETFs offered for sale) was 0.49 percent in 2018. The asset-weighted average expense ratio for index equity ETFs (the average shareholders actually paid) was much less than that, 0.20 percent. The same holds for index bond ETFs, with a simple average expense ratio of 0.28 percent in 2018 and an asset-weighted average expense ratio of 0.16 percent.

FIGURE 6.8

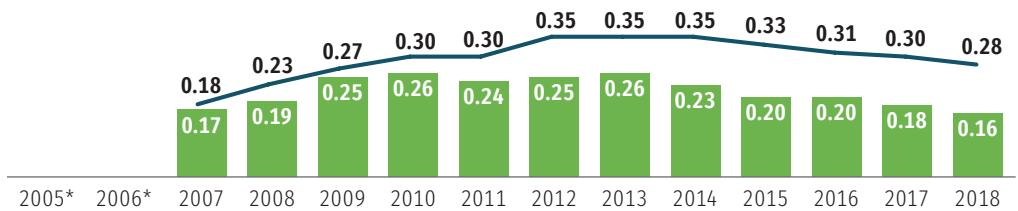
Expense Ratios Incurred by Index ETF Investors Have Declined in Recent Years
Percent

— Simple average expense ratio
■ Asset-weighted average expense ratio

Index equity ETFs



Index bond ETFs



*Data for index bond ETFs are excluded prior to 2007 because of a limited number of funds.

Note: Data exclude ETFs not registered under the Investment Company Act of 1940.

Sources: Investment Company Institute and Morningstar. See *ICI Research Perspective*, "Trends in the Expenses and Fees of Funds, 2018."

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Additionally, index ETF expense ratios differ based on their investment objectives (Figure 6.9). Among index bond ETFs, for example, expense ratios tend to be higher for ETFs that invest in either foreign or high-yield bonds because such securities are typically more costly to manage than, for example, Treasury bonds. Indeed, the asset-weighted average expense ratio for index high-yield bond ETFs was 0.45 percent in 2018, compared to the asset-weighted average expense ratio of 0.14 percent for index government bond ETFs. Even within specific investment objectives, expense ratios will vary among different index ETFs for a range of reasons. For example, expense ratios may differ because not all index ETFs in a given investment objective rely on the same index, and licensing fees that ETFs pay to index providers may vary.

FIGURE 6.9

Index ETF Expense Ratios Vary Across Investment Objectives

Percent, 2018

Investment objective	10th percentile	Median	90th percentile	Asset-weighted average	Simple average
Index equity ETFs	0.13	0.47	0.95	0.20	0.49
Growth	0.07	0.30	0.64	0.19	0.36
Sector	0.13	0.50	0.95	0.26	0.56
Value	0.08	0.30	0.64	0.21	0.34
Blend	0.10	0.35	0.95	0.12	0.43
World	0.25	0.53	0.82	0.30	0.54
Index hybrid ETFs	0.56	0.68	0.95	0.60	0.70
Index bond ETFs	0.07	0.20	0.50	0.16	0.28
Corporate	0.06	0.10	0.25	0.09	0.15
World	0.24	0.41	0.50	0.31	0.40
Government	0.07	0.15	0.95	0.14	0.31
High-yield	0.25	0.41	0.63	0.45	0.43
Municipal	0.18	0.25	0.35	0.23	0.25
Memo:					
Active equity ETFs	0.40	0.75	1.07	0.79	0.77

Note: Each fund's share class is weighted equally for the median, 10th, and 90th percentiles. Data exclude ETFs not registered under the Investment Company Act of 1940.

Sources: Investment Company Institute and Morningstar. See *ICI Research Perspective*, "Trends in the Expenses and Fees of Funds, 2018."

Mutual Fund Fee Structures

Mutual funds often are categorized by the class of shares that fund sponsors offer, primarily load or no-load classes. Load classes generally serve investors who buy shares through financial professionals; no-load classes usually serve investors who buy shares without the assistance of a financial professional or who choose to compensate their financial professionals separately. Funds sold through financial professionals typically offer more than one share class in order to provide investors with alternative ways to pay for financial services.

12b-1 Fees

Since 1980, when the SEC adopted Rule 12b-1 under the Investment Company Act of 1940, mutual funds and their shareholders have had the flexibility to compensate financial professionals and other financial intermediaries through asset-based fees. These distribution fees, known as 12b-1 fees, enable investors to pay indirectly for some or all of the services they receive from financial professionals (such as brokers) and other financial intermediaries (such as retirement plan recordkeepers and discount brokerage firms). Funds also use 12b-1 fees to a very limited extent to help defray advertising and marketing costs.

Load Share Classes

Load share classes include a sales load, a 12b-1 fee, or both. Sales loads and 12b-1 fees are used to compensate brokers and other financial professionals for their services.

Front-end load shares, which are predominantly Class A shares, were the traditional way investors compensated financial professionals for assistance. These shares generally charge a sales load—a percentage of the sales price or offering price—at the time of purchase. They also generally have a 12b-1 fee, often 0.25 percent (25 basis points). Front-end load shares are sometimes used in employer-sponsored retirement plans, but fund sponsors typically waive the sales load for purchases made through such retirement plans. Additionally, front-end load fees often decline as the size of an investor's initial purchase rises (called *breakpoint discounts*), and many fund providers offer discounted load fees when an investor has total balances exceeding a given amount in that provider's funds.

CONTINUED ON THE NEXT PAGE

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Back-end load shares, often called Class B shares, typically do not have a front-end load. Investors using back-end load shares pay for services provided by financial professionals through a combination of an annual 12b-1 fee and a contingent deferred sales load (CDSL). The CDSL is paid if fund shares are redeemed before a given number of years of ownership. Back-end load shares usually convert after a specified number of years to a share class with a lower 12b-1 fee (for example, Class A shares). The assets in back-end load shares have declined substantially in recent years.

Level load shares, which include Class C shares, generally do not have front-end loads. Investors in this share class compensate financial professionals with an annual 12b-1 fee (typically 1 percent) and a CDSL (also typically 1 percent) that shareholders pay if they sell their shares within a year of purchase.

No-Load Share Classes

No-load share classes have neither a front-end load nor a CDSL, and have a 12b-1 fee of 0.25 percent (25 basis points) or less. Originally, no-load share classes were sold directly by mutual fund sponsors to investors. Now, investors can purchase no-load funds through employer-sponsored retirement plans, discount brokerage firms, and bank trust departments, as well as directly from mutual fund sponsors. Some financial professionals who charge investors separately for their services, rather than through a load or 12b-1 fee, help investors select a portfolio of no-load funds.

Mutual Fund Load Fees

Many mutual fund investors engage an investment professional, such as a broker, an investment adviser, or a financial planner. Among households owning mutual fund shares outside employer-sponsored retirement plans, 78 percent own mutual fund shares through investment professionals (Figure 7.7). These professionals can provide many benefits to investors, such as helping them identify financial goals, analyzing an existing financial portfolio, determining an appropriate asset allocation, and (depending on the type of financial professional) providing investment advice or recommendations to help investors achieve their financial goals. The investment professional also may provide ongoing services, such as responding to investors' inquiries or periodically reviewing and rebalancing their portfolios.

Over the past few decades, the way that fund shareholders compensate financial professionals has changed significantly, moving away from front-end loads toward asset-based fees. An important element in the changing distribution structure of mutual funds has been this shift toward asset-based fees, which are assessed as a percentage of the assets that the financial professional helps an investor manage. Increasingly, these fees compensate brokers and other financial professionals who sell mutual funds. An investor may pay an asset-based fee indirectly through a fund's 12b-1 fee, which is included in the fund's expense ratio, or directly (out of pocket) to the financial professional, in which case it is not included in the fund's expense ratio.

In part because of the shift toward asset-based fees (either through the fund or out of pocket), the total net assets of front-end and back-end load share classes have declined in recent years, while those in no-load share classes have increased substantially. For example, over the past 10 years, front-end and back-end load share classes had more than \$1.2 trillion in net outflows (Figure 6.10), and gross sales of back-end load share classes have dwindled to almost zero (Figure 6.11). As a result, the percentage of long-term mutual fund net assets held in front-end and back-end load share classes fell by half, from 24 percent at year-end 2009 to 12 percent at year-end 2018 (Figure 6.12).

FIGURE 6.10

Institutional No-Load Share Classes Garnered Positive Net New Cash Flow in 2018

Billions of dollars, annual

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All long-term mutual funds	\$393	\$244	\$28	\$200	\$163	\$100	-\$120	-\$193	\$72	-\$350
Load	9	-63	-129	-77	-70	-173	-130	-234	-291	-224
Front-end ¹	2	-56	-100	-67	-57	-160	-101	-183	-218	-156
Back-end ²	-24	-27	-23	-16	-11	-9	-7	-5	-2	-1
Level ³	31	21	-6	6	-2	-4	-22	-46	-71	-66
Other ⁴	(*)	(*)	(*)	-1	(*)	(*)	(*)	(*)	(*)	(*)
Unclassified ⁵	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
No-load⁶	323	266	169	299	271	339	79	122	450	-7
Retail	137	55	-46	16	38	112	8	-36	38	-97
Institutional	185	211	214	284	233	228	71	158	412	90
Variable annuities	29	7	-22	-27	-51	-64	-67	-79	-112	-129
“R” share classes⁷	33	33	10	4	13	-2	-2	-2	26	10

¹ Front-end load > 1 percent. Primarily includes Class A shares; includes sales where front-end loads are waived.

² Front-end load = 0 percent and contingent deferred sales load (CDSL) > 2 percent. Primarily includes Class B shares.

³ Front-end load ≤ 1 percent, CDSL ≤ 2 percent, and 12b-1 fee > 0.25 percent. Primarily includes Class C shares; excludes institutional share classes.

⁴ This category contains all other load share classes not classified as front-end load, back-end load, or level load.

⁵ This category contains load share classes with missing load fee data.

⁶ Front-end load = 0 percent, CDSL = 0 percent, and 12b-1 fee ≤ 0.25 percent.

⁷ “R” shares include assets in any share class that ICI designates as a “retirement share class.” These share classes are sold predominantly to employer-sponsored retirement plans. However, other share classes—including retail and institutional share classes—also contain investments made through 401(k) plans or IRAs.

(*) = inflow or outflow of less than \$500 million

Sources: Investment Company Institute, Lipper, and Morningstar

FIGURE 6.11

Gross Sales of Long-Term Mutual Funds Are Concentrated in No-Load Share Classes

Billions of dollars, annual

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All long-term mutual funds	\$2,374	\$2,701	\$2,860	\$2,963	\$3,511	\$3,611	\$3,500	\$3,560	\$3,925	\$4,116
Load	559	565	543	509	598	544	490	427	365	354
Front-end ¹	435	445	438	403	474	431	387	352	307	303
Back-end ²	10	7	4	3	3	2	2	1	(*)	(*)
Level ³	112	111	98	99	119	109	99	73	56	49
Other ⁴	2	2	2	4	3	1	2	1	1	1
Unclassified ⁵	(*)	1	(*)	(*)	(*)	(*)	(*)	1	1	1
No-load⁶	1,446	1,706	1,897	2,050	2,501	2,692	2,611	2,741	3,173	3,361
Retail	825	934	948	973	1,153	1,226	1,229	1,226	1,331	1,413
Institutional	621	772	949	1,078	1,347	1,466	1,381	1,515	1,842	1,947
Variable annuities	269	318	309	294	286	236	248	245	184	205
“R” share classes⁷	100	112	111	109	126	139	152	148	203	195

¹ Front-end load > 1 percent. Primarily includes Class A shares; includes sales where front-end loads are waived.

² Front-end load = 0 percent and contingent deferred sales load (CDSL) > 2 percent. Primarily includes Class B shares.

³ Front-end load ≤ 1 percent, CDSL ≤ 2 percent, and 12b-1 fee > 0.25 percent. Primarily includes Class C shares; excludes institutional share classes.

⁴ This category contains all other load share classes not classified as front-end load, back-end load, or level load.

⁵ This category contains load share classes with missing load fee data.

⁶ Front-end load = 0 percent, CDSL = 0 percent, and 12b-1 fee ≤ 0.25 percent.

⁷ “R” shares include assets in any share class that ICI designates as a “retirement share class.” These share classes are sold predominantly to employer-sponsored retirement plans. However, other share classes—including retail and institutional share classes—also contain investments made through 401(k) plans or IRAs.

(*) = gross sales of less than \$500 million

Sources: Investment Company Institute, Lipper, and Morningstar

FIGURE 6.12

Total Net Assets of Long-Term Mutual Funds Are Concentrated in No-Load Share Classes

Billions of dollars, year-end

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All long-term mutual funds	\$7,793	\$9,028	\$8,939	\$10,360	\$12,331	\$13,152	\$12,903	\$13,625	\$15,917	\$14,670
Load	2,184	2,350	2,175	2,360	2,650	2,613	2,439	2,369	2,382	2,063
Front-end ¹	1,749	1,881	1,750	1,892	2,148	2,115	1,989	1,946	1,989	1,763
Back-end ²	98	78	50	39	32	24	15	9	6	4
Level ³	327	381	367	417	459	467	429	408	378	280
Other ⁴	8	8	7	11	10	7	6	6	7	6
Unclassified ⁵	1	2	(*)	1	1	(*)	(*)	1	2	10
No-load⁶	4,248	5,090	5,226	6,264	7,601	8,388	8,381	9,105	11,077	10,378
Retail	2,658	3,066	2,990	3,463	4,141	4,639	4,586	4,874	5,644	5,072
Institutional	1,590	2,024	2,235	2,801	3,460	3,749	3,795	4,231	5,433	5,307
Variable annuities	1,129	1,290	1,249	1,396	1,628	1,671	1,596	1,636	1,793	1,587
“R” share classes⁷	233	297	290	340	452	480	487	514	666	642

¹ Front-end load > 1 percent. Primarily includes Class A shares; includes sales where front-end loads are waived.

² Front-end load = 0 percent and contingent deferred sales load (CDSL) > 2 percent. Primarily includes Class B shares.

³ Front-end load ≤ 1 percent, CDSL ≤ 2 percent, and 12b-1 fee > 0.25 percent. Primarily includes Class C shares; excludes institutional share classes.

⁴ This category contains all other load share classes not classified as front-end load, back-end load, or level load.

⁵ This category contains load share classes with missing load fee data.

⁶ Front-end load = 0 percent, CDSL = 0 percent, and 12b-1 fee ≤ 0.25 percent.

⁷ “R” shares include assets in any share class that ICI designates as a “retirement share class.” These share classes are sold predominantly to employer-sponsored retirement plans. However, other share classes—including retail and institutional share classes—also contain investments made through 401(k) plans or IRAs.

(*) = total net assets of less than \$500 million

Sources: Investment Company Institute, Lipper, and Morningstar

By contrast, no-load share classes—those with neither a front-end nor a back-end load fee and a 12b-1 fee of no more than 0.25 percent—generally have seen net inflows and rising net assets over the past 10 years (Figure 6.10). At year-end 2009, no-load share classes accounted for 55 percent of long-term mutual fund net assets, rising to 71 percent at year-end 2018 (Figure 6.12).

Some of the shift toward no-load share classes can be attributed to do-it-yourself investors. A larger factor, however, is the growth of sales through defined contribution plans as well as sales of no-load share classes through sales channels that compensate financial professionals (for example, discount brokers, fee-based advisers, full-service brokerage platforms) with asset-based fees outside of funds.

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The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2017
www.ici.org/research/industry_research/fees

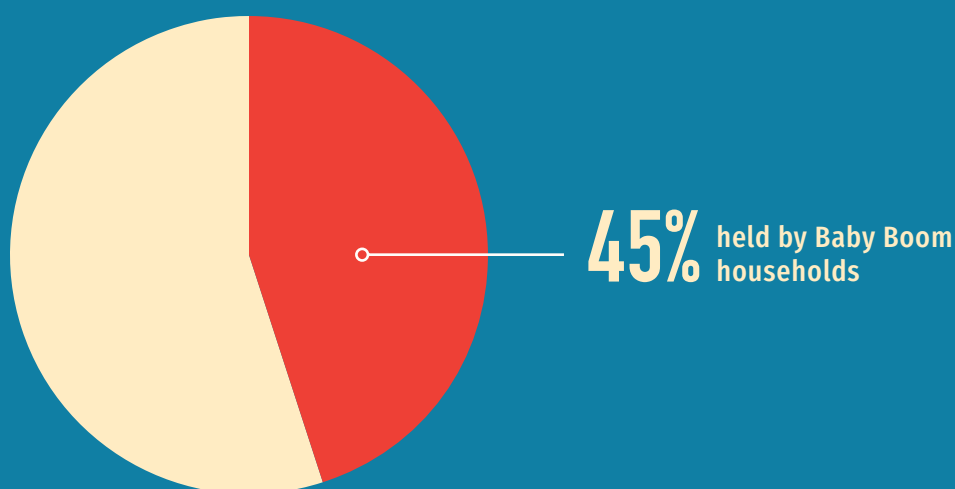
CHAPTER

07

CHARACTERISTICS OF US MUTUAL FUND OWNERS

The percentage of US households owning mutual funds grew substantially in the 1980s and 1990s and has held steady for the past 18 years, averaging about 45 percent since 2000. In 2018, about 44 percent of all US households owned mutual funds. The estimated 99.5 million people who owned mutual funds in 2018 belong to all age and income groups; have a variety of financial goals; and buy and sell mutual funds through three principal sources: investment professionals, employer-sponsored retirement plans, and fund companies directly or discount brokers. Forty-six percent of Baby Boom households owned mutual funds in 2018. They accounted for 34 percent of mutual fund-owning households and held 45 percent of households' mutual fund assets.

Nearly half of household mutual fund assets were held by Baby Boom households in 2018



In this chapter

- 136** Individual and Household Ownership of Mutual Funds
- 142** Where Investors Own Mutual Funds
- 147** Shareholder Sentiment and Confidence
- 149** Willingness to Take Investment Risk
- 151** Shareholder Use of the Internet

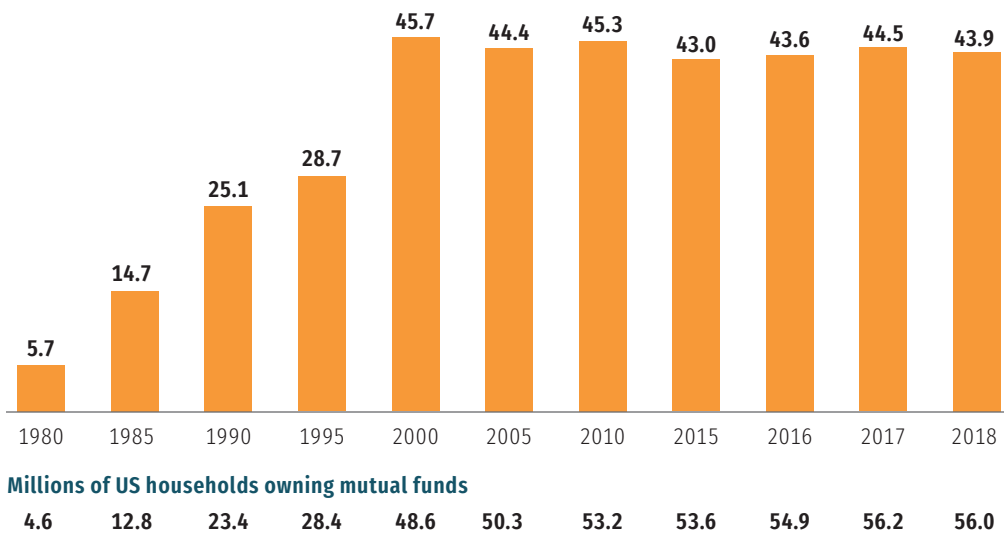
Individual and Household Ownership of Mutual Funds

In 2018, an estimated 99.5 million individual investors owned mutual funds—and at year-end 2018, these investors held 89 percent of total mutual fund assets (Figure 3.3), directly or through retirement accounts. Household ownership of mutual funds has remained relatively steady since 2000. Altogether, 43.9 percent of US households—or 56.0 million—owned mutual funds in 2018, nearly identical to the 2000–2018 average of 45 percent (Figure 7.1). Mutual funds were a major component of many US households’ financial holdings in 2018. Among households owning mutual funds, the median amount invested in mutual funds was \$150,000 (Figure 7.2). Seventy percent of individuals heading households that owned mutual funds were married or living with a partner, more than half were college graduates, and more than three-quarters worked full- or part-time.

FIGURE 7.1

43.9 Percent of US Households Owned Mutual Funds in 2018

Percentage of US households owning mutual funds



Note: The survey methodology was changed to a dual-frame sample of cell phones and landlines in 2014.

Source: ICI Research Perspective, “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018”

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FIGURE 7.2

Characteristics of Mutual Fund Investors

2018

How many people own mutual funds?

99.5 million individuals

56.0 million US households

Who are they?

51 is the median age of the head of household

70 percent are married or living with a partner

53 percent are college graduates

76 percent are employed (full- or part-time)

11 percent are Silent or GI Generation (born 1904 to 1945)

34 percent are Baby Boom Generation (born 1946 to 1964)

32 percent are Generation X (born 1965 to 1980)

23 percent are Millennial Generation (born 1981 to 2004)*

\$100,000 is the median household income

What do they own?

\$250,000 is the median household financial assets

\$150,000 is the median mutual fund assets

67 percent hold more than half of their financial assets in mutual funds

61 percent own individual retirement accounts (IRAs)

84 percent own defined contribution (DC) retirement plan accounts

4 mutual funds is the median number owned

88 percent own equity funds

When and how did they make their first mutual fund purchase?

55 percent bought their first mutual fund before 2000

63 percent purchased their first mutual fund through an employer-sponsored retirement plan

Why do they invest?

93 percent are saving for retirement

46 percent are saving for emergencies

45 percent hold mutual funds to reduce taxable income

24 percent are saving for education

*The Millennial Generation is aged 14 to 37 in 2018; survey respondents, however, must be 18 or older.

Sources: *ICI Research Perspective*, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018"; *ICI Research Perspective*, "Characteristics of Mutual Fund Investors, 2018"; and *ICI Research Report*, "Profile of Mutual Fund Shareholders, 2018"

Mutual Fund Ownership by Age and Income

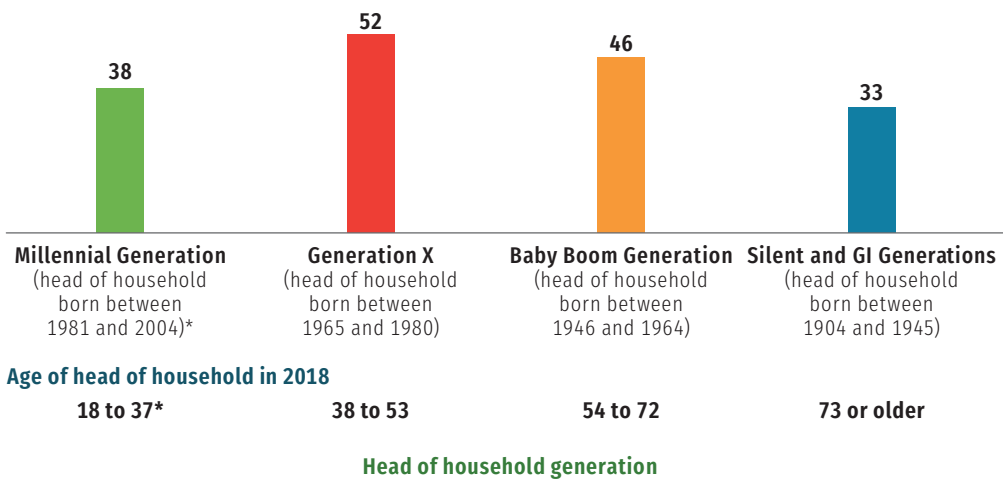
Mutual fund-owning households span all generations, but members of the Baby Boom Generation and Generation X had the highest mutual fund ownership rates in 2018. Forty-six percent of households headed by a Baby Boomer (head of household born between 1946 and 1964) and 52 percent of households headed by a member of Generation X (born between 1965 and 1980) owned mutual funds in 2018 (Figure 7.3). Thirty-eight percent of Millennial Generation households (born between 1981 and 2004) and 33 percent of Silent and GI Generation households (born between 1904 and 1945) owned mutual funds in 2018.

Among mutual fund-owning households in 2018, 34 percent were headed by members of the Baby Boom Generation, 32 percent were headed by members of Generation X, 23 percent were headed by members of the Millennial Generation, and 11 percent were headed by members of the Silent and GI Generations (Figure 7.4). Heads of mutual fund-owning households had a median age of 51 years (Figure 7.2).

FIGURE 7.3

Incidence of Mutual Fund Ownership Is Greatest Among the Baby Boom Generation and Generation X

Percentage of US households within each generation, 2018



*The Millennial Generation is aged 14 to 37 in 2018; survey respondents, however, must be 18 or older.
 Note: Generation is based on the age of the household sole or co-decisionmaker for saving and investing.
 Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

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Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018
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Not only were Baby Boomers the largest shareholder group in 2018, they also held the largest percentage of households' mutual fund assets, at 45 percent (Figure 7.4). Households headed by members of Generation X (34 percent), the Silent and GI Generations (11 percent), and the Millennial Generation (10 percent) held the rest. This pattern of asset ownership reflects the fact that Millennial households are younger and have not had as much time to save as Baby Boom households, which are in their peak earning and saving years.

FIGURE 7.4

The Baby Boom Generation Is the Largest Shareholder Group and Holds Nearly Half of Households' Mutual Fund Assets

Percentage of US households owning mutual funds and household mutual fund assets by generation, 2018

- Millennial Generation (head of household born between 1981 and 2004)*
- Generation X (head of household born between 1965 and 1980)
- Baby Boom Generation (head of household born between 1946 and 1964)
- Silent and GI Generations (head of household born between 1904 and 1945)



*The Millennial Generation is aged 14 to 37 in 2018; survey respondents, however, must be 18 or older.

Note: Generation is based on the age of the household sole or co-decisionmaker for saving and investing.

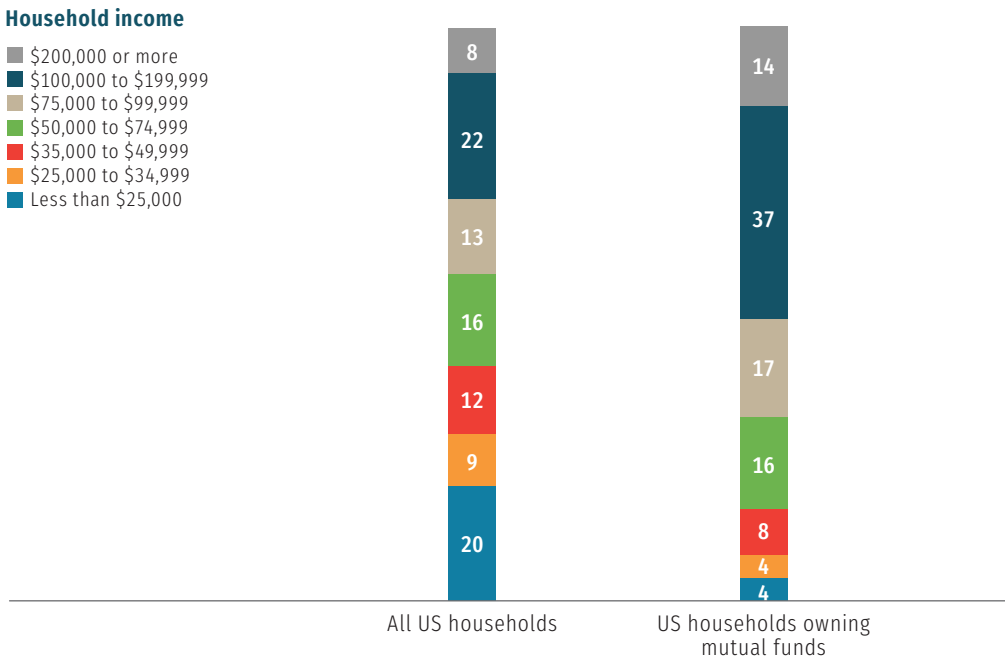
Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

US households owning mutual funds had a range of annual household incomes: 16 percent had annual household income of less than \$50,000; 16 percent had between \$50,000 and \$74,999; 17 percent had between \$75,000 and \$99,999; and the remaining 51 percent had \$100,000 or more (Figure 7.5). The median household income of mutual fund-owning households in 2018 was \$100,000 (Figure 7.2).

FIGURE 7.5

About Half of Households Owning Mutual Funds Have Moderate or Lower Incomes

Percent distribution of all US households and US households owning mutual funds by household income, 2018



Note: Total reported is household income before taxes in 2017.

Source: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018"

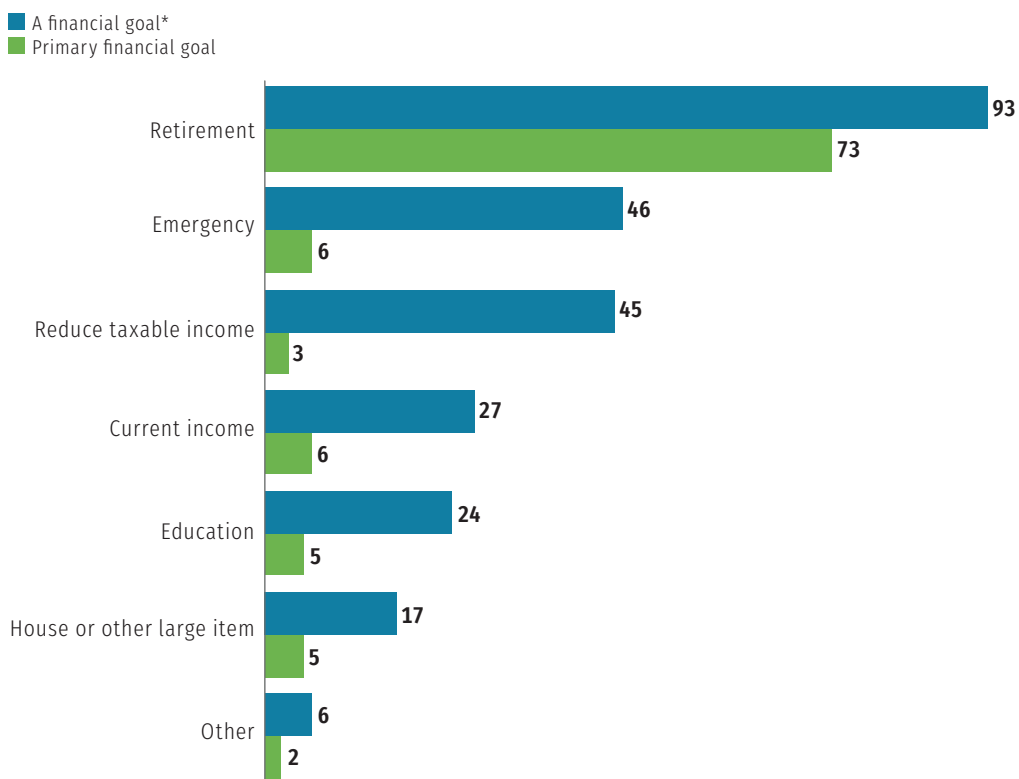
Savings Goals of Mutual Fund Investors

Mutual funds play a key role in the long- and short-term savings goals of US households. In 2018, 93 percent of mutual fund-owning households indicated that saving for retirement was one of their financial goals, and 73 percent said it was their primary financial goal (Figure 7.6). Mutual fund-owning households often purchase their first mutual fund through employer-sponsored retirement plans. In 2018, across all mutual fund-owning households, 63 percent had purchased their first fund through that channel (Figure 7.2). Retirement, however, is not the only financial goal for mutual fund-owning households—46 percent reported saving for emergencies as a goal; 45 percent reported reducing taxable income as a goal; and 24 percent reported saving for education as a goal.

FIGURE 7.6

Majority of Mutual Fund Investors Focus on Retirement

Percentage of US households owning mutual funds, 2018



*Multiple responses are included.

Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

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Focus on Funds: Latest Data Show US Retirement Savers Holding Steady
www.ici.org/pressroom/video/focus/fof_07_20_18_holden_retirement

Where Investors Own Mutual Funds

The importance that mutual fund-owning households place on retirement saving is reflected in where they own their funds—in 2018, 94 percent of these households held mutual fund shares inside employer-sponsored retirement plans, individual retirement accounts (IRAs), and variable annuities. It is also reflected in the type of funds they choose—households are more likely to invest their retirement assets in long-term mutual funds than in money market funds. Indeed, defined contribution (DC) retirement plan and IRA assets held in equity, bond, and hybrid mutual funds totaled \$7.8 trillion at year-end 2018, or 53 percent of those funds' total net assets industrywide (Figure 8.22). By contrast, DC retirement plan and IRA assets in money market funds totaled just \$399 billion, or 13 percent of those funds' total net assets industrywide.

In 2018, 80 percent of mutual fund-owning households held funds inside employer-sponsored retirement plans, with 37 percent owning funds only inside such plans (Figure 7.7). Sixty-three percent of mutual fund-owning households held funds outside employer-sponsored retirement accounts, with 20 percent owning funds only outside such plans. For mutual fund-owning households without mutual funds in employer-sponsored retirement plans, 50 percent held funds in traditional or Roth IRAs. In many cases, these IRAs held assets rolled over from 401(k) plans or other employer-sponsored retirement plans (either defined benefit or DC plans).

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Households owning mutual funds outside employer-sponsored retirement plans buy their fund shares through a variety of sources. In 2018, 78 percent of these households owned funds purchased with the help of an investment professional, including registered investment advisers, full-service brokers, independent financial planners, bank and savings institution representatives, insurance agents, and accountants (Figure 7.7). Forty percent of these households owned funds purchased solely with the help of an investment professional, and another 38 percent owned funds purchased from investment professionals and from fund companies directly or discount brokers. Fourteen percent solely owned funds purchased from fund companies directly or discount brokers. Fourteen percent solely owned funds purchased from fund companies directly or discount brokers.

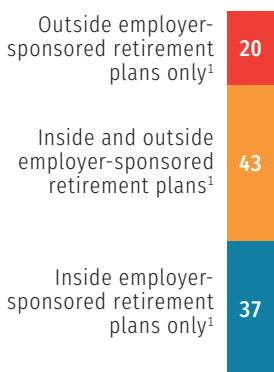
FIGURE 7.7

Mutual Fund Investments Outside Retirement Plans Are Often Guided by Investment Professionals

2018

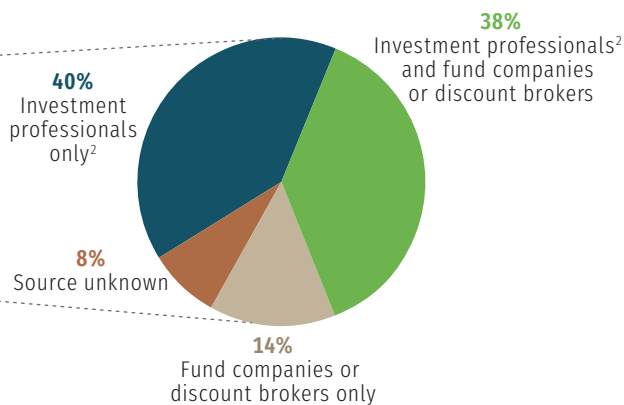
Sources of mutual fund ownership

Percentage of US households owning mutual funds



Sources for households owning mutual funds outside employer-sponsored retirement plans

Percentage of US households owning mutual funds outside employer-sponsored retirement plans¹



¹ Employer-sponsored retirement plans include DC plans (such as 401(k), 403(b), or 457 plans) and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

² Investment professionals include registered investment advisers, full-service brokers, independent financial planners, bank and savings institution representatives, insurance agents, and accountants.

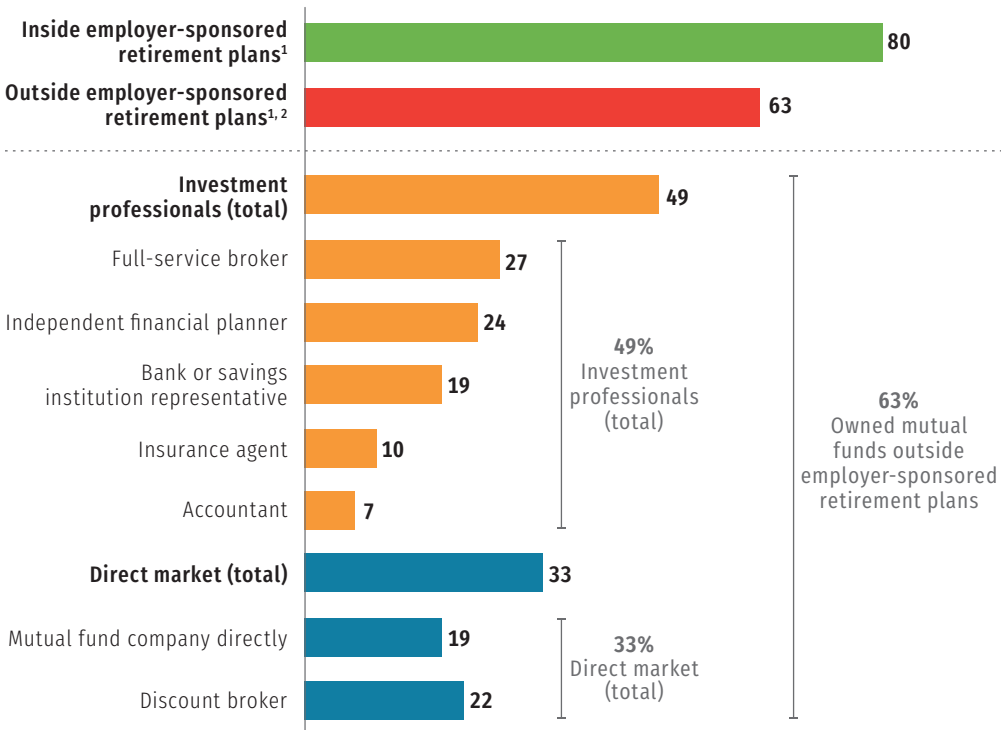
Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

In 2018, 80 percent of mutual fund-owning households held mutual funds through employer-sponsored retirement plans, and 63 percent owned mutual funds outside such plans (Figures 7.7 and 7.8). This latter group purchased funds through two sources: investment professionals and the direct market channel. In 2018, almost half of households owning mutual funds held funds purchased through an investment professional and one-third owned funds purchased through the direct market channel.

FIGURE 7.8

Mutual Fund Investors Purchase Mutual Funds Through a Variety of Channels

Percentage of US households owning mutual funds, 2018



¹ Employer-sponsored retirement plans include DC plans (such as 401(k), 403(b), or 457 plans) and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

² Six percent of households owning mutual funds outside of employer-sponsored retirement plans did not indicate which source was used to purchase funds. This 6 percent includes 4 percent owning funds both inside and outside employer-sponsored retirement plans and 2 percent owning funds only outside of employer-sponsored retirement plans.

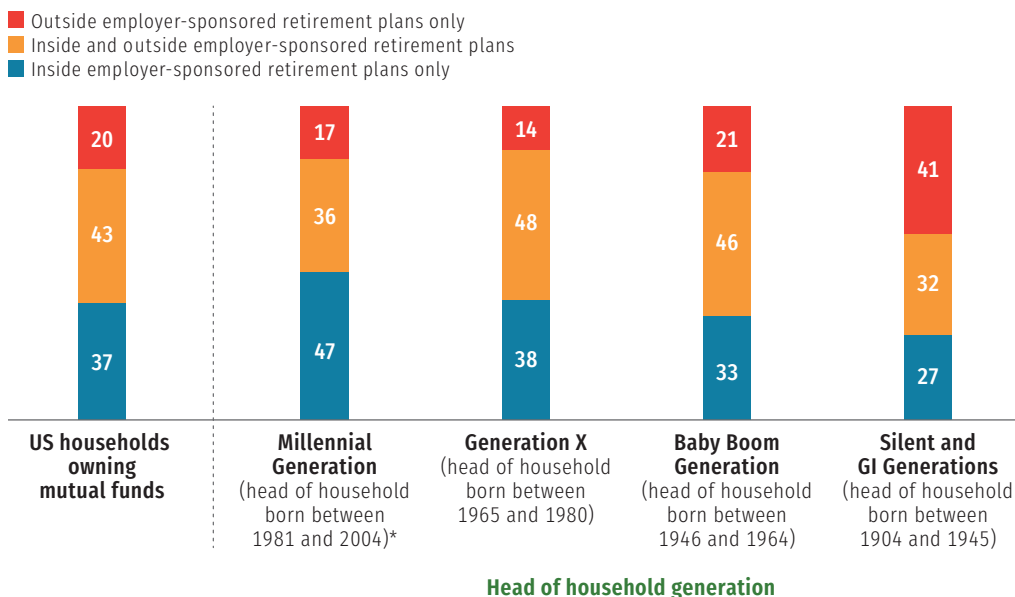
Note: Multiple responses are included.

Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

Younger generations are more likely to own mutual funds only inside employer-sponsored retirement plans, while older generations are more likely to own funds outside such plans. In 2018, 47 percent of mutual fund-owning households in the Millennial Generation owned funds only inside employer-sponsored retirement plans, compared with 33 percent of mutual fund-owning households in the Baby Boom Generation (Figure 7.9). Fifty-three percent of mutual fund-owning households in the Millennial Generation owned funds outside of employer-sponsored retirement plans, compared with 67 percent of mutual fund-owning households headed by a Baby Boomer. Baby Boom and Generation X households that own mutual funds are more likely to own funds both inside and outside employer-sponsored retirement plans than younger or older generations. In 2018, 48 percent of Generation X households and 46 percent of Baby Boom households that owned mutual funds owned mutual funds both inside and outside employer-sponsored retirement plans, compared with 36 percent of Millennial Generation households and 32 percent of Silent and GI Generation households. Although Silent and GI Generation households are the least likely to own mutual funds, those that do are the most likely to hold mutual funds only outside employer-sponsored retirement plans.

FIGURE 7.9

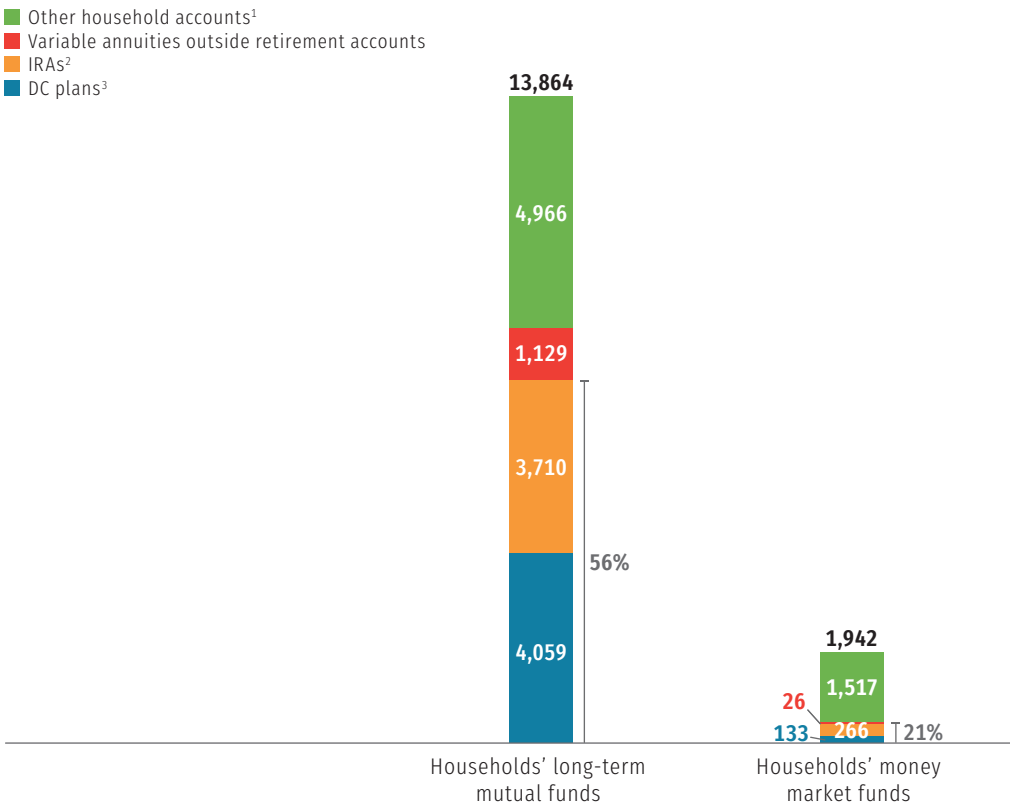
Mutual Fund Ownership Inside and Outside of Employer-Sponsored Retirement Plans
Percentage of US households owning mutual funds by generation, 2018



*The Millennial Generation is aged 14 to 37 in 2018; survey respondents, however, must be 18 or older.
Note: Generation is based on the age of the household sole or co-decisionmaker for saving and investing. Employer-sponsored retirement plans include DC plans (such as 401(k), 403(b), or 457 plans) and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).
Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

At year-end 2018, mutual funds held in DC plans and IRAs accounted for \$8.2 trillion (30 percent) of the \$27.1 trillion US retirement market (Figures 8.5 and 8.23) and 46 percent of total mutual fund assets. DC plans and IRAs held 53 percent of total net assets in long-term mutual funds but a much smaller share of total net assets in money market funds (13 percent) (Figure 8.22). Similarly, mutual funds held in DC plans and IRAs accounted for 56 percent of household long-term mutual fund assets but only 21 percent of household money market fund assets (Figure 7.10).

FIGURE 7.10
Households' Mutual Fund Assets by Type of Account
 Billions of dollars, year-end 2018



¹ Mutual funds held as investments in 529 plans and Coverdell ESAs are counted in this category.
² This category includes traditional, Roth, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).
³ DC plans include 401(k) plans, 403(b) plans, 457 plans, and other DC plans without 401(k) features.

Shareholder Sentiment and Confidence

Each year, ICI surveys US households about a variety of topics, including shareholder sentiment. In 2018, 67 percent of mutual fund–owning households familiar with mutual fund companies had “very” or “somewhat” favorable impressions of fund companies, similar to 2017 (Figure 7.11). The share of mutual fund–owning households with “very” favorable impressions of fund companies was 15 percent.

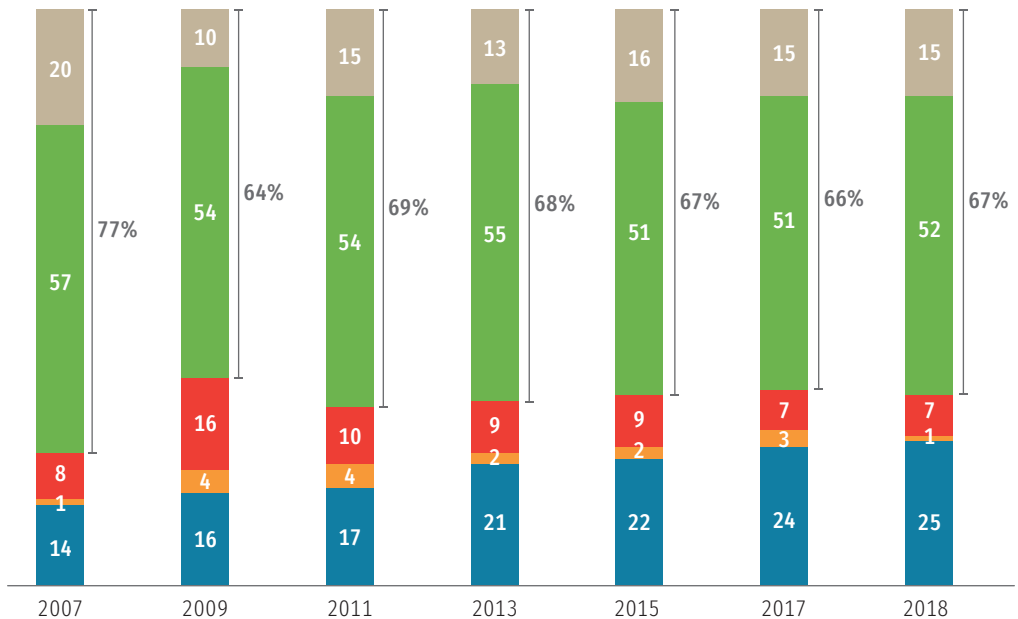
FIGURE 7.11

Most Shareholders View the Mutual Fund Industry Favorably

Percentage of mutual fund–owning households familiar with mutual fund companies

Impression of mutual fund industry

- Very favorable
- Somewhat favorable
- Somewhat unfavorable
- Very unfavorable
- No opinion



Note: The survey methodology was changed to a dual-frame sample of cell phones and landlines in 2014.

Source: ICI Research Perspective, “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018”

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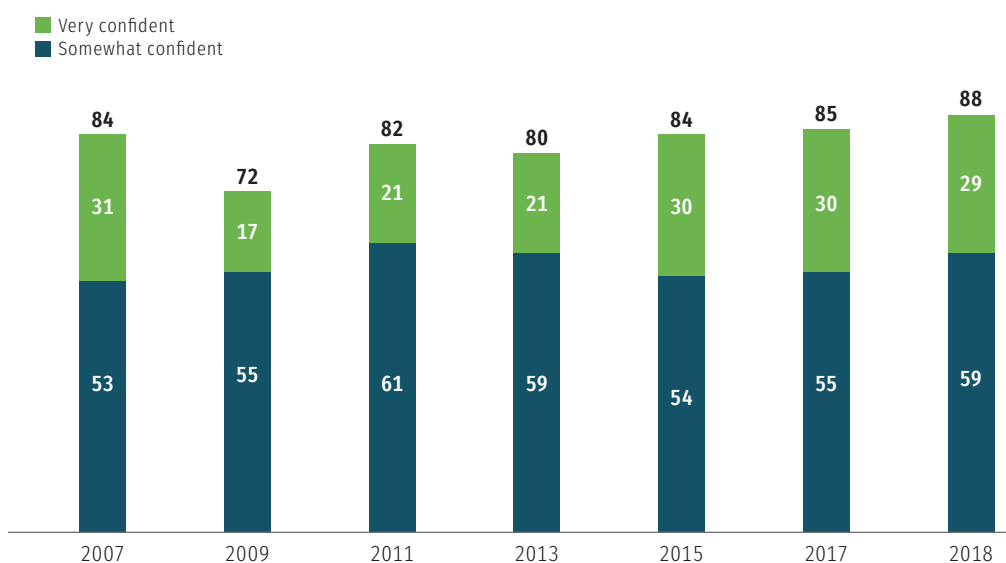
Characteristics of Mutual Fund Investors, 2018

www.ici.org/ownership

Mutual fund-owning households' confidence that mutual funds are helping them reach their financial goals rebounded in the wake of the financial crisis. In 2009, 72 percent of mutual fund-owning households said they were confident in mutual funds' ability to help them achieve their financial goals, down from 84 percent in 2007 (Figure 7.12). From 2011 through 2013, about eight in 10 mutual fund-owning households said they were confident in mutual funds' ability to help them achieve their financial goals, with more than 20 percent saying they were "very" confident. From 2015 to 2017, around 85 percent of mutual fund-owning households said they were confident in mutual funds' ability to help them achieve their financial goals. Confidence increased to 88 percent of mutual fund-owning households in 2018, with 29 percent indicating they were "very" confident in mutual funds' ability to help them achieve their financial goals.

FIGURE 7.12

Nearly Nine in 10 Mutual Fund-Owning Households Have Confidence in Mutual Funds
 Percentage of US households owning mutual funds by level of confidence that mutual funds can help them meet their investment goals



Note: The survey methodology was changed to a dual-frame sample of cell phones and landlines in 2014. The question has four choices; the other two possible responses are "not very confident" and "not at all confident."

Source: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018"

Willingness to Take Investment Risk

The ICI survey asked households about their willingness to take investment risk. Households owning mutual funds are far more willing to take investment risk than other households. In 2018, 35 percent of households owning mutual funds were willing to take above-average or substantial investment risk, more than two and a half times the 13 percent of households not owning mutual funds (Figure 7.13).

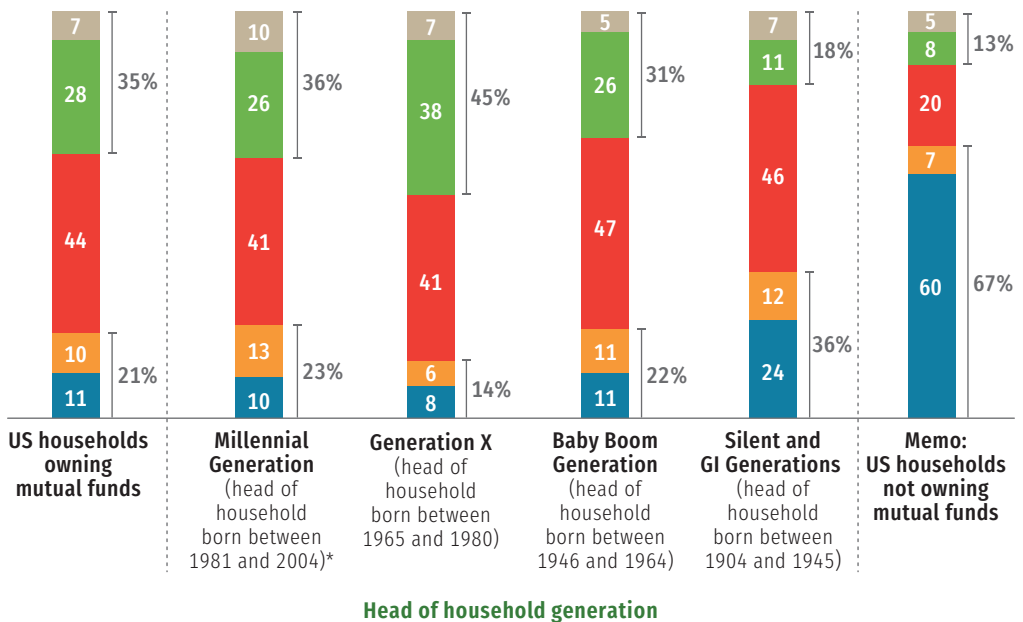
FIGURE 7.13

Households' Willingness to Take Investment Risk

Percentage of US households owning mutual funds by generation, 2018

Level of risk willing to take with financial investments

- Substantial risk for substantial gain
- Above-average risk for above-average gain
- Average risk for average gain
- Below-average risk for below-average gain
- Unwilling to take any risk



*The Millennial Generation is aged 14 to 37 in 2018; survey respondents, however, must be 18 or older.

Note: Generation is based on the age of the household sole or co-decisionmaker for saving and investing.

Sources: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018" and ICI Research Report, "Profile of Mutual Fund Shareholders, 2018"

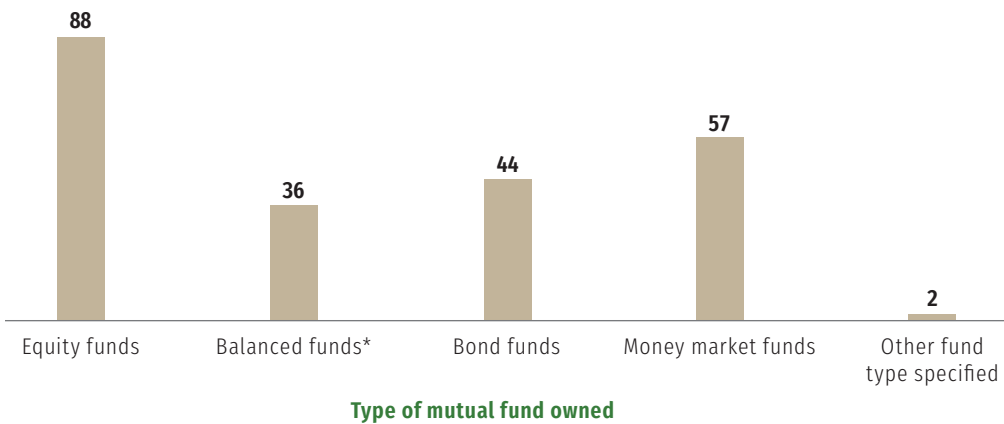
Risk tolerance varies with the age of the head of household, and younger households tend to be more willing to take investment risk than older households. In 2018, 36 percent of mutual fund-owning households in the Millennial Generation and 45 percent of mutual fund-owning households in Generation X were willing to take above-average or substantial investment risk (Figure 7.13). This willingness to take risk drops to 31 percent for mutual fund-owning households in the Baby Boom Generation and 18 percent for mutual fund-owning households in the Silent and GI Generations.

Mutual fund-owning households' willingness to take investment risk is reflected in the types of mutual funds they own. Equity funds were the most commonly owned type of mutual fund in 2018, held by 88 percent of mutual fund-owning households (Figure 7.14). In addition, 36 percent owned balanced funds, 44 percent owned bond funds, and 57 percent owned money market funds.

FIGURE 7.14

Equity Funds Are the Most Commonly Owned Type of Mutual Fund

Percentage of US households owning mutual funds, 2018



*The Investment Company Institute classifies this fund category as *hybrid* in its data.

Note: Multiple responses are included.

Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2018"

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Profile of Mutual Fund Shareholders, 2018
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Shareholder Use of the Internet

An overwhelming majority of mutual fund-owning households have internet access. In 2018, 93 percent of US households owning mutual funds had internet access (Figure 7.15), up from 68 percent in 2000. Internet access traditionally has been greatest among younger people—in both mutual fund-owning households and the general population. Increasing access among older households, however, has narrowed the gap considerably.

FIGURE 7.15

Internet Access Is Nearly Universal Among Mutual Fund-Owning Households

Percentage of US households with internet access, 2018

	All US households	Mutual fund-owning households	Households with DC plan accounts ¹
Age of head of household²			
Younger than 35	88	95	93
35 to 49	88	98	97
50 to 64	82	94	93
65 or older	64	85	81
Education level			
High school diploma or less	65	86	83
Some college or associate's degree	86	93	93
College or postgraduate degree	91	96	96
Household income³			
Less than \$50,000	64	83	79
\$50,000 to \$99,999	89	93	93
\$100,000 to \$149,999	95	97	97
\$150,000 or more	93	97	97
Total	80	93	92

¹ DC plans include 401(k), 403(b), 457, and other DC plans.

² Age is based on the sole or co-decisionmaker for household saving and investing.

³ Total reported is household income before taxes in 2017.

Note: Internet access includes access to the internet at home, work, or some other location.

Source: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2018"

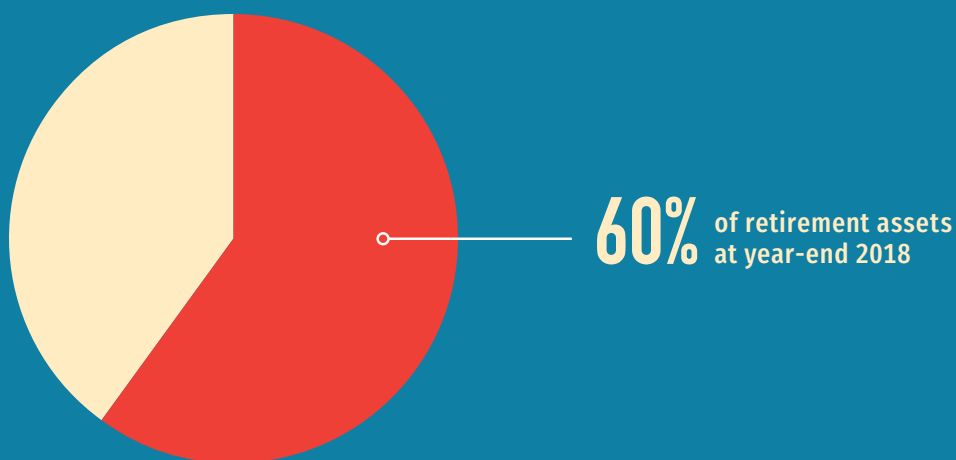
CHAPTER

08

US RETIREMENT AND EDUCATION SAVINGS

National policies that have created or enhanced tax-advantaged savings accounts have proven integral to helping Americans prepare for retirement and other long-term savings goals. Because many Americans use mutual funds in tax-advantaged accounts to reach these goals, ICI studies the US retirement market; the investors who use 401(k) plans, IRAs, 529 plans, and other tax-advantaged savings vehicles; and the role of mutual funds in the retirement and education savings markets.

DC plans and IRAs accounted for 60 percent of retirement assets at year-end 2018



In this chapter

- 154** The US Retirement System
- 161** US Retiree Income
- 163** Defined Contribution Retirement Plans
- 172** Individual Retirement Accounts
- 179** The Role of Mutual Funds in Retirement Savings
- 182** The Role of Mutual Funds in Education Savings

The US Retirement System

American households rely on a combination of resources in retirement, and the role each type of resource plays has changed over time and varies across households. The traditional analogy compares retirement resources to a three-legged stool, with resources divided equally among the legs—Social Security, employer-sponsored pension plans, and private savings. Americans' retirement resources, however, are best thought of as a five-layer pyramid.

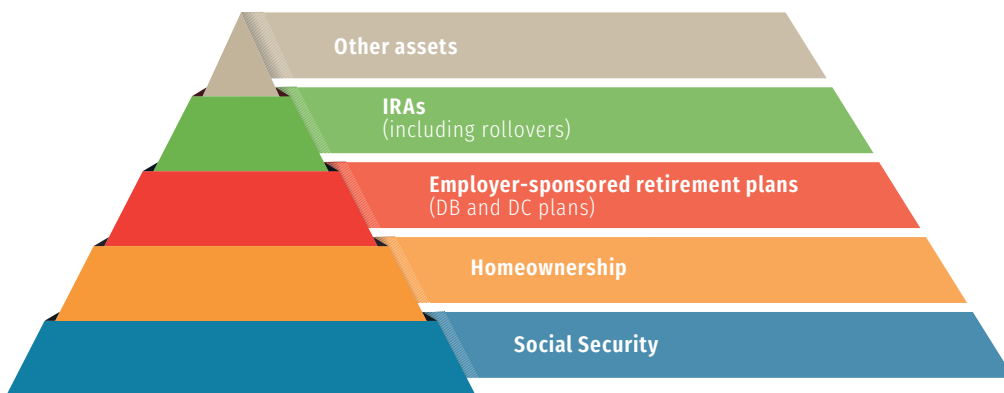
Retirement Resource Pyramid

The retirement resource pyramid has five layers, which draw from government programs, compensation deferred until retirement, and other savings (Figure 8.1):

- » Social Security
- » homeownership
- » employer-sponsored retirement plans (private-sector and government employer plans, including both defined benefit [DB] and defined contribution [DC] plans)
- » individual retirement accounts (IRAs), including rollovers
- » other assets

Though the use of each layer differs by household, together they have broadly enabled recent generations of retirees to maintain their standard of living in retirement.

FIGURE 8.1
Retirement Resource Pyramid



Source: Investment Company Institute, *The Success of the US Retirement System*

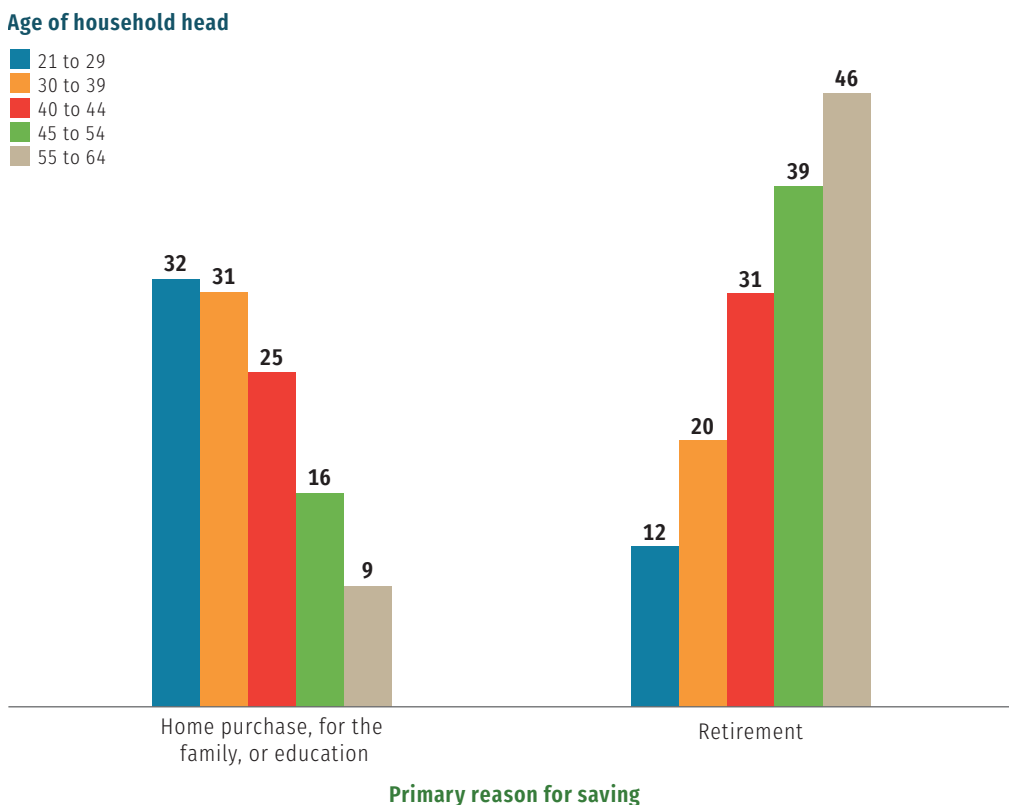
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The construction of each household’s retirement pyramid varies with income. For example, lower-income households tend to rely more on Social Security, reflecting the fact that Social Security benefits replace a higher share of pre-retirement earnings for workers with lower lifetime earnings.

The amount and composition of retirement resources also change with age. Younger households are more likely to save primarily for reasons other than retirement, such as a home purchase, family needs, or education (Figure 8.2). By contrast, older households are more likely to save primarily for retirement, as many already have reached their other savings goals. The tendency of younger workers to focus less on saving for retirement is consistent with economic models of life-cycle consumption predicting that most workers delay saving for retirement until later in their careers.

FIGURE 8.2
Primary Reason for Household Saving Changes with Age
 Percentage of households by age of household head, 2016



Source: Investment Company Institute tabulations of the 2016 Federal Reserve Board Survey of Consumer Finances

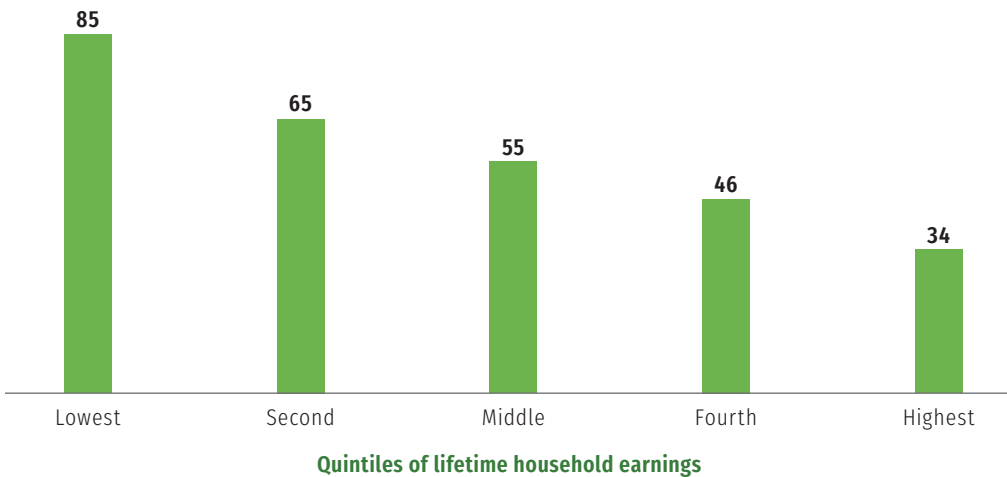
Social Security, the base of the US retirement resource pyramid, is a substantial component of retiree income and the primary source of income for lower-income retirees. Social Security benefits are funded through a payroll tax equal to 12.4 percent of earnings of covered workers (6.2 percent paid by employees and 6.2 percent paid by employers) up to a maximum taxable earnings amount (\$128,400 in 2018). The benefit formula is highly progressive, with benefits representing a much higher percentage of earnings for workers with lower lifetime earnings.

By design, Social Security is the primary means of support for retirees with low lifetime earnings and a substantial source of income for all retired workers. The Congressional Budget Office estimates that, for those in the lowest quintile (20 percent) of households ranked by lifetime household earnings, first-year Social Security benefits will replace 85 percent of inflation-indexed lifetime earnings, on average, for workers born in the 1960s who claim benefits at age 65 (Figure 8.3). That replacement rate drops to 65 percent for workers in the second quintile of households, and then declines more slowly as lifetime household earnings increase. Even for workers in the top 20 percent of households, Social Security benefits are projected to replace a considerable portion (34 percent) of earnings.

FIGURE 8.3

Social Security Benefit Formula Is Highly Progressive

Average scheduled Social Security replacement rates for workers in the 1960s birth cohort by quintile of lifetime household earnings, percent



Note: The replacement rate is the ratio of Social Security benefits net of income tax to average inflation-indexed lifetime earnings. Replacement rates are for workers claiming benefits at age 65. For workers born in the 1960s, the Social Security full benefit retirement age is 67. If these workers claimed benefits at age 67, benefits would increase by about 15 percent.

Source: Congressional Budget Office, *CBO's 2018 Long-Term Projections for Social Security: Additional Information*

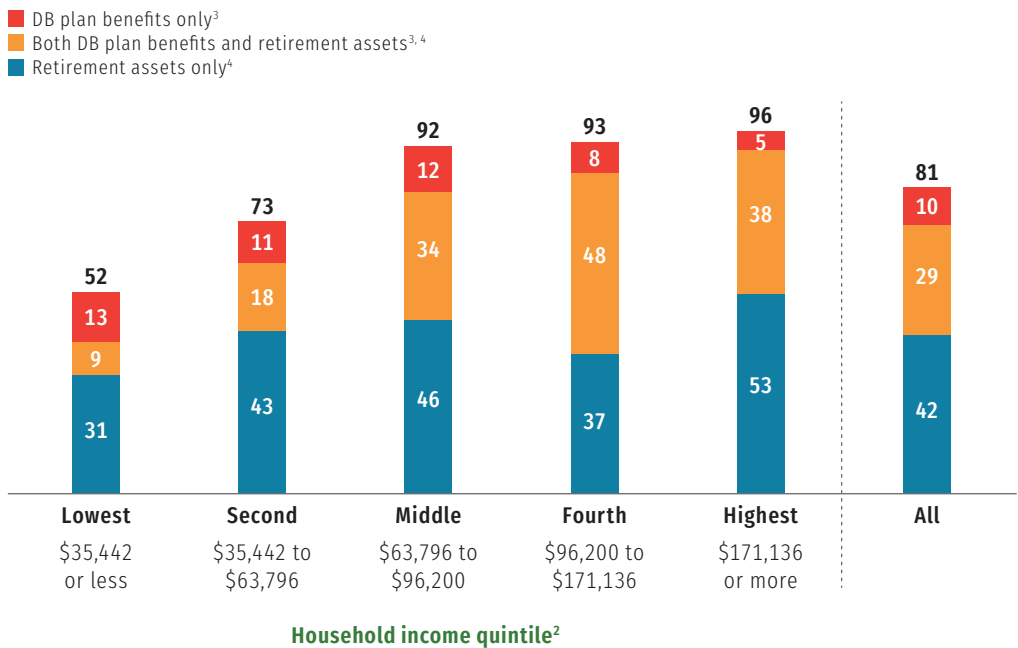
For many near-retiree households, homeownership is the second most important retirement resource after Social Security. Older households are more likely to own their homes and more likely to have fully—or at least, largely—paid down any mortgage. Retired households typically benefit from this resource simply by living in their homes rent-free.

Employer-sponsored retirement plans and IRAs, which complement Social Security benefits and are important resources for households regardless of income or wealth, increase in importance for households for which Social Security replaces a smaller share of earnings. In 2016, eight out of 10 near-retiree households had accrued benefits in employer-sponsored retirement plans—DB and DC plans sponsored by private-sector and government employers—or IRAs (Figure 8.4).

FIGURE 8.4

Near-Retiree Households Across All Income Groups Have Retirement Assets, DB Plan Benefits, or Both

Percentage of near-retiree households¹ by income quintile,² 2016



¹ Near-retiree households are those with a head of household aged 55 to 64, and a working head of household or working spouse.

² Income is household income before taxes in 2015.

³ Households currently receiving DB plan benefits and households with the promise of future DB plan benefits, whether from private-sector or government employers, are counted in this category.

⁴ Retirement assets include DC plan assets (401(k), 403(b), 457, thrift, and other DC plans), whether from private-sector or government employers, and IRAs (traditional, Roth, SEP, SAR-SEP, and SIMPLE).

Source: Investment Company Institute tabulations of the 2016 Federal Reserve Board Survey of Consumer Finances

Finally, although less important on average, retirees also rely on other assets in retirement. These assets can be financial—including bank deposits, stocks, bonds, and mutual funds owned outside employer-sponsored retirement plans and IRAs. They also can be nonfinancial—including business equity, investment real estate, second homes, vehicles, and consumer durables (long-lived goods such as household appliances and furniture). Higher-income households are more likely to have large holdings of assets in this category.

Snapshot of US Retirement Market Assets

Employer-sponsored retirement plans (DB and DC plans sponsored by private-sector and government employers), IRAs (including rollovers), and annuities play an important role in the US retirement system, with assets totaling \$27.1 trillion at year-end 2018 (Figure 8.5)—down 4.7 percent from year-end 2017, but in line with the 5.3 percent decline in US stocks* during the year. The largest components of retirement assets were IRAs and employer-sponsored DC plans, which together represented 60 percent of all retirement market assets at year-end 2018. Other employer-sponsored plans include private-sector DB pension plans (\$2.9 trillion), state and local government DB retirement plans (\$3.9 trillion), and federal government DB plans (\$1.8 trillion) (Figure 8.6). In addition, annuity reserves outside of retirement plans were \$2.1 trillion at year-end 2018.

Retirement assets include individual account-based savings (DC plans and IRAs) and assets held in DB plans. Traditional DB plans promise to pay benefits in retirement typically based on salary and years of service. Some DB plans, however, do not have sufficient assets to cover promised benefits that households have a legal right to expect. The total unfunded liabilities of DB plans were \$6.9 trillion at year-end 2018 (Figure 8.6), and underfunding is more pronounced in government-sector pension plans. As of year-end 2018, state and local government DB plans had \$3.9 trillion in assets and \$4.7 trillion in unfunded liabilities, and federal DB plans had \$1.8 trillion in assets and \$1.7 trillion in unfunded liabilities. By comparison, private-sector DB plans had \$2.9 trillion in assets and \$0.6 trillion in unfunded liabilities.

*As measured by the Wilshire 5000 Total Market Index.

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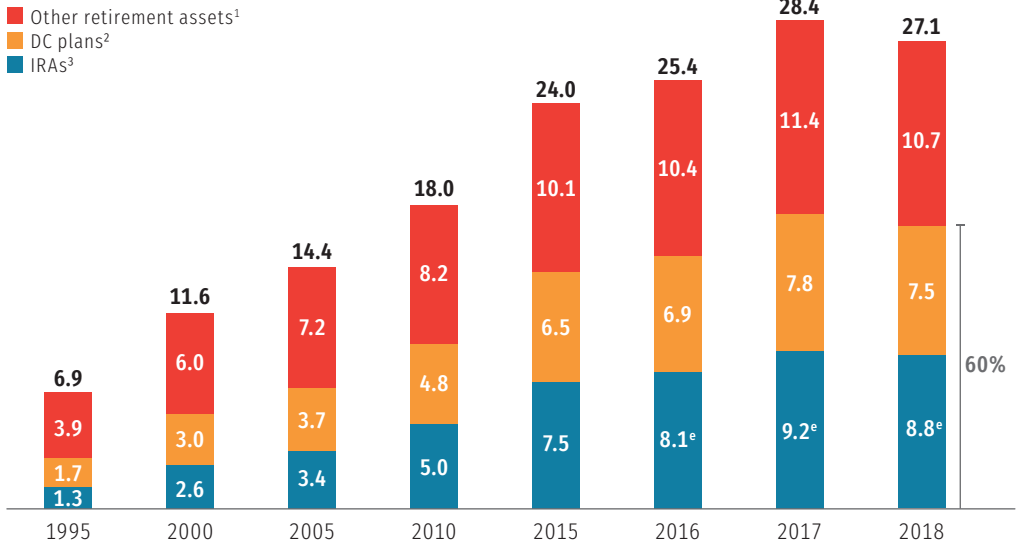
Focus on Funds: At 40, the 401(k) Is a Savings Success

www.ici.org/retirement/system/ret_resources/fof_11_16_18_holden_401k

FIGURE 8.5

Total US Retirement Market Assets

Trillions of dollars, year-end



¹ *Other retirement assets* includes private-sector DB plans; federal, state, and local government DB plans; and all fixed and variable annuities held outside retirement plans and IRAs. Federal pension plans include US Treasury security holdings of the civil service retirement and disability fund, the military retirement fund, the judicial retirement funds, the Railroad Retirement Board, and the foreign service retirement and disability fund. These plans also include securities held in the National Railroad Retirement Investment Trust. The reported assets of federal pension plans for year-end 2017 are adjusted for US Treasury financing activities undertaken after the legal limit on federal government borrowing was reached. These actions temporarily reduced the amount of Treasury securities reported on the balance sheet of the Civil Service Retirement and Disability Fund.

² DC plans include private employer-sponsored DC plans (including 401(k) plans), 403(b) plans, 457 plans, and the Federal Employees Retirement System (FERS) Thrift Savings Plan (TSP).

³ This category includes traditional, Roth, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

^e Data are estimated.

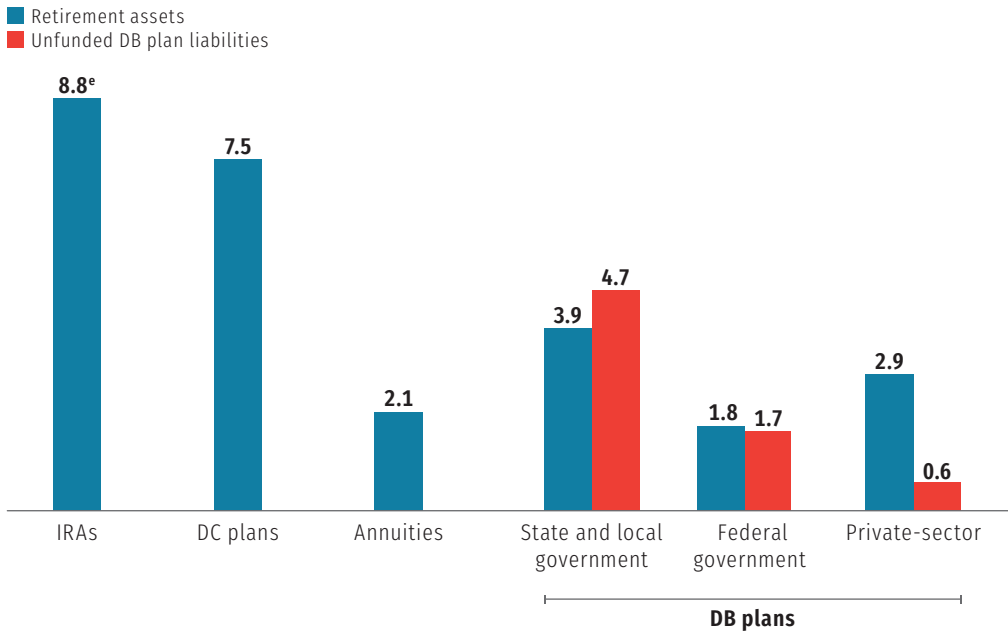
Sources: Investment Company Institute, Federal Reserve Board, Department of Labor, National Association of Government Defined Contribution Administrators, American Council of Life Insurers, and Internal Revenue Service Statistics of Income Division. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2018.”

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The US Retirement Market
www.ici.org/research/stats/retirement

FIGURE 8.6**Total US Retirement Assets and Unfunded Defined Benefit Plan Liabilities**

Trillions of dollars, year-end 2018

^e Data are estimated.

Sources: Investment Company Institute and Federal Reserve Board. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2018.”

Ownership of Retirement Resources

Many US households have accumulated resources earmarked for retirement (Figure 8.7). Across all age groups, 62 percent of US households (79 million) reported that they had employer-sponsored retirement plans, IRAs, or both in 2018. Fifty-six percent of US households reported that they had employer-sponsored retirement plans—that is, they had assets in DC plan accounts, were receiving or expecting to receive benefits from DB plans, or both. Thirty-three percent reported having assets in IRAs, including 27 percent who had both IRAs and employer-sponsored retirement plans. US households represent a wide range of ages at different points in the life cycle of savings. Focus on retirement savings tends to increase with age (Figure 8.2), and older households are more likely to have retirement resources; for example, about eight out of 10 near-retiree households have retirement accumulations (Figure 8.4).

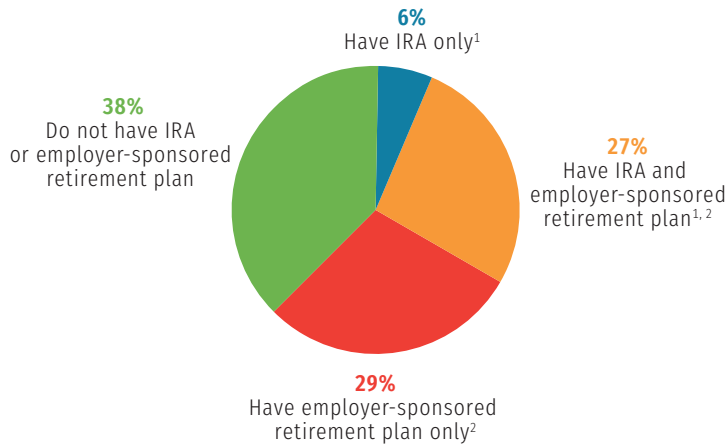
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Americans: In Defined Contribution We Trust
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FIGURE 8.7

Many US Households Have Retirement Resources Outside Social Security

Percentage of US households, 2018



Total number of US households: 127.6 million

¹ This category includes traditional, Roth, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

² Employer-sponsored retirement plans include DC and DB retirement plans.

Sources: Investment Company Institute and US Census Bureau. See *ICI Research Perspective*, "The Role of IRAs in US Households' Saving for Retirement, 2018."

US Retiree Income

Most American workers maintain or increase their spendable income after claiming Social Security, according to a study coauthored by Investment Company Institute and Internal Revenue Service Statistics of Income Division staff. The study also finds that, after claiming, most get substantial amounts of both Social Security benefits and retirement income (from employer-sponsored retirement plans, annuities, or IRAs).

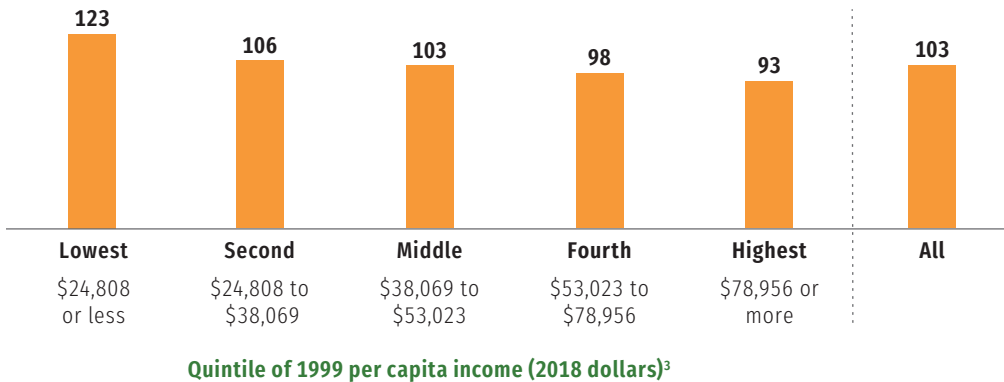
Lower-income workers typically had higher replacement rates of spendable income—income available after paying taxes and making contributions to retirement accounts (Figure 8.8). Three years after claiming, the median worker in the study had spendable income that was greater (103 percent) than spendable income in the year before claiming. Notably, median replacement rates were found to be highest for individuals in the lowest quintile of income in 1999 (123 percent) and lowest for individuals in the highest quintile (93 percent).

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FIGURE 8.8**Most Workers Maintain Spendable Income After Claiming Social Security**

Median spendable income replacement rate¹ three years after claiming Social Security among individuals in the sample² by 1999 per capita income,³ percent



¹ Spendable income is the sum of labor income, Social Security benefits, and retirement income (DB and DC pension, annuity, and IRA income) less payroll taxes and a proportional amount of federal income taxes. The replacement rate is expressed as a percentage of spendable income in the year before Social Security was claimed.

² The sample consists of all working taxpayers aged 55 to 61 in 1999 who claimed Social Security retirement benefits between 2000 and 2007.

³ For individuals filing a non-joint return, per capita income is income reported on the tax return. For married individuals filing a joint return, per capita income is income reported on the tax return divided by two.

Source: *Using Panel Tax Data to Examine the Transition to Retirement*, available at www.ici.org/transition_to_retirement

In addition to Social Security, the vast majority of workers analyzed had resources from employer-sponsored retirement plans, annuities, and IRAs (Figure 8.9). Over the five-year period from one year before an individual claims Social Security to three years after claiming, 81 percent received income—either directly or through a spouse—from employer plans, annuities, or IRAs. Another 8 percent had evidence of these resources—a Form 1099-R (reporting a rollover or other retirement account transaction that did not generate income), a Form 5498 (indicating IRA ownership), or both—but were not yet drawing on them.

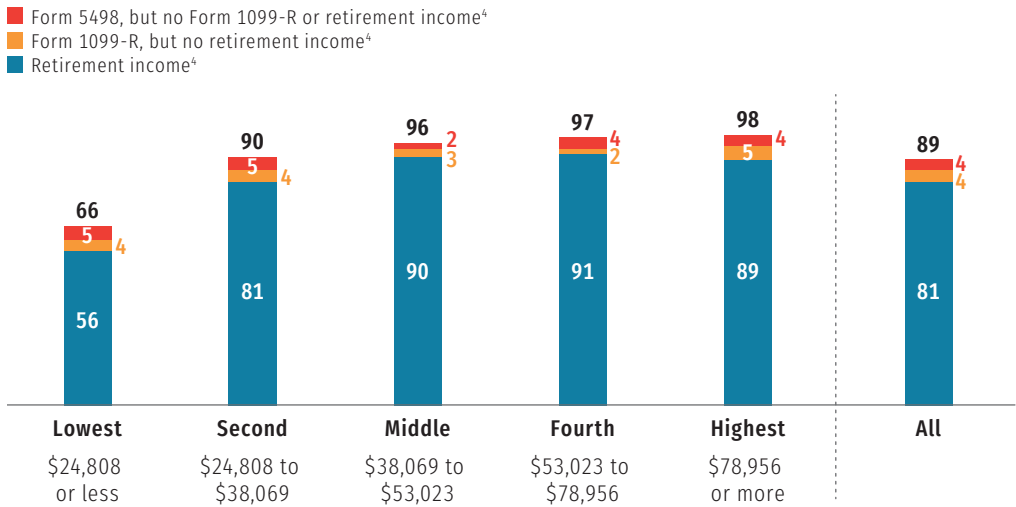
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ICI Analysis Shows Americans Maintain or Increase Spendable Income After Claiming Social Security
www.ici.org/research/retirement/retirement/17_news_retirement_income

FIGURE 8.9

Nearly Nine in 10 Had Retirement Resources Outside of Social Security

Percentage of sample¹ who had evidence of retirement resources outside of Social Security,² by 1999 per capita income³



Quintile of 1999 per capita income (2018 dollars)³

¹ The sample consists of all working taxpayers aged 55 to 61 in 1999 who claimed Social Security retirement benefits between 2000 and 2007.

² The period analyzed is the five-year period starting one year prior to claiming Social Security and ending three years after claiming.

³ For individuals filing a non-joint return, per capita income is income reported on the tax return. For married individuals filing a joint return, per capita income is income reported on the tax return divided by two.

⁴ Retirement income is income from DB and DC pensions, annuities, and IRAs.

Source: *Using Panel Tax Data to Examine the Transition to Retirement*, available at www.ici.org/transition_to_retirement

Defined Contribution Retirement Plans

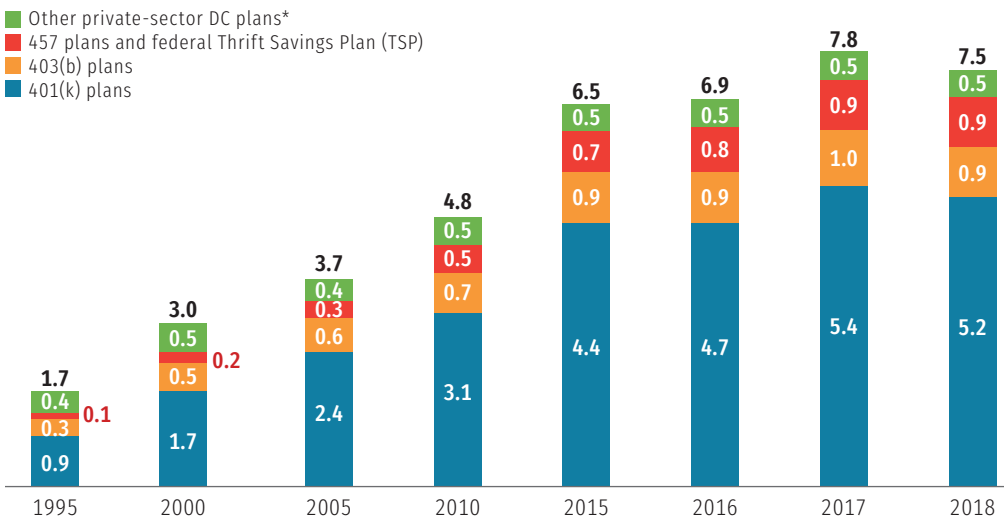
DC plans provide employees with a retirement account funded with employer contributions, employee contributions, or both, plus investment earnings or losses on those contributions, less withdrawals. Assets in employer-sponsored DC plans have grown faster than assets in DB plans over the past three decades, increasing from 29 percent of total DC and DB plan assets in 1988 to 46 percent at year-end 2018.

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At the end of 2018, employer-sponsored DC plans—which include 401(k) plans, 403(b) plans, 457 plans, the federal Thrift Savings Plan (TSP), and other private-sector DC plans—held an estimated \$7.5 trillion in assets (Figure 8.10). With \$5.2 trillion in assets at year-end 2018, 401(k) plans held the largest share of employer-sponsored DC plan assets. 403(b) plans—which are similar to 401(k) plans and are offered by educational and certain nonprofit organizations—held another \$0.9 trillion in assets. In addition, 457 plans—which serve employees of state and local governments and certain tax-exempt organizations—and the TSP held a total of \$0.9 trillion. Other private-sector DC plans without 401(k) features held the remaining \$0.5 trillion.

FIGURE 8.10
Defined Contribution Plan Assets by Type of Plan
 Trillions of dollars, year-end



*Other private-sector DC plans includes Keoghs and other private-sector DC plans (profit-sharing, stock bonus, and money purchase) without 401(k) features.

Sources: Investment Company Institute, Federal Reserve Board, Department of Labor, National Association of Government Defined Contribution Administrators, and American Council of Life Insurers. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2018.”

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401(k) and 403(b) Plan Design and Investment Lineup

Plan Design

Employers that sponsor a 401(k) plan have the option to include features such as employer contributions, access to plan assets through participant loans, and automatic enrollment of employees into the plan to encourage participation. The most common of these plan features is employer contributions. In 401(k) plans, employers can make contributions without regard to employee contributions or by using a matching structure that gives employees an incentive to contribute to the plan. Recent analysis of large 401(k) plans found that 85 percent made employer contributions in plan year 2016. Nearly eight out of 10 (78 percent) large 401(k) plans had participant loans outstanding, and nearly three out of 10 (28 percent) included automatic enrollment in 2016. An analysis of large 403(b) plans found that they are similarly likely to have employer contributions but less likely to have loans outstanding or automatic enrollment.

When designing 401(k) plans, employers tend to select a combination of features that their employees are likely to value. In 2016, 46 percent of large 401(k) plans had both employer contributions and participant loans outstanding but no automatic enrollment, making this the most common combination of plan activities. The next most common plan design combined all three activities—employer contributions, automatic enrollment, and outstanding loans—and was offered by 21 percent of large 401(k) plans, followed by 14 percent having employer contributions only. About 4 percent of large 401(k) plans did not report any of the three activities.

Investment Lineup

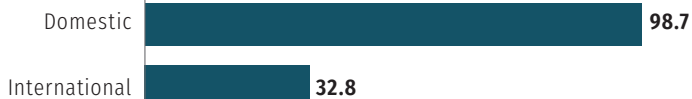
In addition to choosing how to structure contributions to the 401(k) plan, employers also select the investment options that are available to plan participants. In 2015, domestic equity funds, international equity funds, and domestic bond funds were offered in nearly all large 401(k) plans (Figure 8.11). Although these three fund types are equally likely to be offered, when these funds are available in the plan, employers tend to offer more domestic equity funds (10 funds on average) than domestic bond funds (three funds) or international equity funds (three funds). Target date funds also are common investment choices, with about 80 percent of large 401(k) plans offering 10 of these funds on average. In addition, about half of large 401(k) plans offered one money fund on average and 75 percent offered one guaranteed investment contract (GIC). In total, the average large 401(k) plan offered 29 funds to participants in 2015. Large private-sector 403(b) plans also offer participants a diverse array of investment options to choose from.

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The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2015
www.ici.org/research/retirement/defined

FIGURE 8.11**Incidence of Investment Options Offered in Large 401(k) Plans by Type of Investment**

Percentage of plans with audited 401(k) filings in the BrightScope database, 2015

Type of investment option**Equity funds****Balanced funds¹****Bond funds****Other options****Memo**

¹ The Investment Company Institute classifies balanced funds as *hybrid* in its data.

² A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

³ *Other* includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds.

Note: The sample is 19,422 plans with 41.5 million participants and \$3.3 trillion in assets. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options, more than 100 investment options, or less than \$1 million in plan assets are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database. See BrightScope and Investment Company Institute, *The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2015*.

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401(k) Participants: Asset Allocation, Account Balances, and Loan Activity

Asset Allocation

The income that 401(k) plan accounts provide in retirement depends, in part, on the asset allocation decisions of plan participants.

On average, younger participants allocate more of their portfolios to equities compared with older participants. According to research conducted by ICI and the Employee Benefit Research Institute (EBRI), at year-end 2016, participants in their twenties had 80 percent of their 401(k) assets invested in equities, on average, while those in their sixties had 55 percent of their 401(k) assets invested in equities (Figure 8.12). 401(k) plans can offer investment in equities through equity mutual funds and other pooled equity investments, the equity portion of balanced funds (including target date funds), and company stock.

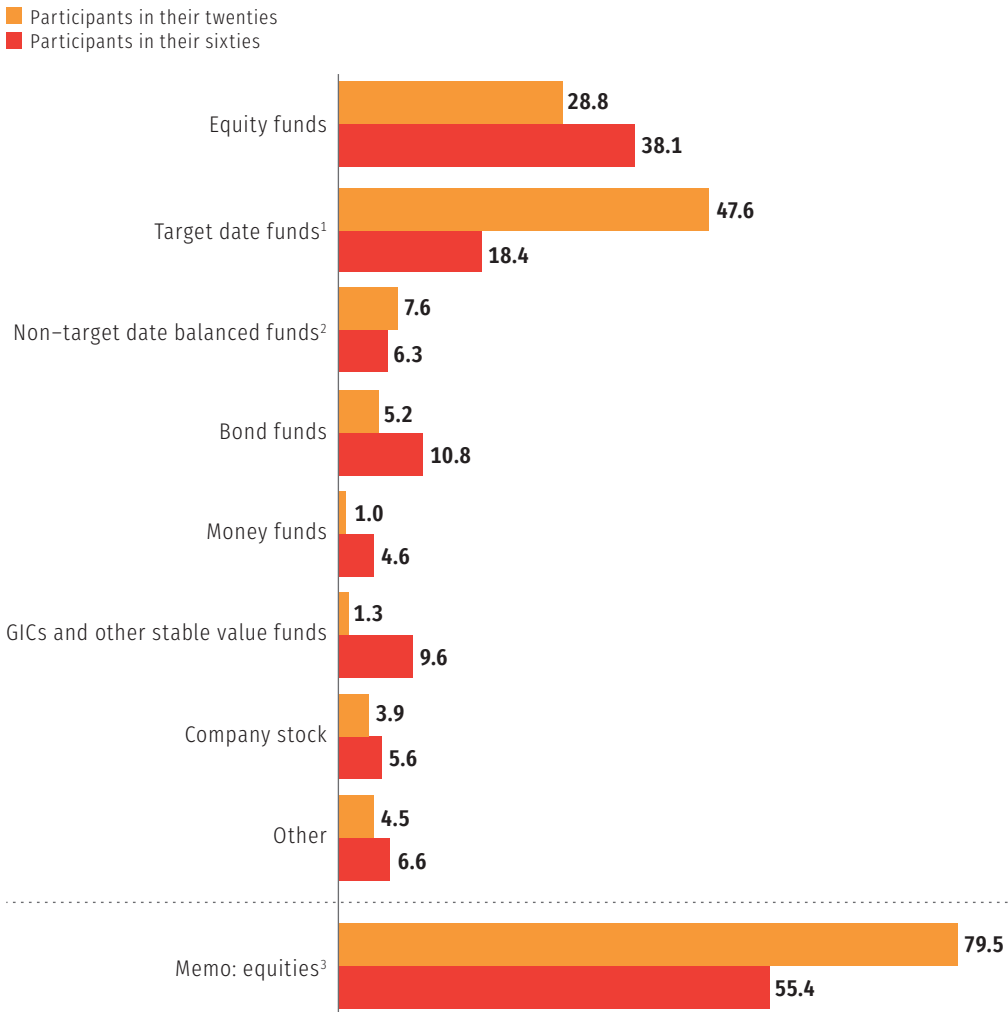
According to EBRI/ICI research, participants of different ages also tend to use different vehicles to invest in equities. At year-end 2016, on average, 401(k) plan participants in their twenties had 29 percent of their 401(k) assets invested in equity funds, 48 percent in target date funds, 8 percent in non-target date balanced funds, and 4 percent in company stock (Figure 8.12). By comparison, older 401(k) plan participants had higher allocations to equity funds (38 percent of their 401(k) assets), lower allocations to target date funds (18 percent), and similar allocations to non-target date balanced funds (6 percent) and company stock (6 percent). These older participants also had higher allocations to fixed-income investments. At year-end 2016, on average, 401(k) plan participants in their sixties had one-quarter of their 401(k) account assets in money funds, bond funds, and GICs and other stable value funds, while participants in their twenties allocated a much lower 8 percent to those investments, on average.

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FIGURE 8.12**401(k) Asset Allocation Varies with Participant Age**

Average asset allocation of 401(k) account balances, percentage of account balances, year-end 2016



¹ A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

² The Investment Company Institute classifies balanced funds as *hybrid* in its data.

³ Equities include equity funds, company stock, and the equity portion of balanced funds.

Note: Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Percentages are dollar-weighted averages.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. See *ICI Research Perspective*, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016."

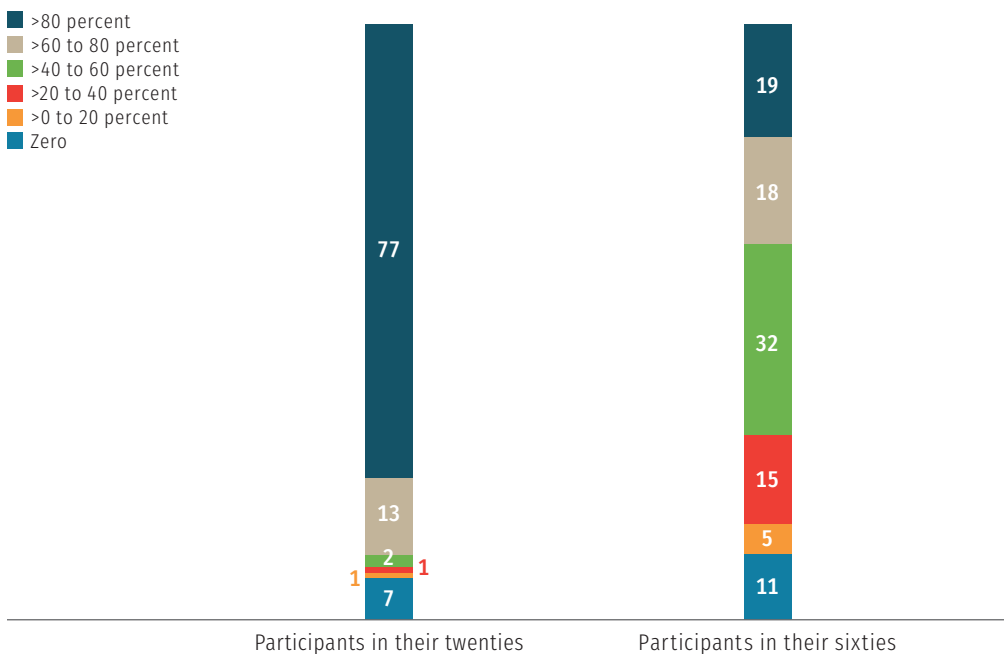
Portfolio allocation also varies widely within age groups. At year-end 2016, 77 percent of 401(k) participants in their twenties held more than 80 percent of their account in equities, while participants in their sixties were much less inclined to hold such high equity allocations (less than 20 percent of them did so) (Figure 8.13). By comparison, 8 percent of those in their twenties and 31 percent of those in their sixties allocated 40 percent or less of their account to equities.

FIGURE 8.13

Asset Allocation to Equities Varies Widely Among 401(k) Plan Participants

Asset allocation distribution of 401(k) participant account balance to equities, percentage of participants, year-end 2016

Percentage of 401(k) account balance invested in equities



Note: Equities include equity funds, company stock, and the equity portion of balanced funds. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The Investment Company Institute classifies balanced funds as *hybrid* in its data.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. See *ICI Research Perspective*, “401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016.”

Target Date Funds

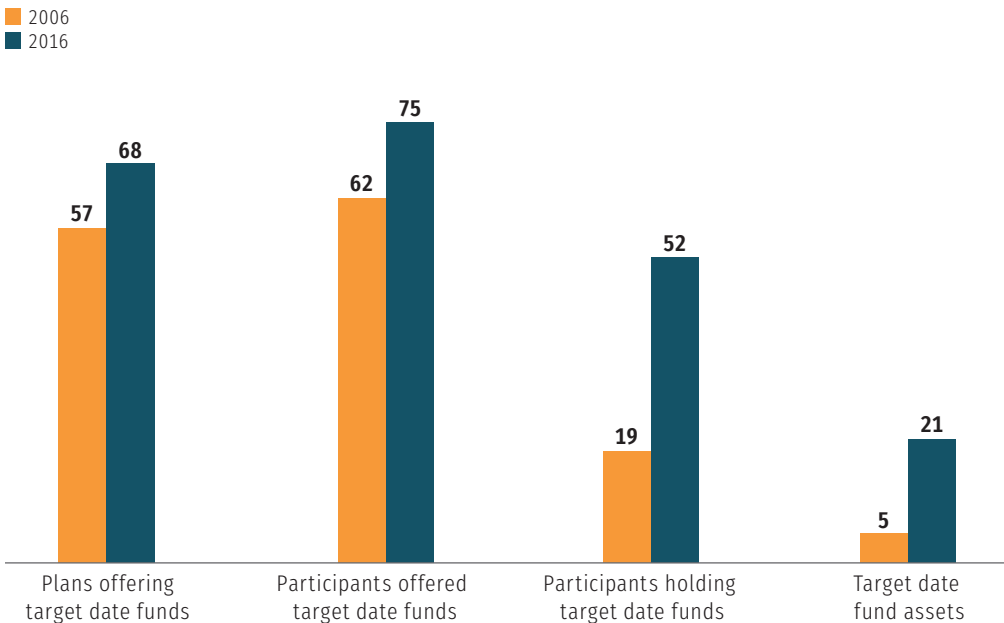
A target date fund (including both target date mutual funds and other pooled target date investments) follows a predetermined reallocation of assets over time based on a specified target retirement date. Typically, the fund rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date, which is usually indicated in the fund's name.

The use of target date funds in 401(k) plans has increased in the past decade—from 5 percent of assets at year-end 2006 to 21 percent at year-end 2016 (Figure 8.14). The share of 401(k) plans that offer target date funds and the share of 401(k) plan participants offered target date funds also have increased. At year-end 2016, 68 percent of 401(k) plans offered target date funds, and 75 percent of 401(k) plan participants were offered target date funds. Participant use of target date funds also has increased—more than half of 401(k) plan participants in 2016 held these funds, up from less than one-fifth in 2006.

FIGURE 8.14

Target Date Funds' 401(k) Market Share

Percentage of total 401(k) market, year-end



Note: Funds include mutual funds, bank collective trusts, life insurance separate accounts, and other pooled investment products.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. See *ICI Research Perspective*, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016."

Account Balances

Account balances tend to be higher the longer 401(k) plan participants have been working for their current employers and the older the participant. Participants in their sixties with more than 30 years of tenure at their current employer had an average 401(k) plan account balance of about \$287,500 at year-end 2016 (Figure 8.15). Participants in their forties with five to 10 years of tenure at their current employer had an average 401(k) plan account balance of \$69,600. The median 401(k) plan participant was 45 years old at year-end 2016, and the median job tenure was seven years.

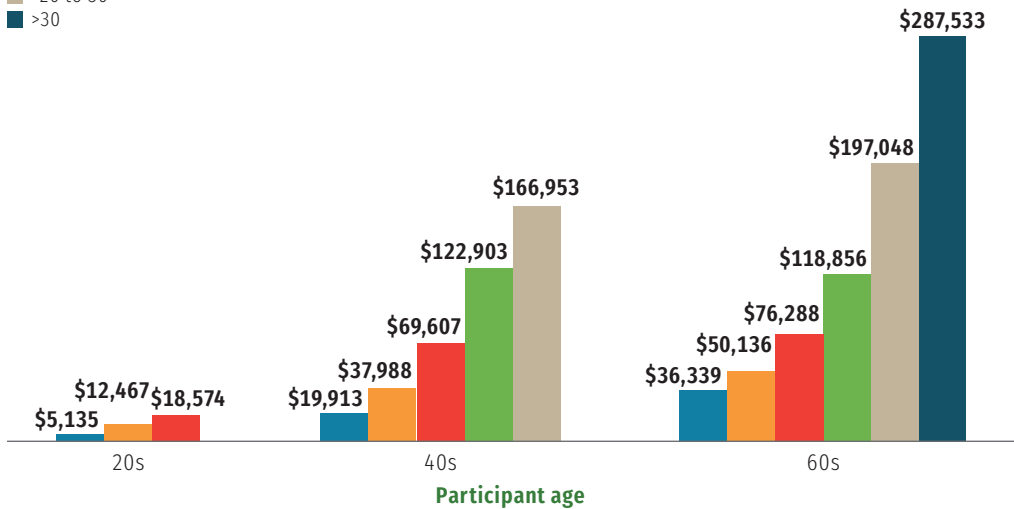
FIGURE 8.15

401(k) Plan Balances Tend to Increase with Participant Age and Job Tenure

Average 401(k) account balance by participant age and tenure, year-end 2016

Participant job tenure (years)

- 0 to 2
- >2 to 5
- >5 to 10
- >10 to 20
- >20 to 30
- >30



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. See *ICI Research Perspective*, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016."

Loan Activity

Most 401(k) participants do not borrow from their plans, although the majority (86 percent) have access to loans. At year-end 2016, 19 percent of participants eligible for loans had loans outstanding. Not all participants, however, have access to 401(k) plan loans—factoring in all 401(k) participants with and without loan access in the EBRI/ICI 401(k) database, only 16 percent had loans outstanding at year-end 2016. Unpaid loan balances among participants with loans averaged about 11 percent of the remaining 401(k) account balance. In aggregate, US Department of Labor data indicate that outstanding loan amounts were less than 2 percent of 401(k) plan assets in 2016.

Individual Retirement Accounts

The first type of IRA—known as a traditional IRA—was created under the Employee Retirement Income Security Act of 1974 (ERISA). IRAs provide all workers with a contributory retirement savings vehicle and, through rollovers, give workers leaving jobs a means to preserve the tax benefits and growth opportunities that employer-sponsored retirement plans provide. Roth IRAs, first available in 1998, were created to provide a contributory retirement savings vehicle on an after-tax basis with qualified withdrawals distributed tax-free. In addition, policymakers have added employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs) to encourage small businesses to provide retirement plans by simplifying the rules applicable to tax-qualified plans.

IRA assets totaled \$8.8 trillion at year-end 2018, accounting for 33 percent of US retirement assets (Figure 8.16). Mutual funds were 45 percent of IRA assets (\$4.0 trillion) at year-end 2018. The *other assets* category—which includes ETFs, closed-end funds, individual stocks and bonds, and other non-mutual fund securities held through brokerage accounts—had 44 percent of IRA assets (\$3.8 trillion).

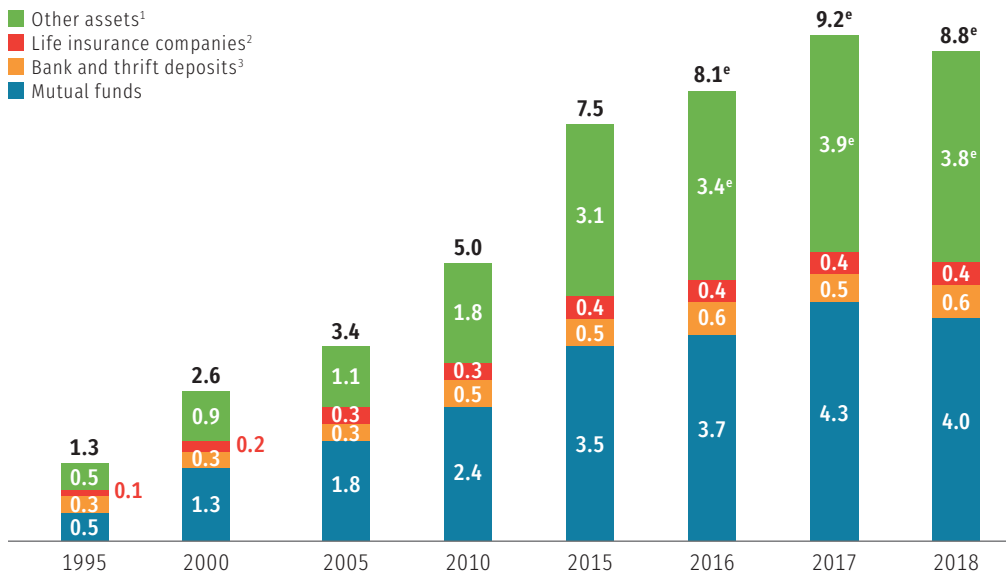
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Individual Retirement Account Resource Center
www.ici.org/iraresource

FIGURE 8.16

IRA Assets

Trillions of dollars, year-end



¹ Other assets includes individual stocks, individual bonds, closed-end funds, ETFs, and other assets held through brokerage or trust accounts.

² Life insurance company IRA assets are annuities held by IRAs, excluding variable annuity mutual fund IRA assets, which are included in mutual funds.

³ Bank and thrift deposits include Keogh deposits.

^e Data are estimated.

Sources: Investment Company Institute, Federal Reserve Board, American Council of Life Insurers, and Internal Revenue Service Statistics of Income Division. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2018.”

IRA Investors

About one-third of US households, or nearly 43 million, owned at least one type of IRA in 2018 (Figure 8.17). Traditional IRAs—those introduced under ERISA—were the most common type, owned by 33 million US households. Roth IRAs, created as part of the Taxpayer Relief Act of 1997, were owned by nearly 23 million US households. Nearly eight million US households owned employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, or SIMPLE IRAs).

FIGURE 8.17

Nearly 43 Million US Households Owned IRAs

	Year created	Number of US households with type of IRA 2018	Percentage of US households with type of IRA 2018	Assets in IRAs Billions of dollars, year-end 2018
Traditional IRA	1974 (Employee Retirement Income Security Act)	33.2 million	26.0%	\$7,496 ^e
SEP IRA	1978 (Revenue Act)	7.5 million	5.9%	\$510 ^e
SAR-SEP IRA	1986 (Tax Reform Act)			
SIMPLE IRA	1996 (Small Business Job Protection Act)			
Roth IRA	1997 (Taxpayer Relief Act)	22.5 million	17.6%	\$800 ^e
Any IRA		42.6 million	33.4%	\$8,806 ^e

^e Data are estimated.

Note: Households may own more than one type of IRA. SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs are employer-sponsored IRAs.

Sources: *ICI Research Perspective*, “The Role of IRAs in US Households’ Saving for Retirement, 2018” and “The US Retirement Market, Fourth Quarter 2018”

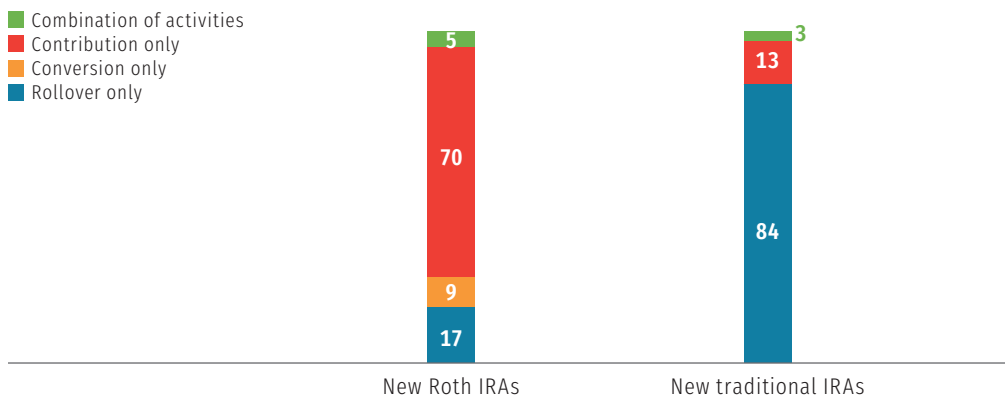
Investment returns and rollovers from employer-sponsored retirement plans, more than new contributions, have fueled the growth of IRAs. For example, the Internal Revenue Service Statistics of Income Division reports that \$473 billion was rolled over to IRAs in tax year 2015, compared with \$64 billion that was contributed. Although most US households are eligible to make contributions to IRAs, few do so. Indeed, only 11 percent of US households contributed to traditional or Roth IRAs in tax year 2017 and very few eligible households made “catch-up” contributions (the additional contributions individuals aged 50 or older are allowed to make).

Analysis of The IRA Investor Database—which contains information on more than 17 million IRA investors—finds that rollovers play a particularly important role in opening traditional IRAs. In 2016, most new traditional IRAs (84 percent) were opened only with rollovers (Figure 8.18). In contrast, most new Roth IRAs (70 percent) were opened solely with contributions.

FIGURE 8.18

New Roth IRAs Often Are Opened with Contributions; New Traditional IRAs Often Are Opened with Rollovers

Percentage of new IRAs opened in 2016 by type of IRA



Note: New IRAs are accounts that did not exist in The IRA Investor Database in 2015 and were opened by one of the paths indicated in 2016. The calculation excludes IRAs that changed financial services firms. The samples are 0.4 million new Roth IRA investors aged 18 or older at year-end 2016 and 0.8 million new traditional IRA investors aged 25 to 74 at year-end 2016.

Source: The IRA Investor Database™. See ICI Research Report, “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007–2016.”

A substantial share of traditional IRA investors have rolled over assets from an employer-sponsored retirement plan. In any given year, only a small portion of traditional IRA investors have a rollover, but, for the most part, the groups that make rollovers differ from year to year. For example, in each year from 2007 through 2016, about one in 10 traditional IRA investors in The IRA Investor Database had a rollover, but more than half of investors with traditional IRAs at year-end 2016 had a rollover at some point during this period.

Traditional IRA-owning households generally researched the decision to roll over money from their former employers’ retirement plans into traditional IRAs. The most common source of information was a professional financial adviser. Advisers were consulted by 60 percent of traditional IRA-owning households with rollovers; nearly half indicated that they primarily relied on these financial professionals. Older households were more likely to consult professional financial advisers than younger households. Seven percent of traditional IRA-owning households with rollovers indicated their primary source of information was online materials from financial services firms, with younger households more likely to rely on online resources as their primary source of information than were older households. Twelve percent of households with rollovers primarily relied on information from their employers.

IRA Portfolios

As with 401(k) participants, younger IRA investors tend to have more invested in equities, equity funds, and target date funds than older investors, according to The IRA Investor Database. Older investors tend to be more invested in bonds, bond funds, and non-target date balanced funds. In 2016, traditional IRA investors in their thirties had, on average, a combined 71 percent of their assets in equities, equity funds, and target date funds (Figure 8.19). Traditional IRA investors in their sixties held a lower share of their assets (57 percent) in these combined categories, while holding much higher allocations across bonds, bond funds, and non-target date balanced funds.

Roth IRA investors display a similar pattern of investing by age, although in all age groups, they tended to have higher allocations to equities and equity funds and lower allocations to bonds and bond funds compared with traditional IRA investors (Figure 8.19).

Distributions from IRAs

Withdrawals from IRAs tend to occur later in life, often to fulfill required minimum distributions (RMDs) under the law. An RMD is calculated as a percentage of the IRA balance, based on remaining life expectancy. Traditional IRA owners aged 70½ or older generally must withdraw at least the minimum amount each year, or pay a penalty. In tax year 2017, 72 percent of households that took traditional IRA withdrawals said they calculated the withdrawal amount based on RMD rules.

Individuals appear to respond to distribution rules and penalties. For example, there is a large increase in traditional IRA withdrawal activity as RMD rules kick in (Figure 8.20). This pattern does not occur in Roth IRAs because, unlike traditional IRAs, there are no RMD rules for Roth IRAs (unless the account was inherited). Because early withdrawal penalties can apply to both Roth and traditional IRA investors younger than 59½ years old, withdrawal activity is lower among investors younger than 60 compared with investors aged 60 or older.

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The IRA Investor Profile

www.ici.org/research/investors/database

FIGURE 8.19

IRA Asset Allocation Varies with Investor Age

Average asset allocation of IRA balances, percentage of assets, year-end 2016

- Other investments¹
- Money market funds
- Bonds and bond funds²
- Non-target date balanced funds³
- Target date funds⁴
- Equities and equity funds⁵

Traditional IRA investors



Roth IRA investors



¹ *Other investments* includes certificates of deposit and unidentifiable assets.

² Bond funds include bond mutual funds, bond closed-end funds, and bond ETFs.

³ The Investment Company Institute classifies balanced funds as *hybrid* in its data.

⁴ A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

⁵ Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

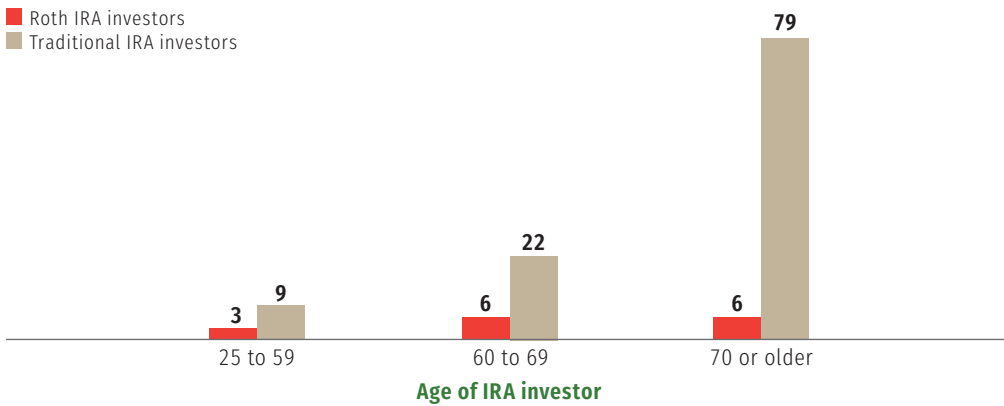
Note: Percentages are dollar-weighted averages.

Source: The IRA Investor Database™. See *ICI Research Report*, "The IRA Investor Profile: Traditional IRA Investors' Activity, 2007–2016" and *ICI Research Report*, "The IRA Investor Profile: Roth IRA Investors' Activity, 2007–2016."

FIGURE 8.20

Roth IRA Investors Rarely Take Withdrawals; Traditional IRA Investors Are Heavily Affected by RMDs

Percentage of IRA investors with withdrawals by type of IRA and investor age, 2016



Note: The samples are 5.7 million Roth IRA investors aged 25 or older at year-end 2016 and 11.9 million traditional IRA investors aged 25 or older at year-end 2016.

Source: The IRA Investor Database™. See *ICI Research Report*, “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007–2016.”

Withdrawals from IRAs tend to be retirement related. Of the 26 percent of traditional IRA-owning households in 2018 that reported taking withdrawals in 2017, 85 percent reported that the head of household, the spouse, or both were retired. Among retired traditional IRA-owning households in 2018 that reported taking withdrawals in 2017, 42 percent reported using some or all of the withdrawal amount to pay for living expenses (Figure 8.21). Other uses included reinvesting or saving in another account (42 percent); buying, repairing, or remodeling a home (15 percent); and using it for an emergency (3 percent).

Nonretired traditional IRA-owning households in 2018 that reported taking withdrawals in 2017 had different uses for the funds. These households were about half as likely to indicate reinvesting or saving some or all of the money in another account (23 percent) and were more than six times as likely to indicate they used the funds for emergencies (19 percent) as retired households (Figure 8.21).

FIGURE 8.21**Traditional IRA Withdrawals Among Retirees Often Are Used to Pay for Living Expenses**Percentage of withdrawing traditional IRA-owning households by retirement status,¹ 2018

Purpose of traditional IRA withdrawal	Retired ^{1,2}	Not retired ^{2,3}
Took withdrawals to pay for living expenses	42	30
Spent it on a car, boat, or big-ticket item other than a home	10	14
Spent it on a healthcare expense	9	14
Used it for an emergency	3	19
Used it for home purchase, repair, or remodeling	15	12
Reinvested or saved it in another account	42	23
Paid for education	1	8
Some other purpose	10	1

¹ The base of respondents includes the 22 percent of traditional IRA-owning households that were retired in 2018 and took withdrawals in tax year 2017.

² The household was considered retired if either the head of household or spouse responded affirmatively to the question: "Are you retired from your lifetime occupation?"

³ The base of respondents includes the 4 percent of traditional IRA-owning households that were not retired in 2018 and took withdrawals in tax year 2017.

Note: Multiple responses are included.

Source: ICI Research Perspective, "The Role of IRAs in US Households' Saving for Retirement, 2018"

The Role of Mutual Funds in Retirement Savings

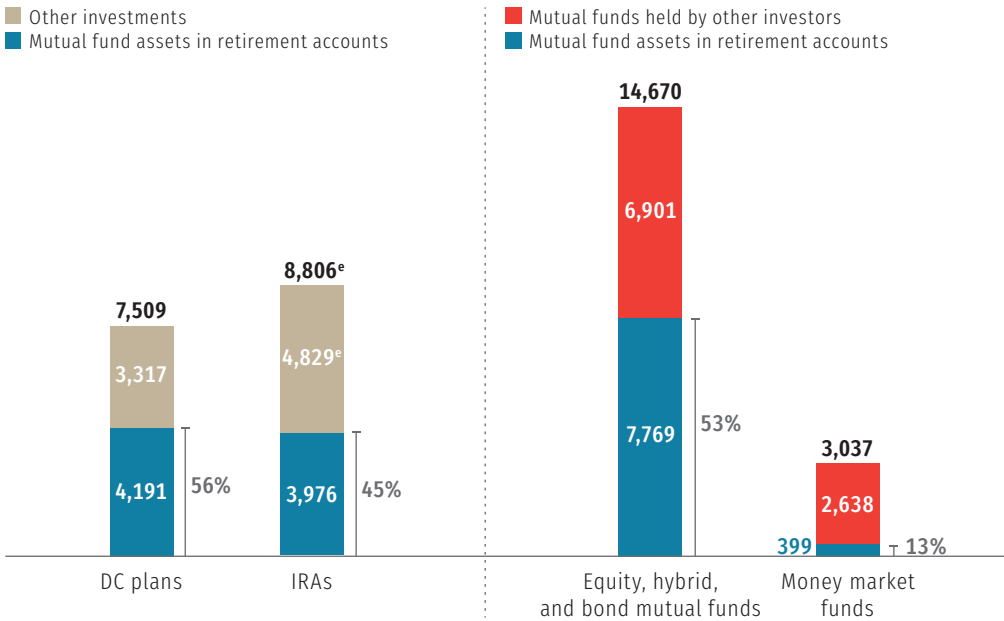
Mutual funds play a major role in employer-sponsored DC plans (such as 401(k) plans) and IRAs. At year-end 2018, mutual funds accounted for 56 percent of DC plan assets and 45 percent of IRA assets (Figure 8.22). Investors held slightly more mutual fund assets in DC plans (\$4.2 trillion) than in IRAs (\$4.0 trillion). Among DC plans, 401(k) plans held the most assets in mutual funds, with \$3.3 trillion, followed by 403(b) plans (\$432 billion), other private-sector DC plans (\$350 billion), and 457 plans (\$108 billion) (Figure 8.23). Combined, the \$8.2 trillion of mutual fund assets held in DC plans and IRAs at the end of 2018 accounted for 30 percent of the \$27.1 trillion US retirement market.

Assets in DC plans and IRAs represent a large share of mutual fund assets overall, and long-term mutual fund assets in particular (Figure 8.22). The \$8.2 trillion in mutual fund retirement assets made up 46 percent of all mutual fund assets at year-end 2018. DC plans and IRAs held 53 percent of equity, hybrid, and bond mutual fund assets, but only 13 percent of money market fund assets.

FIGURE 8.22

Substantial Amounts of Retirement Assets Are Invested in Mutual Funds

Assets, billions of dollars, year-end 2018



^e Data are estimated.

Sources: Investment Company Institute and Federal Reserve Board. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2018.”

Types of Mutual Funds Used by Retirement Investors

Retirement investors tend to hold equity investments. At year-end 2018, 56 percent of the \$8.2 trillion in mutual fund retirement assets held in DC plans and IRAs were invested in equity funds (Figure 8.23). US domestic equity funds alone constituted \$3.5 trillion, or 43 percent, of mutual fund assets held in DC plans and IRAs; world equity funds were an additional 14 percent.

Retirement investors also gain exposure to equities through hybrid funds, which invest in a mix of equity, bond, and money market securities. At year-end 2018, 24 percent of mutual fund assets held in DC plans and IRAs were held in hybrid funds (Figure 8.23).

The remaining 19 percent of mutual fund assets held in DC plans and IRAs at the end of 2018 were invested in bond funds and money market funds. Bond funds held \$1.2 trillion, or 15 percent, of mutual fund assets held in DC plans or IRAs, and money market funds accounted for \$399 billion, or 5 percent (Figure 8.23).

FIGURE 8.23

Majority of Mutual Fund Retirement Account Assets Were Invested in Equities

Billions of dollars, year-end 2018

	Equity			Bond	Money market	Total
	Domestic	World	Hybrid ¹			
IRAs²	\$1,641	\$512	\$862	\$696	\$266	\$3,976
DC plans	1,860	592	1,110	497	133	4,191
401(k) plans	1,415	499	932	366	90	3,302
403(b) plans	254	37	85	36	20	432
457 plans	56	16	22	13	1	108
Other private-sector DC plans ³	135	40	70	83	22	350
Total	\$3,501	\$1,104	\$1,971	\$1,193	\$399	\$8,168

¹ Hybrid funds invest in a mix of equities and fixed-income securities. Most target date and lifestyle funds are counted in this category.

² This category includes traditional, Roth, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

³ *Other private-sector DC plans* includes private-sector DC plans without 401(k) features.

Source: Investment Company Institute, "The US Retirement Market, Fourth Quarter 2018"

Target Date and Lifestyle Mutual Funds in Retirement Accounts

Target date and lifestyle mutual funds, generally included in the hybrid fund category, have grown more popular among investors and retirement plan sponsors over the past decade. A target date fund follows a predetermined reallocation of assets over time based on a specified target retirement date. Typically, the fund rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date, which is usually indicated in the fund's name. A lifestyle fund maintains a predetermined risk level and generally uses words such as "conservative," "moderate," or "aggressive" in its name to indicate the fund's risk level.

Assets in target date and lifestyle mutual funds totaled \$1.4 trillion at year-end 2018, down from \$1.5 trillion at year-end 2017 (Figure 8.24). Target date mutual fund assets were \$1.1 trillion, down 1 percent from year-end 2017. Assets in lifestyle mutual funds were \$348 billion at year-end 2018, a decrease of 13 percent from year-end 2017. At year-end 2018, most (86 percent) target date mutual fund assets were held in retirement accounts, predominantly DC plan accounts. At year-end 2018, although the majority (56 percent) of lifestyle mutual fund assets were held outside of retirement accounts, 26 percent were held in IRAs and 18 percent were held in DC plans.

The Role of Mutual Funds in Education Savings

Twenty-four percent of households that owned mutual funds in 2018 cited education as a financial goal for their fund investments (Figure 7.6). Nevertheless, the demand for education savings vehicles has been relatively moderate since their introduction in the 1990s, partly because of their limited availability and partly due to investors' lack of familiarity with them. The Economic Growth and Tax Relief Reconciliation Act (EGTRRA), enacted in 2001, enhanced the attractiveness of two education savings vehicles—Section 529 plans and Coverdell education savings accounts (ESAs)—by making them more flexible and allowing larger contributions. When enacted, the EGTRRA enhancements were temporary, but the 2006 Pension Protection Act (PPA) made them permanent. The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 extended the EGTRRA enhancements to Coverdell ESAs for two years; the American Taxpayer Relief Act of 2012 made these enhancements permanent.

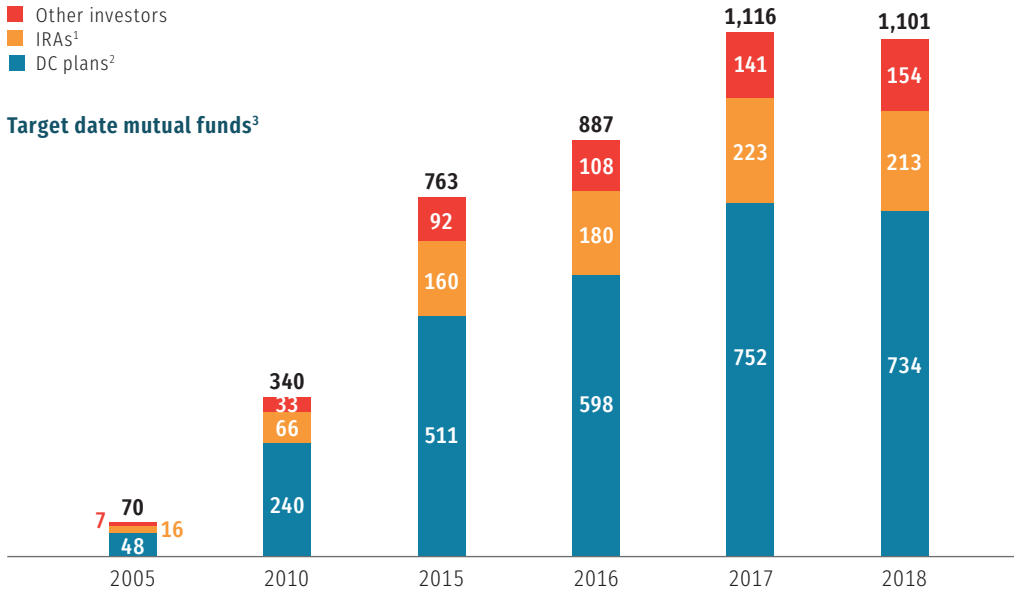
FIGURE 8.24

Target Date and Lifestyle Mutual Fund Assets by Account Type

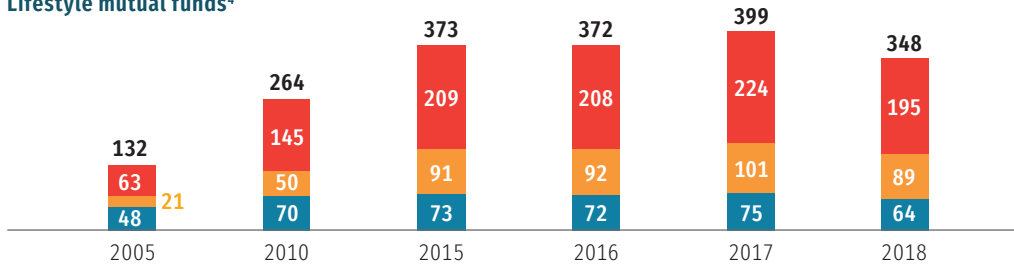
Billions of dollars, year-end

- Other investors
- IRAs¹
- DC plans²

Target date mutual funds³



Lifestyle mutual funds⁴



¹ This category includes traditional, Roth, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

² DC plans include 401(k) plans, other private-sector DC plans without 401(k) features, 403(b) plans, and 457 plans.

³ A target date mutual fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

⁴ A lifestyle mutual fund maintains a predetermined risk level and generally contains "conservative," "moderate," or "aggressive" in its name.

Source: Investment Company Institute, "The US Retirement Market, Fourth Quarter 2018"

Assets in 529 Savings Plans

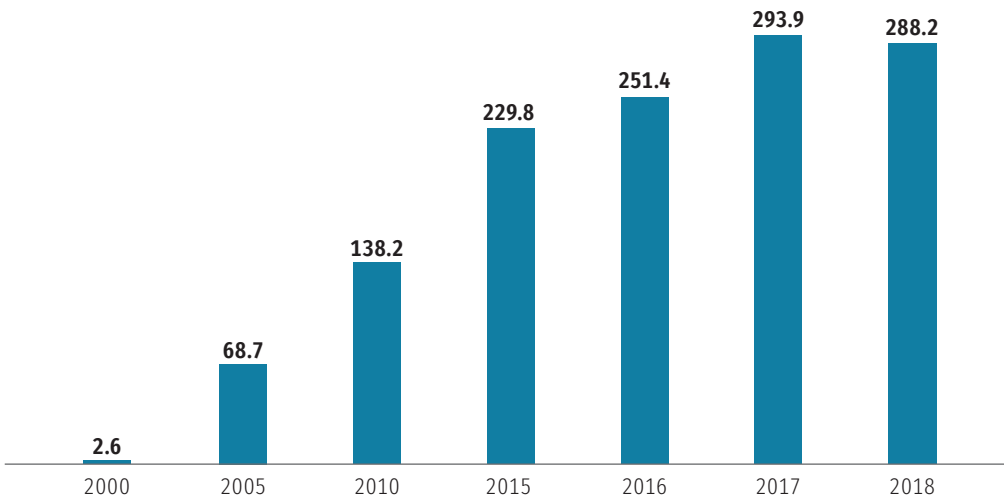
Assets in Section 529 savings plans were \$288.2 billion at year-end 2018, down 2 percent since year-end 2017 (Figure 8.25). As of year-end 2018, there were 12.8 million 529 savings plan accounts, with an average account size of approximately \$22,600.

Characteristics of Households Saving for College

In 2018, as a group, households saving for college through 529 plans, Coverdell ESAs, or mutual funds held outside these accounts tended to be headed by younger individuals—almost half (47 percent) were younger than 45 (Figure 8.26). Heads of households saving for college had a range of educational attainment. Sixty-one percent had completed college, 23 percent had an associate’s degree or some college, and 16 percent had a high school diploma or less. These households also represented a range of incomes: 40 percent of households saving for college had household income of less than \$100,000, including 25 percent with household income less than \$75,000. Finally, about six in 10 of these households had children (younger than 18) in the home, and 38 percent had more than one child in the home.

FIGURE 8.25

Section 529 Savings Plan Assets
Billions of dollars, year-end



Note: Data were estimated for a few individual state observations in order to construct a continuous time series.

Sources: Investment Company Institute and College Savings Plans Network. See Investment Company Institute, “529 Plan Program Statistics, December 2018.”

LEARN MORE

529 Plan Program Statistics
www.ici.org/research/stats/529s

FIGURE 8.26**Characteristics of Households Saving for College**Percentage of US households saving for college,¹ 2018**Age of head of household²**

Younger than 35	23
35 to 44	24
45 to 54	29
55 to 64	13
65 or older	11

Education level of head of household²

High school diploma or less	16
Associate's degree or some college	23
Completed college	25
Some graduate school or completed graduate school	36

Household income³

Less than \$25,000	6
\$25,000 to \$34,999	3
\$35,000 to \$49,999	5
\$50,000 to \$74,999	11
\$75,000 to \$99,999	15
\$100,000 or more	60

Number of children in home⁴

None	41
One	21
Two	25
Three or more	13

¹ Households saving for college are households that own education savings plans (Coverdell ESAs or 529 plans) or that said paying for education was one of their financial goals for their mutual funds.

² Age and education level are based on the sole or co-decisionmaker for saving and investing.

³ Total reported is household income before taxes in 2017.

⁴ The number of children reported is children younger than 18 living in the home.



PART TWO

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DATA TABLES

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TABLE 1

Mutual Funds: Total Net Assets, Number of Funds, and Number of Share Classes

Year-end

Year	Total net assets <i>Billions of dollars</i>	Number of funds	Number of share classes
1940	\$0.45	68	-
1945	1.28	73	-
1950	2.53	98	-
1955	7.84	125	-
1960	17.03	161	-
1965	35.22	170	-
1970	47.62	361	-
1975	45.87	426	-
1976	51.28	452	-
1977	48.94	477	-
1978	55.84	505	-
1979	94.51	526	-
1980	134.76	564	-
1981	241.37	665	-
1982	296.68	857	-
1983	292.99	1,026	-
1984	370.68	1,243	1,243
1985	495.39	1,528	1,528
1986	715.67	1,835	1,835
1987	769.17	2,312	2,312
1988	809.37	2,737	2,737
1989	980.67	2,935	2,935
1990	1,064.34	3,078	3,176
1991	1,392.17	3,402	3,586
1992	1,641.58	3,823	4,207
1993	2,068.94	4,533	5,561
1994	2,153.69	5,324	7,696
1995	2,807.61	5,724	9,006
1996	3,520.29	6,246	10,350
1997	4,461.17	6,675	11,988
1998	5,516.07	7,308	13,707
1999	6,833.75	7,758	15,209
2000	6,955.94	8,134	16,687
2001	6,969.00	8,268	17,967
2002	6,380.19	8,223	18,947
2003	7,398.75	8,107	19,290
2004	8,093.27	8,039	20,025
2005	8,888.70	7,967	20,534
2006	10,395.24	8,106	21,231
2007	11,995.19	8,019	21,569
2008	9,618.69	8,022	22,233
2009	11,108.97	7,651	21,621
2010	11,831.06	7,546	21,894
2011	11,630.37	7,581	22,277
2012	13,053.59	7,596	22,659
2013	15,048.93	7,721	23,413
2014	15,876.62	7,934	24,251
2015	15,657.87	8,121	25,078
2016	16,353.46	8,073	25,134
2017	18,763.96	7,965	25,132
2018	17,706.87	8,078	25,024

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 2

Mutual Funds: Total Sales, New Sales, Exchange Sales, Redemptions, and Exchange Redemptions

Billions of dollars, annual

Year	Total sales ¹	New sales	Exchange sales ²	Redemptions	Exchange redemptions ³
1945	\$0.29	-	-	\$0.11	-
1950	0.52	-	-	0.28	-
1955	1.21	-	-	0.44	-
1960	2.10	-	-	0.84	-
1965	4.36	\$3.93	-	1.96	-
1970	4.63	3.84	-	2.99	-
1975	10.06	8.94	-	9.57	-
1980	247.42	238.96	\$10.10	216.08	\$9.94
1981	472.13	452.42	14.44	362.44	14.59
1982	626.94	604.09	28.25	588.35	27.86
1983	547.77	532.04	35.67	565.83	36.03
1984	680.12	661.74	36.66	607.02	37.11
1985	953.85	933.37	46.55	864.88	46.84
1986	1,204.90	1,179.40	107.75	1,015.64	107.96
1987	1,251.19	1,220.27	205.68	1,178.75	207.35
1988	1,176.81	1,143.62	134.28	1,166.67	134.24
1989	1,444.84	1,401.21	130.66	1,327.05	131.95
1990	1,564.55	1,517.16	138.79	1,470.80	140.98
1991	2,037.33	1,990.26	155.75	1,879.62	154.31
1992	2,749.56	2,704.59	197.43	2,548.05	198.15
1993	3,187.32	3,137.61	248.79	2,904.31	253.95
1994	3,074.99	3,019.14	317.53	2,928.42	324.99
1995	3,598.52	3,523.91	351.53	3,314.74	351.08
1996	4,669.20	4,584.62	504.73	4,265.81	503.91
1997	5,799.28	5,703.11	613.42	5,323.65	618.42
1998	7,227.21	7,123.95	742.91	6,647.64	743.30
1999	9,041.22	8,920.81	949.94	8,560.63	947.21
2000	11,107.08	10,968.25	1,149.66	10,582.54	1,145.07
2001	12,864.47	12,745.95	797.12	12,239.48	797.34
2002	13,167.80	13,083.43	747.34	13,008.87	745.47
2003	12,393.19	12,315.05	571.85	12,360.77	573.70
2004	12,190.71	12,100.61	408.99	12,038.36	417.93
2005	13,938.45	13,811.67	420.83	13,546.09	432.40
2006	17,408.21	17,227.72	487.70	16,751.26	492.17
2007	23,467.84	23,233.76	606.40	22,350.06	611.68
2008	26,346.85	26,132.75	734.70	25,710.86	729.68
2009	20,679.42	20,528.10	530.15	20,675.75	528.31
2010	18,208.99	18,052.27	420.14	18,319.00	434.82
2011	17,836.37	17,660.62	448.02	17,738.10	466.44
2012	17,023.22	16,832.51	422.01	16,620.59	434.00
2013	18,159.43	17,970.31	517.65	17,778.86	530.96
2014	18,718.53	18,501.76	425.47	18,388.00	433.27
2015	20,939.31	20,715.43	442.75	20,811.36	444.97
2016	21,890.20	21,663.10	593.63	21,888.85	591.10
2017	21,102.06	20,845.27	597.31	20,665.21	598.18
2018	24,125.61	23,820.17	622.18	24,014.97	618.31

¹ Total sales are the dollar value of new sales plus sales made through reinvestment of income dividends from existing accounts, but exclude reinvestment of capital gains distributions.

² Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

³ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 3

Mutual Funds: Total Net Assets

Billions of dollars, year-end

Year	Total	Long-term funds		Money market funds
		Equity	Bond and income	
1960	\$17.03	\$16.00	\$1.02	-
1965	35.22	32.76	2.46	-
1970	47.62	45.13	2.49	-
1975	45.87	37.49	4.68	\$3.70
1980	134.76	44.42	13.98	76.36
1981	241.37	41.19	14.01	186.16
1982	296.68	53.63	23.21	219.84
1983	292.99	76.97	36.63	179.39

Year	Total	Long-term funds					Money market funds	
		Equity			Bond		Taxable	Tax-exempt
		Domestic	World	Hybrid	Taxable	Municipal		
1984	\$370.68	\$74.55	\$5.19	\$11.15	\$25.45	\$20.79	\$209.75	\$23.80
1985	495.39	103.39	7.94	17.61	83.20	39.44	207.55	36.25
1986	715.67	138.98	15.47	25.76	167.63	75.67	228.35	63.81
1987	769.17	158.02	17.43	29.25	171.40	76.97	254.68	61.42
1988	809.37	171.40	17.98	26.35	168.96	86.73	272.20	65.76
1989	980.67	221.45	23.59	35.64	166.25	105.66	358.62	69.47
1990	1,064.34	211.18	28.30	35.98	170.29	120.25	414.56	83.78
1991	1,392.17	365.21	39.52	52.04	238.75	154.20	452.46	89.98
1992	1,641.58	468.41	45.68	77.63	307.41	196.26	451.35	94.84
1993	2,068.94	626.54	114.13	142.33	366.03	254.60	461.88	103.44
1994	2,153.69	691.57	161.19	161.40	301.21	227.31	501.11	109.89
1995	2,807.61	1,052.57	196.51	206.70	345.52	253.29	631.32	121.69
1996	3,520.29	1,440.81	285.20	248.36	391.05	253.07	763.94	137.87
1997	4,461.17	2,021.58	346.37	311.71	450.75	271.87	901.23	157.66
1998	5,516.07	2,585.90	391.64	360.04	528.25	298.57	1,166.97	184.71
1999	6,833.75	3,454.77	585.19	374.31	535.11	271.31	1,413.16	199.90
2000	6,955.94	3,368.86	563.87	360.84	538.71	278.41	1,611.38	233.87
2001	6,969.00	2,946.98	444.03	357.95	638.60	296.22	2,026.15	259.08
2002	6,380.19	2,272.69	369.37	335.27	807.75	330.04	1,988.78	276.30
2003	7,398.75	3,117.83	535.01	447.53	922.68	336.31	1,749.10	290.29
2004	8,093.27	3,625.92	716.20	552.25	968.96	328.24	1,589.70	312.00
2005	8,888.70	3,929.15	955.72	621.48	1,016.58	338.95	1,690.45	336.37
2006	10,395.24	4,471.16	1,360.43	731.50	1,128.60	365.09	1,969.42	369.03
2007	11,995.19	4,694.05	1,718.55	821.47	1,301.49	374.14	2,617.67	467.83
2008	9,618.69	2,738.21	916.34	562.26	1,231.86	337.79	3,338.55	493.68
2009	11,108.97	3,564.05	1,307.47	717.58	1,745.48	458.50	2,916.96	398.94
2010	11,831.06	4,053.48	1,542.69	842.20	2,115.22	473.95	2,473.51	330.01
2011	11,630.37	3,855.07	1,357.72	883.98	2,345.16	497.53	2,399.22	291.70
2012	13,053.59	4,324.37	1,614.39	1,032.46	2,809.03	580.17	2,405.74	287.43
2013	15,048.93	5,726.44	2,036.11	1,284.70	2,784.59	499.29	2,447.20	270.61
2014	15,876.62	6,230.01	2,083.98	1,379.20	2,892.31	566.48	2,463.85	260.79
2015	15,657.87	6,042.96	2,106.65	1,341.47	2,818.64	593.41	2,499.81	254.93
2016	16,353.46	6,412.01	2,165.26	1,399.87	3,034.49	613.70	2,597.87	130.27
2017	18,763.96	7,478.62	2,827.34	1,545.36	3,400.04	665.30	2,716.18	131.13
2018	17,706.87	6,798.65	2,426.11	1,383.26	3,386.40	675.41	2,891.77	145.27

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. The data contain a series break beginning in 1984. All funds were reclassified in 1984, and a separate category was created for hybrid funds. Components may not add to the total because of rounding.

TABLE 4

Mutual Funds: Total Net Assets by Composite Investment Objective

Billions of dollars, year-end

Year	Equity funds			Investment grade			Bond funds					Money market funds		
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni	Taxable	Tax-exempt		
2000	\$1,433.91	\$563.87	\$1,934.94	\$360.84	\$245.68	\$32.85	\$124.87	\$32.10	\$131.92	\$146.49	\$1,611.38	\$233.87		
2001	1,405.05	444.03	1,841.92	357.95	311.07	31.75	154.01	36.57	139.78	156.44	2,026.15	259.08		
2002	765.43	369.37	1,507.26	335.27	410.53	34.12	218.98	38.51	152.63	177.41	1,988.78	276.30		
2003	1,040.99	535.01	2,076.85	447.53	476.32	156.84	43.97	47.56	149.26	187.05	1,749.10	290.29		
2004	1,148.42	716.20	2,477.50	552.25	520.67	165.81	176.61	53.24	144.09	184.15	1,589.70	312.00		
2005	1,232.62	955.72	2,696.53	621.48	572.64	157.27	59.95	59.38	147.46	191.50	1,690.45	336.37		
2006	1,319.99	1,360.43	3,151.17	731.50	642.92	173.86	80.90	77.79	154.42	210.67	1,969.42	369.03		
2007	1,420.73	1,718.55	3,273.31	821.47	762.92	172.06	109.93	98.38	155.93	218.21	2,617.67	467.83		
2008	809.26	916.34	1,928.94	562.26	737.53	116.91	105.65	83.73	135.09	202.70	3,338.55	493.68		
2009	1,086.38	1,307.47	2,477.67	717.58	1,050.97	196.09	158.07	130.04	159.26	299.24	2,916.96	398.94		
2010	1,247.08	1,542.69	2,806.40	842.20	1,241.68	241.66	246.41	160.04	156.16	317.80	2,473.51	330.01		
2011	1,177.36	1,357.72	2,677.71	883.98	1,365.14	269.49	294.42	174.07	158.89	338.64	2,399.22	291.70		
2012	1,317.67	1,614.39	3,006.70	1,032.46	1,569.96	340.42	369.02	231.35	177.53	402.64	2,405.74	287.43		
2013	1,723.64	2,036.11	4,002.81	1,284.70	1,447.72	417.12	431.37	249.00	144.82	354.47	2,447.20	270.61		
2014	1,854.68	2,083.98	4,375.33	1,379.20	1,520.74	376.36	466.87	274.54	156.16	410.32	2,463.85	260.79		
2015	1,843.31	2,106.65	4,199.64	1,341.47	1,510.30	325.39	431.51	285.70	159.84	433.57	2,499.81	254.93		
2016	1,779.27	2,165.26	4,632.74	1,399.87	1,639.10	371.73	420.41	322.44	160.86	452.84	2,597.87	130.27		
2017	2,092.89	2,827.34	5,385.73	1,545.36	1,838.50	372.84	491.41	407.06	165.00	500.30	2,716.18	131.13		
2018	1,941.64	2,426.11	4,857.01	1,383.26	1,844.51	331.08	493.58	418.18	157.84	517.57	2,891.77	145.27		

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 5

Mutual Funds: Number of Funds

Year-end

Year	Total	Long-term funds		Money market funds
		Equity	Bond and income	
1970	361	323	38	–
1975	426	314	76	36
1980	564	288	170	106
1981	665	306	180	179
1982	857	340	199	318
1983	1,026	396	257	373

Year	Total	Long-term funds					Money market funds	
		Equity			Bond		Taxable	Tax-exempt
		Domestic	World	Hybrid	Taxable	Municipal		
1984	1,243	430	29	89	159	111	331	94
1985	1,528	519	43	103	229	174	350	110
1986	1,835	621	57	121	302	247	360	127
1987	2,312	743	81	164	415	366	389	154
1988	2,737	897	109	179	522	420	433	177
1989	2,935	941	128	189	561	443	470	203
1990	3,078	944	155	192	583	463	505	236
1991	3,402	985	206	211	657	523	552	268
1992	3,823	1,086	239	234	772	628	585	279
1993	4,533	1,280	306	281	950	796	627	293
1994	5,324	1,463	423	360	1,103	1,012	649	314
1995	5,724	1,611	528	411	1,166	1,011	676	321
1996	6,246	1,901	668	465	1,243	981	669	319
1997	6,675	2,181	768	499	1,283	931	685	328
1998	7,308	2,620	889	525	1,349	899	687	339
1999	7,758	2,993	945	528	1,367	882	702	341
2000	8,134	3,308	1,051	506	1,362	870	703	334
2001	8,268	3,593	1,077	470	1,300	814	689	325
2002	8,223	3,703	1,016	457	1,290	769	677	311
2003	8,107	3,648	927	472	1,309	779	659	313
2004	8,039	3,648	887	472	1,322	767	638	305
2005	7,967	3,655	911	480	1,312	740	592	277
2006	8,106	3,738	993	500	1,316	712	573	274
2007	8,019	3,671	1,059	495	1,320	672	544	258
2008	8,022	3,646	1,139	511	1,306	638	533	249
2009	7,651	3,412	1,168	481	1,287	599	476	228
2010	7,546	3,315	1,193	495	1,308	583	442	210
2011	7,581	3,257	1,267	519	1,344	563	430	201
2012	7,596	3,217	1,280	570	1,392	557	400	180
2013	7,721	3,192	1,346	613	1,455	560	382	173
2014	7,934	3,234	1,413	674	1,529	557	364	163
2015	8,121	3,272	1,490	726	1,579	573	336	145
2016	8,073	3,230	1,521	727	1,599	575	319	102
2017	7,965	3,197	1,509	738	1,566	573	299	83
2018	8,078	3,226	1,527	783	1,617	557	287	81

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. The data contain a series break beginning in 1984. All funds were reclassified in 1984, and a separate category was created for hybrid funds.

TABLE 6

Mutual Funds: Number of Funds by Composite Investment Objective

Year-end

Year	Equity funds			Investment				Bond funds				Money market funds		
	Capital appreciation	World	Total return	Hybrid funds	Investment grade	High yield	World	Government	Multisector	State muni	National muni	Taxable	Tax-exempt	
2000	1,554	1,051	1,754	506	573	217	155	322	95	588	282	703	334	
2001	1,712	1,077	1,881	470	554	221	140	294	91	550	264	689	325	
2002	1,722	1,016	1,981	457	575	209	126	283	97	514	255	677	311	
2003	1,673	927	1,975	472	601	210	120	281	97	523	256	659	313	
2004	1,648	887	2,000	472	615	215	122	275	95	513	254	638	305	
2005	1,629	911	2,026	480	609	226	123	262	92	498	242	592	277	
2006	1,665	993	2,073	500	594	219	139	255	109	477	235	573	274	
2007	1,575	1,059	2,096	495	605	219	150	243	103	444	228	544	258	
2008	1,553	1,139	2,093	511	593	214	161	236	102	414	224	533	249	
2009	1,441	1,168	1,971	481	571	205	169	237	105	377	222	476	228	
2010	1,391	1,193	1,924	495	583	209	183	229	104	361	222	442	210	
2011	1,355	1,267	1,902	519	579	209	216	222	118	346	217	430	201	
2012	1,341	1,280	1,876	570	580	217	255	216	124	336	221	400	180	
2013	1,325	1,346	1,867	613	591	229	290	213	132	331	229	382	173	
2014	1,328	1,413	1,906	674	602	240	347	198	142	322	235	364	163	
2015	1,344	1,490	1,928	726	618	239	370	191	161	319	254	336	145	
2016	1,314	1,521	1,916	727	622	242	370	189	176	319	256	319	102	
2017	1,300	1,509	1,897	738	605	239	354	186	182	312	261	299	83	
2018	1,319	1,527	1,907	783	604	247	362	193	211	293	264	287	81	

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 7

Mutual Funds: Number of Share Classes

Year-end

Year	Long-term funds						Money market funds	
	Total	Equity			Bond		Taxable	Tax-exempt
		Domestic	World	Hybrid	Taxable	Municipal		
1984	1,243	430	29	89	159	111	331	94
1985	1,528	519	43	103	229	174	350	110
1986	1,835	621	57	121	302	247	360	127
1987	2,312	743	81	164	415	366	389	154
1988	2,737	897	109	179	522	420	433	177
1989	2,935	941	128	189	561	443	470	203
1990	3,176	962	166	199	597	490	522	240
1991	3,586	1,021	227	223	686	558	591	280
1992	4,207	1,189	263	257	876	708	616	298
1993	5,561	1,560	385	347	1,206	1,054	672	337
1994	7,696	2,026	630	515	1,604	1,660	858	403
1995	9,006	2,442	845	634	1,843	1,862	953	427
1996	10,350	3,055	1,155	749	2,049	1,889	1,005	448
1997	11,988	3,858	1,449	872	2,288	1,973	1,075	473
1998	13,707	4,865	1,769	963	2,530	1,954	1,136	490
1999	15,209	5,800	1,964	1,015	2,710	1,992	1,228	500
2000	16,687	6,709	2,288	1,002	2,810	2,030	1,327	521
2001	17,967	7,712	2,496	991	2,866	1,957	1,403	542
2002	18,947	8,407	2,509	1,029	3,058	1,938	1,463	543
2003	19,290	8,531	2,366	1,110	3,215	2,040	1,460	568
2004	20,025	8,995	2,357	1,202	3,374	2,050	1,474	573
2005	20,534	9,252	2,500	1,343	3,420	1,992	1,462	565
2006	21,231	9,625	2,772	1,355	3,532	1,937	1,452	558
2007	21,569	9,688	3,027	1,350	3,624	1,878	1,443	559
2008	22,233	9,871	3,384	1,424	3,739	1,827	1,441	547
2009	21,621	9,333	3,543	1,374	3,768	1,757	1,330	516
2010	21,894	9,195	3,714	1,450	3,980	1,774	1,281	500
2011	22,277	9,173	3,953	1,561	4,142	1,719	1,254	475
2012	22,659	9,145	4,046	1,715	4,433	1,698	1,174	448
2013	23,413	9,221	4,266	1,892	4,715	1,748	1,141	430
2014	24,251	9,418	4,539	2,054	4,991	1,743	1,100	406
2015	25,078	9,631	4,798	2,237	5,212	1,773	1,056	371
2016	25,134	9,633	4,911	2,186	5,333	1,796	1,003	272
2017	25,132	9,626	4,882	2,224	5,359	1,864	946	231
2018	25,024	9,533	4,880	2,292	5,383	1,808	911	217

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 8

Mutual Funds: Number of Share Classes by Composite Investment Objective

Year-end

Year	Equity funds			Bond funds					Money market funds				
	Capital appreciation	World	Total return	Hybrid funds	Investment grade	High yield	World	Government	Multisector	State muni	National muni	Taxable	Tax-exempt
2000	3,229	2,288	3,480	1,002	1,134	488	310	678	200	1,392	638	1,327	521
2001	3,754	2,496	3,958	991	1,187	521	292	659	207	1,325	632	1,403	542
2002	3,959	2,509	4,448	1,029	1,340	525	291	675	227	1,285	653	1,463	543
2003	3,938	2,366	4,593	1,110	1,462	535	289	703	226	1,333	707	1,460	568
2004	4,062	2,357	4,933	1,202	1,554	568	302	716	234	1,333	717	1,474	573
2005	4,088	2,500	5,164	1,343	1,576	606	315	687	236	1,306	686	1,462	565
2006	4,239	2,772	5,386	1,355	1,606	616	367	664	279	1,257	680	1,452	558
2007	4,151	3,027	5,537	1,350	1,657	648	412	629	278	1,208	670	1,443	559
2008	4,175	3,384	5,696	1,424	1,660	669	491	624	295	1,150	677	1,441	547
2009	3,926	3,543	5,407	1,374	1,630	650	542	633	313	1,069	688	1,330	516
2010	3,835	3,714	5,360	1,450	1,709	685	615	652	319	1,065	709	1,281	500
2011	3,778	3,953	5,395	1,561	1,721	698	743	619	361	1,029	690	1,254	475
2012	3,764	4,046	5,381	1,715	1,798	739	892	626	378	1,002	696	1,174	448
2013	3,763	4,266	5,458	1,892	1,842	791	1,044	630	408	1,010	738	1,141	430
2014	3,789	4,539	5,629	2,054	1,872	830	1,250	600	439	990	753	1,100	406
2015	3,867	4,798	5,764	2,237	1,943	842	1,332	591	504	976	797	1,056	371
2016	3,817	4,911	5,816	2,186	1,983	851	1,348	590	561	998	798	1,003	272
2017	3,811	4,882	5,815	2,224	1,995	865	1,324	589	586	1,027	837	946	231
2018	3,831	4,880	5,702	2,292	1,983	871	1,295	586	648	963	845	911	217

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 9
Closed-End Funds: Total Assets and Number of Funds by Type of Fund

Year	Total assets										Number of funds					
	Equity funds					Bond funds					Equity funds			Bond funds		
	Total	Domestic	Global/ International	Domestic taxable	Domestic municipal	Global/ International	Total	Domestic taxable	Domestic municipal	Global/ International	Total	Domestic	Global/ International	Domestic taxable	Domestic municipal	Global/ International
1996	\$152,415	\$19,830	\$27,074	\$33,925	\$59,540	\$12,046	497	50	91	497	50	91	119	205	32	
1997	158,477	20,536	29,011	35,025	61,992	11,912	487	45	89	487	45	89	116	205	32	
1998	164,456	22,529	25,011	42,833	63,628	10,454	492	44	83	492	44	83	124	211	30	
1999	156,581	24,696	16,494	40,529	64,513	10,348	512	49	74	512	49	74	118	241	30	
2000	149,798	24,557	11,986	35,313	68,266	9,676	482	53	69	482	53	69	110	220	30	
2001	145,185	22,309	8,748	30,559	74,467	9,102	490	52	64	490	52	64	109	238	27	
2002	161,165	26,596	6,988	28,143	90,024	9,414	543	63	59	543	63	59	105	291	25	
2003	215,909	42,987	9,743	57,581	94,060	11,539	581	75	55	581	75	55	127	297	27	
2004	255,455	63,732	18,072	65,963	94,841	12,847	618	95	61	618	95	61	137	295	30	
2005	276,482	77,090	27,784	64,485	94,563	12,559	635	120	71	635	120	71	133	280	31	
2006	299,111	88,013	33,657	69,836	94,526	13,079	646	128	74	646	128	74	135	276	33	
2007	316,135	87,869	57,329	66,335	88,920	15,682	664	136	92	664	136	92	133	269	34	
2008	185,099	45,753	26,525	34,596	67,334	10,891	644	128	93	644	128	93	130	260	33	
2009	224,407	52,940	34,489	45,639	77,677	13,660	629	117	91	629	117	91	129	260	32	
2010	239,384	60,461	36,239	50,578	77,140	14,965	626	117	87	626	117	87	132	258	32	
2011	244,023	62,414	33,441	49,646	84,100	14,422	634	125	87	634	125	87	134	256	32	
2012	265,175	68,461	32,179	55,195	90,594	18,746	604	125	86	604	125	86	133	223	37	
2013	281,806	81,757	32,480	60,170	83,626	23,773	601	131	85	601	131	85	134	210	41	
2014	291,613	88,962	30,422	58,361	90,957	22,910	570	126	84	570	126	84	126	194	40	
2015	262,959	72,201	27,593	52,882	90,371	19,912	561	122	84	561	122	84	128	188	39	
2016	264,521	75,587	26,217	54,742	87,720	20,254	534	118	82	534	118	82	128	172	34	
2017	277,061	79,688	29,610	57,127	89,782	20,853	533	117	80	533	117	80	131	172	33	
2018	250,040	67,873	23,136	52,309	87,073	19,649	506	110	70	506	110	70	131	161	34	

Note: Components may not add to the total because of rounding. Totals are inclusive of preferred share classes.

TABLE 10

Closed-End Funds: Gross Issuance, Gross Redemptions, and Net Issuance by Type of Fund

Millions of dollars, annual

Year	Equity funds			Bond funds		
	Total	Domestic	Global/ International	Domestic taxable	Domestic municipal	Global/ International
Gross issuance¹						
2002	\$24,895	\$9,191	\$3	\$2,309	\$13,392	\$0
2003	40,810	11,187	50	25,587	2,954	1,032
2004	27,991	15,424	5,714	5,820	5	1,028
2005	21,388	12,559	6,628	2,046	31	124
2006	12,745	7,992	2,505	1,718	196	334
2007	31,086	5,973	19,764	2,221	433	2,695
2008	275	8	145	121	0	0
2009	3,615	549	485	876	1,389	317
2010	14,017	3,719	114	2,374	7,454	358
2011	14,990	3,850	1,469	1,000	8,669	2
2012	16,844	3,815	533	4,088	6,328	2,081
2013	17,850	4,311	157	4,525	2,393	6,464
2014	8,456	4,263	619	677	2,897	1
2015	4,292	572	1,461	1,403	804	51
2016	3,739	346	156	2,101	1,132	4
2017	2,920	776	302	1,270	221	350
2018	2,165	111	50	143	1,862	0
Gross redemptions²						
2007	\$2,717	\$1,024	\$105	\$254	\$1,313	\$20
2008	22,713	7,060	1,832	7,031	6,089	701
2009	6,875	2,916	639	1,664	1,627	30
2010	8,587	1,724	55	474	6,335	0
2011	8,972	644	209	276	7,843	0
2012	5,459	974	420	838	3,226	0
2013	3,335	214	649	604	1,864	5
2014	3,522	444	124	411	2,330	213
2015	2,463	348	419	725	816	156
2016	2,167	104	340	664	556	502
2017	2,350	923	703	512	98	113
2018	1,568	463	109	101	891	4
Net issuance³						
2007	\$28,369	\$4,949	\$19,659	\$1,966	-\$880	\$2,675
2008	-22,438	-7,052	-1,687	-6,910	-6,089	-700
2009	-3,259	-2,366	-154	-788	-238	287
2010	5,430	1,995	59	1,900	1,119	357
2011	6,018	3,206	1,260	724	825	2
2012	11,385	2,840	113	3,249	3,102	2,081
2013	14,515	4,097	-491	3,921	530	6,459
2014	4,935	3,819	494	266	567	-212
2015	1,829	224	1,043	678	-11	-104
2016	1,572	242	-184	1,437	576	-498
2017	570	-147	-401	758	123	237
2018	597	-352	-60	42	971	-4

¹ Gross issuance of shares is the value of net proceeds from underwritings, additional offerings, and other issuance. Data are not available prior to 2002.

² Gross redemptions of shares is the value of share repurchases and fund liquidations. Data are not available prior to 2007.

³ Net issuance of shares is the dollar value of gross issuance minus gross redemptions. A positive number indicates that gross issuance exceeded gross redemptions. A negative number indicates that gross redemptions exceeded gross issuance. Data are not available prior to 2007.

Note: Components may not add to the total because of rounding. Totals are inclusive of preferred share classes.

TABLE 11

Exchange-Traded Funds: Total Net Assets by Type of Fund

Millions of dollars, year-end

Year	Investment objective										Legal status			Memo		
	Total	Equity					Commodities ²					1940 Act ETFs			Funds of funds ⁴	
		Broad-based	Sector ¹	Global/International		Bond	Hybrid	Commodities ²	Hybrid	Bond	Index	Actively managed	Non-1940 Act ETFs ³			
				Domestic equity	International											Commodities ²
1996	\$2,411	\$2,159	-	\$252	-	-	-	-	-	-	\$2,411	-	-	-	-	
1997	6,707	6,200	-	506	-	-	-	-	-	-	6,707	-	-	-	-	
1998	15,568	14,058	\$484	1,026	-	-	-	-	-	-	15,568	-	-	-	-	
1999	33,873	29,374	2,507	1,992	-	-	-	-	-	-	33,873	-	-	-	-	
2000	65,585	60,529	3,015	2,041	-	-	-	-	-	-	65,585	-	-	-	-	
2001	82,993	74,752	5,224	3,016	-	-	-	-	-	-	82,993	-	-	-	-	
2002	102,143	86,985	5,919	5,324	-	-	-	-	\$3,915	-	102,143	-	-	-	-	
2003	150,983	120,430	11,901	13,984	-	-	-	-	4,667	-	150,983	-	-	-	-	
2004	227,540	163,730	20,315	33,644	\$1,335	-	8,516	-	8,516	-	226,205	-	\$1,335	-	-	
2005	300,820	186,832	28,975	65,210	4,798	-	15,004	-	15,004	-	296,022	-	4,798	-	-	
2006	422,550	232,487	43,655	111,194	14,699	-	20,514	-	20,514	-	407,850	-	14,699	-	-	
2007	608,422	300,930	64,117	179,702	28,906	\$119	34,648	-	34,648	-	579,517	-	28,906	-	-	
2008	531,288	266,161	58,374	113,684	35,728	132	57,209	-	57,209	-	495,314	\$245	35,728	-	\$97	
2009	777,128	304,044	82,053	209,315	74,528	169	107,018	-	107,018	-	701,586	1,014	74,528	-	824	
2010	991,989	372,377	103,807	276,622	101,081	322	137,781	-	137,781	-	888,175	2,759	101,055	-	1,294	
2011	1,048,139	400,702	108,548	245,114	109,176	377	184,222	-	184,222	-	934,232	5,039	108,868	-	1,575	
2012	1,337,123	509,350	135,378	328,521	120,016	656	243,203	-	243,203	-	1,207,037	10,211	119,875	-	2,215	
2013	1,674,713	761,798	202,706	398,834	64,042	1,469	245,862	-	245,862	-	1,596,580	14,267	63,866	-	2,561	
2014	1,974,550	935,825	267,523	414,805	56,974	3,047	296,376	-	296,376	-	1,901,223	16,789	56,538	-	5,030	
2015	2,100,658	965,338	267,355	474,640	49,317	3,738	340,270	-	340,270	-	2,029,296	22,891	48,471	-	10,476	
2016	2,524,388	1,224,187	302,637	502,702	62,777	4,951	427,133	-	427,133	-	2,433,745	29,014	61,629	-	9,701	
2017	3,400,705	1,603,965	374,463	792,248	68,927	7,800	553,302	-	553,302	-	3,288,444	44,974	67,288	-	11,944	
2018	3,370,665	1,606,004	332,621	725,345	65,868	8,708	632,120	-	632,120	-	3,239,002	69,257	62,406	-	12,718	

¹ This category includes funds both registered and not registered under the Investment Company Act of 1940.² This category includes funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.³ The funds in this category are not registered under the Investment Company Act of 1940.⁴ Data for ETFs that invest primarily in other ETFs are excluded from the totals.

Note: Components may not add to the total because of rounding.

Sources: Investment Company Institute and Strategic Insight Simfund

TABLE 12

Exchange-Traded Funds: Number of Funds by Type of Fund

Year-end

Year	Investment objective										Legal status			Memo
	Equity					Global/International					1940 Act ETFs			
	Domestic equity		Sector ¹	Global/International	Commodities ²	Hybrid	Bond	Index	Actively managed	Non-1940 Act ETFs ³	Funds of funds ⁴			
	Broad-based	Sector ¹												
1996	19	2	-	17	-	-	-	19	-	-	-	-		
1997	19	2	-	17	-	-	-	19	-	-	-	-		
1998	29	3	9	17	-	-	-	29	-	-	-	-		
1999	30	4	9	17	-	-	-	30	-	-	-	-		
2000	80	29	26	25	-	-	-	80	-	-	-	-		
2001	102	34	34	34	-	-	-	102	-	-	-	-		
2002	113	34	32	39	-	8	-	113	-	-	-	-		
2003	119	39	33	41	-	6	-	119	-	-	-	-		
2004	152	60	42	43	1	6	-	151	-	1	-	-		
2005	204	81	65	49	3	6	-	201	-	3	-	-		
2006	359	133	119	85	16	6	-	343	-	16	-	-		
2007	629	197	191	159	28	49	5	601	-	28	-	-		
2008	728	204	186	225	45	62	6	670	13	45	15	15		
2009	797	222	179	244	49	98	5	727	21	49	23	23		
2010	923	243	193	298	55	128	6	843	26	54	27	27		
2011	1,135	288	229	368	75	168	7	1,029	33	73	31	31		
2012	1,195	275	222	404	79	202	13	1,076	42	77	44	44		
2013	1,295	293	235	438	76	238	15	1,163	60	72	37	37		
2014	1,412	317	236	494	82	264	19	1,232	108	72	39	39		
2015	1,595	361	266	592	81	274	21	1,402	120	73	49	49		
2016	1,716	396	304	629	80	285	22	1,500	150	66	58	58		
2017	1,835	472	301	629	91	309	33	1,570	196	69	65	65		
2018	1,988	515	327	668	91	352	35	1,660	259	69	69	69		

¹ This category includes funds both registered and not registered under the Investment Company Act of 1940.

² This category includes funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

³ The funds in this category are not registered under the Investment Company Act of 1940.

⁴ Data for ETFs that invest primarily in other ETFs are excluded from the totals.

Sources: Investment Company Institute and Strategic Insight Simfund

TABLE 13
Exchange-Traded Funds: Net Issuance by Type of Fund
 Millions of dollars, annual

Year	Investment objective										Legal status			Memo
	Equity					Commodities ²					1940 Act ETFs			
	Total	Broad-based	Sector ¹	Global/ International	Commodities ²	Hybrid	Bond	Index	Actively managed	Non-1940 Act ETFs ³	Funds of funds ⁴			
1996	\$1,108	\$842	-	\$266	-	-	-	\$1,108	-	-	-	-	-	
1997	3,466	3,160	-	306	-	-	-	3,466	-	-	-	-	-	
1998	6,195	5,158	\$484	553	-	-	-	6,195	-	-	-	-	-	
1999	11,929	10,221	1,596	112	-	-	-	11,929	-	-	-	-	-	
2000	42,508	40,591	1,033	884	-	-	-	42,508	-	-	-	-	-	
2001	31,012	26,911	2,735	1,366	-	-	-	31,012	-	-	-	-	-	
2002	45,302	35,477	2,304	3,792	-	\$3,729	-	45,302	-	-	-	-	-	
2003	15,810	5,737	3,587	5,764	-	721	-	15,810	-	-	-	-	-	
2004	56,375	29,084	6,514	15,645	\$1,353	3,778	-	55,021	-	\$1,353	-	-	-	
2005	56,729	16,941	6,719	23,455	2,859	6,756	-	53,871	-	2,859	-	-	-	
2006	73,995	21,589	9,780	28,423	8,475	5,729	-	65,520	-	8,475	-	-	-	
2007	150,617	61,152	18,122	48,842	9,062	\$122	13,318	141,555	-	9,062	-	-	-	
2008	177,220	88,105	30,296	25,243	10,567	58	22,952	166,372	\$281	10,567	\$107	-	-	
2009	116,469	-11,842	14,329	39,599	28,410	15	45,958	87,336	724	28,410	237	-	-	
2010	117,982	28,317	10,187	41,527	8,155	144	29,652	108,136	1,716	8,129	433	-	-	
2011	117,646	34,657	9,674	24,250	2,948	72	46,045	112,464	2,555	2,627	385	-	-	
2012	185,399	57,744	14,307	51,896	8,889	246	52,318	171,377	4,988	9,035	505	-	-	
2013	179,959	99,545	34,434	62,807	-29,870	849	12,195	205,154	4,710	-29,905	1,106	-	-	
2014	240,844	102,394	40,593	46,642	-1,420	1,629	51,007	240,026	2,584	-1,766	2,365	-	-	
2015	230,970	49,757	13,368	109,668	2,118	1,110	54,949	222,005	7,435	1,530	5,726	-	-	
2016	283,914	147,805	19,705	20,195	11,679	1,088	83,442	266,170	6,300	11,444	-638	-	-	
2017	470,809	156,459	29,542	159,771	1,603	2,500	120,933	454,249	15,432	1,128	1,058	-	-	
2018	310,871	141,229	-2,153	70,261	1,700	1,689	98,145	283,313	28,298	-741	1,988	-	-	

¹ This category includes funds both registered and not registered under the Investment Company Act of 1940.

² This category includes funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

³ The funds in this category are not registered under the Investment Company Act of 1940.

⁴ Data for ETFs that invest primarily in other ETFs are excluded from the totals.

Note: Data for ETF net share issuance include reinvested dividends. Components may not add to the total because of rounding.

Sources: Investment Company Institute and Strategic Insight Simfund

TABLE 14

Unit Investment Trusts: Total Net Assets, Number of Trusts, and New Deposits by Type of Trust

Year	Total net assets				Number of trusts				New deposits			
	Millions of dollars, year-end				Year-end				Millions of dollars, annual			
	Total trusts	Equity	Taxable debt	Tax-free debt	Total trusts	Equity	Taxable debt	Tax-free debt	Total trusts	Equity	Taxable debt	Tax-free debt
1996	\$72,204	\$22,922	\$8,485	\$40,796	11,764	378	591	10,795	\$21,662	\$18,316	\$800	\$2,546
1997	84,761	40,747	6,480	37,533	11,593	563	513	10,517	38,546	35,855	771	1,919
1998	93,943	56,413	5,380	32,151	10,966	872	414	9,680	47,675	45,947	562	1,166
1999	91,970	62,128	4,283	25,559	10,414	1,081	409	8,924	52,046	50,629	343	1,074
2000	74,161	48,060	3,502	22,599	10,072	1,554	369	8,149	43,649	42,570	196	883
2001	49,249	26,467	3,784	18,999	9,295	1,500	324	7,471	19,049	16,927	572	1,550
2002	36,016	14,651	4,020	17,345	8,303	1,247	366	6,690	11,600	9,131	862	1,607
2003	35,826	19,024	3,311	13,491	7,233	1,206	320	5,707	12,731	10,071	931	1,729
2004	37,267	23,201	2,635	11,432	6,499	1,166	295	5,038	17,125	14,559	981	1,585
2005	40,894	28,634	2,280	9,980	6,019	1,251	304	4,464	22,598	21,526	289	782
2006	49,662	38,809	2,142	8,711	5,907	1,566	319	4,022	29,057	28,185	294	578
2007	53,040	43,295	2,066	7,680	6,030	1,964	327	3,739	35,836	35,101	298	438
2008	28,543	20,080	2,007	6,456	5,984	2,175	343	3,466	23,590	22,335	557	698
2009	38,336	24,774	3,668	9,894	6,049	2,145	438	3,466	22,293	16,159	2,201	3,933
2010	50,567	34,112	3,780	12,675	5,971	2,212	491	3,268	30,936	25,003	928	5,006
2011	59,931	40,638	3,602	15,691	6,043	2,395	512	3,136	36,026	31,900	765	3,361
2012	71,725	51,905	4,063	15,757	5,787	2,426	553	2,808	43,404	40,012	1,236	2,157
2013	86,504	70,850	3,560	12,094	5,552	2,428	580	2,544	55,628	53,719	916	993
2014	101,136	85,887	3,135	12,114	5,381	2,501	593	2,287	65,529	63,991	624	915
2015	94,127	80,417	2,597	11,113	5,188	2,609	587	1,992	65,949	64,582	492	875
2016	84,627	71,590	2,676	10,362	5,100	2,586	635	1,879	49,346	47,564	631	1,151
2017	84,939	73,262	2,370	9,307	5,035	2,557	639	1,839	49,580	48,695	322	563
2018	69,932	59,807	2,246	7,880	4,917	2,522	642	1,753	49,289	48,285	498	506

Note: Components may not add to the total because of rounding.

TABLE 15

Long-Term Mutual Funds: Liquid Assets and Liquid Assets as a Percentage of Total Net Assets

Year-end

Year	Liquid assets* Millions of dollars			Liquid assets* as a percentage of total net assets Percent				
	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds
1984	\$12,181	\$7,295	\$878	\$4,007	8.9%	9.1%	7.9%	8.7%
1985	20,593	10,452	1,413	8,728	8.2	9.4	8.0	7.1
1986	30,611	14,612	2,514	13,485	7.2	9.5	9.8	5.5
1987	37,930	16,319	2,730	18,881	8.4	9.3	9.3	7.6
1988	44,980	17,742	2,986	24,252	9.5	9.4	11.3	9.5
1989	44,603	25,602	5,747	13,253	8.1	10.4	16.1	4.9
1990	48,369	27,344	4,198	16,827	8.5	11.4	11.7	5.8
1991	60,243	30,657	3,309	26,277	7.1	7.6	6.4	6.7
1992	73,858	42,417	6,560	24,881	6.7	8.3	8.5	4.9
1993	99,251	57,539	16,613	25,099	6.6	7.8	11.7	4.0
1994	120,228	70,885	19,929	29,414	7.8	8.3	12.3	5.6
1995	141,245	97,743	19,271	24,231	6.9	7.8	9.3	4.0
1996	151,196	107,667	17,954	25,575	5.8	6.2	7.2	4.0
1997	198,035	145,560	24,634	27,841	5.8	6.1	7.9	3.9
1998	190,519	143,507	25,289	21,724	4.6	4.8	7.0	2.6
1999	217,266	174,660	20,976	21,630	4.2	4.3	5.6	2.7
2000	276,329	224,990	26,777	24,562	5.4	5.7	7.4	3.0
2001	222,019	170,315	26,906	24,798	4.7	5.0	7.5	2.7
2002	208,669	120,491	25,422	62,757	5.1	4.6	7.6	5.5
2003	259,441	154,859	30,645	73,937	4.8	4.2	6.8	5.9
2004	307,048	184,119	36,419	86,510	5.0	4.2	6.6	6.7
2005	303,161	190,880	43,133	69,149	4.4	3.9	6.9	5.1
2006	346,718	218,626	57,461	70,631	4.3	3.7	7.9	4.7
2007	381,641	266,256	56,813	58,572	4.3	4.2	6.9	3.5
2008	314,270	203,272	52,712	58,285	5.4	5.6	9.4	3.7
2009	365,705	169,791	52,845	143,068	4.7	3.5	7.4	6.5
2010	330,323	192,599	61,022	76,702	3.7	3.4	7.2	3.0
2011	462,132	182,547	70,744	208,841	5.2	3.5	8.0	7.3
2012	517,184	200,436	101,222	215,526	5.0	3.4	9.8	6.4
2013	661,363	272,504	151,578	237,280	5.4	3.5	11.8	7.2
2014	745,389	291,688	168,182	285,519	5.7	3.5	12.2	8.3
2015	677,166	258,379	185,527	233,260	5.2	3.2	13.8	6.8
2016	674,376	257,872	179,700	236,803	4.9	3.0	12.8	6.5
2017	802,582	307,302	197,804	297,476	5.0	3.0	12.8	7.3
2018	680,981	268,927	170,530	241,524	4.6	2.9	12.3	5.9

* Liquid assets include certificates of deposit, commercial paper, US government agency issues (one year maturity or less), repurchase agreements, cash reserves, other securities (one year maturity or less), and receivables minus liabilities.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 16

Long-Term Mutual Funds: Liquid Assets* as a Percentage of Total Net Assets by Composite Investment Objective

Percent, year-end

Year	Equity funds				Bond funds						
	Capital appreciation	World	Total return	Hybrid funds	Investment grade	High yield	World	Government	Multisector	State muni	National muni
2000	6.1%	7.7%	4.9%	7.4%	4.5%	9.0%	-2.2%	-2.8%	-2.2%	3.1%	3.5%
2001	4.9	6.2	4.8	7.5	3.3	7.6	-3.7	-0.6	0.6	2.3	3.2
2002	4.9	5.7	4.1	7.6	9.8	7.9	-2.5	0.5	7.1	2.6	4.2
2003	3.7	5.8	4.1	6.8	9.5	6.1	3.3	1.7	8.7	2.2	3.7
2004	3.6	5.5	4.2	6.6	8.8	6.1	6.1	3.8	8.3	2.9	6.5
2005	3.3	5.2	3.7	6.9	6.4	5.2	6.1	1.2	6.7	2.5	5.7
2006	3.4	4.3	3.7	7.9	6.8	5.0	12.5	-4.1	2.6	2.0	4.5
2007	4.3	5.2	3.6	6.9	2.1	4.7	17.0	-0.8	4.5	1.8	4.6
2008	6.1	7.9	4.2	9.4	1.1	10.9	13.0	4.4	3.6	1.7	4.9
2009	4.5	3.9	2.8	7.4	6.8	5.5	13.5	4.0	6.6	2.8	6.0
2010	3.5	4.4	2.9	7.2	0.3	6.0	16.5	-2.5	2.7	2.1	5.2
2011	3.8	4.5	2.8	8.0	7.2	7.3	17.5	0.9	5.2	3.1	6.6
2012	3.6	4.0	2.9	9.8	5.4	5.7	15.1	2.8	6.9	3.4	6.2
2013	3.6	4.5	3.0	11.8	6.8	4.4	17.2	1.0	7.0	2.0	6.5
2014	3.3	4.9	2.9	12.2	7.5	4.5	19.3	2.5	8.1	3.6	7.6
2015	3.3	4.3	2.6	13.8	4.7	5.9	15.0	3.2	9.5	4.4	8.2
2016	3.1	4.2	2.4	12.8	6.0	5.7	13.7	1.3	6.4	2.7	6.7
2017	3.5	4.1	2.2	12.8	7.4	5.1	15.4	3.8	5.2	2.6	6.3
2018	3.1	4.0	2.3	12.3	5.6	4.2	14.1	2.2	2.5	2.6	6.5

* Liquid assets include certificates of deposit, commercial paper, US government agency issues (one year maturity or less), repurchase agreements, cash reserves, other securities (one year maturity or less), and receivables minus liabilities.

TABLE 17

Long-Term Mutual Funds: Net New Cash Flow, Total Net Assets, and Flows as a Percentage of Total Net Assets

Millions of dollars

Year	Net new cash flow				Total net assets				Net new cash flow ratio*			
	Annual				Year-end				Percentage			
	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds
1984	\$19,194	\$4,336	\$1,801	\$13,058	\$137,126	\$79,735	\$11,152	\$46,239	53.6%	8.3%	33.4%	136.5%
1985	73,490	6,643	3,720	63,127	251,583	111,329	17,609	122,646	51.7	18.3	39.7	83.7
1986	129,991	20,386	6,988	102,618	423,516	154,446	25,764	243,305	17.5	12.5	14.5	2.8
1987	29,776	19,231	3,748	6,797	453,076	175,452	29,253	248,370	-5.1	-8.5	-12.6	-1.8
1988	-23,119	-14,948	-3,684	-4,488	471,417	189,383	26,346	255,688	1.9	3.6	12.1	-0.5
1989	8,731	6,774	3,183	-1,226	552,578	245,037	35,636	271,905	3.8	5.3	4.1	2.4
1990	20,997	12,915	1,463	6,619	565,998	239,478	35,981	290,539	18.7	16.7	19.6	20.3
1991	106,004	39,888	7,067	59,049	849,725	404,732	52,045	392,948	20.2	19.5	41.7	18.1
1992	171,833	78,983	21,725	71,126	1,095,390	514,087	77,630	503,673	22.1	24.8	54.9	14.3
1993	242,034	127,261	42,619	72,154	1,503,626	740,667	142,331	620,628	5.0	15.5	15.5	-10.0
1994	74,741	114,525	21,998	-61,782	1,542,688	852,765	161,405	528,519	7.8	14.6	2.3	-1.5
1995	120,245	124,392	3,738	-7,884	2,054,588	1,249,077	206,705	598,807	11.2	17.4	5.7	0.2
1996	230,198	216,935	11,796	1,468	2,618,485	1,726,009	248,358	644,118	10.3	13.2	6.3	4.4
1997	270,994	227,107	15,755	28,132	3,402,280	2,367,951	311,713	722,615	7.1	6.6	3.4	10.1
1998	240,458	156,856	10,457	73,144	4,164,395	2,977,539	360,037	826,819	4.1	6.3	-3.6	-0.6
1999	169,232	187,550	-13,031	-5,288	5,220,693	4,039,961	374,315	806,417	4.4	7.8	-9.8	-5.9
2000	230,927	315,325	-36,736	-47,661	5,110,689	3,932,725	360,841	817,123	2.6	0.8	2.0	11.1
2001	131,019	33,272	7,235	90,512	4,683,769	3,391,004	357,947	934,818	2.6	-0.9	2.2	15.3
2002	122,354	-28,888	7,979	143,263	4,115,111	2,642,057	335,270	1,137,784	5.3	5.5	11.6	2.9
2003	216,445	143,996	38,958	33,491	5,359,359	3,652,839	447,530	1,258,989	3.9	4.7	11.9	-1.2
2004	210,054	171,903	53,052	-14,901	6,191,574	4,342,123	552,250	1,297,200	3.1	2.9	7.7	2.0
2005	191,923	123,843	42,752	25,328	6,861,884	4,884,874	621,477	1,355,533	3.3	3.0	3.2	4.4
2006	276,826	147,242	19,859	59,725	8,056,786	5,831,591	731,503	1,493,693	2.8	1.3	5.5	7.4
2007	224,138	73,216	40,361	110,561	8,909,694	6,412,592	821,474	1,675,628	-2.4	-3.4	-3.1	1.9
2008	-210,794	-216,457	-25,523	31,185	5,786,458	3,654,545	562,262	1,569,652	6.8	5.0	3.5	23.7
2009	393,337	2,150	19,792	371,395	7,793,077	4,871,520	717,580	2,203,977	3.1	-0.5	5.0	10.5
2010	243,647	-24,384	35,612	232,420	9,027,544	5,596,173	842,198	2,589,174	0.3	-2.3	4.7	4.6
2011	28,200	-129,506	39,682	118,024	8,939,449	5,212,787	883,980	2,842,683	2.2	-2.9	5.2	10.8
2012	200,108	-152,678	46,267	306,519	10,360,421	5,938,757	1,032,462	3,389,202	1.6	2.7	7.2	-2.1
2013	163,016	159,481	74,733	-71,198	12,331,127	7,762,556	1,284,695	3,283,876	0.8	0.3	2.4	1.3
2014	99,728	25,458	30,399	43,871	13,151,980	8,313,989	1,379,201	3,458,790	-0.9	-0.9	-1.4	-0.7
2015	-119,613	-75,620	-19,046	-20,947	12,903,124	8,149,607	1,341,466	3,412,051	-1.5	-3.2	-3.1	3.1
2016	-192,974	-258,030	-41,882	106,938	13,625,320	8,577,267	1,399,866	3,648,187	0.5	-1.9	-2.0	7.1
2017	72,337	-159,231	-28,115	259,682	15,916,658	10,305,955	1,545,365	4,065,338	-2.2	-2.5	-5.9	0.0
2018	-349,727	-260,525	-91,030	1,829	14,669,831	9,224,755	1,383,259	4,061,817				

Note: Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges. Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 18

Equity Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow

Millions of dollars, annual

Year	Net new cash flow ¹	Sales			Redemptions		
		New + exchange	New ²	Exchange ³	Regular + exchange	Regular ⁴	Exchange ⁵
1984	\$4,336	\$28,705	\$16,586	\$12,119	\$24,369	\$10,669	\$13,700
1985	6,643	40,608	25,046	15,562	33,965	17,558	16,406
1986	20,386	87,997	50,774	37,224	67,612	26,051	41,561
1987	19,231	139,596	65,093	74,502	120,365	38,601	81,764
1988	-14,948	68,827	25,641	43,186	83,775	33,247	50,528
1989	6,774	89,345	46,817	42,528	82,571	37,229	45,342
1990	12,915	104,334	62,872	41,462	91,419	44,487	46,931
1991	39,888	146,618	90,192	56,427	106,730	53,394	53,336
1992	78,983	201,720	134,309	67,411	122,738	61,465	61,272
1993	127,261	307,356	213,639	93,717	180,095	91,944	88,151
1994	114,525	366,659	252,887	113,772	252,134	141,097	111,037
1995	124,392	433,853	282,937	150,915	309,461	170,402	139,059
1996	216,935	674,323	442,372	231,951	457,388	240,533	216,854
1997	227,107	880,285	579,063	301,222	653,178	362,020	291,158
1998	156,856	1,065,012	699,372	365,640	908,156	534,090	374,066
1999	187,550	1,410,664	918,438	492,226	1,223,113	743,983	479,130
2000	315,325	1,970,909	1,318,803	652,107	1,655,585	1,031,260	624,325
2001	33,272	1,329,228	953,220	376,008	1,295,956	891,564	404,392
2002	-28,888	1,213,934	893,841	320,094	1,242,822	875,050	367,772
2003	143,996	1,073,973	837,298	236,676	929,977	707,423	222,554
2004	171,903	1,096,318	926,741	169,577	924,415	758,715	165,701
2005	123,843	1,192,366	1,016,940	175,427	1,068,524	877,996	190,527
2006	147,242	1,416,347	1,213,690	202,657	1,269,106	1,047,184	221,922
2007	73,216	1,728,761	1,506,107	222,655	1,655,545	1,388,642	266,903
2008	-216,457	1,525,723	1,331,066	194,656	1,742,180	1,467,312	274,867
2009	2,150	1,194,084	1,032,246	161,838	1,191,934	1,011,588	180,346
2010	-24,384	1,405,936	1,236,196	169,740	1,430,320	1,238,430	191,890
2011	-129,506	1,492,242	1,322,125	170,117	1,621,748	1,417,372	204,376
2012	-152,678	1,449,655	1,260,225	189,430	1,602,333	1,382,129	220,203
2013	159,481	1,864,206	1,641,084	223,122	1,704,725	1,496,823	207,903
2014	25,458	2,009,016	1,797,760	211,256	1,983,558	1,773,309	210,249
2015	-75,620	2,004,953	1,795,262	209,692	2,080,573	1,875,778	204,795
2016	-258,030	1,941,717	1,722,731	218,986	2,199,746	1,955,001	244,745
2017	-159,231	2,226,122	1,937,952	288,170	2,385,353	2,072,874	312,479
2018	-260,525	2,408,476	2,114,454	294,022	2,669,002	2,352,601	316,400

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

² New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.

³ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

⁴ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

⁵ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 19

Hybrid Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow

Millions of dollars, annual

Year	Net new cash flow ¹	Sales			Redemptions		
		New + exchange	New ²	Exchange ³	Regular + exchange	Regular ⁴	Exchange ⁵
1984	\$1,801	\$4,118	\$3,842	\$277	\$2,318	\$2,017	\$301
1985	3,720	7,502	6,976	526	3,782	3,161	621
1986	6,988	13,535	12,342	1,194	6,548	5,162	1,386
1987	3,748	14,948	12,420	2,529	11,200	7,848	3,353
1988	-3,684	6,259	4,601	1,658	9,943	7,521	2,422
1989	3,183	11,139	9,334	1,805	7,956	5,780	2,176
1990	1,463	9,671	7,989	1,682	8,208	5,600	2,608
1991	7,067	16,860	13,754	3,106	9,793	7,011	2,782
1992	21,725	32,772	26,463	6,309	11,047	7,209	3,838
1993	42,619	60,610	49,526	11,083	17,990	11,735	6,256
1994	21,998	58,541	49,043	9,498	36,544	25,298	11,245
1995	3,738	43,024	35,385	7,640	39,286	27,807	11,479
1996	11,796	56,783	47,436	9,348	44,988	31,413	13,575
1997	15,755	68,345	55,261	13,084	52,590	38,265	14,326
1998	10,457	82,691	67,294	15,397	72,234	53,161	19,073
1999	-13,031	81,904	67,607	14,297	94,935	69,790	25,144
2000	-36,736	70,364	56,920	13,445	107,100	77,159	29,941
2001	7,235	83,442	65,530	17,912	76,207	58,803	17,405
2002	7,979	93,414	75,394	18,021	85,436	67,201	18,234
2003	38,958	115,845	96,728	19,117	76,888	63,367	13,520
2004	53,052	143,459	125,434	18,025	90,407	77,520	12,887
2005	42,752	144,267	126,616	17,650	101,514	86,200	15,314
2006	19,859	146,088	127,532	18,555	126,229	106,066	20,163
2007	40,361	206,397	183,464	22,933	166,036	144,102	21,934
2008	-25,523	181,436	155,075	26,361	206,959	165,395	41,564
2009	19,792	174,217	150,048	24,169	154,425	127,179	27,246
2010	35,612	205,830	181,871	23,959	170,218	146,547	23,672
2011	39,682	263,981	234,392	29,589	224,299	191,200	33,099
2012	46,267	266,569	239,916	26,653	220,302	195,788	24,514
2013	74,733	339,527	302,752	36,775	264,794	233,859	30,935
2014	30,399	323,388	291,911	31,476	292,989	265,828	27,161
2015	-19,046	299,590	268,713	30,877	318,636	284,185	34,451
2016	-41,882	302,250	263,627	38,624	344,132	303,791	40,342
2017	-28,115	291,354	250,525	40,829	319,468	278,347	41,121
2018	-91,030	262,375	229,475	32,901	353,406	313,974	39,432

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

² New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.

³ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

⁴ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

⁵ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 20

Bond Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow

Millions of dollars, annual

Year	Net new cash flow ¹	Sales			Redemptions		
		New + exchange	New ²	Exchange ³	Regular + exchange	Regular ⁴	Exchange ⁵
1984	\$13,058	\$25,554	\$20,774	\$4,780	\$12,497	\$7,344	\$5,152
1985	63,127	83,359	74,485	8,874	20,232	13,095	7,137
1986	102,618	158,874	138,240	20,634	56,256	35,776	20,480
1987	6,797	123,528	93,725	29,803	116,731	69,628	47,104
1988	-4,488	72,174	47,378	24,796	76,662	51,558	25,103
1989	-1,226	71,770	48,602	23,168	72,996	48,517	24,480
1990	6,619	80,414	56,861	23,552	73,795	47,947	25,848
1991	59,049	141,399	107,819	33,580	82,350	56,111	26,239
1992	71,126	217,769	171,897	45,872	146,643	96,398	50,246
1993	72,154	262,155	208,459	53,696	190,001	127,163	62,838
1994	-61,782	186,270	130,728	55,542	248,051	162,620	85,432
1995	-7,884	164,348	108,361	55,986	172,232	114,559	57,673
1996	1,468	201,252	135,795	65,457	199,784	125,092	74,693
1997	28,132	240,600	174,592	66,008	212,468	140,297	72,171
1998	73,144	312,004	228,564	83,440	238,860	159,225	79,635
1999	-5,288	297,350	215,587	81,764	302,638	206,057	96,581
2000	-47,661	250,001	186,271	63,730	297,662	217,819	79,844
2001	90,512	393,737	301,021	92,716	303,225	224,211	79,014
2002	143,263	514,694	401,687	113,008	371,431	283,497	87,934
2003	33,491	520,642	428,512	92,130	487,151	376,116	111,035
2004	-14,901	395,224	340,323	54,901	410,125	341,056	69,070
2005	25,328	402,232	350,627	51,605	376,904	321,127	55,776
2006	59,725	446,110	390,877	55,234	386,385	328,938	57,447
2007	110,561	591,464	505,718	85,745	480,903	409,347	71,555
2008	31,185	709,214	580,580	128,633	678,028	581,399	96,630
2009	371,395	1,006,192	856,450	149,742	634,797	524,597	110,200
2010	232,420	1,089,250	964,032	125,217	856,830	742,133	114,697
2011	118,024	1,103,549	975,974	127,575	985,525	869,663	115,863
2012	306,519	1,246,679	1,121,167	125,512	940,161	837,899	102,261
2013	-71,198	1,307,639	1,158,510	149,129	1,378,837	1,190,488	188,349
2014	43,871	1,278,248	1,174,182	104,066	1,234,377	1,137,576	96,801
2015	-24,947	1,195,117	1,090,489	104,629	1,220,064	1,119,502	100,562
2016	106,938	1,315,909	1,188,167	127,742	1,208,971	1,102,267	106,705
2017	259,682	1,407,854	1,262,215	145,639	1,148,172	1,026,868	121,304
2018	1,829	1,444,776	1,300,307	144,469	1,442,947	1,304,260	138,687

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

² New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.

³ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

⁴ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

⁵ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 21
Long-Term Mutual Funds: Net New Cash Flow by Composite Investment Objective
 Millions of dollars, annual

Year	Equity funds			Investment grade			Bond funds			
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni
2000	\$262,240	\$57,893	-\$4,809	-\$36,736	-\$12,798	-\$4,648	-\$16,633	-\$4,439	-\$5,438	-\$8,998
2001	-22,874	-23,242	79,389	7,235	3,371	-1,151	24,657	2,436	6,293	5,892
2002	-52,330	-4,118	27,560	7,979	4,309	-71	53,225	4,475	5,259	11,549
2003	27,022	24,361	92,613	38,958	22,589	4,028	-22,124	5,539	-8,212	1,471
2004	-11,539	71,583	111,858	53,052	-2,843	4,310	-26,259	3,160	-7,939	-7,410
2005	-25,447	106,911	42,379	42,752	-13,495	6,404	-14,211	5,171	1,232	3,480
2006	-27,082	150,923	23,401	19,859	3,322	10,937	-17,834	11,203	3,876	11,229
2007	-43,158	141,736	-25,362	40,361	-4,755	21,130	-2,242	9,646	3,233	7,622
2008	-48,373	-66,945	-101,139	-25,523	-5,229	6,070	20,600	-6,628	-2,301	10,121
2009	-7,270	29,645	-20,224	19,792	22,466	32,554	18,950	24,801	6,081	64,296
2010	-26,724	56,679	-54,340	35,612	19,453	70,076	4,059	16,427	-2,838	14,499
2011	-44,500	4,124	-89,130	39,682	22,004	44,462	3,338	8,736	-9,890	-1,726
2012	-39,022	6,563	-120,218	46,267	34,550	42,969	33,743	40,285	8,539	41,633
2013	-2,981	141,377	21,085	74,733	55,689	66,239	-51,224	14,307	-22,420	-36,074
2014	-41,233	85,219	-18,528	30,399	-43,854	24,402	5,729	20,396	-1,064	29,051
2015	-54,254	94,172	-115,538	-19,046	-36,417	-23,568	12,403	8,615	682	14,109
2016	-138,374	-23,058	-96,598	-41,882	6,852	-39,539	11,294	21,580	2,454	20,548
2017	-103,192	76,977	-133,016	-28,115	-17,963	47,240	2,031	63,844	-2,010	28,332
2018	-93,653	-7,315	-159,558	-91,030	-34,137	7,350	5,772	2,017	-7,634	11,813

Note: Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 22

Long-Term Mutual Funds: New Sales by Composite Investment Objective

Millions of dollars, annual

Year	Equity funds			Investment grade			Bond funds					National muni
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	State muni		
2000	\$574,045	\$342,451	\$402,306	\$56,920	\$26,742	\$8,242	\$24,347	\$6,787	\$16,985	\$24,168		
2001	306,495	251,519	395,206	65,530	36,183	8,948	58,983	12,245	25,028	32,191		
2002	249,939	245,137	398,764	75,394	39,644	10,920	93,873	14,537	26,274	43,168		
2003	250,424	205,235	381,638	96,728	65,537	18,946	71,167	20,084	20,546	44,688		
2004	267,837	184,371	474,533	125,434	48,120	18,132	38,511	17,923	16,821	34,548		
2005	263,366	239,613	513,960	126,616	41,686	23,786	32,063	20,629	21,959	38,331		
2006	301,651	354,877	557,163	127,532	45,475	29,025	29,690	29,478	25,566	46,985		
2007	368,158	479,123	658,826	183,464	54,490	45,536	34,593	38,826	29,589	54,582		
2008	340,148	374,346	616,573	155,075	47,176	53,445	64,528	37,527	30,562	69,983		
2009	273,503	284,643	474,100	150,048	70,111	69,216	90,702	57,875	28,386	113,264		
2010	309,445	379,531	547,220	181,871	95,780	129,602	79,464	71,230	28,530	109,250		
2011	340,259	398,432	583,434	234,392	128,866	138,821	72,172	76,840	19,798	90,501		
2012	335,524	362,983	561,719	239,916	124,084	132,763	109,826	106,453	30,912	128,058		
2013	395,529	511,267	734,288	302,752	172,324	193,007	74,495	117,003	23,833	111,661		
2014	425,118	543,102	829,540	291,911	147,566	194,845	70,511	128,794	22,423	117,425		
2015	422,935	584,834	787,492	268,713	124,802	154,000	79,994	127,043	24,301	113,737		
2016	384,479	500,397	837,854	263,627	130,474	114,885	90,939	132,663	34,344	154,531		
2017	415,724	612,382	909,847	250,525	124,304	159,081	74,598	175,775	28,833	147,073		
2018	464,476	671,022	979,257	229,475	117,302	148,264	89,583	164,883	32,103	180,141		

Note: New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 23
Long-Term Mutual Funds: Exchange Sales by Composite Investment Objective
 Millions of dollars, annual

Year	Equity funds			Investment grade			Bond funds				
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni	
2000	\$343,618	\$169,388	\$139,101	\$13,445	\$16,756	\$3,011	\$15,829	\$1,662	\$5,304	\$10,870	
2001	176,019	85,777	114,212	17,912	32,609	2,057	24,779	2,860	5,348	13,686	
2002	144,274	71,079	104,740	18,021	39,468	2,373	37,280	3,460	5,625	13,602	
2003	94,568	41,777	100,330	19,117	33,966	3,528	18,355	4,664	4,288	10,218	
2004	57,575	27,630	84,373	18,025	23,681	2,056	7,022	4,314	2,750	6,135	
2005	55,786	38,396	81,244	17,650	20,833	2,780	6,575	4,742	2,983	6,435	
2006	64,340	56,926	81,392	18,555	21,900	2,740	5,972	7,024	3,451	6,869	
2007	60,892	68,791	92,972	22,933	41,588	4,629	10,226	5,035	5,706	10,680	
2008	58,295	49,364	86,998	26,361	50,417	7,363	27,495	10,048	7,039	17,767	
2009	44,896	47,478	69,464	24,169	76,507	13,163	18,336	8,641	5,081	20,037	
2010	41,943	55,909	71,888	23,959	58,253	13,047	14,512	10,791	3,852	15,280	
2011	48,425	40,006	81,686	29,589	59,218	14,797	14,323	10,756	3,736	13,944	
2012	45,113	47,473	96,843	26,653	54,576	13,406	14,912	12,957	3,685	16,171	
2013	68,219	44,076	110,827	36,775	52,652	18,960	13,320	10,343	4,900	22,131	
2014	61,403	48,147	101,706	31,476	46,053	12,165	7,231	9,770	3,600	15,107	
2015	60,632	53,753	95,307	30,877	40,680	13,664	9,151	9,412	3,899	14,222	
2016	54,074	49,012	115,900	38,624	52,757	14,264	10,539	9,738	4,106	20,874	
2017	62,762	82,370	143,038	40,829	65,914	13,602	11,159	13,367	4,122	19,422	
2018	69,967	73,031	151,024	32,901	52,723	12,054	13,872	9,098	4,508	20,254	

Note: Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 24

Long-Term Mutual Funds: Regular Redemptions by Composite Investment Objective

Millions of dollars, annual

Year	Equity funds			Investment grade					Bond funds				
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni			
2000	\$367,514	\$288,496	\$375,250	\$71,159	\$34,638	\$11,437	\$35,823	\$10,431	\$21,857	\$31,884			
2001	307,078	264,301	320,185	58,803	32,315	9,538	38,047	10,368	18,584	27,401			
2002	276,695	243,144	355,211	67,201	34,988	11,384	53,740	11,082	20,881	33,434			
2003	222,805	183,741	300,877	63,367	46,729	15,501	79,437	14,856	25,603	41,443			
2004	269,507	122,228	366,980	77,520	48,641	13,819	58,824	14,628	22,818	39,625			
2005	273,948	148,065	455,983	86,200	51,704	18,359	43,913	15,546	20,457	34,488			
2006	313,641	223,282	510,261	106,066	41,939	18,602	43,974	19,036	21,692	36,205			
2007	393,826	347,693	647,123	144,102	56,044	26,366	38,850	28,060	25,962	46,949			
2008	375,930	413,224	678,159	165,395	49,838	49,479	59,781	44,522	32,199	63,068			
2009	273,995	254,602	482,991	127,179	51,002	40,269	69,920	35,644	22,685	56,421			
2010	329,575	317,496	591,358	146,547	79,416	62,812	74,240	55,216	29,101	93,398			
2011	377,054	383,010	657,308	191,200	107,838	95,478	69,559	69,157	28,412	92,128			
2012	367,394	354,582	660,153	195,788	91,821	92,006	77,394	70,308	22,815	89,798			
2013	401,196	374,285	721,341	233,859	121,424	141,365	117,156	101,578	40,542	139,023			
2014	464,838	459,393	849,078	265,828	186,224	170,248	63,788	110,968	23,917	92,168			
2015	480,214	501,265	894,299	284,185	156,690	181,379	68,931	119,597	23,870	102,699			
2016	509,013	513,034	932,955	303,791	126,135	155,357	81,447	114,381	31,051	134,988			
2017	506,244	546,083	1,020,548	278,347	141,256	118,101	74,455	114,556	30,481	120,933			
2018	555,492	679,313	1,117,796	313,974	148,194	160,659	85,618	149,979	38,606	168,988			

Note: Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 25
Long-Term Mutual Funds: Exchange Redemptions by Composite Investment Objective
 Millions of dollars, annual

Year	Equity funds			Investment grade				Bond funds			
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni	
2000	\$287,909	\$165,451	\$170,965	\$29,941	\$18,714	\$4,463	\$20,986	\$2,457	\$5,870	\$12,153	
2001	198,310	96,238	109,844	17,405	23,080	2,618	21,058	2,301	5,499	12,583	
2002	169,848	77,190	120,734	18,234	30,232	1,981	24,188	2,440	5,759	11,787	
2003	95,166	38,910	88,478	13,520	38,764	2,945	32,210	4,354	7,443	11,992	
2004	67,443	18,190	80,067	12,887	25,168	2,059	12,969	4,450	4,692	8,467	
2005	70,651	23,033	96,843	15,314	19,597	1,804	8,936	4,653	3,253	6,798	
2006	79,432	37,597	104,893	20,163	22,074	7,493	9,521	6,263	3,449	6,420	
2007	78,381	58,486	130,037	21,934	26,647	11,082	8,210	6,155	6,099	10,692	
2008	70,886	77,430	126,551	41,564	36,711	6,400	11,642	9,682	7,703	14,562	
2009	51,675	47,874	80,797	27,246	52,499	9,807	20,168	6,071	4,702	12,584	
2010	48,536	61,264	82,090	23,672	49,734	6,196	15,678	10,379	6,119	16,632	
2011	56,130	51,303	96,942	33,099	50,005	9,681	13,597	9,703	5,012	14,043	
2012	52,265	49,311	118,628	24,514	45,090	11,119	13,601	8,818	3,243	12,797	
2013	65,533	39,680	102,689	30,935	87,152	14,171	21,882	11,461	10,611	30,844	
2014	62,916	46,637	100,696	27,161	39,199	17,360	8,225	7,199	3,170	11,313	
2015	57,607	43,151	104,038	34,451	41,726	18,193	7,812	8,244	3,648	11,150	
2016	67,914	59,434	117,398	40,342	40,431	11,752	8,737	6,439	4,945	19,869	
2017	75,433	71,693	165,353	41,121	53,170	14,613	9,271	10,742	4,484	17,230	
2018	72,304	72,054	172,042	39,432	51,891	12,215	12,065	21,985	5,639	19,594	

Note: Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 26

Long-Term Mutual Funds: Annual Redemption Rates

Percent

Year	Narrow redemption rates ¹				Broad redemption rates ²			
	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds
1985	17.4%	18.4%	22.0%	15.5%	29.8%	35.6%	26.3%	24.0%
1986	19.8	19.6	23.8	19.6	38.6	50.9	30.2	30.7
1987	26.5	23.4	28.5	28.3	56.7	73.0	40.7	47.5
1988	20.0	18.2	27.1	20.5	36.9	45.9	35.8	30.4
1989	17.9	17.1	18.7	18.4	31.9	38.0	25.7	27.7
1990	17.5	18.4	15.6	17.0	31.0	37.7	22.9	26.2
1991	16.5	16.6	15.9	16.4	28.1	33.1	22.2	24.1
1992	17.0	13.4	11.1	21.5	28.8	26.7	17.0	32.7
1993	17.8	14.7	10.7	22.6	29.9	28.7	16.4	33.8
1994	21.6	17.7	16.7	28.3	35.2	31.6	24.1	43.2
1995	17.4	16.2	15.1	20.3	29.0	29.4	21.3	30.6
1996	17.0	16.2	13.8	20.1	30.1	30.7	19.8	32.1
1997	18.0	17.7	13.7	20.5	30.5	31.9	18.8	31.1
1998	19.7	20.0	15.8	20.6	32.2	34.0	21.5	30.8
1999	21.7	21.2	19.0	25.2	34.5	34.9	25.9	37.1
2000	25.7	25.9	21.0	26.8	39.9	41.5	29.1	36.7
2001	24.0	24.3	16.4	25.6	34.2	35.4	21.2	34.6
2002	27.9	29.0	19.4	27.4	38.6	41.2	24.6	35.8
2003	24.2	22.5	16.2	31.4	31.5	29.5	19.6	40.7
2004	20.4	19.0	15.5	26.7	24.7	23.1	18.1	32.1
2005	19.7	19.0	14.7	24.2	23.7	23.2	17.3	28.4
2006	19.9	19.5	15.7	23.1	23.9	23.7	18.7	27.1
2007	22.9	22.7	18.6	25.8	27.1	27.0	21.4	30.3
2008	30.1	29.2	23.9	35.8	35.8	34.6	29.9	41.8
2009	24.5	23.7	19.9	27.8	29.2	28.0	24.1	33.6
2010	25.3	23.7	18.8	31.0	29.2	27.3	21.8	35.8
2011	27.6	26.2	22.2	32.0	31.5	30.0	26.0	36.3
2012	25.0	24.8	20.4	26.9	28.6	28.7	23.0	30.2
2013	25.7	21.8	20.2	35.7	29.5	24.9	22.9	41.3
2014	24.9	22.1	20.0	33.7	27.6	24.7	22.0	36.6
2015	25.2	22.8	20.9	32.6	27.8	25.3	23.4	35.5
2016	25.3	23.4	22.2	31.2	28.3	26.3	25.1	34.2
2017	22.9	22.0	18.9	26.6	26.1	25.3	21.7	29.8
2018	26.0	24.1	21.4	32.1	29.2	27.3	24.1	35.5

¹ The narrow redemption rate is calculated by taking the sum of regular redemptions for the year as a percentage of average net assets at the beginning and end of the period.

² The broad redemption rate is calculated by taking the sum of regular redemptions and exchange redemptions for the year as a percentage of average net assets at the beginning and end of the period.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 27

Long-Term Mutual Funds: Portfolio Holdings: Value and Percentage of Total Net Assets

Year-end

Year	Total net assets	Common and preferred stocks	Long-term US government bonds	Corporate bonds	Municipal bonds	Liquid assets	Other
<i>Millions of dollars</i>							
1995	\$2,054,588	\$1,215,223	\$259,192	\$187,575	\$245,331	\$141,245	\$6,021
1996	2,618,485	1,718,207	265,127	233,127	245,183	151,196	5,645
1997	3,402,280	2,358,201	282,360	286,516	266,303	198,035	10,866
1998	4,164,395	3,003,688	286,697	381,435	292,368	190,519	9,688
1999	5,220,692	4,057,388	293,241	380,357	267,264	217,266	5,176
2000	5,110,688	3,908,281	309,755	342,983	269,334	276,329	4,007
2001	4,683,769	3,423,161	379,606	367,727	289,490	222,019	1,766
2002	4,115,111	2,687,479	481,481	415,160	320,410	208,669	1,910
2003	5,359,359	3,760,375	504,575	499,950	331,980	259,441	3,038
2004	6,191,574	4,489,103	537,319	531,265	318,354	307,048	8,483
2005	6,861,884	5,054,529	612,828	547,881	330,945	303,161	12,540
2006	8,056,786	6,023,836	644,739	666,374	359,163	346,718	15,956
2007	8,909,694	6,608,519	749,423	779,991	369,046	381,641	21,075
2008	5,786,458	3,733,391	705,043	675,350	336,874	314,270	21,531
2009	7,793,077	5,089,644	849,829	1,019,336	451,152	365,705	17,411
2010	9,027,544	5,869,326	1,084,731	1,256,539	479,661	330,323	6,964
2011	8,939,449	5,507,290	1,185,690	1,317,241	506,830	462,132	-39,734
2012	10,360,421	6,294,164	1,379,388	1,603,032	592,848	517,184	-26,196
2013	12,331,127	8,222,937	1,208,861	1,728,524	512,634	661,363	-3,192
2014	13,151,980	8,797,072	1,213,235	1,839,763	568,191	745,389	-11,671
2015	12,903,124	8,624,289	1,253,021	1,793,063	582,720	677,166	-27,135
2016	13,625,320	9,069,741	1,363,004	1,933,480	607,889	674,376	-23,170
2017	15,916,658	10,826,528	1,515,022	2,110,521	661,426	802,582	579
2018	14,669,831	9,655,092	1,584,797	2,098,161	667,708	680,981	-16,907
<i>Percent</i>							
1995	100.0%	59.1%	12.6%	9.1%	11.9%	6.9%	0.3%
1996	100.0	65.6	10.1	8.9	9.4	5.8	0.2
1997	100.0	69.3	8.3	8.4	7.8	5.8	0.3
1998	100.0	72.1	6.9	9.2	7.0	4.6	0.2
1999	100.0	77.7	5.6	7.3	5.1	4.2	0.1
2000	100.0	76.5	6.1	6.7	5.3	5.4	0.1
2001	100.0	73.1	8.1	7.9	6.2	4.7	0.0
2002	100.0	65.3	11.7	10.1	7.8	5.1	0.0
2003	100.0	70.2	9.4	9.3	6.2	4.8	0.1
2004	100.0	72.5	8.7	8.6	5.1	5.0	0.1
2005	100.0	73.7	8.9	8.0	4.8	4.4	0.2
2006	100.0	74.8	8.0	8.3	4.5	4.3	0.2
2007	100.0	74.2	8.4	8.8	4.1	4.3	0.2
2008	100.0	64.5	12.2	11.7	5.8	5.4	0.4
2009	100.0	65.3	10.9	13.1	5.8	4.7	0.2
2010	100.0	65.0	12.0	13.9	5.3	3.7	0.1
2011	100.0	61.6	13.3	14.7	5.7	5.2	-0.4
2012	100.0	60.8	13.3	15.5	5.7	5.0	-0.3
2013	100.0	66.7	9.8	14.0	4.2	5.4	0.0
2014	100.0	66.9	9.2	14.0	4.3	5.7	-0.1
2015	100.0	66.8	9.7	13.9	4.5	5.2	-0.2
2016	100.0	66.6	10.0	14.2	4.5	4.9	-0.2
2017	100.0	68.0	9.5	13.3	4.2	5.0	0.0
2018	100.0	65.8	10.8	14.3	4.6	4.6	-0.1

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 28

Long-Term Mutual Funds: Portfolio Holdings as a Percentage of Total Net Assets by Type of Fund

Year-end

Year	Total net assets	Common and preferred stocks	Long-term US government bonds	Corporate bonds	Municipal bonds	Liquid assets	Other	Total net assets <i>Millions of dollars</i>
Equity funds								
2002	100.0%	94.2%	0.4%	0.8%	0.0%	4.6%	0.0%	\$2,642,057
2003	100.0	95.0	0.2	0.5	0.0	4.2	0.0	3,652,839
2004	100.0	95.2	0.1	0.4	0.0	4.2	0.1	4,342,123
2005	100.0	95.5	0.1	0.4	0.0	3.9	0.1	4,884,874
2006	100.0	95.6	0.1	0.4	0.0	3.8	0.1	5,831,591
2007	100.0	95.2	0.1	0.4	0.0	4.2	0.2	6,412,592
2008	100.0	93.5	0.2	0.5	0.0	5.6	0.3	3,654,545
2009	100.0	95.8	0.1	0.5	0.0	3.5	0.1	4,871,520
2010	100.0	95.7	0.2	0.5	0.0	3.4	0.1	5,596,173
2011	100.0	95.6	0.3	0.6	0.0	3.5	0.0	5,212,787
2012	100.0	95.6	0.3	0.6	0.0	3.4	0.0	5,938,757
2013	100.0	95.6	0.2	0.6	0.0	3.5	0.0	7,762,556
2014	100.0	95.7	0.2	0.6	0.0	3.5	0.1	8,313,989
2015	100.0	96.1	0.2	0.5	0.0	3.2	0.1	8,149,607
2016	100.0	96.2	0.2	0.5	0.0	3.0	0.1	8,577,267
2017	100.0	96.3	0.2	0.4	0.0	3.0	0.1	10,305,955
2018	100.0	96.4	0.2	0.5	0.0	2.9	0.0	9,224,755
Hybrid funds								
2002	100.0%	57.4%	12.4%	22.3%	0.2%	7.5%	0.1%	\$335,270
2003	100.0	62.5	10.6	19.7	0.3	6.9	0.0	447,530
2004	100.0	63.5	11.0	18.4	0.4	6.6	0.1	552,250
2005	100.0	62.6	10.5	19.5	0.4	6.9	0.0	621,477
2006	100.0	61.2	10.0	19.5	0.3	8.9	0.1	731,503
2007	100.0	60.5	10.3	20.8	0.3	8.0	0.1	821,474
2008	100.0	55.4	9.8	24.3	0.4	9.6	0.4	562,262
2009	100.0	58.3	9.8	23.4	0.4	7.7	0.5	717,580
2010	100.0	60.7	8.9	22.3	0.5	7.3	0.4	842,198
2011	100.0	59.3	9.4	22.1	0.5	7.9	0.8	883,980
2012	100.0	59.4	8.8	21.1	0.5	9.4	0.8	1,032,462
2013	100.0	61.2	7.8	18.6	0.4	11.3	0.6	1,284,695
2014	100.0	59.4	8.2	19.6	0.5	11.9	0.4	1,379,201
2015	100.0	57.4	8.8	19.5	0.6	13.7	-0.1	1,341,466
2016	100.0	57.3	9.0	20.5	0.6	12.6	0.0	1,399,866
2017	100.0	56.8	10.2	19.6	0.6	12.5	0.2	1,545,365
2018	100.0	54.2	12.2	20.8	0.7	11.9	0.2	1,383,259
Bond funds								
2002	100.0%	0.6%	37.7%	28.0%	28.1%	5.5%	0.0%	\$1,137,784
2003	100.0	0.8	35.8	31.2	26.2	5.8	0.1	1,258,989
2004	100.0	0.8	36.3	31.6	24.2	6.6	0.4	1,297,200
2005	100.0	0.8	39.7	29.9	24.0	5.1	0.6	1,355,533
2006	100.0	0.8	37.4	33.4	23.7	4.3	0.5	1,493,693
2007	100.0	1.0	38.9	34.9	21.7	3.0	0.6	1,675,628
2008	100.0	0.6	40.8	33.2	21.2	3.7	0.5	1,569,652
2009	100.0	0.8	34.9	37.3	20.2	6.5	0.4	2,203,977
2010	100.0	0.9	38.2	39.9	18.1	3.0	-0.1	2,589,174
2011	100.0	0.8	37.8	38.2	17.4	7.4	-1.7	2,842,683
2012	100.0	0.9	37.0	39.5	17.1	6.5	-1.0	3,389,202
2013	100.0	1.1	32.9	43.7	15.3	7.5	-0.4	3,283,876
2014	100.0	1.1	31.3	43.9	16.1	8.4	-0.7	3,458,790
2015	100.0	0.9	32.7	43.6	16.7	6.9	-0.9	3,412,051
2016	100.0	0.7	33.3	43.8	16.3	6.6	-0.8	3,648,187
2017	100.0	0.8	32.8	43.3	15.9	7.4	-0.2	4,065,338
2018	100.0	0.6	34.2	43.5	16.1	6.1	-0.5	4,061,817

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 29

Long-Term Mutual Funds: Paid and Reinvested Dividends by Type of Fund

Millions of dollars, annual

Year	Paid dividends			Reinvested dividends				
	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds
1984 ^e	\$7,238	\$2,613	\$583	\$4,042	\$4,655	\$1,881	\$432	\$2,342
1985	12,719	3,229	1,098	8,392	7,731	2,321	768	4,642
1986	22,689	6,328	1,499	14,862	13,991	3,706	1,087	9,197
1987	31,708	7,246	1,934	22,528	18,976	4,841	1,476	12,659
1988	31,966	6,554	1,873	23,539	17,494	4,476	1,217	11,801
1989	34,102	10,235	2,165	21,702	20,584	7,119	1,383	12,082
1990	33,156	8,787	2,350	22,018	21,124	6,721	1,717	12,686
1991	35,145	9,007	2,337	23,801	24,300	7,255	1,898	15,147
1992	58,608	17,023	4,483	37,102	30,393	8,845	2,923	18,625
1993	73,178	20,230	6,810	46,137	38,116	12,174	4,239	21,703
1994	61,261	17,279	6,662	37,320	39,136	12,971	4,907	21,258
1995	67,229	22,567	8,856	35,806	46,635	18,286	6,792	21,558
1996	73,282	25,061	9,580	38,642	53,213	21,345	8,031	23,837
1997	79,522	27,597	11,319	40,606	58,423	23,100	9,413	25,910
1998	81,011	25,495	11,104	44,413	60,041	22,377	9,328	28,336
1999	95,443	32,543	12,441	50,458	69,973	27,332	10,544	32,096
2000	88,194	27,021	10,848	50,325	66,259	23,768	9,537	32,954
2001	82,964	21,386	10,361	51,216	62,304	19,248	9,270	33,786
2002	82,057	20,465	9,740	51,853	62,406	18,552	8,778	35,076
2003	85,924	24,356	9,920	51,648	66,868	22,125	8,840	35,903
2004	98,126	34,702	12,186	51,237	78,247	31,421	10,668	36,158
2005	115,502	42,413	16,691	56,397	94,024	38,435	14,579	41,011
2006	143,500	60,112	19,134	64,254	119,074	54,210	16,989	47,875
2007	181,014	77,563	25,058	78,393	151,777	69,596	22,092	60,090
2008	182,120	70,598	26,032	85,490	153,100	63,634	23,045	66,421
2009	168,019	58,877	22,213	86,930	140,359	53,098	19,388	67,873
2010	180,989	62,196	23,277	95,516	152,331	56,385	20,671	75,275
2011	202,446	68,706	29,026	104,714	172,526	62,436	25,630	84,461
2012	215,295	83,226	24,937	107,131	186,528	76,125	22,678	87,725
2013	209,487	84,509	24,208	100,769	183,897	77,978	22,146	83,773
2014	237,039	101,055	29,949	106,035	211,694	93,774	27,698	90,222
2015	242,330	108,268	31,358	102,705	218,402	100,850	29,139	88,413
2016	244,401	115,464	28,700	100,237	221,591	107,715	26,934	86,942
2017	271,211	128,071	32,672	110,468	235,092	119,414	30,607	90,113
2018	311,542	146,616	34,399	130,528	282,135	135,997	32,242	113,895

^e Portions of the paid dividend totals for equity, hybrid, and bond funds are estimated; the total is not estimated.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 30

Long-Term Mutual Funds: Paid and Reinvested Capital Gains by Type of Fund

Millions of dollars, annual

Year	Paid capital gains			Reinvested capital gains				
	Total	Equity funds	Hybrid funds	Bond funds	Total	Equity funds	Hybrid funds	Bond funds
1984 ^e	\$6,019	\$5,247	\$553	\$219	\$5,122	\$4,655	\$338	\$129
1985	4,895	3,699	739	457	3,751	3,091	398	261
1986	17,661	13,942	1,240	2,478	14,275	11,851	778	1,646
1987	22,926	18,603	1,605	2,718	17,816	15,449	1,056	1,312
1988	6,354	4,785	620	948	4,769	3,883	364	522
1989	14,766	12,665	540	1,562	9,710	8,744	348	617
1990	8,017	6,833	443	742	5,515	4,975	255	285
1991	13,917	11,961	861	1,095	9,303	8,242	484	577
1992	22,089	17,294	1,488	3,306	14,906	12,233	1,130	1,542
1993	35,905	27,705	3,496	4,704	25,514	19,954	2,687	2,872
1994	29,744	26,351	2,399	993	24,864	22,038	2,086	740
1995	54,271	50,204	3,322	745	46,866	43,550	2,832	484
1996	100,489	88,212	10,826	1,451	87,416	76,638	9,769	1,009
1997	182,764	160,744	19,080	2,941	164,916	145,358	17,360	2,198
1998	164,989	138,681	21,572	4,737	151,105	127,473	19,698	3,935
1999	237,624	219,484	16,841	1,299	206,508	190,300	15,229	979
2000	325,841	305,994	18,645	1,202	298,429	279,891	17,506	1,032
2001	68,626	60,088	6,105	2,433	64,820	56,965	5,790	2,065
2002	16,097	10,538	907	4,651	14,749	9,838	887	4,024
2003	14,397	7,782	758	5,857	12,956	7,188	703	5,065
2004	54,741	41,581	6,600	6,560	49,896	38,074	6,167	5,655
2005	129,058	113,167	11,895	3,995	117,566	103,208	10,955	3,403
2006	256,915	235,853	18,720	2,342	236,465	217,010	17,509	1,946
2007	413,641	377,682	32,163	3,795	380,921	347,633	30,011	3,277
2008	132,404	110,883	9,786	11,735	123,272	103,801	9,064	10,407
2009	15,300	5,740	771	8,789	13,994	5,418	702	7,874
2010	42,950	15,739	1,290	25,921	38,961	14,785	1,199	22,977
2011	73,284	51,455	5,503	16,326	67,437	48,120	5,275	14,042
2012	100,185	66,771	5,563	27,851	93,350	62,866	5,328	25,157
2013	239,183	201,806	22,834	14,544	227,570	191,961	22,138	13,471
2014	399,582	345,744	40,526	13,312	382,164	330,047	39,564	12,554
2015	379,426	331,241	35,248	12,938	363,847	316,962	34,580	12,305
2016	220,403	197,820	14,249	8,335	213,382	191,403	14,034	7,944
2017	370,046	333,629	32,440	3,978	358,549	322,895	31,830	3,825
2018	511,429	461,944	45,324	4,162	495,081	446,710	44,375	3,996

^e Portions of the paid capital gains totals for equity, hybrid, and bond funds are estimated; the total is not estimated.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding. Capital gains distributions include long-term and short-term capital gains.

TABLE 31

Long-Term Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security

Millions of dollars, annual

Year	Total portfolio			Common stock			Other securities		
	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases
1996	\$2,014,471	\$1,734,681	\$279,790	\$1,151,258	\$927,261	\$223,997	\$863,213	\$807,420	\$55,793
1997	2,380,579	2,104,978	275,601	1,457,383	1,268,979	188,404	923,196	835,999	87,197
1998	2,857,469	2,557,559	299,910	1,761,777	1,597,051	164,727	1,095,692	960,508	135,184
1999	3,434,814	3,221,790	213,024	2,262,359	2,088,332	174,027	1,172,455	1,133,457	38,998
2000	4,917,851	4,691,428	226,423	3,558,646	3,328,033	230,613	1,359,205	1,363,395	-4,190
2001	4,682,606	4,385,924	296,682	2,733,670	2,606,442	127,228	1,948,936	1,779,482	169,454
2002	4,016,226	3,803,575	212,651	2,175,875	2,141,252	34,623	1,840,351	1,662,323	178,028
2003	4,279,139	3,995,890	283,248	2,054,070	1,884,388	169,682	2,225,068	2,111,502	113,567
2004	4,307,465	4,016,592	290,873	2,390,635	2,198,265	192,370	1,916,830	1,818,327	98,503
2005	4,831,622	4,529,560	302,062	2,764,796	2,610,540	154,256	2,066,826	1,919,020	147,806
2006	5,734,401	5,395,034	339,367	3,329,028	3,171,157	157,871	2,405,374	2,223,877	181,496
2007	7,094,402	6,717,330	377,071	3,834,824	3,732,412	102,412	3,259,578	2,984,919	274,659
2008	7,350,891	7,291,533	59,359	3,655,169	3,715,052	-59,883	3,695,723	3,576,481	119,242
2009	6,932,015	6,451,974	480,040	2,644,766	2,543,164	101,602	4,287,249	3,908,811	378,438
2010	7,335,194	6,865,394	469,799	2,811,379	2,752,104	59,275	4,523,815	4,113,290	410,524
2011	8,531,542	8,125,848	405,694	3,033,112	3,033,762	-650	5,498,430	5,092,085	406,344
2012	8,191,304	7,603,869	587,435	2,772,466	2,827,128	-54,662	5,418,838	4,776,741	642,097
2013	9,253,292	8,733,458	519,834	3,409,921	3,226,955	182,966	5,843,371	5,506,503	336,868
2014	8,527,228	7,967,414	559,815	3,523,203	3,447,214	75,989	5,004,025	4,520,199	483,826
2015	8,882,423	8,425,247	457,176	3,597,960	3,559,243	38,716	5,284,463	4,866,004	418,460
2016	8,571,080	8,172,753	398,327	3,417,690	3,538,433	-120,743	5,153,390	4,634,320	519,070
2017	9,047,666	8,469,126	578,540	3,474,384	3,620,522	-146,138	5,573,281	4,848,603	724,678
2018	9,492,573	9,023,405	469,168	4,026,903	4,164,259	-137,356	5,465,670	4,859,146	606,524

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 32

Equity Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security

Millions of dollars, annual

Year	Total portfolio			Common stock			Other securities		
	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases
1996	\$1,116,902	\$896,639	\$220,263	\$1,050,880	\$832,482	\$218,398	\$66,022	\$64,157	\$1,865
1997	1,421,210	1,223,458	197,751	1,352,084	1,166,645	185,439	69,126	56,814	12,312
1998	1,723,409	1,556,960	166,449	1,635,510	1,475,133	160,377	87,899	81,827	6,072
1999	2,232,671	2,049,338	183,333	2,126,719	1,941,307	185,411	105,952	108,031	-2,078
2000	3,513,553	3,256,504	257,049	3,391,531	3,142,910	248,621	122,022	113,595	8,427
2001	2,704,374	2,590,457	113,917	2,568,207	2,461,596	106,611	136,167	128,861	7,305
2002	2,140,466	2,112,381	28,085	2,017,518	1,999,454	18,064	122,949	112,928	10,021
2003	1,965,144	1,822,530	142,614	1,902,448	1,757,922	144,526	62,696	64,608	-1,912
2004	2,278,466	2,110,374	168,091	2,216,669	2,053,424	163,245	61,796	56,950	4,846
2005	2,670,842	2,524,140	146,702	2,591,755	2,452,060	139,695	79,086	72,080	7,007
2006	3,230,084	3,062,769	167,315	3,128,793	2,965,097	163,696	101,292	97,672	3,620
2007	3,759,468	3,657,698	101,770	3,582,008	3,489,479	92,529	177,460	168,219	9,241
2008	3,627,580	3,697,755	-70,174	3,361,218	3,425,944	-64,725	266,362	271,811	-5,449
2009	2,749,690	2,676,251	73,438	2,433,080	2,338,835	94,245	316,609	337,416	-20,807
2010	2,828,651	2,828,670	-19	2,568,313	2,532,479	35,834	260,338	296,191	-35,853
2011	2,914,461	2,942,815	-28,355	2,755,590	2,785,154	-29,564	158,871	157,662	1,209
2012	2,639,817	2,696,135	-56,318	2,499,411	2,571,685	-72,274	140,405	124,450	15,956
2013	3,178,861	2,993,404	185,457	3,043,658	2,877,064	166,595	135,203	116,340	18,863
2014	3,301,189	3,190,975	110,214	3,120,746	3,033,031	87,715	180,443	157,945	22,499
2015	3,385,506	3,308,692	76,814	3,188,293	3,121,591	66,703	197,212	187,101	10,111
2016	3,235,378	3,327,498	-92,120	3,025,556	3,128,195	-102,639	209,821	199,303	10,519
2017	3,340,294	3,399,330	-59,036	3,089,524	3,172,276	-82,753	250,771	227,054	23,717
2018	3,849,259	3,916,107	-66,847	3,603,197	3,686,808	-83,611	246,062	229,299	16,763

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 33

Hybrid Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security

Millions of dollars, annual

Year	Total portfolio			Common stock			Other securities		
	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases
1996	\$223,905	\$201,872	\$22,033	\$92,485	\$88,464	\$4,021	\$131,420	\$113,408	\$18,011
1997	255,200	234,816	20,384	98,109	94,976	3,132	157,092	139,839	17,252
1998	282,651	257,096	25,555	115,703	111,401	4,301	166,948	145,694	21,254
1999	296,228	296,836	-607	128,298	138,910	-10,612	167,930	157,926	10,004
2000	308,675	335,254	-26,579	157,997	174,917	-16,920	150,678	160,337	-9,659
2001	357,427	334,013	23,414	155,118	134,256	20,862	202,308	199,757	2,552
2002	340,604	320,551	20,053	145,342	129,192	16,150	195,263	191,359	3,903
2003	360,522	312,045	48,477	137,487	113,780	23,707	223,035	198,265	24,769
2004	404,947	337,214	67,733	163,795	132,966	30,829	241,151	204,248	36,904
2005	397,694	346,259	51,435	165,487	150,166	15,321	232,207	196,094	36,113
2006	408,861	381,374	27,487	191,740	197,120	-5,380	217,122	184,255	32,867
2007	529,026	465,012	64,014	241,633	230,855	10,778	287,393	234,157	53,236
2008	594,118	577,594	16,524	281,814	273,655	8,159	312,304	303,939	8,365
2009	477,006	443,131	33,876	200,907	194,826	6,081	276,099	248,305	27,794
2010	512,564	463,314	49,250	225,191	204,365	20,826	287,374	258,950	28,424
2011	660,464	596,747	63,716	254,665	229,513	25,152	405,799	367,235	38,564
2012	721,488	659,618	61,870	252,700	236,516	16,184	468,788	423,102	45,686
2013	911,886	831,231	80,655	345,324	328,480	16,845	566,562	502,751	63,810
2014	933,624	865,393	68,232	371,983	386,419	-14,436	561,641	478,973	82,668
2015	946,306	911,822	34,484	380,355	404,392	-24,037	565,951	507,430	58,521
2016	882,133	842,628	39,505	354,704	375,405	-20,701	527,430	467,223	60,207
2017	911,923	873,320	38,603	326,610	379,484	-52,874	585,313	493,836	91,477
2018	1,029,649	1,014,247	15,402	381,777	430,263	-48,486	647,872	583,983	63,888

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 34

Bond Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security

Millions of dollars, annual

Year	Total portfolio			Common stock			Other securities		
	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases
1996	\$673,665	\$636,170	\$37,494	\$7,893	\$6,316	\$1,578	\$665,771	\$629,855	\$35,917
1997	704,169	646,704	57,465	7,190	7,358	-167	696,978	639,346	57,632
1998	851,409	743,503	107,906	10,565	10,516	49	840,845	732,987	107,858
1999	905,914	875,616	30,299	7,342	8,115	-773	898,572	867,501	31,072
2000	1,095,623	1,099,669	-4,046	9,118	10,206	-1,088	1,086,505	1,089,464	-2,958
2001	1,620,805	1,461,454	159,351	10,345	10,589	-245	1,610,461	1,450,864	159,596
2002	1,535,155	1,370,642	164,513	13,015	12,606	409	1,522,140	1,358,036	164,104
2003	1,953,473	1,861,315	92,158	14,135	12,686	1,449	1,939,338	1,848,629	90,709
2004	1,624,053	1,569,004	55,049	10,171	11,875	-1,704	1,613,882	1,557,129	56,753
2005	1,763,087	1,659,162	103,925	7,554	8,314	-760	1,755,533	1,650,847	104,686
2006	2,095,456	1,950,891	144,565	8,495	8,940	-445	2,086,961	1,941,951	145,010
2007	2,805,908	2,594,620	211,288	11,183	12,077	-894	2,794,725	2,582,542	212,182
2008	3,129,193	3,016,184	113,009	12,136	15,453	-3,317	3,117,057	3,000,731	116,326
2009	3,705,319	3,332,592	372,727	10,778	9,502	1,276	3,694,541	3,323,090	371,451
2010	3,993,978	3,573,410	420,568	17,875	15,260	2,615	3,976,103	3,558,150	417,953
2011	4,956,617	4,586,285	370,333	22,858	19,096	3,762	4,933,760	4,567,189	366,571
2012	4,829,999	4,248,116	581,883	20,355	18,926	1,428	4,809,644	4,229,190	580,455
2013	5,162,545	4,908,823	253,722	20,938	21,411	-473	5,141,607	4,887,412	254,195
2014	4,292,415	3,911,046	381,369	30,474	27,764	2,710	4,261,941	3,883,281	378,659
2015	4,550,611	4,204,733	345,878	29,311	33,261	-3,950	4,521,300	4,171,472	349,828
2016	4,453,569	4,002,627	450,942	37,430	34,832	2,598	4,416,139	3,967,795	448,344
2017	4,795,448	4,196,475	598,973	58,251	68,761	-10,511	4,737,198	4,127,714	609,484
2018	4,613,664	4,093,051	520,613	41,928	47,187	-5,259	4,571,736	4,045,864	525,872

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 35
Money Market Funds: Total Net Assets, Number of Funds, and Number of Share Classes by Type of Fund
 Year-end

Year	Total net assets Millions of dollars						Number of funds						Number of share classes					
	Taxable			Tax-exempt			Taxable			Tax-exempt			Taxable			Tax-exempt		
	Total	Government	Prime	Total	Government	Prime	Total	Government	Prime	Total	Government	Prime	Total	Government	Prime	Total	Government	Prime
1996	\$901,807	\$223,790	\$540,146	\$137,871	988	277	392	319	1,453	413	592	448						
1997	1,058,886	254,223	647,005	157,658	1,013	279	406	328	1,548	442	633	473						
1998	1,351,677	312,905	854,061	184,711	1,026	277	410	339	1,626	461	675	490						
1999	1,613,058	333,726	1,079,435	199,897	1,043	281	421	341	1,728	488	740	500						
2000	1,845,248	367,780	1,243,598	233,869	1,037	274	429	334	1,848	530	797	521						
2001	2,285,232	461,631	1,564,520	259,081	1,014	269	420	325	1,945	573	830	542						
2002	2,265,075	453,157	1,535,621	276,297	988	259	418	311	2,006	581	882	543						
2003	2,039,393	410,041	1,339,061	290,291	972	251	408	313	2,028	571	889	568						
2004	1,901,700	379,706	1,209,995	311,999	943	239	399	305	2,047	575	899	573						
2005	2,026,820	399,330	1,291,117	336,373	869	221	371	277	2,027	569	893	565						
2006	2,338,451	426,838	1,542,584	369,029	847	215	358	274	2,010	577	875	558						
2007	3,085,500	760,389	1,857,280	467,832	802	202	342	258	2,002	570	873	559						
2008	3,832,232	1,490,204	1,848,349	493,680	782	199	334	249	1,988	583	858	547						
2009	3,315,893	1,107,035	1,809,923	398,935	704	180	296	228	1,846	561	769	516						
2010	2,803,514	855,021	1,618,488	330,006	652	165	277	210	1,781	544	737	500						
2011	2,690,921	970,075	1,429,149	291,697	631	166	264	201	1,729	544	710	475						
2012	2,693,169	928,749	1,476,993	287,426	580	158	242	180	1,622	519	655	448						
2013	2,717,808	962,009	1,485,187	270,612	555	152	230	173	1,571	508	633	430						
2014	2,724,641	1,010,783	1,453,071	260,787	527	148	216	163	1,506	512	588	406						
2015	2,754,743	1,226,735	1,273,077	254,931	481	146	190	145	1,427	523	533	371						
2016	2,728,137	2,221,873	375,999	130,266	421	230	89	102	1,275	718	285	272						
2017	2,847,304	2,260,750	455,428	131,126	382	225	74	83	1,177	700	246	231						
2018	3,037,039	2,326,389	565,379	145,271	368	217	70	81	1,128	680	231	217						

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 36

Money Market Funds: Total Net Assets by Type of Fund

Millions of dollars, year-end

Year	All money market funds				Retail money market funds				Institutional money market funds			
	Taxable funds		Tax-exempt		Taxable		Tax-exempt		Taxable		Tax-exempt	
	Total	Government	Prime	Tax-exempt	Total	Government	Prime	Tax-exempt	Total	Government	Prime	Tax-exempt
1996	\$901,807	\$223,790	\$540,146	\$137,871	\$592,743	\$94,786	\$387,844	\$110,113	\$309,064	\$129,003	\$152,302	\$27,758
1997	1,058,886	254,223	647,005	157,658	663,683	100,991	439,946	122,747	395,202	153,232	207,059	34,911
1998	1,351,677	312,905	854,061	184,711	835,623	121,662	571,834	142,126	516,054	191,243	282,227	42,585
1999	1,613,058	333,726	1,079,435	199,897	965,202	132,915	676,502	155,785	647,856	200,812	402,933	44,111
2000	1,845,248	367,780	1,243,598	233,869	1,062,252	151,837	731,699	178,716	782,996	215,943	511,900	55,154
2001	2,285,232	461,631	1,564,520	259,081	1,135,500	169,883	776,132	189,484	1,149,733	291,748	788,388	69,597
2002	2,265,075	453,157	1,535,621	276,297	1,065,333	157,011	716,297	192,025	1,199,743	296,146	819,324	84,272
2003	2,039,393	410,041	1,339,061	290,291	938,595	141,248	606,735	190,612	1,100,798	268,793	732,326	99,679
2004	1,901,700	379,706	1,209,995	311,999	853,187	126,473	534,920	191,794	1,048,514	253,233	675,076	120,205
2005	2,026,820	399,330	1,291,117	336,373	876,493	126,244	546,843	203,406	1,150,327	273,085	744,274	132,968
2006	2,338,451	426,838	1,542,584	369,029	1,008,656	140,483	644,129	224,043	1,329,796	286,354	898,455	144,986
2007	3,085,500	760,389	1,857,280	467,832	1,226,179	185,526	755,324	285,329	1,859,321	574,863	1,101,955	182,503
2008	3,832,232	1,490,204	1,848,349	493,680	1,370,803	289,731	777,860	303,212	2,461,429	1,200,472	1,070,489	190,467
2009	3,315,893	1,107,035	1,809,923	398,935	1,080,913	214,478	631,052	235,383	2,234,981	892,556	1,178,872	163,553
2010	2,803,514	855,021	1,618,488	330,006	958,674	189,694	563,005	205,975	1,844,840	665,327	1,055,482	124,031
2011	2,690,921	970,075	1,429,149	291,697	950,623	203,677	550,496	196,451	1,740,298	766,398	878,654	95,247
2012	2,693,169	928,749	1,476,993	287,426	949,287	205,513	540,799	202,975	1,743,881	723,236	936,194	84,451
2013	2,717,808	962,009	1,485,187	270,612	936,830	205,056	535,512	196,262	1,780,978	756,954	949,674	74,350
2014	2,724,641	1,010,783	1,453,071	260,787	906,906	199,533	517,370	190,003	1,817,735	811,250	935,701	70,784
2015	2,754,743	1,226,735	1,273,077	254,931	941,089	346,765	409,582	184,743	1,813,654	879,970	863,496	70,188
2016	2,728,137	2,221,873	375,999	130,266	986,231	607,323	252,880	126,028	1,741,906	1,614,549	123,119	4,238
2017	2,847,304	2,260,750	455,428	131,126	1,006,896	611,421	269,354	126,121	1,840,407	1,649,329	186,074	5,004
2018	3,037,039	2,326,389	565,379	145,271	1,187,271	703,785	346,184	137,302	1,849,769	1,622,604	219,195	7,969

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 37

Money Market Funds: Net New Cash Flow¹ by Type of Fund

Millions of dollars, annual

Year	All money market funds				Retail money market funds ²				Institutional money market funds ³			
	Taxable		Tax-exempt		Taxable		Tax-exempt		Taxable		Tax-exempt	
	Total	Government	Prime	Tax-exempt	Total	Government	Prime	Tax-exempt	Total	Government	Prime	Tax-exempt
1996	\$89,422	\$20,572	\$58,935	\$9,915	\$52,940	\$6,181	\$39,559	\$7,200	\$36,481	\$14,391	\$19,376	\$2,715
1997	103,466	20,129	69,107	14,231	46,745	4,781	32,206	9,758	56,721	15,347	36,901	4,473
1998	235,457	45,178	167,909	22,370	131,072	15,835	100,508	14,728	104,386	29,343	67,401	7,642
1999	193,681	8,486	174,957	10,238	82,215	-757	73,145	9,827	111,466	9,243	101,812	411
2000	159,371	14,412	118,360	26,599	43,582	505	24,423	18,655	115,789	13,908	93,937	7,944
2001	375,226	86,623	267,263	21,340	36,385	13,580	12,762	10,043	338,841	73,043	254,501	11,297
2002	-45,934	-11,131	-51,056	16,254	-80,065	-10,174	-71,219	1,328	34,131	-957	20,163	14,925
2003	-264,019	-50,998	-222,795	9,774	-151,954	-20,609	-126,437	-4,908	-112,065	-30,389	-96,358	14,682
2004	-156,745	-36,125	-139,213	18,592	-88,770	-15,871	-75,331	2,432	-67,976	-20,254	-63,882	16,160
2005	62,084	13,182	28,008	20,895	2,358	-3,652	-4,781	10,791	59,726	16,834	32,789	10,103
2006	245,163	19,615	200,117	25,432	96,543	9,317	71,069	16,157	148,621	10,297	129,048	9,276
2007	654,286	319,240	251,098	83,948	172,620	38,769	83,232	50,618	481,666	280,471	167,866	33,329
2008	637,696	697,443	-73,243	13,495	114,389	98,267	2,099	14,023	523,307	599,176	-75,341	-528
2009	-539,150	-414,948	-28,571	-95,631	-308,406	-104,057	-136,444	-67,906	-230,744	-310,892	107,873	-27,725
2010	-525,064	-253,927	-201,765	-69,372	-124,197	-25,964	-69,829	-28,404	-400,867	-227,962	-131,937	-40,968
2011	-124,102	107,294	-192,742	-38,654	-1,377	20,461	-12,573	-9,265	-122,725	86,833	-180,169	-29,389
2012	-178	-43,344	47,096	-3,930	-1,195	-781	-7,602	7,187	1,017	-42,563	54,697	-11,117
2013	15,132	29,348	2,568	-16,784	-12,115	-1,143	-4,181	-6,792	27,247	30,491	6,748	-9,993
2014	6,235	48,232	-31,890	-10,107	-30,663	-5,843	-18,335	-6,486	36,898	54,075	-13,556	-3,621
2015	21,462	40,682	-13,719	-5,502	5,270	20,579	-11,153	-4,156	16,192	20,103	-2,566	-1,345
2016	-30,256	850,698	-764,865	-116,088	-70,353	169,635	-161,149	-78,839	40,097	681,063	-603,716	-37,249
2017	106,858	30,088	76,287	483	5,394	-8,376	14,039	-269	101,464	38,464	62,248	752
2018	158,798	42,871	103,288	12,640	165,228	83,003	72,009	10,215	-6,429	-40,132	31,279	2,424

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.² Retail includes mutual funds offered through a network of broker-dealers, by fund companies without intermediaries, through variable annuity and variable life insurance contracts, and predominantly to employer-sponsored retirement plans. Fund shares sold to both employer-sponsored retirement plans and institutional investors are not included in this category.³ Institutional includes fund shares sold primarily to institutional investors or institutional accounts. This also includes accounts that are purchased by or through an institution such as an employer, trustee, or fiduciary on behalf of its clients, employees, or owners; employer-sponsored retirement plans; and certain qualified individual investors, which includes high net worth individuals and fee-based or wrap account participants.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 38

Money Market Funds: Net New Cash Flow and Components of Net New Cash Flow

Millions of dollars, annual

Year	Net new cash flow ¹	Sales			Redemptions		
		New + exchange	New ²	Exchange ³	Regular + exchange	Regular ⁴	Exchange ⁵
1984	\$35,077	\$640,021	\$620,536	\$19,485	\$604,944	\$586,991	\$17,953
1985	-5,293	848,451	826,858	21,592	853,743	831,067	22,676
1986	33,552	1,026,745	978,041	48,704	993,193	948,656	44,537
1987	10,072	1,147,877	1,049,034	98,843	1,137,805	1,062,671	75,133
1988	106	1,130,639	1,066,003	64,636	1,130,534	1,074,346	56,188
1989	64,132	1,359,616	1,296,458	63,158	1,295,484	1,235,527	59,957
1990	23,179	1,461,537	1,389,440	72,098	1,438,358	1,372,764	65,594
1991	6,068	1,841,131	1,778,491	62,640	1,835,063	1,763,106	71,957
1992	-16,006	2,449,766	2,371,925	77,841	2,465,772	2,382,976	82,796
1993	-13,890	2,756,282	2,665,987	90,296	2,770,172	2,673,464	96,708
1994	8,525	2,725,201	2,586,478	138,722	2,716,675	2,599,400	117,275
1995	89,381	3,234,216	3,097,225	136,990	3,144,835	3,001,968	142,867
1996	89,422	4,156,985	3,959,014	197,971	4,067,563	3,868,772	198,791
1997	103,465	5,127,297	4,894,195	233,102	5,023,832	4,783,066	240,767
1998	235,460	6,407,155	6,128,721	278,434	6,171,695	5,901,169	270,526
1999	193,661	8,080,824	7,719,176	361,648	7,887,163	7,540,804	346,359
2000	159,371	9,826,639	9,406,256	420,383	9,667,268	9,256,307	410,962
2001	375,226	11,736,664	11,426,177	310,487	11,361,438	11,064,906	296,531
2002	-45,934	12,008,720	11,712,506	296,215	12,054,654	11,783,124	271,530
2003	-264,019	11,176,438	10,952,511	223,927	11,440,457	11,213,867	226,590
2004	-156,745	10,874,604	10,708,112	166,492	11,031,349	10,861,072	170,277
2005	62,084	12,493,634	12,317,489	176,145	12,431,550	12,260,771	170,779
2006	245,163	15,706,879	15,495,624	211,255	15,461,716	15,269,072	192,643
2007	654,286	21,313,538	21,038,467	275,071	20,659,252	20,407,965	251,287
2008	637,696	24,451,072	24,066,025	385,047	23,813,377	23,496,758	316,619
2009	-539,150	18,683,752	18,489,354	194,399	19,222,902	19,012,386	210,516
2010	-525,064	15,771,387	15,670,167	101,220	16,296,451	16,191,894	104,558
2011	-124,102	15,248,864	15,128,126	120,738	15,372,966	15,259,864	113,102
2012	-178	14,291,619	14,211,202	80,417	14,291,797	14,204,776	87,021
2013	15,132	14,976,592	14,867,963	108,629	14,961,461	14,857,692	103,769
2014	6,235	15,316,582	15,237,910	78,672	15,310,347	15,211,292	99,055
2015	21,462	17,658,517	17,560,966	97,551	17,637,056	17,531,891	105,164
2016	-30,256	18,696,848	18,488,574	208,274	18,727,104	18,527,794	199,309
2017	106,858	17,517,259	17,394,583	122,677	17,410,402	17,287,124	123,278
2018	158,798	20,326,725	20,175,934	150,791	20,167,926	20,044,133	123,794

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

² New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.

³ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

⁴ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

⁵ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 39

Money Market Funds: Paid and Reinvested Dividends by Type of Fund

Millions of dollars, annual

Year	Paid dividends			Reinvested dividends		
	Total	Taxable money market funds	Tax-exempt money market funds	Total	Taxable money market funds	Tax-exempt money market funds
1984	\$16,435	\$15,435	\$1,000	\$13,730	\$13,061	\$669
1985	15,708	14,108	1,600	12,758	11,760	998
1986	14,832	12,432	2,400	11,514	9,981	1,533
1987	15,654	12,833	2,821	11,946	10,136	1,810
1988	21,618	17,976	3,642	15,692	13,355	2,337
1989	28,619	24,683	3,936	23,050	20,294	2,756
1990	30,258	26,448	3,810	26,282	23,226	3,056
1991	28,604	25,121	3,483	22,809	19,998	2,811
1992	20,280	17,197	3,083	14,596	12,567	2,029
1993	18,991	15,690	3,302	11,615	10,007	1,607
1994	23,737	20,504	3,233	16,739	14,626	2,113
1995	37,038	32,855	4,183	27,985	24,873	3,111
1996	42,555	38,446	4,108	31,516	28,448	3,068
1997	48,843	44,185	4,658	37,979	34,425	3,554
1998	57,375	52,164	5,211	43,443	39,580	3,863
1999	69,004	63,229	5,775	50,648	46,602	4,046
2000	98,219	90,158	8,061	72,771	66,890	5,881
2001	79,307	73,361	5,946	56,367	51,949	4,418
2002	32,251	29,397	2,854	22,033	19,940	2,093
2003	17,041	15,124	1,917	11,314	9,916	1,398
2004	18,390	15,899	2,491	11,889	10,080	1,809
2005	50,186	43,547	6,638	32,803	27,951	4,852
2006	96,423	85,018	11,405	61,488	53,268	8,220
2007	127,907	113,177	14,730	82,457	71,938	10,519
2008	93,857	82,727	11,130	61,134	53,455	7,680
2009	18,619	16,590	2,030	11,035	9,999	1,037
2010	7,161	6,708	453	4,447	4,196	252
2011	5,237	4,888	349	3,261	3,074	187
2012	6,618	6,345	273	4,212	4,068	144
2013	8,020	7,794	226	5,206	5,089	117
2014	7,565	7,323	242	5,000	4,876	124
2015	7,907	7,703	204	5,328	5,223	105
2016	8,618	8,262	356	5,367	5,170	198
2017	18,502	17,722	781	10,665	10,248	418
2018	42,306	40,738	1,567	23,123	22,303	820

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 40

Taxable Government Money Market Funds: Asset Composition as a Percentage of Total Net Assets

Year-end

Year	Total net assets Millions of dollars	US Treasury bills	Other Treasury securities	US government agency issues	Repurchase agreements	Certificates of deposit	Eurodollar CDs	Commercial paper	Bank notes ¹	Corporate notes ²	Other assets ³	Average maturity Days
1996	\$223,790	17.7%	18.5%	25.4%	35.2%	0.0%	0.1%	0.7%	0.0%	-	2.4%	49
1997	254,223	15.2	17.6	25.1	37.8	0.1	0.0	1.2	0.1	-	2.9	50
1998	312,905	14.3	17.7	30.4	33.4	0.3	0.0	1.7	0.1	0.2%	2.0	52
1999	333,726	17.1	13.0	37.1	28.2	0.1	0.0	1.4	0.1	1.1	1.9	48
2000	367,780	14.2	10.1	32.0	37.9	0.0	0.0	1.6	0.1	1.2	2.9	45
2001	461,631	19.2	9.2	34.5	31.7	0.2	0.0	0.5	0.0	1.5	3.3	55
2002	453,157	20.5	6.4	33.2	35.5	0.1	0.0	0.5	0.0	1.7	2.1	52
2003	410,041	20.0	7.2	33.8	36.3	0.3	0.0	0.9	0.0	1.8	-0.3	52
2004	379,706	21.4	4.9	34.5	35.9	0.2	0.0	0.9	0.1	0.8	1.2	36
2005	399,330	15.8	4.4	28.1	50.0	0.0	0.0	0.2	0.1	0.8	0.5	27
2006	426,838	14.9	4.1	21.5	58.6	0.1	0.0	0.5	0.0	0.1	0.3	32
2007	760,389	16.3	5.1	24.1	53.7	0.3	0.0	0.2	0.0	0.0	0.2	31
2008	1,490,204	30.5	6.2	36.2	26.8	0.0	0.0	0.1	0.1	0.2	-0.1	48
2009	1,107,035	25.6	6.0	35.4	30.6	0.0	0.0	1.0	0.2	0.3	0.7	47
2010	855,021	22.9	8.5	33.3	33.0	0.0	0.0	0.9	0.1	0.4	0.9	47
2011	970,075	23.2	13.2	28.9	31.6	0.0	0.0	1.0	0.1	0.4	1.5	45
2012	928,749	25.6	12.6	26.7	33.0	0.0	0.0	0.7	0.0	0.1	1.4	46
2013	962,009	27.1	14.3	29.4	27.9	0.0	0.0	0.3	0.0	0.1	0.8	48
2014	1,010,783	21.2	13.5	31.3	34.7	0.1	0.0	0.5	0.0	0.1	-1.2	44
2015	1,226,735	17.2	17.2	32.8	32.2	0.0	0.0	0.0	0.0	0.1	0.4	40
2016	2,221,873	17.8	16.8	30.5	33.0	0.0	0.0	0.1	0.0	0.0	1.7	46
2017	2,260,750	19.4	10.5	30.0	39.0	0.0	0.0	0.0	0.0	0.0	1.1	33
2018	2,326,389	23.6	12.0	27.4	38.6	0.0	0.0	0.0	0.0	0.0	-1.7	31

¹ Prior to 1994, bank notes are included in other assets.² Prior to 1998, corporate notes are included in other assets.³ Other assets include banker's acceptances, municipal securities, and cash reserves.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to 100 percent because of rounding.

TABLE 41

Taxable Prime Money Market Funds: Asset Composition as a Percentage of Total Net Assets

Year-end

Year	Total net assets Millions of dollars	US Treasury bills	Other Treasury securities	US government agency issues	Repurchase agreements	Certificates of deposit	Eurodollar CDs	Commercial paper	Bank notes ¹	Corporate notes ²	Other assets ³	Average maturity Days
1996	\$540,146	0.5%	1.6%	9.0%	5.1%	12.8%	4.3%	51.0%	2.3%	-	13.5%	56
1997	647,005	0.4	0.5	5.4	5.3	14.7	3.7	52.0	3.2	-	14.8	57
1998	854,061	0.4	0.8	9.6	4.6	13.0	3.6	48.7	3.9	5.8%	9.6	58
1999	1,079,435	0.3	0.3	6.8	4.8	12.8	3.9	49.2	3.1	8.4	10.4	49
2000	1,243,598	0.3	0.1	5.9	3.9	11.7	6.6	50.9	3.6	10.5	6.5	53
2001	1,564,520	0.4	0.3	12.3	6.0	14.9	7.3	41.7	1.5	11.1	4.5	58
2002	1,535,621	1.3	0.3	11.8	8.1	13.8	7.0	40.1	1.4	12.0	4.2	54
2003	1,339,061	1.4	0.3	14.9	8.1	11.6	5.1	35.6	2.0	16.2	4.6	59
2004	1,209,995	0.3	0.1	12.0	8.5	14.1	5.7	33.9	2.6	17.9	4.9	41
2005	1,291,117	0.6	0.1	4.1	11.8	14.5	6.0	38.5	2.3	17.9	4.0	38
2006	1,542,584	0.1	0.2	2.9	9.9	13.9	4.4	39.6	2.2	21.6	5.2	49
2007	1,857,280	0.8	0.2	3.1	11.3	15.2	5.5	36.9	4.0	16.7	6.3	44
2008	1,848,349	1.9	0.5	12.7	8.4	21.5	4.7	34.1	3.1	9.3	3.8	47
2009	1,809,923	2.3	1.3	8.9	8.3	31.6	5.5	28.1	2.9	6.4	4.8	50
2010	1,618,488	2.7	1.9	7.8	12.8	28.6	6.7	24.3	3.2	6.2	5.8	44
2011	1,429,149	3.1	3.8	9.2	13.5	28.4	3.1	24.6	2.7	4.5	7.1	40
2012	1,476,993	3.4	4.2	6.9	16.8	29.5	3.0	23.1	3.5	3.5	6.1	45
2013	1,485,187	2.2	4.3	5.7	15.7	33.3	2.3	23.9	2.7	4.2	5.7	46
2014	1,453,071	2.1	2.6	5.1	20.9	35.7	1.7	23.0	1.6	3.9	3.5	44
2015	1,273,077	1.9	2.8	5.1	23.9	34.7	0.9	23.4	2.0	3.0	2.3	31
2016	375,999	5.1	2.0	0.2	18.0	38.6	0.5	26.8	0.3	1.1	7.4	34
2017	455,428	5.2	0.6	0.7	16.5	39.2	0.8	32.5	0.8	0.8	2.9	30
2018	565,379	7.2	0.3	1.0	21.5	33.7	0.3	33.4	0.5	0.8	1.2	30

¹ Prior to 1994, bank notes are included in other assets.² Prior to 1998, corporate notes are included in other assets.³ Other assets include banker's acceptances, municipal securities, and cash reserves.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to 100 percent because of rounding.

TABLE 42

Active and Index Mutual Funds: Total Net Assets

Millions of dollars, year-end

Year	Active funds				Index funds				
	Equity				Equity				
	Total	Domestic	World	Hybrid and bond	Total	S&P 500	Other	World	Hybrid and bond
1993	\$1,476,839	\$603,409	\$112,849	\$760,581	\$27,805	\$19,790	\$3,338	\$1,281	\$3,396
1994	1,511,747	664,955	159,099	687,693	32,573	22,752	3,863	2,095	3,863
1995	2,001,233	1,004,386	193,659	803,189	57,042	41,744	6,442	2,846	6,009
1996	2,520,727	1,355,714	281,075	883,938	97,759	73,856	11,241	4,124	8,538
1997	3,231,978	1,870,505	341,039	1,020,434	170,302	129,857	21,221	5,329	13,895
1998	3,899,397	2,349,060	383,675	1,166,662	264,998	201,791	35,051	7,962	20,193
1999	4,834,039	3,107,557	572,058	1,154,425	386,653	283,831	63,386	13,130	26,307
2000	4,726,650	3,024,385	551,225	1,151,041	384,039	272,462	72,009	12,644	26,923
2001	4,313,234	2,623,951	432,899	1,256,384	370,535	249,452	73,573	11,128	36,381
2002	3,787,694	2,002,274	358,318	1,427,101	327,417	200,989	69,426	11,050	45,952
2003	4,904,066	2,731,660	516,789	1,655,616	455,293	273,691	112,480	18,218	50,903
2004	5,637,529	3,160,276	687,966	1,789,287	554,044	317,826	147,819	28,236	60,163
2005	6,243,185	3,423,764	912,929	1,906,491	618,699	334,012	171,377	42,792	70,518
2006	7,309,295	3,873,226	1,293,787	2,142,283	747,491	379,765	218,166	66,647	82,913
2007	8,054,981	4,041,605	1,622,851	2,390,525	854,713	394,591	257,850	95,695	106,577
2008	5,166,984	2,307,274	848,469	2,011,242	619,474	252,956	177,975	67,871	120,672
2009	6,957,655	2,979,038	1,214,963	2,763,654	835,422	328,647	256,365	92,507	157,903
2010	8,010,831	3,352,255	1,419,941	3,238,635	1,016,713	375,949	325,276	122,751	192,736
2011	7,845,700	3,120,860	1,236,275	3,488,565	1,093,749	376,582	357,624	121,445	238,098
2012	9,049,344	3,455,039	1,453,175	4,141,130	1,311,077	429,698	439,633	161,212	280,534
2013	10,597,497	4,513,196	1,820,566	4,263,736	1,733,629	574,380	638,869	215,545	304,835
2014	11,098,750	4,792,662	1,841,056	4,465,032	2,053,230	669,057	768,289	242,924	372,959
2015	10,696,570	4,556,993	1,803,761	4,335,816	2,206,554	690,528	795,436	302,890	417,701
2016	10,996,094	4,643,126	1,801,534	4,551,434	2,629,226	806,070	962,815	363,721	496,619
2017	12,551,167	5,262,855	2,303,008	4,985,304	3,365,491	987,488	1,228,273	524,331	625,399
2018	11,350,796	4,650,810	1,919,906	4,780,080	3,319,035	953,107	1,194,729	506,204	664,996

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 43

Active and Index Mutual Funds: Net New Cash Flow

Millions of dollars, annual

Year	Active funds				Index funds					
	Equity				Equity					
	Total	Domestic	World	Hybrid and bond	Total	S&P 500	Domestic	Other	World	Hybrid and bond
1993	\$235,621	\$83,873	\$37,940	\$113,808	\$6,428	\$3,994	\$953	\$515	\$501	\$980
1994	71,812	67,891	43,812	-39,890	3,348	1,871	515	436	436	525
1995	110,393	103,022	11,000	-3,630	11,815	8,820	1,038	512	512	1,446
1996	205,418	147,780	46,483	11,155	24,780	18,447	3,192	1,033	1,033	2,108
1997	236,147	158,823	37,028	40,296	34,847	25,208	5,230	818	818	3,591
1998	194,318	109,857	5,955	78,505	46,140	30,977	8,499	1,568	1,568	5,096
1999	107,619	122,149	8,986	-23,515	61,613	38,073	16,102	2,241	2,241	5,197
2000	205,317	235,961	56,229	-86,874	25,611	10,802	10,668	1,664	1,664	2,477
2001	104,283	38,542	-24,423	90,165	26,735	9,113	8,859	1,181	1,181	7,582
2002	97,098	-41,741	-5,786	144,626	25,256	4,818	12,153	1,669	1,669	6,616
2003	181,211	88,866	22,163	70,183	35,234	14,231	16,538	2,199	2,199	2,266
2004	169,924	72,502	65,922	31,499	40,130	11,739	16,078	5,661	5,661	6,651
2005	164,046	5,518	98,455	60,073	27,877	-317	11,731	8,456	8,456	8,007
2006	194,067	-17,691	140,249	71,510	32,758	-5,908	19,918	10,674	10,674	8,074
2007	163,000	-96,271	124,821	134,449	61,138	-1,441	29,192	16,915	16,915	16,473
2008	-259,419	-180,515	-74,642	-4,262	48,624	7,666	23,337	7,697	7,697	9,924
2009	333,410	-52,336	21,693	364,052	59,928	8,195	16,646	7,951	7,951	27,135
2010	186,087	-95,280	37,603	243,763	57,560	-808	15,024	19,076	19,076	24,268
2011	-26,628	-151,361	-13,078	137,811	54,828	-6,868	24,600	17,202	17,202	19,895
2012	141,066	-174,236	-8,960	324,261	59,043	-7,139	22,134	15,523	15,523	28,525
2013	48,640	-33,978	113,068	-30,449	114,376	5,541	46,541	28,309	28,309	33,984
2014	-49,334	-121,328	46,816	25,179	149,062	12,559	49,009	38,403	38,403	49,091
2015	-285,337	-216,780	19,240	-87,796	165,724	14,678	32,311	74,932	74,932	43,804
2016	-390,148	-320,200	-68,040	-1,909	197,174	30,395	54,833	44,982	44,982	66,964
2017	-150,693	-306,476	21,715	134,068	223,030	7,150	63,118	55,262	55,262	97,499
2018	-505,941	-310,892	-70,006	-125,042	156,214	13,666	44,016	62,692	62,692	35,840

Note: Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges. Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 44

Active and Index Mutual Funds: Number of Funds

Year-end

Year	Active funds			Index funds						
	Equity			Equity			Hybrid and bond			
	Total	Domestic	World	Total	S&P 500	Other	World	Domestic	Other	World
1993	3,544	1,226	300	70	39	15	6			
1994	4,280	1,403	416	82	43	17	7			
1995	4,641	1,545	521	87	48	18	7			
1996	5,153	1,819	661	105	60	22	7			
1997	5,530	2,082	756	132	72	27	12			
1998	6,126	2,497	874	156	86	37	15			
1999	6,519	2,838	925	197	96	59	20			
2000	6,826	3,089	1,025	271	120	99	26			
2001	6,969	3,358	1,053	285	126	109	24			
2002	6,922	3,447	988	313	132	124	28			
2003	6,814	3,386	897	321	128	134	30			
2004	6,768	3,375	859	328	127	146	28			
2005	6,776	3,389	882	322	119	147	29			
2006	6,916	3,456	960	343	125	157	33			
2007	6,863	3,387	1,022	354	125	159	37			
2008	6,880	3,361	1,097	360	122	163	42			
2009	6,590	3,148	1,119	357	113	151	49			
2010	6,529	3,043	1,143	365	111	161	50			
2011	6,568	2,977	1,210	382	111	169	57			
2012	6,644	2,948	1,222	372	103	166	58			
2013	6,795	2,925	1,288	371	96	171	58			
2014	7,025	2,957	1,355	382	94	183	58			
2015	7,237	2,984	1,427	403	94	194	63			
2016	7,231	2,939	1,448	421	94	197	73			
2017	7,130	2,890	1,428	453	93	214	81			
2018	7,213	2,897	1,437	497	92	237	90			

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 45

Active and Index Mutual Funds: Number of Share Classes

Year-end

Year	Active funds				Index funds			
	Equity		Hybrid and bond		Equity		Hybrid and bond	
	Total	Domestic	World	Hybrid and bond	Total	S&P 500	Other	World
1993	4,479	1,502	379	2,598	74	43	15	6
1994	6,340	1,955	620	3,765	96	54	17	10
1995	7,517	2,360	834	4,323	110	63	19	11
1996	8,754	2,944	1,144	4,666	143	86	25	11
1997	10,235	3,705	1,428	5,102	205	115	38	21
1998	11,829	4,665	1,744	5,420	252	148	52	25
1999	13,160	5,541	1,933	5,686	321	164	95	31
2000	14,374	6,325	2,245	5,804	465	221	163	43
2001	15,505	7,278	2,453	5,774	517	238	196	43
2002	16,363	7,931	2,456	5,976	578	255	221	53
2003	16,661	8,035	2,310	6,316	601	253	243	56
2004	17,345	8,464	2,302	6,579	633	262	269	55
2005	17,860	8,715	2,438	6,707	647	258	279	62
2006	18,522	9,050	2,702	6,770	699	272	303	70
2007	18,833	9,101	2,944	6,788	734	275	312	83
2008	19,490	9,277	3,288	6,925	755	278	316	96
2009	19,019	8,783	3,436	6,800	756	259	291	107
2010	19,337	8,641	3,593	7,103	776	253	301	121
2011	19,692	8,576	3,809	7,307	856	260	337	144
2012	20,166	8,549	3,893	7,724	871	247	349	153
2013	20,961	8,623	4,110	8,228	881	234	364	156
2014	21,837	8,784	4,391	8,662	908	231	403	148
2015	22,687	8,965	4,637	9,085	964	233	433	161
2016	22,861	8,962	4,731	9,168	998	234	437	180
2017	22,900	8,929	4,686	9,285	1,055	228	469	196
2018	22,821	8,827	4,689	9,305	1,075	221	485	191

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 46

Alternative Strategy Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

Year	Equity funds		Hybrid funds		Bond funds		Total	Equity funds		Hybrid funds		Bond funds	
	Total	Domestic	World	Total	Domestic	World		Total	Domestic	World	Total	Domestic	World
Total net assets <i>Millions of dollars, year-end</i>													
2007	\$41,491	\$20,331	\$1,149	\$18,619	\$1,392	-	-\$780	\$445	-\$47	-\$632	-\$546	-	-
2008	31,276	17,097	431	12,574	1,174	-	-1,237	-1,011	-446	208	12	-	-
2009	58,317	24,432	3,355	28,892	1,638	-	21,025	7,241	2,572	10,789	424	-	-
2010	112,951	32,620	1,776	55,078	1,796	\$21,680	36,448	7,295	726	14,930	241	\$13,256	-
2011	129,167	33,729	3,987	64,171	2,136	25,143	15,838	-3,747	954	14,798	420	3,412	-
2012	148,873	41,045	3,897	80,421	2,145	21,366	12,026	6,088	822	4,358	-46	803	-
2013	220,211	50,193	6,666	110,367	1,862	51,124	64,028	9,804	2,054	23,493	116	28,560	-
2014	239,457	58,766	7,920	102,491	2,288	67,993	22,443	6,959	1,298	-1,093	123	15,156	-
2015	227,366	51,931	10,907	110,334	2,337	51,857	-15,162	-5,646	2,618	3,030	-186	-14,978	-
2016	212,653	49,201	10,349	115,615	1,968	35,520	-23,366	-4,446	-742	198	-445	-17,930	-
2017	224,755	54,213	12,561	121,508	2,294	34,179	-1,626	440	824	-824	313	-2,380	-
2018	197,515	46,466	10,512	102,986	7,491	30,060	-20,552	-5,407	-960	-11,951	1,611	-3,845	-
Number of funds <i>Year-end</i>													
2007	180	125	16	21	18	-	424	294	35	54	41	-	-
2008	204	138	22	27	17	-	499	320	58	80	41	-	-
2009	208	132	24	34	18	-	507	300	65	98	44	-	-
2010	243	139	24	52	20	8	645	330	72	157	48	38	-
2011	301	149	39	79	23	11	800	350	103	238	52	57	-
2012	337	154	35	111	23	14	903	361	85	340	52	65	-
2013	364	153	42	130	23	16	1,012	366	104	412	48	82	-
2014	437	167	52	159	26	33	1,243	408	145	502	64	124	-
2015	489	177	57	188	29	38	1,357	422	157	576	66	136	-
2016	477	179	61	175	30	32	1,318	423	172	535	70	118	-
2017	472	185	56	174	27	30	1,292	429	146	535	64	118	-
2018	497	187	64	190	30	26	1,316	428	164	562	69	93	-

* Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Alternative strategy mutual funds in this table are funds that employ alternative investment approaches like long/short, market neutral, leveraged, inverse, or commodity strategies to meet their investment objectives. Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 47

Emerging Market Debt Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

Year	Total net assets <i>Millions of dollars, year-end</i>	Net new cash flow* <i>Millions of dollars, annual</i>	Number of funds <i>Year-end</i>	Number of share classes <i>Year-end</i>
2000	\$2,319	-\$297	23	47
2001	2,129	-412	24	50
2002	2,585	311	22	46
2003	4,297	691	19	43
2004	5,543	635	19	43
2005	7,590	1,245	18	42
2006	12,962	2,193	23	60
2007	16,966	2,275	28	79
2008	13,589	257	31	98
2009	19,739	2,016	33	104
2010	37,888	14,902	36	126
2011	45,009	12,568	48	165
2012	75,322	19,891	66	217
2013	64,668	-4,701	88	291
2014	58,881	-5,627	103	351
2015	44,812	-10,721	97	355
2016	51,046	502	108	408
2017	66,377	6,936	105	398
2018	63,383	-1,868	104	387

*Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Emerging market debt funds in this table are funds that invest primarily in debt from underdeveloped regions of the world. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 48

Floating-Rate High-Yield Bond Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

Year	Total net assets <i>Millions of dollars, year-end</i>	Net new cash flow* <i>Millions of dollars, annual</i>	Number of funds <i>Year-end</i>	Number of share classes <i>Year-end</i>
2000	\$17,059	-\$48	14	28
2001	15,717	-2,617	21	54
2002	10,892	-4,442	20	50
2003	12,815	334	19	47
2004	21,960	7,650	22	60
2005	25,396	2,228	24	68
2006	31,745	5,723	22	79
2007	29,903	-2,303	27	94
2008	15,812	-7,078	29	115
2009	26,365	4,444	29	112
2010	45,292	15,158	31	122
2011	58,228	10,612	37	151
2012	75,117	10,918	40	164
2013	139,492	59,628	50	194
2014	117,323	-21,826	51	198
2015	93,085	-22,059	54	215
2016	104,898	3,450	59	226
2017	119,128	10,493	64	249
2018	116,086	-2,242	69	261

*Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Floating-rate high-yield funds in this table are funds that invest in income-producing senior loans, floating-rate loans, and other floating-rate debt securities, which typically are of below investment grade quality. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 49

Funds of Funds:¹ Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

Year	Total net assets Millions of dollars, year-end			Net new cash flow ² Millions of dollars, annual		
	Total	Equity	Bond	Total	Equity	Bond
2007	\$638,070	\$96,660	\$540,516	\$126,405	\$17,276	\$108,856
2008	469,330	42,858	425,207	60,478	5,710	54,311
2009	680,121	55,266	622,820	70,164	4,145	65,274
2010	914,590	80,580	824,609	118,365	4,964	110,953
2011	1,035,613	80,693	939,194	119,672	3,010	111,794
2012	1,270,684	93,065	1,149,517	93,733	-2,653	85,518
2013	1,558,210	128,757	1,391,401	108,398	12,612	85,432
2014	1,689,742	127,886	1,514,602	66,797	11,458	50,469
2015	1,715,203	136,723	1,524,458	55,833	8,849	35,771
2016	1,859,227	149,865	1,652,444	14,941	-2,683	17,378
2017	2,197,583	178,991	1,951,746	28,712	714	20,881
2018	2,102,904	194,036	1,830,433	38,788	35,443	-15,017
						18,362

Year	Number of funds Year-end			Number of share classes Year-end		
	Total	Equity	Bond	Total	Equity	Bond
2007	704	124	573	2,326	295	2,010
2008	838	122	706	2,779	309	2,443
2009	943	130	803	3,049	324	2,708
2010	977	146	818	3,133	347	2,767
2011	1,081	156	904	3,394	355	2,996
2012	1,146	163	953	3,704	404	3,225
2013	1,249	173	1,042	3,969	411	3,469
2014	1,322	174	1,107	4,203	414	3,683
2015	1,394	178	1,177	4,522	438	3,978
2016	1,432	173	1,218	4,636	432	4,098
2017	1,389	164	1,184	4,652	415	4,144
2018	1,521	181	1,288	5,067	437	4,528
						102

¹ Funds of funds are mutual funds that invest primarily in other mutual funds.

² Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Components may not add to the total because of rounding.

TABLE 50

Funds of Funds:¹ Components of Net New Cash Flow²

Millions of dollars, annual

Year	New + exchange			New ³			Sales					
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	\$226,974	\$33,410	\$193,123	\$441	\$193,638	\$26,126	\$167,106	\$406	\$33,336	\$7,284	\$26,017	\$35
2008	210,801	25,027	184,991	783	181,188	20,752	159,718	719	29,613	4,276	25,273	64
2009	190,510	19,787	169,659	1,064	171,431	18,308	152,102	1,021	19,079	1,479	17,557	43
2010	290,423	21,530	265,742	3,152	265,189	20,329	241,726	3,134	25,235	1,201	24,016	18
2011	350,468	20,728	321,984	7,756	322,736	19,618	295,384	7,734	27,732	1,111	26,600	21
2012	330,585	18,461	296,379	15,745	304,582	17,097	272,149	15,335	26,003	1,364	24,229	410
2013	400,742	33,303	349,514	17,924	360,684	30,706	312,397	17,581	40,058	2,597	37,117	343
2014	406,427	34,501	355,859	16,067	365,839	32,584	317,650	15,605	40,588	1,916	38,210	462
2015	452,288	38,962	386,426	26,900	400,073	37,004	336,713	26,356	52,215	1,958	49,713	544
2016	404,937	32,372	355,919	16,646	367,331	30,677	320,535	16,119	37,605	1,695	35,384	527
2017	458,254	37,068	396,801	24,386	413,194	34,598	354,805	23,792	45,060	2,470	41,996	594
2018	560,387	85,394	427,801	47,192	504,063	82,446	375,063	46,554	56,324	2,948	52,738	638

Year	Regular + exchange			Redemptions			Exchange ⁶					
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	\$100,569	\$16,134	\$84,267	\$168	\$81,897	\$13,073	\$68,680	\$144	\$18,671	\$3,061	\$15,587	\$23
2008	150,323	19,317	130,680	326	119,873	16,057	103,539	277	30,449	3,260	27,140	49
2009	120,346	15,642	104,385	319	102,094	14,235	87,563	296	18,252	1,406	16,822	24
2010	172,058	16,566	154,789	703	150,063	15,166	134,199	698	21,995	1,400	20,590	6
2011	230,796	17,718	210,190	2,887	202,695	16,236	183,580	2,879	28,101	1,482	26,610	8
2012	236,852	21,115	210,861	4,876	211,555	19,614	187,274	4,667	25,297	1,500	23,587	209
2013	292,343	20,691	264,082	7,571	259,180	19,196	232,689	7,295	33,163	1,495	31,393	276
2014	339,630	23,042	305,390	11,198	288,455	21,665	255,814	10,976	51,175	1,377	49,576	222
2015	396,456	30,113	350,655	15,687	337,302	28,087	293,903	15,312	59,154	2,026	56,752	376
2016	389,996	35,055	338,540	16,400	343,472	32,924	294,553	15,996	46,524	2,131	43,988	405
2017	429,542	36,354	375,920	17,268	375,590	33,996	324,737	16,857	53,951	2,357	51,183	411
2018	521,599	49,951	442,818	28,830	451,045	47,428	375,317	28,300	70,554	2,523	67,501	530

¹ Funds of funds are mutual funds that invest primarily in other mutual funds.² Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.³ New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.⁴ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.⁵ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.⁶ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: Components may not add to the total because of rounding.

TABLE 51
Inflation-Protected and TIPS Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
 Millions of dollars, annual

Year	Total	Inflation-protected ¹	TIPS ²	Total	Inflation-protected ¹	TIPS ²
	Total net assets	Net new cash flow ³	Number of funds	Total	Net new cash flow ³	Number of share classes
	Millions of dollars, year-end	Millions of dollars, annual	Year-end		Millions of dollars, annual	Year-end
2010	\$108,539	\$98,326	50	\$9,277	\$7,346	170
2011	133,437	120,065	52	11,421	9,900	183
2012	150,447	137,116	56	7,333	8,289	197
2013	108,266	95,942	57	-31,499	-31,383	205
2014	107,432	92,360	56	-3,096	-5,869	205
2015	105,832	86,206	59	-1,025	-5,821	230
2016	112,516	90,706	58	2,194	821	226
2017	127,310	99,630	56	11,034	5,487	234
2018	129,118	95,717	52	3,357	-2,232	249
2010	60	50	10	202	170	32
2011	64	52	12	219	183	36
2012	69	56	13	236	197	39
2013	70	57	13	244	205	39
2014	66	56	10	234	205	29
2015	69	59	10	260	230	30
2016	68	58	10	254	226	28
2017	67	56	11	262	234	28
2018	65	52	13	249	219	30

¹ Inflation-protected funds are funds that invest in inflation-protected or inflation-indexed securities other than TIPS (Treasury inflation-protected securities).

² TIPS funds invest in Treasury inflation-protected securities, which are backed by the US government and provide protection against inflation, as measured by the Consumer Price Index, while the interest rate remains fixed.

³ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 52

Mutual Funds by Market Capitalization: Total Net Assets and Net New Cash Flow by Type of Fund

Millions of dollars

Year	Total net assets																	
	Growth funds						Value funds						Blend funds					
	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap		
2008	\$67,773	\$92,473	\$225,474	\$275,904	\$78,536	\$88,564	\$339,460	\$111,339	\$71,867	\$108,904	\$636,952	\$493,320	\$71,867	\$108,904	\$636,952	\$493,320		
2009	94,830	128,430	295,384	365,173	104,213	121,026	416,722	140,989	96,987	148,326	816,907	632,496	96,987	148,326	816,907	632,496		
2010	116,796	159,945	328,189	398,056	130,432	146,319	456,880	159,686	120,735	181,664	922,811	687,874	120,735	181,664	922,811	687,874		
2011	107,062	146,471	327,589	355,108	120,523	135,540	435,524	156,211	116,873	171,699	911,538	629,798	116,873	171,699	911,538	629,798		
2012	115,862	161,472	385,822	377,427	133,265	152,990	471,659	175,461	144,896	191,544	1,038,038	698,849	144,896	191,544	1,038,038	698,849		
2013	165,727	213,551	507,662	491,343	175,869	209,693	591,281	243,433	207,615	265,240	1,401,939	907,738	207,615	265,240	1,401,939	907,738		
2014	158,834	212,405	554,300	507,679	170,461	222,068	630,230	273,493	208,371	286,797	1,618,791	965,116	208,371	286,797	1,618,791	965,116		
2015	153,505	200,529	562,446	509,084	145,762	200,505	563,615	258,300	196,653	278,493	1,630,702	925,614	196,653	278,493	1,630,702	925,614		
2016	158,867	186,763	520,512	504,464	171,304	224,280	615,851	285,492	234,820	303,518	1,846,797	950,681	234,820	303,518	1,846,797	950,681		
2017	193,013	220,690	632,593	601,259	180,191	242,518	666,091	335,859	258,251	344,597	2,233,409	1,124,809	258,251	344,597	2,233,409	1,124,809		
2018	184,868	205,770	611,265	553,405	139,739	191,257	569,535	283,697	228,722	293,961	2,128,810	1,021,287	228,722	293,961	2,128,810	1,021,287		
Year	Net new cash flow*																	
	Growth funds						Value funds						Blend funds					
	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap		
2008	-\$4,211	-\$9,711	-\$14,062	-\$11,247	-\$1,936	-\$8,764	-\$18,821	-\$15,187	-\$7,642	-\$14,109	-\$3,504	-\$31,175	-\$7,642	-\$14,109	-\$3,504	-\$31,175		
2009	1,857	-1,028	-9,382	-9,332	1,123	2,485	-7,468	-3,438	1,383	-985	3,507	-16,832	1,383	-985	3,507	-16,832		
2010	-1,783	-1,264	-12,749	-19,343	1,313	375	-13,519	-2,275	150	-503	-10,068	-29,813	150	-503	-10,068	-29,813		
2011	-5,469	-6,854	6,609	-33,775	-4,981	-4,838	-18,593	-34	-472	-5,515	-12,351	-42,344	-472	-5,515	-12,351	-42,344		
2012	-6,430	-5,520	1,625	-38,498	-8,699	-7,282	-29,485	-10,692	-6,223	-5,649	-10,905	-41,284	-6,223	-5,649	-10,905	-41,284		
2013	3,136	-2,982	-12,382	-16,666	-3,930	2,880	-25,917	14,457	7,768	8,020	29,290	-11,482	7,768	8,020	29,290	-11,482		
2014	-10,104	-15,204	-16,656	-28,511	-10,199	-3,928	-20,671	9,045	-7,551	-2,046	40,443	-23,621	-7,551	-2,046	40,443	-23,621		
2015	-2,896	-11,603	-17,595	-21,651	-13,983	-7,278	-43,256	-5,801	-4,113	-1,565	4,368	-43,911	-4,113	-1,565	4,368	-43,911		
2016	-10,316	-21,618	-50,185	-30,996	-7,329	-7,421	-23,734	-6,419	-506	-10,540	22,160	-62,809	-506	-10,540	22,160	-62,809		
2017	-4,980	-9,191	-31,785	-32,615	-8,705	-10,540	-46,488	-1,749	-7,543	-12,615	3,637	-49,013	-7,543	-12,615	3,637	-49,013		
2018	843	-4,738	-19,951	-34,553	-14,771	-20,424	-43,411	-16,323	-3,825	-17,133	-5,675	-37,995	-3,825	-17,133	-5,675	-37,995		

* Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 53
Mutual Funds by Market Capitalization: Number of Funds and Number of Share Classes by Type of Fund
 Year-end

Year	Number of funds											
	Growth funds				Value funds				Blend funds			
	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap
2008	235	245	347	208	221	202	393	203	186	148	489	251
2009	212	220	330	191	201	190	368	190	177	139	463	243
2010	206	207	316	182	196	185	357	192	171	133	457	233
2011	203	198	309	170	203	182	339	201	173	139	439	226
2012	198	189	299	165	209	180	328	212	167	135	420	225
2013	191	180	287	166	205	177	320	215	179	130	413	228
2014	188	179	288	161	213	187	323	220	188	128	414	233
2015	183	179	286	161	214	189	322	215	199	134	421	234
2016	182	173	266	159	213	188	321	207	201	134	414	238
2017	179	165	261	155	210	186	322	208	201	134	402	234
2018	178	162	271	159	213	186	320	198	207	138	408	237

Year	Number of share classes											
	Growth funds				Value funds				Blend funds			
	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap	Small cap	Mid cap	Large cap	Multi cap
2008	650	695	1,002	549	595	563	1,107	551	471	402	1,301	706
2009	605	635	955	531	559	529	1,023	503	450	379	1,248	716
2010	579	611	915	522	560	539	1,024	516	431	356	1,235	699
2011	590	594	903	495	582	543	994	545	436	377	1,223	695
2012	581	570	890	476	598	549	954	571	438	373	1,184	714
2013	560	557	873	487	593	554	946	602	478	361	1,184	740
2014	560	558	886	467	610	592	977	624	521	350	1,210	745
2015	550	565	902	468	626	601	996	608	568	350	1,239	776
2016	575	560	843	469	645	607	1,007	585	596	373	1,221	782
2017	596	547	815	474	643	614	1,002	619	604	373	1,188	772
2018	584	532	820	490	624	609	987	565	603	368	1,181	765

Note: Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 54

Sector Mutual Funds: Total Net Assets and Net New Cash Flow by Type of Fund

Millions of dollars

Total net assets									
Year-end									
Year	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/ Telecom	Utilities	Other sectors
2000	\$1,042	\$16,087	\$45,921	\$2,885	\$1,143	\$11,675	\$103,853	\$22,908	\$3,917
2001	1,290	13,901	40,545	2,355	1,314	13,509	62,302	17,744	2,940
2002	1,096	10,885	30,087	2,175	2,486	17,744	31,275	11,275	2,082
2003	1,436	13,138	36,803	3,237	4,227	31,652	46,922	13,481	2,412
2004	1,631	12,917	40,147	5,789	4,270	49,925	42,403	19,201	2,974
2005	1,405	11,837	45,398	11,972	7,003	59,158	34,366	28,390	3,189
2006	1,928	12,269	44,744	14,588	9,875	81,329	32,879	34,589	3,950
2007	2,147	8,518	43,967	22,050	12,066	53,738	34,169	45,669	4,826
2008	1,776	4,857	31,337	9,907	7,836	33,503	16,331	23,229	1,766
2009	2,439	5,941	32,440	17,380	14,901	44,126	27,610	30,309	2,986
2010	3,113	6,286	32,507	22,714	23,065	55,120	30,738	33,332	4,597
2011	3,546	4,548	35,884	20,797	17,102	60,155	26,680	34,785	3,906
2012	4,675	5,901	44,105	21,712	15,338	75,340	28,570	35,400	5,001
2013	6,431	9,285	74,767	30,696	6,811	77,363	41,486	40,149	8,173
2014	7,017	9,415	103,447	36,630	6,019	104,288	45,358	41,556	8,969
2015	9,514	10,222	124,538	28,988	4,487	101,459	47,088	32,516	7,006
2016	8,962	12,025	93,121	39,256	6,882	105,701	46,956	38,543	8,014
2017	8,946	14,099	104,465	37,720	7,277	110,899	62,450	35,539	9,727
2018	7,925	10,600	101,803	29,472	3,780	93,783	57,107	28,759	6,633

Net new cash flow*									
Annual									
Year	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/ Telecom	Utilities	Other sectors
2000	-\$122	-\$534	\$9,256	\$248	-\$214	\$339	\$43,837	\$1,201	-\$187
2001	254	-962	236	-169	-29	429	-4,466	-953	-198
2002	11	-1,603	-2,895	-73	484	3,612	-6,207	-2,076	-288
2003	9	-940	-767	336	447	5,177	65	-292	-145
2004	3	-1,535	-387	1,435	398	7,048	-6,165	1,571	148
2005	-209	-1,586	836	3,471	1,027	3,000	-8,541	3,311	121
2006	29	-1,017	-4,137	769	736	4,395	-4,452	556	-49
2007	94	-2,617	-3,378	1,662	-152	-15,282	-2,742	1,992	257
2008	209	96	-3,026	-206	769	1,791	-3,865	-3,412	-488
2009	82	-457	-3,163	1,764	2,253	492	1,768	250	386
2010	101	-626	-2,407	1,493	2,330	1,746	-1,391	-848	724
2011	262	-885	478	1,152	-1,359	1,018	-2,346	701	-286
2012	544	56	1,385	460	112	4,490	-1,515	-1,994	173
2013	794	859	8,582	5,451	-1,433	315	1,972	-1,409	977
2014	47	-256	7,645	5,776	-166	5,279	85	3,783	91
2015	2,235	978	11,007	-688	-37	-4,552	288	-2,585	-1,510
2016	-913	49	-17,602	3,053	325	-771	-3,953	-1,155	154
2017	-1,481	208	-8,496	-2,489	-108	-6,603	-932	-5,234	74
2018	-429	-1,311	-4,247	-2,972	-505	-11,438	-3,210	-4,324	-1,411

*Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Sector funds are funds that invest solely in companies that operate in related fields or specific industries. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 55

Sector Mutual Funds: Number of Funds and Number of Share Classes by Type of Fund

Year-end

Year	Number of funds								
	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/ Telecom	Utilities	Other sectors
2000	7	34	38	17	12	74	132	34	16
2001	9	41	57	16	11	75	152	40	17
2002	12	42	63	14	12	79	143	35	19
2003	11	38	58	15	12	91	123	33	19
2004	14	40	59	16	12	94	114	34	20
2005	14	41	53	17	12	93	103	32	19
2006	18	40	57	19	13	97	107	38	23
2007	19	40	52	19	12	96	98	39	25
2008	19	38	48	20	12	92	88	41	22
2009	19	36	41	19	12	90	79	37	23
2010	19	35	38	20	12	87	74	35	21
2011	19	32	34	24	11	83	69	33	21
2012	20	33	35	26	12	84	66	36	24
2013	19	32	35	30	12	87	68	41	24
2014	19	31	34	34	12	87	67	37	24
2015	19	31	34	42	12	90	67	39	24
2016	19	30	34	42	12	89	67	39	23
2017	20	30	34	44	11	88	67	38	23
2018	20	31	36	47	11	88	69	37	23

Year	Number of share classes								
	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/ Telecom	Utilities	Other sectors
2000	12	73	91	29	20	151	283	75	23
2001	17	88	145	28	22	156	345	89	25
2002	22	92	171	25	25	171	345	91	28
2003	19	85	155	32	27	213	288	88	28
2004	27	92	159	33	28	237	277	91	29
2005	26	95	137	37	28	240	259	94	27
2006	33	93	147	40	31	246	265	107	37
2007	41	95	132	46	35	252	248	113	42
2008	42	91	124	51	38	246	218	116	33
2009	42	80	101	49	38	246	199	104	41
2010	42	79	97	53	39	246	190	96	36
2011	43	72	80	70	34	238	184	89	36
2012	47	73	83	80	37	241	182	100	43
2013	41	72	83	92	35	256	188	109	44
2014	41	70	80	101	35	266	181	96	40
2015	39	70	80	135	35	281	180	101	39
2016	37	72	79	136	33	275	178	101	36
2017	39	74	78	141	31	269	181	101	36
2018	39	78	85	149	33	270	187	99	37

Note: Sector funds invest solely in companies that operate in related fields or specific industries. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 56

Target Date and Lifestyle Mutual Funds:¹ Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

Year	Total net assets			Net new cash flow ²			Number of funds			Number of share classes		
	Millions of dollars, year-end			Millions of dollars, annual			Year-end			Year-end		
	Total	Target date ³	Lifestyle ⁴	Total	Target date ³	Lifestyle ⁴	Total	Target date ³	Lifestyle ⁴	Total	Target date ³	Lifestyle ⁴
1997	\$14,314	\$1,133	\$13,181	\$4,138	\$128	\$4,010	77	9	68	141	14	127
1998	25,413	4,158	21,255	6,013	1,097	4,916	110	14	96	199	20	179
1999	34,753	6,492	28,261	4,927	1,318	3,609	130	16	114	239	26	213
2000	39,716	8,215	31,501	7,583	3,553	4,030	146	21	125	279	36	243
2001	45,467	11,761	33,706	7,696	3,884	3,812	147	22	125	351	67	284
2002	49,425	14,433	34,992	8,095	3,768	4,327	171	22	149	431	67	364
2003	81,733	25,374	56,359	19,040	7,252	11,788	192	42	150	499	105	394
2004	129,170	43,135	86,035	28,336	12,851	15,485	241	81	160	740	248	492
2005	202,062	70,476	131,585	57,182	22,122	35,059	325	124	201	1,131	449	682
2006	303,656	113,807	189,849	66,805	33,101	33,704	423	181	242	1,562	770	792
2007	420,912	182,973	237,939	91,919	56,211	35,708	495	246	249	1,834	1,038	796
2008	335,491	159,900	175,591	54,444	41,917	12,527	614	339	275	2,217	1,369	848
2009	486,605	255,655	230,950	52,116	43,441	8,674	644	380	264	2,353	1,516	837
2010	603,991	339,836	264,155	48,609	44,425	4,184	639	378	261	2,330	1,494	836
2011	637,927	375,881	262,046	40,468	41,552	-1,084	677	413	264	2,491	1,623	868
2012	773,388	480,800	292,588	50,272	52,932	-2,660	683	429	254	2,601	1,753	848
2013	976,850	618,061	358,789	55,255	52,941	2,314	763	492	271	2,934	2,034	900
2014	1,098,026	702,702	395,324	41,671	44,588	-2,918	816	542	274	3,086	2,176	913
2015	1,135,315	762,789	372,526	52,766	66,349	-13,582	869	599	270	3,266	2,353	910
2016	1,258,736	886,686	372,050	41,159	64,929	-23,770	913	641	272	3,393	2,469	924
2017	1,514,844	1,115,766	399,078	38,225	67,581	-29,355	886	632	254	3,398	2,505	893
2018	1,449,111	1,100,889	348,222	21,965	53,140	-31,175	935	685	250	3,683	2,811	872

¹ Categories include data for funds that invest primarily in other funds.

² Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

³ A target date fund is designed to satisfy investors' investment objective by a particular target date, which is usually included in the name of the fund. These funds invest in a mix of asset classes and typically rebalance their portfolios to become more conservative and income producing as the fund approaches and passes its target date.

⁴ A lifestyle fund maintains a predetermined risk level and generally use words such as "conservative," "moderate", or "aggressive" in their names to indicate the fund's risk level. Note: Components may not add to the total because of rounding.

TABLE 57
Target Date and Lifestyle Mutual Funds:¹ Components of Net New Cash Flow²
 Millions of dollars, annual

Year	Sales						Redemptions					
	New ³			Exchange ⁴			Regular ⁵			Exchange ⁶		
	Total	Target date ⁷	Lifestyle ⁸	Total	Target date ⁷	Lifestyle ⁸	Total	Target date ⁷	Lifestyle ⁸	Total	Target date ⁷	Lifestyle ⁸
1997	\$5,580	\$453	\$5,127	\$1,066	\$0	\$1,066	\$1,763	\$325	\$1,438	\$746	\$0	\$746
1998	8,853	1,175	7,679	2,782	1,335	1,448	3,557	589	2,968	2,066	823	1,243
1999	10,660	1,712	8,948	3,142	1,682	1,460	6,099	909	5,190	2,776	1,167	1,609
2000	15,032	3,796	11,236	4,620	2,530	2,089	8,296	1,306	6,990	3,772	1,467	2,305
2001	15,408	4,624	10,784	4,179	2,519	1,660	8,510	1,601	6,909	3,381	1,658	1,723
2002	18,235	5,171	13,064	3,691	2,288	1,403	10,901	2,180	8,721	2,930	1,511	1,419
2003	27,581	7,984	19,597	5,321	3,368	1,953	11,038	2,383	8,655	2,824	1,717	1,107
2004	41,670	16,261	25,409	8,713	5,398	3,315	17,571	6,113	11,458	4,477	2,696	1,781
2005	77,129	26,503	50,625	11,647	7,618	4,029	25,921	8,467	17,454	5,673	3,532	2,141
2006	89,517	39,781	49,736	17,113	11,123	5,990	31,240	12,448	18,792	8,586	5,356	3,230
2007	137,678	76,013	61,665	23,456	17,011	6,445	56,645	28,346	28,299	12,570	8,468	4,102
2008	127,548	78,569	48,978	22,099	16,120	5,979	73,889	38,397	35,492	21,314	14,375	6,938
2009	118,488	80,350	38,138	15,172	11,554	3,618	68,215	39,410	28,805	13,329	9,053	4,277
2010	149,986	107,631	42,356	20,606	16,623	3,983	104,959	67,392	37,567	17,025	12,437	4,588
2011	172,552	131,665	40,887	22,271	17,914	4,356	132,011	90,813	41,198	22,343	17,215	5,129
2012	182,816	143,661	39,155	19,667	15,988	3,680	133,104	92,090	41,014	19,107	14,626	4,481
2013	217,811	171,396	46,415	30,989	25,301	5,687	167,030	121,606	45,424	26,514	22,150	4,364
2014	240,323	186,214	54,109	33,593	28,093	5,500	187,366	129,060	58,306	44,878	40,658	4,221
2015	279,536	239,289	40,247	45,530	40,479	5,051	220,966	166,823	54,143	51,333	46,596	4,737
2016	279,449	241,381	38,068	35,211	30,891	4,320	230,522	169,536	60,986	42,979	37,800	5,172
2017	316,018	286,073	29,945	38,014	33,235	4,779	268,585	209,194	59,390	47,222	42,534	4,688
2018	337,950	309,638	28,312	47,701	42,895	4,805	302,239	243,092	59,147	61,446	56,301	5,145

¹ Categories include data for funds that invest primarily in other funds.

² Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

³ New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.

⁴ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

⁵ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

⁶ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

⁷ A target date fund is designed to satisfy investors' investment objective by a particular target date, which is usually included in the name of the fund. These funds invest in a mix of asset classes and typically rebalance their portfolios to become more conservative and income producing as the fund approaches and passes its target date.

⁸ A lifestyle fund maintains a predetermined risk level and generally use words such as "conservative," "moderate," or "aggressive" in their names to indicate the fund's risk level. Note: Components may not add to the total because of rounding.

TABLE 58

Variable Annuity Mutual Funds: Total Net Assets, Net New Cash Flow, and Number of Funds

Year	Total net assets				Net new cash flow*				Number of funds			
	Total	Equity	Hybrid and bond	Money market	Total	Equity	Hybrid and bond	Money market	Total	Equity	Hybrid and bond	Money market
	Millions of dollars, year-end				Millions of dollars, annual				Year-end			
1997	\$473,331	\$364,286	\$92,571	\$16,474	\$40,468	\$33,743	\$6,316	\$410	937	535	323	79
1998	615,152	474,961	116,337	23,853	44,252	27,853	10,359	6,040	1,161	702	377	82
1999	818,712	656,759	128,221	33,732	38,580	30,747	-455	8,288	1,350	866	403	81
2000	816,766	652,387	131,341	33,037	48,465	58,318	-7,791	-2,063	1,559	1,049	430	80
2001	741,998	558,511	138,730	44,756	21,373	4,755	7,931	8,687	1,735	1,238	408	89
2002	638,928	438,598	152,260	48,070	-1,066	-12,627	11,234	327	1,897	1,385	420	92
2003	837,408	619,012	182,744	35,652	29,735	34,966	6,919	-12,150	1,885	1,362	435	88
2004	973,910	738,444	202,106	33,361	33,505	33,592	2,595	-2,683	1,881	1,351	443	87
2005	1,072,894	822,105	217,090	33,699	16,404	13,254	4,449	-1,299	1,882	1,356	443	83
2006	1,266,689	975,362	249,135	42,192	29,558	16,878	7,178	5,501	1,922	1,389	452	81
2007	1,397,953	1,052,793	292,437	52,723	31,640	1,631	22,758	7,251	1,895	1,364	453	78
2008	928,316	598,560	254,786	74,971	-6,398	-30,780	4,844	19,538	1,895	1,368	448	79
2009	1,185,798	791,759	336,742	57,296	9,756	-3,518	32,081	-18,806	1,824	1,303	448	73
2010	1,338,575	886,357	403,664	48,554	-2,563	-25,434	32,581	-9,711	1,773	1,256	447	70
2011	1,297,419	799,921	448,654	48,844	-21,463	-48,327	26,756	107	1,732	1,220	449	63
2012	1,439,798	875,004	520,862	43,932	-31,892	-55,367	28,607	-5,132	1,724	1,195	469	60
2013	1,667,318	1,050,470	577,056	39,792	-53,809	-61,392	10,221	-2,638	1,733	1,180	496	57
2014	1,708,123	1,065,125	605,874	37,124	-67,157	-58,536	-5,957	-2,665	1,729	1,150	523	56
2015	1,634,720	1,006,454	589,223	39,043	-65,126	-53,813	-13,119	1,806	1,705	1,126	526	53
2016	1,672,237	1,027,850	608,496	35,892	-81,181	-64,863	-13,981	-2,337	1,681	1,102	536	43
2017	1,825,018	1,156,265	636,558	32,196	-116,215	-89,763	-22,585	-3,867	1,679	1,094	542	43
2018	1,624,919	997,734	588,880	38,305	-122,918	-91,075	-37,525	5,681	1,713	1,116	555	42

*Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: This category includes mutual funds offered through variable annuity and variable life insurance contracts. Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 59

Variable Annuity Mutual Funds: Components of Net New Cash Flow¹

Millions of dollars, annual

Year	Sales						Redemptions									
	New ²			Exchange ³			Regular ⁴			Exchange ⁵						
	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Money market
1997	\$105,219	\$67,005	\$15,290	\$22,923	\$24,210	\$13,017	\$2,348	\$8,846	\$65,375	\$33,408	\$9,905	\$22,061	\$23,586	\$12,871	\$1,417	\$9,298
1998	141,460	83,456	23,224	34,780	37,134	18,964	5,502	12,668	99,142	54,025	14,963	30,153	35,199	20,542	3,403	11,254
1999	212,005	130,891	22,002	59,112	40,818	22,080	2,985	15,753	174,368	100,372	22,268	51,728	39,875	21,853	3,174	14,849
2000	334,926	222,937	20,125	91,863	36,326	22,822	1,852	11,652	287,216	166,174	27,481	93,561	35,571	21,267	2,288	12,017
2001	346,078	197,776	33,674	114,628	31,716	15,927	5,185	10,604	325,797	191,027	27,582	107,189	30,623	17,921	3,346	9,356
2002	342,105	183,693	48,156	110,256	34,170	16,428	7,160	10,583	343,917	194,173	38,802	110,942	33,425	18,574	5,281	9,570
2003	282,544	169,038	54,378	59,128	28,791	15,307	5,944	7,540	253,156	136,059	46,629	70,468	28,444	13,319	6,774	8,351
2004	261,715	170,082	46,592	45,042	26,407	14,396	5,711	6,300	228,278	136,344	44,382	47,552	26,340	14,543	5,325	6,472
2005	246,396	162,387	48,220	35,789	19,598	10,599	3,403	5,595	230,118	148,067	44,472	37,578	19,472	11,666	2,702	5,104
2006	280,053	191,694	51,513	36,846	22,318	10,823	3,425	8,070	250,470	173,262	44,348	32,859	22,344	12,376	3,412	6,555
2007	343,148	218,037	73,775	51,336	37,045	19,701	8,247	9,097	317,002	215,663	55,851	45,488	31,550	20,444	3,413	7,693
2008	379,879	197,960	93,750	88,169	25,445	11,112	5,114	9,220	389,907	227,288	90,474	72,144	21,816	12,564	3,546	5,706
2009	312,302	150,896	99,879	61,528	22,650	14,589	3,767	4,294	302,418	154,620	69,567	78,231	22,778	14,382	1,999	6,397
2010	337,225	164,907	139,353	32,964	17,325	6,755	6,742	3,828	339,535	188,579	108,555	42,401	17,578	8,517	4,959	4,102
2011	331,149	144,557	150,371	36,221	16,262	6,816	6,865	2,582	352,624	189,860	125,864	36,900	16,251	9,840	4,616	1,795
2012	309,793	128,108	153,109	28,575	14,231	10,720	2,102	1,410	340,829	181,579	125,427	33,824	15,087	12,616	1,178	1,293
2013	296,779	142,685	123,346	30,748	23,171	14,353	5,960	2,859	348,940	201,508	112,565	34,867	24,819	16,922	6,520	1,377
2014	257,643	132,904	96,537	28,201	9,559	4,669	1,574	3,316	324,217	189,773	103,400	31,043	10,142	6,335	668	3,139
2015	267,129	137,141	97,627	32,361	16,398	6,576	6,187	3,635	332,646	190,532	111,026	31,089	16,007	6,998	5,907	3,102
2016	268,900	124,422	111,350	33,127	12,088	4,948	3,995	3,145	350,567	187,786	126,687	36,094	11,603	6,448	2,639	2,515
2017	203,106	109,668	64,526	28,912	13,418	7,226	2,936	3,256	319,440	197,914	88,680	32,846	13,298	8,743	1,367	3,189
2018	228,111	120,444	70,324	37,343	18,723	11,015	3,683	4,026	351,039	210,390	108,063	32,586	18,713	12,143	3,469	3,102

¹ Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.² New sales are the dollar value of new purchases of mutual fund shares. This does not include shares purchased through reinvestment of dividends in existing accounts.³ Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.⁴ Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.⁵ Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

Note: This category includes mutual funds offered through variable annuity and variable life insurance contracts. Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 60

Mutual Funds: Total Net Assets Held in Individual and Institutional Accounts

Millions of dollars, year-end

Year	Total	Equity funds	Hybrid funds	Bond funds	Money market funds
Total					
2003	\$7,398,752	\$3,652,839	\$447,530	\$1,258,989	\$2,039,393
2004	8,093,274	4,342,123	552,250	1,297,200	1,901,700
2005	8,888,704	4,884,874	621,477	1,355,533	2,026,820
2006	10,395,237	5,831,591	731,503	1,493,693	2,338,451
2007	11,995,194	6,412,592	821,474	1,675,628	3,085,500
2008	9,618,691	3,654,545	562,262	1,569,652	3,832,232
2009	11,108,970	4,871,520	717,580	2,203,977	3,315,893
2010	11,831,058	5,596,172	842,198	2,589,174	2,803,514
2011	11,630,371	5,212,786	883,980	2,842,683	2,690,921
2012	13,053,590	5,938,757	1,032,462	3,389,202	2,693,169
2013	15,048,935	7,762,556	1,284,695	3,283,876	2,717,808
2014	15,876,621	8,313,989	1,379,201	3,458,790	2,724,641
2015	15,657,868	8,149,607	1,341,466	3,412,051	2,754,743
2016	16,353,457	8,577,266	1,399,866	3,648,187	2,728,137
2017	18,763,962	10,305,955	1,545,365	4,065,338	2,847,304
2018	17,706,870	9,224,755	1,383,259	4,061,817	3,037,039
Individual accounts					
2003	\$6,550,988	\$3,463,087	\$435,095	\$1,166,076	\$1,486,729
2004	7,201,792	4,093,108	536,248	1,203,913	1,368,522
2005	7,800,523	4,576,081	600,435	1,233,422	1,390,585
2006	9,095,808	5,436,666	704,117	1,356,239	1,598,787
2007	10,388,178	5,985,979	792,338	1,518,061	2,091,800
2008	7,866,074	3,405,816	544,231	1,425,168	2,490,860
2009	9,292,487	4,503,071	693,741	2,007,495	2,088,179
2010	10,063,201	5,132,817	808,656	2,338,153	1,783,575
2011	9,937,535	4,780,238	845,148	2,578,064	1,734,084
2012	11,241,280	5,450,552	990,241	3,066,675	1,733,812
2013	13,065,406	7,156,868	1,226,873	2,954,976	1,726,688
2014	13,760,657	7,652,783	1,319,191	3,105,100	1,683,583
2015	13,529,337	7,488,211	1,283,710	3,055,443	1,701,973
2016	14,189,547	7,886,148	1,341,319	3,273,257	1,688,823
2017	16,336,752	9,466,327	1,481,521	3,635,583	1,753,321
2018 ^p	15,383,262	8,468,854	1,328,848	3,650,544	1,935,015
Institutional accounts*					
2003	\$847,764	\$189,752	\$12,435	\$92,913	\$552,664
2004	891,482	249,015	16,002	93,287	533,178
2005	1,088,181	308,793	21,042	122,111	636,235
2006	1,299,429	394,925	27,386	137,454	739,664
2007	1,607,016	426,613	29,136	157,567	993,700
2008	1,752,617	248,729	18,031	144,484	1,341,372
2009	1,816,483	368,449	23,839	196,482	1,227,714
2010	1,767,857	463,355	33,542	251,021	1,019,939
2011	1,692,836	432,548	38,832	264,619	956,837
2012	1,812,310	488,205	42,221	322,527	959,357
2013	1,983,529	605,688	57,822	328,900	991,120
2014	2,115,964	661,206	60,010	353,690	1,041,058
2015	2,128,531	661,396	57,756	356,608	1,052,770
2016	2,163,910	691,118	58,547	374,930	1,039,314
2017	2,427,210	839,628	63,844	429,755	1,093,983
2018 ^p	2,323,608	755,901	54,411	411,273	1,102,024

* Institutional accounts include accounts purchased by an institution, such as a business, financial, or nonprofit organization. Institutional accounts do not include primary accounts of individuals issued by a broker-dealer.

^p Data are preliminary.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 61

Mutual Funds: Total Net Assets of Institutional Investors by Type of Institution and Type of Fund

Millions of dollars, year-end

Year		Total	Business corporations	Financial institutions ¹	Nonprofit organizations	Other ²
2008	Total	\$1,752,617	\$904,516	\$497,226	\$135,471	\$215,403
	Equity	248,729	70,685	65,085	33,126	79,833
	Hybrid	18,031	5,702	5,708	2,717	3,904
	Bond	144,484	29,131	28,669	22,808	63,877
	Money market	1,341,372	798,998	397,765	76,820	67,789
2009	Total	1,816,483	885,996	511,068	147,352	272,067
	Equity	368,449	106,010	89,486	44,758	128,195
	Hybrid	23,839	7,989	7,126	3,665	5,060
	Bond	196,482	46,929	41,564	28,967	79,022
	Money market	1,227,714	725,069	372,893	69,963	59,790
2010	Total	1,767,857	740,811	515,903	153,296	357,847
	Equity	463,355	120,797	108,785	49,035	184,738
	Hybrid	33,542	10,953	10,186	4,262	8,142
	Bond	251,021	53,920	54,883	33,426	108,791
	Money market	1,019,939	555,140	342,048	66,574	56,177
2011	Total	1,692,836	681,722	488,485	146,362	376,267
	Equity	432,548	102,056	95,442	45,288	189,761
	Hybrid	38,832	12,042	11,390	4,795	10,606
	Bond	264,619	51,793	57,984	36,221	118,621
	Money market	956,837	515,830	323,670	60,058	57,278
2012	Total	1,812,310	684,193	519,412	152,243	456,462
	Equity	488,205	108,749	98,567	51,677	229,212
	Hybrid	42,221	11,235	13,949	5,186	11,851
	Bond	322,527	59,297	68,777	40,304	154,149
	Money market	959,357	504,912	338,120	55,074	61,251
2013	Total	1,983,529	745,302	548,911	165,777	523,539
	Equity	605,688	135,707	121,573	64,253	284,156
	Hybrid	57,822	15,135	17,240	7,431	18,015
	Bond	328,900	58,967	70,699	35,563	163,670
	Money market	991,120	535,492	339,399	58,530	57,698
2014	Total	2,115,964	800,050	579,937	180,943	555,035
	Equity	661,206	157,549	125,520	65,481	312,656
	Hybrid	60,010	15,821	18,065	7,170	18,955
	Bond	353,690	69,078	79,370	39,071	166,171
	Money market	1,041,058	557,603	356,982	69,221	57,253
2015	Total	2,128,531	824,800	578,413	183,096	542,222
	Equity	661,396	159,465	127,182	62,566	312,184
	Hybrid	57,756	16,613	19,185	7,621	14,336
	Bond	356,608	72,159	86,100	38,294	160,054
	Money market	1,052,770	576,563	345,945	74,615	55,647
2016	Total	2,163,910	722,280	657,204	198,602	585,824
	Equity	691,118	164,557	126,441	64,040	336,080
	Hybrid	58,547	15,510	19,635	8,400	15,001
	Bond	374,930	78,178	90,159	40,332	166,262
	Money market	1,039,314	464,035	420,969	85,829	68,481
2017	Total	2,427,210	778,733	741,087	213,587	693,802
	Equity	839,628	200,274	165,584	74,603	399,167
	Hybrid	63,844	16,563	21,400	9,630	16,252
	Bond	429,755	86,237	119,510	42,333	181,675
	Money market	1,093,983	475,659	434,593	87,022	96,709
2018 ^p	Total	2,323,608	737,320	769,115	216,680	600,493
	Equity	755,901	177,729	157,545	67,075	353,553
	Hybrid	54,411	11,993	19,045	9,172	14,202
	Bond	411,273	81,282	120,937	43,732	165,323
	Money market	1,102,024	466,316	471,589	96,702	67,416

¹ Financial institutions include credit unions, accounts of banks not held as fiduciaries, insurance companies, and other financial organizations.

² Other institutional investors include state and local governments, funds holding mutual fund shares, and other institutional accounts not classified.

^p Data are preliminary.

Note: Data for funds that invest primarily in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 62

Taxable Money Market Funds: Total Net Assets of Institutional Investors by Type of Institution and Type of Fund

Millions of dollars, year-end

Year		Total	Business corporations	Financial institutions ¹	Nonprofit organizations	Other ²
2003	Total	\$515,134	\$270,469	\$194,252	\$32,211	\$18,202
	Institutional funds	428,443	220,562	173,539	22,473	11,870
	Retail funds	86,691	49,907	20,713	9,738	6,333
2004	Total	486,612	277,235	161,810	28,909	18,659
	Institutional funds	406,634	228,594	146,520	18,934	12,586
	Retail funds	79,979	48,641	15,290	9,975	6,073
2005	Total	578,538	322,944	197,002	32,896	25,696
	Institutional funds	485,039	270,892	172,215	23,666	18,266
	Retail funds	93,499	52,052	24,788	9,229	7,430
2006	Total	677,610	388,596	221,779	37,856	29,379
	Institutional funds	581,580	324,089	208,179	26,698	22,613
	Retail funds	96,030	64,507	13,600	11,158	6,766
2007	Total	916,501	514,367	294,432	57,470	50,232
	Institutional funds	804,418	444,130	273,626	43,408	43,254
	Retail funds	112,082	70,237	20,806	14,062	6,977
2008	Total	1,253,699	736,035	377,962	74,803	64,899
	Institutional funds	1,129,758	659,901	350,944	60,631	58,281
	Retail funds	123,941	76,134	27,018	14,171	6,618
2009	Total	1,150,656	668,516	356,992	68,124	57,025
	Institutional funds	1,052,584	606,631	336,161	57,764	52,029
	Retail funds	98,072	61,885	20,831	10,360	4,996
2010	Total	961,045	513,038	328,890	65,252	53,865
	Institutional funds	872,602	459,592	307,203	56,442	49,365
	Retail funds	88,443	53,446	21,687	8,809	4,500
2011	Total	909,996	481,122	314,508	58,686	55,680
	Institutional funds	822,855	428,513	292,479	50,999	50,864
	Retail funds	87,141	52,610	22,029	7,687	4,815
2012	Total	911,741	468,745	328,348	53,961	60,686
	Institutional funds	835,786	422,874	309,051	47,368	56,492
	Retail funds	75,955	45,871	19,297	6,593	4,194
2013	Total	946,812	500,390	331,652	57,568	57,202
	Institutional funds	875,277	452,859	317,151	55,082	50,186
	Retail funds	71,535	47,531	14,501	2,486	7,017
2014	Total	997,775	523,025	350,410	67,707	56,632
	Institutional funds	928,544	476,948	336,690	65,017	49,889
	Retail funds	69,231	46,078	13,720	2,690	6,743
2015	Total	1,010,420	542,906	339,122	73,427	54,966
	Institutional funds	944,012	499,770	326,717	70,402	47,124
	Retail funds	66,408	43,136	12,405	3,025	7,842
2016	Total	1,034,398	463,664	417,207	85,116	68,411
	Institutional funds	969,598	421,197	407,307	81,571	59,523
	Retail funds	64,800	42,467	9,899	3,545	8,888
2017	Total	1,090,365	475,354	432,088	86,317	96,605
	Institutional funds	1,026,586	433,051	423,285	82,812	87,438
	Retail funds	63,779	42,303	8,803	3,505	9,168
2018 ^p	Total	1,096,906	465,539	468,353	95,693	67,322
	Institutional funds	1,005,315	420,217	454,352	91,693	39,053
	Retail funds	91,591	45,321	14,000	4,000	28,269

¹ Financial institutions include credit unions, accounts of banks not held as fiduciaries, insurance companies, and other financial organizations.

² Other institutional investors include state and local governments, funds holding mutual fund shares, and other institutional accounts not classified.

^p Data are preliminary.

Note: Institutional funds are sold primarily to institutional investors or institutional accounts. This includes accounts that are purchased by an institution, such as a business, financial, or nonprofit organization. Retail funds are sold primarily to individual investors and include variable annuity mutual funds. Data for funds that invest in other mutual funds were excluded from the series. Components may not add to the total because of rounding.

TABLE 63
Mutual Funds: DC Plan Assets and Estimated Net New Cash Flow by Type of Fund
 Billions of dollars

Year	Total net assets					Estimated net new cash flow				
	Year-end					Annual				
	Total	Equity funds		Hybrid funds	Money market funds	Total	Equity funds		Hybrid funds	Money market funds
	Domestic	World				Domestic	World			
1997	\$775	\$527	\$56	\$73	\$58	\$67	\$45	\$11	\$7	\$6
1998	993	688	67	91	72	77	44	4	6	11
1999	1,293	914	109	102	76	70	45	8	2	4
2000	1,284	884	115	108	80	85	68	22	-1	-3
2001	1,226	789	96	118	104	91	39	2	12	19
2002	1,101	631	85	114	139	78	26	6	7	27
2003	1,422	867	124	154	155	50	37	7	13	4
2004	1,656	1,017	172	195	163	71	40	21	22	2
2005	1,880	1,105	229	255	178	97	13	27	46	10
2006	2,222	1,247	334	326	192	91	-5	47	36	6
2007	2,492	1,298	422	403	217	94	-29	35	52	13
2008	1,710	755	222	309	225	35	-39	-15	32	17
2009	2,194	982	322	429	291	40	-11	12	32	36
2010	2,507	1,130	370	520	341	31	-12	7	34	29
2011	2,472	1,070	321	554	373	17	-40	-2	36	15
2012	2,846	1,210	377	664	441	36	-38	-3	40	38
2013	3,473	1,619	477	809	419	56	13	26	36	-15
2014	3,701	1,759	491	874	438	18	-17	25	17	3
2015	3,634	1,692	501	888	413	-40	-66	-21	23	-21
2016	3,849	1,777	514	988	441	-58	-87	-5	32	12
2017	4,543	2,059	687	1,177	497	-3	-87	29	26	36
2018	4,191	1,860	592	1,110	497	-59	-76	3	3	2

(*) = between -\$500 million and \$500 million

Note: Data for funds that invest primarily in other mutual funds are included in the series. Components may not add to the total because of rounding.

TABLE 64

Mutual Funds: IRA Assets and Estimated Net New Cash Flow by Type of Fund

Billions of dollars

Year	Total net assets					Estimated net new cash flow				
	Year-end					Annual				
	Total	Equity funds		Hybrid funds	Money market funds	Total	Equity funds		Hybrid funds	Money market funds
	Domestic	World				Domestic	World			
1997	\$785	\$442	\$79	\$84	\$90	\$54	\$7	\$5	\$7	-\$6
1998	996	586	93	98	105	50	6	3	12	19
1999	1,274	796	137	103	107	53	2	-1	1	11
2000	1,263	781	135	104	107	64	14	-9	-6	-4
2001	1,203	699	111	110	131	34	-2	8	20	10
2002	1,089	548	93	110	174	3	(*)	10	34	9
2003	1,388	749	131	162	196	30	4	24	7	-15
2004	1,597	861	176	218	204	19	20	37	-1	-15
2005	1,781	932	231	264	210	3	24	34	2	1
2006	2,143	1,067	324	340	233	5	36	31	11	27
2007	2,437	1,125	410	409	269	-14	33	45	24	36
2008	1,694	653	220	288	259	-43	-17	1	14	41
2009	2,116	834	307	372	374	-18	3	13	69	-44
2010	2,420	948	368	444	456	-18	11	26	47	-26
2011	2,411	895	314	495	496	-38	-11	45	21	9
2012	2,756	1,010	354	583	592	-33	-15	28	53	5
2013	3,390	1,358	444	716	577	23	24	44	-14	12
2014	3,526	1,478	456	789	584	-11	16	37	-11	-10
2015	3,495	1,458	461	785	575	-17	16	8	(*)	-3
2016	3,710	1,547	461	834	623	-57	-17	-10	20	29
2017	4,282	1,796	601	942	703	-68	16	-9	53	-5
2018	3,976	1,641	512	862	696	-53	-11	-31	-4	22

(*) = between -\$500 million and \$500 million

Note: Data for funds that invest primarily in other mutual funds are included in the series. Components may not add to the total because of rounding.

TABLE 65

Worldwide Regulated Open-End Funds: Total Net Assets

Millions of US dollars, year-end

	2013	2014	2015	2016	2017	2018
World	\$36,432,940	\$38,141,673	\$38,253,006	\$40,643,821	\$49,303,348	\$46,699,696
Americas	18,917,229	20,077,066	19,628,150	21,187,291	24,898,007	23,639,819
Argentina	11,179	15,630	16,435	20,189	29,213	15,902
Brazil	1,014,115	989,542	743,530	1,060,904	1,238,039	1,211,436
Canada	999,960	1,047,840	954,305	1,080,632	1,292,023	1,163,469
Chile	39,291	44,166	39,898	46,214	54,744	52,497
Costa Rica	1,933	2,092	2,533	2,297	2,446	2,119
Mexico	120,518	119,504	105,940	92,429	109,449	109,729
Trinidad and Tobago	6,586	7,121	6,983	6,781	7,426	7,131
United States	16,723,647	17,851,171	17,758,526	18,877,845	22,164,667	21,077,536
Europe	13,601,725	13,804,517	13,732,581	14,112,401	17,725,155	16,478,499
Austria	194,932	165,084	151,199	150,939	179,198	165,036
Belgium	93,389	100,790	92,115	84,294	109,190	98,098
Bulgaria	504	496	440	548	770	822
Croatia	N/A	2,058	1,975	2,571	2,982	2,977
Cyprus	N/A	N/A	N/A	248	1,581	2,803
Czechia	5,302	5,746	7,812	8,901	12,823	12,514
Denmark	118,702	120,844	111,509	116,910	145,837	138,232
Finland	103,602	86,397	88,351	93,757	110,998	100,005
France	2,115,410	1,940,490	1,832,073	1,880,335	2,313,588	2,074,766
Germany	1,934,468	1,842,547	1,799,754	1,893,722	2,312,051	2,198,505
Greece	6,742	5,256	4,292	4,111	5,390	4,744
Hungary	18,138	15,980	14,825	14,582	16,983	15,486
Ireland	1,845,040	2,003,956	2,052,437	2,197,533	2,873,630	2,772,568
Italy	223,023	217,363	207,867	203,384	260,385	236,504
Liechtenstein	41,915	45,792	44,938	45,624	54,674	50,871
Luxembourg	3,606,847	3,757,624	3,817,201	3,901,304	4,988,625	4,654,017
Malta	4,468	4,423	3,808	2,739	3,437	3,185
Netherlands	781,020	801,397	729,096	771,988	923,269	858,681
Norway	109,325	112,223	102,526	113,957	138,737	138,053

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TABLE 65 CONTINUED

Worldwide Regulated Open-End Funds: Total Net Assets

Millions of US dollars, year-end

	2013	2014	2015	2016	2017	2018
Poland	29,515	34,177	32,286	29,572	41,450	39,769
Portugal	28,222	15,786	14,685	13,149	15,361	13,572
Romania	4,000	4,932	5,038	5,072	5,827	4,726
Russia	3,589	1,288	1,383	2,099	3,207 ^a	N/A
Slovakia	5,954	6,514	6,202	6,205	7,889	7,563
Slovenia	2,506	2,550	2,448	2,528	3,106	2,750
Spain	268,380	274,072	274,715	280,826	351,307	324,856
Sweden	255,822	283,683	279,977	286,412	355,957	336,156
Switzerland	425,662	436,431	457,162	475,838	558,769	530,976
Turkey	14,078	15,310	12,887	12,277	13,185	7,407
United Kingdom	1,361,170	1,501,308	1,583,580	1,510,976	1,914,949	1,682,857
Asia and Pacific	3,771,118	4,113,616	4,770,207	5,198,307	6,498,424	6,426,383
Australia	1,624,081	1,610,811	1,545,426	1,791,800	2,149,932	1,946,433
China	486,516	749,708	1,263,130	1,227,540	1,688,981	1,768,597
Chinese Taipei	62,286	58,049	63,147	61,773	72,835	78,938
India	109,558	136,834	168,186	216,805	307,387	296,868
Japan	1,161,194	1,177,233	1,335,924	1,470,910	1,759,449	1,804,509
Korea, Rep. of	285,172	330,168	343,293	370,600	451,886	463,144
New Zealand	34,185	41,559	41,908	48,623	57,441	59,364
Pakistan	3,464	4,156	4,164	5,360	4,591	3,653
Philippines	4,662	5,098	5,029	4,896	5,922	4,877
Africa	142,868	146,474	122,068	145,822	181,762	154,995
South Africa	142,868	146,474	122,068	145,822	181,762	154,995

^a Year-end data are not available. Data are as of September.

N/A = not available

Note: Components may not add to the total because of rounding. Regulated open-end funds include mutual funds, exchange-traded funds (ETFs), and institutional funds. ETFs are included in Canada beginning in 2017 and China beginning in 2015. Beginning in 2014, data from Brazil, Chile, Chinese Taipei, Korea, and European jurisdictions (where applicable) include ETFs. New Zealand and Trinidad and Tobago include home- and foreign-domiciled funds. Funds of funds are excluded except where noted. Croatia, Cyprus, France, Ireland, Luxembourg, Netherlands, Norway, Romania, Spain, and Turkey include funds of funds, without providing separate data on funds of funds. Finland, Germany, and Italy exclude funds of funds beginning in 2014, Malta beginning in 2013, and Switzerland beginning in 2012. Slovakia includes funds of funds beginning in 2014. For the Netherlands, data between 2011 and 2014 are estimated based upon European Central Bank and IIFA sources.

Source: International Investment Funds Association (IIFA)

TABLE 66

Worldwide Regulated Open-End Funds: Number of Funds

Year-end

	2013	2014	2015	2016	2017	2018
World	97,939	101,686	106,675	110,790	113,930	118,978
Americas	23,263	24,727	25,610	26,361	27,266	28,379
Argentina	297	302	346	420	487	544
Brazil	7,721	8,560	8,783	9,224	9,774	10,257
Canada	3,248	3,506	3,657	3,754	3,867	4,086
Chile	2,385	2,418	2,500	2,539	2,673	2,726
Costa Rica	66	66	65	67	67	71
Mexico	487	486	499	524	553	575
Trinidad and Tobago	43	43	44	44	45	54
United States	9,016	9,346	9,716	9,789	9,800	10,066
Europe	52,216	51,724	53,212	53,513	54,842	56,036
Austria	1,842	1,629	1,596	1,575	1,580	1,603
Belgium	1,446	1,231	1,164	962	890	735
Bulgaria	98	104	104	110	116	123
Croatia	N/A	82	85	89	94	96
Cyprus	N/A	N/A	N/A	30	46	69
Czechia	88	108	128	129	147	159
Denmark	510	526	532	558	565	599
Finland	492	383	371	372	380	404
France	11,392	11,273	11,122	10,952	10,860	10,804
Germany	5,917	5,503	5,604	5,678	5,863	6,149
Greece	166	143	139	135	146	175
Hungary	369	307	316	306	306	298
Ireland	5,599	5,833	6,201	6,470	6,831	7,285
Italy	784	687	713	760	832	866
Liechtenstein	923	946	1,184	1,287	1,367	1,566
Luxembourg	13,685	13,849	14,108	14,211	14,728	14,898
Malta	114	110	130	126	140	143
Netherlands	501	561	1,015	1,014	991	931
Norway	573	619	700	720	754	865

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TABLE 66 CONTINUED

Worldwide Regulated Open-End Funds: Number of Funds

Year-end

	2013	2014	2015	2016	2017	2018
Poland	331	398	391	423	428	440
Portugal	243	184	171	152	131	136
Romania	64	72	74	75	74	78
Russia	443	378	340	296	284 ^a	N/A
Slovakia	77	87	88	87	87	86
Slovenia	114	110	109	102	98	98
Spain	2,374	2,235	2,238	2,342	2,332	2,584
Sweden	493	522	471	496	519	528
Switzerland	795	843	860	858	918	887
Turkey	373	404	387	396	387	398
United Kingdom	2,410	2,597	2,871	2,802	2,948	3,033
Asia and Pacific	21,398	24,064	26,526	29,396	30,196	32,996
Australia	N/A	N/A	N/A	N/A	N/A	N/A
China	1,494	1,862	2,558	3,564	4,361	4,957
Chinese Taipei	570	577	602	653	714	774
India	738	768	804	795	807	831
Japan	7,827	8,778	9,820	10,915	11,662	12,294
Korea, Rep. of	9,876	11,235	11,918	12,626	11,828	13,258
New Zealand	694	632	609	615	587	629
Pakistan	152	159	160	171	177	192
Philippines	47	53	55	57	60	61
Africa	1,062	1,171	1,327	1,520	1,626	1,567
South Africa	1,062	1,171	1,327	1,520	1,626	1,567

^a Year-end data are not available. Data are as of September.

N/A = not available

Note: Regulated open-end funds include mutual funds, exchange-traded funds (ETFs), and institutional funds. ETFs are included in Canada beginning in 2017 and China beginning in 2015. Beginning in 2014, data from Brazil, Chile, Chinese Taipei, Korea, and European jurisdictions (where applicable) include ETFs. New Zealand and Trinidad and Tobago include home- and foreign-domiciled funds. Funds of funds are excluded except where noted. Croatia, Cyprus, France, Ireland, Luxembourg, Netherlands, Norway, Romania, Spain, and Turkey include funds of funds, without providing separate data on funds of funds. Finland, Germany, and Italy exclude funds of funds beginning in 2014, Malta beginning in 2013, and Switzerland beginning in 2012. Slovakia includes funds of funds beginning in 2014. For the Netherlands, data between 2011 and 2014 are estimated based upon European Central Bank and IIFA sources.

Source: International Investment Funds Association (IIFA)

TABLE 67

Worldwide Regulated Open-End Funds: Net Sales

Millions of US dollars, annual

	2013	2014	2015	2016	2017	2018
World	\$1,269,300	\$1,819,484	\$1,992,119	\$1,220,148	\$2,720,586	\$1,051,748
Americas	663,849	688,914	469,936	393,156	1,094,025	504,281
Argentina	N/A	4,511 ^a	4,421	3,248	7,018	-1,641
Brazil	33,893	1,886	13,531	33,568	86,648	22,893
Canada	69,950	99,319	95,126	65,000	84,526	53,699
Chile	5,394	8,550	983	3,269	3,422	5,618
Costa Rica	-305	341	427	-511 ^a	N/A	N/A
Mexico	7,705	10,442	-1,226	782	5,612	-1,706
Trinidad and Tobago	-13	292	-23	17	10	37
United States	547,225	563,573	356,697	287,783	906,789	425,381
Europe	462,388	809,914	738,833	476,007	1,013,035	307,343
Austria	-40	4,688	3,198	-370	3,510	256
Belgium	N/A	N/A	N/A	N/A	N/A	N/A
Bulgaria	129	36	(*)	112	116	60
Croatia	N/A	-52	249	1,295	-1,969	254
Cyprus	N/A	N/A	N/A	45	80	1,293
Czechia	256	712	1,426	1,170	1,417	924
Denmark	7,439	8,137	5,945	7,362	5,467	6,719
Finland	5,617	10,933	7,888	3,437	2,306	-1,553
France	-99,007	-26,455	24,945	31,991	51,883	-18,345
Germany	116,538	121,923	149,783	108,464	112,770	107,852
Greece	-741	-303	-444	-242	-73	-88
Hungary	2,856	1,297	226	-715	-41	8
Ireland	74,644	155,231	127,605	154,311	335,902	113,484
Italy	14,831	38,415	11,339	9,908	22,900	3,357
Liechtenstein	-726	8,364	993	-448	2,682	1,172
Luxembourg	256,919	337,851	331,873	110,662	348,648	113,193
Malta	-628	122	-267	-568	152	76
Netherlands	875	-5,261	-5,826	13,004	-2,340	-19,986
Norway	4,727	17,184	1,733	4,639	9,399	3,994

Continued on the next page

TABLE 67 CONTINUED

Worldwide Regulated Open-End Funds: Net Sales

Millions of US dollars, annual

	2013	2014	2015	2016	2017	2018
Poland	2,610	3,167	465	-1,656	3,467	912
Portugal	1,354	-221	-94	-844	255	-1,054
Romania	1,075	1,288	378	80	59	-888
Russia	571	-940	35	238	917 ^b	N/A
Slovakia	148	855	420	104	622	260
Slovenia	-54	52	86	15	41	-9
Spain	30,744	47,704	26,866	15,728	23,479	10,072
Sweden	8,708	15,714	8,136	2,317	9,385	6,086
Switzerland	5,780	30,075	31,736	17,466	20,418	15,171
Turkey	969	-625	-160	748	395	-2,409
United Kingdom	26,794	40,023	10,299	-2,246	61,188	-33,468
Asia and Pacific	122,994	310,634	775,461	339,954	603,409	233,252
Australia	N/A	N/A	N/A	N/A	N/A	N/A
China	-8,814	168,355	467,137	122,744	395,965	8,545
Chinese Taipei	1,472	-3,835	7,124	-3,597	-503	11,770
India	2,387	7,978	33,195	42,892	40,465	18,051
Japan	131,203	99,644	235,590	138,354	157,018	158,912
Korea, Rep. of	-4,876	34,917	29,190	35,337	6,336	32,912
New Zealand	231	3,551	2,966	3,839	3,104	3,706
Pakistan	-89	28	-68	264	536	-182
Philippines	1,480	-4	327	121	488	-462
Africa	20,069	10,022	7,889	11,031	10,117	6,872
South Africa	20,069	10,022	7,889	11,031	10,117	6,872

(*) = between -\$0.5 million and \$0.5 million

^a Data are only for October through December.^b Data are only for January through September.

N/A = not available

Note: Net sales is a calculation of total sales minus total redemptions plus net exchanges. Components may not add to the total because of rounding. Regulated open-end funds include mutual funds, exchange-traded funds (ETFs), and institutional funds. ETFs are included in Canada beginning in 2017 and China beginning in 2015. Beginning in 2014, data from Brazil, Chile, Chinese Taipei, Korea, and European jurisdictions (where applicable) include ETFs. New Zealand and Trinidad and Tobago include home- and foreign-domiciled funds. Funds of funds are excluded except where noted. Croatia, Cyprus, France, Ireland, Luxembourg, Netherlands, Norway, Romania, Spain, and Turkey include funds of funds, without providing separate data on funds of funds. Finland, Germany, and Italy exclude funds of funds beginning in 2014, Malta beginning in 2013, and Switzerland beginning in 2012. Slovakia includes funds of funds beginning in 2014. For the Netherlands, data between 2011 and 2014 are estimated based upon European Central Bank and IIFA sources.

Source: International Investment Funds Association (IIFA)

APPENDIX A

How US-Registered Investment Companies Operate and the Core Principles Underlying Their Regulation

The Origins of Pooled Investing

The investment company concept dates to the late 1700s in Europe, according to K. Geert Rouwenhorst in *The Origins of Mutual Funds*, when “a Dutch merchant and broker...invited subscriptions from investors to form a trust...to provide an opportunity to diversify for small investors with limited means.”

The emergence of “investment pooling” in England in the 1800s brought the concept closer to US shores. In 1868, the Foreign and Colonial Government Trust formed in London. This trust resembled the US fund model in basic structure, providing “the investor of moderate means the same advantages as the large capitalists...by spreading the investment over a number of different stocks.”

Perhaps more importantly, the British fund model established a direct link with US securities markets, helping to finance the development of the post-Civil War US economy. The Scottish American Investment Trust, formed on February 1, 1873, by fund pioneer Robert Fleming, invested in the economic potential of the United States, chiefly through American railroad bonds. Many other trusts followed that not only targeted investment in America, but also led to the introduction of the fund investing concept on US shores in the late 1800s and early 1900s.

The first mutual, or open-end, fund was introduced in Boston in March 1924. The Massachusetts Investors Trust introduced important innovations to the investment company concept by establishing a simplified capital structure, continuous offering of shares, the ability to redeem shares rather than hold them until dissolution of the fund, and a set of clear investment restrictions and policies.

The stock market crash of 1929 and the Great Depression that followed hampered the growth of pooled investments until a succession of landmark securities laws—beginning with the Securities Act of 1933 and concluding with the Investment Company Act of 1940—reinvigorated investor confidence. Renewed investor confidence and many innovations led to relatively steady growth in industry assets and number of accounts.

Four Principal Securities Laws Govern Investment Companies

The Investment Company Act of 1940	Regulates the structure and operations of investment companies through a combination of registration and disclosure requirements and restrictions on day-to-day operations. The Investment Company Act requires the registration of all investment companies with more than 100 investors. Among other things, the act addresses investment company capital structures, custody of assets, investment activities (particularly with respect to transactions with affiliates and other transactions involving potential conflicts of interest), and the duties of fund boards.
The Investment Advisers Act of 1940	Regulates investment advisers. Requires all advisers to registered investment companies and other large advisers to register with the SEC. The Advisers Act contains provisions requiring fund advisers to meet recordkeeping, custodial, reporting, and other regulatory responsibilities.
The Securities Exchange Act of 1934	Regulates the trading, purchase, and sale of securities, including investment company shares. The 1934 Act also regulates broker-dealers, including investment company principal underwriters and others that sell investment company shares, and requires them to register with the SEC. In 1938, the act was revised to add Section 15A, which authorized the SEC to create self-regulatory organizations. Pursuant to this authority, in 1939 a self-regulatory organization for broker-dealers—which is now known as the Financial Industry Regulatory Authority (FINRA)—was created. Through its rules, inspections, and enforcement activities, FINRA, with oversight by the SEC, continues to regulate the conduct of broker-dealers, thereby adding another layer of protection for investors.
The Securities Act of 1933	Requires the registration of public offerings of securities—including investment company shares, and regulates such offerings. The 1933 Act also requires that all investors receive a current prospectus describing the fund.

The Types of US Investment Companies

Fund sponsors in the United States offer four main types of registered investment companies: mutual funds, closed-end funds, exchange-traded funds (ETFs), and unit investment trusts (UITs).

The majority of investment companies are **mutual funds**, both in terms of number of funds and assets under management. Mutual funds can have actively managed portfolios, in which a professional investment adviser creates a unique mix of investments to meet a particular investment objective, or passively managed portfolios, in which the adviser seeks to track the performance of a selected benchmark or index. One hallmark of mutual funds is that they issue redeemable securities, meaning that the fund stands ready to buy back its shares at their next computed net asset value (NAV). The NAV is calculated by dividing the total market value of the fund's assets, minus its liabilities, by the number of mutual fund shares outstanding.

Money market funds are one type of mutual fund that offer investors a variety of features, including liquidity, a market-based rate of return, and the goal of returning principal, all at a reasonable cost. These funds, which are typically publicly offered to all types of investors, are registered investment companies that are regulated by the Securities and Exchange Commission (SEC) under US federal securities laws, including Rule 2a-7 under the Investment Company Act. That rule contains numerous risk-limiting conditions concerning portfolio maturity, quality, diversification, and liquidity. Since October 2016, institutional prime money market funds (funds that primarily invest in corporate debt securities) and institutional municipal money market funds maintain a floating NAV for transactions based on the current market value of the securities in their portfolios. Government money market funds and retail money market funds (funds designed to limit all beneficial owners of the funds to natural persons) are allowed to use the amortized cost method of pricing or penny rounding—or both—to seek to maintain a stable share price. Money market fund boards of directors also have the ability to impose liquidity fees or to suspend redemptions temporarily if a fund's level of weekly liquid assets falls below a certain threshold.

Unlike mutual funds, **closed-end funds** do not issue redeemable shares. Instead, they issue a fixed number of shares that trade intraday on stock exchanges at market-determined prices. Investors in a closed-end fund buy or sell shares through a broker, just as they would trade the shares of any publicly traded company. For more information on closed-end funds, see chapter 5.

ETFs are a hybrid of investment companies. They are structured and legally classified as open-end management investment companies or UITs (discussed below), but trade intraday on stock exchanges like closed-end funds. ETFs only buy and sell fund shares directly with authorized participants in large blocks, often 50,000 shares or more. For more information on ETFs, see chapter 4.

UITs are also a hybrid, with some characteristics of mutual funds and some of closed-end funds. Like closed-end funds, UITs typically issue only a specific, fixed number of shares, called units. Like mutual funds, the units are redeemable, but unlike mutual funds, generally the UIT sponsor will maintain a secondary market in the units so that redemptions do not deplete the UIT's assets. A UIT does not actively trade its investment portfolio—instead it buys and holds a set of particular investments until a set termination date, at which time the trust is dissolved and proceeds are paid to shareholders. For more information, see page 48.

The Organization of a Mutual Fund

A mutual fund typically is organized under state law either as a corporation or a business trust (sometimes called a statutory trust). The three most popular forms of organization are Massachusetts business trusts, Maryland corporations, and Delaware statutory trusts (Figure A.1).*

Historically, Massachusetts business trusts were the most popular—in part because the very first mutual fund was formed as a Massachusetts business trust. This was a common form of organization at the time for pools that invested in real estate or public utilities and it provided a model for others to follow. Developments in the late 1980s gave asset management companies other attractive choices, and since then, the percentage of funds organized as Massachusetts business trusts has declined as more and more funds have formed as Maryland corporations and Delaware statutory trusts. For example, in 1987, Maryland revised its law to align it with interpretations of the Investment Company Act concerning when funds are required to hold annual meetings. As a result, Maryland corporations became more competitive with the Massachusetts business trust as a form of organization for mutual funds. In 1988, Delaware—already a popular domicile for US corporations—adopted new statutory provisions devoted specifically to business trusts (since renamed statutory trusts). Benefits such as management of the trust and limited liability afforded to the trust's beneficial owners have led to Delaware statutory trusts being the most favored form of mutual fund organization.

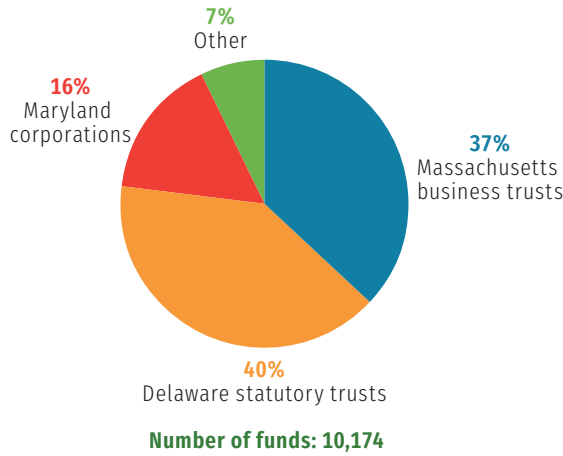
*Fewer than 800 funds, or about 7 percent, have chosen other forms of organization, such as limited liability partnerships, or other domiciles, such as Ohio or Minnesota.

Mutual funds have officers and directors (if the fund is a corporation) or trustees (if the fund is a business trust).^{*} The fund's board plays an important role in overseeing fund operations, described in more detail on page 280.

FIGURE A.1

The Most Popular Forms of Mutual Fund Organization

Percentage of funds, year-end 2018



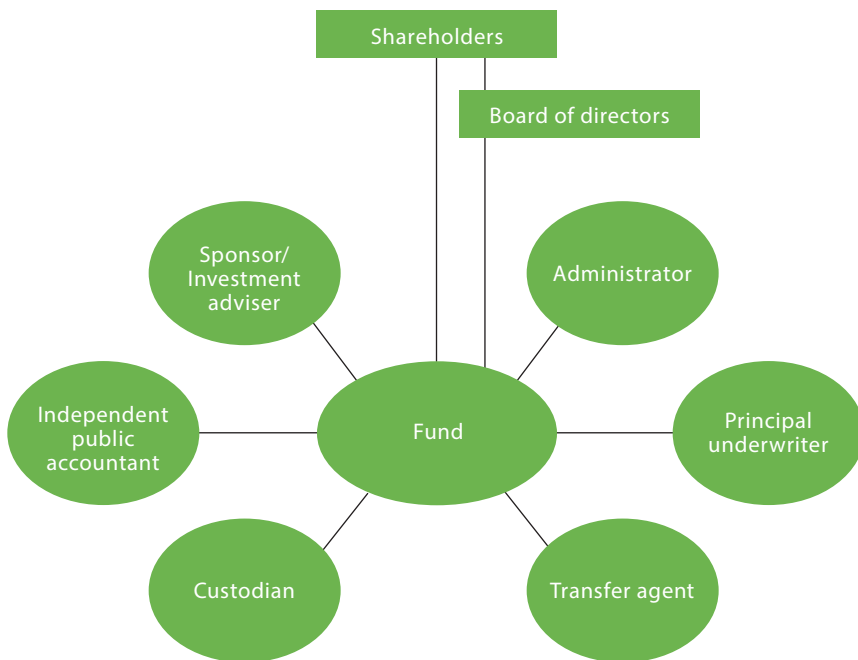
Note: Data include mutual funds that do not report statistical information to the Investment Company Institute and mutual funds that invest primarily in other mutual funds.

^{*}For ease of reference, this appendix refers to all directors and trustees as directors and all boards as *boards of directors*.

Unlike other companies, a mutual fund is typically externally managed; it is not an operating company and it has no employees in the traditional sense. Instead, a fund relies upon third parties or service providers—either affiliated organizations or independent contractors—to invest fund assets and carry out other business activities. Figure A.2 shows the primary types of service providers usually relied upon by a fund.

Although it typically has no employees, a fund is required by law to have written compliance policies and procedures that govern the operations of the fund and the fund’s administrator, investment adviser, transfer agent, and principal underwriter and that are reasonably designed to ensure the fund’s compliance with the federal securities laws. All funds must also have a chief compliance officer (CCO), whose appointment must be approved by the fund’s board and who must annually produce a report for the board regarding the adequacy of the fund’s compliance policies and procedures, the effectiveness of their implementation, and any material compliance matters that have arisen.

FIGURE A.2
Organization of a Mutual Fund



Fund Boards

A fund board represents the interests of the fund's shareholders by overseeing the management and operations of the fund, including the fund's contractual arrangements with its service providers. For more information on fund boards, see page 280.

Shareholders

Like shareholders of other companies, mutual fund shareholders have specific voting rights. These include the right to elect directors at meetings called for that purpose and the right to approve material changes in the terms of a fund's contract with its investment adviser, the entity that manages the fund's assets. For example, a fund's management fee cannot be increased and a fund's fundamental investment policies cannot be changed unless a majority of shareholders vote to approve the increase or change.

Sponsors

Setting up a mutual fund is a complicated process performed by the fund's sponsor, which is typically the fund's investment adviser. The fund sponsor has a variety of responsibilities. For example, it must assemble the group of third parties needed to launch the fund, including the persons or entities charged with managing and operating the fund. The sponsor provides officers and affiliated directors to oversee the fund and recruits unaffiliated persons to serve as independent directors.

Some of the major steps in the process of starting a mutual fund include organizing the fund under state law, registering the fund with the SEC as an investment company pursuant to the Investment Company Act, and registering the fund shares for sale to the public pursuant to the Securities Act of 1933.* Unless otherwise exempt from doing so, the fund also must make filings and pay fees to each state (except Florida) in which the fund's shares will be offered to the public. The Investment Company Act also requires that each new fund have at least \$100,000 of seed capital before distributing its shares to the public; this capital is usually contributed by the sponsor or adviser in the form of an initial investment.

Advisers

Investment advisers have overall responsibility for directing the fund's investments and handling its business affairs. The investment advisers have their own employees, including investment professionals who work on behalf of the fund's shareholders and determine which securities to buy and sell in the fund's portfolio, consistent with the fund's investment objectives and policies. In addition to managing the fund's portfolio, the adviser often serves as administrator to the fund, providing various "back-office" services. As noted earlier, a fund's investment adviser is often the fund's initial sponsor and its initial shareholder through the seed money invested to create the fund.

*For more information on the requirements for the initial registration of a mutual fund, see the SEC's Investment Company Registration and Regulation Package, available at www.sec.gov/divisions/investment/invcoreg121504.htm.

To protect investors, a fund's investment adviser and the adviser's employees are subject to numerous standards and legal restrictions, including restrictions on transactions that may pose conflicts of interest. Like a mutual fund, investment advisers are required to have their own written compliance programs that are overseen by CCOs and to establish detailed procedures and internal controls designed to ensure compliance with all relevant laws and regulations.

Administrators

A fund's administrator handles the many back-office functions for a fund. For example, administrators often provide office space, clerical and fund accounting services, data processing, bookkeeping, and internal auditing; they also may prepare and file SEC, tax, shareholder, and other reports. Fund administrators also help maintain compliance procedures and internal controls, subject to oversight by the fund's board and CCO.

Principal Underwriters

Investors buy and redeem fund shares either directly through a fund's transfer agent or indirectly through a broker-dealer that is authorized to sell fund shares. In order to offer a particular fund's shares, however, a broker-dealer must have a sales agreement with the fund. The role of a fund's principal underwriter is to act as the agent for the fund in executing sales agreements that authorize broker-dealers to offer for sale and sell fund shares. Though principal underwriters must register under the Securities Exchange Act of 1934 as broker-dealers, they (1) do not operate as full-service broker-dealers, (2) typically are not involved in offering or selling fund shares to retail investors, and (3) do not establish or maintain accounts for retail investors.

Transfer Agents

Mutual funds and their shareholders rely on the services of transfer agents to maintain records of shareholder accounts; calculate and distribute dividends and capital gains; and prepare and mail shareholder account statements, federal income tax information, and other shareholder notices. Some transfer agents also prepare and mail statements confirming shareholder transactions and account balances. Additionally, they may maintain customer service departments, including call centers, to respond to shareholder inquiries.

Auditors

Auditors certify the fund's financial statements. The auditors' oversight role is described more fully on page 281.

Tax Features of Mutual Funds

Mutual funds are subject to special tax rules set forth in subchapter M of the Internal Revenue Code. Unlike most corporations, mutual funds are not subject to taxation on their income or capital gains at the entity level, provided that they meet certain gross income and asset requirements and distribute their income annually.

To qualify as a regulated investment company (RIC) under subchapter M, at least 90 percent of a mutual fund's gross income must be derived from certain sources, including dividends, interest, payments with respect to securities loans, and gains from the sale or other disposition of stock, securities, or foreign currencies. In addition, at the close of each quarter of the fund's taxable year, at least 50 percent of the value of the fund's total net assets must consist of cash, cash items, government securities, securities of other funds, and investments in other securities that, with respect to any one issuer, represent neither more than 5 percent of the assets of the fund nor more than 10 percent of the voting securities of the issuer. Further, no more than 25 percent of the fund's assets may be invested in the securities of any one issuer (other than government securities or the securities of other funds), the securities (other than the securities of other funds) of two or more issuers that the fund controls and are engaged in similar trades or businesses, or the securities of one or more qualified publicly traded partnerships.

If a mutual fund satisfies the gross income and asset tests and thus qualifies as a RIC, the fund is eligible for the tax treatment provided by subchapter M, including the ability to deduct from its taxable income the dividends it pays to shareholders, provided that the RIC distributes at least 90 percent of its income (other than net capital gains) each year. A RIC may retain up to 10 percent of its income and all capital gains, but the retained income and capital gains are taxed at regular corporate tax rates. Therefore, mutual funds generally distribute all, or nearly all, of their income and capital gains each year.

The Internal Revenue Code also imposes an excise tax on RICs, unless a RIC distributes by December 31 at least 98 percent of its ordinary income earned during the calendar year, 98.2 percent of its net capital gains earned during the 12-month period ending on October 31 of the calendar year, and 100 percent of any previously undistributed amounts. Mutual funds typically seek to avoid this charge—imposed at a 4 percent rate on the underdistributed amount—by making the required minimum distribution each year.

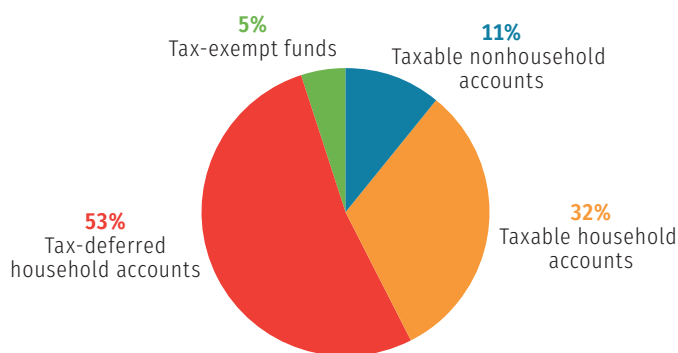
Mutual Fund Assets by Tax Status

Fund investors are responsible for paying tax on the amount of a fund's earnings and gains distributed to them, whether they receive the distributions in cash or reinvest them in additional fund shares. Investors often attempt to lessen the impact of taxes on their investments by investing in tax-exempt funds and tax-deferred retirement accounts and variable annuities. As of year-end 2018, 5 percent of all mutual fund assets were held in tax-exempt funds, and 53 percent were invested in tax-deferred accounts held by households.

FIGURE A.3

58 Percent of Mutual Fund Total Net Assets Were Held in Tax-Deferred Accounts and Tax-Exempt Funds

Percentage of total net assets, year-end 2018



Mutual fund total net assets: \$17.7 trillion

Types of Distributions

Mutual funds make two types of taxable distributions to shareholders: ordinary dividends and capital gains.

Ordinary dividend distributions come primarily from the interest and dividends earned by the securities in a fund's portfolio and net short-term gains, if any, after expenses are paid by the fund. These distributions must be reported as dividends on a US investor's tax return and are taxed at the investor's ordinary income tax rate, unless they are qualified dividends. Qualified dividend income is taxed at a maximum rate of 20 percent. Some dividends paid by mutual funds may qualify for these lower top tax rates.

Long-term capital gains distributions represent a fund's net gains, if any, from the sale of securities held in its portfolio for more than one year. Long-term capital gains are taxed at a maximum rate of 20 percent.

Certain high-income individuals also are subject to a 3.8 percent tax on net investment income (NII). The tax on NII applies to interest, dividends, and net capital gains, including those received from a mutual fund.

Non-US investors may be subject to US withholding and estate taxes and certain US tax reporting requirements on investments in US funds. Amounts distributed to non-US investors that are designated as interest-related dividends or dividends deriving from capital gains will generally be eligible for exemption from US withholding tax. Other distributions that are treated as ordinary dividends will generally be subject to US withholding tax (at a 30 percent rate or lower treaty rate).

To help mutual fund shareholders understand the impact of taxes on the returns generated by their investments, the SEC requires mutual funds to disclose standardized after-tax returns for one-, five-, and 10-year periods. After-tax returns, which accompany before-tax returns in fund prospectuses, are presented in two ways:

- » After taxes on fund distributions only (preliquidation)
- » After taxes on fund distributions and an assumed redemption of fund shares (postliquidation)

Types of Taxable Shareholder Transactions

An investor who sells mutual fund shares usually incurs a capital gain or loss in the year the shares are sold; an exchange of shares between funds in the same fund family also usually results in either a capital gain or loss.

Investors are liable for tax on any capital gain arising from the sale of fund shares, just as they would be if they sold a stock, bond, or other security. Capital losses from mutual fund share sales and exchanges, like capital losses from other investments, may be used to offset other capital gains in the current year and thereafter. In addition, up to \$3,000 of capital losses in excess of capital gains (\$1,500 for a married individual filing a separate return) may be used to offset ordinary income.

The amount of a shareholder's gain or loss on fund shares is determined by the difference between the cost basis of the shares (generally, the purchase price—including sales loads—of the shares, whether acquired with cash or reinvested dividends) and the sale price. Many funds voluntarily have been providing cost basis information to shareholders or computing gains and losses for shares sold. Tax rules enacted in 2012 require all brokers and funds to provide cost basis information to shareholders, as well as to indicate whether any gains or losses are long-term or short-term, for fund shares acquired beginning in 2012.

Tax-Exempt Funds

Tax-exempt bond funds distribute amounts attributable to municipal bond interest. These “exempt-interest dividends” are exempt from federal income tax and, in some cases, state and local taxes. Tax-exempt money market funds invest in short-term municipal securities or equivalent instruments and also pay exempt-interest dividends. Even though income from these funds generally is tax-exempt, investors must report it on their income tax returns. Tax-exempt funds provide investors with this information and typically explain how to handle exempt-interest dividends on a state-by-state basis. For some taxpayers, portions of income earned by tax-exempt funds also may be subject to the federal alternative minimum tax.

Mutual Fund Ordinary Dividend Distributions

Ordinary dividend distributions represent income—primarily from interest and dividends earned by securities in a fund’s portfolio—after expenses are paid by the fund. Mutual funds distributed \$354 billion in dividends to fund shareholders in 2018. Bond and money market funds accounted for 49 percent of all dividend distributions in 2018. Fifty percent of all dividend distributions were paid to tax-exempt fund shareholders and tax-deferred household accounts. Another 41 percent were paid to taxable household accounts.

FIGURE A.4

Dividend Distributions

Billions of dollars

Year	Tax-deferred household accounts and tax-exempt funds	Taxable household accounts	Taxable nonhousehold accounts	Total
2000	\$74	\$87	\$25	\$186
2001	68	71	23	162
2002	59	43	12	114
2003	57	37	9	103
2004	65	41	10	116
2005	84	61	21	166
2006	114	90	36	240
2007	143	118	47	309
2008	138	100	38	276
2009	109	63	15	187
2010	112	64	12	188
2011	122	74	12	208
2012	128	81	13	222
2013	123	81	14	217
2014	136	93	15	245
2015	140	94	17	250
2016	141	96	16	253
2017	153	115	22	290
2018	177	145	33	354

Mutual Fund Capital Gains Distributions

Capital gains distributions represent a fund's net gains, if any, from the sale of securities held in its portfolio. When gains from these sales exceed losses, they are distributed to fund shareholders. Mutual funds distributed \$511 billion in capital gains to shareholders in 2018. Sixty-four percent of these distributions were paid to tax-exempt fund shareholders and tax-deferred household accounts, and another 31 percent were paid to taxable household accounts. Equity, bond, and hybrid funds can distribute capital gains, but equity funds typically account for the bulk of these distributions. In 2018, 73 percent of equity fund share classes made a capital gains distribution, and 87 percent of these share classes distributed more than 2.0 percent of their assets as capital gains.

FIGURE A.5

Capital Gains Distributions

Billions of dollars

Year	Tax-deferred household accounts and tax-exempt funds	Taxable household accounts	Taxable nonhousehold accounts	Total
2000	\$194	\$119	\$13	\$326
2001	51	16	2	69
2002	10	5	1	16
2003	8	5	1	14
2004	31	20	4	55
2005	78	43	8	129
2006	164	79	14	257
2007	260	131	22	414
2008	97	29	7	132
2009	11	4	1	15
2010	22	18	3	43
2011	40	29	4	73
2012	58	37	5	100
2013	147	81	11	239
2014	253	129	17	400
2015	251	114	15	380
2016	150	62	8	220
2017	237	117	17	370
2018	329	160	22	511

Note: Capital gains distributions include long-term and short-term capital gains.

Core Principles Underlying the Regulation of US Investment Companies

Embedded in the structure and regulation of mutual funds and other registered investment companies are several core principles that provide important protections for shareholders.

Transparency

Funds are subject to more extensive disclosure requirements than any other comparable financial product, such as separately managed accounts, collective investment trusts, and private pools. The cornerstone of the disclosure regime for mutual funds and ETFs is the prospectus.* Mutual funds and ETFs are required to maintain a current prospectus, which provides investors with information about the fund, including its investment objectives, investment strategies, risks, fees and expenses, and performance, as well as how to purchase, redeem, and exchange fund shares. Importantly, the key parts of this disclosure with respect to performance information and fees and expenses are standardized to facilitate comparisons by investors. Mutual funds and ETFs may provide investors with a summary prospectus containing key information about the fund, while making more information available on the internet and by mail upon request.

Mutual funds and ETFs also are required to make statements of additional information (SAIs) available to investors upon request and without charge. The SAI conveys information about the fund that, though useful to some investors, is not necessarily needed to make an informed investment decision. For example, the SAI generally includes information about the history of the fund, offers detailed disclosure on certain investment policies (such as borrowing and concentration policies), and lists officers, directors, and other persons who control the fund.

The prospectus, SAI, and certain other required information are contained in the fund's registration statement, which is filed electronically with the SEC and is publicly available via the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system. Mutual fund and ETF registration statements are amended at least once each year to ensure that financial statements and other information do not become stale.† These funds also amend registration statements throughout the year as necessary to reflect material changes to their disclosure.

* Closed-end funds and UITs also provide investors with extensive disclosure, but under a slightly different regime that reflects the way shares of these funds trade. Both closed-end funds and UITs file an initial registration statement with the SEC containing a prospectus and other information related to the initial offering of their shares to the public.

† Section 10(a)(3) of the Securities Act of 1933 prohibits investment companies that make a continuous offering of shares from using a registration statement with financial information that is more than 16 months old. This gives mutual funds and ETFs four months after the end of their fiscal year to amend their registration statements.

In addition to registration statement disclosure, funds provide shareholders with several other disclosure documents. Funds must transmit annual and semiannual shareholder reports within 60 days after the end and the midpoint of the fund's fiscal year, respectively. These reports contain performance and expense information, financial statements, and a list of the fund's portfolio securities.* Financial statements included in the annual shareholder report must be audited by an independent accountant. The annual shareholder report for non-money market mutual funds and most ETFs must also provide management's discussion of fund performance, describing the factors that affected the fund's performance, including relevant market conditions and investment strategies and techniques used by the fund's investment adviser.

Following their first and third quarters, funds file Form N-Q with the SEC, which discloses the complete schedule of their portfolio holdings. The requirement to provide shareholder reports combined with the requirement to file Form N-Q after the first and third quarter causes funds to publicly disclose their portfolio holdings four times each year.

Beginning in May 2019, funds in large fund complexes (complexes with \$1 billion or more in net assets) will be required to file Form N-PORT with the SEC. Form N-PORT must include a complete list of the fund's portfolio securities in a structured data format and other information including flows, returns, securities lending information, and—for funds investing more than a specified amount in fixed-income securities—portfolio level risk metrics. Funds must file Form N-PORT for each month during the year; however, only the filing relating to the third month of each fiscal quarter will be made publicly available. Beginning in May 2020, funds in small fund complexes (complexes with less than \$1 billion in net assets) will be required to file Form N-PORT with the SEC. Once a fund begins filing Form N-PORT, it will cease filing Form N-Q. However, the portfolio holdings schedule relating to the fund's third and ninth month of the fiscal quarter that was included as part of the form N-Q will become part of the Form N-PORT, thus maintaining quarterly public portfolio holdings disclosure.†

Additionally, funds must file census-type information annually on Form N-CEN.‡ Finally, funds annually disclose how they voted on specific proxy issues at portfolio companies on Form N-PX. Funds are the only shareholders required to publicly disclose each and every proxy vote they cast. Funds are not required to mail Form N-Q, Form N-PORT, Form N-CEN, and Form N-PX to shareholders, but the forms are publicly available via the SEC's EDGAR database.§

*A fund is permitted to include a summary portfolio schedule in its shareholder reports in lieu of the complete schedule, provided that the complete portfolio schedule is filed with the SEC and is provided to shareholders upon request, free of charge. The summary portfolio schedule includes each of the fund's 50 largest holdings in unaffiliated issuers and each investment that exceeds 1 percent of the fund's NAV.

† Money market funds, which already must file portfolio holdings with the SEC monthly on Form N-MFP and disclose those holdings on their websites, are not required to file Form N-PORT.

‡ Beginning in June 2018, Form N-CEN replaced Form N-SAR. Form N-CEN updated the information required by Form N-SAR and required additional information about ETFs, closed-end funds, and securities lending activities. Form N-CEN will be fully phased in for all funds by July 2019.

§ As noted above, only the Form N-PORT filing related to the third month of the fiscal quarter will be made publicly available.

The combination of prospectuses, SAIs, annual and semiannual shareholder reports, Form N-Q, Form N-PORT, Form N-CEN, and Form N-PX provide the investing public, regulators, media, and other interested parties with far more information on funds than is available for other types of investments. This information is easily and readily available from most funds and the SEC. It is also available from private-sector vendors, such as Morningstar, that are in the business of compiling publicly available information on funds in ways that might benefit investors.

Daily Valuation and Liquidity

Nearly all funds offer shareholders liquidity and market-based valuation of their investments at least daily. ETFs and most closed-end fund shares are traded intraday on stock exchanges at market-determined prices, giving shareholders real-time liquidity and pricing. Mutual fund shares are redeemable on a daily basis at a price that reflects the current market value of the fund's portfolio investments. The value of each portfolio investment is determined either by a market quotation, if a market quotation is readily available, or at fair value as determined in good faith by the fund's board.

The daily pricing process is a critically important core compliance function that involves numerous staff and pricing vendors. The fair valuation process, a part of the overall pricing process, receives particular scrutiny from funds, their boards of directors, regulators, and independent auditors. Under SEC rules, all funds must adopt written policies and procedures that address the circumstances under which investments may be fair valued, and must establish criteria for determining how to assign fair values in particular instances.*

This daily valuation process results in a NAV for the fund. The NAV is the price used for all mutual fund share transactions occurring that day—new purchases, sales (redemptions), and exchanges from one fund to another within the same fund family.[†] It represents the current mark-to-market value of all the fund's assets, minus liabilities (e.g., accrued fund expenses payable), divided by the total number of outstanding shares. Mutual funds release their daily NAVs to investors and others after they complete the pricing process, generally around 6:00 p.m. eastern time. Daily fund prices are available through fund toll-free telephone services, websites, and other means.

* ICI has published several papers on the mutual fund valuation process. For more information, see materials from ICI, the Independent Directors Council, and ICI Mutual Insurance Company, including *Valuation and Liquidity Issues for Mutual Funds* (February 1997 and March 2002) and two installments of the Fair Valuation Series, "An Introduction to Fair Valuation" (2005) and "The Role of the Board" (2006). ICI also has a two-volume compendium of SEC releases, staff letters, and enforcement actions related to the mutual fund valuation process, which is available at www.ici.org/pdf/pub_15_valuation_update_vol1.pdf and www.ici.org/pdf/pub_15_valuation_update_vol2.pdf.

[†] The pricing process is also critical for ETFs, although for slightly different reasons. ETFs operate like mutual funds with respect to transactions with authorized participants that trade with the ETF in large blocks, often of 50,000 shares or more. The NAV is the price used for these large transactions. Closed-end funds are not required to strike a daily NAV, but most do so to provide the market with the ability to calculate the difference between the fund's market price and its NAV. That difference is called the fund's *premium* or *discount*.

The Investment Company Act requires mutual funds to process transactions based upon “forward pricing,” meaning that shareholders receive the next computed NAV following the fund’s receipt of their transaction orders. For example, for a fund that prices its shares as of 4:00 p.m.,* orders received before 4:00 p.m. receive the NAV determined that same day as of 4:00 p.m. Orders received after 4:00 p.m. receive the NAV determined as of 4:00 p.m. on the next business day. Forward pricing is an important protection for mutual fund shareholders. It is designed to minimize the ability of shareholders to take advantage of fluctuations in the prices of a fund’s portfolio investments that occur after the fund has last calculated its NAV.

When a shareholder redeems shares in a mutual fund, he or she can expect to be paid promptly. Mutual funds may not suspend redemptions of their shares (subject to certain extremely limited exceptions)[†] or delay payments of redemption proceeds for more than seven days.

No more than 15 percent of a mutual fund’s or ETF’s portfolio may be invested in illiquid assets,[‡] in part to ensure that the fund can make redemptions. In 2016, the SEC adopted a liquidity risk management framework applicable to mutual funds and open-end ETFs, which will substantially enhance funds’ regulatory obligations in this area. Most funds have partially implemented the new requirements, and those funds will be fully compliant by June 1, 2019.

* Funds must price their shares at least once every business day as of a time determined by the fund’s board. Many funds price as of 4:00 p.m. eastern time or when the New York Stock Exchange closes.

[†] Section 22(e) of the Investment Company Act prohibits funds from suspending redemptions unless the SEC permits them to do so or declares an emergency, or the New York Stock Exchange closes or restricts trading. These occurrences are relatively rare, although funds have suspended redemptions on several occasions, such as during Hurricane Sandy in 2012. See also page 264.

[‡] Money market funds are held to different liquidity standards. For more information on this topic, see Types of US Investment Companies on page 264 and www.ici.org/mmfs/current/16_mmf_reg_summ.

Oversight and Accountability

All funds are subject to a strong system of oversight from both internal and external sources. Boards of directors, which include independent directors, and written compliance programs overseen by CCOs (see Compliance Programs on page 281), are examples of internal oversight mechanisms. External oversight is provided by the SEC, the Financial Industry Regulatory Authority (FINRA), and external service providers, such as certified public accounting firms.

Fund Boards

Mutual funds, closed-end funds, and most ETFs have boards. The role of a fund's board of directors is primarily one of oversight. The board of directors typically is not involved in the day-to-day management of the fund company. Instead, day-to-day management is handled by the fund's investment adviser or administrator pursuant to a contract with the fund.

Investment company directors review and approve major contracts with service providers (including, notably, the fund's investment adviser), approve policies and procedures to ensure the fund's compliance with federal securities laws, and undertake oversight and review of the performance of the fund's operations. Directors devote substantial time and consider large amounts of information in fulfilling these duties, in part because they must perform all their duties in "an informed and deliberate manner."

Fund boards must maintain a particular level of independence. The Investment Company Act requires at least 40 percent of the members of a fund board to be independent from fund management. An independent director is a fund director who does not have any significant business relationship with a mutual fund's adviser or underwriter. In practice, most fund boards have far higher percentages of independent directors. As of year-end 2016, independent directors made up at least three-quarters of boards in 84 percent of fund complexes.*

Independent fund directors play a critical role in overseeing fund operations and are entrusted with the primary responsibility for looking after the interests of the fund's shareholders. They serve as watchdogs, furnishing an independent check on the management of funds. Like directors of operating companies, they have a fiduciary duty to represent the interests of shareholders. But independent fund directors also have specific statutory and regulatory responsibilities under the Investment Company Act beyond the duties required of other types of directors. Among other things, they oversee the performance of the fund, approve the fees paid to the investment adviser for its services, and oversee the fund's compliance program.

* See *Overview of Fund Governance Practices, 1994–2016* for a description of the study that collects data on this and other governance practices. Available at www.idc.org/pdf/pub_17_fund_governance.pdf.

Compliance Programs

The internal oversight function played by the board has been greatly enhanced in recent years by the development of written compliance programs and a formal requirement that all funds have CCOs. Rules adopted in 2003 require every fund and adviser to have a CCO who administers a written compliance program reasonably designed to prevent, detect, and correct violations of the federal securities laws. Compliance programs must be reviewed at least annually for their adequacy and effectiveness, and fund CCOs are required to report directly to the independent directors.

Regulatory Oversight

Internal oversight is accompanied by a number of forms of external oversight and accountability. Funds are subject to inspections, examinations, and enforcement by their primary regulator, the SEC. Fund underwriters and distributors also are overseen by FINRA, a self-regulatory organization. Funds affiliated with a bank may also be overseen by banking regulators. All funds are subject to the antifraud jurisdiction of each state in which the fund's shares are offered for sale or sold.

Auditors

A fund's financial statement disclosure is also subject to several internal and external checks. For example, annual reports include audited financial statements certified by a certified public accounting firm subject to oversight by the Public Company Accounting Oversight Board (PCAOB). This ensures that the financial statements are prepared in conformity with generally accepted accounting principles (GAAP) and fairly present the fund's financial position and results of operations.

Sarbanes-Oxley Act

Like officers of public companies, fund officers are required to make certifications and disclosures required by the Sarbanes-Oxley Act. For example, they must certify the accuracy of the financial statements.

Additional Regulation of Advisers

In addition to the system of oversight applicable directly to funds, investors enjoy protections through SEC regulation of the investment advisers that manage fund portfolios. All advisers to registered funds are required to register with the SEC, and are subject to SEC oversight and disclosure requirements. Advisers also owe a fiduciary duty to each fund they advise, meaning that they have a fundamental legal obligation to act in the best interests of the fund pursuant to a duty of undivided loyalty and utmost good faith.

Limits on Leverage

The inherent nature of a fund—a professionally managed pool of assets owned pro rata by its investors—is straightforward and easily understood by investors. The Investment Company Act fosters simplicity by prohibiting complex capital structures and limiting funds' use of leverage.

The Investment Company Act imposes various requirements on the capital structure of mutual funds, closed-end funds, and ETFs, including limitations on the issuance of “senior securities” and borrowing. These limitations greatly minimize the possibility that a fund's liabilities will exceed the value of its assets.

Generally speaking, a senior security is any debt that takes priority over the fund's shares, such as a loan or preferred stock. The SEC historically has interpreted the definition of senior security broadly, taking the view that selling securities short, purchasing securities on margin, and investing in many types of derivative instruments, among other practices, may create senior securities.

The SEC also takes the view that the Investment Company Act generally prohibits a fund from creating a future obligation to pay unless it “covers” the obligation. A fund generally can cover an obligation by owning the instrument underlying that obligation. For example, a fund that wants to take a short position in a certain stock can comply with the Investment Company Act by owning an equivalent long position in that stock. The fund also can cover by earmarking or segregating liquid securities equal in value to the fund's potential exposure from the leveraged transaction. The assets set aside to cover the potential future obligation must be liquid, unencumbered, and marked-to-market daily. They may not be used to cover other obligations and, if disposed of, must be replaced.

The Investment Company Act also limits borrowing. With the exception of certain privately arranged loans and temporary loans, any promissory note or other indebtedness would generally be considered a prohibited senior security.* Mutual funds and ETFs are permitted to borrow from a bank if, immediately after borrowing, the fund's total net assets are at least three times total aggregate borrowings. In other words, the fund must have at least 300 percent asset coverage.

* Temporary loans cannot exceed 5 percent of the fund's total net assets and must be repaid within 60 days.

Closed-end funds have a slightly different set of limitations. They are permitted to issue debt and preferred stock, subject to certain conditions, including asset coverage requirements of 300 percent for debt and 200 percent for preferred stock.

Many funds voluntarily go beyond the prohibitions in the Investment Company Act, adopting policies that further restrict their ability to issue senior securities or borrow. Funds often, for example, adopt a policy stating that they will borrow only as a temporary measure for extraordinary or emergency purposes and not to finance investment in securities. In addition, they may disclose that, in any event, borrowings will be limited to a small percentage of fund assets (such as 5 percent). These are meaningful voluntary measures, because under the Investment Company Act, a fund's policies on borrowing money and issuing senior securities cannot be changed without the approval of fund shareholders.

Custody

To protect fund assets, the Investment Company Act requires all funds to maintain strict custody of fund assets, separate from the assets of the adviser. Although the act permits other arrangements,* nearly all funds use a bank custodian for domestic securities. Foreign securities are required to be held in the custody of an international foreign bank or securities depository.

A fund's custody agreement with a bank is typically far more elaborate than the arrangements used for other bank clients. The custodian's services generally include safekeeping and accounting for the fund's assets, settling securities transactions, receiving dividends and interest, providing foreign exchange services, paying fund expenses, reporting failed trades, reporting cash transactions, monitoring corporate actions at portfolio companies, and tracing loaned securities.

The strict rules on the custody and reconciliation of fund assets are designed to prevent theft and other fraud-based losses. Shareholders are further insulated from these types of losses by a provision in the Investment Company Act that requires all mutual funds to have fidelity bonds designed to protect them against possible instances of employee larceny or embezzlement.

* The Investment Company Act contains six separate custody rules for the possible types of custody arrangements for mutual funds, closed-end funds, and ETFs. UITs are subject to a separate rule that requires the use of a bank to maintain custody. See Section 17(f) of the Investment Company Act and SEC Rules 17f-1 through 17f-7.

Prohibitions on Transactions with Affiliates

The Investment Company Act contains a number of strong and detailed prohibitions on transactions between the fund and fund insiders or affiliated organizations (such as the corporate parent of the fund’s adviser). Many of these prohibitions were part of the original statutory text of the act, enacted in response to instances of overreaching and self-dealing by fund insiders during the 1920s in the purchase and sale of portfolio securities, loans by funds, and investments in related funds. The SEC’s Division of Investment Management has said that “for more than 50 years, [the affiliated transaction prohibitions] have played a vital role in protecting the interests of shareholders and in preserving the industry’s reputation for integrity; they continue to be among the most important of the act’s many protections.”*

Although a number of prohibitions in the Investment Company Act relate to affiliated transactions, three are particularly noteworthy:

- » General prohibition on direct transactions between a fund and an affiliate
- » General prohibition on “joint transactions,” where the fund and affiliate are acting together vis-à-vis a third party
- » Restrictions preventing investment banks from placing or “dumping” unmarketable securities with an affiliated fund by generally prohibiting the fund from buying securities in an offering syndicated by an affiliated investment bank

* See *Protecting Investors: A Half Century of Investment Company Regulation*, Report of the Division of Investment Management, Securities and Exchange Commission (May 1992), available at www.sec.gov/divisions/investment/guidance/icreg50-92.pdf. The Division of Investment Management is the division within the SEC responsible for the regulation of funds.

Diversification

Both tax and securities law provide diversification standards for funds registered under the Investment Company Act. As discussed in detail above, to qualify as RICs under the tax laws, all mutual funds, closed-end funds, and ETFs, as well as most UITs, must meet a tax diversification test every quarter. The effect of this test is that a fund with a modest cash position and no government securities would hold securities from at least 12 different issuers. Another tax diversification restriction limits the amount of an issuer's outstanding voting securities that a fund may own.

The securities laws set higher standards for funds that elect to be diversified. If a fund elects to be diversified, the Investment Company Act requires that, with respect to at least 75 percent of the portfolio, no more than 5 percent may be invested in the securities of any one issuer and no investment may represent more than 10 percent of the outstanding voting securities of any issuer. Diversification is not mandatory, but all mutual funds, closed-end funds, and ETFs must disclose whether or not they are diversified under the act's standards.

In practice, most funds that elect to be diversified are much more highly diversified than they need to be to meet these two tests. As of December 2018, for example, the median number of stocks held by US equity mutual funds was 81.*

* This number—tabulated using Morningstar data—is the median among domestic equity mutual funds, excluding sector mutual funds and funds of funds.

APPENDIX B

Significant Events in Fund History

1774	Dutch merchant and broker Adriaan van Ketwich invites subscriptions from investors to form a trust, the Eendragt Maakt Magt, with the aim of providing investment diversification opportunities to investors of limited means.
1868	The Foreign and Colonial Government Trust, the precursor to the US investment fund model, is formed in London. This trust provides “the investor of moderate means the same advantages as large capitalists.”
1924	The first mutual funds are established in Boston.
1933	The Securities Act of 1933 regulates the registration and offering of new securities, including mutual fund and closed-end fund shares, to the public.
1934	The Securities Exchange Act of 1934 authorizes the Securities and Exchange Commission (SEC) to provide for fair and equitable securities markets.
1936	The Revenue Act of 1936 establishes the tax treatment of mutual funds and their shareholders. Closed-end funds were covered by the Act in 1942.
1940	The Investment Company Act of 1940 is signed into law, setting the structure and regulatory framework for registered investment companies. The forerunner to the National Association of Investment Companies (NAIC) is formed. The NAIC will become the Investment Company Institute.
1944	The NAIC begins collecting investment company industry statistics.
1951	The total number of mutual funds surpasses 100, and the number of shareholder accounts exceeds one million for the first time. The first mutual fund focusing on non-US investments is made available to US investors.
1954	Households’ net purchases of fund shares exceed those of corporate stock. NAIC initiates a nationwide public information program emphasizing the role of investors in the US economy and explaining the concept of investment companies.
1961	The first tax-free unit investment trust is offered. The NAIC changes its name to the Investment Company Institute (ICI) and welcomes fund advisers and underwriters as members.
1962	The Self-Employed Individuals Tax Retirement Act creates savings opportunities (Keogh plans) for self-employed individuals.

1971	Money market funds are introduced.
1974	The Employee Retirement Income Security Act of 1974 (ERISA) creates the individual retirement account (IRA).
1976	The Tax Reform Act of 1976 permits the creation of municipal bond funds. The first retail index fund is offered.
1978	The Revenue Act of 1978 creates new Section 401(k) retirement plans and simplified employee pensions (SEPs).
1981	The Economic Recovery Tax Act establishes “universal” IRAs for all workers. IRS proposes regulations for Section 401(k).
1986	The Tax Reform Act of 1986 reduces IRA deductibility.
1987	ICI welcomes closed-end funds as members.
1990	Mutual fund assets top \$1 trillion.
1993	The first exchange-traded fund (ETF) shares are issued.
1996	Enactment of the National Securities Markets Improvement Act of 1996 (NSMIA) provides a more rational system of state and federal regulation, giving the SEC exclusive jurisdiction for registering and regulating mutual funds, exchange-listed securities, and larger advisers. States retain their antifraud authority and responsibility for regulating non-exchange-listed offerings and smaller advisers. The Small Business Job Protection Act creates SIMPLE plans for employees of small businesses.
1997	The Taxpayer Relief Act of 1997 creates the Roth IRA and eliminates restrictions on portfolio management that disadvantage fund shareholders.
1998	The SEC approves the most significant disclosure reforms in the history of US mutual funds, encompassing “plain English,” fund profiles, and improved risk disclosure.
1999	The Gramm-Leach-Bliley Act modernizes financial services regulation and enhances financial privacy.
2001	Enactment of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) significantly expands retirement savings opportunities for millions of working Americans.
2003	The Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA) provides mutual fund shareholders with the full benefits of lower tax rates on dividends and capital gains.

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- 2006** The Pension Protection Act (PPA) and the Tax Increase Prevention and Reconciliation Act provide incentives for investors of all ages to save more in tax-deferred and taxable investment accounts.
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- 2008** The SEC votes to adopt the Summary Prospectus rule.
Reserve Primary Fund fails to maintain \$1.00 NAV, becoming the second money market fund in 25 years to “break the dollar.”
-
- 2009** Money market fund assets hit \$3.9 trillion, their highest level to date.
The Money Market Working Group, a task force of senior industry executives, submits its report to the ICI Board. The board endorses the working group’s call for immediate implementation of new regulatory and oversight standards for money market funds.
-
- 2010** The SEC adopts new rules and amendments to regulations governing money market funds.
In Jones v. Harris, the US Supreme Court unanimously upholds the *Gartenberg* standard under which courts have long considered claims of excessive fund advisory fees.
Enactment of the RIC Modernization Act streamlines and updates technical tax rules, benefiting shareholders by making funds more efficient.
-
- 2011** *In Business Roundtable et al. v. SEC*, the United States Court of Appeals for the District of Columbia Circuit vacated the SEC’s proxy access rule for failing to adequately evaluate the rule’s costs and benefits.
ICI launches ICI Global to carry out the Institute’s international work by advancing the perspective of regulated investment funds globally.
-
- 2014** The SEC adopted sweeping changes to the rules that govern money market funds, building upon the changes to money market fund regulation adopted by the SEC in 2010.
-
- 2017** Congress passes most significant tax bill in three decades. Reflecting Congressional support for the voluntary, employer-based retirement system, lawmakers reject proposals to raise revenue by limiting retirement savings tax incentives.
-
- 2018** The SEC adopted Rule 30e-3, permitting US-registered funds to deliver shareholder reports online to satisfy their fund disclosure obligations.
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GLOSSARY

You can find more information about many of these entries in the chapters and appendix of this book and on www.ici.org.

actively managed fund. A fund that employs a portfolio manager or management team to manage the fund's investments to try to outperform their benchmarks and peer group average.

adviser. See **investment adviser**.

annual report. A report that a fund sends to its shareholders that discusses the fund's performance over the past fiscal year and identifies the securities in the fund's portfolio on the last business day of the fund's fiscal year. The annual report includes audited financial statements.

asset class. A group of securities or investments that have similar characteristics and behave similarly in the marketplace. Three common asset classes are equities (e.g., stocks), fixed income (e.g., bonds), and cash equivalents (e.g., money market funds).

at-the-market offering. An offering of new shares at a price determined by the same class of shares currently trading in the market. At-the-market offerings tend to be smaller than follow-on offerings and are conducted through equity distribution programs using a shelf registration statement.

auditor. An auditor certifies a fund's financial statements, providing assurance that they are prepared in conformity with generally accepted accounting principles (GAAP) and fairly present the fund's financial position and results of operations.

authorized participant. An entity, usually an institutional investor, that submits orders to an exchange-traded fund (ETF) for the creation and redemption of ETF **creation units**.

average portfolio maturity. The average maturity of all the securities in a bond or money market fund's portfolio.

back-end load. See **contingent deferred sales load (CDSL)**.

basis point. One one-hundredth of 1 percent (0.01 percent); thus, 100 basis points equals 1 percentage point. When applied to \$1.00, 1 basis point is \$0.0001, and 100 basis points equals one cent (\$0.01). Basis points are often used to simplify percentages written in decimal form.

benchmark. A standard against which the performance of a security or a mutual fund can be measured. For example, Barclays Capital Aggregate Bond Index is a benchmark index for many bond mutual funds. Many equity mutual funds are benchmarked to the S&P 500 index. See also **index**.

bond. A debt security issued by a company, municipality, government, or government agency. A bond investor lends money to the issuer and, in exchange, the issuer promises to repay the loan amount on a specified maturity date; the issuer usually pays the bondholder periodic interest payments over the life of the loan. The term *fixed-income* is often used interchangeably with bond.

bond fund. A fund that invests primarily in bonds and other debt instruments.

breakpoints. Designated levels above which certain discounts or fee rate reductions apply. In the mutual fund context, breakpoints relate to the sales charges investors pay if they buy fund shares through a broker or other intermediary, or to the management fee the fund pays to its investment adviser. Many funds offer sales charge (load) discounts to investors when they initially purchase fund shares if the amount invested surpasses a specified breakpoint. The amount of the discount typically increases as the amount of the investment reaches higher breakpoints. Similarly, funds may establish breakpoints requiring a reduction in the rate of the management fee the fund's investment adviser may charge as fund assets surpass specified levels.

break the dollar. A phrase used to describe when the net asset value (NAV) of a government or retail money market fund that uses either the amortized cost method and/or the penny-rounding method to calculate its share price falls below its stable \$1.00 NAV. This could be triggered by a deviation greater than one-half of 1 percent (one-half cent, or \$0.0050) between the fund's mark-to-market value (shadow price) and its stable \$1.00 NAV. Also known as *break the buck*.

broker. A firm engaged in the business of effecting transactions in securities for the accounts of others, and is often paid by commission.

broker-dealer. A broker-dealer is a firm that acts as both a **broker** and a **dealer**. Broker-dealers selling mutual fund shares are required to be registered with the SEC and regulated by FINRA. They typically are compensated for their services through sales charges paid by investors and other fees paid by the fund (e.g., **12b-1 fees**).

capital gains distributions. A distribution to mutual fund shareholders resulting from the fund's sale of securities held in its portfolio at a profit.

catch-up contribution. An additional contribution that individuals aged 50 or older are permitted to make to an individual retirement account (IRA) or employer-sponsored retirement savings plan in excess of the annual contribution limit. In 2017, the catch-up contribution amount was limited to \$1,000 for traditional and Roth IRAs, \$6,000 for 401(k) plans, and \$3,000 for SIMPLE IRA plans.

closed-end fund. A type of investment company that issues a fixed number of shares that trade intraday on stock exchanges at market-determined prices. Investors in a closed-end fund buy or sell shares through a broker, just as they would trade the shares of any publicly traded company.

commercial paper. Short-term, unsecured notes issued by a corporation to meet immediate short-term needs for cash, such as the financing of accounts payable, inventories, and short-term liabilities. Maturities typically range from overnight to 270 days. Commercial paper usually is issued by corporations with high credit ratings and sold at a discount from face value.

common stock. An investment that represents a share of ownership in a corporation. Also known as *common shares*. See also **preferred stock**.

contingent deferred sales load (CDSL). A fee that may be imposed by a fund on shareholders who redeem (sell back to the fund) shares during the first few years of ownership. A CDSL is disclosed to shareholders in the fund's prospectus. Also known as a *back-end load*.

creation unit. Financial institutions (called authorized participants) interact directly with an ETF by purchasing and redeeming ETF shares in large blocks called creation units. A creation unit generally contains between 25,000 and 200,000 ETFs shares. See also **authorized participant**.

dealer. A firm engaged in the business of buying and selling securities for its own account.

defined benefit (DB) plan. An employer-sponsored pension plan in which the amount of future benefits an employee will receive from the plan is defined, typically by a formula based on salary history and years of service. The amount of contributions the employer is required to make will depend on the investment returns experienced by the plan and the benefits promised. Contrast **defined contribution plan**.

defined contribution (DC) plan. An employer-sponsored retirement plan, such as a 401(k) plan or a 403(b) plan, in which contributions are made to individual participant accounts. Depending on the type of DC plan, contributions may be made by the employee, the employer, or both. The employee's benefits at retirement or termination of employment are based on the employee and employer contributions and earnings and losses on those contributions. See also **401(k) plan** and **403(b) plan**. Contrast **defined benefit plan**.

director. A person serving on the board of directors of a mutual fund. Mutual fund directors oversee the management and operations of a fund organized as a corporation. Directors also have significant and specific responsibilities under the federal securities laws. Among other things, they oversee the performance of the fund, approve the fees paid to the investment adviser for its services, and oversee the fund's compliance program. All directors have a fiduciary duty to represent the interests of shareholders. See also **independent director** and **trustee**.

distribution. (1) A fund's payment of dividends and capital gains to shareholders, (2) a method of selling fund shares to the public, which could involve either direct sales from the fund to retail or institutional investors, or sales through intermediaries, such as broker-dealers, who interact directly with the purchaser of fund shares, or both, or (3) a term used to describe a withdrawal of funds from a retirement plan.

dividend. Money that a fund or company pays to its shareholders, typically from its investment income, after expenses. The amount is usually expressed on a per-share basis. A dividend is a type of **distribution**.

emerging market. Generally, economies that are in the process of growth and industrialization, for example, many countries in Africa and Latin America. Though relatively undeveloped, these economies may hold significant growth potential in the future. May also be called *developing markets*.

employer-sponsored retirement plan. A type of employee benefit plan that an employer offers to help its employees accumulate assets for retirement. These can include **defined contribution plans** or **defined benefit plans**.

equity. A security or investment representing ownership in a company. By contrast, a bond represents a loan from the investor (owner of the bond) to a borrower (the issuer of the bond). The term *equity* is often used interchangeably with *stock*.

equity fund. A fund that concentrates its investments in equities. Also known as a *stock fund*.

exchange-traded fund (ETF). An investment company, typically a mutual fund or unit investment trust, whose shares are traded intraday on stock exchanges at market-determined prices. Investors may buy or sell ETF shares on the secondary market through a broker, just as they would the shares of any publicly traded company. Authorized participants are the only entities allowed to purchase and redeem ETF shares directly from the ETF. See also **authorized participant**.

expense ratio. A measure of what it costs to operate a fund, expressed as a percentage of its assets. This ratio is disclosed in the fund's prospectus and shareholder reports.

factor. Any variable that can explain differences in the returns on securities, such as: macroeconomic variables, returns on prespecified portfolios, or returns on benchmarks.

fair value. The amount a fund might reasonably expect to receive upon a current sale of a security. Where the value of the security cannot be readily determined from transactions occurring on an exchange or otherwise, a fund must have a process in place to determine how to value the amount it would expect to receive upon a current sale.

federal funds rate. The interest rate at which banks lend to each other in overnight borrowings to maintain their bank reserves at the Federal Reserve.

Financial Industry Regulatory Authority (FINRA). A self-regulatory organization that was created under the Securities Exchange Act of 1934 and that is charged with regulating broker-dealers. To fulfill its responsibilities, FINRA adopts regulatory rules that broker-dealers must comply with, conducts inspections of such broker-dealers, and imposes sanctions on those broker-dealers that violate its rules. FINRA's activities are overseen by the SEC.

529 plan. An investment program designed to help pay future qualified higher education expenses through a tax-advantaged account. These plans are offered by state governments and may also be offered by private consortiums. States offer two types of 529 plans: prepaid tuition programs allow contributors to establish an account in the name of a student to cover the cost of a specified number of academic periods or course units in the future; and college savings plans allow individuals to contribute to an investment account to pay for a student's qualified higher education expenses.

fixed-income security. See **bond**.

forward pricing. The concept describing the price at which mutual fund shareholders buy or redeem fund shares. Shareholders must receive the next computed share price following the fund's receipt of a shareholder transaction order.

follow-on offering. An offering of new shares of a same class of shares that is already publicly traded. The new shares are offered at a price established by the fund that is generally lower than the current price traded in the market.

457 plan. An employer-sponsored retirement plan that enables employees of state and local governments and certain tax-exempt employers to make tax-deferred contributions from their salaries to the plan.

401(k) plan. An employer-sponsored retirement plan that enables employees to make tax-deferred contributions from their salaries to the plan. See also **defined contribution plan**.

403(b) plan. An employer-sponsored retirement plan that enables employees of universities, public schools, and nonprofit organizations to make tax-deferred contributions from their salaries to the plan. See also **defined contribution plan**.

front-end load. A fee imposed by some funds at the point of purchase to cover selling costs. Any front-end load imposed by a fund will be described in detail in the fund's prospectus.

full-service broker. A licensed broker-dealer firm that provides a variety of services, including trade execution, research and investment advice, retirement planning, tax advice, and other services.

fund complex. A group of funds usually having the same investment adviser and distributor. Each fund in a complex may have different investment objectives and follow different investment strategies. Also known as *fund family*.

funds of funds. Mutual funds that primarily invest in shares of other mutual funds rather than investing directly in individual securities. Also, ETFs that primarily invest in shares of other ETFs rather than investing directly in individual securities.

government bond. A debt security issued by a government or its agencies (e.g., in the United States: savings bonds, Treasury bonds, Treasury inflation-protected securities [TIPS]).

government money market fund. A money market fund that seeks to maintain a stable share price and invests at least 99.5 percent of its total assets in cash, government securities, and/or repurchase agreements collateralized by government securities or cash. See also **money market fund**.

government securities. Any debt obligation issued by a government or its agencies (e.g., Treasury bills issued by the United States). See also **US Treasury securities**.

hedge fund. A private investment pool for qualified (typically wealthy) investors that, unlike a mutual fund, is exempt from SEC registration.

hybrid fund. A mutual fund that invests in a mix of equity and fixed-income securities, which can change proportionally over time or remain fixed.

independent director. A fund director must satisfy a number of specific and stringent requirements to be “independent.” In general, under the 1940 Act, an independent director cannot currently have, or at any time during the previous two years have had, a significant business relationship with the fund’s adviser, principal underwriter (distributor), or affiliates. An independent director also cannot own any stock of the investment adviser or certain related entities, such as parent companies or subsidiaries. See also **director** and **trustee**.

independent public accountant. The entity that audits a fund’s financial statements. As part of the audit, the independent public accountant must consider the fund’s internal control over financial reporting, including controls for safeguarding the fund’s securities. The independent public accountant reports to the board’s audit committee.

index. A portfolio of assets that tracks the performance of a particular financial market or subset of it (e.g., stock, bond, or commodity markets) and serves as a benchmark against which to evaluate a fund’s performance. The most common index for equity funds is the S&P 500. See also **benchmark**.

index fund. A fund designed to track the performance of a market index. The fund’s portfolio of assets is either a replicate or a representative sample of the designated market index. Often referred to as *passively managed portfolios*.

individual retirement account (IRA). A tax-advantaged account set up by or for an individual to hold and invest funds for retirement.

institutional investor. Businesses, nonprofit organizations, and other similar investors that own funds and other securities on behalf of their organizations. This classification of investors differs from individual or household investors who own the majority of investment company assets.

institutional money market fund. A money market fund that does not qualify as either a retail or government money market fund and does not limit all beneficial owners of the fund to natural persons.

intraday indicative value (IIV). A real-time estimate of the intraday value of an exchange-traded fund (ETF). Typically, third-party providers calculate and disseminate this measure every 15 to 60 seconds during securities market trading hours.

investment adviser. An organization retained by an investment company to give professional advice on the fund's investments and asset management practices. All investment advisers to registered investment companies, such as mutual funds, must be registered with the SEC under the Investment Advisers Act of 1940.

investment company. A corporation, trust, or partnership that invests pooled shareholder dollars in securities appropriate to the organization's objective. Mutual funds, closed-end funds, unit investment trusts, and exchange-traded funds are the main types of SEC-registered investment companies.

investment objective. The goal (e.g., current income, long-term capital growth) that a fund pursues on behalf of its investors. The fund's investment objective is disclosed to investors in the fund's prospectus and the fund's investments must be consistent with the stated investment objective.

level load. A combination of an annual 12b-1 fee (typically 1 percent) and a contingent deferred sales load fee (also often 1 percent) imposed by funds when shares are sold within the first year after purchase. See also **contingent deferred sales load** and **12b-1 fee**.

lifecycle fund. See **target date fund**.

lifestyle fund. Mutual funds that maintain a predetermined risk level and generally use words such as "conservative," "moderate," or "aggressive" in their names to indicate the fund's risk level. Also known as *target risk fund*.

liquidity. The ability to gain ready access to invested money. Mutual funds are liquid because their shares can be redeemed for the next computed net asset value (NAV) on any business day. In the securities market, a security is said to be liquid if the spread between bid and ask prices is narrow and reasonably sized trades can take place at those quotes.

load. See **sales charge**.

load fund. A mutual fund that imposes a sales charge—either when fund shares are purchased (front-end load) or redeemed (contingent deferred sales load)—or a fund that charges a 12b-1 fee greater than 0.25 percent. See also **12b-1 fee**.

long-term funds. A mutual fund industry designation for all mutual funds other than money market funds. Long-term funds are broadly divided into equity (stock), bond, and hybrid funds.

management fee. The amount paid by a mutual fund to the investment adviser for its services.

maturity. The date by which an issuer promises to repay a bond's face value.

money market. The global financial market for short-term borrowing and lending where short-term instruments such as Treasury bills (T-bills), commercial paper, and repurchase agreements are bought and sold.

money market fund. A mutual fund regulated pursuant to Rule 2a-7 under the Investment Company Act of 1940 that invests in short-term, high-quality, fixed-income securities, and seeks the highest level of income consistent with preservation of capital (e.g., maintaining a stable share price).

mutual fund. An investment vehicle that offers investors professional money management and diversified investment opportunities. All mutual funds are investment companies that are registered with the SEC under the Investment Company Act of 1940. Mutual funds buy a portfolio of securities selected by the fund's investment adviser to meet a specified investment objective. One hallmark of mutual funds is that they are considered a liquid investment because they issue redeemable securities, meaning that the fund stands ready to buy back its shares at their next computed net asset value (NAV). See also **open-end investment company**.

net asset value (NAV). The per-share value of an investment company, calculated by subtracting the fund's liabilities from the current market value of its assets and dividing by the number of shares outstanding. Mutual funds calculate their NAVs at least once daily on each day the financial markets are open.

net new cash flow. The net amount of "new" money flowing into a mutual fund. The amount is determined by calculating the dollar value of new sales of the fund minus redemptions, plus net exchanges. A positive number indicates new sales plus exchanges into funds exceeded redemptions plus exchanges out of funds. A negative number indicates redemptions plus exchanges out of funds exceeded new sales plus exchanges into funds.

net share issuance. The dollar value of gross issuance (proceeds from initial and additional public offerings of shares) minus the dollar value of gross redemptions of shares (share repurchases and fund liquidations). A positive number indicates that gross issuance exceeded gross redemptions. A negative number indicates that gross redemptions exceeded gross issuance.

no-load fund. A mutual fund whose shares are sold without a sales charge and without a 12b-1 fee of more than 0.25 percent per year. See also **12b-1 fee**.

open-end investment company. The legal name for a mutual fund, indicating that it stands ready to redeem (buy back) its shares from investors. See also **mutual fund**.

operating expenses. Business costs paid from a fund's assets. These include management fees, 12b-1 fees, and other expenses.

pooled investing. The basic concept behind mutual funds and other investment companies in which a fund aggregates the assets of investors who share common financial goals. A fund uses the pooled assets to buy a portfolio of investments, and each share purchased represents a shareholder's pro rata ownership interest in the fund's portfolio.

portfolio. A collection of investments owned by an individual or an institution (such as a mutual fund) that may include stocks, bonds, money market instruments, and other investments.

portfolio manager. A specialist employed by a fund's adviser to invest the fund's assets in accordance with predetermined investment objectives.

portfolio turnover rate. A measure of how frequently securities are bought and sold within a fund during a year. The portfolio turnover rate usually is expressed as a percentage of the value of a fund.

preferred stock. An investment that represents a share of ownership in a corporation that has a higher claim on the corporation's assets and earnings than common stock. Preferred stock differs from common stock in that preferred stock generally pays a fixed dividend that must be paid out before dividends to common stock shareholders. Also known as *preferred shares*. See also **common stock**.

primary market. The market in which investors buy securities directly from the companies issuing them. Contrast **secondary market**.

prime money market fund. A money market fund that invests primarily in corporate debt securities.

principal underwriter. A mutual fund underwriter enters into sales agreements with retail distributors (e.g., broker-dealers) of the mutual fund. To sell fund shares, a retail distributor must have executed a contract with a fund or its principal underwriter, which authorizes the distributor to offer and sell fund shares to the public. Generally speaking, a fund's underwriter is not involved in the offer or sale of fund shares to investors.

prospectus. The official document that describes an investment company to prospective investors. The prospectus contains information required by the SEC, such as investment objectives and policies, risks, services, and fees. Federal law requires that every mutual fund investor receive a prospectus. See also **summary prospectus**.

redeem. To sell mutual fund shares back to the fund. Mutual fund shares may be redeemed on any business day. An investor receives the next computed share price, called net asset value (NAV), minus any deferred sales charge or redemption fee.

redemption price. The amount per share that mutual fund shareholders receive when they redeem. See **redeem**.

registered investment company. Any fund—including a mutual fund—that is registered as an investment company with the SEC under the Investment Company Act of 1940. In addition to registering as an investment company under the Investment Company Act of 1940, shares of the registered investment company must be registered under the Securities Act of 1933 (if they are offered to the public) and the investment company's investment adviser must be registered with the SEC under the Investment Advisers Act of 1940. Each of these acts imposes regulatory responsibilities on the entities or securities registered under such acts.

regulated investment company (RIC). A fund eligible under subchapter M of the Internal Revenue Code to eliminate tax at the entity level by distributing all of its taxable income to its shareholders. The fund's income thus is taxed only once, at the investor level. A RIC may be organized in either corporate or trust form—but is treated in all cases as a corporation. To qualify as a RIC, a corporation must be registered at all times during the taxable year under the Investment Company Act of 1940 and must derive at least 90 percent of its income from certain sources, including dividends, interest, and capital gains. It also must distribute at least 90 percent of the dividends and interest received.

repurchase agreements. A form of short-term funding that is typically used by dealers and other institutional investors. In a repurchase transaction, one party sells securities to another party and agrees to buy back the securities at a specified time (e.g., the next day) for a specified price. Also known as a *repo*.

required minimum distribution (RMD). Rules under the Internal Revenue Code that generally require a person who owns a traditional IRA or 401(k) account to take annual distributions from the IRA or 401(k) account beginning at age 70½. The annual distribution amount is determined by formulas established by the IRS and must be calculated each year based on the owner's age (or the ages of the owner and the owner's spouse). The IRS formula is intended to ensure that the entire amount of a traditional IRA or 401(k) account be distributed over the expected life of the individual (or the joint lives of the individual and the individual's spouse). Distributing less than the required amount may result in a tax penalty. Roth IRAs are not subject to required minimum distributions during the account holder's lifetime.

retail investor. An individual investor who buys and sells securities for his or her personal account, and not for a company or organization.

retail money market fund. A money market fund that has policies and procedures reasonably designed to limit all beneficial owners of the fund to natural persons.

RIC. See **regulated investment company**.

rights offerings. Fund shareholders are issued rights to purchase additional fund shares at a price established by the fund, usually at a discount to NAV.

rollover. The transfer of an investor's assets from one qualified retirement plan (including an IRA) to another—due to changing jobs, for instance—without a tax penalty.

Roth IRA. An individual retirement plan, first available in 1998, that permits only after-tax contributions; earnings are not taxed, and qualified distributions of earnings and principal are generally tax-free.

sales charge. The sales fee that may be imposed on mutual fund shares that are purchased through a broker-dealer or other financial intermediary. By regulation, mutual fund sales charges are capped. Sales charges may vary depending on where the shares are acquired (e.g., a fund supermarket or a broker-dealer), the amount invested, and the fund purchased. Also known as the load.

SAR-SEP IRA (salary reduction simplified employee pension). A SEP IRA with a salary reduction feature (see **SEP IRA**). The Small Business Job Protection Act of 1996, which created SIMPLE IRAs, prohibited the formation of new SAR-SEP IRAs, which were created in 1986.

secondary market. Market in which an investor purchases or sells certain assets (such as closed-end fund, UIT, and ETF shares) from another investor through an intermediary such as a broker-dealer. Contrast **primary market**.

sector mutual fund. A fund that invests in a particular or specialized segment of the marketplace, such as stocks of companies in the software, healthcare, or real estate industries.

separate account. An insurance company account that is segregated or separate from the insurance company's general assets. Also refers to a fund managed by an investment adviser for a single plan.

SEP IRA (simplified employee pension plan). A retirement program created in 1978 that consists of individual retirement accounts for all eligible employees, to which the employer can contribute according to certain rules. A fairly simple, inexpensive plan to establish and administer, a SEP IRA can be attractive to small businesses and self-employed individuals.

series trust fund. A group of different mutual funds, each with its own investment objective and policies, that is structured as a single corporation or business trust.

share classes. Some mutual funds offer investors different types of shares known as classes (e.g., Class A, institutional shares). Each class will invest in the same portfolio of securities and will have the same investment objectives and policies, but each class will have different shareholder services and/or distribution arrangements with different fees and expenses and, therefore, different performance results. A multiclass structure offers investors the ability to select a fee and expense structure that is most appropriate for their investment goals (including the time that they expect to remain invested in the fund).

short-term fund. See **money market fund**.

SIMPLE IRA (savings incentive match plan for employees). A simplified tax-favored retirement plan created in 1996 that small employers can set up for the benefit of their employees.

S&P 500 index. A daily measure of stock market performance based on 500 US stocks chosen by Standard & Poor's for market size, liquidity, and industry group representation.

sponsor. A company or financial institution that creates a fund and determines its investment objective. When a new fund complex is launched, the fund sponsor (often an investment adviser) typically is the initial and sole shareholder of the new funds and elects the initial slate of directors.

stable value fund. An investment fund that seeks to preserve principal and to provide consistent returns and liquidity. Stable value funds include collective investment funds sponsored by banks or trust companies or contracts issued by insurance companies.

summary prospectus. SEC rules permit mutual funds to provide their investors with a brief summary (generally three to four pages) of key fund information instead of the fund's long-form, statutory prospectus if they make the statutory prospectus available online or by mail upon request and meet certain additional conditions. The summary prospectus must contain the following items in standardized order and cannot include additional information, nor omit required information: investment objectives/goals; fee and expense tables; principal investment strategies, principal risks and performance table; and management information. See also **prospectus**.

target date fund. Funds designed to satisfy their investors' investment objective by a particular target date, which is usually included in the name of the fund. For example, a Target Date 2025 fund may be designed for persons who plan to retire in 2025. To fulfill the investor's investment objective, the fund is typically constructed as a hybrid fund that follows a predetermined reallocation of risk over the lifetime of the investment. These funds invest in a mix of asset classes and typically rebalance their portfolios over time to become more conservative and income producing as the fund approaches and passes its target date. Target date funds are most commonly used to save for retirement or education, where the owner of the account expects to use the account proceeds at a known future date. Also known as **lifecycle fund**.

target risk fund. See **lifestyle fund**.

tender offer. In a closed-end fund tender offer, shareholders are given a limited opportunity to sell a portion of their shares back to the fund at a price—the tender price. Generally, the tender price is close to the fund's net asset value (NAV) and is higher than the market price.

total net assets. The total amount of assets, less any liabilities, a fund holds as of a certain date.

total return. A measure of a fund's performance that encompasses all elements of return: dividends, capital gains distributions, and changes in net asset value (NAV). Total return is the change in value of an investment over a given period, assuming reinvestment of any dividends and capital gains distributions, expressed as a percentage of the initial investment.

traditional IRA. The first type of IRA, created in 1974. Individuals may make tax-deductible or nondeductible (depending on income and other requirements) contributions to these accounts. See also **individual retirement account (IRA)**.

transfer agent. A transfer agent is the entity within a fund complex that maintains all shareholder account records, processes all transactions effected by shareholders, and provides shareholders who own shares directly with the fund communications regarding the fund or the shareholder's account. Typically, when a mutual fund shareholder contacts the fund to discuss the shareholder's account, it is the transfer agent that handles such inquiries. The transfer agent must be registered with the SEC under the Securities Exchange Act of 1934 and must perform its services pursuant to an agreement with the fund's board.

Treasury bill (T-bill). A short-term debt obligation of the US government with a maturity of less than one year. T-bills are sold in denominations of \$1,000 up to a maximum purchase of \$5 million and commonly have maturities of one month (four weeks), three months (13 weeks), or six months (26 weeks).

trustee. A member of the board of trustees of a fund organized as a business or statutory trust. Mutual fund trustees oversee the management and operations of the fund and have a fiduciary duty to represent the interests of shareholders. Fund trustees have the same responsibilities as fund directors. See also **director**.

12b-1 fee. A mutual fund fee, named for the SEC rule that permits it, used to pay distribution costs such as compensation to financial advisers for initial and ongoing assistance. If a fund has a 12b-1 fee, it will be disclosed in the fee table of a fund's prospectus.

underwriter. See **principal underwriter**.

unit investment trust (UIT). A type of fund that blends characteristics of mutual funds and closed-end funds. Like mutual funds, UITs issue redeemable shares. Like closed-end funds, however, UITs typically issue only a specific, fixed number of shares. A UIT does not actively trade its investment portfolio. Instead it buys and holds a fixed portfolio of securities until the UIT's set termination date, at which time the trust is dissolved and proceeds are paid to shareholders.

US Treasury securities. Debt securities issued by the US government and secured by its full faith and credit. Treasury securities are the debt financing instruments of the US federal government, and they are often referred to simply as Treasuries. There are four types of Treasury securities: Treasury bills, Treasury bonds, Treasury notes, and Treasury inflation protected securities (TIPS). See also **Treasury bill**.

variable annuity. An investment contract sold by an insurance company. Capital is accumulated, often through mutual fund investments, with the option to convert to an income stream in retirement.

wirehouse. An integrated broker with a national or worldwide business model as opposed to a regional one.

worldwide regulated open-end fund. A substantively regulated, open-end fund that is constrained by some diversification limits, concentration limits, and/or leverage limits with a view to offering a high level of investor protection; includes mutual funds, exchange-traded funds (ETFs), institutional funds, guaranteed/protected funds, (open-end) real estate funds, and other substantively regulated funds.

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