

# 2018 Investment Company Fact Book

A Review of Trends and Activities in  
the Investment Company Industry

58th edition

## 2017 Facts at a Glance

### Total net assets of worldwide regulated open-end funds\*

United States	\$22.1 trillion
Europe	\$17.7 trillion
Asia-Pacific	\$6.5 trillion
Rest of the world	\$2.9 trillion

### US-registered investment company total net assets

Mutual funds	\$18.7 trillion
Exchange-traded funds	\$3.4 trillion
Closed-end funds	\$275 billion
Unit investment trusts	\$85 billion

### US-registered investment companies' share of:

US corporate equity	31%
US and foreign corporate bonds	20%
US Treasury and government agency securities	13%
US municipal securities	25%
Commercial paper	25%

### US household ownership of US-registered investment companies

Number of households owning funds	57.3 million
Number of individuals owning funds	101.9 million
Percentage of households owning funds	45.4%
Median mutual fund assets of mutual fund-owning households	\$120,000
Median number of mutual funds owned among mutual fund-owning households	3

### US retirement market


Total retirement market assets	\$28.2 trillion
Percentage of households with tax-advantaged retirement savings	61%
IRA and DC plan assets invested in mutual funds	\$8.8 trillion

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

Note: Components may not add to the total because of rounding.

**2018  
Investment Company  
Fact Book**





# 2018 Investment Company Fact Book

A Review of Trends and Activities in  
the Investment Company Industry

58th edition

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.

Fifty-eighth edition

ISBN 1-878731-64-5

Copyright © 2018 by the Investment Company Institute. All rights reserved.

# CONTENTS

- viii Letter from the Chief Economist
- x ICI Research Staff and Publications

---

## PART ONE

### Analysis and Statistics

- 2 List of Figures**
- 10 Chapter One**  
Worldwide Regulated Open-End Funds
- 32 Chapter Two**  
US-Registered Investment Companies
- 56 Chapter Three**  
US Mutual Funds
- 82 Chapter Four**  
US Exchange-Traded Funds
- 104 Chapter Five**  
US Closed-End Funds
- 116 Chapter Six**  
US Fund Expenses and Fees
- 140 Chapter Seven**  
Characteristics of US Mutual Fund Owners
- 162 Chapter Eight**  
US Retirement and Education Savings

---

## PART TWO

### Data Tables

- 204 List of Data Tables**
- 208 Section One**  
US Mutual Fund Totals
- 216 Section Two**  
US Closed-End Funds, Exchange-Traded Funds, and Unit Investment Trusts
- 222 Section Three**  
US Long-Term Mutual Funds
- 242 Section Four**  
US Money Market Funds
- 250 Section Five**  
Additional Categories of US Mutual Funds
- 268 Section Six**  
Institutional Investors in the US Mutual Fund Industry
- 270 Section Seven**  
Retirement Account Investing in US Mutual Funds
- 272 Section Eight**  
Worldwide Regulated Open-End Fund Totals

- 
- 278 Appendix A**  
How US-Registered Investment Companies Operate and the Core Principles Underlying Their Regulation
  - 302 Appendix B**  
Significant Events in Fund History
  - 305 Glossary**
  - 319 Index**

**Letter from the  
Chief Economist**



## LETTER FROM THE CHIEF ECONOMIST

How do we see the world? Our eyes are flooded with light, bearing signals about the shape and movement of people and objects around us. But those signals don't make sense until they're processed through our eyes, our nerves, and our brains, where we apply accumulated knowledge and models of the world to turn patterns of light into the recognized image of a landmark or a friend's face.

Those of us who have worn glasses most of our lives know that one of the most crucial elements in this process is the right lens. A bad lens warps the light and distorts the signals—so our brains never have a chance to make sense of the patterns. The right lens sharpens the image and enhances our understanding.

This is a useful metaphor for the work that ICI Research does in providing informed analysis to guide public policy. Through our voluminous collections and surveys, we gather large amounts of data—signals about the behavior of funds, markets, and investors. But finding the patterns in these signals requires the right lens—accumulated knowledge provided by context, economic insights, and understanding of institutions.

The *Investment Company Fact Book* is one very visible result of this process and its many elements.

**Data.** The *Fact Book* provides objective data and information about investment companies and their investors—high-quality signals to send through the lens. Each chapter, as well as extensive data tables, was developed with great care by the research staff. All of the data in this book are available on ICI's website—in addition to data from the more than 300 statistical releases produced throughout the year under the direction of Judy Steenstra, ICI's senior director of statistical research.

The *Fact Book* also provides a wealth of information on investor characteristics. These are derived from unique databases and surveys—updated annually under the direction of Sarah Holden, ICI's senior director of retirement and investor research—that illuminate the success of the fund industry in helping investors save. In a recent *ICI Viewpoints*, Sarah Holden and I used data drawn from chapters 7 and 8 to explain why mutual fund investors reacted rather calmly to the stock market turbulence in February 2018: investors save for long-term goals such as retirement, understand that funds involve risk-return trade-offs, and make financial plans (often with the help of a financial professional) that can help them weather market downturns.

**Context.** Chapters 2 and 3 in particular give us an example of focusing data through context. They offer informed analysis for how developments in markets affected flows to US mutual funds.

Some have expressed concern that rapid growth in bond fund assets could destabilize fixed-income markets. As chapter 3 shows, bond funds have attracted more than \$1.5 trillion in new money in the past decade. But even with that rapid growth, by year-end 2017, assets in funds accounted for only 20 percent of the US bond market (chapter 2). With this context, the concern over bond funds' rapid growth dissipates.



*Institutional knowledge.* Deep institutional knowledge—that is, an understanding of the institutions of funds, investors, and the financial and retirement markets—also is key to good vision. ICI Research spends a lot of time seeking to understand how investors and markets operate, which allows us to combine data with real world details. Chapter 4, as well as a recent *ICI Viewpoints* by Shelly Antoniewicz, ICI’s senior director of industry and financial analysis, offer good examples.

When stock market volatility spiked in early February 2018, some commentators pointed fingers at exchange-traded funds (ETFs). We explained that the vast majority of ETF trades occur between investors on the secondary market (i.e., the stock exchanges) and don’t “touch” the stocks ETFs hold. Those stocks are affected only on the primary market—when there are net creations or redemptions of ETF shares. We showed that although ETF trading volumes did rise on the secondary market during the recent market turbulence, net redemptions of ETF shares were a tiny fraction of the value of company stocks traded.

*Economic insights.* The life-cycle consumption model—standard fare in undergraduate economics—is simple in concept: workers improve their welfare by smoothing consumption over their lifetimes. As my colleague Peter Brady has emphasized, the life-cycle model has vast implications for correctly interpreting data on households’ preparedness for retirement. Because a worker’s earnings typically increase early in life and then level off, the model suggests workers should delay saving for retirement until later in their career. In fact, as the model predicts, younger and lower-income workers are less likely to participate in employer-sponsored retirement plans.

But alarm over this pattern is misplaced: younger workers don’t stay young, and many lower-income workers advance into better-paying jobs. As we show in chapter 8, by the time households approach retirement, 81 percent have accrued benefits in a defined benefit plan; accumulated assets in a defined contribution plan or individual retirement account; or both.

*Global vision.* Finally, to get a clear picture of the industry, we must sometimes broaden our field of vision. ICI has for years served on behalf of the International Investment Funds Association (IIFA) as a repository of data about the global funds market. Over the past decade, financial regulation has gone global in new and expansive ways that affect the fund industry. So, too, has the work of ICI, with the launch of ICI Global in 2011. As we continue to build our research and data in this area, the 2018 *Fact Book* introduces a new chapter—chapter 1—focusing on trends in the flows and assets of funds globally.

We hope you’ll find this year’s *Fact Book* an illuminating lens, both as a compendium of data and information, and ultimately as a store of knowledge. As a quote commonly attributed to (the famously bespectacled) Benjamin Franklin puts it, “An investment in knowledge pays the best interest.”



# 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 of Governors and the Reserve Bank of New Zealand. He is a current 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** conducts research on the structure and trends of the US and global exchange-traded fund (ETF), mutual fund, and closed-end fund industries and on the equity and bond 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** leads 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 Pennsylvania State University.

## ICI Research Department

The ICI Research Department consists of 39 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.

## 2017 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 23 research and policy publications and more than 300 statistical reports in 2017.

The *Investment Company Fact Book* remains one of ICI Research's most visible products—garnering more than 35,000 visits and downloads in 2017. In its 58th 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](http://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, 2016,” *ICI Research Perspective*, April 2017
- » “Trends in the Expenses and Fees of Funds, 2016,” *ICI Research Perspective*, May 2017

### Retirement and Investor Research

- » “The Role of IRAs in US Households’ Saving for Retirement, 2016,” *ICI Research Perspective*, January 2017
- » “American Views on Defined Contribution Plan Saving, 2016,” *ICI Research Report*, February 2017
- » “Profile of Mutual Fund Shareholders, 2016,” *ICI Research Report*, February 2017
- » “Defined Contribution Plan Participants’ Activities, First Three Quarters of 2016,” *ICI Research Report*, February 2017
- » “Using Panel Tax Data to Examine the Transition to Retirement,” April 2017
- » “Defined Contribution Plan Participants’ Activities, 2016,” *ICI Research Report*, June 2017
- » “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007–2015,” *ICI Research Report*, June 2017
- » “The IRA Investor Profile: Traditional IRA Investors’ Activity, 2007–2015,” *ICI Research Report*, June 2017

- » “The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2016,” *ICI Research Perspective*, June 2017
- » “Who Participates in Retirement Plans,” *ICI Research Perspective*, July 2017
- » “Ten Important Facts About IRAs,” July 2017
- » “Ten Important Facts About Roth IRAs,” July 2017
- » “401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2015,” *ICI Research Perspective*, August 2017
- » “Ten Important Facts About 401(k) Plans,” August 2017
- » “Defined Contribution Plan Participants’ Activities, First Quarter 2017,” *ICI Research Report*, August 2017
- » “Profile of Mutual Fund Shareholders, 2017,” *ICI Research Report*, October 2017
- » “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017,” *ICI Research Perspective*, October 2017
- » “Characteristics of Mutual Fund Investors, 2017,” *ICI Research Perspective*, October 2017
- » “What Does Consistent Participation in 401(k) Plans Generate? Changes in 401(k) Account Balances, 2010–2015,” *ICI Research Perspective*, October 2017
- » “Defined Contribution Plan Participants’ Activities, First Half 2017,” *ICI Research Report*, November 2017
- » “The Role of IRAs in US Households’ Saving for Retirement, 2017,” *ICI Research Perspective*, December 2017

*ICI’s papers and more are available at [www.ici.org/research](http://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 2017. Please visit [www.ici.org/viewpoints](http://www.ici.org/viewpoints) to find these and more.

- » For “401(k) Pioneers,” No Reason for Regrets
- » Mutual Funds' and ETFs' Share of the Corporate Bond Market: What's the Right Answer?
- » What's the “Exposure” of Money Market Funds to Europe?
- » Scratch That: Why Arguments of a Broken Retirement System Are Misguided
- » Average Expense Ratios for Long-Term Mutual Funds Continued to Decrease in 2016
- » Average Expense Ratios for Index ETFs Have Declined
- » Americans Trust in Their 401(k) Plans
- » Simulating a Crisis
- » In Reality, Data Tell a Different Story of Old Age in America
- » Applying Evidence to Theories on Regulated Funds
- » More People Are Building Nest Eggs with Their IRAs
- » Let's Give the US Retirement System the Credit It Deserves

## 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 48 jurisdictions worldwide.

*These and other ICI statistics are available at [www.ici.org/research/stats](http://www.ici.org/research/stats). To subscribe to ICI's statistical releases, visit [www.ici.org/pdf/stats\\_subs\\_order.pdf](http://www.ici.org/pdf/stats_subs_order.pdf).*

## Acknowledgments

Publication of the *2018 Investment Company Fact Book* was directed by Morris Mitler, economist, and Judy Steenstra, senior director of statistical research, working with Miriam Bridges, editorial director, James Duvall, assistant economist, Candice Gullett, editor, and Angie Brownie, designer. Contributors from ICI's research team who developed and edited analysis, text, and data are Steven Bass, Mike Bogdan, Peter Brady, Sailesh Jha, Shaun Lutz, Sheila McDonald, Matthew Nolan, Doug Richardson, Julieth Saenz, Dan Schrass, and Jason Seligman.

PART ONE

# Analysis and Statistics





# FIGURES

---

## CHAPTER ONE

### Worldwide Regulated Open-End Funds

- 13 Figure 1.1**  
Total Net Assets of Worldwide Regulated Open-End Funds Surpassed \$49 Trillion in 2017
- 15 Figure 1.2**  
Stock Market Gains Were Strong in 2017
- 16 Figure 1.3**  
Impact of Changes in the Exchange Rate on the US Dollar Value of a European Stock
- 18 Figure 1.4**  
Worldwide Net Sales of Regulated Open-End Long-Term Funds Exceeded \$2 Trillion in 2017
- 20 Figure 1.5**  
Worldwide Net Sales of Money Market Funds
- 21 Figure 1.6**  
Net Sales of Money Market Funds in the Asia-Pacific Region Are Related to Chinese Money Market Instrument Returns
- 22 Figure 1.7**  
Number of Worldwide Regulated Open-End Funds
- 23 Figure 1.8**  
Total Net Assets of Worldwide Regulated Open-End Funds
- 25 Figure 1.9**  
Worldwide Net Sales of Regulated Open-End Long-Term Funds
- 27 Figure 1.10**  
Countries with More-Developed Stock Markets Tend to Have More-Developed Fund Industries
- 29 Figure 1.11**  
US Households Have More of Their Wealth in Regulated Funds; Chinese Households Have a Lower Share
- 31 Figure 1.12**  
Worldwide Regulated Open-End Long-Term Fund Share of Worldwide Equity and Debt Markets

---

## CHAPTER TWO

### US-Registered Investment Companies

- 34 Figure 2.1**  
Investment Company Total Net Assets by Type
- 35 Figure 2.2**  
The Majority of US Mutual Fund and ETF Total Net Assets Were in Equity Funds
- 36 Figure 2.3**  
Share of Household Financial Assets Held in Investment Companies
- 37 Figure 2.4**  
Mutual Funds in Household Retirement Accounts
- 38 Figure 2.5**  
Money Market Funds Managed 16 Percent of US Nonfinancial Businesses' Short-Term Assets in 2017
- 40 Figure 2.6**  
Investment Companies Channel Investment to Stock, Bond, and Money Markets
- 42 Figure 2.7**  
Index Funds Have Grown as a Share of the Fund Market
- 43 Figure 2.8**  
Index Fund Share of US Stock Market Is Small
- 44 Figure 2.9**  
More Than 80 Percent of Fund Complexes Were Independent Fund Advisers
- 45 Figure 2.10**  
Number of Fund Sponsors
- 46 Figure 2.11**  
Positive Net Share Issuance of ETFs and Positive Net New Cash Flow to Long-Term Mutual Funds
- 47 Figure 2.12**  
Share of Mutual Fund and ETF Assets at the Largest Fund Complexes
- 49 Figure 2.13**  
Number of Mutual Funds and ETFs Entering and Leaving the Industry
- 51 Figure 2.14**  
Total Net Assets and Number of UITs
- 52 Figure 2.15**  
Number of Investment Companies by Type
- 53 Figure 2.16**  
Investment Company Industry Employment
- 54 Figure 2.17**  
Investment Company Industry Employment by Job Function
- 55 Figure 2.18**  
Investment Company Industry Employment by State

---

CHAPTER THREE  
**US Mutual Funds**

- 58 Figure 3.1**  
Equity Mutual Funds Held More Than Half of Mutual Fund Total Net Assets
- 59 Figure 3.2**  
Number of Mutual Funds Entering and Exiting the Industry
- 60 Figure 3.3**  
Households Held 90 Percent of Mutual Fund Total Net Assets
- 61 Figure 3.4**  
Net New Cash Flow to Mutual Funds
- 65 Figure 3.5**  
Net New Cash Flow to Equity Mutual Funds Typically Is Related to World Equity Returns
- 66 Figure 3.6**  
Net New Cash Flow to Equity Mutual Funds in 2017
- 68 Figure 3.7**  
Turnover Rate Experienced by Equity Mutual Fund Investors
- 69 Figure 3.8**  
Net New Cash Flow to Bond Mutual Funds Typically Is Related to Bond Returns
- 70 Figure 3.9**  
Net New Cash Flow to Bond Mutual Funds in 2017
- 72 Figure 3.10**  
Bond Mutual Funds Have Experienced Net Inflows Through Most of the Past Decade
- 74 Figure 3.11**  
Net New Cash Flow to Hybrid Mutual Funds
- 76 Figure 3.12**  
Net New Cash Flow to Index Mutual Funds
- 76 Figure 3.13**  
Index Equity Mutual Funds' Share Continued to Rise
- 77 Figure 3.14**  
Some of the Outflows from Domestic Equity Mutual Funds Have Gone to ETFs
- 78 Figure 3.15**  
Fee-Based Advisers Are Driving Larger Portions of Client Portfolios Toward ETFs
- 79 Figure 3.16**  
Assets of Large 401(k) Plans Are Increasingly Held in Collective Investment Trusts
- 80 Figure 3.17**  
Net New Cash Flow to Money Market Funds
- 81 Figure 3.18**  
Net Yields of Money Market Funds Far Exceeded MMDA Rates by the End of 2017

---

## CHAPTER FOUR

### US Exchange-Traded Funds

- 86 Figure 4.1**  
The United States Has the Largest ETF Market
- 87 Figure 4.2**  
Total Net Assets and Number of ETFs
- 89 Figure 4.3**  
Creation of ETF Shares
- 91 Figure 4.4**  
The Secondary Market Has Many ETF Liquidity Providers
- 94 Figure 4.5**  
Most ETF Activity Occurs on the Secondary Market
- 95 Figure 4.6**  
Secondary Market Trading of High-Yield Bond ETFs Increased When Yields Rose in 2017
- 97 Figure 4.7**  
Record Net Share Issuance of ETFs in 2017
- 98 Figure 4.8**  
Net Share Issuance of ETFs by Investment Classification
- 99 Figure 4.9**  
Total Net Assets of ETFs Were Concentrated in Large-Cap Domestic Stocks
- 100 Figure 4.10**  
Number of ETFs Entering and Exiting the Industry
- 101 Figure 4.11**  
ETF-Owning Households Held a Broad Range of Investments
- 102 Figure 4.12**  
Characteristics of ETF-Owning Households
- 103 Figure 4.13**  
ETF-Owning Households Are Willing to Take More Investment Risk

---

## CHAPTER FIVE

### US Closed-End Funds

- 107 Figure 5.1**  
Total Assets of Closed-End Funds Were \$275 Billion at Year-End 2017
- 108 Figure 5.2**  
Composition of the Closed-End Fund Market by Investment Objective
- 109 Figure 5.3**  
Closed-End Fund Net Share Issuance
- 110 Figure 5.4**  
Closed-End Fund Distributions
- 111 Figure 5.5**  
Closed-End Funds Are Employing Structural and Some Types of Portfolio Leverage
- 112 Figure 5.6**  
Preferred Shares Constituted the Majority of Closed-End Fund Structural Leverage
- 113 Figure 5.7**  
Use of Portfolio Leverage
- 114 Figure 5.8**  
Closed-End Fund Investors Owned a Broad Range of Investments
- 115 Figure 5.9**  
Closed-End Fund Investors Had Above-Average Household Incomes and Financial Assets

**US Fund Expenses and Fees**

- 119 Figure 6.1**  
Expense Ratios Incurred by Mutual Fund Investors Have Declined Substantially Since 2000
- 120 Figure 6.2**  
Mutual Fund Expense Ratios Tend to Fall as Fund Assets Rise
- 121 Figure 6.3**  
Fund Shareholders Paid Below-Average Expense Ratios for Equity Mutual Funds
- 122 Figure 6.4**  
Total Net Assets Are Concentrated in Lower-Cost Mutual Funds
- 123 Figure 6.5**  
Mutual Fund Expense Ratios Vary Across Investment Objectives
- 125 Figure 6.6**  
Total Net Assets and Number of Index Mutual Funds Have Increased in Recent Years
- 126 Figure 6.7**  
Expense Ratios of Actively Managed and Index Mutual Funds Have Fallen
- 128 Figure 6.8**  
Expense Ratios Incurred by Index ETF Investors Have Declined in Recent Years
- 129 Figure 6.9**  
Index ETF Expense Ratios Vary Across Investment Objectives
- 133 Figure 6.10**  
No-Load Share Classes Garnered Positive Net New Cash Flow in 2017
- 134 Figure 6.11**  
Gross Sales of Long-Term Mutual Funds Are Concentrated in No-Load Share Classes
- 135 Figure 6.12**  
Total Net Assets of Long-Term Mutual Funds Are Concentrated in No-Load Share Classes
- 137 Figure 6.13**  
A Variety of Arrangements May Be Used to Compensate 401(k) Service Providers
- 139 Figure 6.14**  
401(k) Equity Mutual Fund Assets Are Concentrated in Lower-Cost Funds

---

## CHAPTER SEVEN

### Characteristics of US Mutual Fund Owners

- 142 Figure 7.1**  
44.5 Percent of US Households Owned Mutual Funds in 2017
- 143 Figure 7.2**  
Characteristics of Mutual Fund Investors
- 144 Figure 7.3**  
Incidence of Mutual Fund Ownership Is Greatest Among the Baby Boom Generation and Generation X
- 145 Figure 7.4**  
The Baby Boom Generation Is the Largest Shareholder Group and Holds Half of Households' Mutual Fund Assets
- 146 Figure 7.5**  
Ownership of Mutual Funds Increases with Household Income
- 147 Figure 7.6**  
Half of Households Owning Mutual Funds Have Moderate or Lower Incomes
- 148 Figure 7.7**  
Employer-Sponsored Retirement Plans Are Increasingly the Source of First Mutual Fund Purchase
- 149 Figure 7.8**  
Majority of Mutual Fund Investors Focus on Retirement
- 151 Figure 7.9**  
Mutual Fund Investments Outside Retirement Plans Are Often Guided by Investment Professionals
- 152 Figure 7.10**  
Mutual Fund Investors Purchase Mutual Funds Through a Variety of Channels
- 153 Figure 7.11**  
Mutual Fund Ownership Inside and Outside of Employer-Sponsored Retirement Plans
- 154 Figure 7.12**  
Millennial Mutual Fund-Owning Households Are More Likely to Hold Funds Through Employer-Sponsored Retirement Plans
- 155 Figure 7.13**  
Baby Boom Mutual Fund-Owning Households Are More Likely Than Millennials to Hold Funds Outside Employer-Sponsored Retirement Plans
- 156 Figure 7.14**  
Households' Mutual Fund Assets by Type of Account
- 157 Figure 7.15**  
Most Shareholders View the Mutual Fund Industry Favorably
- 158 Figure 7.16**  
Households' Willingness to Take Investment Risk
- 159 Figure 7.17**  
Equity Funds Are the Most Commonly Owned Type of Mutual Fund
- 160 Figure 7.18**  
More Than Eight in 10 Mutual Fund-Owning Households Have Confidence in Mutual Funds
- 161 Figure 7.19**  
Internet Access Is Nearly Universal Among Mutual Fund-Owning Households

---

## CHAPTER EIGHT

### US Retirement and Education Savings

- 164 Figure 8.1**  
Retirement Resource Pyramid
- 165 Figure 8.2**  
Primary Reason for Household Saving Changes with Age
- 166 Figure 8.3**  
Social Security Benefit Formula Is Highly Progressive
- 167 Figure 8.4**  
Near-Retiree Households Across All Income Groups Have Retirement Assets, DB Plan Benefits, or Both
- 169 Figure 8.5**  
Total US Retirement Market Assets
- 170 Figure 8.6**  
Total US Retirement Assets and Unfunded Defined Benefit Plan Liabilities
- 171 Figure 8.7**  
Many US Households Have Retirement Resources Outside Social Security
- 172 Figure 8.8**  
Most Workers Maintain Spendable Income After Claiming Social Security
- 173 Figure 8.9**  
Nearly Nine in 10 Had Retirement Resources Outside of Social Security
- 175 Figure 8.10**  
Defined Contribution Plan Assets by Type of Plan
- 176 Figure 8.11**  
Large 401(k) Sponsors Use a Variety of Plan Designs
- 178 Figure 8.12**  
Incidence of Investment Options Offered in Large 401(k) Plans by Type of Investment
- 180 Figure 8.13**  
401(k) Asset Allocation Varies with Participant Age
- 181 Figure 8.14**  
Asset Allocation to Equities Varies Widely Among 401(k) Plan Participants
- 182 Figure 8.15**  
Target Date Funds' 401(k) Market Share
- 183 Figure 8.16**  
401(k) Plan Balances Tend to Increase with Participant Age and Job Tenure
- 185 Figure 8.17**  
IRA Assets Surpass \$9 Trillion
- 186 Figure 8.18**  
Nearly 44 Million US Households Owned IRAs
- 187 Figure 8.19**  
New Roth IRAs Often Are Opened with Contributions; New Traditional IRAs Often Are Opened with Rollovers
- 189 Figure 8.20**  
Multiple Sources of Information Are Consulted for Rollover Decisions
- 191 Figure 8.21**  
IRA Asset Allocation Varies with Investor Age
- 192 Figure 8.22**  
Roth IRA Investors Rarely Take Withdrawals; Traditional IRA Investors Are Heavily Affected by RMDs
- 193 Figure 8.23**  
Traditional IRA Withdrawals Among Retirees Often Are Used to Pay for Living Expenses


- 194 Figure 8.24**  
Substantial Amounts of Retirement Assets Are Invested in Mutual Funds
- 195 Figure 8.25**  
Majority of Mutual Fund Retirement Account Assets Were Invested in Equities
- 197 Figure 8.26**  
Target Date and Lifestyle Mutual Fund Assets by Account Type
- 198 Figure 8.27**  
Target Date and Index Funds Have Risen as a Share of DC Plans' Mutual Fund Assets
- 199 Figure 8.28**  
Section 529 Savings Plan Assets
- 201 Figure 8.29**  
Characteristics of Households Saving for College



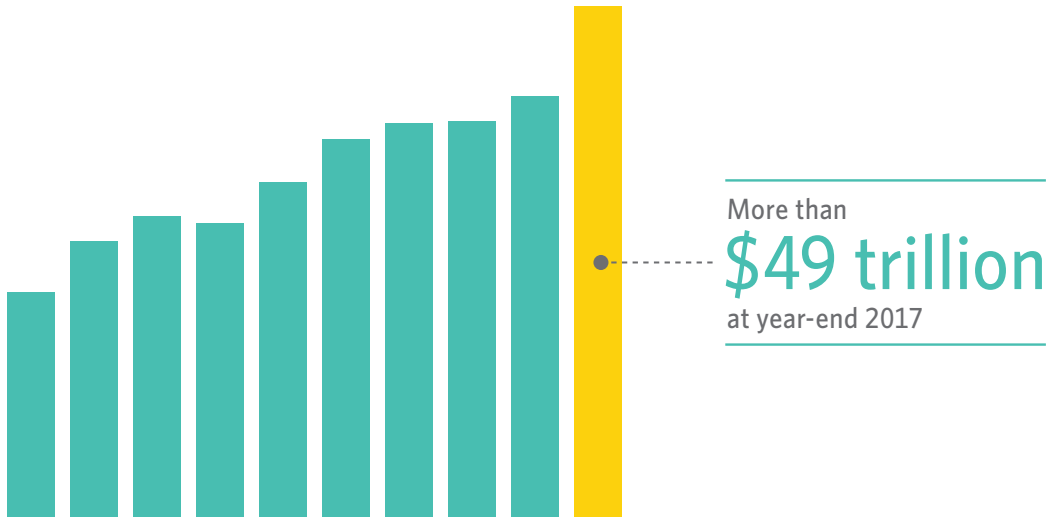
# Worldwide Regulated Open-End Funds

---

Investors across the globe have demonstrated strong demand for regulated open-end funds (referred to in this chapter as *regulated funds*). Total net assets of worldwide regulated funds have more than doubled in the past 10 years, surpassing \$49 trillion at year-end 2017. 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 more than 114,000 regulated funds that provide a vast array of choices for investors. In many countries, markets for regulated funds are well-developed and highly competitive.



## Total net assets of worldwide regulated open-end funds have more than doubled in the past decade



### IN THIS CHAPTER

- 12 What Are Regulated Funds?
- 13 Investor Demand for Worldwide Regulated Funds
- 23 Total Net Assets and Net Sales of Worldwide Regulated Funds by Region
- 26 Factors Influencing Demand for Worldwide Regulated Funds
- 30 Size of Worldwide Regulated Funds in Global Capital Markets

## 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) or 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).

---

\* The primary data source for worldwide regulated funds is the IIFA. In 2017, IIFA collected data on worldwide regulated funds from 48 jurisdictions. For data on individual jurisdictions, see the data tables on pages 272–277. For more details about the IIFA data collection, see [www.ici.org/info/ww\\_q4\\_14\\_definitions.xls](http://www.ici.org/info/ww_q4_14_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.



### LEARN MORE

IIFA Presents Expanded Worldwide Regulated Open-End Fund Assets and Flows Report  
[www.ici.org/research/stats/worldwide/ww\\_q1\\_15\\_explanation](http://www.ici.org/research/stats/worldwide/ww_q1_15_explanation)

## Investor Demand for Worldwide Regulated Funds

Worldwide regulated funds have seen robust growth in assets in the past two decades across four broad regions consisting of 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.

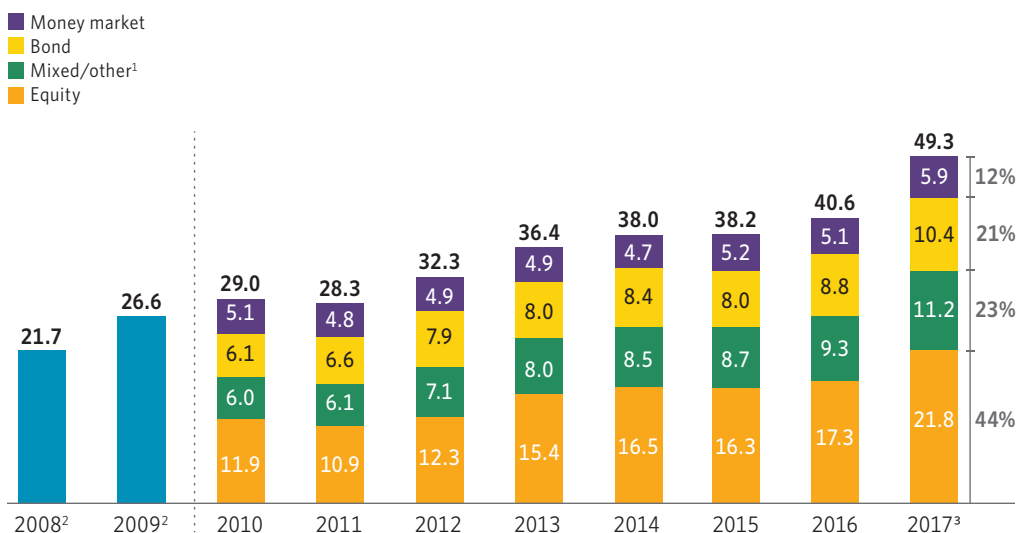
### Total Net Assets of Worldwide Regulated Funds

Total net assets in worldwide regulated funds hit \$49.3 trillion at year-end 2017, more than double their level in 2008 (Figure 1.1).<sup>\*</sup> In 2017 alone, total net assets in these funds jumped nearly \$9 trillion.

FIGURE 1.1

#### Total Net Assets of Worldwide Regulated Open-End Funds Surpassed \$49 Trillion in 2017

Trillions of US dollars by type of fund; year-end, 2008–2017



#### Total number of worldwide regulated open-end funds

83,850   83,041   86,265   91,876   94,475   97,920   101,238   106,523   110,548   114,131

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

<sup>2</sup> Data for total net assets by type of fund are not available in 2008 and 2009.

<sup>3</sup> Data for Russia are for 2017:Q3.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds. Components may not add to the total because of rounding.

Source: International Investment Funds Association

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

Forty-four percent, or \$21.8 trillion, of total net assets in regulated funds were in equity funds, which invest primarily in publicly traded stocks (Figure 1.1). Mixed/other funds\* made up another \$11.2 trillion, while bond funds—which invest primarily in fixed-income securities—had total net assets of \$10.4 trillion. 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, had \$5.9 trillion in total net assets, or 12 percent of worldwide regulated fund total net assets.

More than 40 percent of the increase in total net assets of regulated funds in 2017 reflected robust gains in stock markets around the world and a general appreciation of foreign currencies against the dollar. In 2017, US stocks returned nearly 19 percent (Figure 1.2). Stock markets elsewhere in the world also rose. For example, European stock markets returned 26 percent in 2017, while Asia-Pacific stock markets returned 32 percent. In addition, the euro appreciated 14 percent against the US dollar in 2017, boosting the value of euro-denominated assets when measured in US dollars (see page 16). In the Asia-Pacific region, the Australian dollar appreciated 8 percent, the Chinese renminbi appreciated 6 percent, and the Japanese yen appreciated 4 percent against the US dollar in 2017.

---

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



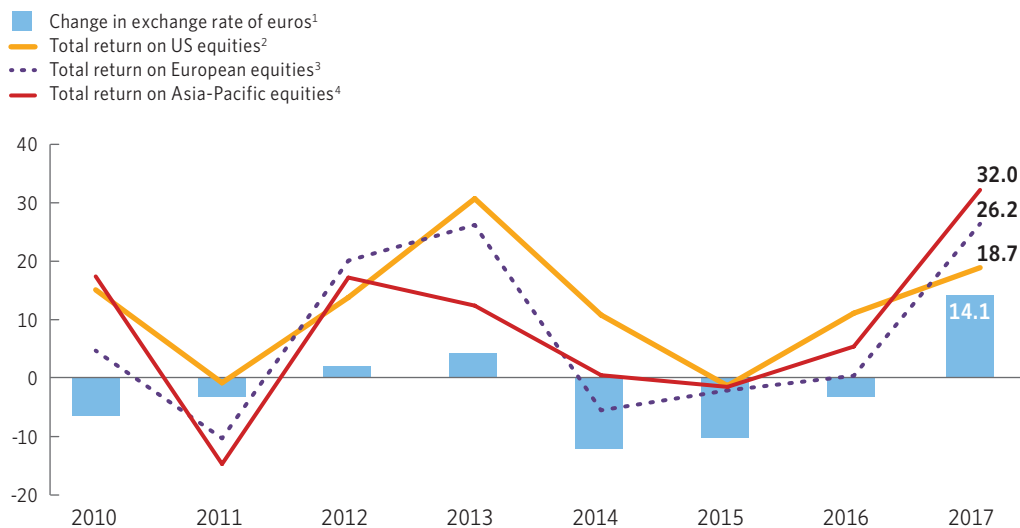
**LEARN MORE**

**Worldwide Regulated Open-End Fund Assets and Flows**  
[www.ici.org/research/stats/worldwide](http://www.ici.org/research/stats/worldwide)

FIGURE 1.2

## Stock Market Gains Were Strong in 2017

Percent, 2010-2017



<sup>1</sup> 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.

<sup>2</sup> The total return on US equities is measured as the year-over-year percent change in the Wilshire 5000 Total Return Index (float-adjusted).

<sup>3</sup> 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).

<sup>4</sup> 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: Investment Company Institute, Bloomberg, and MSCI

## 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 appreciate against the dollar (or, equivalently, the US dollar depreciates against foreign currencies), it will have a positive impact on the value of any 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**

	<b>Year 1</b>	<b>Year 2</b>	<b>Percent change</b>
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 appreciates (US dollar depreciates)**

	<b>Year 1</b>	<b>Year 2</b>	<b>Percent change</b>
4. Market value of European stock expressed in euros	€100	€110	10%
5. Exchange rate of euros (US dollars per euro)	1.00	1.20	20%
6. Market value of European stock expressed in US dollars	\$100	\$132	32%

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 dollar price 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 percentage gain or loss when the value of those assets is expressed in US dollars.

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 appreciates 20 percent against the US dollar. As in the first scenario, in year 1 the market value of European stock expressed in US dollars is \$100. In year 2, however, one euro is now worth 1.20 US dollars. To find the US dollar value of the European stock in year 2, multiply €110 by 1.20 (US dollars per euro) to get \$132. The US dollar return on the European stock is now 32 percent—higher than in the first scenario because it accounts for both the stock price gain in euros and the appreciation of the euro relative to the US dollar.



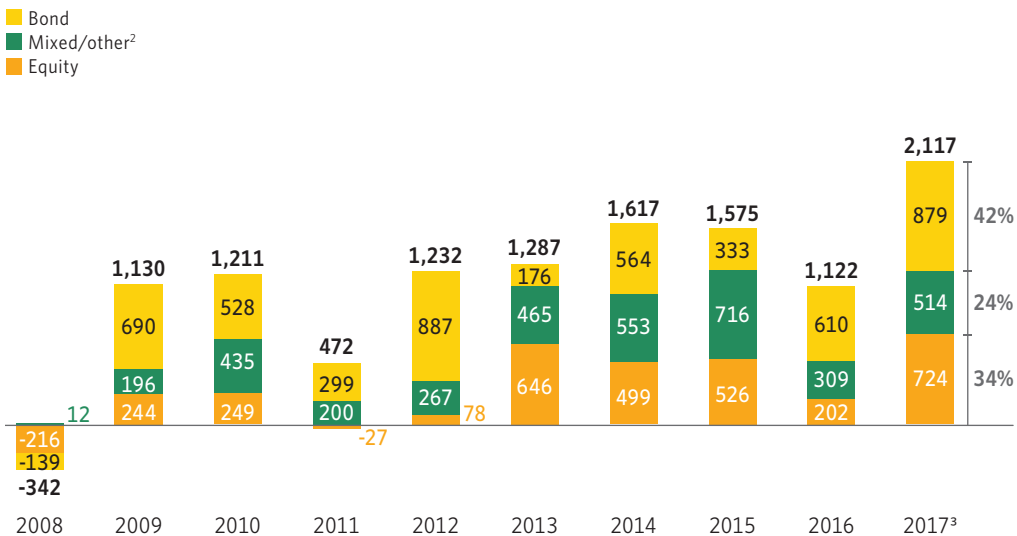
## Worldwide Net Sales of Regulated Long-Term Funds

In the past decade, total net assets in worldwide regulated long-term (equity, bond, and mixed/other) funds also were boosted by strong investor demand for new fund shares, with net sales totaling \$11.4 trillion (Figure 1.4). In 2017 alone, investors across the globe purchased \$2.1 trillion in additional shares of regulated long-term funds. Forty-two percent of those net sales (\$879 billion) went to bond funds in 2017. Much of these sales were attributable to the United States, where bond funds posted exceptionally strong inflows (see chapters 3 and 4). With stock prices rising rapidly around the world, some fund investors may have felt it appropriate to add to their bond fund holdings to keep their allocations of stocks and bonds in line with their long-term objectives.

FIGURE 1.4

### Worldwide Net Sales of Regulated Open-End Long-Term Funds Exceeded \$2 Trillion in 2017

Billions of US dollars by type of fund; annual, 2008-2017<sup>1</sup>



<sup>1</sup> Data for Ireland are not available in 2008 and 2009; are included in mixed/other in 2010; and are distributed by type of fund from 2011 to 2017.

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

<sup>3</sup> Data for Russia are through 2017:Q3.

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. Components may not add to the total because of rounding.

Source: International Investment Funds Association

Worldwide demand for regulated long-term funds has been fairly robust over most of the past decade. With the exception of 2008—the worst year of the global financial crisis—net sales of regulated long-term funds were positive. Moreover, in eight of the past 10 years (2008 and 2011 being the exceptions), each long-term fund type recorded positive net sales. Since 2008, net sales of bond funds and mixed/other funds have been particularly strong, far outpacing net sales of equity funds. Although a number of factors likely affected net flows, two stand out as the most applicable.

First, some investors, such as those nearing retirement, may have reassessed their willingness to accept above-average or substantial investment risk. The global population is aging—in 2017, around 23 percent of the world’s population was individuals 50 and older, up from nearly 20 percent in 2007.\* Against this backdrop, 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.

Second, investor demand may have responded to favorable returns on bonds. In many countries, long-term interest rates declined during and after the financial crisis. To shore up their economies, major central banks cut short-term interest rates and held them at very low levels for much of the past decade. In addition, some major central banks, notably the US Federal Reserve and the European Central Bank, undertook “quantitative easing” policies, 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.

---

\* 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/>.

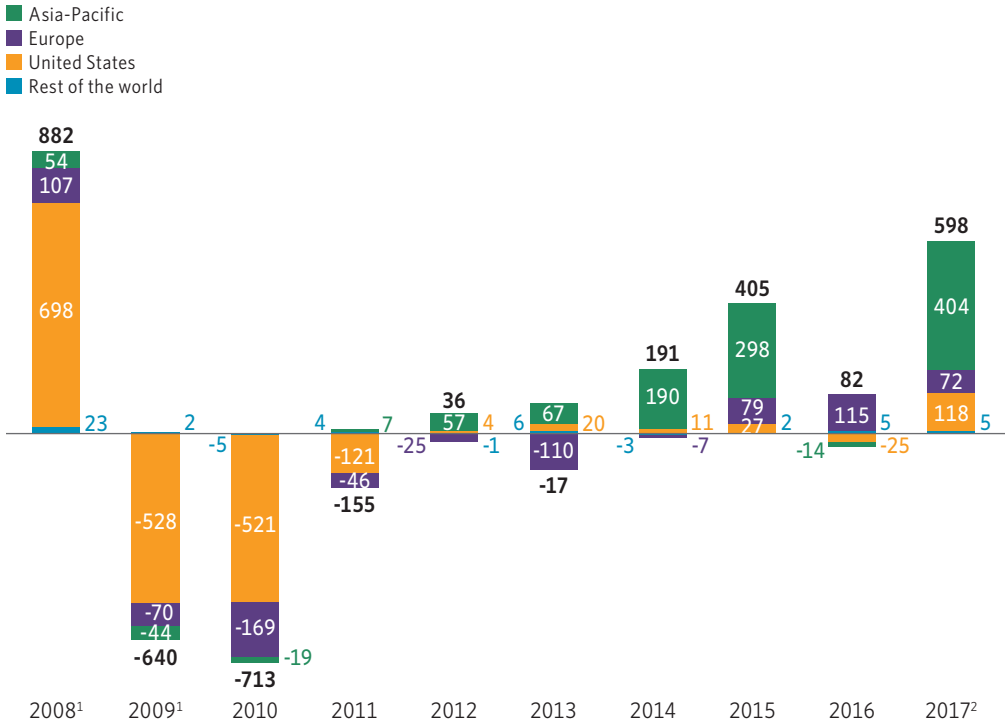
## Worldwide Net Sales of Money Market Funds

Worldwide net sales of money market funds totaled \$598 billion in 2017, a sharp increase from the \$82 billion of net sales in 2016 (Figure 1.5).

FIGURE 1.5

### Worldwide Net Sales of Money Market Funds

Billions of US dollars by region; annual, 2008–2017



<sup>1</sup> Data for Ireland are not available in 2008 and 2009.

<sup>2</sup> Data for Russia are through 2017:Q3.

Note: Components may not add to the total because of rounding.

Source: International Investment Funds Association

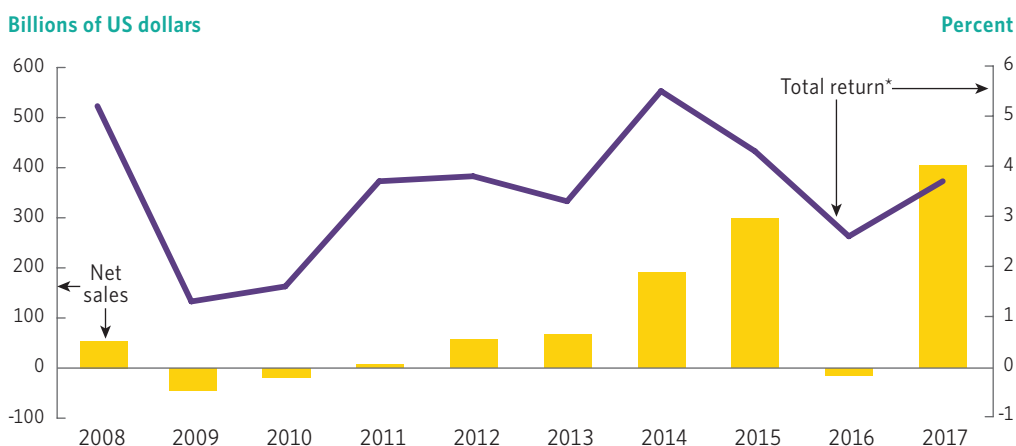
The pattern of net sales over 2016 and 2017 primarily owed to developments in the Asia-Pacific region, where money market funds had net sales of \$404 billion in 2017, after experiencing net outflows of \$14 billion in the previous year. Investor demand for Chinese money market funds strongly influenced net sales of money market funds in the Asia-Pacific region. Nearly 80 percent of Asia-Pacific’s total net assets in money market funds were held in funds domiciled in China at year-end 2017.

Investor demand for money market funds in the Asia-Pacific region appears to be related to changes in the total return on the short-term money market instruments held by these funds (Figure 1.6). Investors pulled back from Asia-Pacific money market funds as the total return on Chinese money market instruments declined from 4.3 percent in 2015 to 2.6 percent in 2016. As the total return on these money market instruments rose throughout 2017, investor demand for Asia-Pacific money market funds increased.

**FIGURE 1.6**

**Net Sales of Money Market Funds in the Asia-Pacific Region Are Related to Chinese Money Market Instrument Returns**

*Annual, 2008–2017*



\* The total return on Chinese money market instruments is the year-over-year percent change in the ChinaBond Money Market Fund Investable Bond Index. This index includes some short-term bonds.

Sources: International Investment Funds Association, Bloomberg, and China Central Depository and Clearing Corporation Limited

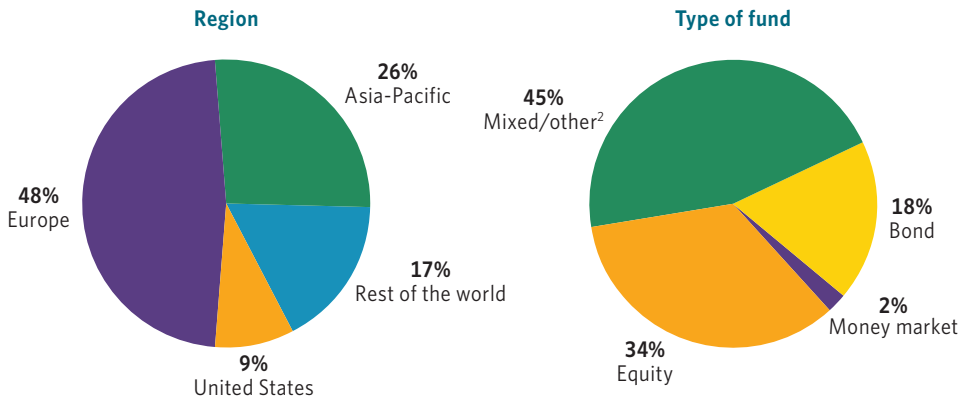
In Europe, money market funds saw net sales of \$72 billion in 2017, the third straight year of positive net sales (Figure 1.5). Europe, like the United States, has adopted reforms intended to increase the resilience of money market funds to financial shocks. US reforms, which were implemented in October 2016, had significant effects on the composition of net new cash flow to US money market funds in 2016. The influence, if any, of Europe’s impending regulatory changes on money market flows in that region is uncertain. Although European Union (EU) reforms for money market funds were adopted in 2017, existing funds are required to be in full compliance by January 2019.

In the United States, net sales of money market funds were \$118 billion in 2017, the largest year of positive net sales since 2008 (Figure 1.5). Over the past decade, US money market funds have faced headwinds because of regulatory reforms and near-zero US short-term interest rates. With short-term interest rates rising in the United States in 2017, US money market funds became more attractive relative to other cash management investments.

### Number of Worldwide Regulated Funds

At year-end 2017, fund providers across the globe offered more than 114,000 regulated funds for sale, a 36 percent increase since 2008 (Figure 1.1). Nearly half (48 percent) of these funds in 2017 were domiciled in Europe (Figure 1.7). The Asia-Pacific region accounted for 26 percent of regulated funds, the United States for 9 percent, and the rest of the world for 17 percent. About half (45 percent) of regulated funds were mixed/other funds. Equity funds accounted for 34 percent of regulated funds, and bond funds were 18 percent. Money market funds accounted for 2 percent of regulated funds.

**FIGURE 1.7**  
**Number of Worldwide Regulated Open-End Funds**  
*Percentage of funds by region or type of fund, year-end 2017<sup>1</sup>*



**Number of worldwide regulated open-end funds: 114,131**

<sup>1</sup> Data for Russia are for 2017:Q3.

<sup>2</sup> 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. Components may not add to 100 percent because of rounding.

Source: International Investment Funds Association

## Total Net Assets and Net Sales of Worldwide Regulated Funds by Region

The total net assets of, and net sales to, 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.

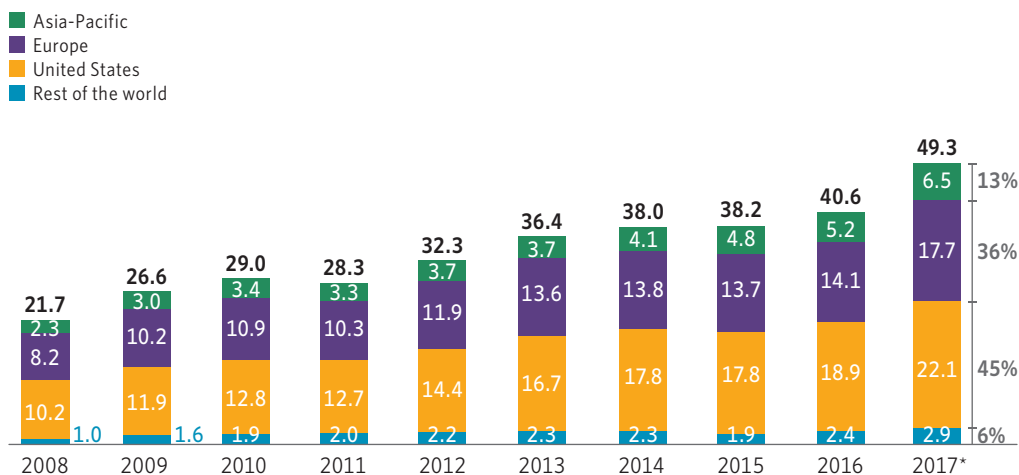
### Total Net Assets of Worldwide Regulated Funds by Region

The United States and Europe have the world's largest regulated fund markets. In 2017, the United States maintained its position as the world's largest fund market, with \$22.1 trillion (45 percent) of the world's \$49.3 trillion in regulated fund total net assets (Figure 1.8). Funds domiciled in Europe held \$17.7 trillion, or 36 percent of the worldwide total. The Asia-Pacific region had \$6.5 trillion in total net assets, and \$2.9 trillion were in funds domiciled in the rest of the world.

FIGURE 1.8

#### Total Net Assets of Worldwide Regulated Open-End Funds

Trillions of US dollars by region; year-end, 2008–2017



\* Data for Russia are for 2017:Q3.

Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds. Components may not add to the total because of rounding.

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 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 13 percent (\$6.5 trillion out of \$49.3 trillion) of the worldwide total net assets of regulated funds, the market has been growing rapidly (Figure 1.8). Moreover, given the size of the population in the Asia-Pacific region, and the rapidly increasing economic development and wealth in many countries, there is potential for growth in the region's regulated fund market.



## LEARN MORE

How US-Registered Investment Companies Operate and the Core Principles Underlying Their Regulation  
Page 278

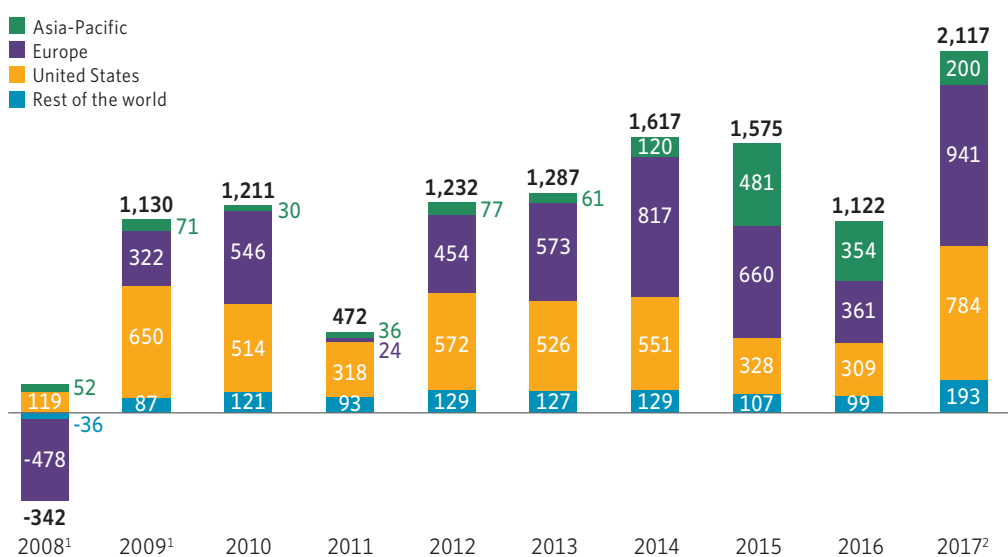
## Worldwide Net Sales of Regulated Long-Term Funds by Region

Worldwide net sales of regulated long-term funds worldwide nearly doubled in 2017, compared with 2016, largely on the strength of flows in Europe and the United States (Figure 1.9). Net sales of regulated long-term funds (equity, bond, and mixed/other funds) in Europe more than doubled to \$941 billion in 2017 from \$361 billion in 2016. This increase in investor demand likely reflected strengthening economic growth in that region, which was accompanied by a robust rebound in European stock markets. Net sales of equity funds domiciled in Europe surged from \$4 billion in 2016 to \$201 billion in 2017. Demand for bond and mixed/other funds also strengthened as interest rates remained fairly stable and monetary policy remained accommodative in Europe. Net sales of regulated long-term funds in the United States increased to \$784 billion in 2017, from \$309 billion in 2016. This reflected a sharp increase in demand for US domiciled funds that invest outside the United States, and strong sales of bond mutual funds and bond ETFs (see chapters 3 and 4).

FIGURE 1.9

### Worldwide Net Sales of Regulated Open-End Long-Term Funds

Billions of US dollars by region; annual, 2008-2017



<sup>1</sup> Data for Ireland are not available in 2008 and 2009.

<sup>2</sup> Data for Russia are through 2017:Q3.

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. Components may not add to the total because of rounding.

Source: International Investment Funds Association

## LEARN MORE

Trends in the European Investment Fund Industry  
[www.efama.org/statistics](http://www.efama.org/statistics)



## 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, and
- » high or improving levels of economic development.

### Well-Developed Capital Markets

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

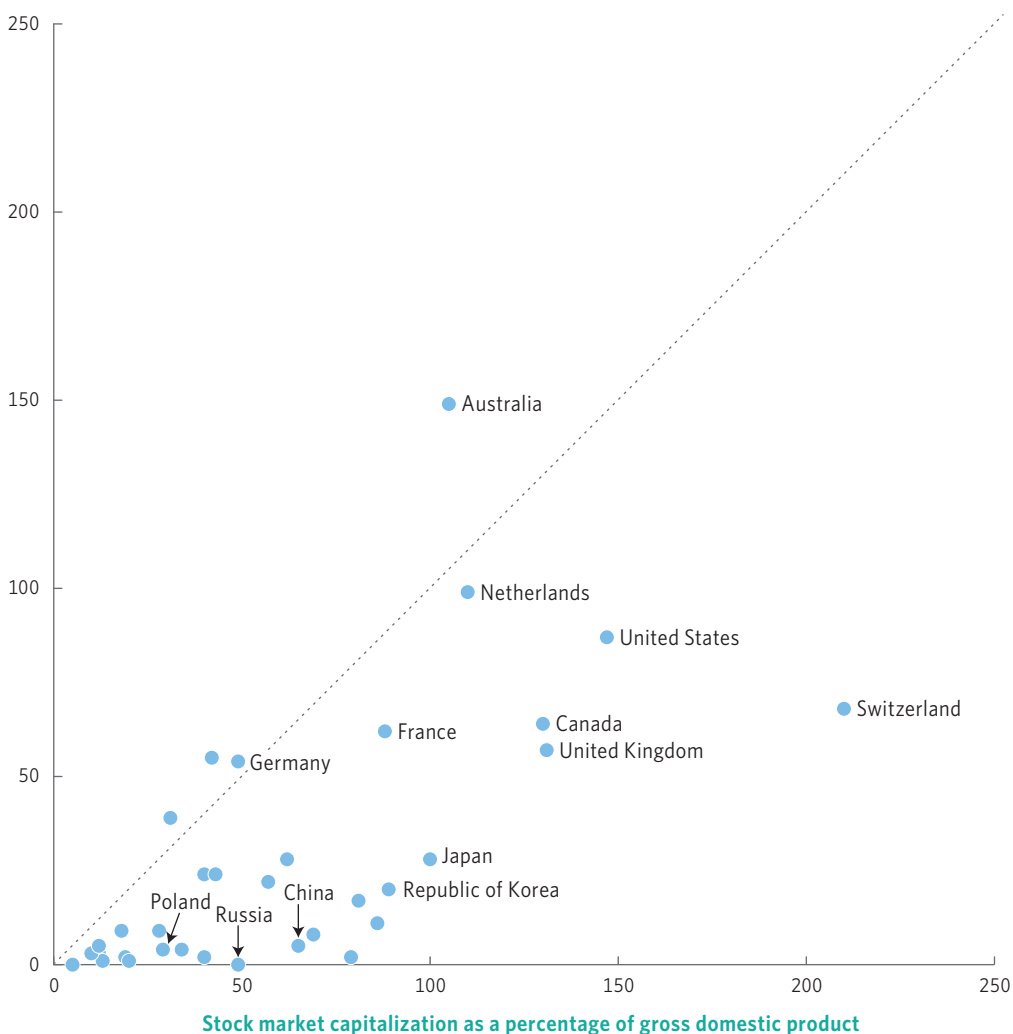
Figure 1.10 illustrates the relationship between capital market development and size of the regulated fund market in a given country. The horizontal axis provides a measure of a country's capital market development (a country's stock market capitalization relative to its gross domestic product [GDP]). 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.

FIGURE 1.10

## Countries with More-Developed Stock Markets Tend to Have More-Developed Fund Industries

Percent, 2016

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



\* 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: 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 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 slightly exceeds its GDP (110 percent, on the horizontal axis), indicating a highly developed capital market, while total net assets in regulated long-term funds are about equal to its GDP (at 99 percent on the vertical axis), indicating a more-developed fund industry. In contrast, countries with less-developed 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 100 percent of GDP, not much lower than the Netherlands (Figure 1.10). Nevertheless, Japan has substantially less total net assets in regulated long-term funds as a proportion of its GDP (28 percent). This outcome reflects Japanese households’ tendency to save in bank deposits rather than invest in regulated funds.

In some countries, especially those where banks have historically dominated the financial landscape, households have traditionally held 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 23 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.



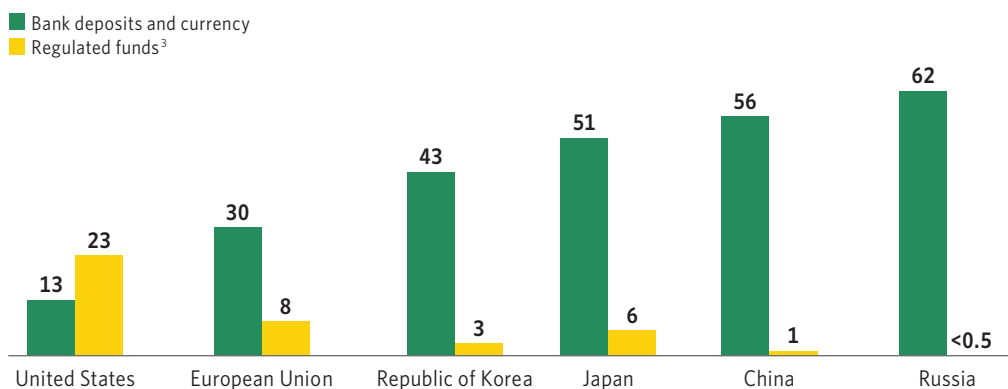
#### LEARN MORE

Regulated Funds, Emerging Markets, and Financial Stability  
[www.iciglobal.org/iciglobal/research/industry/global](http://www.iciglobal.org/iciglobal/research/industry/global)

FIGURE 1.11

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

Percentage of households' financial wealth,<sup>1</sup> 2017<sup>2</sup>



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

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

<sup>3</sup> For the United States, Japan, and Russia, regulated funds include total net assets held by mutual funds and ETFs. For the European Union, 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

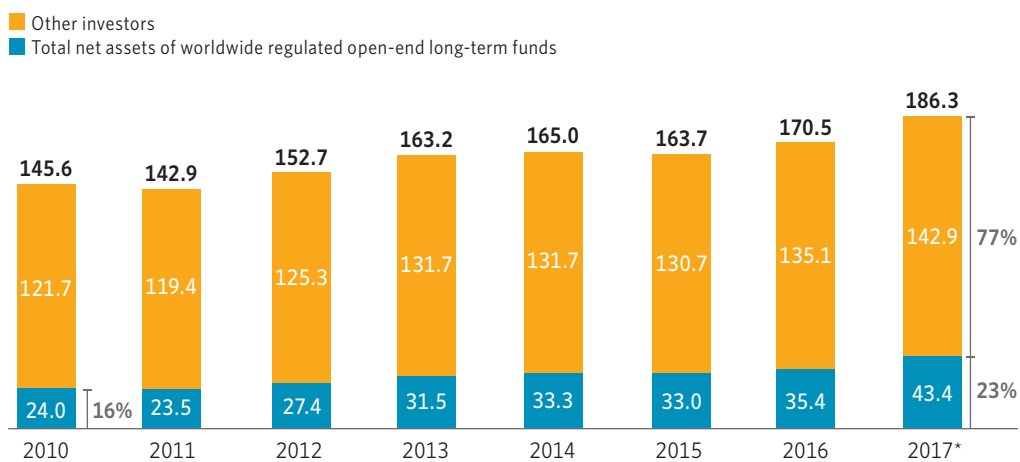
Regulated funds are a growing source of capital for world financial markets, helping to finance businesses, governments, and household activities. As of 2017, worldwide capital markets, as measured by the value of equity and debt securities outstanding, totaled \$186.3 trillion (Figure 1.12). Total net assets of regulated long-term funds constituted 23 percent (\$43.4 trillion) of the \$186.3 trillion in worldwide capital markets.

The share of worldwide capital markets held by regulated long-term funds has grown over the past seven years. In 2010, worldwide regulated long-term funds accounted for 16 percent of worldwide capital markets, rising to 23 percent in 2017. Despite this increase, regulated long-term funds still accounted for a relatively small share of worldwide capital markets. The remaining 77 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 Long-Term Fund Share of Worldwide Equity and Debt Markets

Trillions of US dollars; year-end, 2010–2017



\* Data for worldwide debt markets are as of September 30, 2017.

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. Components may not add to the total because of rounding.

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

## CHAPTER TWO

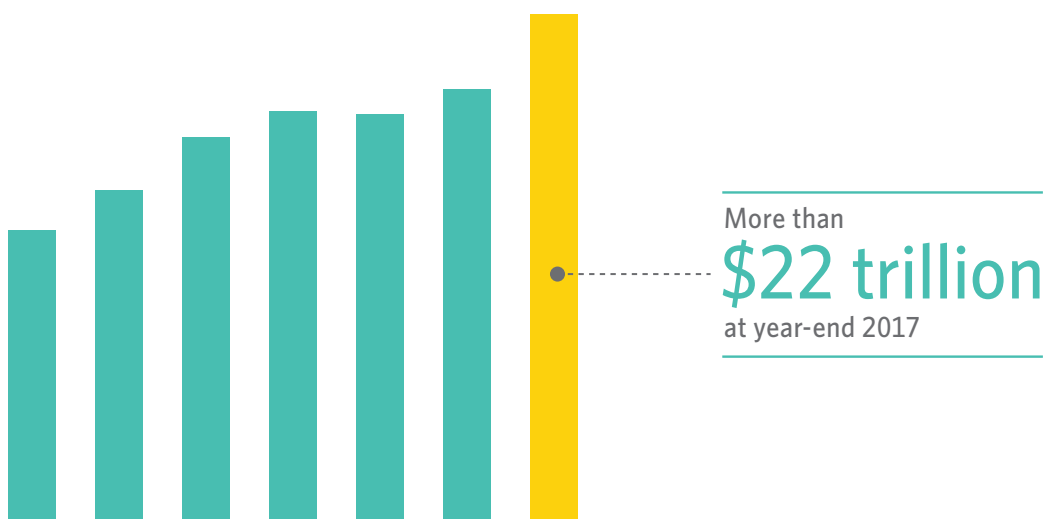
# US-Registered Investment Companies

---

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 \$22 trillion in assets at year-end 2017, 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 exceeded \$22 trillion in 2017



### IN THIS CHAPTER

- 34 Investment Company Assets in 2017
- 36 Americans' Continued Reliance on Investment Companies
- 39 Role of Investment Companies in Financial Markets
- 41 Growth in Index Funds
- 44 Types of Intermediaries and Number of Investment Companies
- 53 Investment Company Employment



## Investment Company Assets in 2017

Assets in US-registered investment companies\* rose \$3.3 trillion in 2017, to a record level at year-end of \$22.5 trillion (Figure 2.1). Of that \$22.5 trillion, mutual funds and exchange-traded funds (ETFs) accounted for the vast majority, \$22.1 trillion.

FIGURE 2.1

### Investment Company Total Net Assets by Type

Billions of dollars; year-end, 1999–2017

	Mutual funds <sup>1</sup>	Closed-end funds <sup>2</sup>	ETFs <sup>3</sup>	UITs	Total <sup>4</sup>
1999	6,846	147	34	92	7,119
2000	6,964	143	66	74	7,247
2001	6,975	141	83	49	7,248
2002	6,383	159	102	36	6,680
2003	7,402	214	151	36	7,802
2004	8,095	253	228	37	8,614
2005	8,891	276	301	41	9,509
2006	10,398	297	423	50	11,167
2007	12,000	312	608	53	12,974
2008	9,620	184	531	29	10,364
2009	11,111	223	777	38	12,150
2010	11,833	238	992	51	13,113
2011	11,633	242	1,048	60	12,983
2012	13,054	264	1,337	72	14,727
2013	15,049	279	1,675	87	17,090
2014	15,873	289	1,975	101	18,238
2015	15,652	261	2,101	94	18,108
2016	16,344	263	2,524	85	19,215
2017	18,746	275	3,401	85	22,507

<sup>1</sup> Mutual fund data exclude mutual funds that invest primarily in other mutual funds.

<sup>2</sup> Closed-end fund data include preferred share classes.

<sup>3</sup> ETF data prior to 2001 were provided by Strategic Insight Simfund. ETF data include ETFs not registered under the Investment Company Act of 1940 and exclude ETFs that primarily invest in other ETFs.

<sup>4</sup> Total investment company assets include mutual fund holdings of closed-end funds and ETFs.

Note: Data are for investment companies that report statistical information to the Investment Company Institute. Assets of these companies are 98 percent of investor assets. Components may not add to the total because of rounding.

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.

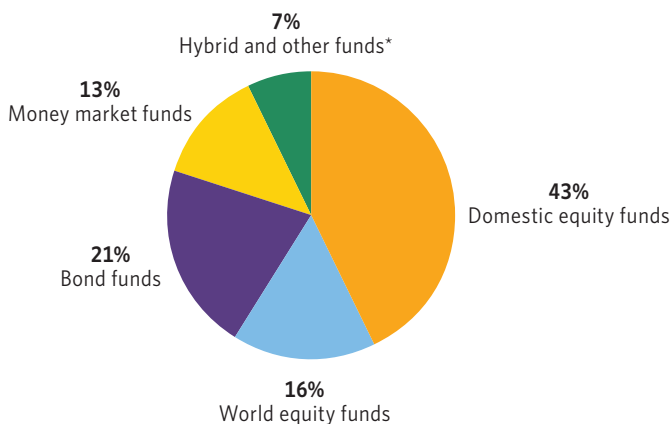
The majority of US mutual fund and ETF assets at year-end 2017 were in long-term funds, with equity funds constituting 59 percent (Figure 2.2). Within equity funds, domestic funds (those that invest primarily in shares of US corporations) held 43 percent of total assets and world funds (those that invest significantly in shares of non-US corporations) accounted for 16 percent. Bond funds held 21 percent of US mutual fund and ETF assets. Money market funds, hybrid funds, and other funds—such as those that invest primarily in commodities—held the remainder (20 percent).

Mutual funds recorded \$174 billion in net new cash flows in 2017 (Figure 3.4). Investors on net added \$67 billion to long-term mutual funds and \$107 billion to money market funds. Mutual fund shareholders reinvested \$257 billion in income dividends and \$359 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 \$471 billion in 2017 (Figure 4.7). Unit investment trusts (UITs) had new deposits of \$49.6 billion, about the same as the previous year, and closed-end funds issued \$2.7 billion in new shares, on net (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 2017*



**US mutual fund and ETF total net assets: \$22.1 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.

**LEARN MORE**

Monthly Trends in Mutual Fund Investing  
[www.ici.org/research/stats/trends](http://www.ici.org/research/stats/trends)

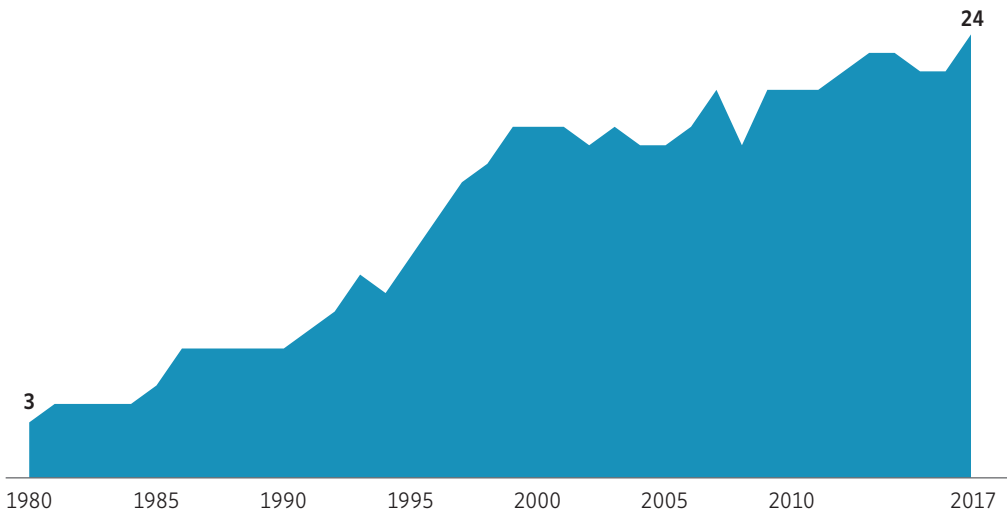
## Americans' Continued Reliance on Investment Companies

Households make up the largest group of investors in funds, and registered investment companies managed 24 percent of household financial assets at year-end 2017 (Figure 2.3).

FIGURE 2.3

### Share of Household Financial Assets Held in Investment Companies

Percentage of household financial assets; year-end, 1980-2017



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

Sources: Investment Company Institute and Federal Reserve Board

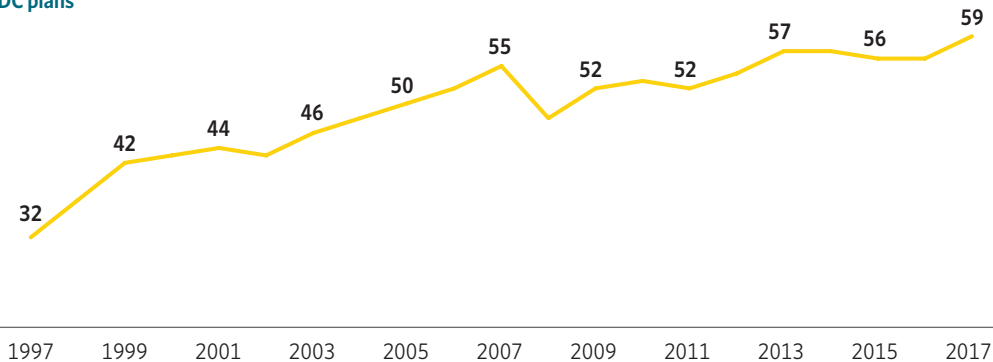
The growth of individual retirement accounts (IRAs) and defined contribution (DC) plans, particularly 401(k) plans, explains some of the increased household reliance on investment companies in the past three decades. IRAs made up 11 percent of household financial assets at year-end 2017, up from 3 percent in 1987, while DC plans have risen from 5 percent of household financial assets to 10 percent over the same period (with 401(k) plans accounting for 7 percent of household financial assets at year-end 2017). Mutual funds made up a significant portion of DC plan assets (59 percent) and IRA assets (47 percent) at year-end 2017 (Figure 2.4). In addition, the share of DC plan assets held in mutual funds has nearly doubled over the past two decades, from 32 percent at year-end 1997 to 59 percent at year-end 2017. Mutual funds also managed \$1.3 trillion in variable annuities outside retirement accounts, as well as \$8.6 trillion of other assets outside retirement accounts.

FIGURE 2.4

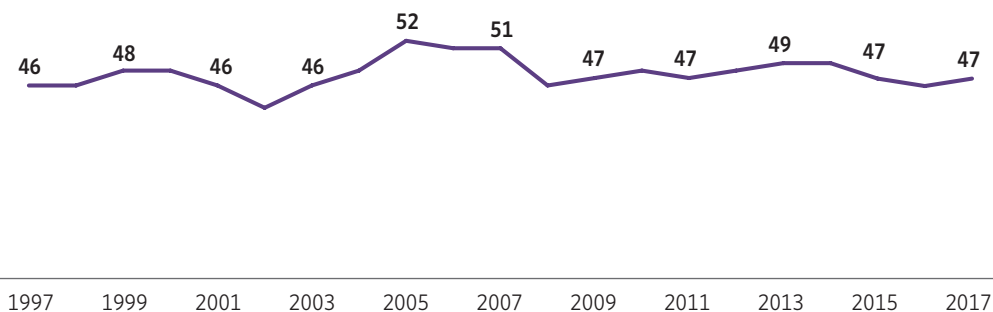
## Mutual Funds in Household Retirement Accounts

Percentage of retirement assets in mutual funds by type of retirement vehicle, 1997-2017

### DC plans\*



### IRAs



\* This category includes 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).

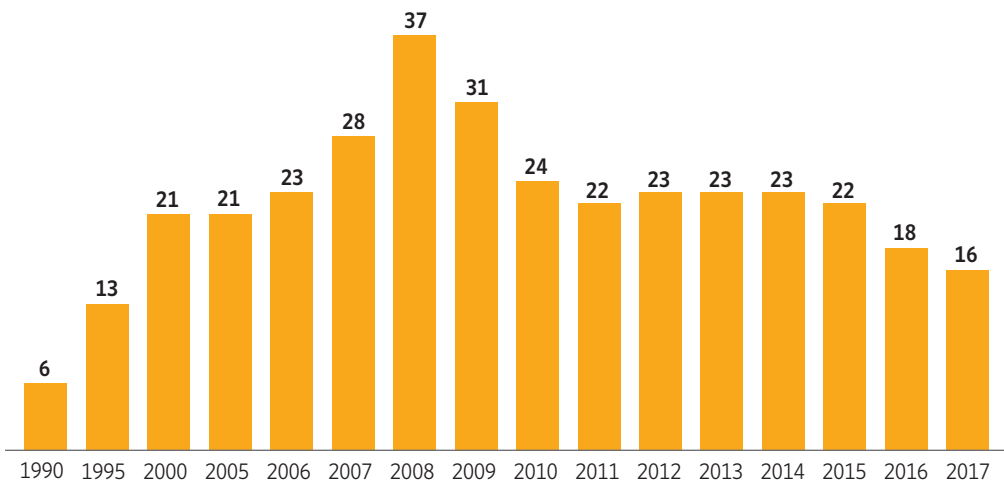
Sources: Investment Company Institute, Federal Reserve Board, Department of Labor, National Association of Government Defined Contribution Administrators, American Council of Life Insurers, and Internal Revenue Service Statistics of Income Division. See Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017."

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 2017, nonfinancial businesses held \$575 billion (16 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 16 Percent of US Nonfinancial Businesses' Short-Term Assets in 2017**

*Percent; year-end, selected years*



Note: US nonfinancial businesses' short-term assets consist of foreign deposits, checkable deposits, time and savings deposits, money market funds, repurchase agreements, and commercial paper.

Sources: Investment Company Institute and Federal Reserve Board

**LEARN MORE**

Money Market Fund Resource Center  
[www.ici.org/mmfs](http://www.ici.org/mmfs)

## 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. They have held a fairly stable share of the securities outstanding across a variety of asset classes. At year-end 2017, investment companies held approximately 31 percent of the shares of US-issued equities outstanding, little changed from 30 percent in 2014 (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 2017. The percentage of bonds outstanding held by investment companies has been little changed since 2014, with mutual funds holding a significantly larger share of corporate bonds relative to other registered investment companies.

Investment companies also held 13 percent of the US Treasury and government agency securities outstanding at year-end 2017, a share that has remained fairly stable since 2014 (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 2017.

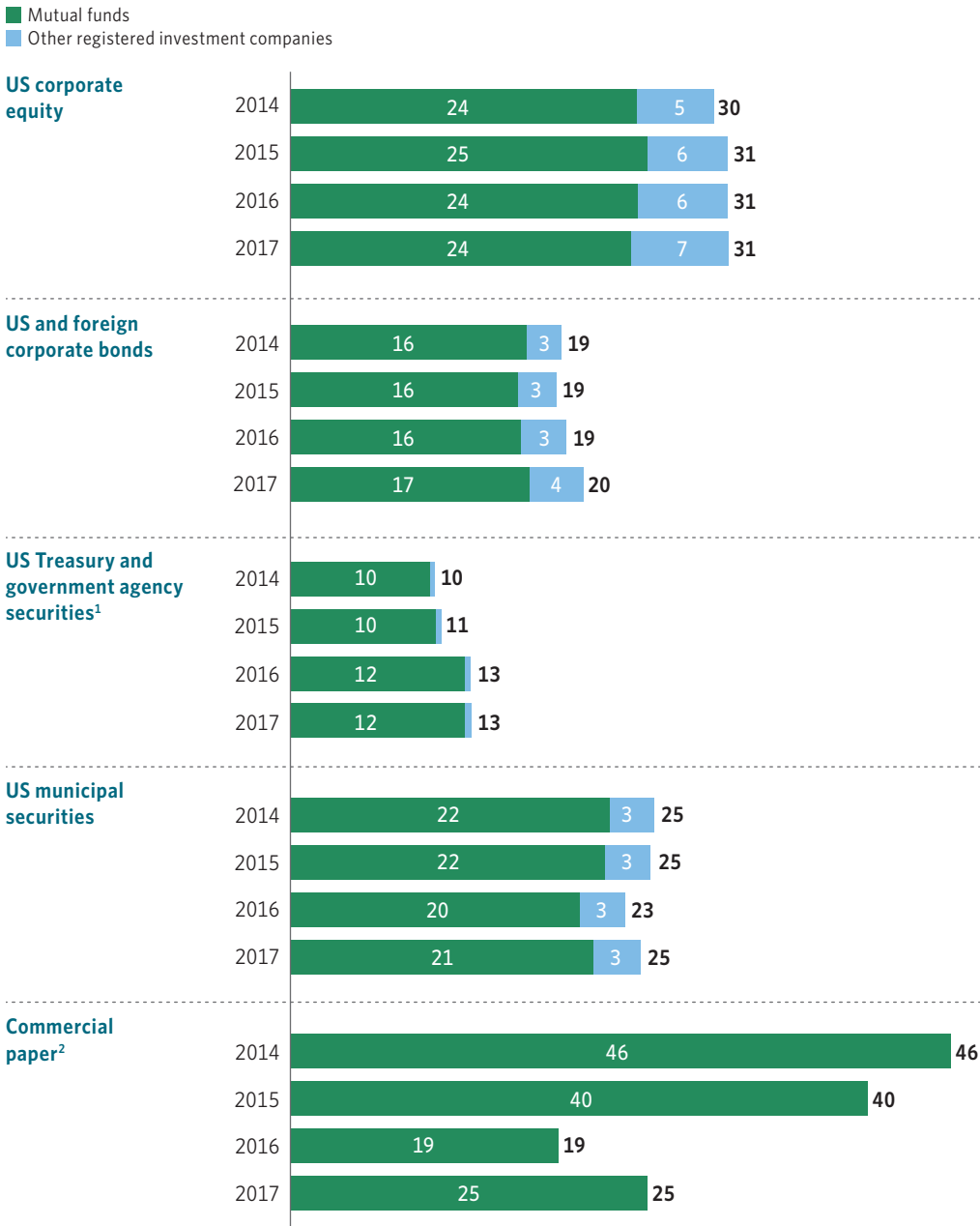
### LEARN MORE

Revised Fed Data Show Mutual Funds' Share of Corporate Bond Market Is Small and Stable  
[www.ici.org/viewpoints/view\\_16\\_corporate\\_bond\\_share](http://www.ici.org/viewpoints/view_16_corporate_bond_share)

FIGURE 2.6

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

Percentage of total market securities held by investment companies, year-end 2014–2017



<sup>1</sup> Total US Treasury and government agency securities held by other registered investment companies were less than 0.5 percent in each year.

<sup>2</sup> Other registered investment companies held no commercial paper in each year.

Note: Components may not add to the total because of rounding.

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, the 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.

## 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. The assets of these funds reached \$6.7 trillion by year-end 2017. Along with this growth, index funds have become a larger share of overall fund assets. At year-end 2017, index mutual funds and index ETFs together accounted for 35 percent of total net assets in long-term funds, up from 15 percent at year-end 2007 (Figure 2.7). Nevertheless, active mutual funds still were the majority of fund assets (65 percent) in 2017.

### LEARN MORE

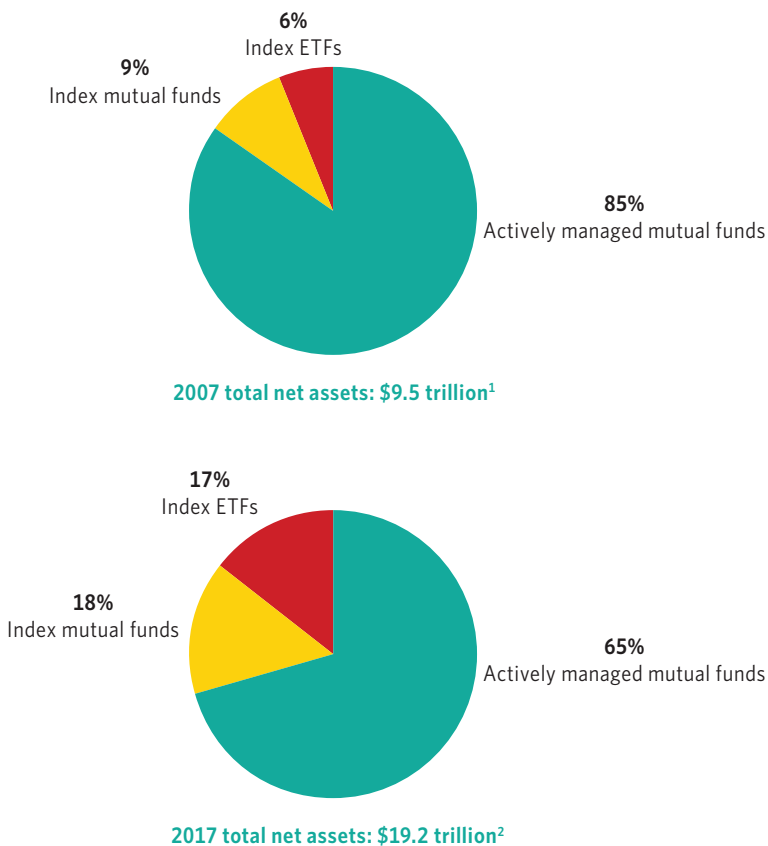
What's the "Exposure" of Money Market Funds to Europe?  
[www.ici.org/viewpoints/view\\_17\\_mmf\\_exposure](http://www.ici.org/viewpoints/view_17_mmf_exposure)



FIGURE 2.7

### Index Funds Have Grown as a Share of the Fund Market

Percent, year-end 2007 and 2017



<sup>1</sup> The first actively managed ETF was not approved until 2008.

<sup>2</sup> In 2017, actively managed ETFs accounted for 0.2 percent of the \$19.2 trillion in total net assets.

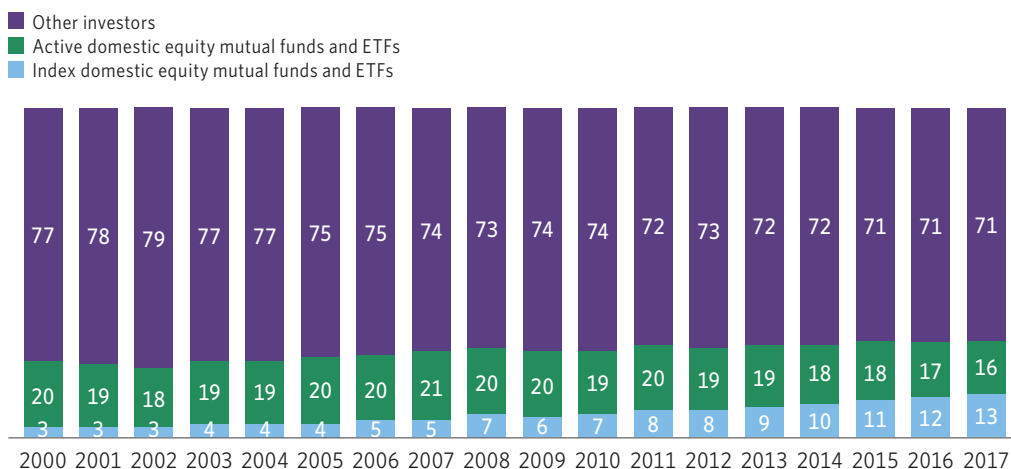
Note: The ETF category excludes non-1940 Act ETFs. The mutual fund category excludes money market fund total net assets.

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, 44 percent of inflows into index funds went to domestic equity funds, and domestic equity index funds accounted for 63 percent of index fund assets at year-end 2017. 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 2017 (Figure 2.8). Actively managed domestic equity mutual funds and ETFs held another 16 percent, while others—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 2000-2017*



Note: In 2008 and 2009, data for index ETFs include a small number of actively managed ETFs. Components may not add to 100 percent because of rounding.

Sources: Investment Company Institute and World Federation of Exchanges

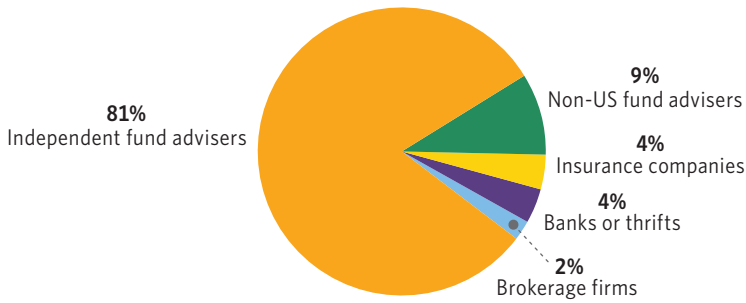
## Types of Intermediaries and Number of Investment Companies

A variety of financial services companies offer registered funds in the United States. At year-end 2017, 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

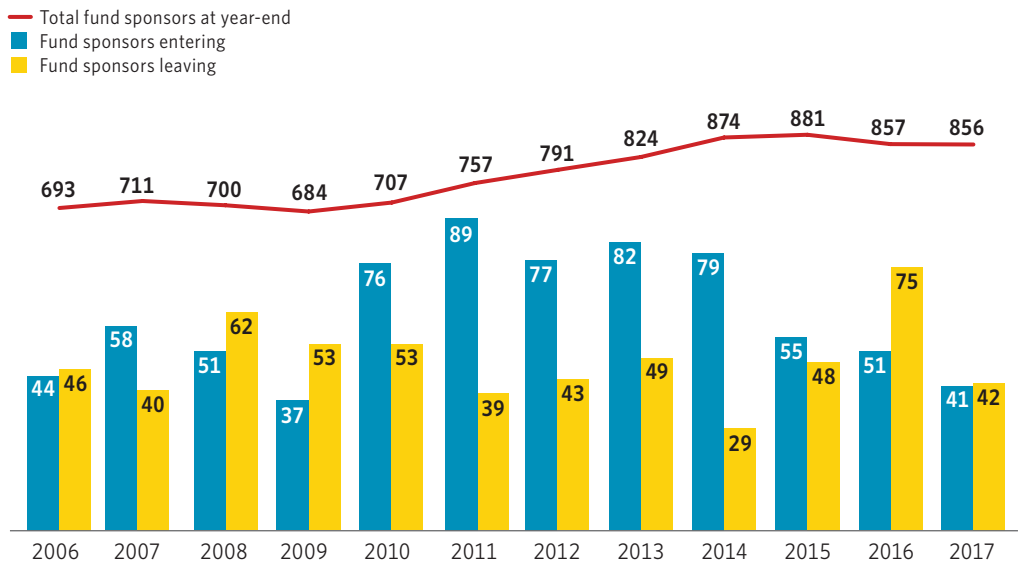
### More Than 80 Percent of Fund Complexes Were Independent Fund Advisers

*Percentage of investment company complexes by type of intermediary, year-end 2017*



In 2017, 856 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. In recent years, the number of fund sponsors had been increasing as the economy and financial markets recovered from the 2007–2009 financial crisis. After 2009, 550 sponsors entered the market while 378 left, for a net increase of 172.

**FIGURE 2.10**  
**Number of Fund Sponsors**  
 2006–2017



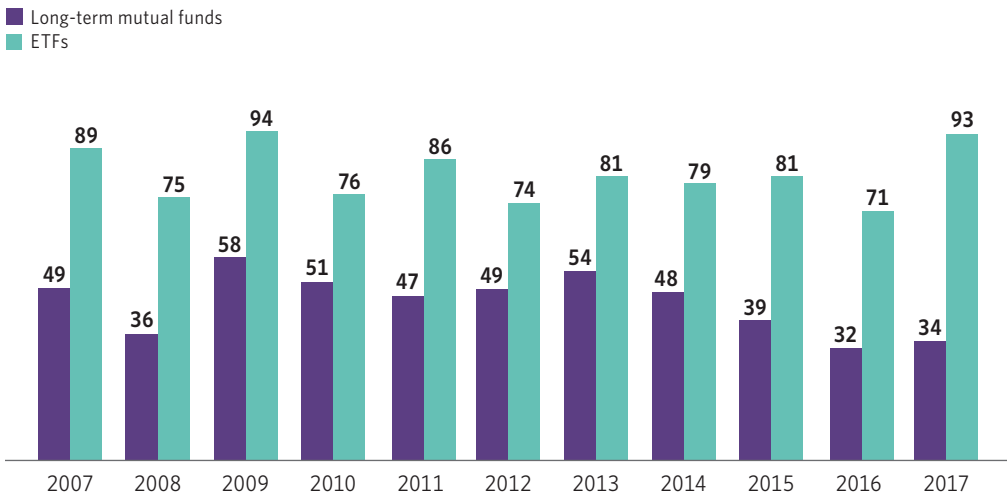
Many recent entrants to the fund industry have adopted solutions in which the fund’s sponsor arranges for a third party to provide certain services (e.g., audit, trustee, some legal) through a turnkey setup. This allows the sponsor to focus more on managing portfolios and gathering assets. Through an 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 2017, 34 percent of fund complexes saw inflows to their long-term mutual funds; 93 percent of ETF sponsors had positive net share issuance (Figure 2.11).

**FIGURE 2.11**

**Positive Net Share Issuance of ETFs and Positive Net New Cash Flow to Long-Term Mutual Funds**

*Percentage of fund complexes, 2007-2017*



Note: Data exclude funds that invest primarily in other funds.

In 2017, the percentage of fund complexes attracting new money increased, despite a rising concentration of mutual fund and ETF assets managed by the largest fund complexes. The share of assets managed by the five largest firms rose from 36 percent in 2005 to 50 percent in 2017, and the share managed by the 10 largest firms increased from 47 percent to 60 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 22 percent in 2005 to 17 percent in 2017.

**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, selected years*

	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Largest 5 complexes	36	42	45	47	50
Largest 10 complexes	47	55	56	58	60
Largest 25 complexes	69	74	75	76	77

Note: Data include only mutual funds and ETFs registered under the Investment Company Act of 1940. Mutual fund data exclude mutual funds that invest primarily in other mutual funds. ETFs registered as UITs and ETFs that invest primarily in other ETFs are excluded.

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 since 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 3.8), 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 705 mutual funds and ETFs opened in 2017, up from 664 in 2016, but well below the 2006–2015 annual average of 830 (Figure 2.13). The rate of mutual fund and ETF mergers and liquidations stayed about the same: 704 in 2016 and 706 in 2017.

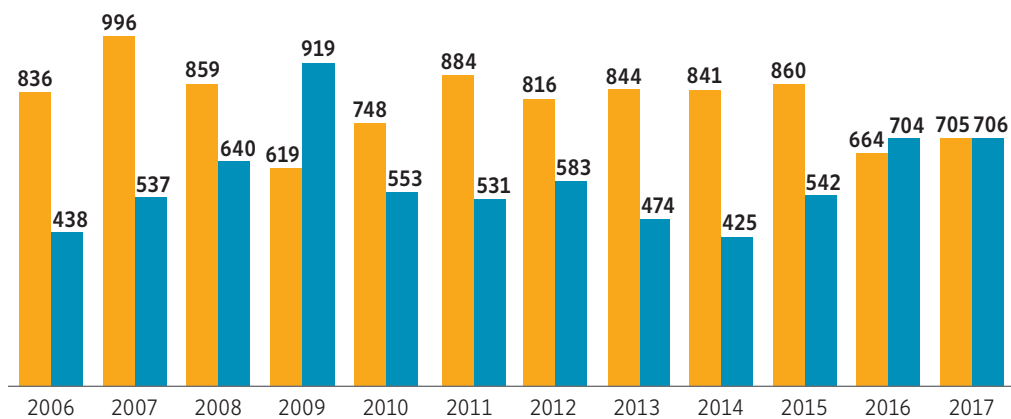
FIGURE 2.13

## Number of Mutual Funds and ETFs Entering and Leaving the Industry

2006-2017

■ Opened funds

■ Merged/Liquidated funds



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 not registered under the Investment Company Act of 1940 but exclude 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 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 in 2017 (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.

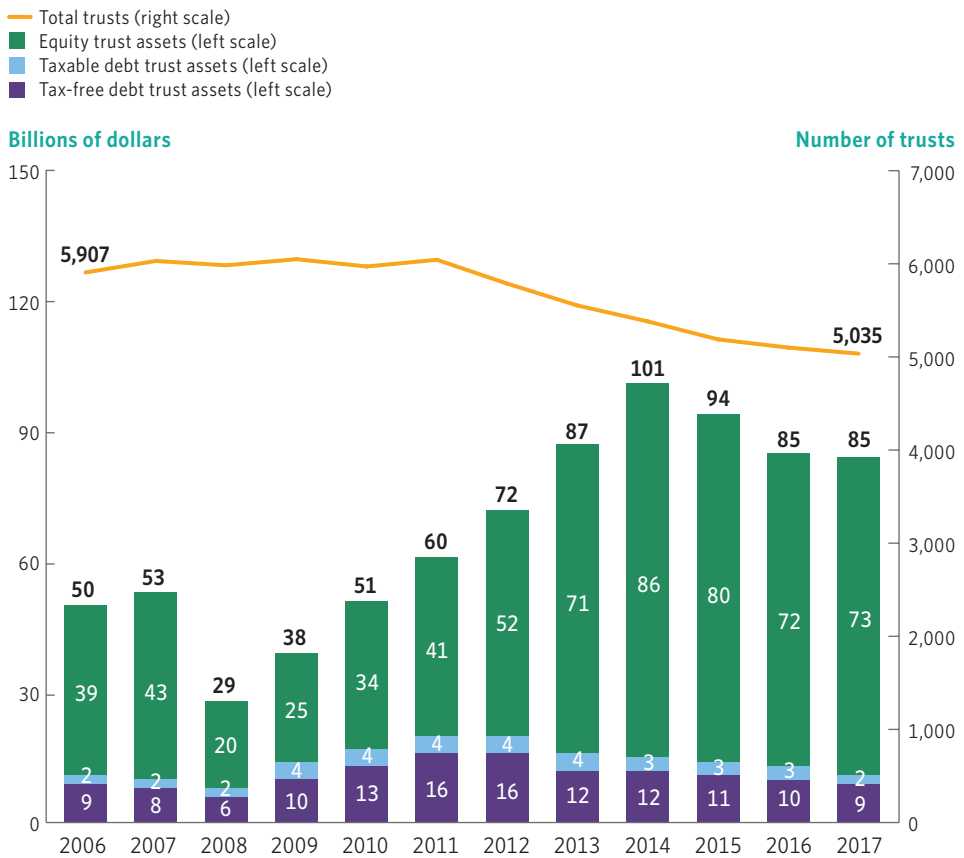
Investors can obtain UIT price quotes from brokerage or investment firms and investment company websites, and some but not all UITs list their prices on NASDAQ's Mutual Fund Quotation Service. Some broker-dealers offer their own trusts or sell trusts offered by nationally recognized independent sponsors. 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, 2006-2017



Note: Components may not add to the total because of rounding.

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 5,035 at year-end 2017 from 5,100 at year-end 2016. The number of mutual funds decreased in 2017 to a total of 9,356 funds. The total number of closed-end funds fell to 530 at year-end 2017, the lowest level since 2001. The number of ETFs continues to grow, with 1,897 ETFs at year-end 2017, triple the total number of ETFs a decade ago.

**FIGURE 2.15**

**Number of Investment Companies by Type**

*Year-end, 1999-2017*

	<b>Mutual funds<sup>1</sup></b>	<b>Closed-end funds</b>	<b>ETFs<sup>2</sup></b>	<b>UITs</b>	<b>Total</b>
1999	8,003	511	30	10,414	18,958
2000	8,369	481	80	10,072	19,002
2001	8,517	489	102	9,295	18,403
2002	8,510	543	113	8,303	17,469
2003	8,425	581	119	7,233	16,358
2004	8,416	618	152	6,499	15,685
2005	8,448	634	204	6,019	15,305
2006	8,720	645	359	5,907	15,631
2007	8,744	662	629	6,030	16,065
2008	8,878	642	743	5,984	16,247
2009	8,608	627	820	6,049	16,104
2010	8,534	624	950	5,971	16,079
2011	8,673	632	1,166	6,043	16,514
2012	8,744	602	1,239	5,787	16,372
2013	8,972	599	1,332	5,552	16,455
2014	9,258	568	1,451	5,381	16,658
2015	9,517	559	1,644	5,188	16,908
2016	9,507	532	1,774	5,100	16,913
2017	9,356	530	1,897	5,035	16,818

<sup>1</sup> Data include mutual funds that invest primarily in other mutual funds.

<sup>2</sup> ETF data prior to 2001 were provided by Strategic Insight Simfund. ETF data include ETFs not registered under the Investment Company Act of 1940 and ETFs that invest primarily in other ETFs.

Note: Data are for investment companies that report statistical information to the Investment Company Institute. Assets of these companies are 98 percent of investor assets.

Sources: Investment Company Institute and Strategic Insight Simfund

## Investment Company Employment

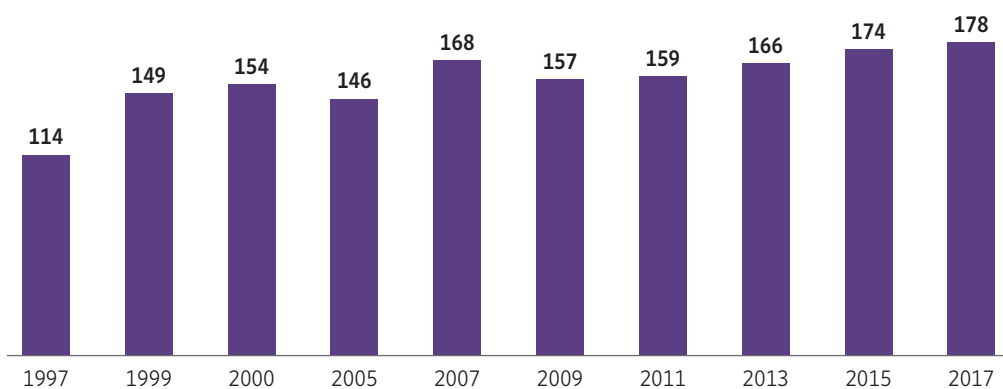
Registered investment companies typically do not have employees—instead, they contract with other businesses to provide services to the fund. Except for UITs, funds in the United States have fund boards that oversee the management of the fund and represent the interests of the fund shareholders. Fund 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, selected years\**



\* 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.

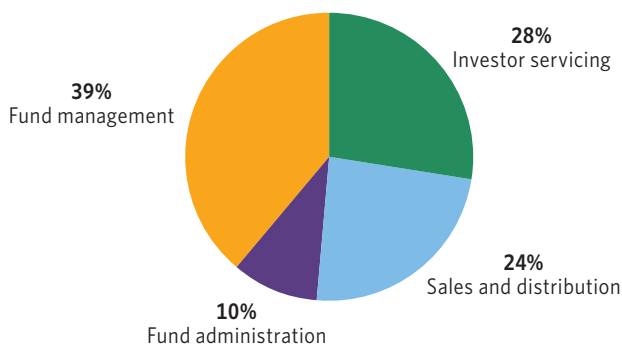
Distribution and sales force personnel together accounted for 24 percent of the workforce (Figure 2.17). Employees in these areas may work in marketing, product development and design, or investor communications, and can include sales support staff, registered representatives, and fund supermarket representatives.

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**

Note: Components do not add to 100 percent because of rounding.

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.

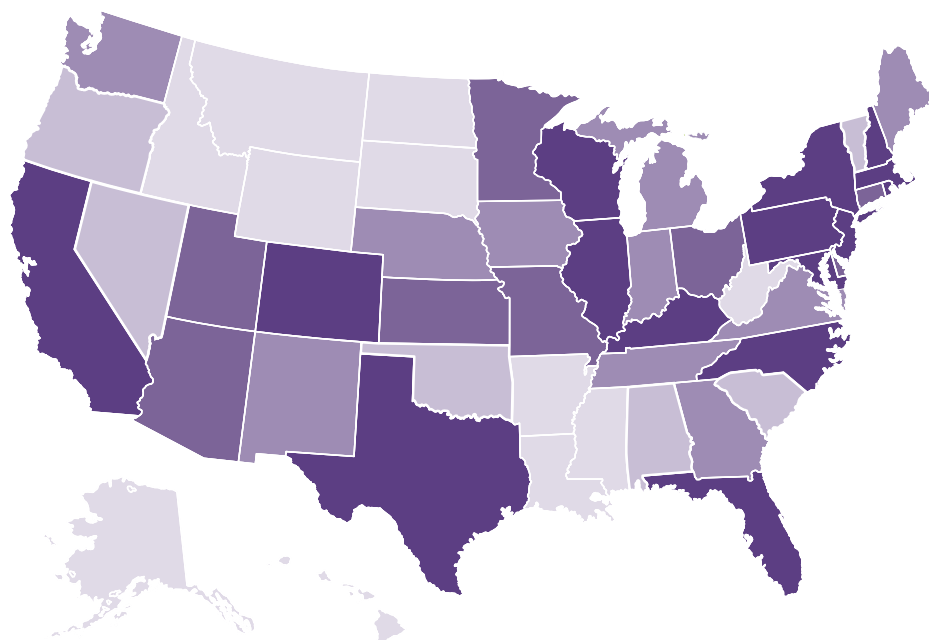
For many industries, employment tends to be concentrated in locations where the industry began. The same is true for investment companies: those located in Massachusetts and New York, early hubs of investment company operations (Figure 2.18), employ 23 percent of fund industry workers. As the industry has grown, other states—including California, Pennsylvania, and Texas—have become major centers of fund 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 THREE

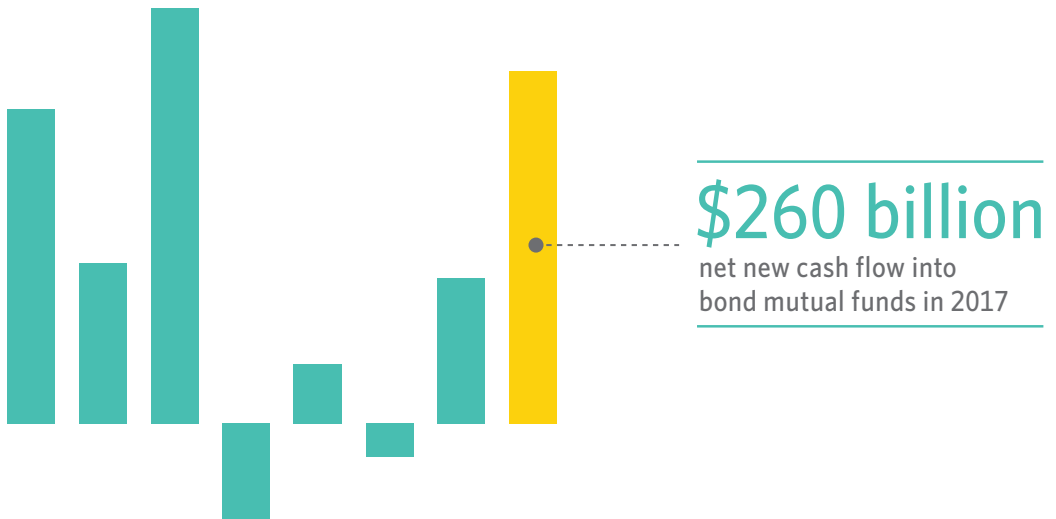
# US Mutual Funds

---

A mutual fund is an investment company that pools money from shareholders and invests in a portfolio of securities. An estimated 100 million individual Americans in 56.2 million households owned mutual funds in mid-2017. US households rely on mutual funds to meet long-term personal financial objectives, such as preparing for retirement, saving for education, purchasing a house, or preparing for emergencies. In the past 10 years, net new cash flows to mutual funds totaled \$230 billion. 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.



## Bond mutual funds had largest inflows since 2012



### IN THIS CHAPTER

- 58 Mutual Fund Total Net Assets
- 61 Developments in Mutual Fund Flows
- 64 Equity Mutual Funds
- 69 Bond Mutual Funds
- 74 Hybrid Mutual Funds
- 80 Money Market Funds



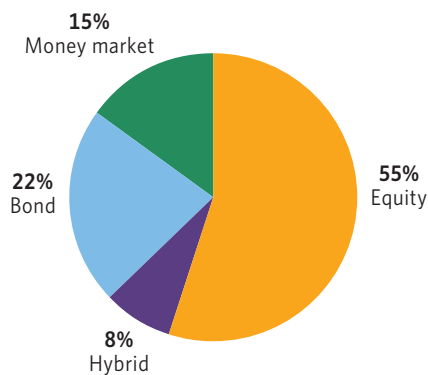
## Mutual Fund Total Net Assets

With \$18.7 trillion in total net assets, the US mutual fund industry remained the largest in the world at year-end 2017 (Figure 3.1). The majority of US mutual fund assets at year-end 2017 were in long-term mutual funds, with equity funds alone making up 55 percent of US mutual fund total net assets. Bond mutual funds were the second-largest category, with 22 percent of total net assets. Money market funds (15 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 2017



US mutual fund total net assets: \$18.7 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.

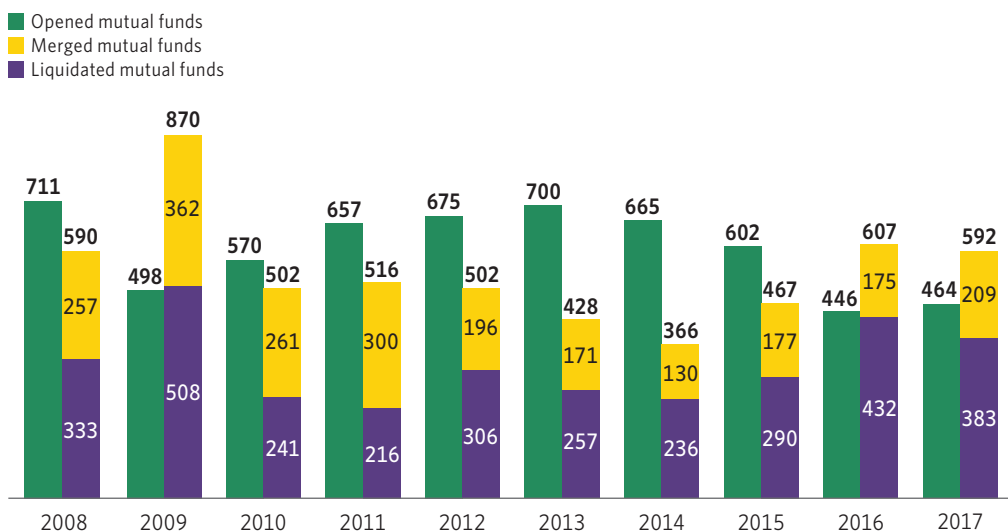
Domestic equity mutual funds continued to experience outflows in 2017, likely reflecting an ongoing shift by investors to index-based products. Although domestic equity mutual funds have had net outflows for the past four years, the year-over-year change in the pace of outflows slowed in 2017. Despite the Federal Reserve raising the federal funds target rate three times in 2017, demand for bond mutual funds strengthened, in part because of the aging of the US population. Investor demand also increased for some types of money market funds as yields increased and the effects of recent regulatory reforms stabilized.

## 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 464 mutual funds opened in 2017 (Figure 3.2), up modestly from the previous year, in part because of an increase in the number of new offerings of domestic equity and world equity mutual funds. The total number of mutual funds that exited the industry dipped slightly in 2017, as fewer domestic equity and money market funds were liquidated, essentially offsetting an increase in the number of merged funds.

FIGURE 3.2

### Number of Mutual Funds Entering and Exiting the Industry 2008-2017



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

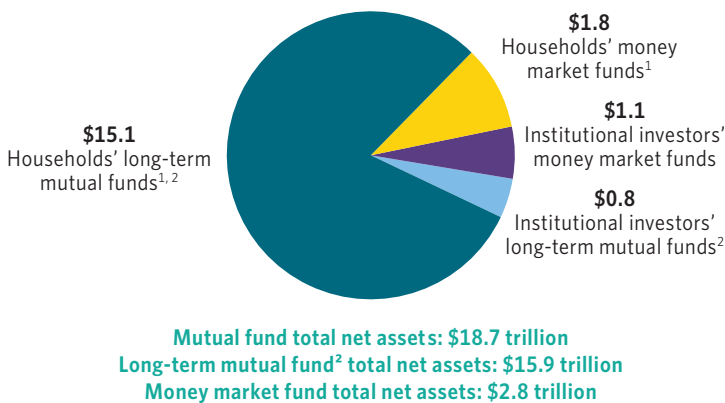
Demand for mutual funds is, in part, related to the types of investors who hold mutual fund shares. Retail investors (i.e., households) held the vast majority (90 percent) of the \$18.7 trillion in US mutual fund total net assets at year-end 2017 (Figure 3.3). The proportion of long-term mutual fund total net assets held by retail investors is even higher (95 percent). Retail investors also held substantial money market fund assets (\$1.8 trillion), but that amounts to a relatively small share (10 percent) of their total mutual fund assets.

In contrast, institutional investors such as nonfinancial businesses, financial institutions, and nonprofit organizations held a relatively small portion of mutual fund assets. At year-end 2017, institutions held 10 percent of mutual fund total net assets. The majority (57 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 90 Percent of Mutual Fund Total Net Assets

Trillions of dollars, year-end 2017



<sup>1</sup> 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.

<sup>2</sup> Long-term mutual funds include equity, bond, and hybrid mutual funds.

Note: Components may not add to the totals because of rounding.

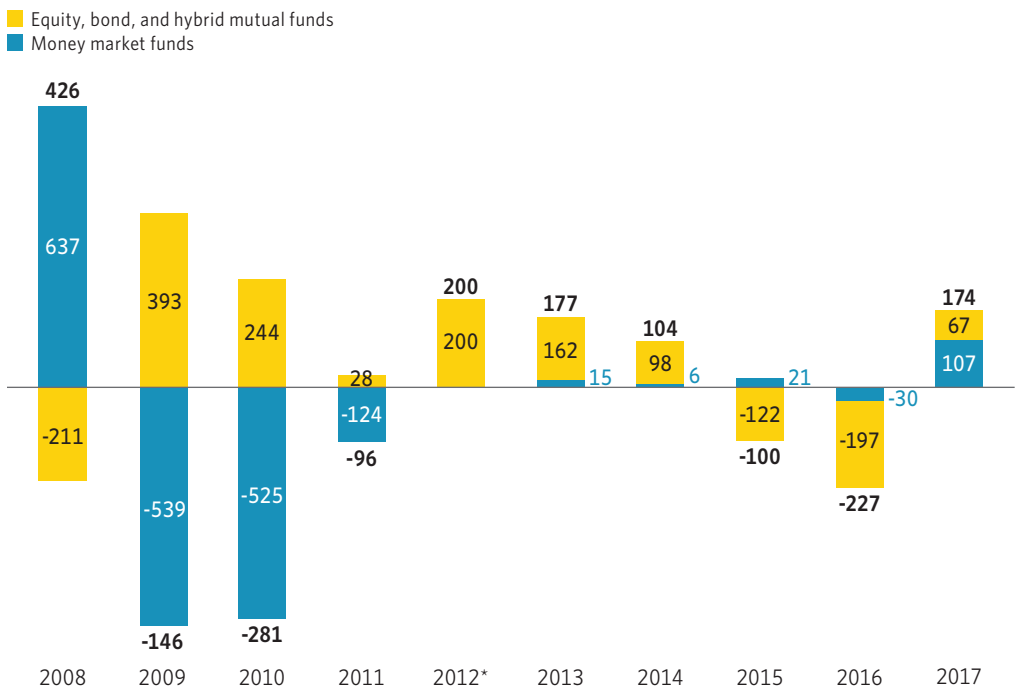
## Developments in Mutual Fund Flows

Overall demand for mutual funds as measured by net new cash flow—new fund sales less redemptions plus net exchanges—rebounded in 2017 (Figure 3.4), following two consecutive years of outflows. In 2017, mutual funds had inflows of \$174 billion (1.1 percent of year-end 2016 total net assets), following outflows of \$227 billion in 2016. Increased investor demand for world equity, bond, and money market funds offset continued outflows from domestic equity mutual funds. Investors purchased \$67 billion, on net, of long-term mutual funds in 2017, and \$107 billion, on net, of money market funds. A number of factors—including broad-based gains in financial markets, ongoing demographic trends, and increased demand for indexed products—appeared to influence long-term mutual fund flows in 2017. Inflows to money market funds were likely driven by the Federal Reserve’s decision to increase the federal funds rate three times in 2017.

FIGURE 3.4

### Net New Cash Flow to Mutual Funds

Billions of dollars; annual, 2008–2017



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

Note: Components may not add to the total because of rounding.

## The Global Economy and Financial Markets in 2017

Economic activity picked up in the United States in 2017 with real gross domestic product (GDP) expanding at a 2.6 percent rate, up from 1.8 percent in 2016. A couple of major items contributed to the acceleration in GDP growth. Businesses increased their investment in factories and machinery as economic activity accelerated around the globe in 2017, and the prospect for continued global economic growth strengthened. At the same time, US households increased their spending on durable goods, likely reflecting higher levels of consumer confidence, strong gains in stock prices, and a modest uptick in wages.

A variety of metrics indicated that the US economy continued to improve in 2017. The labor market continued to strengthen, with the unemployment rate dropping from 4.7 percent at year-end 2016 to 4.1 percent at year-end 2017. In addition, average hourly earnings, which had lagged job growth through most of the recovery from the 2007-2009 financial crisis, rose 2.7 percent in 2017. Strong growth in domestic stock prices and house prices fueled an 8 percent increase in US household net worth in 2017. The Wilshire 5000 index returned 19 percent and the S&P CoreLogic Case-Shiller US National Home Price Index rose 6.3 percent. The December 2017 level of the home price index indicated that house prices had surpassed their previous peak in 2006.

Strengthening economic growth prompted the Federal Reserve to increase the federal funds rate three times in 2017. This tightening in monetary policy was widely expected, so the quarter-point moves in short-term rates in March, June, and December 2017 had little impact on the markets. The decision to raise the federal funds rate was made easier by moderate inflation. The Consumer Price Index rose 2.1 percent in 2017, as it did in 2016, which is close to Federal Reserve's target of 2 percent inflation. The yield on the 10-year Treasury fluctuated somewhat during the year, but ultimately ended 2017 only 5 basis points\* below where it began.

---

\*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 rest of the world also saw an increase in economic activity, with global GDP expanding by 3.8 percent in 2017, up from 3.2 percent in 2016. Advanced economies collectively grew 2.3 percent in 2017, while emerging markets grew 4.8 percent. Most geographic regions of the world posted higher levels of GDP growth in 2017 relative to 2016. As a region, Europe reported GDP growth of 2.4 percent in 2017, up from 1.7 percent in 2016. Within Europe, Russia's economy grew 1.5 percent in 2017, after contracting by 0.2 percent in 2016. In Western Europe, other large economies such as France and Germany reported increases in GDP. On average, Asian economies continued to expand as well, with Japan posting GDP growth of 1.7 percent in 2017, up from 0.9 percent in 2016. China reported a slight improvement in economic growth in 2017—6.9 percent, up from 6.7 percent in 2016. South America as a whole also posted positive economic growth of 0.7 percent in 2017, a sharp rebound from a 2.4 percent contraction in 2016. In 2017, both Argentina (2.9 percent) and Brazil (1.0 percent) reported positive economic growth after their economies contracted in 2016 by 1.8 percent and 3.5 percent, respectively.

Monetary policies varied around the globe. Central banks in Europe and Japan maintained existing accommodative policies, while the Bank of England and the US Federal Reserve began to increase their respective headline interest rates. The Federal Reserve's more aggressive monetary policy stance, however, was not enough to offset depreciation of the US dollar,\* which declined 7.0 percent over the year. The depreciation of the dollar provided a boost to American exports in 2017, which contributed to the increase in reported 12-month earnings per share for the S&P 500 to \$110 in 2017 from \$95 in 2016.

Global stock markets marched higher in 2017, buoyed by a positive outlook for the pace of economic activity, reduced concern about deflationary pressure, and historically low volatility. In the United States, the S&P 500 advanced 19 percent, while the NASDAQ Composite Index gained 28 percent. In the United Kingdom, the Financial Times Stock Exchange (FTSE) 100 Index was up almost 8 percent for the year, and in Germany, the Deutscher Aktienindex (DAX) rose about 13 percent. The MSCI Emerging Markets Index indicated that stock prices in emerging market countries jumped 34 percent in 2017.

---

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

## 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 long-term 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 assets in mutual funds are spread across 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, some investors continue to purchase fund shares.

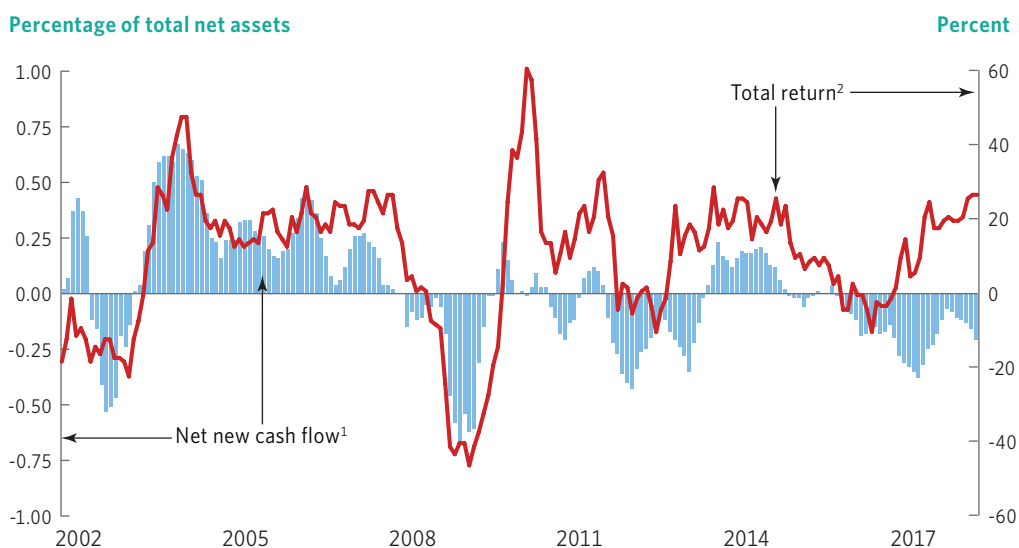
## Equity Mutual Funds

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, increased 24.6 percent in 2017, following an 8.5 percent increase in 2016. Despite strong stock market performance around the globe, equity mutual funds experienced net outflows totaling \$160 billion in 2017 (or 1.9 percent of December 2016 total net assets), on the heels of \$258 billion in net outflows in 2016. The outflows in equity mutual funds were concentrated in domestic equity funds.

FIGURE 3.5

## Net New Cash Flow to Equity Mutual Funds Typically Is Related to World Equity Returns

Monthly, 2002-2017



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

<sup>2</sup> 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.

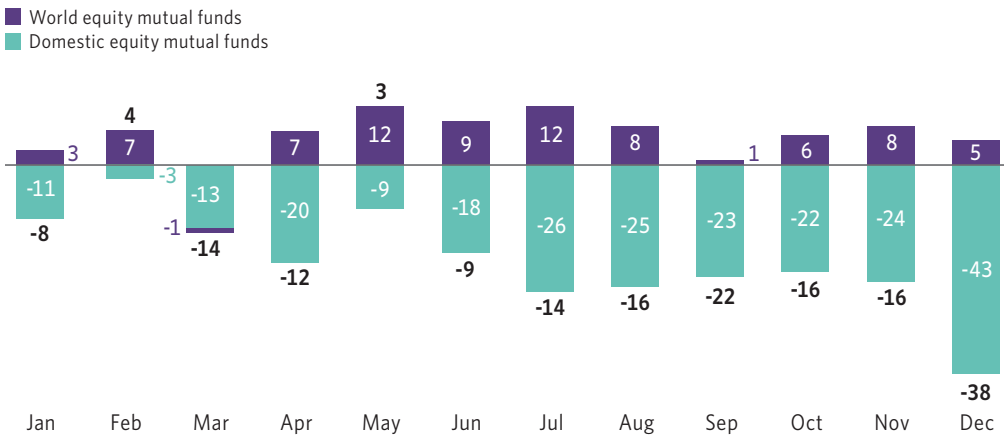
Sources: Investment Company Institute, MSCI, and Bloomberg

With the exception of February and May, equity mutual funds had net outflows in every month in 2017 (Figure 3.6). In the first three months of the year, investors had redeemed, on net, only \$18 billion from equity 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, \$142 billion from April through December.



Although major US stock indexes hit record highs in 2017, domestic equity mutual funds had net outflows of \$236 billion in 2017 (Figure 3.6). Volatility does not appear to have been a major factor in the outflows, as the equity market was quiet during 2017. 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. During 2017, the daily VIX average was near a historical low of 11, with the peak at 16 in mid-August.

**FIGURE 3.6**  
**Net New Cash Flow to Equity Mutual Funds in 2017**  
*Billions of dollars; monthly, January-December 2017*



Note: Components may not add to the total because of rounding.

Rather than volatility, net outflows from domestic equity mutual funds appear to 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 a single month, May 2017. Overall, demand for domestic equity ETFs resulted in \$186 billion in net share issuance in 2017 (Figure 4.8). In contrast, domestic equity mutual funds had net redemptions of \$236 billion over the same period.

Demand for world equity mutual funds strengthened in 2017, with investors purchasing \$77 billion (Figure 3.6), on net, up from net redemptions of \$23 billion in 2016. Throughout 2017, world equity funds received fairly steady inflows—most of which went to international equity funds.

A few developments may have attracted investors to world equity mutual funds in 2017. First, economic activity increased around the globe, including in emerging markets. In 2017, countries in Europe, Asia, and South America all reported levels of economic activity that surpassed their respective 2016 levels, without meaningful increases in inflation. Second, the growth between 2012 and 2017 in the prices of US stocks has made international equities look relatively attractive on a price-earnings basis. Third, and perhaps most important, the US dollar depreciated in 2017, reversing its gains from the previous year. Depreciation of the US dollar generally makes foreign investment more attractive to US investors, because it increases the rate of return US investors earn on their holdings of foreign securities.

Another factor that likely contributed to boosting flows to world equity mutual funds is that some types of funds, such as target date mutual funds (discussed in more detail on page 73), rebalance portfolios automatically as part of an asset allocation strategy. The assets in funds offering asset allocation strategies have grown considerably over the past decade. These funds typically held 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.

## 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 net assets.

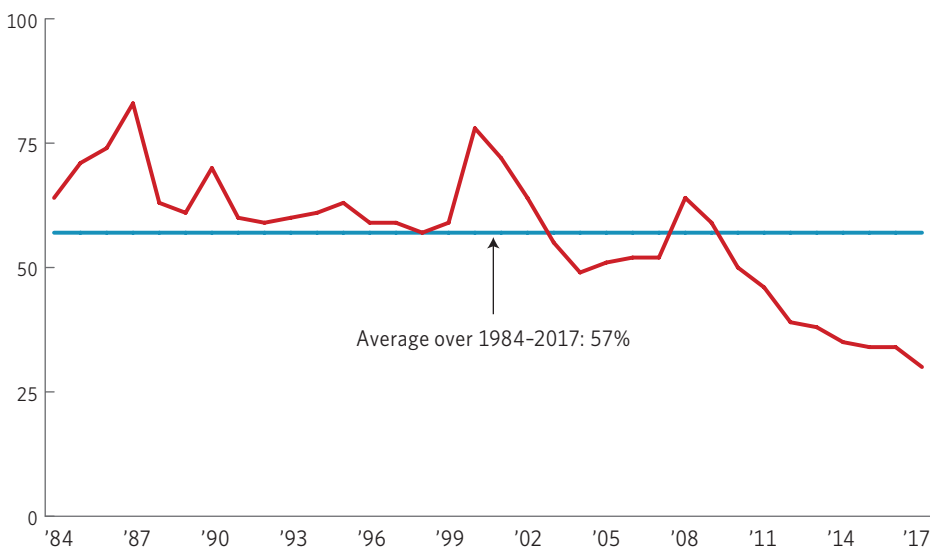
To analyze the turnover rate that shareholders actually experience in their funds, it is important to identify those funds in which shareholders are most heavily invested. Neither a simple average nor a median takes into account where fund assets are concentrated. An asset-weighted average gives more weight to funds with more assets, and accordingly, indicates the average portfolio turnover actually experienced by fund shareholders. In 2017, the asset-weighted annual turnover rate experienced by equity mutual fund investors was 30 percent, well below the average of the past 34 years (Figure 3.7).

Investors tend to own equity funds with relatively low turnover rates. In 2017, about half of equity mutual fund total net assets were in funds with portfolio turnover rates of less than 23 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

1984-2017



Note: The turnover rate is an asset-weighted average. Data exclude mutual funds that invest primarily in other mutual funds.

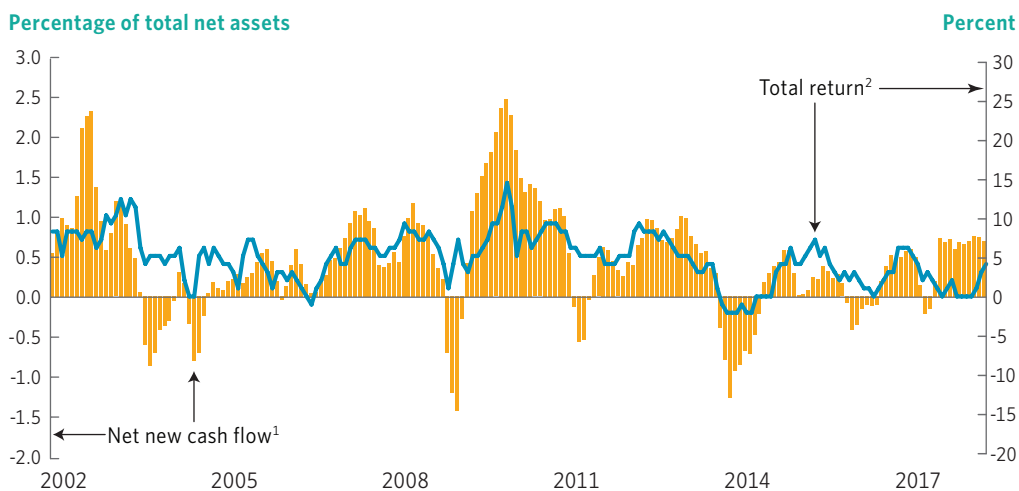
## Bond Mutual Funds

Bond fund 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 2017, but finished the year only 5 basis points below where they started. The 10-year Treasury began 2017 at 2.45 percent, and declined 14 basis points by June 30. Over the same period, the total return on bonds fell to zero. During the second half of 2017, long-term interest rates increased, and finished the year at 2.40 percent. Despite the modest increase in interest rates during the second half of the year, bond mutual funds received positive net new cash flows in every month. In 2017, bond mutual funds had net inflows of \$260 billion, more than double the \$107 billion in net inflows received in 2016.

FIGURE 3.8

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

Monthly, 2002-2017



<sup>1</sup> 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.

<sup>2</sup> The total return on bonds is measured as the year-over-year percent change in the Citi US Broad Investment Grade Corporate Bond Index.

Sources: Investment Company Institute, Citigroup, and Bloomberg

### LEARN MORE

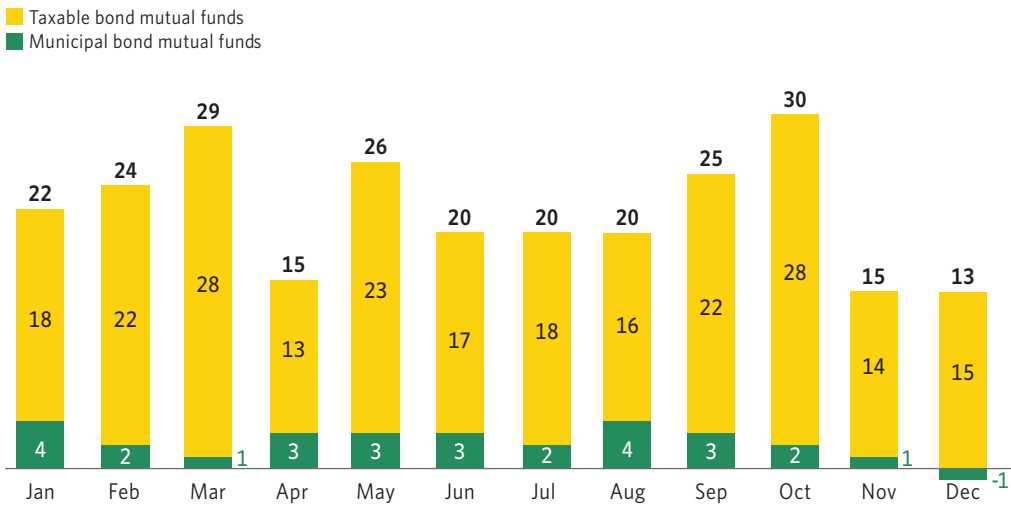
Fund Investors Will “Run”? Sorry, Charlie Brown  
[www.ici.org/viewpoints/view\\_18\\_charlie\\_brown](http://www.ici.org/viewpoints/view_18_charlie_brown)

During the first half of 2017, when long-term interest rates were declining, taxable bond funds received \$121 billion in net inflows (Figure 3.9). During the second half of the year, investors added \$113 billion, on net, to taxable bond mutual funds even though long-term interest rates were moving up.

Investor demand varied across specific categories of taxable bond mutual funds in 2017. Investment grade bond funds (and multisector bond funds) were the most sought after, receiving \$202 billion of net inflows in 2017, while investors redeemed \$17 billion from high-yield bond funds in 2017. World bond funds, which typically hold a mix of bonds denominated in US dollars and foreign currencies, saw net inflows of \$47 billion. These inflows were, in part, attributable to a weaker US dollar. Depreciation of the US dollar increases dollar returns on bonds denominated in foreign currencies, and makes it less expensive for foreign companies to pay off their dollar-denominated debts.

Demand for municipal bond funds was fairly steady through the first 11 months of 2017, with inflows amounting to \$28 billion, before turning slightly negative in December (Figure 3.9).

**FIGURE 3.9**  
**Net New Cash Flow to Bond Mutual Funds in 2017**  
*Billions of dollars; monthly, January-December 2017*



Note: Components may not add to the total because of rounding.

## 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 were only 11 percent of the US bond market (US government bonds, corporate bonds, and tax-exempt bonds) in December 2017, up from 7 percent at year-end 2007. This means that 89 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.

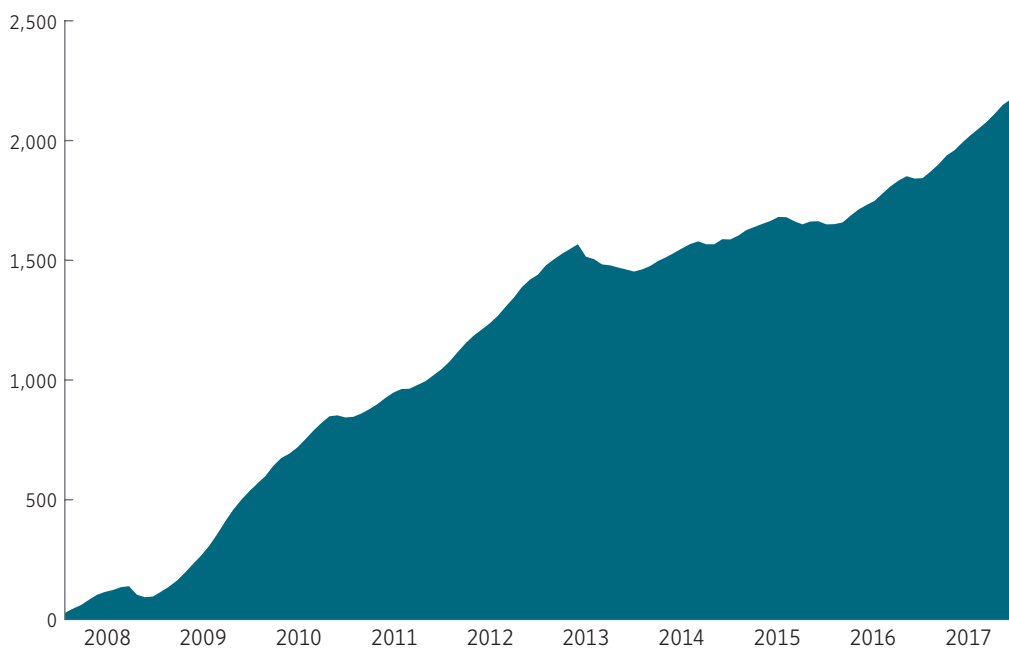
Finally, when meeting redemptions, managers use a nuanced approach in their bond trading, with their actions guided by market conditions, expected investor flows, and other factors. For example, during a market downturn, a manager might determine that the fund can add shareholder value by buying some 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.

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 2008 through 2017 (Figure 3.10). A number of factors have helped sustain this long-term demand for bond mutual funds.

**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, January 2008–December 2017*



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

**LEARN MORE**

Revised Fed Data Show Mutual Funds' Share of Corporate Bond Market Is Small and Stable  
[www.ici.org/viewpoints/view\\_16\\_corporate\\_bond\\_share](http://www.ici.org/viewpoints/view_16_corporate_bond_share)

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 over the second half of 2017, they were likely mitigated, in part, by the demographic factors that have supported bond fund flows over the past decade.

The continued popularity of target date mutual funds also likely helped to limit outflows from bond mutual funds in 2017. 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 funds or ETFs. Over the past 10 years, target date mutual funds have received net inflows of \$521 billion. In 2017, target date mutual funds had net inflows of \$68 billion and ended the year with assets of \$1.1 trillion. 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. The adoption of the Pension Protection Act of 2006 and the Department of Labor's regulations including target date funds as qualified default investments for DC plans also contributed to their growth.

#### LEARN MORE

Simulating a Crisis

[www.ici.org/viewpoints/view\\_17\\_boe](http://www.ici.org/viewpoints/view_17_boe)



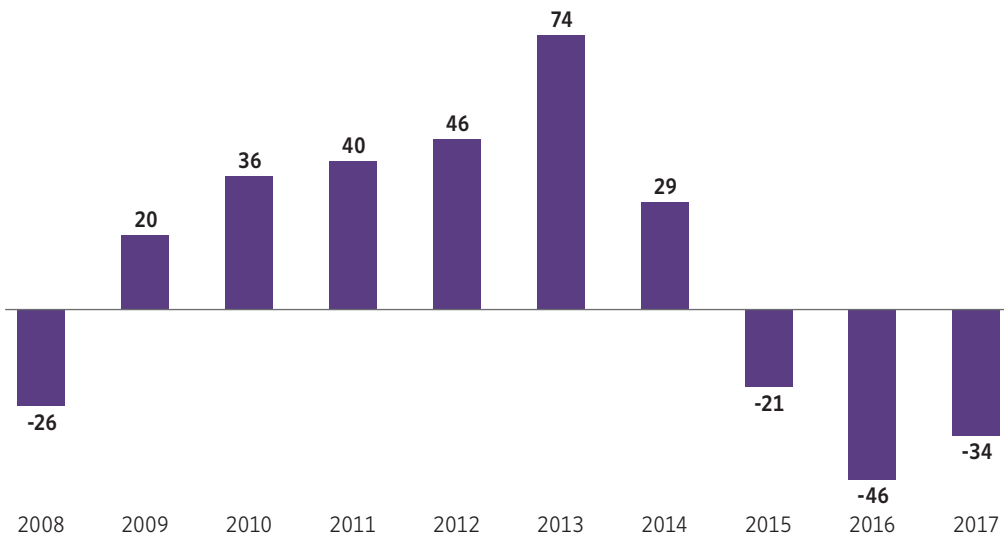
## Hybrid Mutual Funds

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 2017, hybrid mutual funds had negative net new cash flow of \$34 billion (or 2.4 percent of prior year-end assets), following \$46 billion in outflows in 2016 and \$21 billion in 2015. Many factors likely contribute to this change in the use of hybrid 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 2017, assets in target date funds reached \$1.1 trillion, up \$229 billion from year-end 2016 (Figure 8.26).\*

FIGURE 3.11

### Net New Cash Flow to Hybrid Mutual Funds

Billions of dollars; annual, 2008-2017



\* 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.

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 the fund's asset allocation more in line with prospectus objectives, which could be necessary following capital gains or losses in the stock or bond markets.

Net outflows from hybrid funds over the 2015–2017 period 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, almost \$76 billion from flexible portfolio funds in the past three years.

### **The Growth of Other Investment Products**

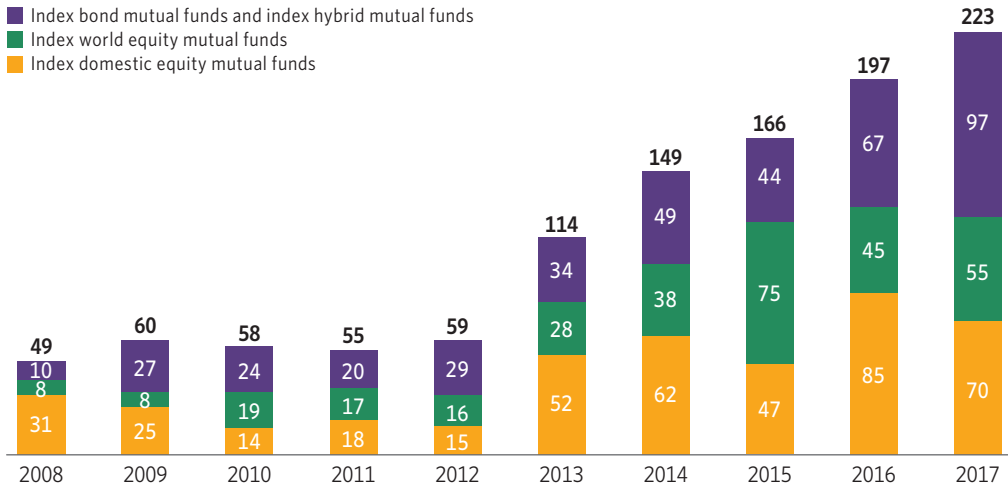
Some of the outflows from long-term mutual funds in 2017 reflect a broader shift, driven by both investors and retirement plan sponsors, toward other pooled investment vehicles. This trend is reflected in the outflows from actively managed funds and the growth of index mutual funds, ETFs, and collective investment trusts (CITs) since 2007.

In 2017, 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, 38 percent owned at least one equity index mutual fund in 2017. As of year-end 2017, 453 index mutual funds managed total net assets of \$3.4 trillion. For 2017 as a whole, investors added \$223 billion in net new cash flow to these funds (Figure 3.12). Of the new money that flowed to index mutual funds, 32 percent was invested in funds tied to domestic stock indexes, 44 percent was invested in funds tied to bond or hybrid indexes, and the remainder (about 25 percent) went to funds tied to world stock indexes. Assets in index equity mutual funds made up 26.6 percent of all equity mutual fund assets in 2017 (Figure 3.13).

FIGURE 3.12

### Net New Cash Flow to Index Mutual Funds

Billions of dollars; annual, 2008-2017

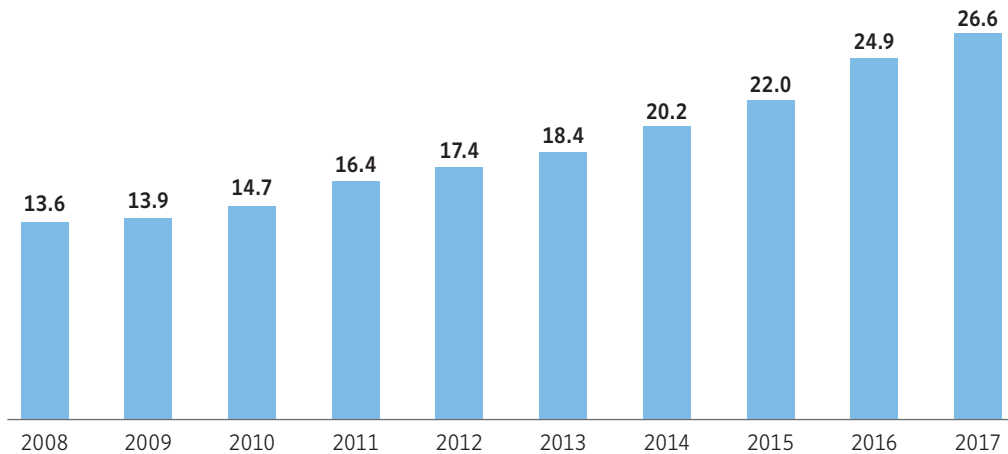


Note: Components may not add to the total because of rounding.

FIGURE 3.13

### Index Equity Mutual Funds' Share Continued to Rise

Percentage of equity mutual funds' total net assets; year-end, 2008-2017

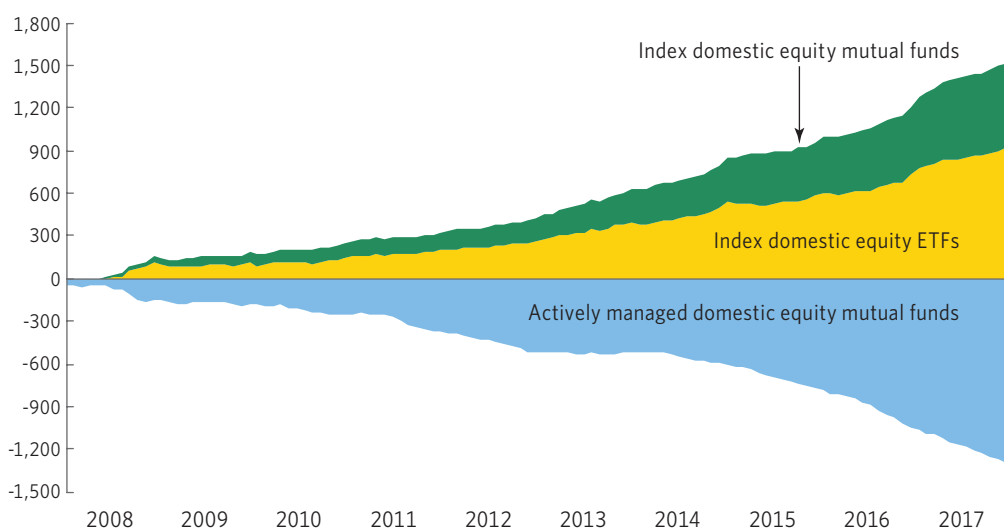


Index domestic equity mutual funds and index-based ETFs have particularly benefited from increased investor demand for index-based investment products. From 2008 through 2017, index domestic equity mutual funds and ETFs received \$1.6 trillion in net new cash and reinvested dividends, while actively managed domestic equity mutual funds experienced a net outflow of \$1.3 trillion (including reinvested dividends) (Figure 3.14). Index domestic equity ETFs have grown particularly quickly—attracting more than one and a half times the net inflows of index domestic equity mutual funds since 2008. Part of the recent increasing popularity of ETFs is likely attributable to more brokers and financial advisers using them in their clients’ portfolios. In 2016, full-service brokers and fee-based advisers had 14 percent and 24 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, January 2008–December 2017*



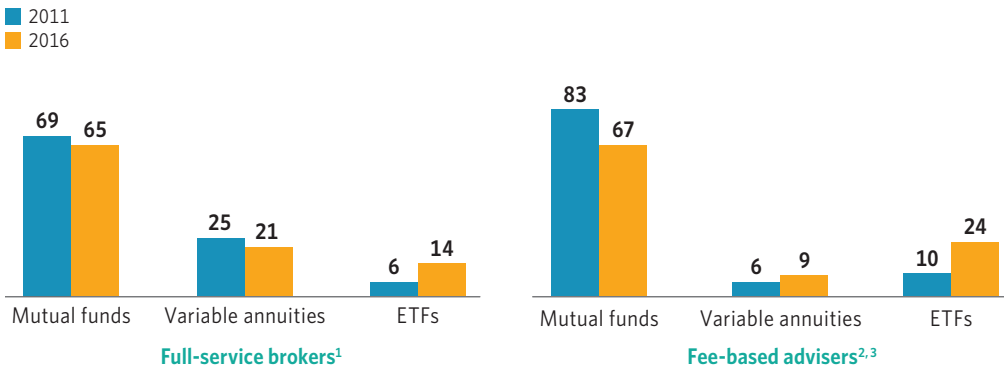
\* Prior to October 2009, index domestic equity ETF data include a small number of actively managed domestic equity ETFs.

Note: Equity mutual fund data include net new cash flow and 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, 2011 and 2016*



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

<sup>2</sup> This category includes registered investment advisers and dually registered investment adviser broker-dealers.

<sup>3</sup> 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, 2017"

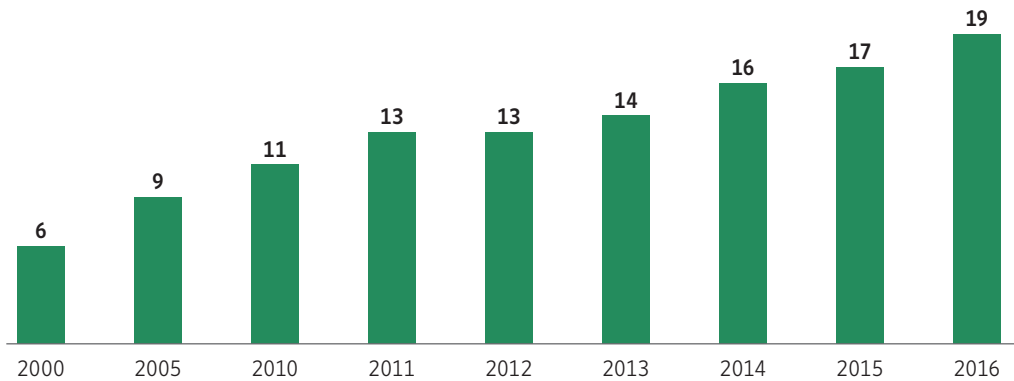
CITs are an alternative to mutual funds for DC plans. Like mutual funds, CITs pool the assets of investors and (either actively or passively) invest those assets according to a particular strategy. Much like institutional share classes of mutual funds, CITs generally require substantial minimum investment 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 19 percent in 2016. This recent expansion is due, in part, to the growth in target date fund 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, selected years*



Note: Assets exclude Direct Filing Entity assets that are reinvested in collective investment trusts. Data prior to 2016 come from the Form 5500 Research data sets released by the Department of Labor. Data for 2016 are preliminary, based on Department of Labor 2016 Form 5500 latest data sets.

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

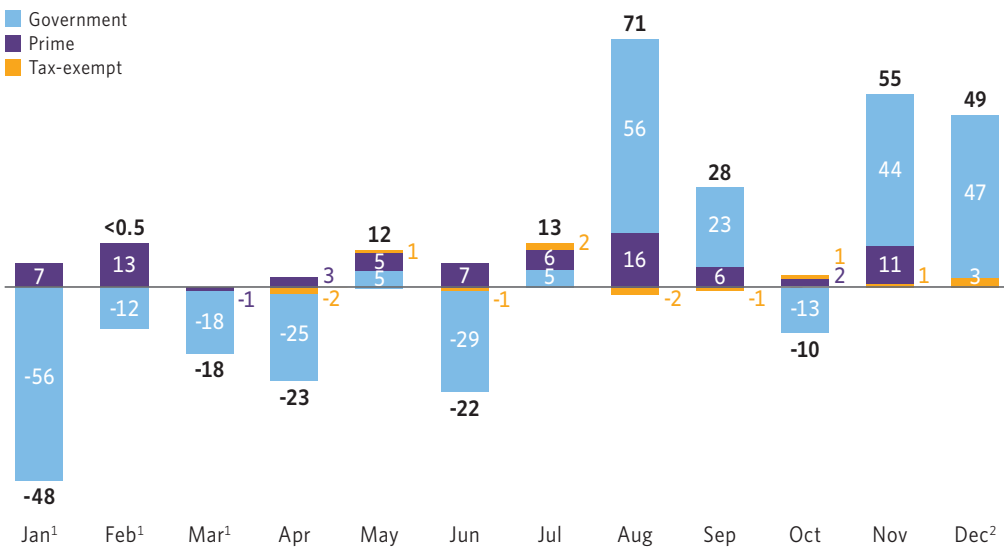
## Money Market Funds

In 2017, money market funds received \$107 billion in net new cash flows (Figure 3.17). Prime money market funds received the bulk of the inflows (\$76 billion), followed by government money market funds with \$30 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 three times in 2017, 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 2017 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, January-December 2017



<sup>1</sup> In January, February, and March 2017, tax-exempt money market funds had net inflows or outflows of less than \$500 million.

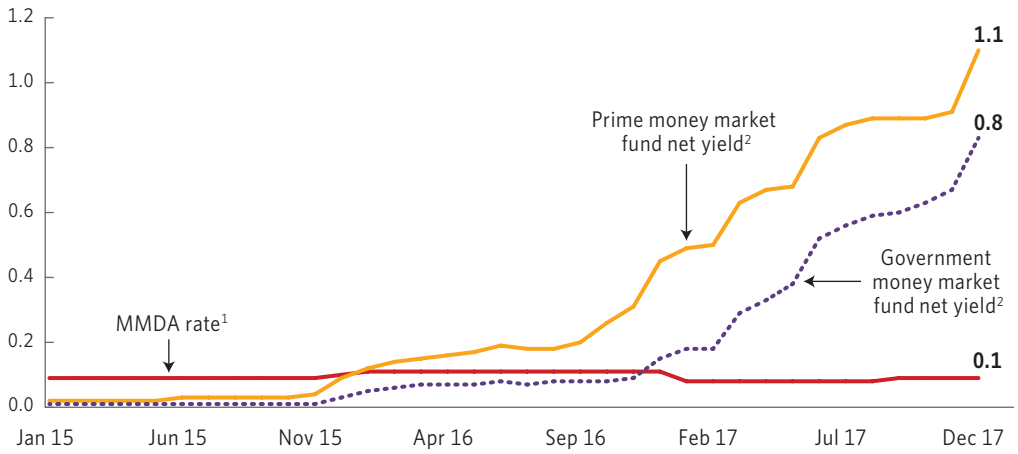
<sup>2</sup> In December 2017, prime money market funds had net outflows of less than \$500 million.

Note: Components may not add to the total because of rounding.

FIGURE 3.18

### Net Yields of Money Market Funds Far Exceeded MMDA Rates by the End of 2017

Percent; month-end, January 2015–December 2017



<sup>1</sup> 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.

<sup>2</sup> Net yields of money market funds are annualized seven-day compound net yields.

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




## CHAPTER FOUR

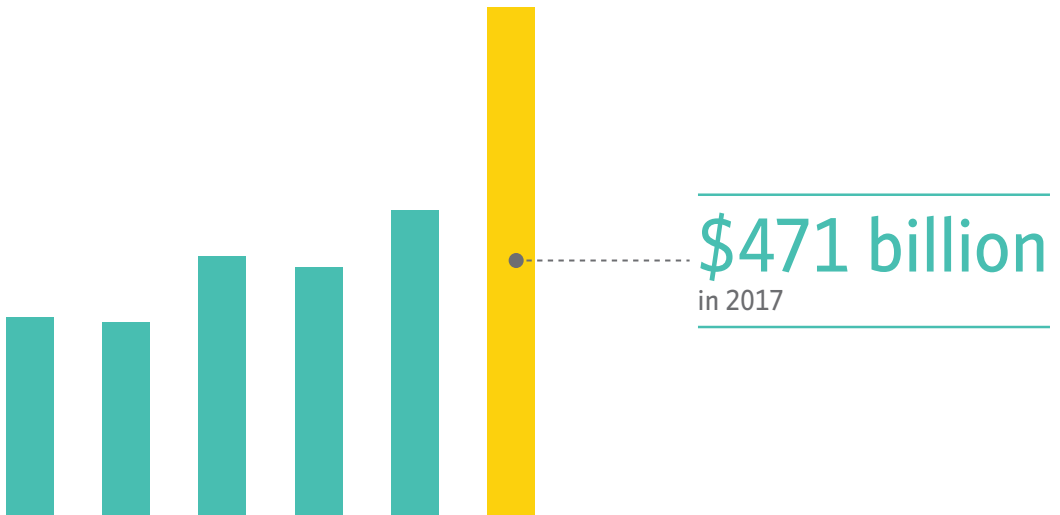
# US Exchange-Traded Funds

---

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 \$2.1 trillion. As investor demand has increased, sponsors have offered more ETFs with a greater variety of investment objectives. With \$3.4 trillion in assets at year-end 2017, 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 at record high in 2017



### IN THIS CHAPTER

- 84 What Is an ETF?
- 85 ETFs and Mutual Funds
- 86 ETF Total Net Assets
- 87 Origination of an ETF
- 92 How ETFs Trade
- 96 Demand for ETFs
- 101 Characteristics of ETF-Owning Households

## 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 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 2017, there were 1,569 index-based ETFs with \$3.3 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 2017, 194 actively managed ETFs—with \$45 billion in assets—were registered with the SEC as investment companies.



### LEARN MORE

Exchange-Traded Funds Resource Center  
[www.ici.org/etf\\_resources](http://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.

### LEARN MORE

Understanding Exchange-Traded Funds: How ETFs Work  
[www.ici.org/perspective](http://www.ici.org/perspective)

## ETF Total Net Assets

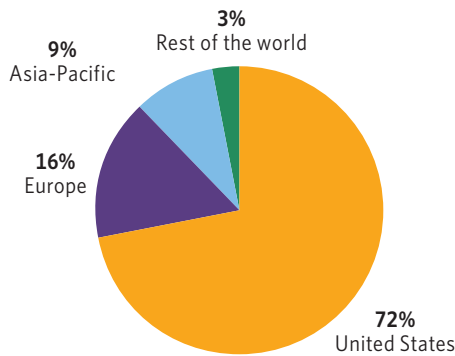
The US ETF market—with 1,832 funds and \$3.4 trillion in total net assets at year-end 2017—remained the largest in the world, accounting for 72 percent of the \$4.7 trillion in ETF total net assets worldwide (Figures 4.1 and 4.2).

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 2017, 2 percent of total 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 Commodity Futures Trading Commission (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.

FIGURE 4.1

### The United States Has the Largest ETF Market

Percentage of total net assets, year-end 2017



Worldwide ETF total net assets: \$4.7 trillion

Sources: Investment Company Institute and ETFGI

#### LEARN MORE

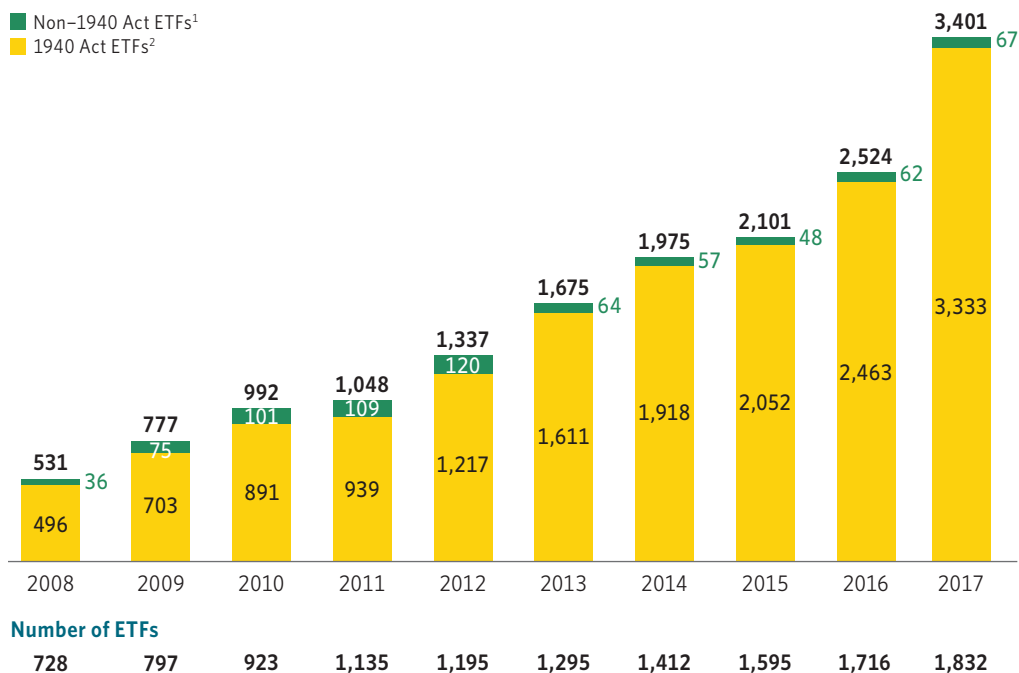
Mutual Funds and ETFs' Share of the Corporate Bond Market: What's the Right Answer?

[www.ici.org/viewpoints/view\\_17\\_corp\\_bond\\_etf](http://www.ici.org/viewpoints/view_17_corp_bond_etf)

FIGURE 4.2

## Total Net Assets and Number of ETFs

Billions of dollars; year-end, 2008–2017



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

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

Note: Data exclude ETFs that invest primarily in other ETFs. Components may not add to the total because of rounding.

## 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 that track 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**

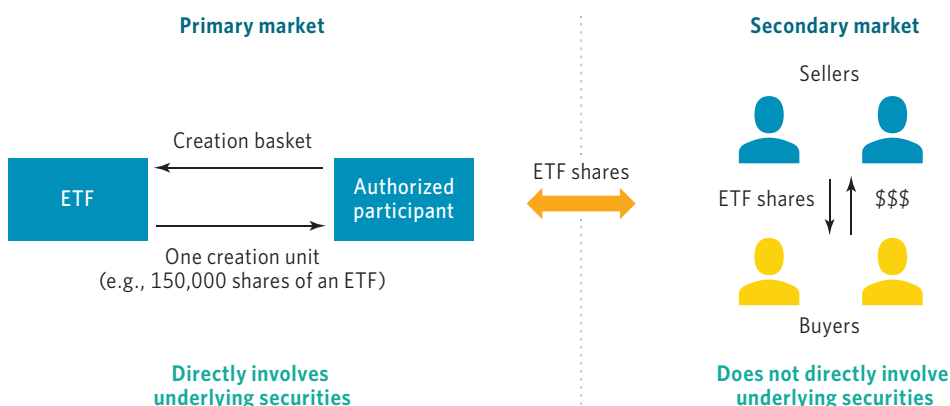
The creation or redemption of ETF shares—activity directly involving the ETF's underlying securities—is categorized as primary market activity. The creation and redemption mechanism in the ETF structure allows the number of shares outstanding in an ETF to expand or contract based on demand (Figure 4.3). 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 90), 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.

FIGURE 4.3

## Creation of ETF Shares



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

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. Any purchases and sales of existing ETF shares among investors, including APs, are referred to as secondary market trading or activity.

## 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.

### LEARN MORE

The Creation and Redemption Process and Why It Matters  
[www.ici.org/viewpoints/view\\_12\\_etfbasics\\_creation](http://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.

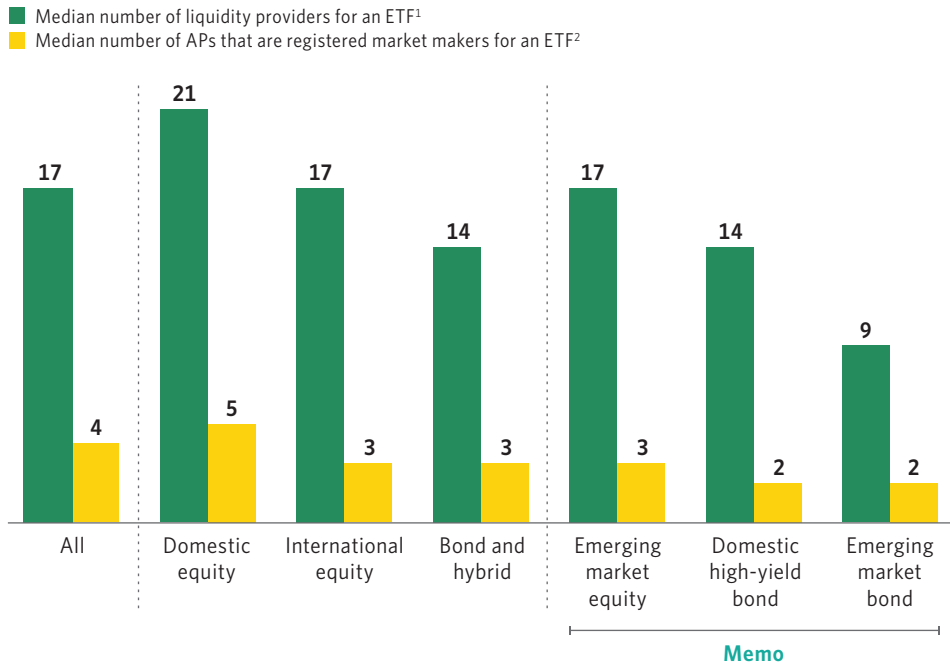
### LEARN MORE

The Role and Activities of Authorized Participants of Exchange-Traded Funds  
[www.ici.org/research/reports](http://www.ici.org/research/reports)

FIGURE 4.4

## The Secondary Market Has Many ETF Liquidity Providers

December 2014



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

<sup>2</sup> 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*

## 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.



### LEARN MORE

Understanding the Regulation of Exchange-Traded Funds Under the Securities Exchange Act of 1934  
[www.ici.org/pubs/white\\_papers](http://www.ici.org/pubs/white_papers)

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.

### LEARN MORE

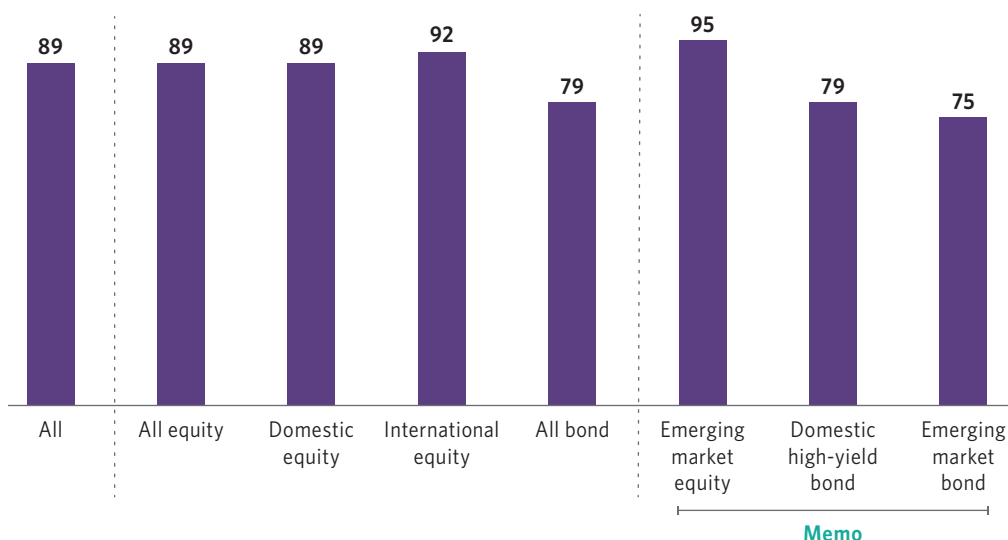
Does Liquidity in ETFs Depend Solely on Authorized Participants?  
[www.ici.org/viewpoints/view\\_15\\_aps\\_etfs](http://www.ici.org/viewpoints/view_15_aps_etfs)

Across all ETFs, investors make greater use of the secondary market (trading ETF shares) than the primary market (creations and redemptions of ETF shares through an AP). On average, 89 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 (95 percent, 79 percent, and 75 percent, respectively). On average, secondary market trading is a smaller proportion of total trading for bond ETFs (79 percent) than for equity ETFs (89 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 activity<sup>1</sup> relative to total activity;<sup>2</sup> daily, January 2, 2015–December 29, 2017*



<sup>1</sup> Secondary market activity is measured as average daily dollar volume of ETF shares traded in each category over the 755 daily observations in the sample.

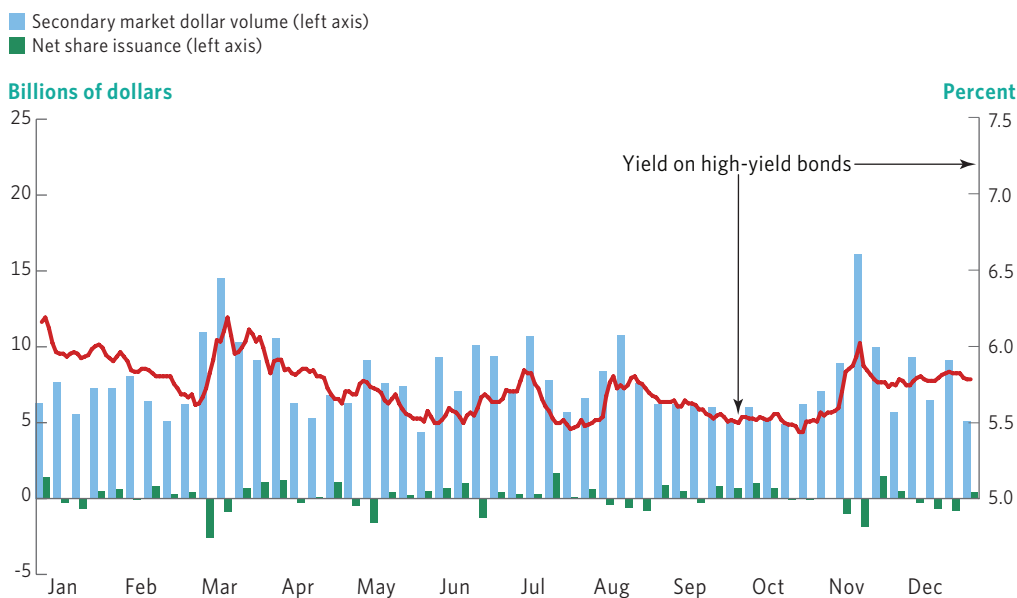
<sup>2</sup> Total activity is measured as the sum of primary market and secondary market activity. Primary market activity is computed as daily creations or redemptions for each ETF, which are estimated by multiplying the daily change in shares outstanding by the daily NAV from Bloomberg. Aggregate 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 755 daily observations in the sample.

Sources: Investment Company Institute and Bloomberg

ETF secondary market trading also can act as a source of liquidity to the broader financial markets. During 2017, the effective yield on the ICE BofAML US High Yield Master II Index ranged between 5.43 percent and 6.19 percent, at times increasing abruptly (Figure 4.6). For example, in early 2017, the index's yield had drifted down to 5.61 percent on March 1, 2017, then ratcheted up quickly to 6.19 percent by March 14, 2017. When bond yields increase, prices on existing bonds—such as those that funds hold in their portfolios—and bond ETFs fall. Sellers of high-yield bond ETFs were able to find willing buyers in the secondary market during this two-week period despite declining prices for high-yield bond ETFs. The weekly dollar volume of high-yield bond ETFs that were traded on the secondary markets (blue bars, Figure 4.6) increased to an average of \$12.7 billion in the first two weeks of March compared with an average of \$6.7 billion in the prior nine weeks. In addition, redemptions of high-yield bond ETFs (green bars, Figure 4.6) were fairly modest in the first two weeks of March, totaling \$3.5 billion, or 6.1 percent of total net assets, in high-yield bond ETFs as of the end of February 2017.

**FIGURE 4.6**  
**Secondary Market Trading of High-Yield Bond ETFs Increased When Yields Rose in 2017**

December 29, 2016–December 29, 2017\*



\* Data for the effective yield of the ICE BofAML US High Yield Master II Index are daily. Data for high-yield bond ETFs' secondary market dollar volume and net share issuance are week-ended Wednesday.

Sources: Investment Company Institute, Federal Reserve Bank of St. Louis, and Bloomberg

**LEARN MORE**

**High-Yield Bond ETFs: A Source of Liquidity**  
[www.ici.org/viewpoints/view\\_15\\_hybf\\_etf](http://www.ici.org/viewpoints/view_15_hybf_etf)

This basic pattern repeated itself later in 2017 when the effective yield on the index jumped from 5.54 percent on November 1, 2017, to 6.02 percent on November 15. At the same time, trading in high-yield bond ETFs increased, peaking at \$16.1 billion for the week ended November 14. As in the episode earlier in the year, redemptions of high-yield bond ETFs were limited during this two-week period—amounting to \$2.9 billion, or 4.6 percent of their October 2017 total net assets.

The relative magnitudes of secondary market trading in and net share issuance of high-yield bond ETFs are also noteworthy—secondary market trading activity is many multiples higher than primary market activity for these ETFs. As investors seek to shed or gain exposure, depending on their risk appetites and expectations of future returns, high-yield bond ETFs provide an efficient means of transferring risk among themselves while limiting the impact on the underlying high-yield bond market.

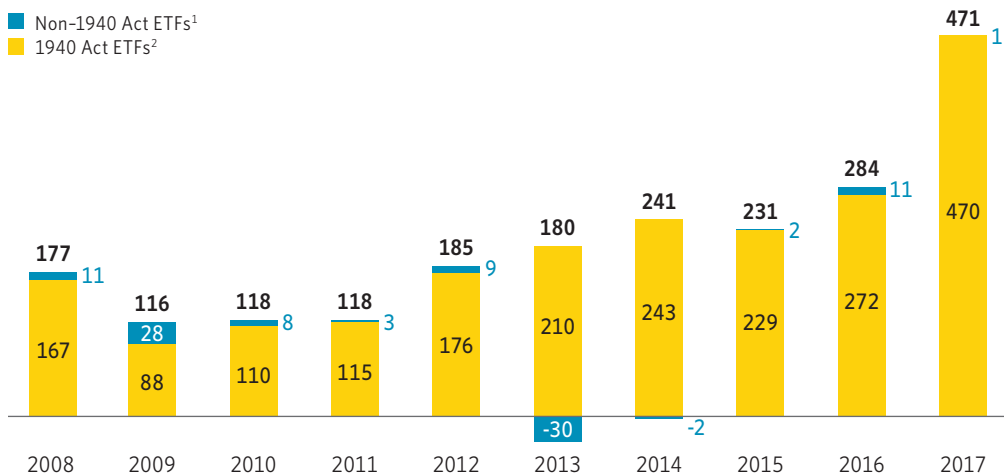
## Demand for ETFs

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 15 percent of total net assets managed by investment companies at year-end 2017. For 2017 as a whole, net share issuance of ETF shares (which includes reinvested dividends) hit a record \$471 billion (Figure 4.7).

FIGURE 4.7

## Record Net Share Issuance of ETFs in 2017

Billions of dollars; annual, 2008–2017



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

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

Note: Data for net share issuance include reinvested dividends. Data exclude ETFs that invest primarily in other ETFs. Components may not add to the total because of rounding.

In 2017, net share issuance of ETFs increased across all broad asset classes, except commodities (Figure 4.8). Demand for global and international equity ETFs surged in 2017 with net share issuance totaling \$160 billion, up from \$20 billion in 2016 and \$110 billion in 2015. This rebound in demand likely reflected the strong performance in international stocks,\* which returned 28 percent in 2017, up from only 5 percent in 2016, and a depreciation (7 percent) in the value of the US dollar,<sup>†</sup> which generally increases the attractiveness of international investments to US investors. Net share issuance of broad-based domestic equity ETFs remained strong in 2017, with \$156 billion in net new shares issued, up slightly from \$148 billion in 2016. Double-digit return performance of domestic stocks over the previous two years—19 percent in 2017 and 11 percent in 2016—likely boosted demand for domestic equity ETFs.<sup>‡</sup> Demand for bond and hybrid ETFs strengthened further in 2017, with net new share issuance totaling \$123 billion, up from \$85 billion in 2016.

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

<sup>†</sup> As measured by the Trade Weighted US Dollar Index: Broad.

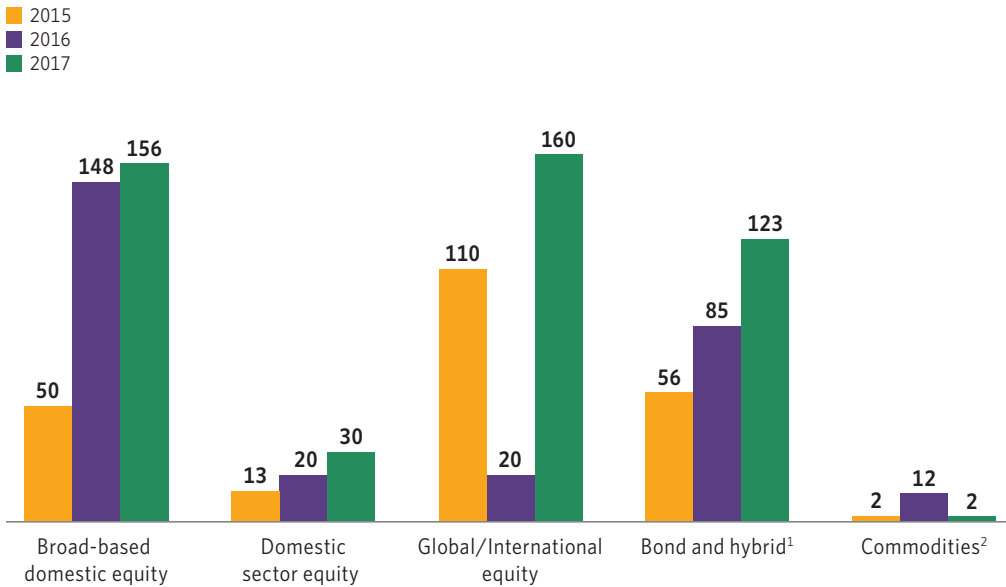
<sup>‡</sup> As measured by the Wilshire 5000 Total Return Index (float-adjusted).



FIGURE 4.8

## Net Share Issuance of ETFs by Investment Classification

Billions of dollars; annual, 2015–2017



<sup>1</sup> Bond ETFs represented 98 percent of net issuance in the bond and hybrid category in 2017.

<sup>2</sup> 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. Data exclude ETFs that invest primarily in other ETFs.

ETFs have been available for 25 years, and in that time, large-cap domestic equity ETFs have accounted for the largest proportion of ETF total net assets. At year-end 2017, assets in large-cap domestic equity ETFs totaled \$927 billion, or 27 percent, of ETF assets (Figure 4.9). Fueled by strong investor demand over the past few years, bond and hybrid ETFs held 16 percent (\$561 billion) of ETF assets. International equity ETFs accounted for 14 percent, or \$477 billion of ETF total net assets.

### LEARN MORE

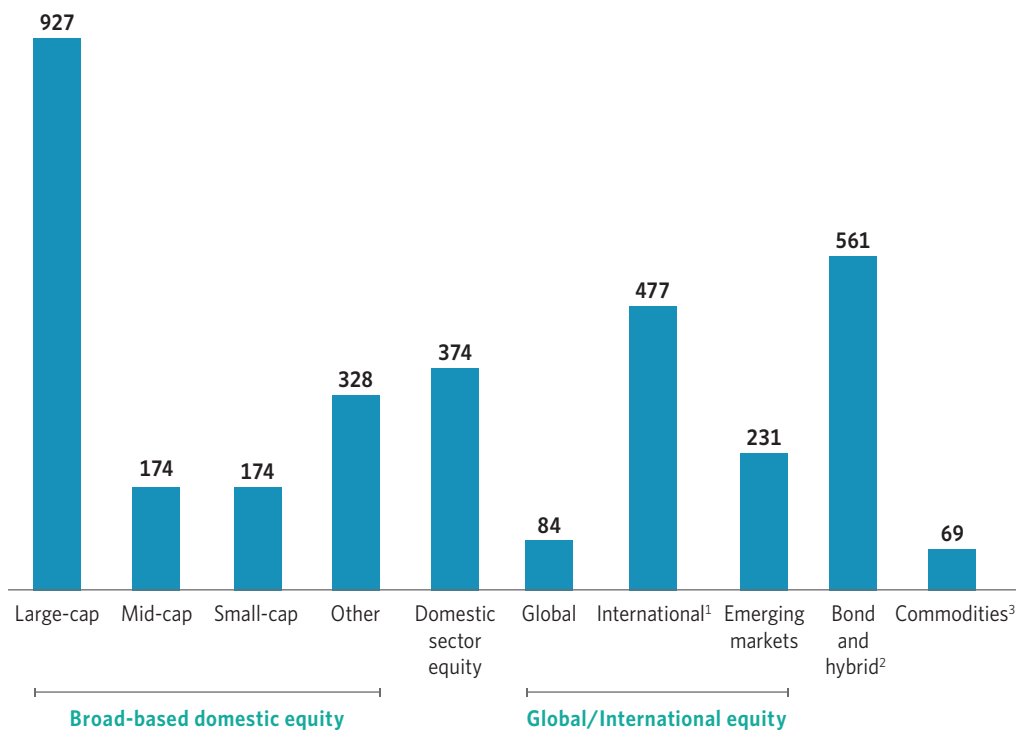
Plenty of Players Provide Liquidity for ETFs

[www.ici.org/viewpoints/view\\_14\\_ft\\_etf\\_liquidity](http://www.ici.org/viewpoints/view_14_ft_etf_liquidity)

FIGURE 4.9

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

Billions of dollars, year-end 2017



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

<sup>2</sup> Bond ETFs represented 99 percent of total net assets in the bond and hybrid category in 2017.

<sup>3</sup> 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 exclude ETFs that invest primarily in other ETFs.

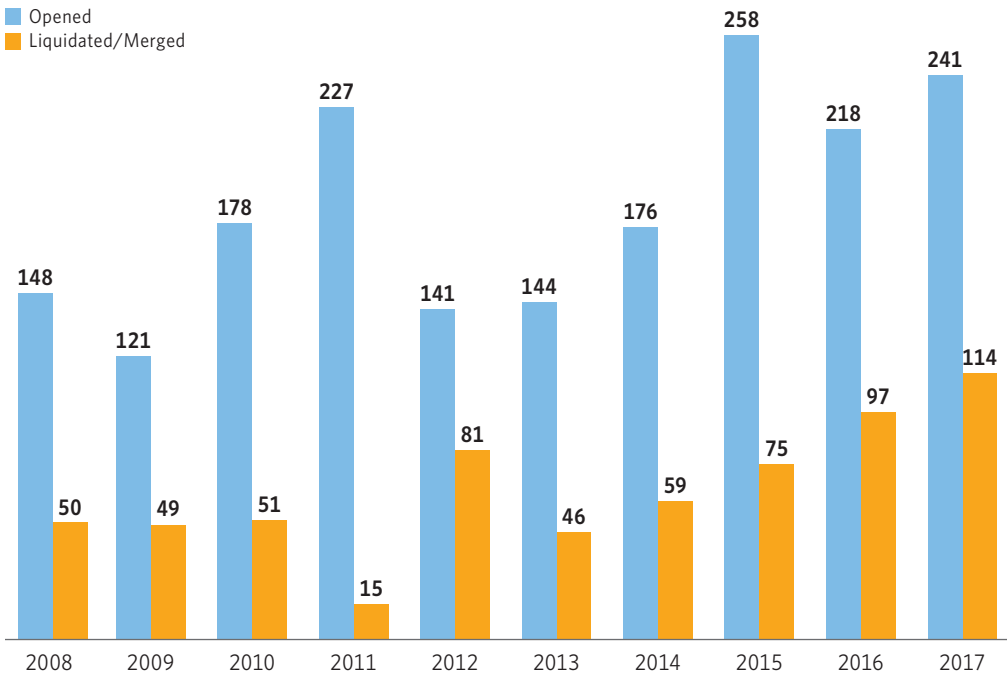
### LEARN MORE

ICI Seeks Market Improvements for ETFs and Their Investors

[www.ici.org/fof\\_cap\\_mkts\\_etfs](http://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 1,852 new ETFs offered to investors in the past decade (Figure 4.10). In 2016 and 2017, domestic equity ETFs accounted for about half of newly offered ETFs. International and global equity ETFs accounted for about one-quarter of new ETFs in 2017. 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. Since 2013, the number of ETF liquidations has risen steadily—a natural result of a maturing industry. In 2017, ETF liquidations rose to 114, as sponsors eliminated some small international equity ETFs from their lineups.

**FIGURE 4.10**  
**Number of ETFs Entering and Exiting the Industry**  
*2008-2017*



Note: Data include ETFs not registered under the Investment Company Act of 1940 but exclude ETFs that invest primarily in other ETFs.

## Characteristics of ETF-Owning Households

An estimated 7.8 million, or about 6 percent of, US households held ETFs in mid-2017. 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 mid-2017, 95 percent of ETF-owning households also owned equity mutual funds, individual stocks, or variable annuities (Figure 4.11). Sixty-nine percent of households that owned ETFs also held bond mutual funds, individual bonds, or fixed annuities. In addition, 44 percent of ETF-owning households owned investment real estate.

FIGURE 4.11

### ETF-Owning Households Held a Broad Range of Investments

*Percentage of ETF-owning households holding each type of investment, mid-2017*

<b>Equity mutual funds, individual stocks, or variable annuities (total)</b>	<b>95</b>
<b>Bond mutual funds, individual bonds, or fixed annuities (total)</b>	<b>69</b>
<b>Mutual funds (total)</b>	<b>91</b>
Equity	89
Bond	56
Hybrid	49
Money market	63
<b>Individual stocks</b>	<b>75</b>
<b>Individual bonds</b>	<b>24</b>
<b>Fixed or variable annuities</b>	<b>33</b>
<b>Investment real estate</b>	<b>44</b>

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 4.12). 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 4.12

### Characteristics of ETF-Owning Households

Mid-2017

	All US households	Households owning ETFs	Households owning mutual funds	Households owning individual stocks
<b>Median</b>				
Age of head of household <sup>1</sup>	51	52	51	53
Household income <sup>2</sup>	\$59,000	\$125,000	\$100,000	\$102,000
Household financial assets <sup>3</sup>	\$90,000	\$500,000	\$200,000	\$350,000
<b>Percentage of households</b>				
<i>Household primary or co-decisionmaker for saving and investing</i>				
Married or living with a partner	57	77	72	72
Widowed	9	4	5	6
College or postgraduate degree	34	68	51	57
Employed (full- or part-time)	60	68	74	69
Retired from lifetime occupation	29	29	23	31
<i>Household owns</i>				
IRA(s)	35	75	64	66
DC retirement plan account(s)	48	81	85	72

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

<sup>2</sup> Total reported is household income before taxes in 2016.

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

#### LEARN MORE

The Liquidity Provided by ETFs Is No Mirage  
[www.ici.org/viewpoints/view\\_16\\_mirage\\_response](http://www.ici.org/viewpoints/view_16_mirage_response)

ETF-owning households also exhibit more willingness to take investment risk (Figure 4.13). Fifty-two percent of ETF-owning households were willing to take substantial or above-average investment risk for substantial or above-average gain in 2017, compared with 22 percent of all US households and 34 percent of mutual fund-owning households. This result may be explained by the predominance of equity ETFs, which make up 81 percent of ETF total net assets (Figure 4.9). Investors who are more willing to take investment risk may be more likely to invest in equities.

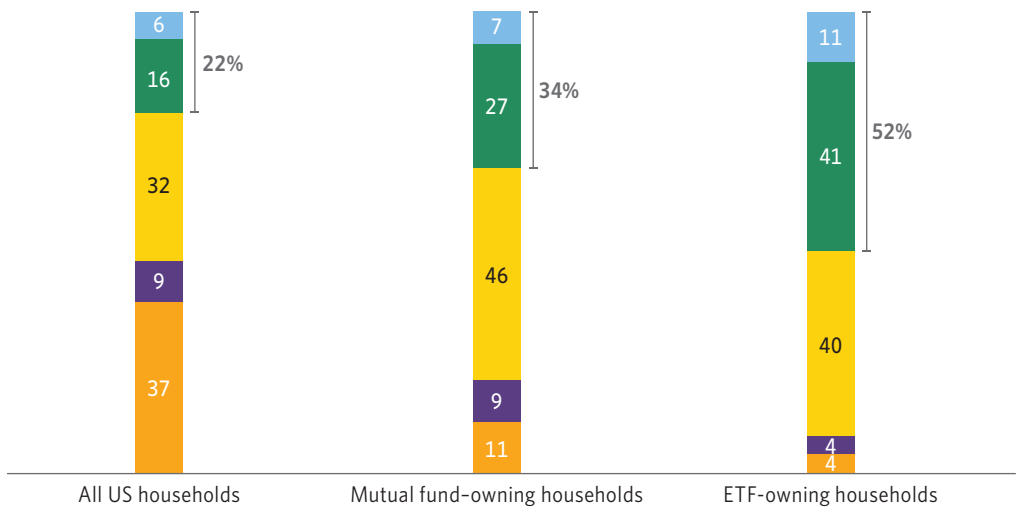
**FIGURE 4.13**

**ETF-Owning Households Are Willing to Take More Investment Risk**

*Percentage of all US households, mutual fund-owning households, and ETF-owning households; mid-2017*

**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




## CHAPTER FIVE

# US Closed-End Funds

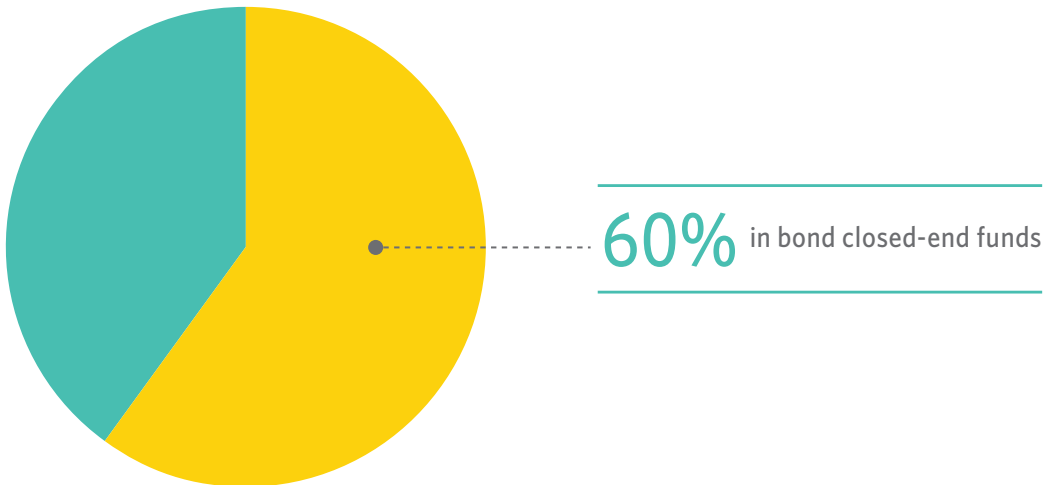
---

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.



## More than half of closed-end fund total assets were in bond funds at year-end 2017



### IN THIS CHAPTER

- 106** What Is a Closed-End Fund?
- 107** Total Assets of Closed-End Funds
- 109** Net Issuance of Closed-End Funds
- 110** Closed-End Fund Distributions
- 111** Closed-End Fund Leverage
- 114** 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.



### LEARN MORE

Closed-End Fund Resource Center  
[www.ici.org/cef](http://www.ici.org/cef)

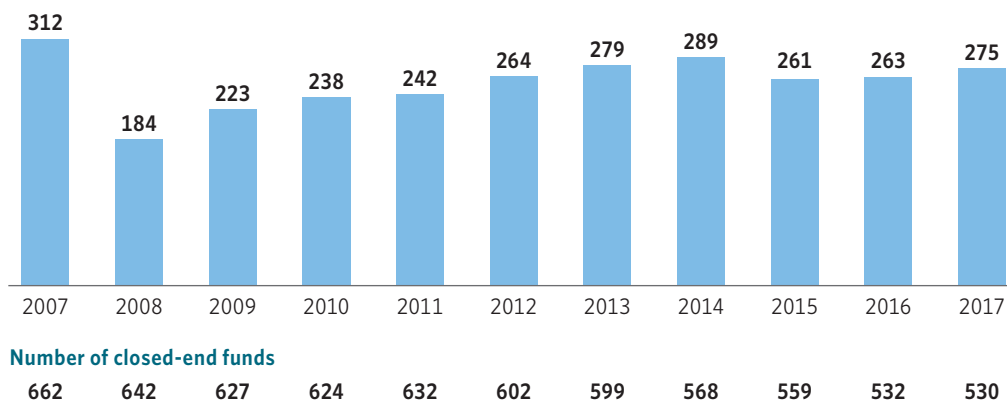
## Total Assets of Closed-End Funds

At year-end 2017, 530 closed-end funds had total assets of \$275 billion (Figure 5.1). This total represents a 4.6 percent increase from year-end 2016, and was driven by broad-based gains in global financial markets.

FIGURE 5.1

### Total Assets of Closed-End Funds Were \$275 Billion at Year-End 2017

Billions of dollars; year-end, 2007-2017



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, 2017"

Historically, bond funds have accounted for a large share of assets in closed-end funds. At year-end 2007, 54 percent of all closed-end fund assets were held in bond funds, with the remainder held in equity funds (Figure 5.2). At year-end 2017, 60 percent of closed-end fund assets were held in bond funds, and totaled \$166 billion. The remainder of closed-end fund assets were held in equity funds, and totaled \$109 billion. The share of assets in bond closed-end funds has been increasing as demand for bond closed-end funds has outpaced that of equity closed-end funds. Cumulative net issuance of bond closed-end fund shares has exceeded that of equity fund shares over the past 10 years, even though the total returns on bonds,\* had been lower than the total returns on US stocks.†

\* As measured by the Citi US Broad Investment Grade Bond Index.

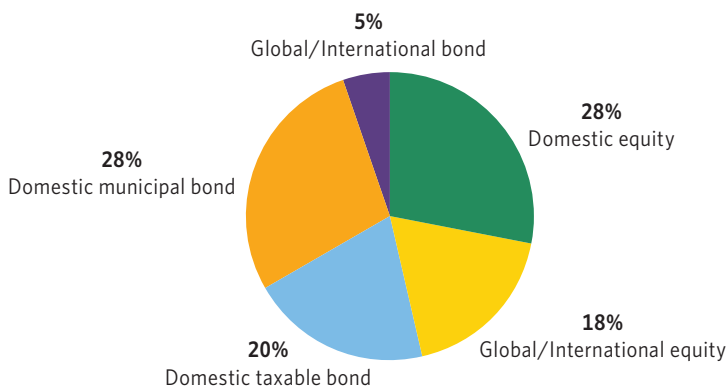
† As measured by the Wilshire 5000 Total Return Index (float-adjusted).

The number of closed-end funds available to investors declined from 2011 to 2016 (Figure 5.1). In that period, more closed-end funds were liquidated and others converted into open-end mutual funds or exchange-traded funds than new closed-end funds were launched. The number of closed-end funds decreased slightly in 2017, and remains well below its recent peak in 2011.

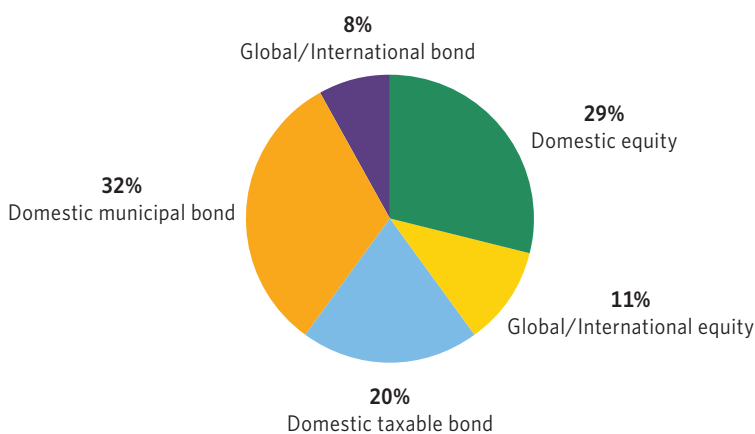
**FIGURE 5.2**

**Composition of the Closed-End Fund Market by Investment Objective**

*Percentage of closed-end fund total assets, year-end 2007 and 2017*



**2007 total assets: \$312 billion**



**2017 total assets: \$275 billion**

Note: Components may not add to 100 percent because of rounding.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2017"

**LEARN MORE**

The Closed-End Fund Market, 2017

[www.ici.org/pdf/per24-02.pdf](http://www.ici.org/pdf/per24-02.pdf)

## Net Issuance of Closed-End Funds

Net issuance of closed-end fund shares increased to \$2.7 billion in 2017 from \$1.6 billion in 2016, as investor demand for domestic municipal bond closed-end funds increased (Figure 5.3). Equity closed-end funds had net redemptions—for the first time since 2009—of \$548 million in 2017 compared with net issuance of \$58 million in 2016. Net issuance for bond closed-end funds increased to \$3.3 billion from \$1.5 billion in 2016.

FIGURE 5.3

### Closed-End Fund Net Share Issuance

Millions of dollars, 2008–2017

	Total	Equity			Bond			
		Total	Domestic	Global/ International	Total	Domestic taxable	Domestic municipal	Global/ International
2008	-\$22,298	-\$8,739	-\$7,052	-\$1,687	-\$13,560	-\$6,770	-\$6,089	-\$700
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	13,765	3,605	4,097	-491	10,159	3,921	-220	6,459
2014	4,935	4,314	3,819	494	621	266	567	-212
2015	1,753	1,267	224	1,043	486	678	-87	-104
2016	1,567	58	242	-184	1,509	1,432	576	-498
2017	2,722	-548	-147	-401	3,270	812	2,146	312

Note: Components may not add to the total because of rounding. 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, 2017"

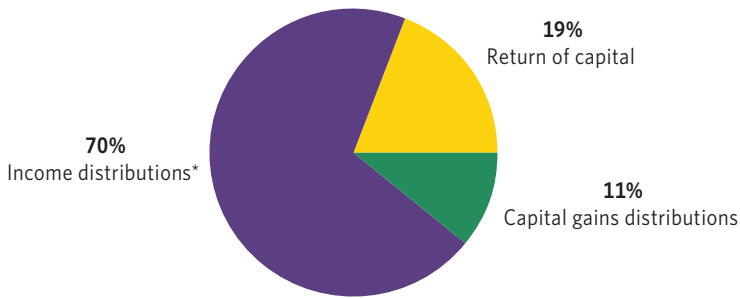
## Closed-End Fund Distributions

In 2017, closed-end funds distributed \$16.8 billion to shareholders (Figure 5.4). Closed-end funds may make distributions to shareholders from three possible sources: income from interest and dividends, realized capital gains, and return of capital. Income from interest and dividends made up 70 percent of closed-end fund distributions, with the majority of income distributions paid by bond closed-end funds. Return of capital constituted 19 percent of closed-end fund distributions, and capital gains distributions accounted for 11 percent.

FIGURE 5.4

### Closed-End Fund Distributions

Percentage of closed-end fund distributions, 2017



**Total closed-end fund distributions: \$16.8 billion**

\* Income distributions include payments from interest and dividends.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2017"

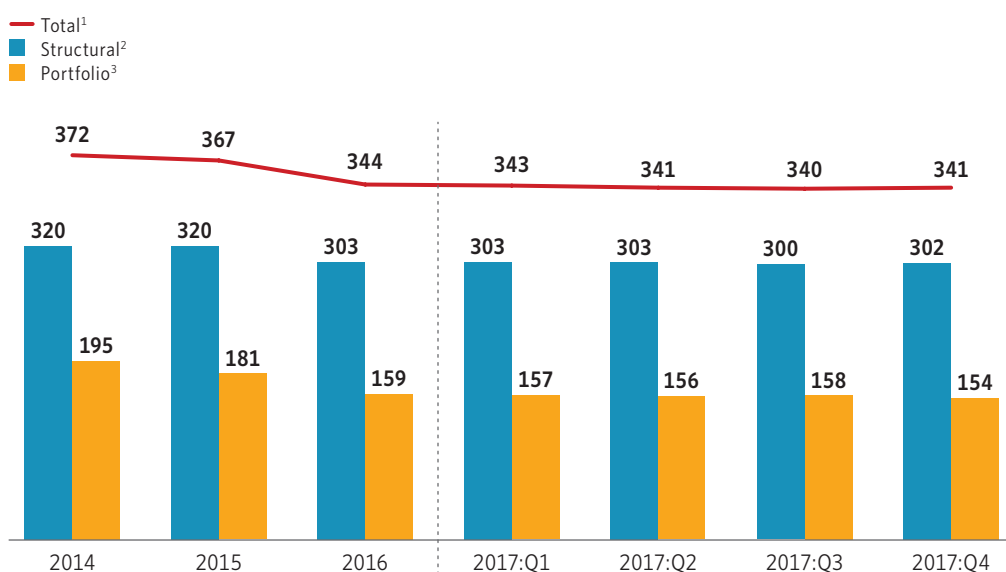
## Closed-End Fund Leverage

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 2017, at least 341 funds, accounting for 64 percent of closed-end funds, were using structural leverage, 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 and Some Types of Portfolio Leverage

Number of funds; end of period, 2014-2016, 2017:Q1-2017:Q4



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

<sup>2</sup> 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.

<sup>3</sup> 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, 2017"

### LEARN MORE

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

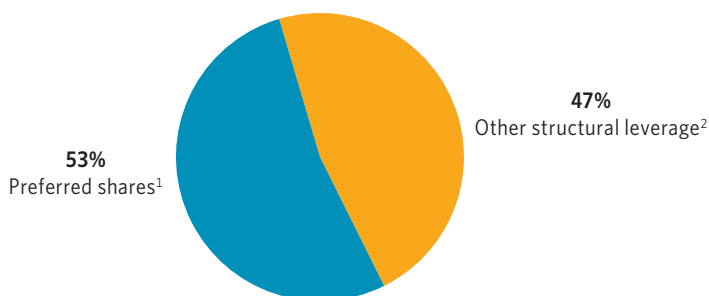
[www.ici.org/cef/background/faqs\\_closed\\_end](http://www.ici.org/cef/background/faqs_closed_end)

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 2017, 302 funds had a total of \$50.4 billion in structural leverage, with slightly more than half (53 percent) from preferred shares (Figure 5.6). Forty-seven percent of closed-end fund structural leverage was other structural leverage. The average leverage ratio\* across those closed-end funds employing structural leverage was 26 percent at year-end 2017. Among closed-end funds employing structural leverage, the average leverage ratio for bond funds was somewhat higher (28 percent) than that of equity funds (22 percent).

**FIGURE 5.6**

**Preferred Shares Constituted the Majority of Closed-End Fund Structural Leverage**

*Percentage of closed-end fund structural leverage, year-end 2017*



**Total closed-end fund structural leverage: \$50.4 billion**

<sup>1</sup> A closed-end fund may issue preferred shares to raise additional capital, which can be used to purchase more securities for its portfolio. Preferred stock differs from common stock 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.

<sup>2</sup> *Other structural leverage* includes bank borrowing and other forms of debt.

Source: ICI Research Perspective, “The Closed-End Fund Market, 2017”

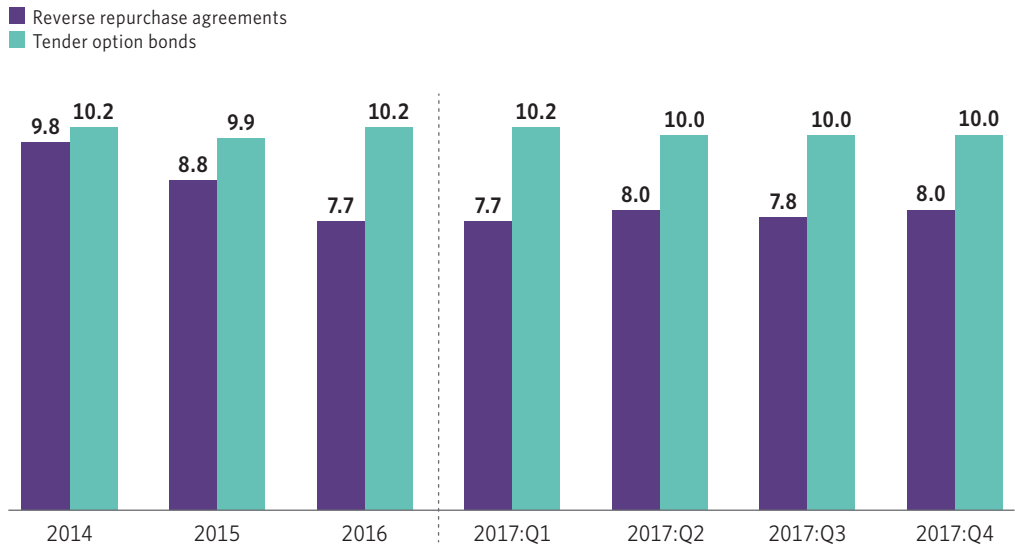
\* The *leverage ratio* is the ratio of the amount of preferred shares and other structural leverage to the sum of the amount of common assets, preferred shares, and other structural leverage.

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 2017, 154 closed-end funds had \$18.1 billion outstanding in reverse repurchase agreements and tender option bonds (Figure 5.7).

**FIGURE 5.7**

**Use of Portfolio Leverage**

*Billions of dollars; end of period, 2014-2016, 2017:Q1-2017:Q4*



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, 2017"



## Characteristics of Households Owning Closed-End Funds

An estimated 3.6 million US households owned closed-end funds in 2017. These households tended to include affluent investors who owned a range of equity and fixed-income investments. In 2017, 96 percent of households owning closed-end funds also owned equity mutual funds, individual stocks, or variable annuities (Figure 5.8). Sixty-five percent of households that owned closed-end funds also held bond mutual funds, individual bonds, or fixed annuities. In addition, 46 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, mid-2017

<b>Equity mutual funds, individual stocks, or variable annuities (total)</b>	<b>96</b>
<b>Bond mutual funds, individual bonds, or fixed annuities (total)</b>	<b>65</b>
<b>Mutual funds (total)</b>	<b>89</b>
Equity	82
Bond	50
Hybrid	46
Money market	58
<b>Individual stocks</b>	<b>71</b>
<b>Individual bonds</b>	<b>33</b>
<b>Fixed or variable annuities</b>	<b>36</b>
<b>Investment real estate</b>	<b>46</b>

Note: Multiple responses are included.

Source: ICI Research Perspective, "The Closed-End Fund Market, 2017"

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, 38 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

Mid-2017

	All US households	Households owning closed-end funds	Households owning mutual funds	Households owning individual stocks
<b>Median</b>				
Age of head of household <sup>1</sup>	51	56	51	53
Household income <sup>2</sup>	\$59,000	\$100,000	\$100,000	\$102,000
Household financial assets <sup>3</sup>	\$90,000	\$250,000	\$200,000	\$350,000
<b>Percentage of households</b>				
<i>Household primary or co-decisionmaker for saving and investing</i>				
Married or living with a partner	57	57	72	72
Widowed	9	6	5	6
College or postgraduate degree	34	58	51	57
Employed (full- or part-time)	60	69	74	69
Retired from lifetime occupation	29	38	23	31
<i>Household owns</i>				
IRA(s)	35	66	64	66
DC retirement plan account(s)	48	77	85	72

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

<sup>2</sup> Total reported is household income before taxes in 2016.

<sup>3</sup> 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, 2017"

### LEARN MORE

#### A Guide to Closed-End Funds


[www.ici.org/cef/background/bro\\_g2\\_ce](http://www.ici.org/cef/background/bro_g2_ce)

## CHAPTER SIX

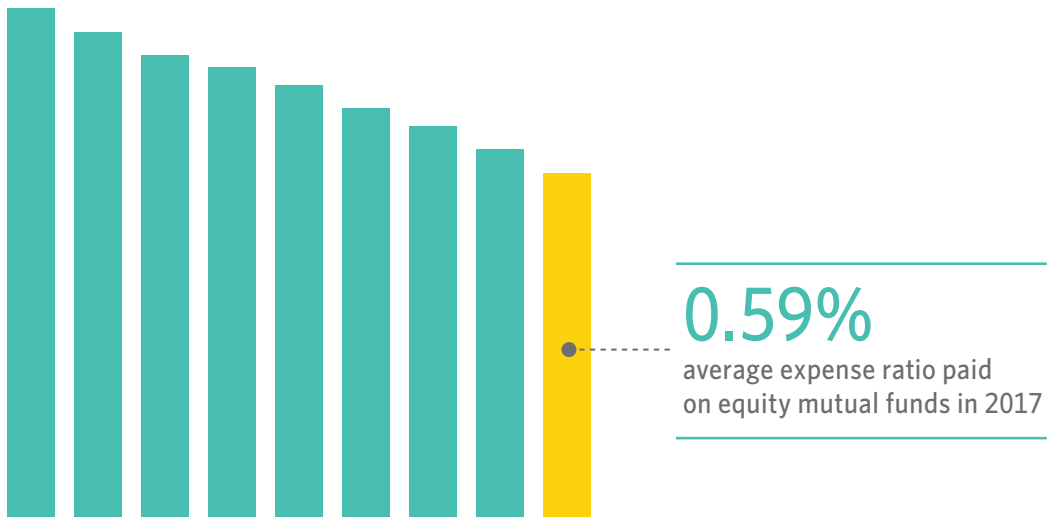
# US Fund Expenses and Fees

---

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 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 0.59 percent in 2017, a 40 percent decline.



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



### IN THIS CHAPTER

- 118** Trends in Mutual Fund Expenses
- 124** Index Funds
- 132** Mutual Fund Load Fees
- 136** Services and Expenses in 401(k) Plans

## 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 2017, that average had fallen to 0.59 percent, a decline of 40 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 0.70 percent in 2017, a reduction of 21 percent. In addition, the average bond mutual fund expense ratio fell from 0.76 percent in 2000 to 0.48 percent in 2017, a decline of 37 percent.

---

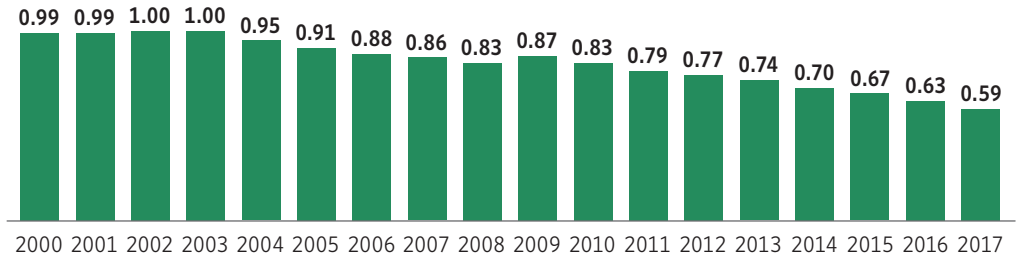
\* In this chapter, unless otherwise noted, average expense ratios are calculated on an asset-weighted basis, which gives more weight to funds with greater assets. It reflects where investors are actually putting their assets, and thus, better reflects the actual expenses, fees, or performance experienced by investors than does a simple average (weighting each fund or share class equally). 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.

FIGURE 6.1

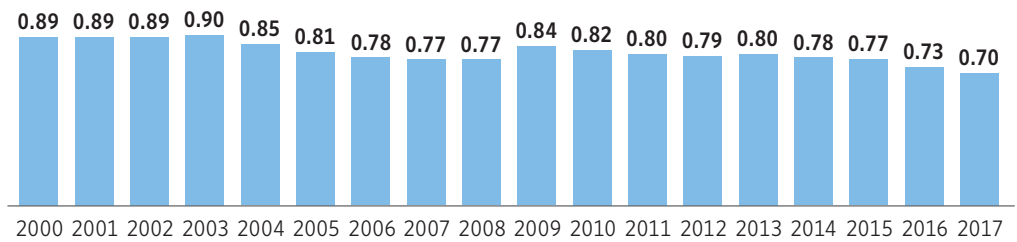
## Expense Ratios Incurred by Mutual Fund Investors Have Declined Substantially Since 2000

Percent, 2000-2017

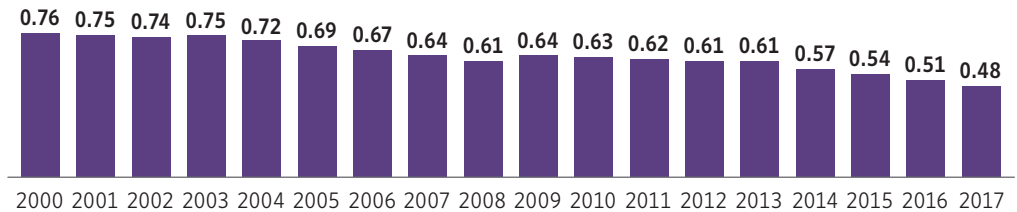
### Equity mutual funds



### Hybrid mutual funds



### Bond mutual funds



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

Sources: Investment Company Institute, Lipper, and Morningstar

### LEARN MORE

Trends in the Expenses and Fees of Funds, 2017

[www.ici.org/perspective](http://www.ici.org/perspective)

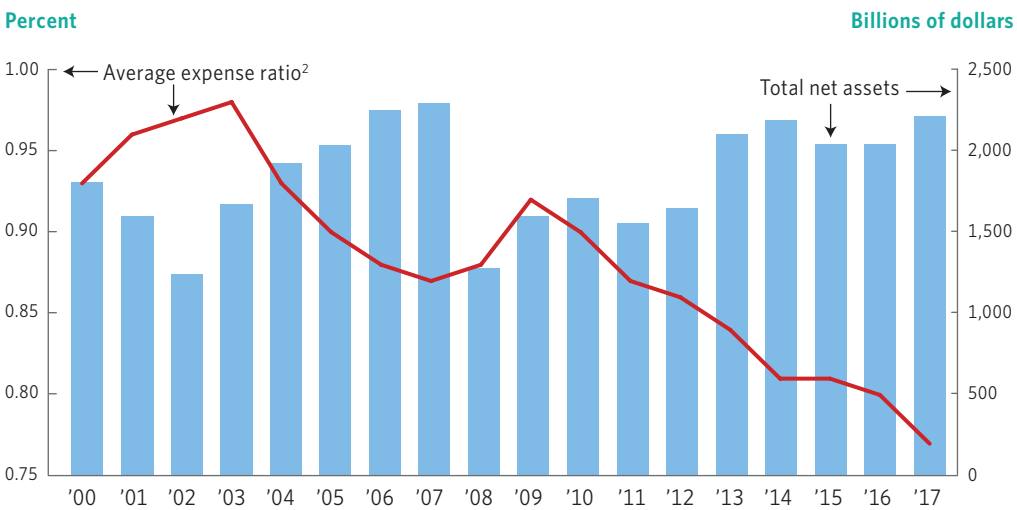
## Understanding the Decline in Mutual Fund Expense Ratios

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 2000<sup>1</sup>



<sup>1</sup> Calculations are based on a fixed sample of share classes. Data exclude mutual funds available as investment choices in variable annuities, index mutual funds, and mutual funds that invest primarily in other mutual funds.

<sup>2</sup> Expense ratios are measured as asset-weighted averages.

Sources: Investment Company Institute, Lipper, and Morningstar

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 131), 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 132).

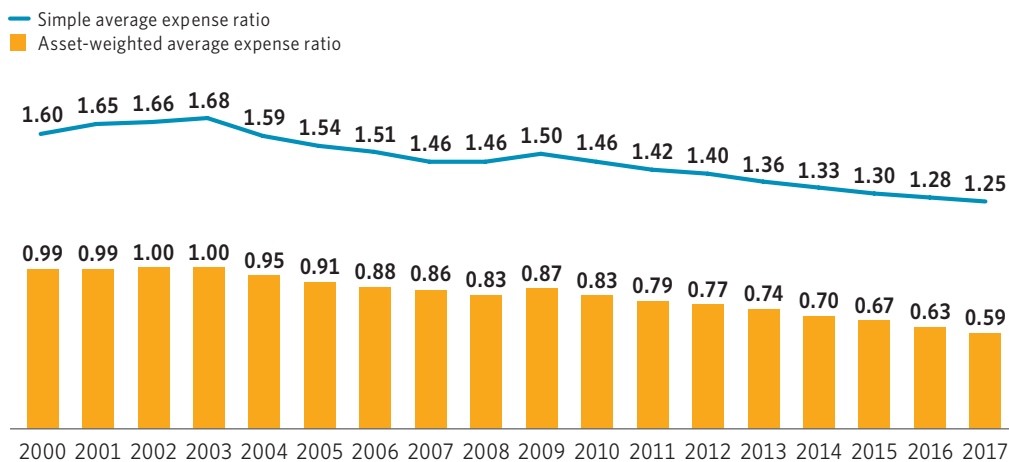
Mutual fund expense ratios also have fallen because of economies of scale and competition. Investor demand for mutual fund services has increased dramatically in recent years. From 1990 to 2017, the number of households owning mutual funds more than doubled—from 23.4 million to 56.2 million (see Figure 7.1 on page 142). 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 127 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 1.25 percent in 2017. The asset-weighted average expense ratio for equity mutual funds (the average shareholders actually paid) was far lower at 0.59 percent.

**FIGURE 6.3**

**Fund Shareholders Paid Below-Average Expense Ratios for Equity Mutual Funds**

*Percent, 2000–2017*



Note: Data exclude mutual funds available as investment choices in variable annuities and mutual funds that invest primarily in other mutual funds.

Sources: Investment Company Institute, Lipper, and Morningstar

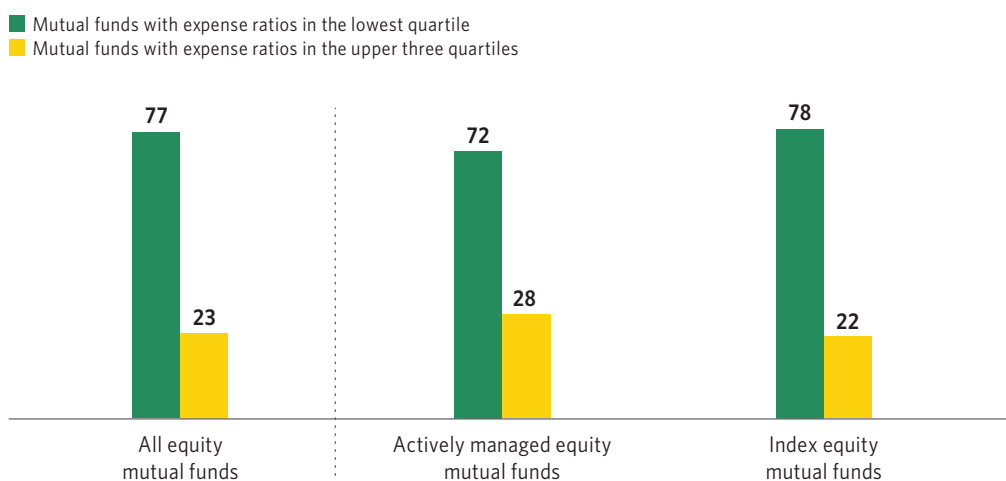


Another way to illustrate the tendency for investors to gravitate to lower-cost funds is to examine how they allocate their assets across funds according to their expense ratios. At year-end 2017, equity mutual funds with expense ratios in the lowest quartile held 77 percent of equity mutual funds' total net assets, while those with expense ratios in the upper three quartiles held only 23 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 72 percent of actively managed equity mutual funds' total net assets at year-end 2017, and lower-cost index equity mutual funds held 78 percent of index equity mutual funds' total net assets.

**FIGURE 6.4**

### Total Net Assets Are Concentrated in Lower-Cost Mutual Funds

*Percentage of total net assets, 2017*



Note: Data exclude mutual funds available as investment choices in variable annuities and mutual funds that invest primarily in other mutual funds.

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 page 123), fund assets (see page 125), and payments to financial intermediaries (see page 132).

## 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 0.70 percent or less, while the top 10 percent have expense ratios of 1.95 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 portfolio managers spend more time doing research.

FIGURE 6.5

### Mutual Fund Expense Ratios Vary Across Investment Objectives

Percent, 2017

Investment objective	10th percentile	Median	90th percentile	Asset-weighted average	Simple average
<b>Equity mutual funds<sup>1</sup></b>	<b>0.66</b>	<b>1.18</b>	<b>2.00</b>	<b>0.59</b>	<b>1.25</b>
Growth	0.70	1.14	1.95	0.73	1.21
Sector	0.76	1.33	2.13	0.76	1.37
Value	0.68	1.10	1.89	0.70	1.18
Blend	0.40	1.00	1.80	0.36	1.04
World	0.80	1.28	2.10	0.73	1.36
<b>Hybrid mutual funds<sup>1</sup></b>	<b>0.65</b>	<b>1.15</b>	<b>1.98</b>	<b>0.70</b>	<b>1.26</b>
<b>Bond mutual funds<sup>1</sup></b>	<b>0.45</b>	<b>0.81</b>	<b>1.61</b>	<b>0.48</b>	<b>0.93</b>
Investment grade	0.35	0.69	1.49	0.35	0.77
World	0.65	1.00	1.80	0.61	1.12
Government	0.29	0.74	1.60	0.40	0.82
High-yield	0.63	0.95	1.76	0.73	1.05
Municipal	0.48	0.77	1.57	0.51	0.90
<b>Money market funds<sup>1</sup></b>	<b>0.17</b>	<b>0.40</b>	<b>0.66</b>	<b>0.25</b>	<b>0.40</b>
<i>Memo:</i>					
<b>Target date mutual funds<sup>2</sup></b>	<b>0.36</b>	<b>0.77</b>	<b>1.49</b>	<b>0.44</b>	<b>0.85</b>
<b>Index equity mutual funds<sup>1</sup></b>	<b>0.06</b>	<b>0.33</b>	<b>1.53</b>	<b>0.09</b>	<b>0.61</b>

<sup>1</sup> Data exclude mutual funds available as investment choices in variable annuities and mutual funds that invest primarily in other mutual funds.

<sup>2</sup> 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

## Index Funds

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 Fund Expense Ratios

Growth in index mutual funds has contributed to the decline in asset-weighted average expense ratios of equity and bond mutual funds. From 2005 to 2017, index mutual fund total net assets grew significantly, from \$619 billion to \$3.4 trillion (Figure 6.6). Consequently, over the same period, index mutual funds' share of long-term mutual fund total net assets more than doubled, from 9.0 percent in 2005 to 21.2 percent in 2017. Within index mutual funds, index equity mutual funds accounted for the lion's share (81 percent) of index mutual fund total net assets in 2017.

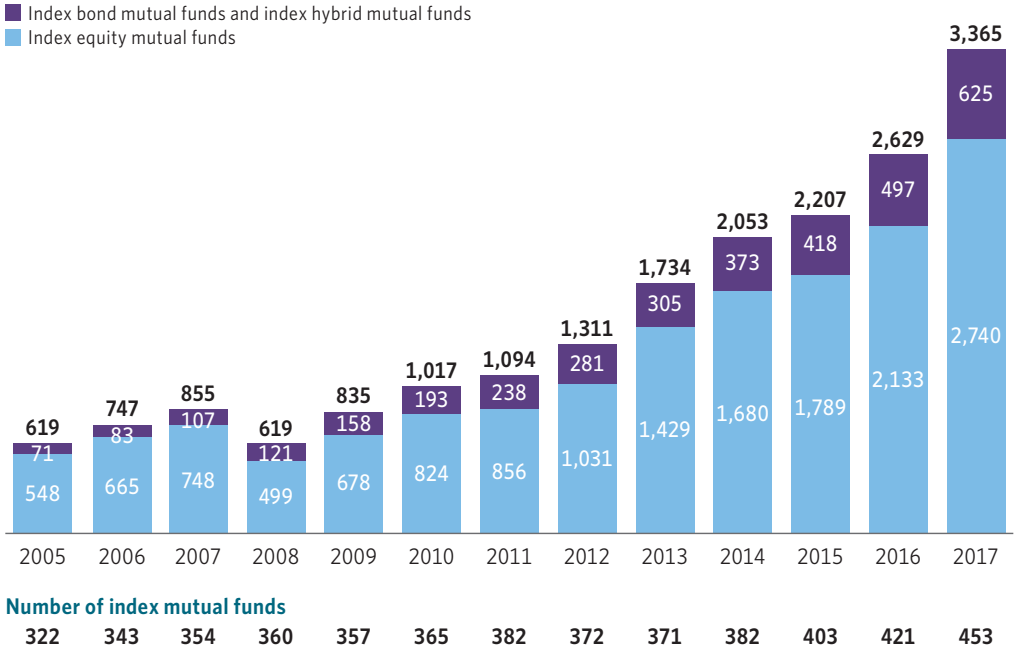
Index mutual funds tend to have below-average expense ratios for several reasons. First, their approach to portfolio management—in which managers generally seek to replicate the return on a specified index by buying and holding all, or a representative sample of, the securities in their target indexes—lends 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. Total 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. Total 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.

FIGURE 6.6

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

*Billions of dollars; year-end, 2005-2017*



Note: Data exclude mutual funds that invest primarily in other mutual funds. Components may not add to the total because of rounding.

Third, index mutual funds are larger on average than actively managed mutual funds, which, through economies of scale, helps reduce fund expense ratios. In 2017, the size of the average index equity mutual fund (\$7.1 billion) was four times as large as the size of the average actively managed equity mutual fund (\$1.8 billion).

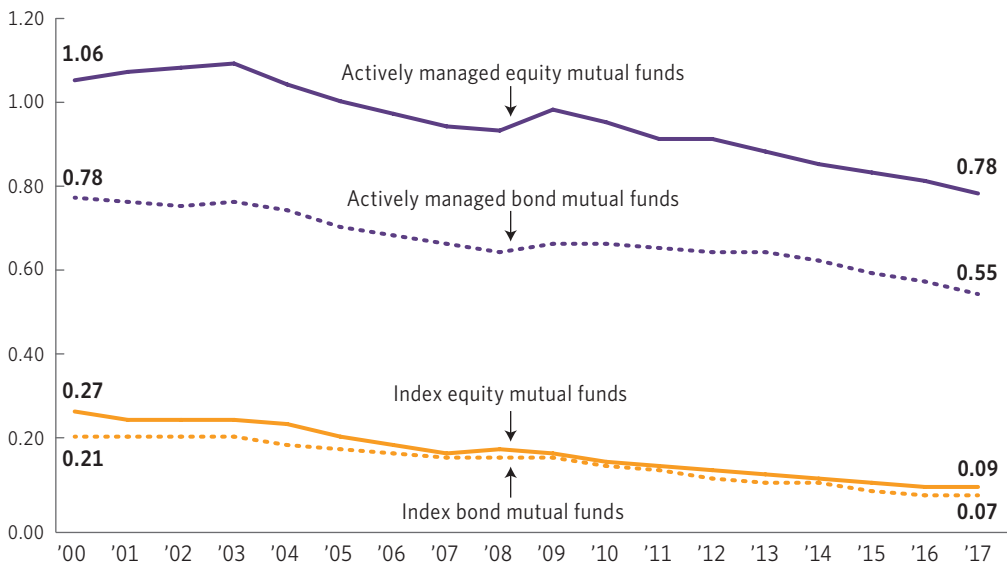
Finally, index mutual fund investors who hire financial professionals might pay for that service out of pocket, rather than through the fund’s expense ratio (see Mutual Fund Load Fees on page 132). In contrast, actively managed mutual funds more commonly have share classes that bundle those costs into 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 2017, the average expense ratio of index equity mutual funds fell from 0.27 percent to 0.09 percent, while the average expense ratio for actively managed equity mutual funds fell from 1.06 percent to 0.78 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 0.78 percent to 0.55 percent.

**FIGURE 6.7**

**Expense Ratios of Actively Managed and Index Mutual Funds Have Fallen**

*Percent, 2000-2017*



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

Sources: Investment Company Institute, Lipper, and Morningstar

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 ETF Expense Ratios**

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 \$301 billion at year-end 2005 to \$3.4 trillion at year-end 2017 (Figure 2.1). During this time, ETFs have become a significant market participant, with assets now accounting for about 15 percent of total net assets managed by investment companies at year-end 2017. ETFs are largely index-based and 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 3.3 percent of ETF total net assets at year-end 2017. Like index mutual funds, most of the total net assets in ETFs are in funds that focus on equities. Equity ETFs account for more than 80 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 0.04 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 0.50 percent in 2017. The asset-weighted average expense ratio for index equity ETFs (the average shareholders actually paid) was less than half of that, 0.21 percent. The same holds for index bond ETFs, with a simple average expense ratio of 0.29 percent in 2017 and an asset-weighted average expense ratio of 0.18 percent.

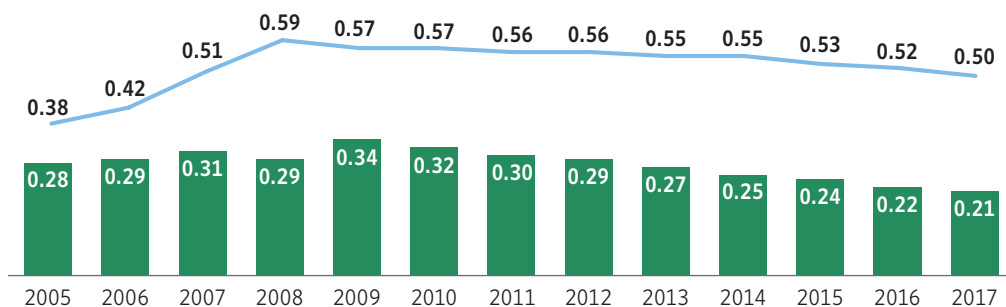
FIGURE 6.8

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

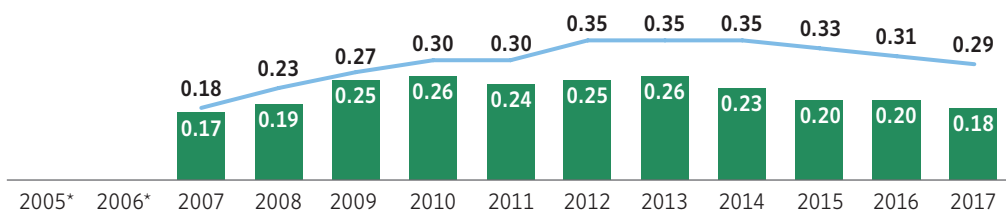
Percent, 2005-2017

- 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 and ETFs that invest primarily in other ETFs.

Sources: Investment Company Institute and Morningstar

#### LEARN MORE

Understanding Exchange-Traded Funds: How ETFs Work

[www.ici.org/perspective](http://www.ici.org/perspective)

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 0.46 percent in 2017, compared to the asset-weighted average expense ratio of 0.18 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, 2017

Investment objective	10th percentile	Median	90th percentile	Asset-weighted average	Simple average
<b>Index equity ETFs</b>	<b>0.14</b>	<b>0.48</b>	<b>0.95</b>	<b>0.21</b>	<b>0.50</b>
Growth	0.07	0.30	0.64	0.19	0.34
Sector	0.14	0.50	0.95	0.27	0.54
Value	0.09	0.30	0.64	0.22	0.34
Blend	0.10	0.38	0.95	0.13	0.45
World	0.25	0.50	0.85	0.32	0.54
<b>Index hybrid ETFs</b>	<b>0.49</b>	<b>0.63</b>	<b>0.87</b>	<b>0.56</b>	<b>0.66</b>
<b>Index bond ETFs</b>	<b>0.08</b>	<b>0.24</b>	<b>0.50</b>	<b>0.18</b>	<b>0.29</b>
Corporate	0.07	0.15	0.25	0.10	0.17
World	0.25	0.46	0.50	0.36	0.42
Government	0.07	0.15	0.95	0.18	0.31
High-yield	0.30	0.44	0.80	0.46	0.48
Municipal	0.18	0.25	0.35	0.24	0.26
<b>Memo:</b>					
<b>Active equity ETFs</b>	<b>0.48</b>	<b>0.83</b>	<b>1.05</b>	<b>0.86</b>	<b>0.84</b>

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 and ETFs that invest primarily in other ETFs.

Sources: Investment Company Institute and Morningstar



## 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 US Securities and Exchange Commission 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 their broker) 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.

**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, 79 percent own mutual fund shares through investment professionals (Figure 7.9). 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 \$1.2 trillion in net outflows (Figure 6.10), and gross sales of back-end load share classes have dwindled almost to zero (Figure 6.11). As a result, the percentage of long-term mutual fund total net assets held in front-end and back-end load share classes fell by half, from 26 percent at year-end 2008 to 13 percent at year-end 2017 (Figure 6.12).

By contrast, no-load share classes have seen net inflows and rising total net assets over the past 10 years. 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—have accumulated the bulk of the net inflows to long-term mutual funds over this period (Figure 6.10). At year-end 2008, no-load share classes accounted for 53 percent of long-term mutual fund total net assets, rising to 70 percent by year-end 2017 (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 DC 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.

FIGURE 6.10

### No-Load Share Classes Garnered Positive Net New Cash Flow in 2017

Billions of dollars, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>All long-term mutual funds</b>	<b>-\$211</b>	<b>\$393</b>	<b>\$244</b>	<b>\$28</b>	<b>\$200</b>	<b>\$162</b>	<b>\$98</b>	<b>-\$122</b>	<b>-\$197</b>	<b>\$67</b>
<b>Load</b>	<b>-156</b>	<b>9</b>	<b>-62</b>	<b>-130</b>	<b>-77</b>	<b>-70</b>	<b>-174</b>	<b>-130</b>	<b>-234</b>	<b>-296</b>
Front-end <sup>1</sup>	-105	2	-56	-100	-67	-56	-160	-101	-183	-221
Back-end <sup>2</sup>	-39	-24	-27	-23	-16	-11	-9	-7	-5	-2
Level <sup>3</sup>	-13	31	21	-6	6	-2	-4	-22	-46	-72
Other <sup>4</sup>	(*)	(*)	(*)	(*)	-1	(*)	(*)	(*)	(*)	(*)
Unclassified <sup>5</sup>	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
<b>No-load<sup>6</sup></b>	<b>-66</b>	<b>322</b>	<b>265</b>	<b>168</b>	<b>299</b>	<b>270</b>	<b>338</b>	<b>77</b>	<b>117</b>	<b>447</b>
Retail	-96	137	55	-46	16	38	111	8	-37	33
Institutional	30	185	210	214	283	232	226	69	154	414
<b>Variable annuities</b>	<b>-26</b>	<b>29</b>	<b>8</b>	<b>-21</b>	<b>-26</b>	<b>-51</b>	<b>-64</b>	<b>-67</b>	<b>-78</b>	<b>-112</b>
<b>"R" share classes<sup>7</sup></b>	<b>37</b>	<b>33</b>	<b>33</b>	<b>10</b>	<b>4</b>	<b>13</b>	<b>-2</b>	<b>-2</b>	<b>-2</b>	<b>27</b>

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

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

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

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

<sup>5</sup> This category contains load share classes with missing load fee data.

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

<sup>7</sup> "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

Note: Components may not add to the totals because of rounding. Data exclude mutual funds that invest primarily in other mutual funds.

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, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>All long-term mutual funds</b>	<b>\$2,418</b>	<b>\$2,375</b>	<b>\$2,701</b>	<b>\$2,860</b>	<b>\$2,963</b>	<b>\$3,510</b>	<b>\$3,609</b>	<b>\$3,506</b>	<b>\$3,555</b>	<b>\$3,940</b>
<b>Load</b>	<b>604</b>	<b>559</b>	<b>566</b>	<b>543</b>	<b>509</b>	<b>598</b>	<b>544</b>	<b>490</b>	<b>427</b>	<b>365</b>
Front-end <sup>1</sup>	482	435	445	438	403	474	431	387	352	307
Back-end <sup>2</sup>	20	10	7	4	3	3	2	2	1	(*)
Level <sup>3</sup>	97	112	111	98	99	119	109	99	73	56
Other <sup>4</sup>	4	2	2	2	4	3	1	2	1	1
Unclassified <sup>5</sup>	1	(*)	1	(*)	(*)	(*)	(*)	(*)	1	1
<b>No-load<sup>6</sup></b>	<b>1,414</b>	<b>1,446</b>	<b>1,706</b>	<b>1,897</b>	<b>2,049</b>	<b>2,498</b>	<b>2,689</b>	<b>2,616</b>	<b>2,735</b>	<b>3,185</b>
Retail	807	825	934	948	973	1,153	1,226	1,229	1,226	1,333
Institutional	607	621	771	949	1,076	1,345	1,463	1,387	1,509	1,852
<b>Variable annuities</b>	<b>308</b>	<b>270</b>	<b>318</b>	<b>310</b>	<b>295</b>	<b>287</b>	<b>236</b>	<b>248</b>	<b>246</b>	<b>186</b>
<b>"R" share classes<sup>7</sup></b>	<b>91</b>	<b>100</b>	<b>112</b>	<b>111</b>	<b>109</b>	<b>126</b>	<b>139</b>	<b>152</b>	<b>148</b>	<b>204</b>

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

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

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

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

<sup>5</sup> This category contains load share classes with missing load fee data.

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

<sup>7</sup> "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

Note: Components may not add to the totals because of rounding. Data exclude mutual funds that invest primarily in other mutual funds.

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, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>All long-term mutual funds</b>	<b>\$5,788</b>	<b>\$7,795</b>	<b>\$9,030</b>	<b>\$8,942</b>	<b>\$10,361</b>	<b>\$12,331</b>	<b>\$13,149</b>	<b>\$12,897</b>	<b>\$13,616</b>	<b>\$15,899</b>
<b>Load</b>	<b>1,722</b>	<b>2,185</b>	<b>2,352</b>	<b>2,176</b>	<b>2,361</b>	<b>2,651</b>	<b>2,614</b>	<b>2,440</b>	<b>2,370</b>	<b>2,382</b>
Front-end <sup>1</sup>	1,374	1,750	1,882	1,751	1,892	2,148	2,115	1,989	1,946	1,990
Back-end <sup>2</sup>	102	98	78	50	39	32	24	15	9	6
Level <sup>3</sup>	237	328	381	367	417	459	468	429	408	378
Other <sup>4</sup>	7	8	8	7	11	10	7	6	6	7
Unclassified <sup>5</sup>	2	2	3	1	2	2	1	(*)	1	2
<b>No-load<sup>6</sup></b>	<b>3,067</b>	<b>4,248</b>	<b>5,089</b>	<b>5,224</b>	<b>6,261</b>	<b>7,598</b>	<b>8,382</b>	<b>8,373</b>	<b>9,093</b>	<b>11,056</b>
Retail	1,951	2,659	3,067	2,991	3,464	4,142	4,639	4,586	4,875	5,647
Institutional	1,116	1,589	2,022	2,233	2,798	3,456	3,743	3,787	4,219	5,409
<b>Variable annuities</b>	<b>854</b>	<b>1,129</b>	<b>1,291</b>	<b>1,251</b>	<b>1,398</b>	<b>1,630</b>	<b>1,672</b>	<b>1,597</b>	<b>1,638</b>	<b>1,794</b>
<b>“R” share classes<sup>7</sup></b>	<b>146</b>	<b>233</b>	<b>297</b>	<b>290</b>	<b>340</b>	<b>452</b>	<b>480</b>	<b>487</b>	<b>514</b>	<b>666</b>

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

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

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

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

<sup>5</sup> This category contains load share classes with missing load fee data.

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

<sup>7</sup> “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

Note: Components may not add to the totals because of rounding. Data exclude mutual funds that invest primarily in other mutual funds.

Sources: Investment Company Institute, Lipper, and Morningstar

## Services and Expenses in 401(k) Plans

Over the past two and a half decades, mutual funds have become the primary vehicle for 401(k) plan investments, with the share of employer-sponsored 401(k) plan assets invested in mutual funds rising from 9 percent at year-end 1990 to 67 percent at year-end 2017.

Two competing economic pressures confront employers: the need to attract and retain quality workers with competitive compensation packages and the need to keep their products and services competitively priced. In deciding whether to offer 401(k) plans to their workers, employers must decide if the benefits of offering a plan (in attracting and retaining quality workers) outweigh the costs of providing the plan and plan services. These costs are both the contributions the employer may make to an employee's 401(k) account and the costs associated with setting up and administering the 401(k) plan on an ongoing basis.

To provide and maintain 401(k) plans, regulations require employers to obtain a variety of administrative, participant-focused, regulatory, and compliance services. Employers offering 401(k) plans typically hire service providers to operate these plans, and these providers charge fees for their services.

As with any employee benefit, the employer generally determines how the costs of providing the benefit will be shared between the employer and employee. 401(k) plan fees can be paid directly by the plan sponsor (the employer), directly by the plan participant (the employee), indirectly by the participant through fees or other reductions in returns paid to the investment provider, or by some combination of these methods (Figure 6.13).

One key driver of 401(k) plan fees is plan size. A BrightScope/ICI study of 2015 data for more than 15,000 large 401(k) plans found that plans with more assets had lower mutual fund expense ratios than those with less assets. For example, the asset-weighted average expense ratio for domestic equity mutual funds held in large 401(k) plans in 2015 ranged from 0.81 percent in plans with between \$1 and \$10 million in plan assets to 0.36 percent in plans with more than \$1 billion in plan assets. These results are consistent across different investment objectives.

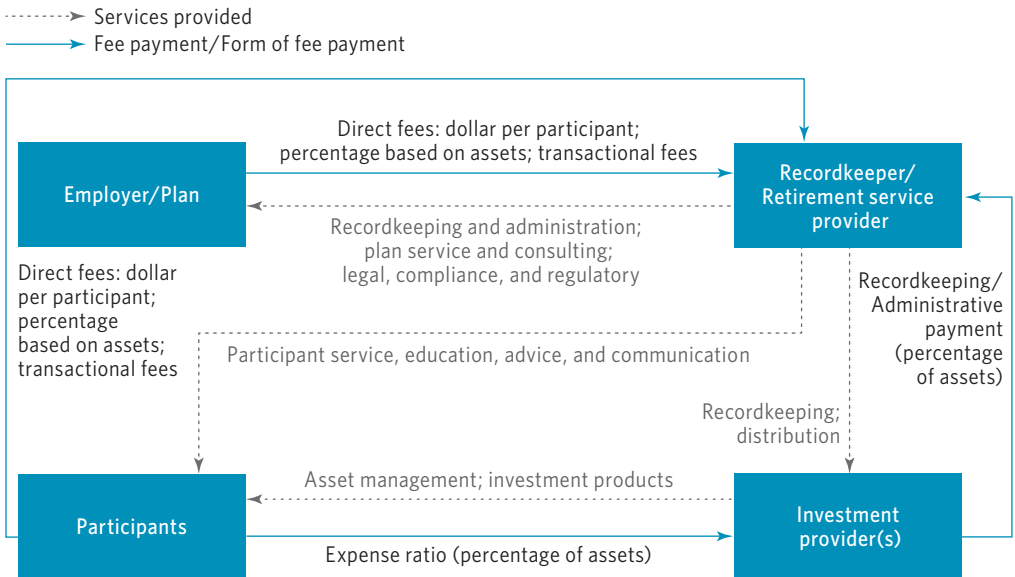


### LEARN MORE

The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2016  
[www.ici.org/perspective](http://www.ici.org/perspective)

FIGURE 6.13

A Variety of Arrangements May Be Used to Compensate 401(k) Service Providers



Note: In selecting the service provider(s) and deciding the cost sharing for the 401(k) plan, the employer/plan sponsor will determine which combinations of these fee arrangements will be used in the plan.

Source: ICI Research Perspective, "The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2016"

LEARN MORE

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

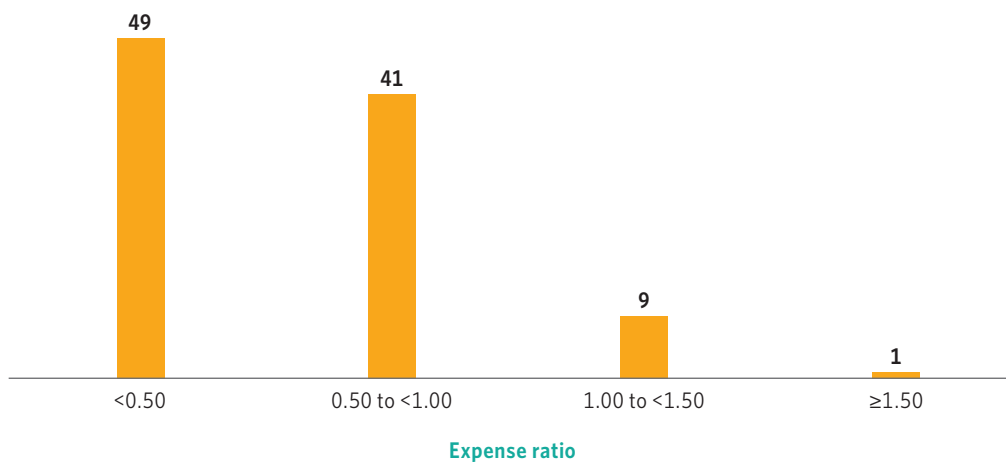


Sixty-seven percent of 401(k) assets at year-end 2017 were invested in mutual funds, mainly equity mutual funds (60 percent of 401(k) mutual fund assets or 40 percent of all 401(k) plan assets). 401(k) plan participants investing in mutual funds tend to invest in lower-cost funds and funds with below-average portfolio turnover. For example, at year-end 2016, 49 percent of 401(k) equity mutual fund assets were in funds that had average expense ratios of less than 0.50 percent, and another 41 percent had expense ratios between 0.50 and 1.00 percent (Figure 6.14). Taking into account both the funds offered in 401(k) plans and the distribution of assets in those funds, 401(k) plan participants who invested in equity mutual funds paid 0.48 percent on average in 2016, less than the asset-weighted average expense ratio of 0.63 percent for equity mutual funds industrywide. Similarly, equity mutual funds held in 401(k) accounts tend to have lower portfolio turnover in their portfolios. The asset-weighted average turnover rate of equity mutual funds held in 401(k) accounts was 28 percent in 2016, less than the industrywide asset-weighted average of 34 percent.

FIGURE 6.14

### 401(k) Equity Mutual Fund Assets Are Concentrated in Lower-Cost Funds

Percentage of 401(k) equity mutual fund assets, 2016



Note: Data exclude mutual funds available as investment choices in variable annuities and mutual funds that invest primarily in other mutual funds.


Sources: Investment Company Institute and Morningstar. See *ICI Research Perspective*, “The Economics of Providing 401(k) Plans: Services, Fees, and Expenses, 2016.”

## CHAPTER SEVEN

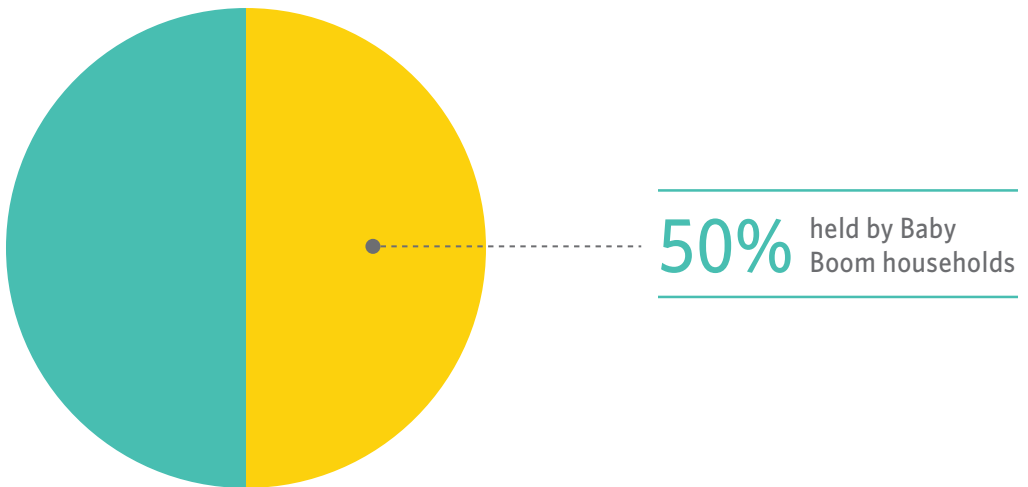
# Characteristics of US Mutual Fund Owners

---

The percentage of US households owning mutual funds grew eightfold in the 1980s and 1990s, and has held steady for the past 17 years, averaging about 45 percent since 2000. In mid-2017, nearly 45 percent of all US households owned mutual funds. The estimated 100 million people who owned mutual funds in mid-2017 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-eight percent of Baby Boom households owned mutual funds in mid-2017. They accounted for 37 percent of mutual fund-owning households and held half of households' mutual fund assets.



## Half of household mutual fund assets were held by Baby Boom households in 2017



### IN THIS CHAPTER

- 142** Individual and Household Ownership of Mutual Funds
- 148** Households' First Mutual Fund Purchase
- 150** Where Investors Own Mutual Funds
- 157** Shareholder Sentiment, Willingness to Take Investment Risk, and Confidence
- 161** Shareholder Use of the Internet

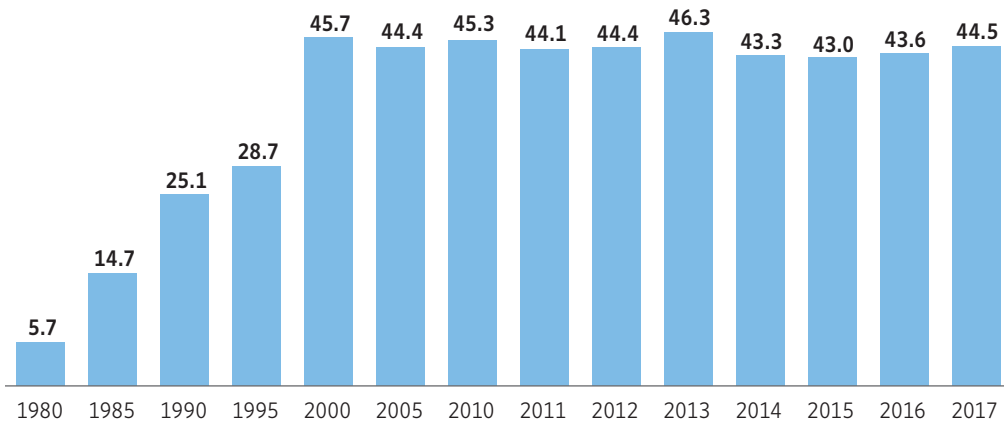
## Individual and Household Ownership of Mutual Funds

In mid-2017, an estimated 100 million individual investors owned mutual funds—and at year-end 2017, these investors held 90 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, 44.5 percent of US households—or about 56.2 million—owned mutual funds in mid-2017, nearly identical to the 2000–2017 average of about 45 percent (Figure 7.1). Mutual funds were a major component of many US households’ financial holdings in mid-2017. Among households owning mutual funds, the median amount invested in mutual funds was \$120,000 (Figure 7.2). Seventy-two percent of individuals heading households that owned mutual funds were married or living with a partner, about half were college graduates, and 74 percent worked full- or part-time.

**FIGURE 7.1**

### 44.5 Percent of US Households Owned Mutual Funds in 2017

*Percentage of US households owning mutual funds, selected years*



### Millions of US households owning mutual funds

4.6 12.8 23.4 28.4 48.6 50.3 53.2 52.9 53.8 56.7 53.2 53.6 54.9 56.2

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

Sources: Investment Company Institute and US Census Bureau. See *ICI Research Perspective*, “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017.”

FIGURE 7.2

## Characteristics of Mutual Fund Investors

Mid-2017

### How many people own mutual funds?

100.0 million individuals

56.2 million US households

---

### Who are they?

51 is the median age of the head of household

72 percent are married or living with a partner

51 percent are college graduates

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

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

37 percent are Baby Boomers (born 1946 to 1964)

33 percent are Generation X (born 1965 to 1980)

20 percent are Millennial Generation (born 1981 to 2004)\*

\$100,000 is the median household income

---

### What do they own?

\$200,000 is the median household financial assets

\$120,000 is the median mutual fund assets

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

64 percent own IRAs

85 percent own DC retirement plan accounts

3 mutual funds is the median number owned

87 percent own equity funds

---

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

53 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?

92 percent are saving for retirement

47 percent are saving for emergencies

49 percent hold mutual funds to reduce taxable income

23 percent are saving for education

\* The Millennial Generation is aged 13 to 36 in 2017; however, survey respondents must be 18 or older.

Sources: *ICI Research Perspective*, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017"; *ICI Research Perspective*, "Characteristics of Mutual Fund Investors, 2017"; and *ICI Research Report*, "Profile of Mutual Fund Shareholders, 2017"

## 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 mid-2017. Forty-eight percent of households headed by a Baby Boomer (head of household born between 1946 and 1964) and 53 percent of households headed by a member of Generation X (born between 1965 and 1980) owned mutual funds in mid-2017 (Figure 7.3). Thirty-eight percent of Millennial Generation households (born between 1981 and 2004) and 31 percent of Silent and GI Generation households (born between 1904 and 1945) owned mutual funds in mid-2017.

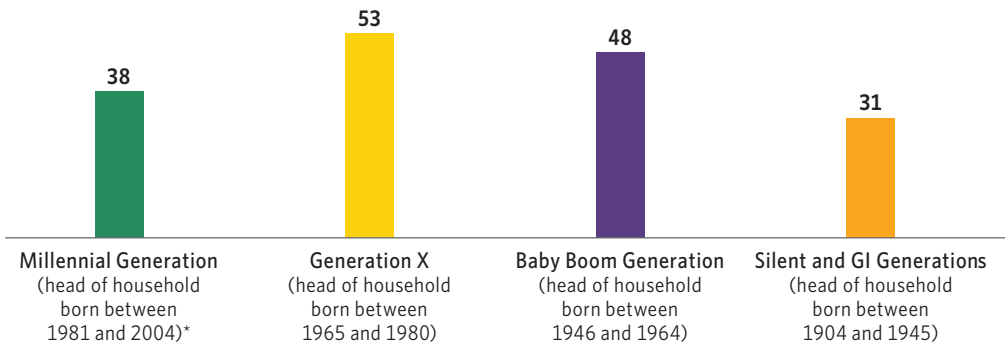
Among mutual fund-owning households in mid-2017, 37 percent were headed by members of the Baby Boom Generation, 33 percent were headed by members of Generation X, 20 percent were headed by members of the Millennial Generation, and 10 percent were headed by members of the Silent and GI Generations (Figure 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 owning mutual funds, mid-2017

#### Head of household generation



#### Age of head of household in 2017

18 to 36\*

37 to 52

53 to 71

72 or older

\* The Millennial Generation is aged 13 to 36 in 2017; however, survey respondents 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, 2017"

#### LEARN MORE

Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017  
[www.ici.org/perspective](http://www.ici.org/perspective)

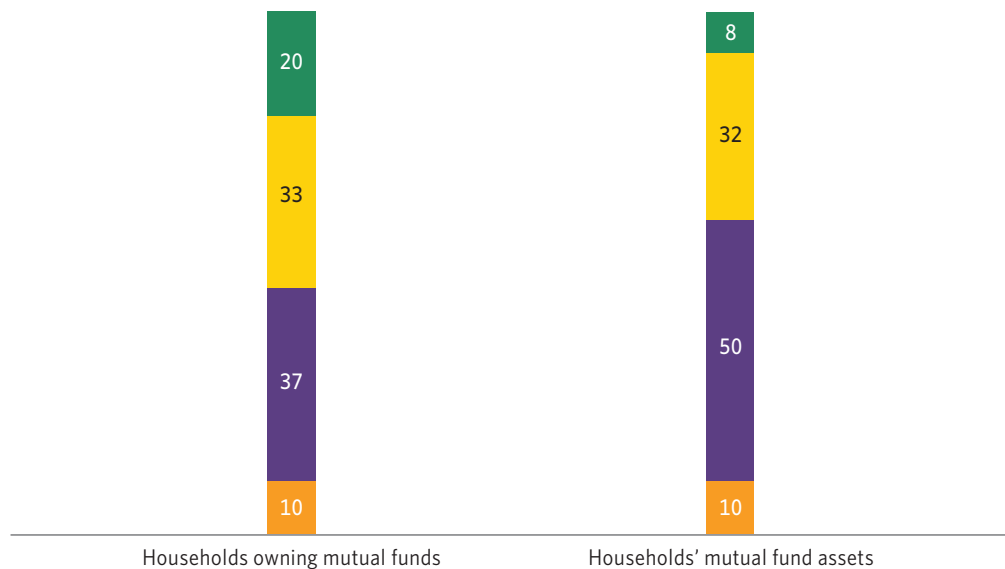
Not only were Baby Boomers the largest shareholder group in mid-2017, they also held the largest percentage of households' mutual fund assets, at 50 percent (Figure 7.4). Households headed by members of Generation X (32 percent), the Silent and GI Generations (10 percent), and the Millennial Generation (8 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 that are in their peak earning and saving years.

**FIGURE 7.4**

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

*Percentage of US households owning mutual funds and mutual fund assets by generation, mid-2017*

- 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 13 to 36 in 2017; however, survey respondents 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, 2017"



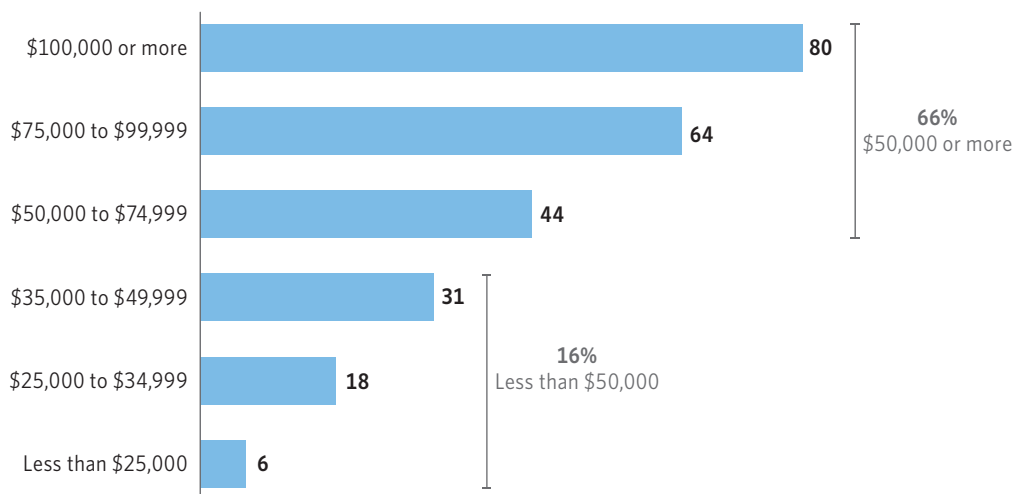
Households with higher annual incomes are more likely to own mutual funds than those with lower annual incomes. In mid-2017, 66 percent of US households with annual income of \$50,000 or more owned mutual funds, compared with 16 percent of households with annual income of less than \$50,000 (Figure 7.5). In fact, lower-income households tend to have less savings of any kind than higher-income households. The typical household with less than \$50,000 in annual income had \$10,000 in savings and investments, while the typical household with annual income of \$50,000 or more held \$200,000 in savings and investments.

**FIGURE 7.5**

**Ownership of Mutual Funds Increases with Household Income**

*Percentage of US households within each income group owning mutual funds, mid-2017*

**Household income**



Note: Total reported is household income before taxes in 2016.

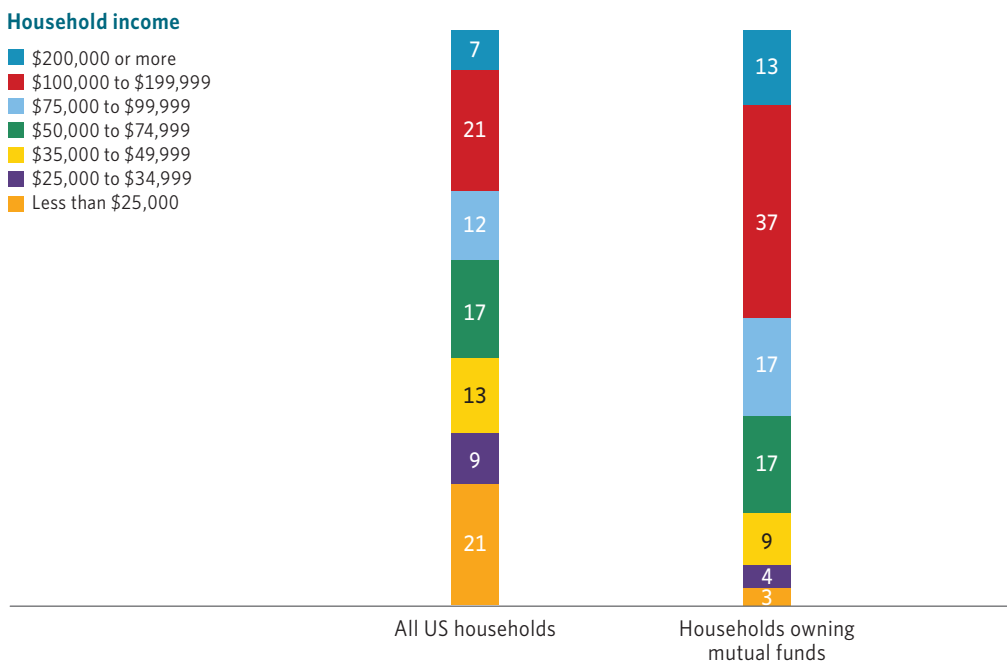
Source: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017"

US households owning mutual funds had a range of annual incomes in mid-2017: 16 percent had annual income of less than \$50,000; 17 percent had between \$50,000 and \$74,999; 17 percent had between \$75,000 and \$99,999; and the remaining 50 percent had \$100,000 or more (Figure 7.6). The median income of mutual fund-owning households in mid-2017 was \$100,000 (Figure 7.2).

**FIGURE 7.6**

**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, mid-2017*



Note: Total reported is household income before taxes in 2016.

Source: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017"

## Households' First Mutual Fund Purchase

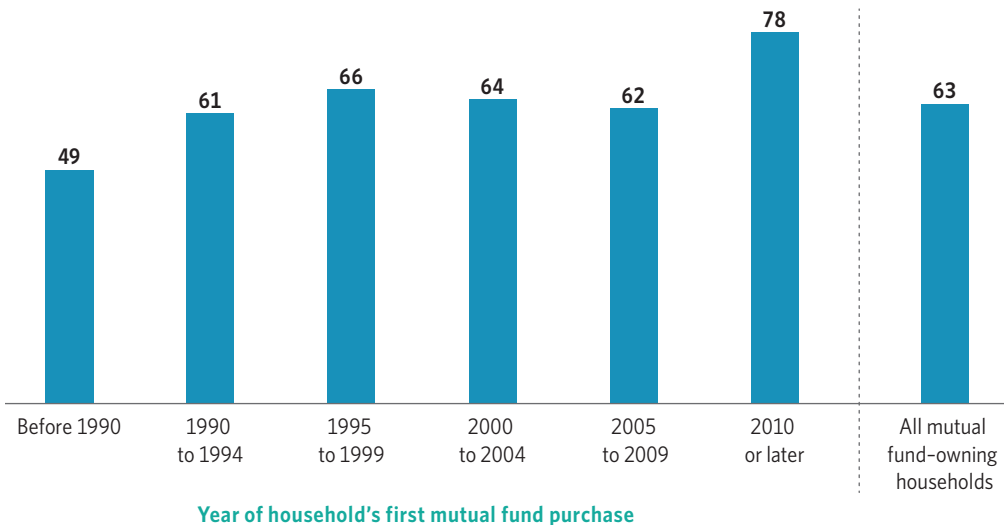
Mutual fund-owning households often purchase their first mutual fund through employer-sponsored retirement plans. In mid-2017, across all mutual fund-owning households, 63 percent had purchased their first fund through that channel (Figure 7.7). Households that made their first mutual fund purchase more recently were more likely to have done so through employer-sponsored retirement plans. Among households that bought their first mutual fund in 2010 or later, 78 percent bought that first fund through such a plan, compared with 49 percent of households that first purchased mutual funds before 1990.

FIGURE 7.7

### Employer-Sponsored Retirement Plans Are Increasingly the Source of First Mutual Fund Purchase

Percentage of US households owning mutual funds, mid-2017

#### First purchase was inside employer-sponsored retirement plan



Note: 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, 2017"

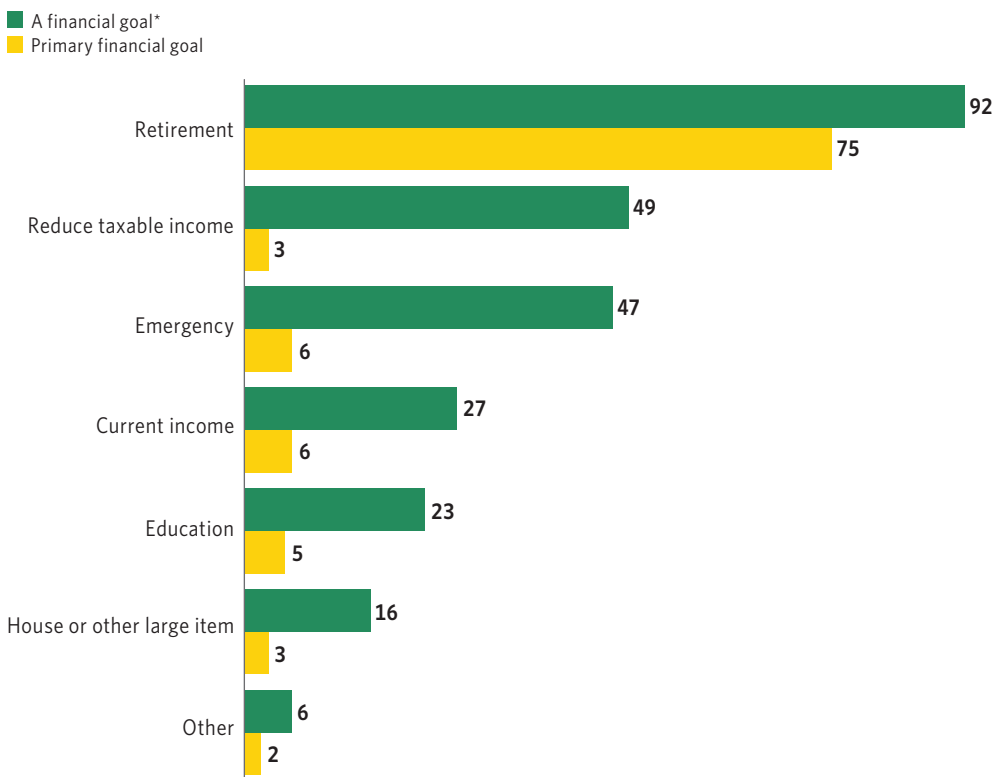
## Savings Goals of Mutual Fund Investors

Mutual funds play a key role in the long- and short-term savings goals of US households. In mid-2017, 92 percent of mutual fund-owning households indicated that saving for retirement was one of their financial goals, and 75 percent said it was their primary financial goal (Figure 7.8). Retirement, however, is not the only financial goal for mutual fund-owning households—49 percent reported reducing taxable income as a goal; 47 percent reported saving for emergencies as a goal; and 23 percent reported saving for education as a goal.

FIGURE 7.8

### Majority of Mutual Fund Investors Focus on Retirement

Percentage of US households owning mutual funds, mid-2017



\* Multiple responses are included.

Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2017"

### LEARN MORE

**Focus on Funds: Latest Data Underscore Importance of 401(k)**

[www.ici.org/retirement/access/ret\\_workers/fof\\_12\\_01\\_17\\_401kebri\\_holden](http://www.ici.org/retirement/access/ret_workers/fof_12_01_17_401kebri_holden)

## Where Investors Own Mutual Funds

The importance that mutual fund-owning households place on retirement saving is reflected in where they own their funds—94 percent of these households held mutual fund shares inside employer-sponsored retirement plans, individual retirement accounts (IRAs), and variable annuities in mid-2017. It also is 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 \$8.5 trillion at year-end 2017, or 53 percent of those funds' total net assets industrywide (Figure 8.24). By contrast, DC retirement plan and IRA assets in money market funds totaled just \$364 billion, or 13 percent of those funds' total net assets industrywide.

In mid-2017, 81 percent of mutual fund-owning households held funds inside employer-sponsored retirement plans, with 36 percent owning funds only inside such plans (Figure 7.9). Sixty-four percent of mutual fund-owning households held funds outside employer-sponsored retirement accounts, with 19 percent owning funds only outside such plans. For mutual fund-owning households without mutual funds in employer-sponsored retirement plans, 55 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).

Households owning mutual funds outside employer-sponsored retirement plans buy their fund shares through a variety of sources. In mid-2017, 79 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 7.9). Thirty-seven percent of these households owned funds purchased solely with the help of an investment professional, and another 42 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.

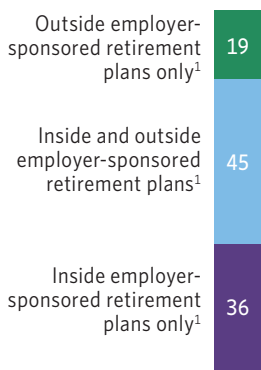
**FIGURE 7.9**

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

Mid-2017

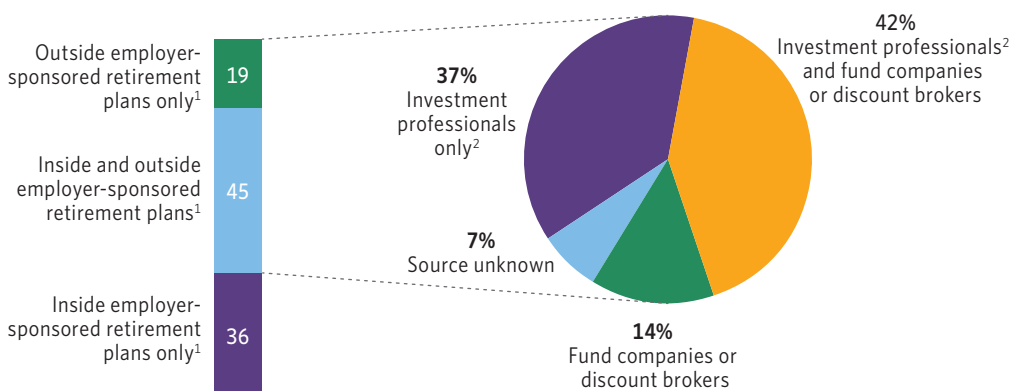
#### Sources of mutual fund ownership

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 plans<sup>1</sup>



<sup>1</sup> 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).

<sup>2</sup> 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, 2017"

#### LEARN MORE

**Focus on Funds: Individual Retirement Accounts Serve a Diverse Range of Investors**

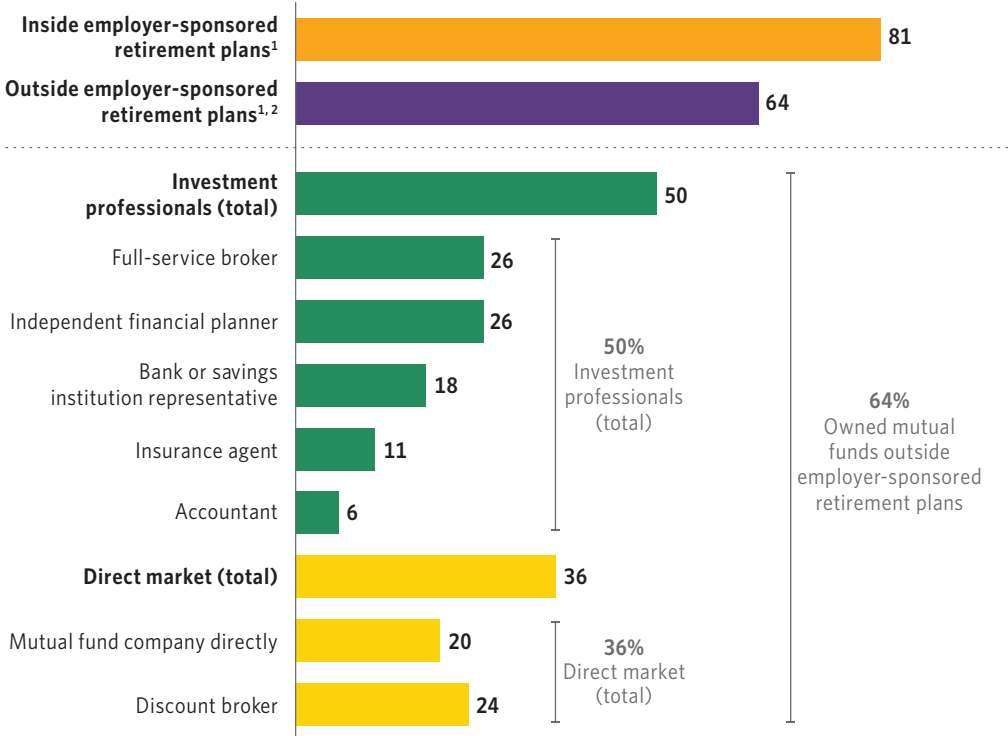
[www.ici.org/research/retirement/ira/fof\\_12\\_08\\_17\\_iras\\_holden](http://www.ici.org/research/retirement/ira/fof_12_08_17_iras_holden)

In mid-2017, 81 percent of mutual fund-owning households held mutual funds through employer-sponsored retirement plans, and 64 percent owned mutual funds outside such plans (Figures 7.9 and 7.10). This latter group purchased funds through two sources: investment professionals and the direct market channel (Figure 7.10). In mid-2017, half of households owning mutual funds held funds purchased through an investment professional and 36 percent owned funds purchased through the direct market channel.

**FIGURE 7.10**

**Mutual Fund Investors Purchase Mutual Funds Through a Variety of Channels**

*Percentage of US households owning mutual funds, mid-2017*



<sup>1</sup> 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).

<sup>2</sup> Four percent of households owning mutual funds outside of employer-sponsored retirement plans did not indicate which source was used to purchase funds. This 4 percent includes 3 percent owning funds both inside and outside employer-sponsored retirement plans and 1 percent owning funds only outside of employer-sponsored retirement plans.

Note: Multiple responses are included.

Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2017"



**LEARN MORE**

Characteristics of Mutual Fund Investors, 2017

[www.ici.org/perspective](http://www.ici.org/perspective)

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 mid-2017, 43 percent of mutual fund-owning households in the Millennial Generation owned funds only inside employer-sponsored retirement plans, compared with 31 percent of mutual fund-owning households in the Baby Boom Generation (Figure 7.11). Fifty-seven percent of mutual fund-owning households in the Millennial Generation owned funds outside of employer-sponsored retirement plans, compared with 69 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 mid-2017, 46 percent of Generation X households and 50 percent of Baby Boom households that owned mutual funds owned mutual funds both inside and outside employer-sponsored retirement plans, compared with 40 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.

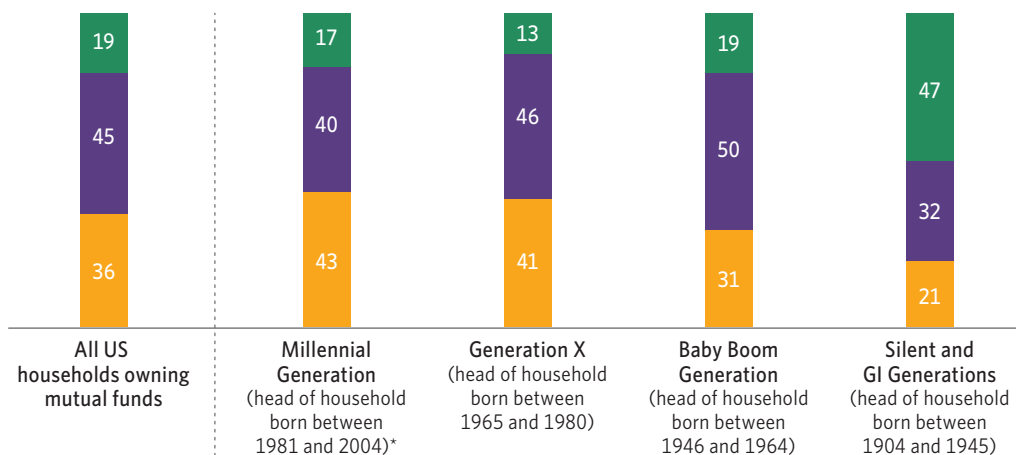
**FIGURE 7.11**

### Mutual Fund Ownership Inside and Outside of Employer-Sponsored Retirement Plans

Percentage of US households owning mutual funds by generation, mid-2017

#### Sources of mutual fund ownership

- Outside employer-sponsored retirement plans only
- Inside and outside employer-sponsored retirement plans
- Inside employer-sponsored retirement plans only



\* The Millennial Generation is aged 13 to 36 in 2017; however, survey respondents 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, 2017"

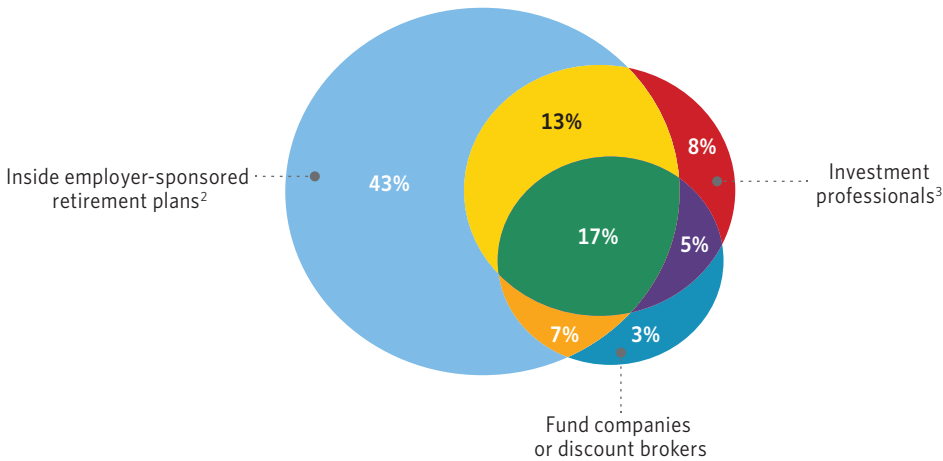


As discussed earlier, where households own mutual funds tends to vary with the generation of the head of household. In mid-2017, 83 percent of mutual fund-owning households in the Millennial Generation held mutual funds inside employer-sponsored retirement plans (Figures 7.11 and 7.12).\* Forty-three percent held mutual funds only inside employer-sponsored retirement plans, 43 percent owned mutual funds through investment professionals, and 32 percent held funds directly through fund companies or discount brokers.

**FIGURE 7.12**

**Millennial Mutual Fund-Owning Households Are More Likely to Hold Funds Through Employer-Sponsored Retirement Plans**

*Percentage of US households owning mutual funds in the Millennial Generation,<sup>1</sup> mid-2017*



<sup>1</sup> Generation is based on the age of the household sole or co-decisionmaker for saving and investing. The Millennial Generation (head of household born between 1981 and 2004) is aged 13 to 36 in 2017; however, survey respondents must be 18 or older.

<sup>2</sup> 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).

<sup>3</sup> Investment professionals include registered investment advisers, full-service brokers, independent financial planners, bank and savings institution representatives, insurance agents, and accountants.

Note: Figure does not add to 100 percent because 4 percent of mutual fund-owning households in the Millennial Generation owned funds outside of employer-sponsored retirement plans, but did not indicate which source was used to purchase funds. This 4 percent includes 3 percent owning funds both inside and outside employer-sponsored retirement plans and 1 percent owning funds only outside of employer-sponsored retirement plans.

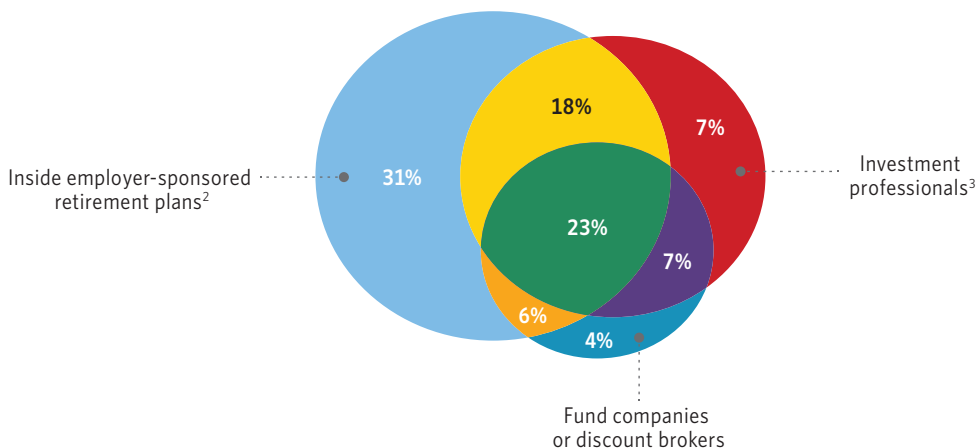
\* This includes 3 percent of Millennial households owning mutual funds both inside and outside employer-sponsored retirement plans that did not indicate which source was used to purchase funds outside employer-sponsored retirement plans.

In contrast, in mid-2017, 81 percent of mutual fund-owning households that are members of the Baby Boom Generation held mutual funds inside employer-sponsored retirement plans (Figures 7.11 and 7.13).<sup>\*</sup> Thirty-one percent held mutual funds only inside employer-sponsored retirement plans. Fifty-five percent of these older households owned mutual funds through investment professionals, and 40 percent held funds directly through fund companies or discount brokers.

**FIGURE 7.13**

**Baby Boom Mutual Fund-Owning Households Are More Likely Than Millennials to Hold Funds Outside Employer-Sponsored Retirement Plans**

*Percentage of US households owning mutual funds in the Baby Boom Generation,<sup>1</sup> mid-2017*



<sup>1</sup> Generation is based on the age of the household sole or co-decisionmaker for saving and investing. The Baby Boom Generation consists of heads of household born between 1946 and 1964.

<sup>2</sup> 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).

<sup>3</sup> Investment professionals include registered investment advisers, full-service brokers, independent financial planners, bank and savings institution representatives, insurance agents, and accountants.

Note: Figure does not add to 100 percent because 4 percent of mutual fund-owning households in the Baby Boom Generation owned funds outside of employer-sponsored retirement plans, but did not indicate which source was used to purchase funds. This 4 percent includes 3 percent owning funds both inside and outside employer-sponsored retirement plans and 1 percent only owning funds outside of employer-sponsored retirement plans.

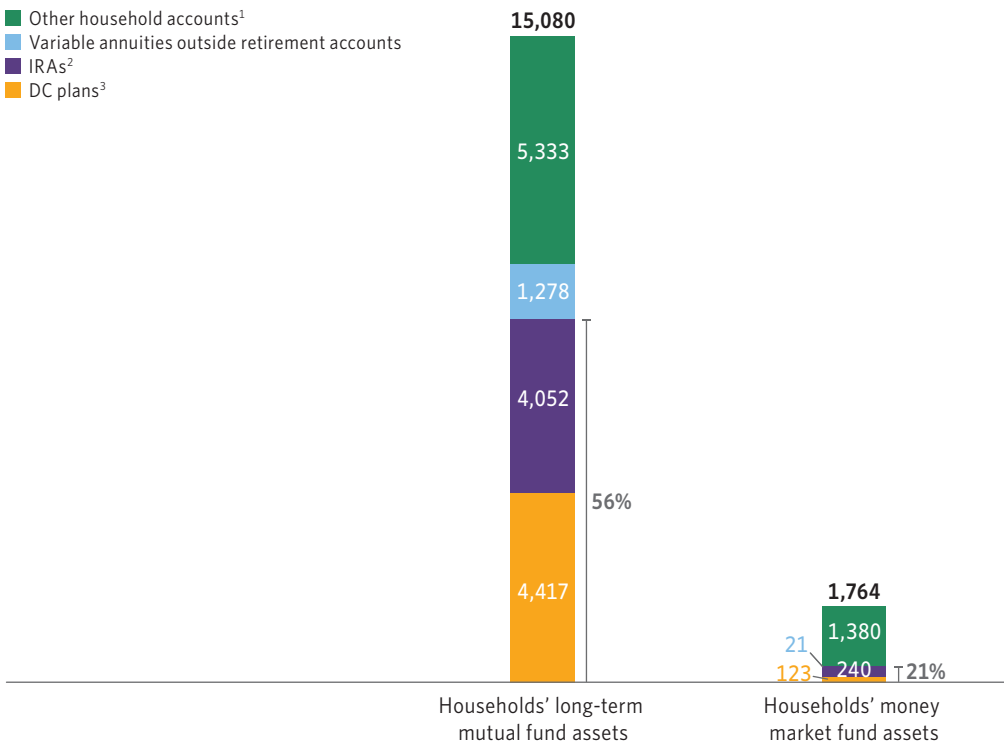
<sup>\*</sup> This includes 3 percent of Baby Boom households owning mutual funds both inside and outside employer-sponsored retirement plans that did not indicate which source was used to purchase funds outside employer-sponsored retirement plans.

At year-end 2017, mutual funds held in DC plans and IRAs accounted for \$8.8 trillion, or 31 percent, of the \$28.2 trillion US retirement market (Figures 8.5 and 8.25). The \$8.8 trillion made up 47 percent of total mutual fund assets at year-end 2017. 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 8.24). Similarly, mutual funds held in DC plans and IRAs accounted for 56 percent of household long-term mutual funds but only 21 percent of household money market funds (Figure 7.14).

**FIGURE 7.14**

**Households' Mutual Fund Assets by Type of Account**

*Billions of dollars, year-end 2017*



<sup>1</sup> Mutual funds held as investments in 529 plans and Coverdell ESAs are counted in this category.

<sup>2</sup> IRAs include traditional IRAs, Roth IRAs, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

<sup>3</sup> DC plans include 401(k) plans, 403(b) plans, 457 plans, and other DC plans without 401(k) features.

## Shareholder Sentiment, Willingness to Take Investment Risk, and Confidence

Each year, ICI surveys US households about a variety of topics, including shareholder sentiment. In mid-2017, 66 percent of mutual fund-owning households familiar with mutual fund companies had “very” or “somewhat” favorable impressions of fund companies, similar to 2016 (Figure 7.15). The share of mutual fund-owning households with “very” favorable impressions of fund companies remained around 15 percent.

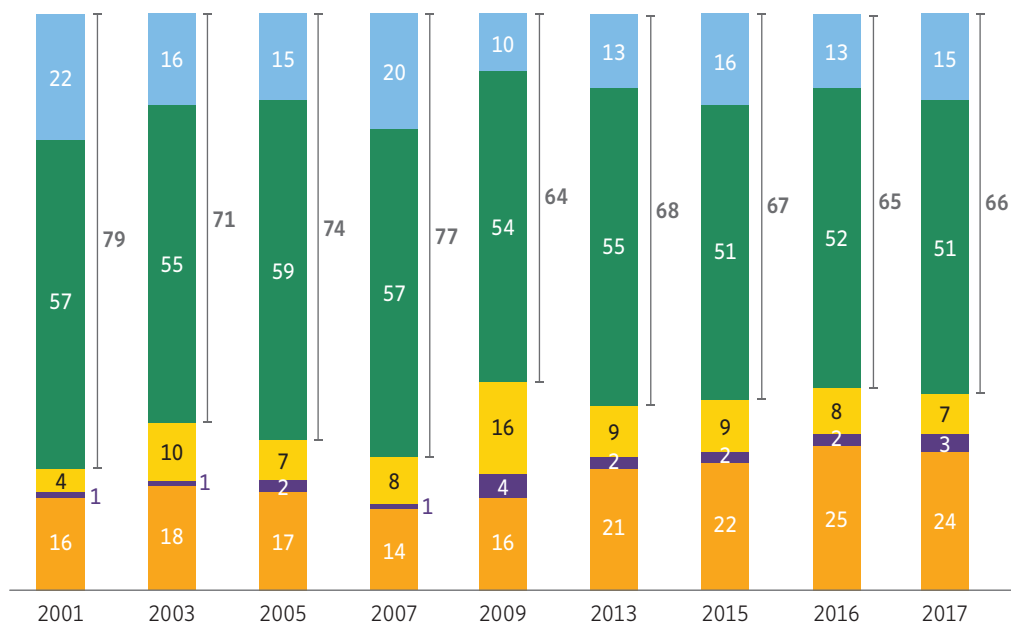
FIGURE 7.15

### Most Shareholders View the Mutual Fund Industry Favorably

Percentage of US households owning mutual funds familiar with mutual fund companies, selected years

#### 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, 2017”

#### LEARN MORE

Profile of Mutual Fund Shareholders, 2017

[www.ici.org/research/reports](http://www.ici.org/research/reports)

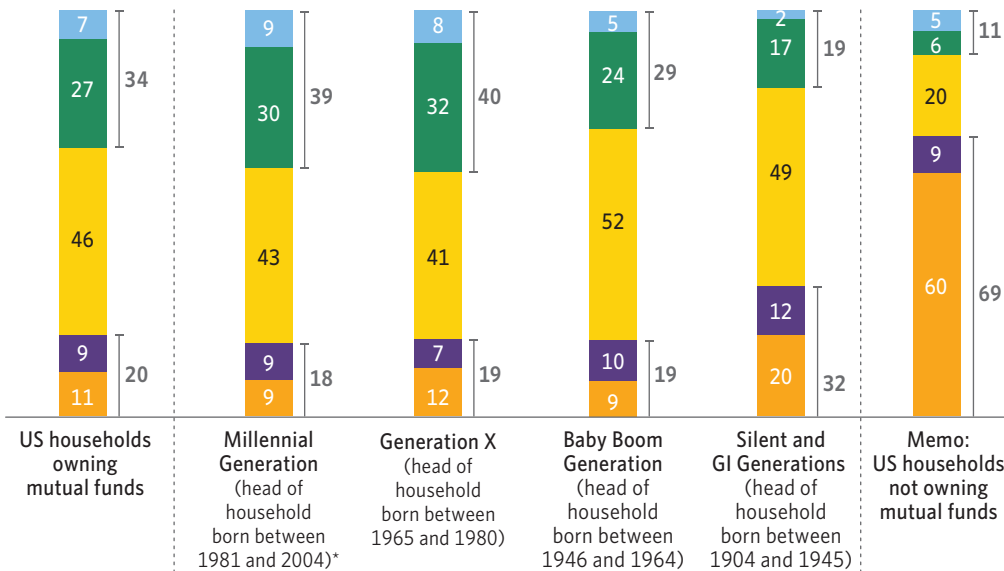
The ICI survey also asked households about their willingness to take investment risk. Households owning mutual funds are far more willing to take investment risk than other households. In mid-2017, 34 percent of households owning mutual funds were willing to take above-average or substantial investment risk, more than three times the 11 percent of households not owning mutual funds (Figure 7.16).

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 mid-2017, around 40 percent of mutual fund-owning households in the Millennial Generation and Generation X were willing to take above-average or substantial financial risk (Figure 7.16). This willingness to take risk drops to 29 percent for mutual fund-owning households in the Baby Boom Generation and 19 percent of mutual fund-owning households in the Silent and GI Generations.

**FIGURE 7.16**  
**Households' Willingness to Take Investment Risk**  
*Percentage of US households owning mutual funds by generation, mid-2017*

**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 13 to 36 in 2017; however, survey respondents must be 18 or older.

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

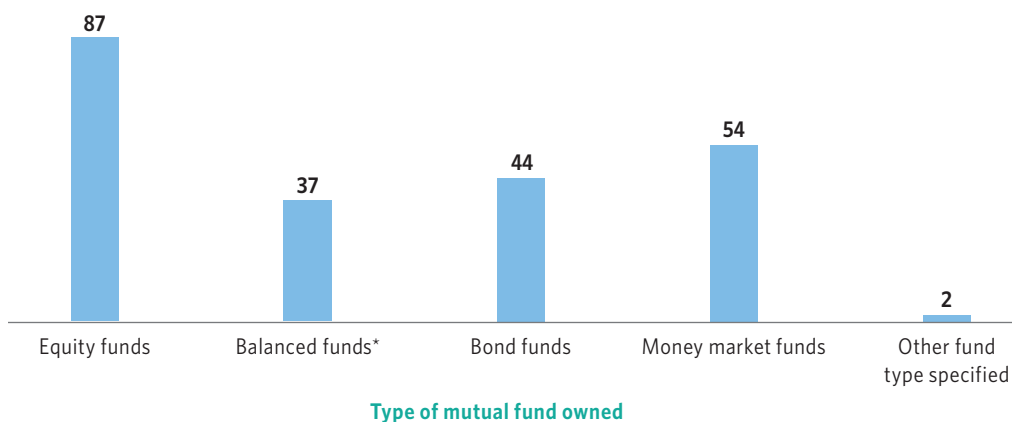
Sources: ICI Research Perspective, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017" and ICI Research Report, "Profile of Mutual Fund Shareholders, 2017"

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 mid-2017, held by 87 percent of mutual fund-owning households (Figure 7.17). In addition, 37 percent owned balanced funds, 44 percent owned bond funds, and 54 percent owned money market funds.

**FIGURE 7.17**

**Equity Funds Are the Most Commonly Owned Type of Mutual Fund**

*Percentage of US households owning mutual funds, mid-2017*



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

Note: Multiple responses are included.

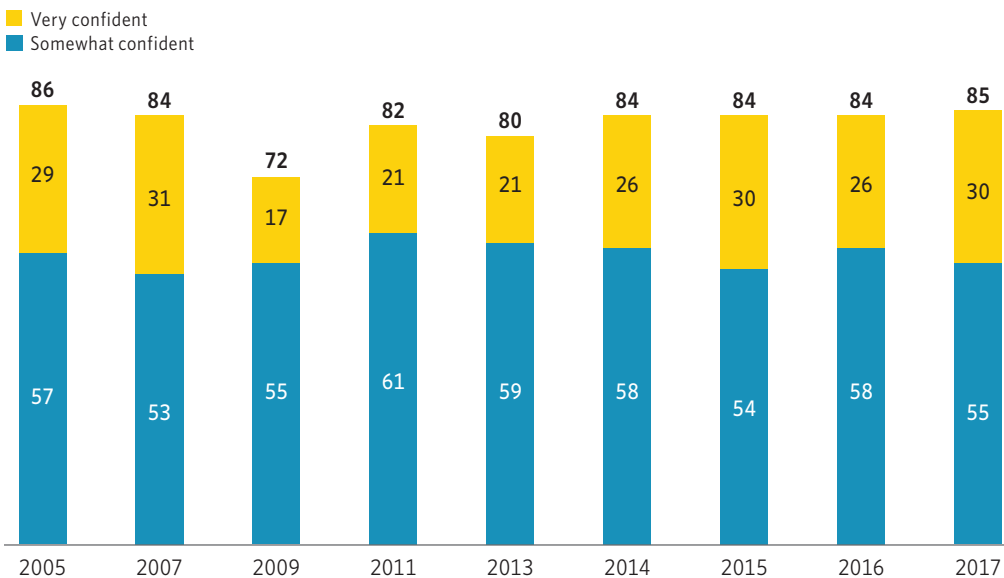
Source: ICI Research Perspective, "Characteristics of Mutual Fund Investors, 2017"

Mutual fund-owning households' confidence that mutual funds are helping them reach their financial goals declined in the wake of the financial crisis. In mid-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 mid-2007 (Figure 7.18). From mid-2011 through mid-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. In mid-2014, confidence increased to 84 percent of mutual fund-owning households and remained around that level through mid-2017. In mid-2017, 30 percent of mutual fund-owning households said they were "very" confident in mutual funds' ability to help them achieve their financial goals.

**FIGURE 7.18**

**More Than Eight 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, selected years*



Note: The survey methodology was changed to a dual frame sample of cell phones and landlines in 2014. This question was not included in the survey prior to 2005. 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, 2017"



**LEARN MORE**

**More People Are Building Nest Eggs with Their IRAs**

[www.ici.org/viewpoints/view\\_17\\_role\\_ira](http://www.ici.org/viewpoints/view_17_role_ira)

## Shareholder Use of the Internet

An overwhelming majority of mutual fund-owning households have internet access. In mid-2017, 95 percent of US households owning mutual funds had internet access (Figure 7.19), up from 68 percent in 2000 (the first year for which ICI collected data on shareholder access to the internet). 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 7.19

### Internet Access Is Nearly Universal Among Mutual Fund-Owning Households

Percentage of US households with internet access, mid-2017

	All US households	Mutual fund-owning households	Households with DC plan accounts <sup>1</sup>
<b>Age of head of household<sup>2</sup></b>			
Younger than 35	92	99	97
35 to 49	87	97	96
50 to 64	83	97	96
65 or older	60	86	82
<b>Education level</b>			
High school diploma or less	64	87	85
Some college or associate's degree	87	96	94
College or postgraduate degree	92	98	97
<b>Household income<sup>3</sup></b>			
Less than \$50,000	64	88	81
\$50,000 to \$99,999	90	95	95
\$100,000 to \$149,999	94	96	97
\$150,000 or more	97	99	99
<b>Total</b>	<b>80</b>	<b>95</b>	<b>93</b>

<sup>1</sup> DC plans include 401(k), 403(b), 457, and other DC plans.

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

<sup>3</sup> Total reported is household income before taxes in 2016.

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

Source: Investment Company Institute Annual Mutual Fund Shareholder Tracking Survey. See *ICI Research Perspective*, "Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2017."




## CHAPTER EIGHT

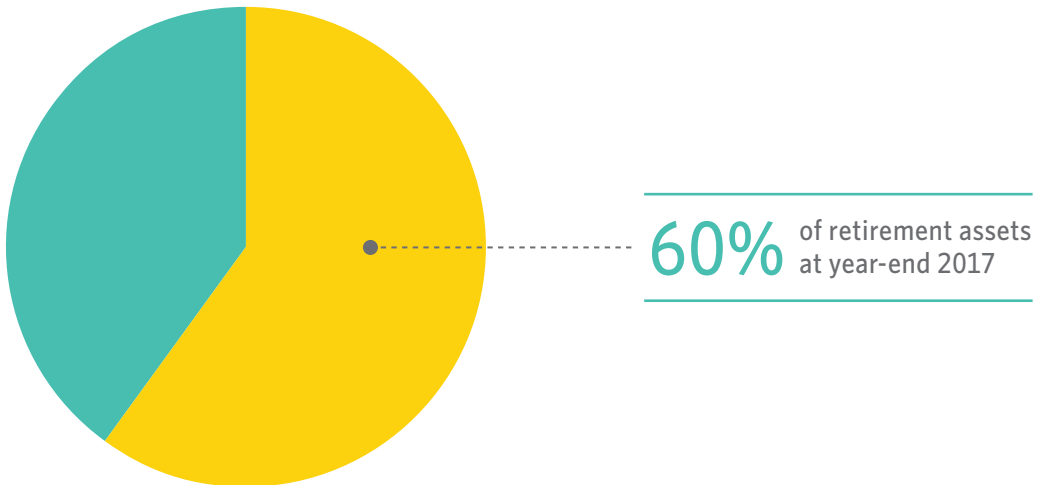
# US Retirement and Education Savings

---

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 2017



### IN THIS CHAPTER

- 164** The US Retirement System
- 174** Defined Contribution Retirement Plans
- 184** Individual Retirement Accounts
- 194** The Role of Mutual Funds in Retirement Savings
- 199** 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.

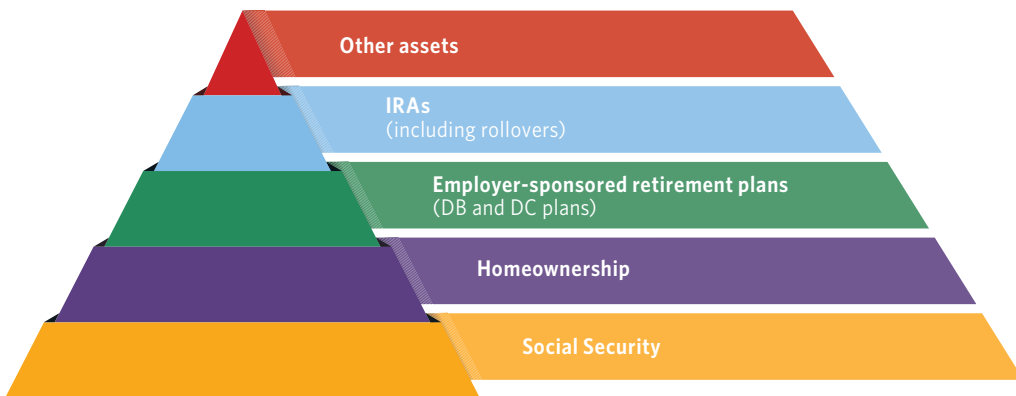
### Retirement Resource Pyramid

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*

#### LEARN MORE

How America Supports Retirement: Challenging the Conventional Wisdom on Who Benefits  
[www.ici.org/whobenefits](http://www.ici.org/whobenefits)

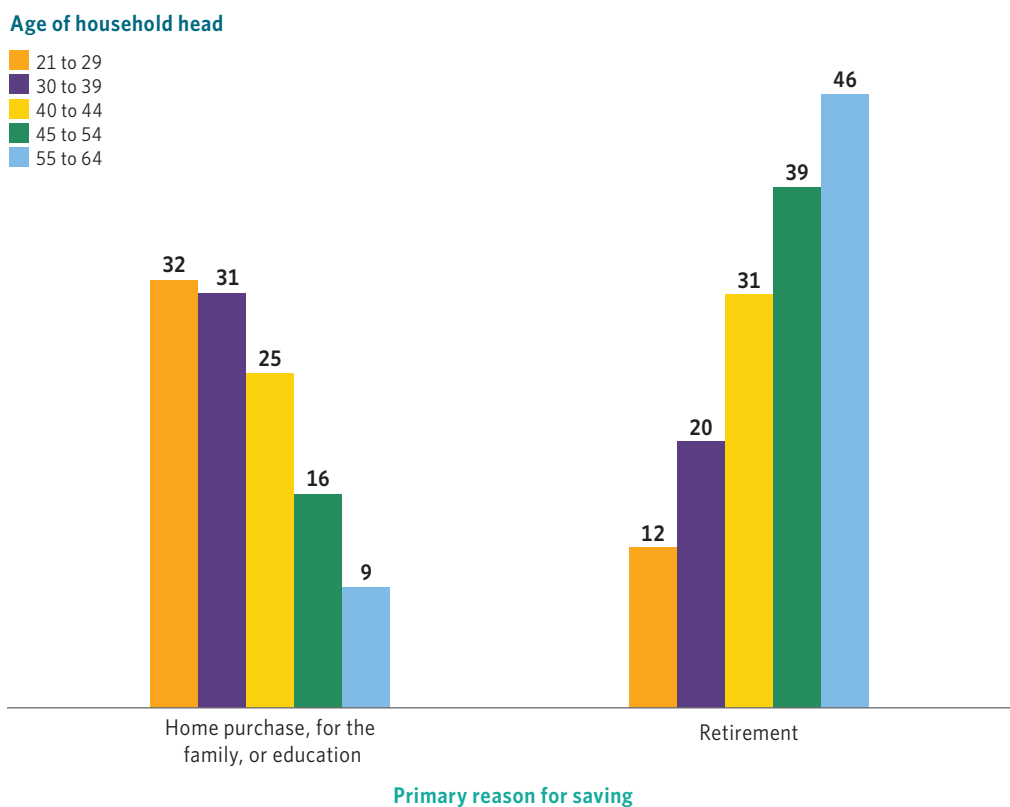
The construction of each household’s retirement pyramid varies with income. For example, lower-income households tend to rely more on Social Security, reflecting the fact that Social Security benefits replace a higher share of pre-retirement earnings for workers with lower lifetime earnings.

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

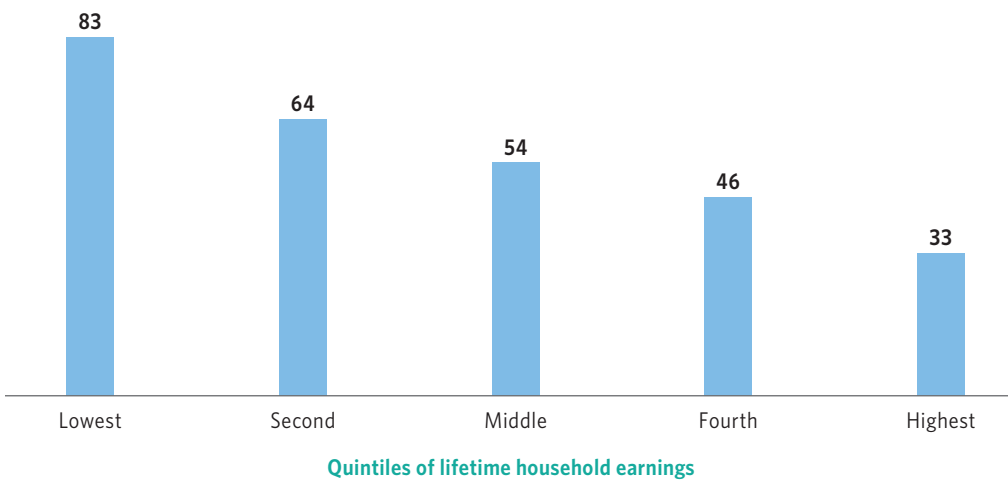
Social Security, the base of the US retirement resource pyramid, is the largest component of retiree income and the primary source of income for lower-income retirees. Social Security benefits are funded through a payroll tax equal to 12.4 percent of earnings of covered workers (6.2 percent paid by employees and 6.2 percent paid by employers) up to a maximum taxable earnings amount (\$127,200 in 2017). 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 (CBO) estimates that, for those in the lowest quintile (20 percent) of households ranked by lifetime household earnings, first-year Social Security benefits will replace 83 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 64 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 (33 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 2017 Long-Term Projections for Social Security: Additional Information*

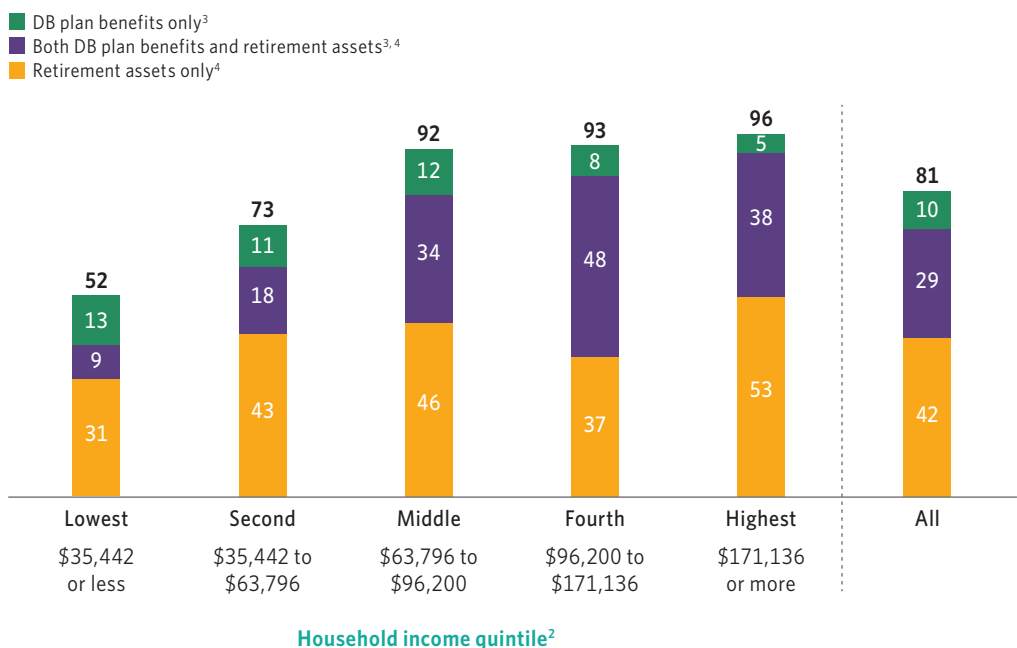
For many near-retiree households, homeownership is the second most important retirement resource after Social Security. Older households are more likely to own their homes and more likely to have fully—or at least, largely—paid down any mortgage. Retired households typically benefit from this resource 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 whom 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 households<sup>1</sup> by income quintile,<sup>2</sup> 2016*



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

<sup>2</sup> Income is household income before taxes in 2015.

<sup>3</sup> 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.

<sup>4</sup> 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).

Note: Components may not add to the total because of rounding.

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.

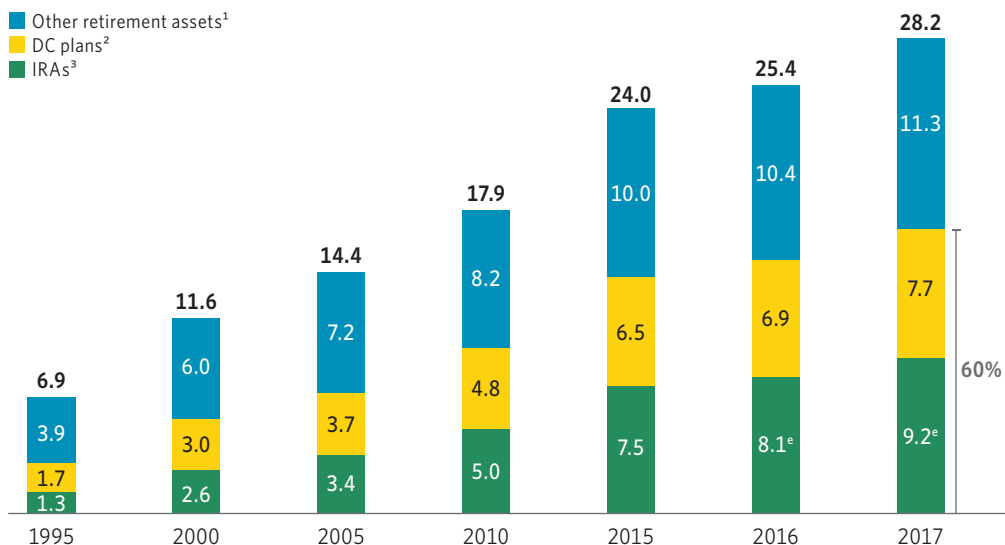
### **Snapshot of US Retirement Market Assets**

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 \$28.2 trillion at year-end 2017, up 11.2 percent from \$25.4 trillion at year-end 2016 (Figure 8.5). The largest components of retirement assets were IRAs and employer-sponsored DC plans, which together represent 60 percent of all retirement market assets. Other employer-sponsored plans include private-sector DB pension plans (\$3.1 trillion), state and local government DB retirement plans (\$4.3 trillion), and federal government DB plans (\$1.7 trillion). In addition, annuity reserves outside of retirement plans were \$2.2 trillion at year-end 2017 (Figure 8.6).

**FIGURE 8.5**

**Total US Retirement Market Assets**

*Trillions of dollars; year-end, selected years*



<sup>1</sup> *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.

<sup>2</sup> 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).

<sup>3</sup> IRAs include traditional IRAs, Roth IRAs, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

<sup>e</sup> Data are estimated.

Note: Components may not add to the total because of rounding.

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 2017."

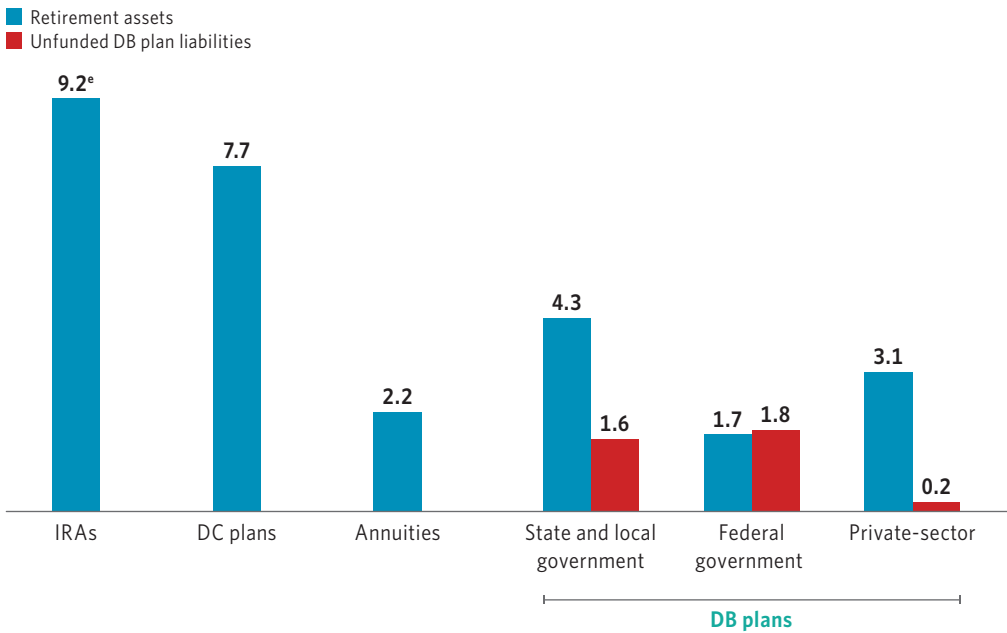


Retirement assets include individual account-based savings (IRAs and DC plans) and assets held in DB plans. Traditional DB plans promise to pay benefits in retirement typically based on salary and years of service. Some DB plans, however, do not have sufficient assets to cover promised benefits that households have a legal right to expect. The total unfunded liabilities of DB plans were \$3.6 trillion at year-end 2017 (Figure 8.6), and underfunding is more pronounced in government-sector pension plans. As of year-end 2017, state and local government DB plans had \$4.3 trillion in assets and \$1.6 trillion in unfunded liabilities, and federal DB plans had \$1.7 trillion in assets, which covered less than half of their liabilities. By comparison, private-sector DB plans had \$3.1 trillion in assets and \$0.2 trillion in unfunded liabilities.

**FIGURE 8.6**

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

*Trillions of dollars, year-end 2017*



<sup>e</sup> Data are estimated.

Sources: Investment Company Institute and Federal Reserve Board. See Investment Company Institute, “The US Retirement Market, Fourth Quarter 2017.”

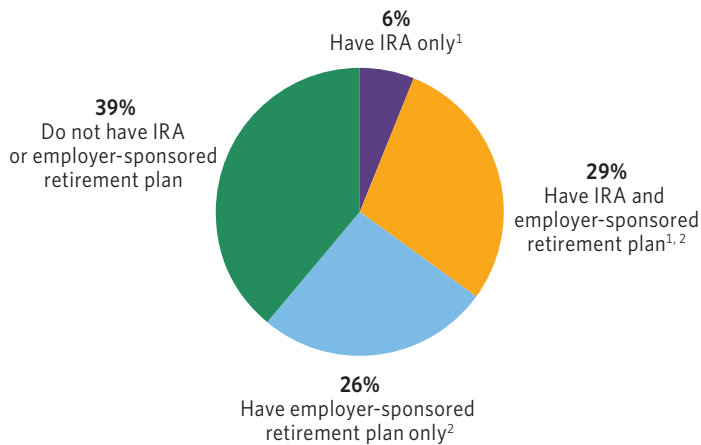
## Ownership of Retirement Resources

Many US households have accumulated resources earmarked for retirement (Figure 8.7). Across all age groups, 61 percent of US households (77 million) reported that they had employer-sponsored retirement plans, IRAs, or both in mid-2017. Fifty-five 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-five percent reported having assets in IRAs, including 29 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).

**FIGURE 8.7**

### Many US Households Have Retirement Resources Outside Social Security

*Percentage of US households, mid-2017*



**Total number of US households: 126.2 million**

<sup>1</sup> IRAs include traditional IRAs, Roth IRAs, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

<sup>2</sup> 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, 2017."

## US Retiree Income

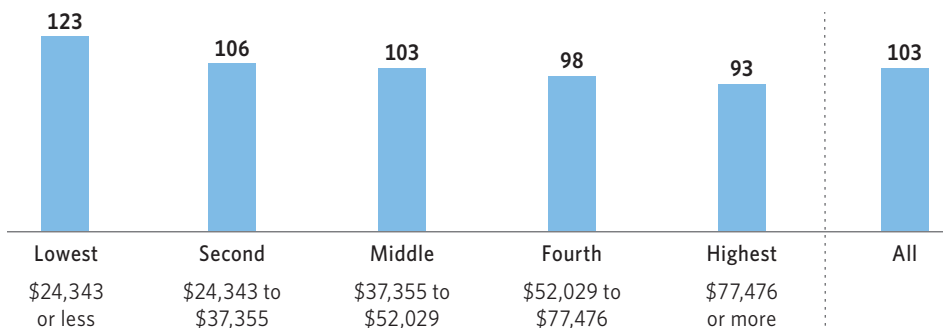
Most American workers maintain or increase their spendable income after claiming Social Security, according to a new study coauthored by Investment Company Institute and Internal Revenue Service Statistics of Income Division staff. The study also finds that, after claiming, most get substantial amounts 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).

FIGURE 8.8

### Most Workers Maintain Spendable Income After Claiming Social Security

Median spendable income replacement rate<sup>1</sup> three years after claiming Social Security among individuals in the sample<sup>2</sup> by 1999 per capita income,<sup>3</sup> percent



#### Quintile of 1999 per capita income (2017 dollars)<sup>3</sup>

<sup>1</sup> 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.

<sup>2</sup> Sample consists of all working taxpayers aged 55 to 61 in 1999 who claimed Social Security retirement benefits between 2000 and 2007.

<sup>3</sup> 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.

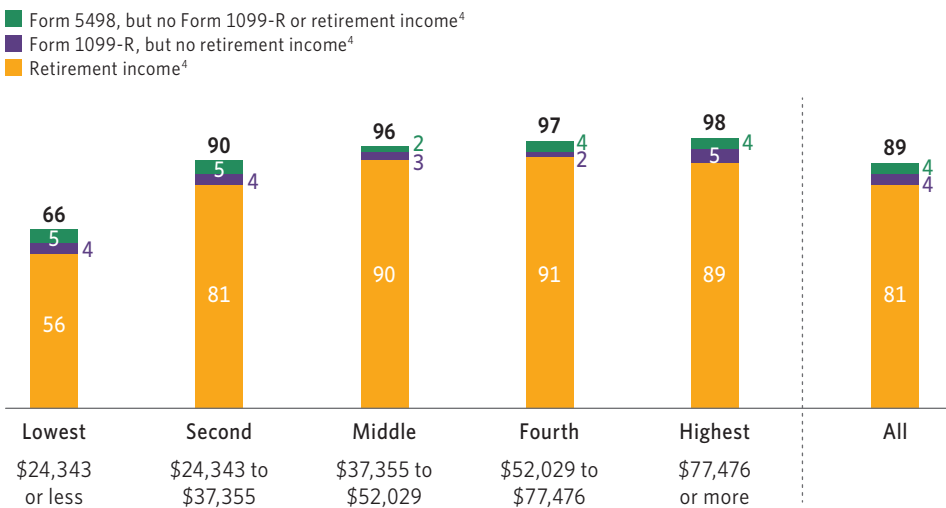
Source: *Using Panel Tax Data to Examine the Transition to Retirement*, available at [www.ici.org/transition\\_to\\_retirement](http://www.ici.org/transition_to_retirement)

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.

**FIGURE 8.9**

**Nearly Nine in 10 Had Retirement Resources Outside of Social Security**

*Percentage of sample<sup>1</sup> who had evidence of retirement resources outside of Social Security,<sup>2</sup> by 1999 per capita income<sup>3</sup>*



**Quintile of 1999 per capita income (2017 dollars)<sup>3</sup>**

<sup>1</sup> Sample consists of all working taxpayers aged 55 to 61 in 1999 who claimed Social Security retirement benefits between 2000 and 2007.

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

<sup>3</sup> 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.

<sup>4</sup> Retirement income is income from DB and DC pensions, annuities, and IRAs.

Note: Components may not add to the total because of rounding.

Source: *Using Panel Tax Data to Examine the Transition to Retirement*, available at [www.ici.org/transition\\_to\\_retirement](http://www.ici.org/transition_to_retirement)

**LEARN MORE**

ICI Analysis Shows Americans Maintain or Increase Spendable Income After Claiming Social Security  
[www.ici.org/research/retirement/retirement/17\\_news\\_retirement\\_income](http://www.ici.org/research/retirement/retirement/17_news_retirement_income)

## Defined Contribution Retirement Plans

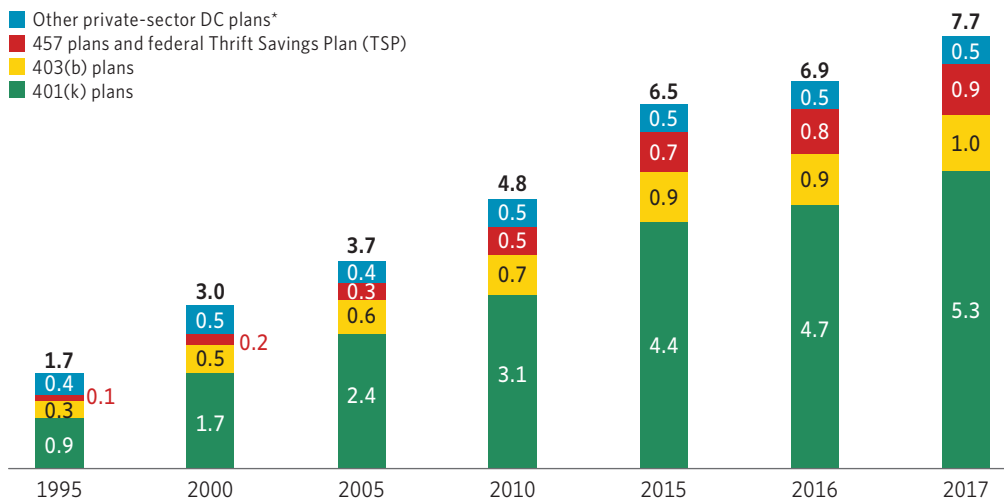
DC plans provide employees with a retirement account funded with employer contributions, employee contributions, or both, plus investment earnings or losses on those contributions, less withdrawals. Assets in employer-sponsored DC plans have grown faster than assets in DB plans over the past three decades, increasing from 28 percent of total DC and DB plan assets in 1987 to 46 percent at year-end 2017.

At the end of 2017, 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 \$7.7 trillion in assets (Figure 8.10). With \$5.3 trillion in assets at year-end 2017, 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 \$1.0 trillion in assets. In addition, 457 plans—which serve employees of state and local governments and certain tax-exempt organizations—and the federal Thrift Savings Plan (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, selected years



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

Note: Components may not add to the total because of rounding.

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 2017."

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

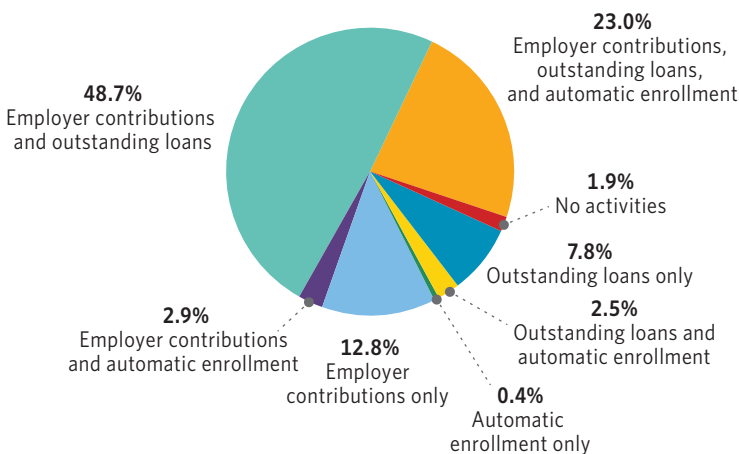
### Plan Design

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 nearly nine out of 10 (87 percent) made employer contributions in plan year 2015 (Figure 8.11). More than eight out of 10 (82 percent) large 401(k) plans had participant loans outstanding, and nearly three out of 10 (29 percent) included automatic enrollment in 2015. 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.

FIGURE 8.11

### Large 401(k) Sponsors Use a Variety of Plan Designs

Percentage of plans with selected plan activity combinations, 2015



Note: The sample is 52,612 plans with \$3.7 trillion in assets. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and had \$1 million or more in plan assets and exclude 403(b) plans with a 401(k) feature. A plan was determined to allow participant loans if any participant had a loan outstanding at the end of plan year 2015.

Source: Investment Company Institute tabulations of Department of Labor Form 5500 data. See BrightScope and Investment Company Institute, *The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2015*.

#### LEARN MORE

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

When designing 401(k) plans, employers tend to select a combination of features that their employees are likely to value. In 2015, nearly half (49 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 (Figure 8.11). The next most common plan design combined all three activities—employer contributions, automatic enrollment, and outstanding loans—and was offered by 23 percent of large 401(k) plans, followed by 13 percent having employer contributions only. About 2 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 8.12). 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.

### LEARN MORE

401(k) Resource Center  
[www.ici.org/401k](http://www.ici.org/401k)





FIGURE 8.12

## 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

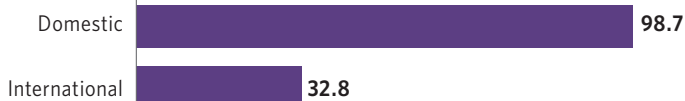
#### Equity funds



#### Balanced funds<sup>1</sup>



#### Bond funds



#### Other options



#### Memo



<sup>1</sup> The Investment Company Institute classifies balanced funds as *hybrid* in its data.

<sup>2</sup> 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.

<sup>3</sup> *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*.

## 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 2015, participants in their twenties had about 80 percent of their 401(k) assets invested in equities, on average, while those in their sixties had investments in equities amounting to 55 percent of their 401(k) assets (Figure 8.13). 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 employer company stock.

EBRI/ICI research also finds differences between younger and older participants in the places where they hold equities. At year-end 2015, on average, 401(k) plan participants in their twenties had 28 percent of their 401(k) assets invested in equity funds, 47 percent in target date funds, 8 percent in non-target date balanced funds, and 5 percent in company stock (Figure 8.13). 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 (17 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 2015, on average, 401(k) plan participants in their sixties had about 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.

#### LEARN MORE

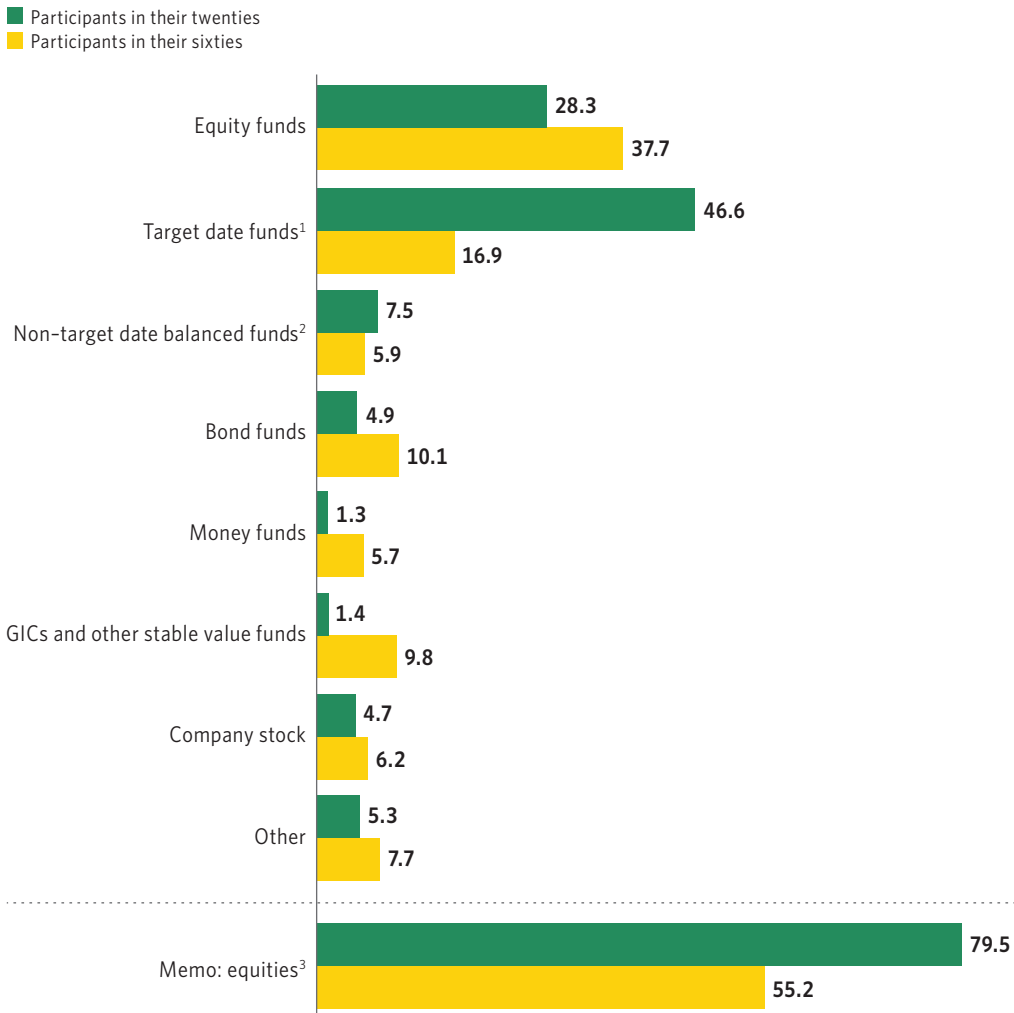
Target Retirement Date Funds Resource Center  
[www.ici.org/trdf](http://www.ici.org/trdf)



FIGURE 8.13

### 401(k) Asset Allocation Varies with Participant Age

Average asset allocation of 401(k) account balances, percentage of account balances, year-end 2015



<sup>1</sup> 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.

<sup>2</sup> The Investment Company Institute classifies balanced funds as *hybrid* in its data.

<sup>3</sup> 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 2015."

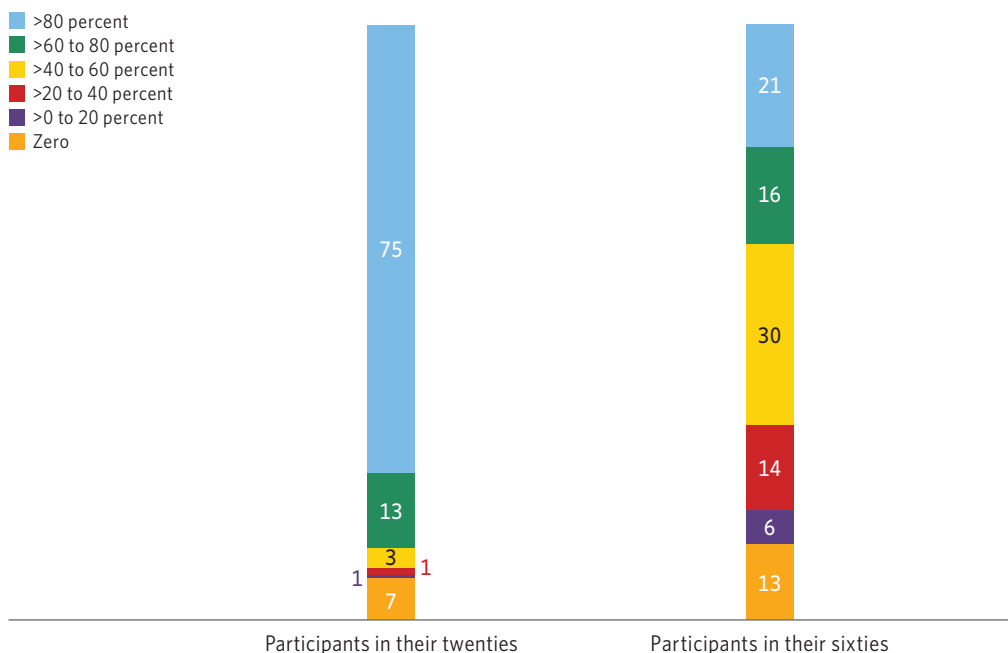
Portfolio allocation also varies widely within age groups. At year-end 2015, 75 percent of 401(k) participants in their twenties held more than 80 percent of their account in equities, while participants in their sixties were much less inclined to hold such high equity allocations (only 21 percent of them did so) (Figure 8.14). By comparison, 9 percent of those in their twenties and 33 percent of those in their sixties allocated 40 percent or less of their account to equities.

**FIGURE 8.14**

**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 2015*

**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 invested primarily 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 2015.”

## Target Date Funds

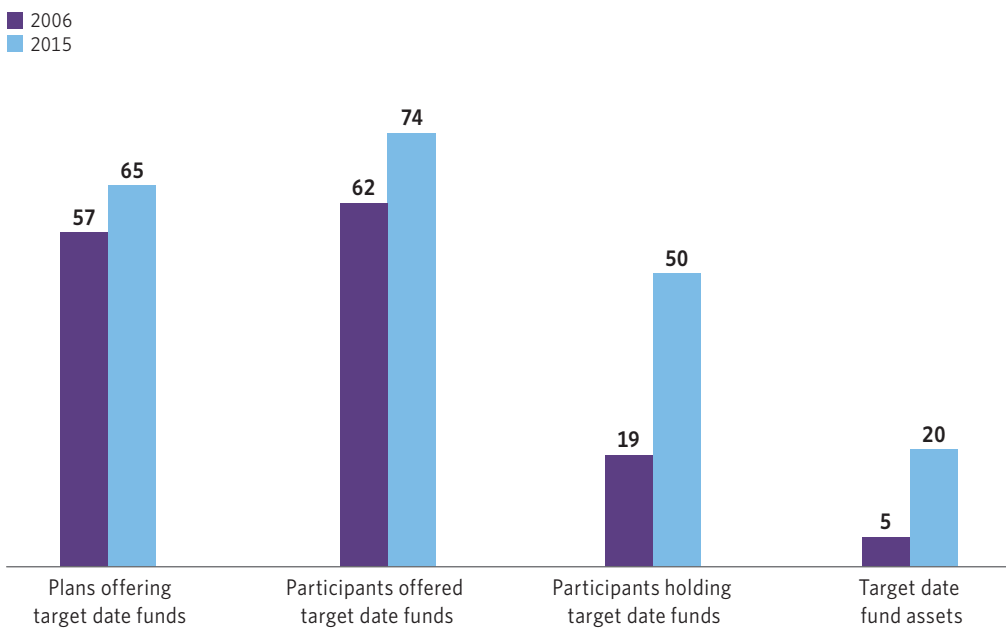
Target date funds, introduced in the mid-1990s, have grown rapidly in recent years. A target date fund (including both target date mutual funds and other pooled target date investments) follows a predetermined reallocation of assets over time based on a specified target retirement date. Typically, the 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.

Target date funds still make up a relatively small portion of 401(k) assets, but they have grown rapidly in recent years—from 5 percent at year-end 2006 to 20 percent at year-end 2015 (Figure 8.15). 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 2015, 65 percent of 401(k) plans offered target date funds, and 74 percent of 401(k) plan participants were offered target date funds. Participant use of target date funds also has increased and 50 percent of 401(k) plan participants in 2015 held these funds—up from less than 20 percent in 2006.

FIGURE 8.15

### Target Date Funds' 401(k) Market Share

Percentage of total 401(k) market; year-end, 2006 and 2015



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 2015."

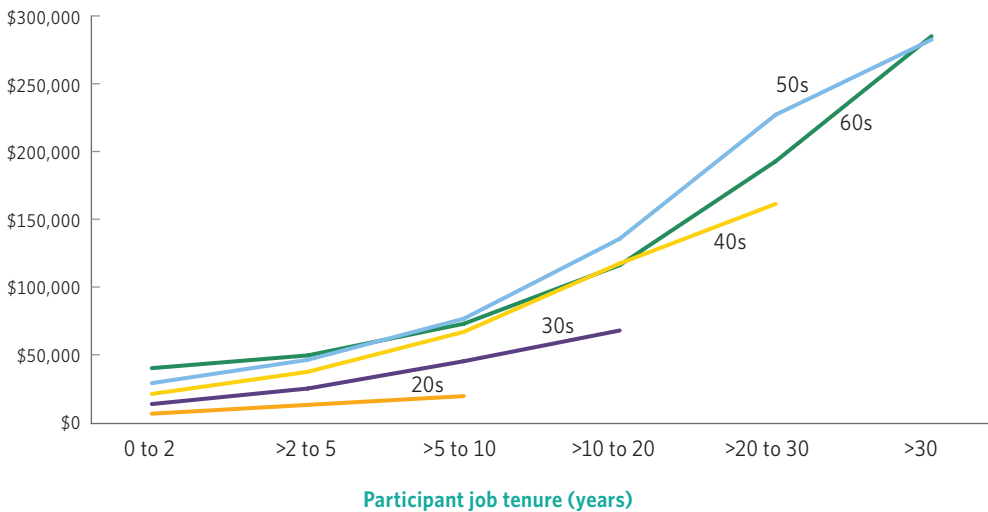
## Account Balances

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 \$281,000 at year-end 2015 (Figure 8.16). Participants in their forties with 10 to 20 years of tenure at their current employer had an average 401(k) plan account balance of \$114,600. The median 401(k) plan participant was 45 years old at year-end 2015, and the median job tenure was eight years.

FIGURE 8.16

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

Average 401(k) plan account balance by participant age and tenure, 2015



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 2015."

## LEARN MORE

Individual Retirement Account Resource Center  
[www.ici.org/iraresource](http://www.ici.org/iraresource)

## Loan Activity

Most 401(k) participants do not borrow from their plans, although the majority have access to loans. At year-end 2015, 18 percent of participants eligible for loans had loans outstanding, down from 20 percent one year earlier. 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 2015. Unpaid loan balances among participants with loans averaged about 12 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 2015.

## Individual Retirement Accounts

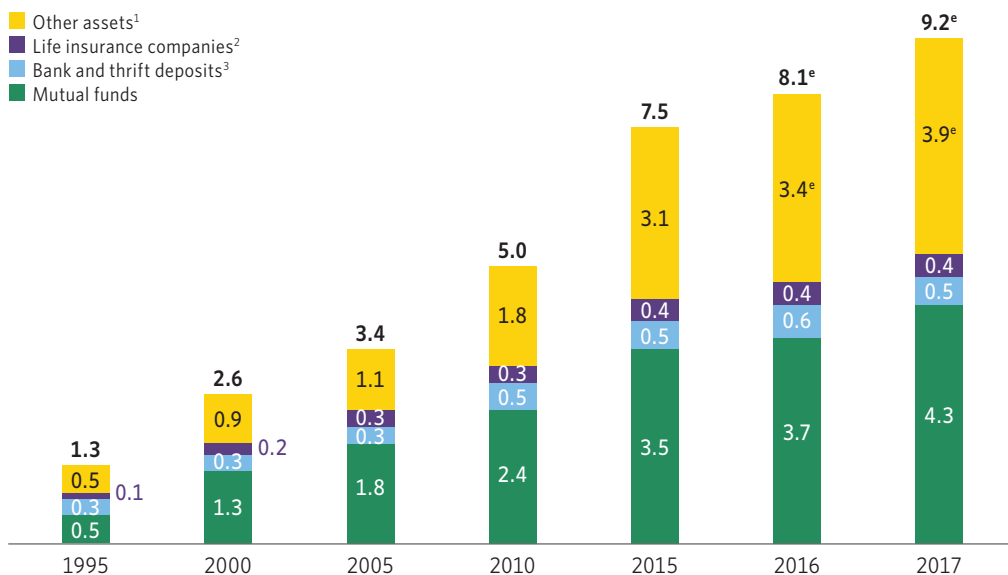
The first type of IRA—known as a traditional IRA—was created under the Employee Retirement Income Security Act of 1974 (ERISA). IRAs provide all workers with a contributory retirement savings vehicle and, through rollovers, give workers leaving jobs a means to preserve the tax benefits and growth opportunities 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 \$9.2 trillion at year-end 2017, accounting for 33 percent of US retirement assets (Figure 8.17). Mutual funds were 47 percent of IRA assets (\$4.3 trillion) at year-end 2017, up from \$3.7 trillion at year-end 2016. 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 43 percent of IRA assets, and rose from \$3.4 trillion at year-end 2016 to \$3.9 trillion at year-end 2017.

FIGURE 8.17

## IRA Assets Surpass \$9 Trillion

Trillions of dollars; year-end, selected years



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

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

<sup>3</sup> Bank and thrift deposits include Keogh deposits.

<sup>e</sup> Data are estimated.

Note: Components may not add to the total because of rounding.

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 2017."



## IRA Investors

More than one-third of US households, or nearly 44 million, owned at least one type of IRA as of mid-2017 (Figure 8.18). Traditional IRAs—those introduced under ERISA—were the most common type, owned by 35 million US households. Roth IRAs, created as part of the Taxpayer Relief Act of 1997, were owned by 25 million US households. Nearly eight million US households owned employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, or SIMPLE IRAs).

FIGURE 8.18

### Nearly 44 Million US Households Owned IRAs

	Year created	Number of US households with type of IRA <i>Mid-2017</i>	Percentage of US households with type of IRA <i>Mid-2017</i>	Assets in IRAs <i>Billions of dollars, year-end 2017</i>
<b>Traditional IRA</b>	1974 (Employee Retirement Income Security Act)	35.1 million	27.8%	\$7,850 <sup>e</sup>
<b>SEP IRA</b>	1978 (Revenue Act)	7.6 million	6.0%	\$540 <sup>e</sup>
<b>SAR-SEP IRA</b>	1986 (Tax Reform Act)			
<b>SIMPLE IRA</b>	1996 (Small Business Job Protection Act)			
<b>Roth IRA</b>	1997 (Taxpayer Relief Act)	24.9 million	19.7%	\$810 <sup>e</sup>
<b>Any IRA</b>		43.9 million	34.8%	\$9,200 <sup>e</sup>

<sup>e</sup> 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: Investment Company Institute and US Census Bureau. See *ICI Research Perspective*, "The Role of IRAs in US Households' Saving for Retirement, 2017" and Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017."

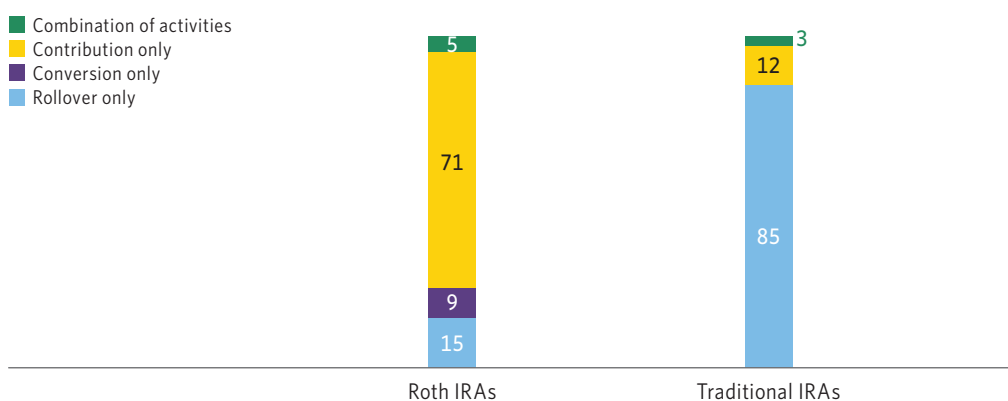
Investment returns and rollovers from employer-sponsored retirement plans, more than new contributions, have fueled the growth of IRAs. For example, the Internal Revenue Service Statistics of Income Division reports \$473 billion was rolled over to IRAs in tax year 2015, compared with \$64 billion that was contributed. Although most US households are eligible to make contributions to IRAs, few do so. Indeed, only 12 percent of US households contributed to traditional or Roth IRAs in tax year 2016 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 nearly 17 million IRA investors—finds that rollovers play a particularly important role in opening traditional IRAs. In 2015, most new traditional IRAs (85 percent) were opened only with rollovers (Figure 8.19). In contrast, most new Roth IRAs (71 percent) were opened solely with contributions.

**FIGURE 8.19**

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

*Percentage of new IRAs opened in 2015 by type of IRA*



Note: New IRAs are accounts that did not exist in The IRA Investor Database in 2014 and were opened in 2015 by one of the paths indicated. 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 2015 and 1.0 million new traditional IRA investors aged 25 to 74 at year-end 2015.

Source: The IRA Investor Database™. See *ICI Research Report*, “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007-2015.”

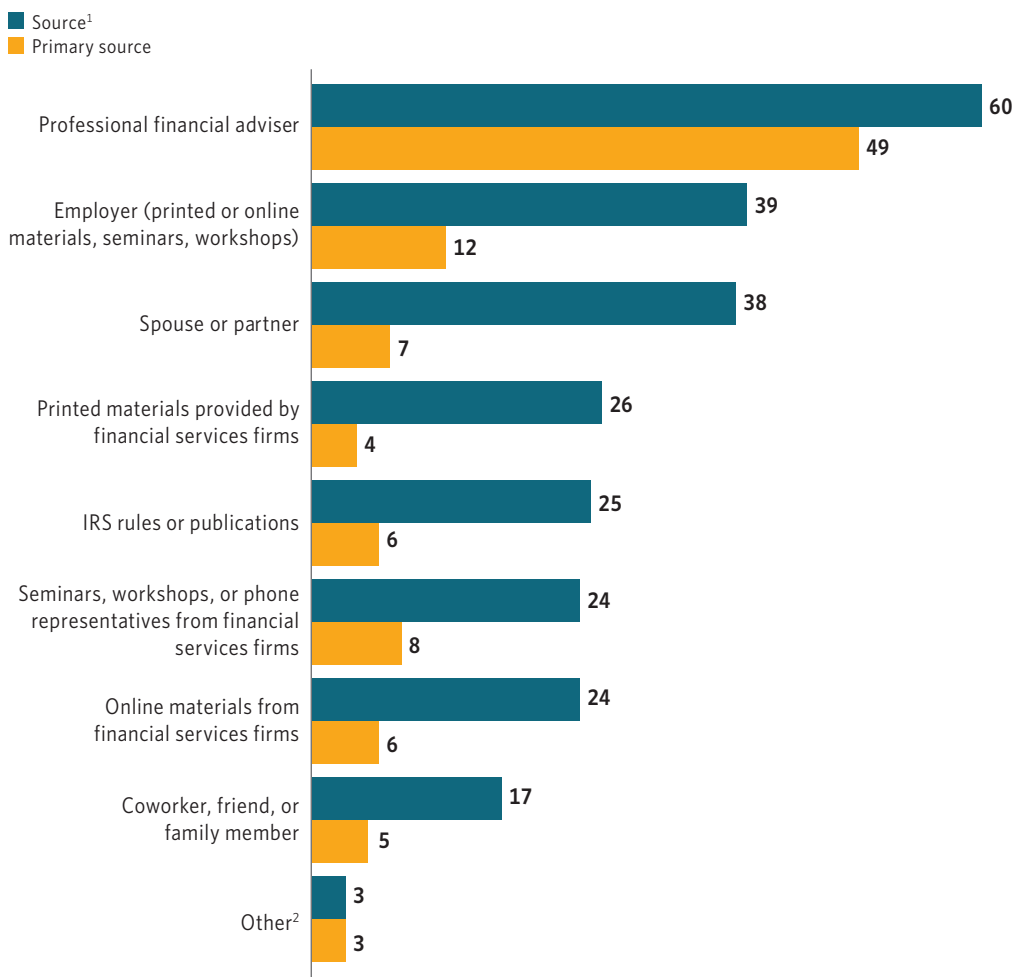
A substantial share of traditional IRA investors has rolled over assets from an employer-sponsored retirement plan. In any given year, only a small portion of traditional IRA investors have a rollover, but, for the most part, the groups that make rollovers differ from year to year. For example, in each year from 2007 through 2015, 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 2015 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; about half indicated that they primarily relied on these financial professionals (Figure 8.20). Older households were more likely to consult professional financial advisers than younger households. Six 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.

FIGURE 8.20

## Multiple Sources of Information Are Consulted for Rollover Decisions

Percentage of traditional IRA-owning households with rollovers, mid-2017



<sup>1</sup> Multiple responses are included; 66 percent of traditional IRA-owning households with rollovers consulted multiple sources of information.

<sup>2</sup> Other responses given included: myself, other online information, bank, and books and magazines.

Source: Investment Company Institute IRA Owners Survey. See *ICI Research Perspective*, "The Role of IRAs in US Households' Saving for Retirement, 2017."

Households owning IRAs generally are headed by middle-aged individuals (median age of 54 years) with moderate household incomes (median income of \$90,000). These households held a median of \$62,500 in traditional or Roth IRAs. In addition, many households held multiple types of IRAs. For example, in mid-2017, 50 percent of households with traditional IRAs also owned Roth IRAs, and 15 percent also owned employer-sponsored IRAs.

## **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 non-target date balanced funds and fixed-income investments. In 2015, traditional IRA investors in their thirties had, on average, a combined 72 percent of their assets in equities, equity funds, and target date funds (Figure 8.21). Traditional IRA investors in their sixties held a lower share of their assets (58 percent) in these combined categories, while holding much higher allocations across bond and non-target date balanced funds.

Roth IRA investors display a similar pattern of investing by age, although Roth IRA investors of all ages tended to have higher allocations to equities and equity funds compared with traditional IRA investors.

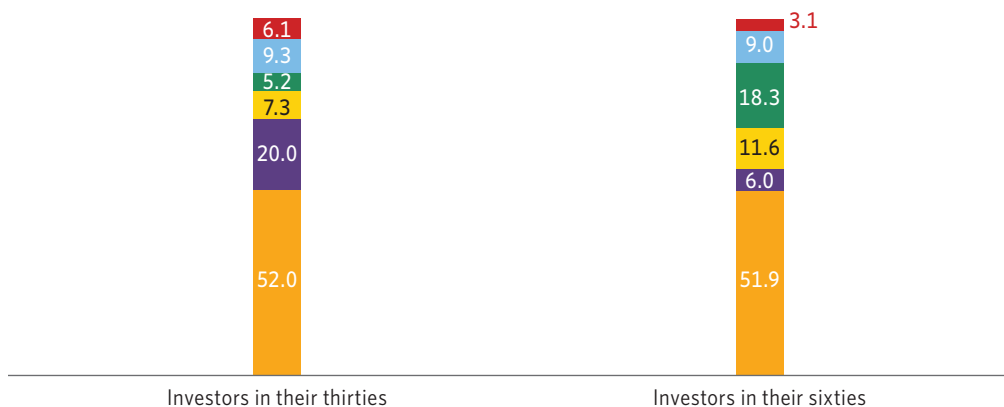
FIGURE 8.21

## IRA Asset Allocation Varies with Investor Age

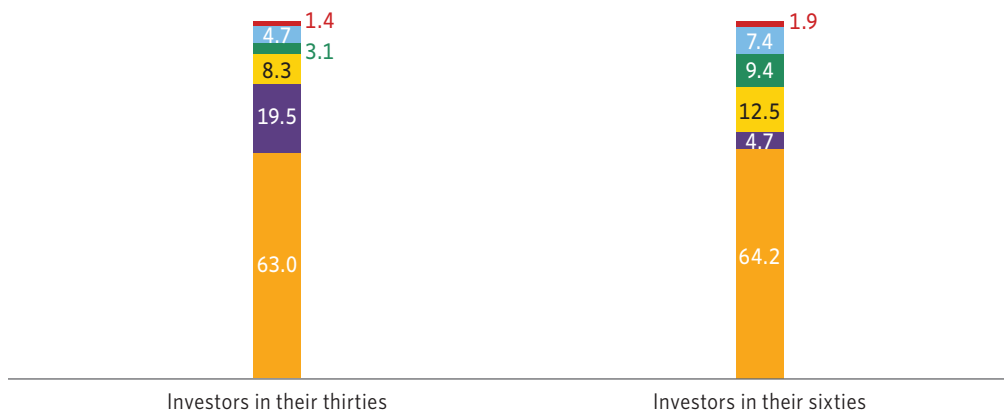
Average asset allocation of IRA balances, percentage of assets, year-end 2015

- Other investments<sup>1</sup>
- Money market funds
- Bonds and bond funds<sup>2</sup>
- Non-target date balanced funds<sup>3</sup>
- Target date funds<sup>4</sup>
- Equities and equity funds<sup>5</sup>

### Traditional IRA investors



### Roth IRA investors



<sup>1</sup> Other investments includes certificates of deposit and unidentifiable assets.

<sup>2</sup> Bond funds include bond mutual funds, bond closed-end funds, and bond ETFs.

<sup>3</sup> The Investment Company Institute classifies balanced funds as *hybrid* in its data.

<sup>4</sup> 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.

<sup>5</sup> Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

Note: Percentages are dollar-weighted averages. Components may not add to 100 percent because of rounding.

Source: The IRA Investor Database™. See ICI Research Report, "The IRA Investor Profile: Traditional IRA Investors' Activity, 2007-2015" and ICI Research Report, "The IRA Investor Profile: Roth IRA Investors' Activity, 2007-2015."

## Distributions from IRAs

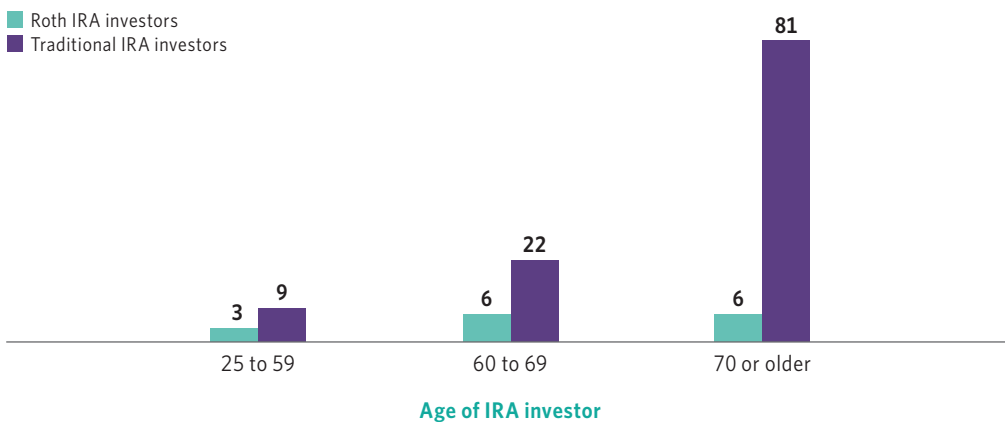
Withdrawals from IRAs tend to occur later in life, often to fulfill required minimum distributions (RMDs) under the law. The RMD is calculated as a percentage of the IRA balance, based on remaining life expectancy. Traditional IRA owners aged 70½ or older generally must withdraw at least the minimum amount each year, or pay a penalty. In tax year 2016, 71 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 8.22). 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, however, withdrawal activity is lower among investors younger than 60 compared with investors aged 60 or older.

FIGURE 8.22

### 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, 2015



Note: The samples are 5.5 million Roth IRA investors aged 25 or older at year-end 2015 and 11.5 million traditional IRA investors aged 25 or older at year-end 2015.

Source: The IRA Investor Database™. See *ICI Research Report*, "The IRA Investor Profile: Roth IRA Investors' Activity, 2007-2015."

Withdrawals from IRAs tend to be retirement related. Of the 26 percent of traditional IRA-owning households that reported taking withdrawals in 2016, 81 percent reported that the head of household, the spouse, or both were retired. Among retired traditional IRA-owning households in mid-2017 that reported taking withdrawals in 2016, 43 percent reported using some or all of the withdrawal amount to pay for living expenses (Figure 8.23). Other uses included reinvesting or saving in another account (39 percent); buying, repairing, or remodeling a home (18 percent); and paying for a healthcare expense (11 percent).

Nonretired traditional IRA-owning households that reported taking withdrawals in 2016 had different uses for the funds. These households were less than half as likely to indicate using some or all of the money for living expenses (21 percent) and were four times as likely to indicate they used the funds for emergencies (22 percent) as retired households (Figure 8.23).

**FIGURE 8.23**

**Traditional IRA Withdrawals Among Retirees Often Are Used to Pay for Living Expenses**

*Percentage of withdrawing traditional IRA-owning households by retirement status,<sup>1</sup> mid-2017*

<b>Purpose of traditional IRA withdrawal</b>	<b>Retired<sup>1,2</sup></b>	<b>Not retired<sup>3</sup></b>
Took withdrawals to pay for living expenses	43	21
Spent it on a car, boat, or big-ticket item other than a home	8	7
Spent it on a healthcare expense	11	8
Used it for an emergency	5	22
Used it for home purchase, repair, or remodeling	18	15
Reinvested or saved it in another account	39	31
Paid for education	1	8
Some other purpose	9	2

<sup>1</sup> 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?”

<sup>2</sup> The base of respondents includes the 21 percent of traditional IRA-owning households that were retired in mid-2017 and took withdrawals in tax year 2016.

<sup>3</sup> The base of respondents includes the 5 percent of traditional IRA-owning households that were not retired in mid-2017 and took withdrawals in tax year 2016.

Note: Multiple responses are included.

Source: Investment Company Institute IRA Owners Survey. See *ICI Research Perspective*, “The Role of IRAs in US Households’ Saving for Retirement, 2017.”



## The Role of Mutual Funds in Retirement Savings

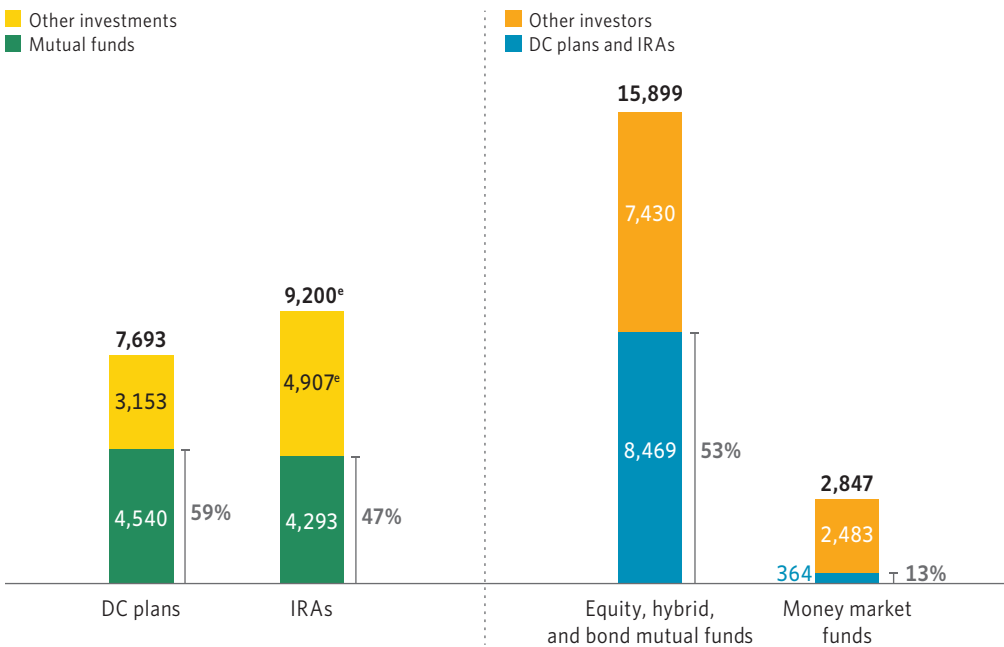
Mutual funds play a major role in employer-sponsored DC plans (such as 401(k) plans) and IRAs. At year-end 2017, mutual funds accounted for 59 percent of DC plan assets and 47 percent of IRA assets (Figure 8.24). Investors held slightly more mutual fund assets in DC plans (\$4.5 trillion) than in IRAs (\$4.3 trillion). Among DC plans, 401(k) plans held the most assets in mutual funds, with \$3.5 trillion, followed by 403(b) plans (\$494 billion), other private-sector DC plans (\$380 billion), and 457 plans (\$121 billion) (Figure 8.25). Combined, the \$8.8 trillion of mutual fund assets held in DC plans and IRAs at the end of 2017 accounted for 31 percent of the \$28.2 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 8.24). The \$8.8 trillion in mutual fund retirement assets made up 47 percent of all mutual fund assets at year-end 2017. 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 8.24

### Substantial Amounts of Retirement Assets Are Invested in Mutual Funds

Assets, billions of dollars, year-end 2017



<sup>e</sup>Data are estimated.

Sources: Investment Company Institute and Federal Reserve Board. See Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017."

## Types of Mutual Funds Used by Retirement Investors

Retirement investors tend to hold equity investments. At year-end 2017, 58 percent of the \$8.8 trillion in mutual fund retirement assets held in DC plans and IRAs were invested in equity funds (Figure 8.25). US domestic equity funds alone constituted about \$3.9 trillion, or 44 percent, of mutual fund assets held in DC plans and IRAs; world equity funds were an additional 15 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 2017, 24 percent of mutual fund assets held in DC plans and IRAs were held in hybrid funds (Figure 8.25).

FIGURE 8.25

### Majority of Mutual Fund Retirement Account Assets Were Invested in Equities

Billions of dollars, year-end 2017

	Equity					Total
	Domestic	World	Hybrid <sup>1</sup>	Bond	Money market	
<b>IRAs<sup>2</sup></b>	<b>\$1,802</b>	<b>\$607</b>	<b>\$939</b>	<b>\$704</b>	<b>\$240</b>	<b>\$4,293</b>
<b>DC plans</b>	<b>2,055</b>	<b>692</b>	<b>1,173</b>	<b>498</b>	<b>123</b>	<b>4,540</b>
401(k) plans	1,550	580	971	363	81	3,545
403(b) plans	301	43	95	37	18	494
457 plans	63	19	25	13	1	121
Other private-sector DC plans <sup>3</sup>	141	50	82	85	24	380
<b>Total</b>	<b>\$3,857</b>	<b>\$1,299</b>	<b>\$2,112</b>	<b>\$1,201</b>	<b>\$364</b>	<b>\$8,833</b>

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

<sup>2</sup> IRAs include traditional IRAs, Roth IRAs, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

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

Note: Components may not add to the total because of rounding.

Source: Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017"

The remaining 18 percent of mutual fund assets held in DC plans and IRAs at the end of 2017 were invested in bond funds and money market funds. Bond funds held \$1.2 trillion, or 14 percent, of mutual fund assets held in DC plans or IRAs, and money market funds accounted for \$364 billion, or 4 percent (Figure 8.25).

### Target Date, Lifestyle, and Index 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 \$1.5 trillion at year-end 2017, up from \$1.3 trillion at year-end 2016 (Figure 8.26). Target date mutual fund assets were \$1.1 trillion, up 26 percent from \$887 billion at year-end 2016. Assets in lifestyle mutual funds were \$399 billion at year-end 2017, an increase of 7 percent from year-end 2016. At year-end 2017, most (87 percent) target date mutual fund assets were held in retirement accounts, predominantly DC plan accounts. At year-end 2017, although the majority (56 percent) of lifestyle mutual fund assets were held outside of retirement accounts, 25 percent of lifestyle mutual fund assets were held in IRAs and 19 percent were held in DC plans.

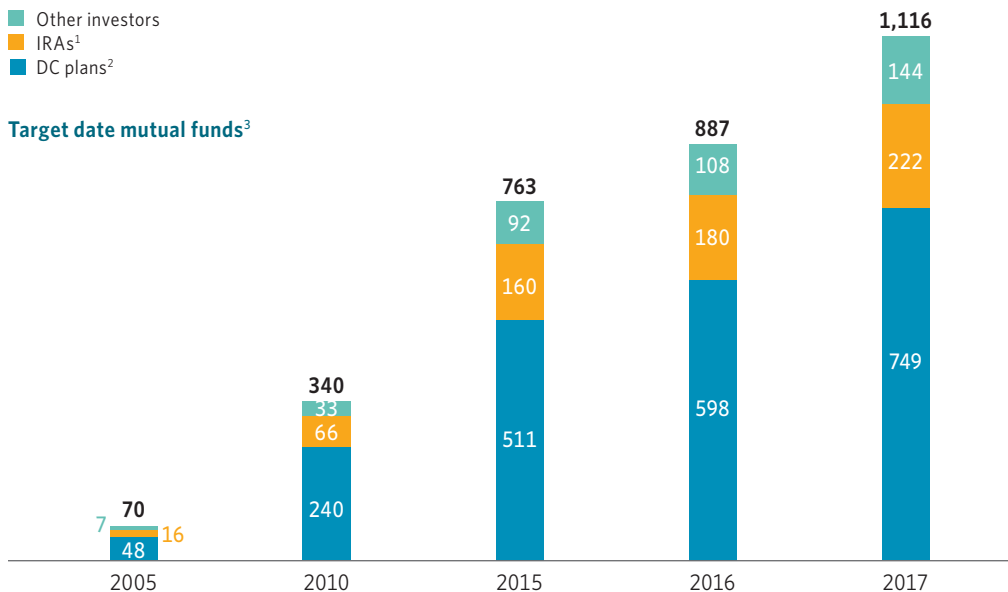
FIGURE 8.26

## Target Date and Lifestyle Mutual Fund Assets by Account Type

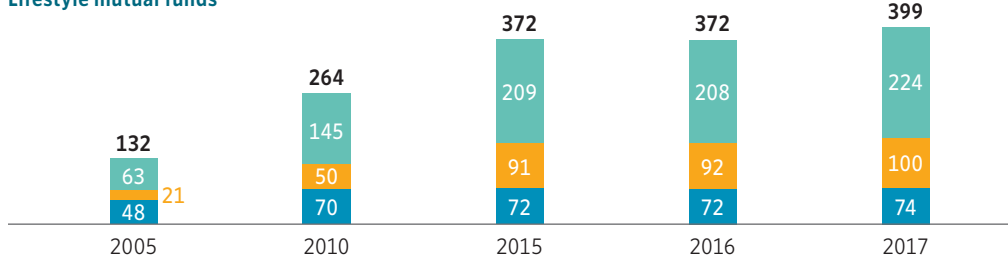
Billions of dollars; year-end, selected years

- Other investors
- IRAs<sup>1</sup>
- DC plans<sup>2</sup>

### Target date mutual funds<sup>3</sup>



### Lifestyle mutual funds<sup>4</sup>



<sup>1</sup> IRAs include traditional IRAs, Roth IRAs, and employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs).

<sup>2</sup> DC plans include 401(k) plans, 403(b) plans, 457 plans, and other DC plans without 401(k) features.

<sup>3</sup> 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.

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

Note: Components may not add to the total because of rounding.

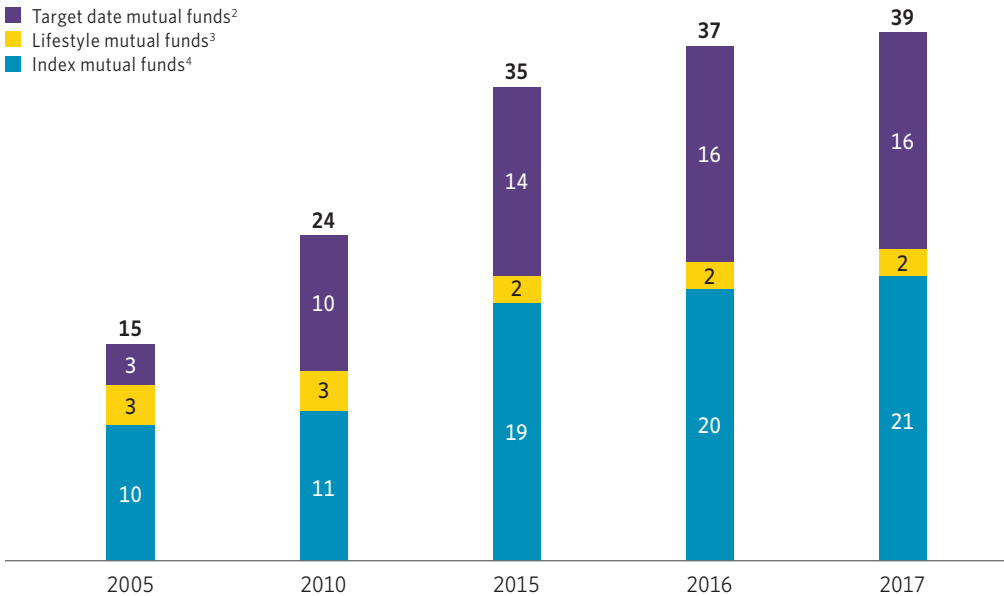
Source: Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017"

Focusing on the composition of mutual fund assets held in DC accounts reveals that target date mutual funds and index mutual funds have increased their share in DC plan mutual fund assets. Target date mutual funds quintupled their share of DC plan mutual fund assets between year-end 2005 and the end of 2017; they now make up 16 percent of these holdings (Figure 8.27). Over the same period, index mutual funds have doubled their share of DC plan mutual fund assets, rising from 10 percent at year-end 2005 to 21 percent at year-end 2017.

**FIGURE 8.27**

**Target Date and Index Funds Have Risen as a Share of DC Plans' Mutual Fund Assets**

*Percentage of mutual fund assets held in DC plans;<sup>1</sup> year-end, selected years*



<sup>1</sup> DC plans include 401(k) plans, 403(b) plans, 457 plans, and other DC plans without 401(k) features.

<sup>2</sup> 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.

<sup>3</sup> A lifestyle mutual fund maintains a predetermined risk level and generally contains "conservative," "moderate," or "aggressive" in the fund's name.

<sup>4</sup> Index mutual funds are equity, bond, and hybrid funds that target specific market indexes with the general objective of meeting the performance of that index. Equity index funds are the most common type of index fund.

Note: Components may not add to the total because of rounding.

Source: Investment Company Institute, "The US Retirement Market, Fourth Quarter 2017"

## The Role of Mutual Funds in Education Savings

Twenty-three percent of households that owned mutual funds in 2017 cited education as a financial goal for their fund investments (Figure 7.8). 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. It was not until the 2006 Pension Protection Act (PPA) that the EGTRRA 529 plan enhancements were made 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.

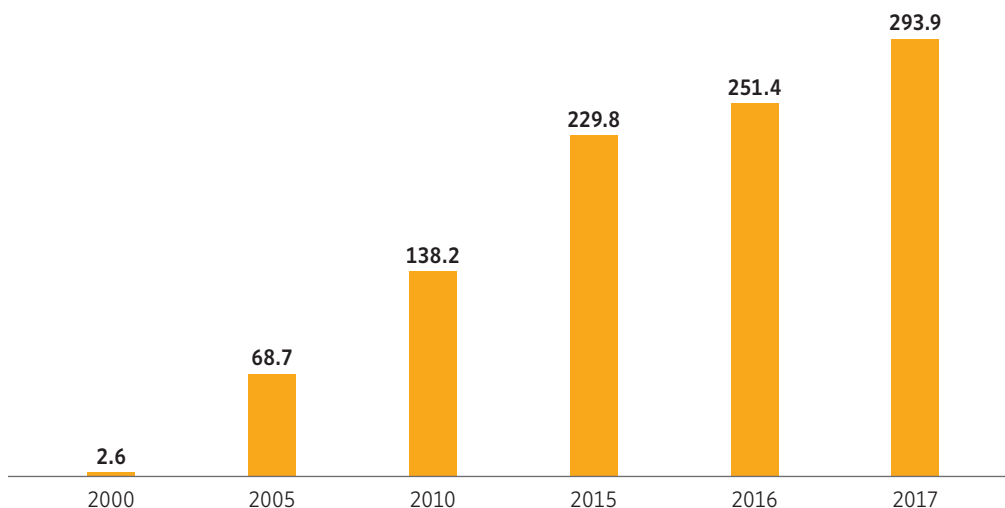
### Assets in 529 Savings Plans

Assets in Section 529 savings plans were \$293.9 billion at year-end 2017, up 17 percent since year-end 2016 (Figure 8.28). As of year-end 2017, there were 12.2 million 529 savings plan accounts, with an average account size of approximately \$24,100.

FIGURE 8.28

#### Section 529 Savings Plan Assets

*Billions of dollars; year-end, selected years*



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 2017."

## Characteristics of Households Saving for College

In mid-2017, 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 (48 percent) were younger than 45 (Figure 8.29). Heads of households saving for college had a range of educational attainment. Sixty percent had completed college, 24 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: 42 percent of households saving for college had household income of less than \$100,000, including 24 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 42 percent had more than one child in the home.



### LEARN MORE

529 Plan Program Statistics  
[www.ici.org/research/stats/529s](http://www.ici.org/research/stats/529s)

FIGURE 8.29

## Characteristics of Households Saving for College

Percentage of US households saving for college,<sup>1</sup> mid-2017

### Age of head of household<sup>2</sup>

Younger than 35	22
35 to 44	26
45 to 54	27
55 to 64	16
65 or older	9

### Education level of head of household<sup>2</sup>

High school diploma or less	16
Associate's degree or some college	24
Completed college	26
Some graduate school or completed graduate school	34

### Household income<sup>3</sup>

Less than \$25,000	3
\$25,000 to \$34,999	3
\$35,000 to \$49,999	5
\$50,000 to \$74,999	13
\$75,000 to \$99,999	18
\$100,000 or more	58

### Number of children in home<sup>4</sup>

None	38
One	20
Two	26
Three or more	16

<sup>1</sup> 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.

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

<sup>3</sup> Total reported is household income before taxes in 2016.

<sup>4</sup> The number of children reported is children younger than 18 living in the home.



PART TWO

# Data Tables



# DATA TABLES

---

## SECTION ONE

### US Mutual Fund Totals

**208 Table 1**

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

**209 Table 2**

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

**210 Table 3**

Mutual Funds: Total Net Assets

**211 Table 4**

Mutual Funds: Total Net Assets by Composite Investment Objective

**212 Table 5**

Mutual Funds: Number of Funds

**213 Table 6**

Mutual Funds: Number of Funds by Composite Investment Objective

**214 Table 7**

Mutual Funds: Number of Share Classes

**215 Table 8**

Mutual Funds: Number of Share Classes by Composite Investment Objective

---

## SECTION TWO

### US Closed-End Funds, Exchange-Traded Funds, and Unit Investment Trusts

**216 Table 9**

Closed-End Funds: Total Assets and Number of Funds by Type of Fund

**217 Table 10**

Closed-End Funds: Gross Issuance, Gross Redemptions, and Net Issuance by Type of Fund

**218 Table 11**

Exchange-Traded Funds: Total Net Assets by Type of Fund

**219 Table 12**

Exchange-Traded Funds: Number of Funds by Type of Fund

**220 Table 13**

Exchange-Traded Funds: Net Issuance by Type of Fund

**221 Table 14**

Unit Investment Trusts: Total Net Assets, Number of Trusts, and New Deposits by Type of Trust

---

## SECTION THREE

### US Long-Term Mutual Funds

- 222 Table 15**  
Long-Term Mutual Funds: Liquid Assets and Liquidity Ratios
- 223 Table 16**  
Long-Term Mutual Funds: Liquidity Ratios by Composite Investment Objective
- 224 Table 17**  
Long-Term Mutual Funds: Net New Cash Flow
- 225 Table 18**  
Equity Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow
- 226 Table 19**  
Hybrid Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow
- 227 Table 20**  
Bond Mutual Funds: Net New Cash Flow and Components of Net New Cash Flow
- 228 Table 21**  
Long-Term Mutual Funds: Net New Cash Flow by Composite Investment Objective
- 229 Table 22**  
Long-Term Mutual Funds: New Sales by Composite Investment Objective
- 230 Table 23**  
Long-Term Mutual Funds: Exchange Sales by Composite Investment Objective
- 231 Table 24**  
Long-Term Mutual Funds: Regular Redemptions by Composite Investment Objective
- 232 Table 25**  
Long-Term Mutual Funds: Exchange Redemptions by Composite Investment Objective
- 233 Table 26**  
Long-Term Mutual Funds: Annual Redemption Rates
- 234 Table 27**  
Long-Term Mutual Funds: Portfolio Holdings: Value and Percentage of Total Net Assets
- 235 Table 28**  
Long-Term Mutual Funds: Portfolio Holdings as a Percentage of Total Net Assets by Type of Fund
- 236 Table 29**  
Long-Term Mutual Funds: Paid and Reinvested Dividends by Type of Fund
- 237 Table 30**  
Long-Term Mutual Funds: Paid and Reinvested Capital Gains by Type of Fund
- 238 Table 31**  
Long-Term Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security
- 239 Table 32**  
Equity Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security
- 240 Table 33**  
Hybrid Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security
- 241 Table 34**  
Bond Mutual Funds: Portfolio Purchases, Sales, and Net Purchases by Type of Security

---

## SECTION FOUR

### US Money Market Funds

- 242 Table 35**  
Money Market Funds: Total Net Assets, Number of Funds, and Number of Share Classes by Type of Fund
- 243 Table 36**  
Money Market Funds: Total Net Assets by Type of Fund
- 244 Table 37**  
Money Market Funds: Net New Cash Flow by Type of Fund
- 245 Table 38**  
Money Market Funds: Net New Cash Flow and Components of Net New Cash Flow
- 246 Table 39**  
Money Market Funds: Paid and Reinvested Dividends by Type of Fund
- 247 Table 40**  
Taxable Government Money Market Funds: Asset Composition as a Percentage of Total Net Assets
- 248 Table 41**  
Taxable Prime Money Market Funds: Asset Composition as a Percentage of Total Net Assets

---

## SECTION FIVE

### Additional Categories of US Mutual Funds

- 249 Table 42**  
Active and Index Mutual Funds: Total Net Assets
- 250 Table 43**  
Active and Index Mutual Funds: Net New Cash Flow
- 251 Table 44**  
Active and Index Mutual Funds: Number of Funds
- 252 Table 45**  
Active and Index Mutual Funds: Number of Share Classes
- 253 Table 46**  
Alternative Strategy Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
- 254 Table 47**  
Emerging Market Debt Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
- 255 Table 48**  
Floating-Rate High-Yield Bond Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
- 256 Table 49**  
Funds of Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
- 257 Table 50**  
Funds of Funds: Components of Net New Cash Flow
- 258 Table 51**  
Inflation-Protected and TIPS Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes
- 259 Table 52**  
Mutual Funds by Market Capitalization: Total Net Assets and Net New Cash Flow by Type of Fund
- 260 Table 53**  
Mutual Funds by Market Capitalization: Number of Funds and Number of Share Classes by Type of Fund
- 261 Table 54**  
Sector Mutual Funds: Total Net Assets and Net New Cash Flow by Type of Fund
- 262 Table 55**  
Sector Mutual Funds: Number of Funds and Number of Share Classes by Type of Fund

---

## SECTION FIVE (continued)

### **263 Table 56**

Target Date and Lifestyle Mutual Funds: Total Net Assets, Net New Cash Flow, Number of Funds, and Number of Share Classes

### **264 Table 57**

Target Date and Lifestyle Mutual Funds: Components of Net New Cash Flow

### **265 Table 58**

Variable Annuity Mutual Funds: Total Net Assets, Net New Cash Flow, and Number of Funds

### **266 Table 59**

Variable Annuity Mutual Funds: Components of Net New Cash Flow

---

## SECTION SIX

### **Institutional Investors in the US Mutual Fund Industry**

#### **267 Table 60**

Mutual Funds: Total Net Assets Held in Individual and Institutional Accounts

#### **268 Table 61**

Mutual Funds: Total Net Assets of Institutional Investors by Type of Institution and Type of Fund

#### **269 Table 62**

Taxable Money Market Funds: Total Net Assets of Institutional Investors by Type of Institution and Type of Fund

---

## SECTION SEVEN

### **Retirement Account Investing in US Mutual Funds**

#### **270 Table 63**

Mutual Funds: DC Plan Assets and Estimated Net New Cash Flow by Type of Fund

#### **271 Table 64**

Mutual Funds: IRA Assets and Estimated Net New Cash Flow by Type of Fund

---

## SECTION EIGHT

### **Worldwide Regulated Open-End Fund Totals**

#### **272 Table 65**

Worldwide Regulated Open-End Funds: Total Net Assets

#### **274 Table 66**

Worldwide Regulated Open-End Funds: Number of Funds

#### **276 Table 67**

Worldwide Regulated Open-End Funds: Net Sales

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	1,065.19	3,079	3,177
1991	1,393.19	3,403	3,587
1992	1,642.54	3,824	4,208
1993	2,069.96	4,534	5,562
1994	2,155.32	5,325	7,697
1995	2,811.29	5,725	9,007
1996	3,525.80	6,248	10,352
1997	4,468.20	6,684	12,002
1998	5,525.21	7,314	13,720
1999	6,846.34	7,791	15,262
2000	6,964.31	8,154	16,737
2001	6,974.63	8,304	18,021
2002	6,382.92	8,242	18,981
2003	7,401.85	8,126	19,319
2004	8,095.50	8,044	20,040
2005	8,891.01	7,976	20,553
2006	10,397.75	8,122	21,263
2007	11,999.71	8,040	21,637
2008	9,620.27	8,039	22,262
2009	11,111.16	7,663	21,646
2010	11,833.09	7,555	21,915
2011	11,632.59	7,590	22,294
2012	13,054.49	7,590	22,646
2013	15,048.98	7,715	23,400
2014	15,873.40	7,927	24,236
2015	15,652.06	8,115	25,062
2016	16,343.72	8,066	25,115
2017	18,746.29	7,956	25,112

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 <sup>1</sup>	New sales	Exchange sales <sup>2</sup>	Redemptions	Exchange redemptions <sup>3</sup>
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	1,564.81	1,517.41	138.79	1,470.83	140.98
1991	2,037.64	1,990.53	155.75	1,879.69	154.31
1992	2,749.68	2,704.69	197.43	2,548.28	198.15
1993	3,187.49	3,137.76	248.79	2,904.44	253.95
1994	3,075.63	3,019.76	317.55	2,928.62	325.00
1995	3,600.62	3,526.00	351.53	3,314.86	351.08
1996	4,671.44	4,586.71	504.73	4,266.20	503.94
1997	5,801.23	5,704.83	613.44	5,324.29	618.49
1998	7,230.40	7,126.92	742.97	6,649.27	743.37
1999	9,043.58	8,922.96	949.96	8,562.10	947.36
2000	11,109.49	10,970.46	1,149.75	10,586.56	1,145.42
2001	12,866.19	12,747.52	797.34	12,242.26	798.08
2002	13,168.73	13,084.29	747.34	13,011.32	745.65
2003	12,393.57	12,315.39	572.50	12,361.63	573.76
2004	12,191.17	12,101.04	409.00	12,038.93	417.95
2005	13,939.17	13,812.35	420.84	13,546.69	432.42
2006	17,409.22	17,228.66	487.72	16,751.91	492.20
2007	23,470.56	23,236.35	606.47	22,352.14	611.96
2008	26,349.16	26,134.93	735.12	25,714.04	730.10
2009	20,679.76	20,528.37	530.25	20,676.51	528.33
2010	18,209.46	18,052.70	420.17	18,319.50	434.85
2011	17,837.06	17,661.26	448.05	17,738.76	466.49
2012	17,023.29	16,832.54	422.03	16,620.95	434.03
2013	18,158.38	17,969.26	517.70	17,778.55	530.97
2014	18,716.36	18,499.64	425.48	18,387.62	433.30
2015	20,936.55	20,712.77	452.12	20,810.78	454.37
2016	21,884.84	21,657.88	594.26	21,887.62	591.74
2017	21,109.30	20,852.49	604.75	20,677.92	605.62

<sup>1</sup> 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.

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

<sup>3</sup> 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**  
*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	1,065.19	211.18	28.30	35.98	171.14	120.25	414.56	83.78
1991	1,393.19	365.21	39.52	52.04	239.77	154.20	452.46	89.98
1992	1,642.54	468.41	45.68	77.63	308.37	196.26	451.35	94.84
1993	2,069.96	626.54	114.13	142.33	367.05	254.60	461.88	103.44
1994	2,155.32	691.57	161.19	161.40	302.84	227.31	501.11	109.89
1995	2,811.29	1,052.57	196.51	206.70	349.21	253.29	631.32	121.69
1996	3,525.80	1,440.81	285.20	248.36	396.56	253.07	763.94	137.87
1997	4,468.20	2,021.66	346.37	311.90	457.50	271.89	901.23	157.66
1998	5,525.21	2,586.31	391.64	360.04	536.96	298.59	1,166.97	184.71
1999	6,846.34	3,456.64	585.25	374.64	545.18	271.48	1,413.25	199.90
2000	6,964.31	3,369.40	564.75	360.92	545.58	278.41	1,611.38	233.87
2001	6,974.63	2,947.64	444.47	358.03	642.96	296.22	2,026.23	259.08
2002	6,382.92	2,272.81	369.37	335.28	810.26	330.13	1,988.78	276.30
2003	7,401.85	3,118.05	535.05	447.57	924.85	336.31	1,749.73	290.29
2004	8,095.50	3,626.07	716.20	552.25	971.03	328.24	1,589.70	312.00
2005	8,891.01	3,929.35	955.73	621.48	1,018.68	338.95	1,690.45	336.37
2006	10,397.75	4,471.73	1,360.45	731.50	1,130.52	365.09	1,969.42	369.03
2007	11,999.71	4,694.19	1,718.57	821.52	1,305.51	374.15	2,617.67	468.09
2008	9,620.27	2,738.46	916.34	562.26	1,233.18	337.79	3,338.56	493.68
2009	11,111.16	3,564.18	1,307.56	717.58	1,747.46	458.50	2,916.96	398.94
2010	11,833.09	4,053.51	1,542.70	842.20	2,117.22	473.95	2,473.51	330.01
2011	11,632.59	3,855.28	1,357.72	883.98	2,347.13	497.53	2,399.25	291.70
2012	13,054.49	4,324.37	1,614.39	1,031.58	2,810.81	580.17	2,405.74	287.43
2013	15,048.98	5,726.44	2,036.11	1,282.57	2,786.76	499.29	2,447.20	270.61
2014	15,873.40	6,232.58	2,081.41	1,374.14	2,894.15	566.48	2,463.85	260.79
2015	15,652.06	6,045.52	2,104.09	1,334.26	2,820.04	593.41	2,499.81	254.93
2016	16,343.72	6,414.74	2,162.53	1,388.66	3,035.96	613.70	2,597.87	130.27
2017	18,746.29	7,481.78	2,824.18	1,525.72	3,402.01	665.30	2,716.18	131.13

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			Hybrid 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	\$1,433.95	\$564.75	\$1,935.45	\$360.92	\$109.94	\$32.98	\$124.87	\$32.10	\$131.92	\$146.49	\$1,611.38	\$233.87			
2001	1,105.24	444.47	1,842.40	358.03	109.20	31.75	154.14	36.57	139.78	156.44	2,026.23	259.08			
2002	765.54	369.37	1,507.27	335.28	108.11	34.12	218.98	38.51	152.72	177.41	1,988.78	276.30			
2003	1,041.14	535.05	2,076.92	447.57	158.99	43.97	197.99	47.56	149.26	187.05	1,749.73	290.29			
2004	1,148.56	716.20	2,477.50	552.25	167.89	52.63	176.61	53.24	144.09	184.15	1,589.70	312.00			
2005	1,232.82	955.73	2,696.54	621.48	159.36	59.95	167.34	59.38	147.46	191.50	1,690.45	336.37			
2006	1,320.45	1,360.45	3,151.28	731.50	175.73	80.90	153.15	77.79	154.42	210.67	1,969.42	369.03			
2007	1,420.78	1,718.57	3,273.41	821.52	175.96	110.01	158.19	98.38	155.94	218.21	2,617.67	468.09			
2008	809.33	916.34	1,929.13	562.26	118.23	105.65	188.04	83.73	135.09	202.70	3,338.56	493.68			
2009	1,086.48	1,307.56	2,477.70	717.58	198.06	158.07	210.31	130.04	159.26	299.24	2,916.96	398.94			
2010	1,247.08	1,542.70	2,806.43	842.20	243.63	246.41	225.43	160.04	156.16	317.80	2,473.51	330.01			
2011	1,177.48	1,357.72	2,677.79	883.98	271.41	294.42	242.09	174.07	158.89	338.64	2,399.25	291.70			
2012	1,317.67	1,614.39	3,006.70	1,031.58	342.20	369.02	298.28	231.35	177.53	402.64	2,405.74	287.43			
2013	1,723.64	2,036.11	4,002.81	1,282.57	419.29	431.37	239.42	247.89	144.82	354.47	2,447.20	270.61			
2014	1,854.68	2,081.41	4,377.90	1,374.14	378.19	466.87	253.88	273.24	156.16	410.32	2,463.85	260.79			
2015	1,843.31	2,104.09	4,202.20	1,334.26	326.79	431.51	265.85	284.35	159.84	433.57	2,499.81	254.93			
2016	1,779.27	2,162.53	4,635.47	1,388.66	373.19	420.41	280.96	321.01	160.86	452.84	2,597.87	130.27			
2017	2,092.90	2,824.18	5,388.88	1,525.72	374.81	491.41	290.41	405.44	165.00	500.30	2,716.18	131.13			

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		
		Equity	Bond and income	Money market funds
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	3,079	944	155	192	584	463	505	236
1991	3,403	985	206	211	658	523	552	268
1992	3,824	1,086	239	234	773	628	585	279
1993	4,534	1,280	306	281	951	796	627	293
1994	5,325	1,463	423	360	1,104	1,012	649	314
1995	5,725	1,611	528	411	1,167	1,011	676	321
1996	6,248	1,902	668	465	1,244	981	669	319
1997	6,684	2,183	768	500	1,287	933	685	328
1998	7,314	2,622	890	525	1,351	900	687	339
1999	7,791	3,004	949	531	1,375	887	704	341
2000	8,154	3,314	1,055	508	1,367	871	704	335
2001	8,304	3,609	1,085	473	1,308	814	690	325
2002	8,242	3,713	1,018	458	1,295	770	677	311
2003	8,126	3,658	929	474	1,313	779	660	313
2004	8,044	3,650	887	472	1,324	767	639	305
2005	7,976	3,658	912	481	1,315	740	593	277
2006	8,122	3,747	995	500	1,320	713	573	274
2007	8,040	3,677	1,060	496	1,326	676	545	260
2008	8,039	3,654	1,140	511	1,311	640	534	249
2009	7,663	3,418	1,171	481	1,290	599	476	228
2010	7,555	3,320	1,194	495	1,311	583	442	210
2011	7,590	3,259	1,267	520	1,349	563	431	201
2012	7,590	3,217	1,280	562	1,394	557	400	180
2013	7,715	3,192	1,346	605	1,457	560	382	173
2014	7,927	3,236	1,411	665	1,531	557	364	163
2015	8,115	3,274	1,488	717	1,582	573	336	145
2016	8,066	3,233	1,518	717	1,602	575	319	102
2017	7,956	3,201	1,505	726	1,569	573	299	83

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			Hybrid funds			Investment grade	Bond funds			Money market funds		
	Capital appreciation	World	Total return	Hybrid funds	World	Government		Multisector	State muni	National muni	Taxable	Tax-exempt	
2000	1,555	1,055	1,759	508	155	323	575	219	155	589	282	704	335
2001	1,723	1,085	1,886	473	140	296	557	224	140	550	264	690	325
2002	1,729	1,018	1,984	458	126	284	576	212	126	515	255	677	311
2003	1,680	929	1,978	474	121	281	602	212	121	523	256	660	313
2004	1,650	887	2,000	472	122	275	615	217	122	513	254	639	305
2005	1,631	912	2,027	481	123	262	610	228	123	498	242	593	277
2006	1,670	995	2,077	500	139	256	595	221	139	478	235	573	274
2007	1,578	1,060	2,099	496	151	243	606	223	151	448	228	545	260
2008	1,556	1,140	2,098	511	161	236	596	216	161	415	225	534	249
2009	1,442	1,171	1,976	481	169	237	572	207	169	377	222	476	228
2010	1,392	1,194	1,928	495	183	229	584	211	183	361	222	442	210
2011	1,356	1,267	1,903	520	217	223	579	212	217	346	217	431	201
2012	1,341	1,280	1,876	562	255	216	580	219	255	336	221	400	180
2013	1,325	1,346	1,867	605	290	214	593	231	290	331	229	382	173
2014	1,328	1,411	1,908	665	347	199	604	242	347	322	235	364	163
2015	1,344	1,488	1,930	717	370	192	620	242	370	319	254	336	145
2016	1,314	1,518	1,919	717	370	190	624	245	370	319	256	319	102
2017	1,301	1,505	1,900	726	354	187	607	242	354	312	261	299	83

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	3,177	962	166	199	598	490	522	240
1991	3,587	1,021	227	223	687	558	591	280
1992	4,208	1,189	263	257	877	708	616	298
1993	5,562	1,560	385	347	1,207	1,054	672	337
1994	7,697	2,026	630	515	1,605	1,660	858	403
1995	9,007	2,442	845	634	1,844	1,862	953	427
1996	10,352	3,056	1,155	749	2,050	1,889	1,005	448
1997	12,002	3,860	1,449	873	2,293	1,978	1,075	474
1998	13,720	4,872	1,770	964	2,532	1,955	1,137	490
1999	15,262	5,818	1,968	1,026	2,722	1,998	1,230	500
2000	16,737	6,724	2,299	1,007	2,821	2,031	1,331	524
2001	18,021	7,737	2,511	994	2,874	1,957	1,405	543
2002	18,981	8,426	2,515	1,030	3,065	1,939	1,463	543
2003	19,319	8,545	2,369	1,112	3,222	2,040	1,462	569
2004	20,040	9,001	2,357	1,202	3,377	2,050	1,477	576
2005	20,553	9,258	2,501	1,344	3,427	1,992	1,464	567
2006	21,263	9,640	2,775	1,355	3,542	1,938	1,454	559
2007	21,637	9,705	3,030	1,354	3,640	1,893	1,447	568
2008	22,262	9,880	3,386	1,424	3,753	1,829	1,443	547
2009	21,646	9,341	3,548	1,374	3,780	1,757	1,330	516
2010	21,915	9,200	3,715	1,450	3,995	1,774	1,281	500
2011	22,294	9,175	3,953	1,562	4,155	1,719	1,255	475
2012	22,646	9,145	4,046	1,691	4,443	1,698	1,174	449
2013	23,400	9,221	4,266	1,868	4,726	1,748	1,141	430
2014	24,236	9,421	4,536	2,028	5,002	1,743	1,100	406
2015	25,062	9,634	4,795	2,205	5,228	1,773	1,056	371
2016	25,115	9,638	4,906	2,151	5,349	1,796	1,003	272
2017	25,112	9,634	4,874	2,186	5,374	1,864	949	231

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			Hybrid funds			Investment grade	Bond funds			Money market funds		
	Capital appreciation	World	Total return	World	High yield	World		Government	Multisector	State muni	National muni	Taxable	Tax-exempt
2000	3,232	2,299	3,492	1,007	490	311	1,141	679	200	1,393	638	1,331	524
2001	3,770	2,511	3,967	994	524	292	1,190	661	207	1,325	632	1,405	543
2002	3,974	2,515	4,452	1,030	528	291	1,343	676	227	1,286	653	1,463	543
2003	3,950	2,369	4,595	1,112	538	291	1,464	703	226	1,333	707	1,462	569
2004	4,068	2,357	4,933	1,202	571	302	1,554	716	234	1,333	717	1,477	576
2005	4,092	2,501	5,166	1,344	612	315	1,577	687	236	1,306	686	1,464	567
2006	4,248	2,775	5,392	1,355	623	367	1,607	666	279	1,258	680	1,454	559
2007	4,161	3,030	5,544	1,354	661	413	1,658	630	278	1,220	673	1,447	568
2008	4,179	3,386	5,701	1,424	680	491	1,663	624	295	1,151	678	1,443	547
2009	3,929	3,548	5,412	1,374	660	542	1,632	633	313	1,069	688	1,330	516
2010	3,836	3,715	5,364	1,450	695	615	1,710	652	323	1,065	709	1,281	500
2011	3,779	3,953	5,396	1,562	709	744	1,721	620	361	1,029	690	1,255	475
2012	3,764	4,046	5,381	1,691	749	892	1,798	626	378	1,002	696	1,174	449
2013	3,763	4,266	5,458	1,868	802	1,044	1,845	631	404	1,010	738	1,141	430
2014	3,789	4,536	5,632	2,028	841	1,250	1,875	601	435	990	753	1,100	406
2015	3,867	4,795	5,767	2,205	858	1,332	1,946	592	500	976	797	1,056	371
2016	3,817	4,906	5,821	2,151	867	1,348	1,986	591	557	998	798	1,003	272
2017	3,814	4,874	5,820	2,186	880	1,324	1,998	590	582	1,027	837	949	231

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 <i>Millions of dollars, year-end</i>										Number of funds <i>Year-end</i>					
	Equity funds					Bond funds					Equity funds			Bond funds		
	Total	Domestic	Global/ International	Domestic taxable	Global/ International	Domestic municipal	Global/ International	Domestic taxable	Global/ International	Domestic municipal	Total	Domestic	Global/ International	Domestic taxable	Global/ International	Domestic municipal
1996	\$146,908	\$19,830	\$27,074	\$28,418	\$59,540	\$12,046	28,315	61,992	11,912	486	50	91	118	205	205	32
1997	151,767	20,536	29,011	28,315	61,992	11,912	34,127	63,628	10,454	486	45	89	115	205	205	32
1998	155,749	22,529	25,011	34,127	63,628	10,454	30,888	64,513	10,348	491	44	83	123	211	211	30
1999	146,940	24,696	16,494	30,888	64,513	10,348	28,581	68,266	9,676	511	49	74	117	241	241	30
2000	143,066	24,557	11,986	26,559	74,467	9,102	26,559	74,467	9,102	481	53	69	109	220	220	30
2001	141,185	22,309	8,748	25,643	90,024	9,414	25,643	90,024	9,414	489	52	64	108	238	238	27
2002	158,664	26,596	6,988	55,428	94,060	11,539	55,428	94,060	11,539	543	63	59	105	291	291	25
2003	213,756	42,987	9,743	63,890	94,841	12,847	63,890	94,841	12,847	581	75	55	127	297	297	27
2004	253,382	63,732	18,072	63,935	94,563	12,559	63,935	94,563	12,559	618	95	61	137	295	295	30
2005	275,932	77,090	27,784	67,962	94,526	13,079	67,962	94,526	13,079	634	120	71	132	280	280	31
2006	297,236	88,013	33,657	62,571	88,920	15,682	62,571	88,920	15,682	645	128	74	134	276	276	33
2007	312,371	87,869	57,329	33,673	67,334	10,891	33,673	67,334	10,891	662	136	92	131	269	269	34
2008	184,175	45,753	26,525	44,126	77,677	13,660	44,126	77,677	13,660	642	128	93	128	260	260	33
2009	222,894	52,940	34,489	48,985	77,140	14,965	48,985	77,140	14,965	627	117	91	127	260	260	32
2010	237,790	60,461	36,239	48,009	84,100	14,422	48,009	84,100	14,422	624	117	87	130	258	258	32
2011	242,387	62,414	33,441	53,638	90,594	18,746	53,638	90,594	18,746	632	125	87	132	256	256	32
2012	263,618	68,461	32,179	58,489	82,876	23,773	58,489	82,876	23,773	602	125	86	131	223	223	37
2013	279,374	81,757	32,480	56,820	90,207	22,910	56,820	90,207	22,910	599	131	85	132	210	210	41
2014	289,322	88,962	30,422	51,720	89,545	19,912	51,720	89,545	19,912	568	126	84	124	194	194	40
2015	260,970	72,201	27,593	53,612	86,894	20,254	53,612	86,894	20,254	559	122	84	126	188	188	39
2016	262,565	75,587	26,217	56,045	89,032	20,853	56,045	89,032	20,853	532	118	82	126	172	172	34
2017	275,177	79,637	29,610							530	117	80	128	172	172	33

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	Total	Equity funds		Bond funds		
		Domestic	Global/ International	Domestic taxable	Domestic municipal	Global/ International
<b>Gross issuance<sup>1</sup></b>						
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	17,100	4,311	157	4,525	1,643	6,464
2014	8,456	4,263	619	677	2,897	1
2015	4,216	572	1,461	1,403	728	51
2016	3,508	346	156	1,870	1,132	4
2017	5,072	776	302	1,324	2,244	425
<b>Gross redemptions<sup>2</sup></b>						
2007	\$2,717	\$1,024	\$105	\$254	\$1,313	\$20
2008	22,573	7,060	1,832	6,891	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	1,941	104	340	438	556	502
2017	2,350	923	703	512	98	113
<b>Net issuance<sup>3</sup></b>						
2007	\$28,369	\$4,949	\$19,659	\$1,966	-\$880	\$2,675
2008	-22,298	-7,052	-1,687	-6,770	-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	13,765	4,097	-491	3,921	-220	6,459
2014	4,935	3,819	494	266	567	-212
2015	1,753	224	1,043	678	-87	-104
2016	1,567	242	-184	1,432	576	-498
2017	2,722	-147	-401	812	2,146	312

<sup>1</sup> Gross issuance of shares is the value of net proceeds from underwritings, additional offerings, and other issuance. Data are not available prior to 2002.

<sup>2</sup> Gross redemptions of shares is the value of share repurchases and fund liquidations. Data are not available prior to 2007.

<sup>3</sup> 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 <sup>2</sup>				Hybrid		1940 Act ETFs		Non-1940 Act ETFs <sup>3</sup>	Funds of funds <sup>4</sup>	
		Broad-based	Sector <sup>1</sup>	Global/International	Commodities <sup>2</sup>	Bond	Index	Actively managed						
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	-	226,205	-	\$1,335	-	
2005	300,820	186,832	28,975	65,210	4,798	-	-	15,004	-	296,022	-	4,798	-	
2006	422,550	232,487	43,655	111,194	14,699	-	-	20,514	-	407,850	-	14,699	-	
2007	608,422	300,930	64,117	179,702	28,906	\$119	-	34,648	-	579,517	-	28,906	-	
2008	531,288	266,161	58,374	113,684	35,728	132	-	57,209	-	495,314	\$245	35,728	\$97	
2009	777,128	304,044	82,053	209,315	74,528	169	-	107,018	-	701,586	1,014	74,528	824	
2010	991,989	372,377	103,807	276,622	101,081	322	-	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	-	934,232	5,039	108,868	1,575	
2012	1,337,123	509,350	135,378	328,521	120,016	656	-	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	-	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	-	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	-	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	-	2,433,798	28,961	61,629	9,701	
2017	3,400,696	1,603,965	374,454	792,248	68,927	7,800	-	553,302	-	3,288,485	44,924	67,288	11,944	

<sup>1</sup> This category includes funds both registered and not registered under the Investment Company Act of 1940.

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

<sup>3</sup> The funds in this category are not registered under the Investment Company Act of 1940.

<sup>4</sup> 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
	Total	Equity					1940 Act ETFs					Non-1940 Act ETFs <sup>3</sup>	Funds of funds <sup>4</sup>	
		Domestic equity		Global/ International	Commodities <sup>2</sup>	Hybrid	Bond	Index	Actively managed					
		Broad-based	Sector <sup>1</sup>											
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	5	49	-	-	601	-	28	-	
2008	728	204	186	225	45	6	62	-	-	670	13	45	15	
2009	797	222	179	244	49	5	98	-	-	727	21	49	23	
2010	923	243	193	298	55	6	128	-	-	843	26	54	27	
2011	1,135	288	229	368	75	7	168	-	-	1,029	33	73	31	
2012	1,195	275	222	404	79	13	202	-	-	1,076	42	77	44	
2013	1,295	293	235	438	76	15	238	-	-	1,163	60	72	37	
2014	1,412	317	236	494	82	19	264	-	-	1,232	108	72	39	
2015	1,595	361	266	592	81	21	274	-	-	1,402	120	73	49	
2016	1,716	396	304	629	80	22	285	-	-	1,501	149	66	58	
2017	1,832	472	298	629	91	33	309	-	-	1,569	194	69	65	

<sup>1</sup> This category includes funds both registered and not registered under the Investment Company Act of 1940.

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

<sup>3</sup> The funds in this category are not registered under the Investment Company Act of 1940.

<sup>4</sup> 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	Equity				Investment objective				Legal status			Memo
	Total	Domestic equity		Global/ International	Commodities <sup>2</sup>	Hybrid	Bond	1940 Act ETFs		Non-1940 Act ETFs <sup>3</sup>		
		Broad-based	Sector <sup>1</sup>					Index	Actively managed		Funds of funds <sup>4</sup>	
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	266,223	6,247	11,444	-638	
2017	470,800	156,459	29,533	159,771	1,603	2,500	120,933	454,235	15,437	1,128	1,058	

<sup>1</sup> This category includes funds both registered and not registered under the Investment Company Act of 1940.

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

<sup>3</sup> The funds in this category are not registered under the Investment Company Act of 1940.

<sup>4</sup> 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 Simifund

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			
	Total	Equity	Taxable debt	Tax-free debt	Total	Equity	Taxable debt	Tax-free debt	Total	Equity	Taxable debt	Tax-free debt
	<i>Millions of dollars, year-end</i>				<i>Year-end</i>				<i>Millions of dollars, annual</i>			
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

Note: Components may not add to the total because of rounding.

TABLE 15

## Long-Term Mutual Funds: Liquid Assets and Liquidity Ratios

Year-end

Year	Liquid asset Millions of dollars				Liquidity ratios* 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	48,440	27,344	4,198	16,899	8.5	11.4	11.7	5.8
1991	60,385	30,657	3,309	26,419	7.1	7.6	6.4	6.7
1992	73,984	42,417	6,560	25,007	6.7	8.3	8.5	5.0
1993	99,436	57,539	16,613	25,284	6.6	7.8	11.7	4.1
1994	120,430	70,885	19,929	29,616	7.8	8.3	12.3	5.6
1995	141,755	97,743	19,271	24,741	6.9	7.8	9.3	4.1
1996	151,988	107,667	17,954	26,367	5.8	6.2	7.2	4.1
1997	198,826	145,565	24,645	28,616	5.8	6.1	7.9	3.9
1998	191,393	143,516	25,289	22,588	4.6	4.8	7.0	2.7
1999	219,098	174,692	20,979	23,427	4.2	4.3	5.6	2.9
2000	277,164	225,023	26,798	25,343	5.4	5.7	7.4	3.1
2001	222,469	170,355	26,911	25,203	4.7	5.0	7.5	2.7
2002	208,938	120,499	25,423	63,016	5.1	4.6	7.6	5.5
2003	259,638	154,874	30,654	74,110	4.8	4.2	6.8	5.9
2004	307,103	184,132	36,419	86,552	5.0	4.2	6.6	6.7
2005	303,181	190,898	43,133	69,150	4.4	3.9	6.9	5.1
2006	346,759	218,661	57,461	70,637	4.3	3.7	7.9	4.7
2007	381,668	266,273	56,813	58,581	4.3	4.2	6.9	3.5
2008	314,280	203,277	52,712	58,291	5.4	5.6	9.4	3.7
2009	365,560	169,792	52,845	142,922	4.7	3.5	7.4	6.5
2010	330,155	192,608	61,022	76,525	3.7	3.4	7.2	3.0
2011	461,852	182,548	70,744	208,559	5.2	3.5	8.0	7.3
2012	516,076	200,436	100,352	215,288	5.0	3.4	9.7	6.3
2013	659,016	272,504	149,455	237,057	5.3	3.5	11.7	7.2
2014	742,206	291,688	165,287	285,231	5.6	3.5	12.0	8.2
2015	670,931	258,379	179,477	233,075	5.2	3.2	13.5	6.8
2016	664,038	257,872	169,521	236,645	4.9	3.0	12.2	6.5
2017	792,223	313,496	181,411	297,316	5.0	3.0	11.9	7.3

\* The liquidity ratio is the ratio of liquid assets divided by total net assets at year-end.

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: Liquidity Ratios by Composite Investment Objective

Percent, year-end

Year	Equity funds			Hybrid funds			Investment grade			Bond funds				
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni				
2000	6.1%	7.7%	4.9%	7.4%	4.5%	-2.2%	-2.8%	-2.2%	3.1%	3.5%				
2001	4.9	6.2	4.8	7.5	3.3	-3.7	-0.5	0.6	2.3	3.2				
2002	4.9	5.7	4.1	7.6	9.8	-2.5	0.5	7.1	2.6	4.2				
2003	3.7	5.8	4.1	6.8	9.5	3.3	1.7	8.7	2.2	3.7				
2004	3.6	5.5	4.2	6.6	8.8	6.1	3.8	8.3	2.9	6.5				
2005	3.3	5.2	3.7	6.9	6.4	5.2	1.2	6.7	2.5	5.7				
2006	3.4	4.3	3.7	7.9	6.8	4.9	-4.1	2.6	2.0	4.5				
2007	4.3	5.2	3.6	6.9	2.1	4.6	-0.8	4.5	1.8	4.6				
2008	6.1	7.9	4.2	9.4	1.1	10.7	4.4	3.6	1.7	4.9				
2009	4.5	3.9	2.8	7.4	6.8	5.4	4.0	6.6	2.8	6.0				
2010	3.5	4.4	2.9	7.2	0.3	5.8	-2.5	2.7	2.1	5.2				
2011	3.8	4.5	2.8	8.0	7.2	7.2	0.9	5.2	3.1	6.6				
2012	3.6	4.0	2.9	9.7	5.4	5.6	2.8	6.9	3.4	6.2				
2013	3.6	4.5	3.0	11.7	6.9	4.3	1.0	7.0	2.0	6.5				
2014	3.3	4.9	2.9	12.0	7.5	4.4	2.5	8.0	3.6	7.6				
2015	3.3	4.3	2.6	13.5	4.7	5.8	3.2	9.4	4.4	8.2				
2016	3.1	4.1	2.4	12.2	6.0	5.6	1.3	6.4	2.7	6.7				
2017	3.8	4.0	2.2	11.9	7.4	5.0	3.8	5.2	2.6	6.3				

Note: The liquidity ratio is the ratio of liquid assets divided by total net assets at year-end. Data for funds that invest primarily in other mutual funds were excluded from the series.

TABLE 17

## Long-Term Mutual Funds: Net New Cash Flow

*Millions of dollars, annual*

Year	Total	Equity funds	Hybrid funds	Bond funds
1984	\$19,194	\$4,336	\$1,801	\$13,058
1985	73,490	6,643	3,720	63,127
1986	129,991	20,386	6,988	102,618
1987	29,776	19,231	3,748	6,797
1988	-23,119	-14,948	-3,684	-4,488
1989	8,731	6,774	3,183	-1,226
1990	21,211	12,915	1,463	6,833
1991	106,213	39,888	7,067	59,258
1992	171,696	78,983	21,725	70,989
1993	242,049	127,260	42,619	72,169
1994	75,160	114,525	21,998	-61,362
1995	122,208	124,392	3,738	-5,922
1996	231,874	216,937	11,795	3,141
1997	272,030	227,106	15,757	29,166
1998	241,796	156,875	10,265	74,656
1999	169,780	187,565	-13,018	-4,767
2000	228,868	315,705	-36,722	-50,115
2001	129,232	33,483	7,285	88,463
2002	120,598	-29,310	8,043	141,865
2003	215,906	144,077	39,079	32,750
2004	209,898	171,945	53,055	-15,102
2005	191,987	123,938	42,754	25,294
2006	227,109	147,804	19,857	59,448
2007	224,300	73,307	40,384	110,609
2008	-211,243	-215,757	-25,525	30,039
2009	392,928	2,013	19,792	371,123
2010	243,578	-24,385	35,612	232,351
2011	28,142	-129,363	39,771	117,734
2012	199,761	-152,678	46,183	306,256
2013	162,406	159,481	73,696	-70,771
2014	97,964	25,458	28,905	43,600
2015	-121,715	-75,620	-20,825	-25,270
2016	-196,961	-258,030	-45,828	106,897
2017	66,839	-159,640	-33,682	260,162

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 <sup>1</sup>	Sales			Redemptions		
		New + exchange	New <sup>2</sup>	Exchange <sup>3</sup>	Regular + exchange	Regular <sup>4</sup>	Exchange <sup>5</sup>
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	83,774	33,247	50,528
1989	6,774	89,345	46,817	42,527	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	127,260	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	216,937	674,323	442,372	231,951	457,385	240,531	216,854
1997	227,106	880,286	579,064	301,222	653,180	362,022	291,158
1998	156,875	1,065,197	699,554	365,643	908,322	534,256	374,065
1999	187,565	1,410,846	918,600	492,245	1,223,281	744,145	479,136
2000	315,705	1,972,167	1,320,008	652,159	1,656,463	1,032,119	624,344
2001	33,483	1,329,811	953,604	376,207	1,296,328	891,744	404,584
2002	-29,310	1,214,116	894,018	320,098	1,243,426	875,635	367,791
2003	144,077	1,074,161	837,483	236,679	930,084	707,530	222,554
2004	171,945	1,096,510	926,931	169,578	924,565	758,864	165,701
2005	123,938	1,192,549	1,017,122	175,427	1,068,611	878,083	190,527
2006	147,804	1,417,040	1,214,383	202,657	1,269,236	1,047,314	221,922
2007	73,307	1,729,303	1,506,648	222,655	1,655,996	1,389,092	266,903
2008	-215,757	1,526,643	1,331,631	195,013	1,742,400	1,467,414	274,986
2009	2,013	1,194,100	1,032,262	161,838	1,192,088	1,011,740	180,348
2010	-24,385	1,405,943	1,236,196	169,747	1,430,327	1,238,430	191,897
2011	-129,363	1,492,509	1,322,392	170,117	1,621,872	1,417,496	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	207,902
2014	25,458	2,009,016	1,797,760	211,256	1,983,558	1,773,309	210,249
2015	-75,620	2,012,607	1,795,601	217,007	2,088,227	1,876,117	212,110
2016	-258,030	1,942,392	1,722,854	219,538	2,200,422	1,955,125	245,297
2017	-159,640	2,238,000	1,945,016	292,983	2,397,640	2,080,348	317,292

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>2</sup> 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.

<sup>3</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

<sup>4</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

<sup>5</sup> 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 <sup>1</sup>	Sales			Redemptions		
		New + exchange	New <sup>2</sup>	Exchange <sup>3</sup>	Regular + exchange	Regular <sup>4</sup>	Exchange <sup>5</sup>
1984	\$1,801	\$4,118	\$3,842	\$276	\$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	12,419	2,528	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	11,795	56,783	47,436	9,347	44,988	31,413	13,575
1997	15,757	68,347	55,264	13,084	52,590	38,265	14,325
1998	10,265	82,691	67,294	15,397	72,426	53,353	19,073
1999	-13,018	81,917	67,617	14,300	94,934	69,790	25,145
2000	-36,722	70,445	56,973	13,473	107,167	77,219	29,948
2001	7,285	83,546	65,634	17,912	76,260	58,850	17,410
2002	8,043	93,685	75,664	18,021	85,642	67,407	18,234
2003	39,079	115,929	96,811	19,117	76,849	63,329	13,520
2004	53,055	143,463	125,438	18,025	90,407	77,520	12,887
2005	42,754	144,267	126,616	17,651	101,513	86,199	15,314
2006	19,857	146,088	127,532	18,555	126,231	106,066	20,165
2007	40,384	206,415	183,482	22,933	166,031	144,066	21,965
2008	-25,525	181,437	155,076	26,361	206,962	165,396	41,566
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	146,546	23,672
2011	39,771	264,068	234,480	29,589	224,298	191,199	33,099
2012	46,183	266,463	239,810	26,653	220,280	195,767	24,513
2013	73,696	337,699	300,924	36,775	264,003	233,080	30,923
2014	28,905	320,933	289,456	31,476	292,027	264,871	27,156
2015	-20,825	296,654	265,534	31,120	317,479	282,783	34,696
2016	-45,828	296,686	258,098	38,587	342,514	302,172	40,341
2017	-33,682	285,323	244,443	40,880	319,005	277,815	41,190

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>2</sup> 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.

<sup>3</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

<sup>4</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

<sup>5</sup> 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 <sup>1</sup>	Sales			Redemptions		
		New + exchange	New <sup>2</sup>	Exchange <sup>3</sup>	Regular + exchange	Regular <sup>4</sup>	Exchange <sup>5</sup>
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	13,094	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	69,627	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	6,833	80,659	57,106	23,552	73,826	47,978	25,848
1991	59,258	141,674	108,095	33,580	82,416	56,177	26,239
1992	70,989	217,863	171,991	45,872	146,874	96,628	50,246
1993	72,169	262,300	208,605	53,696	190,131	127,294	62,838
1994	-61,362	186,908	131,351	55,556	248,270	162,823	85,448
1995	-5,922	166,437	110,451	55,986	172,359	114,686	57,673
1996	3,141	203,343	137,886	65,457	200,201	125,486	74,715
1997	29,166	242,309	176,275	66,034	213,143	140,906	72,237
1998	74,656	314,429	230,934	83,495	239,773	160,071	79,702
1999	-4,767	299,198	217,431	81,767	303,965	207,254	96,711
2000	-50,115	250,918	187,188	63,730	301,033	220,868	80,165
2001	88,463	394,211	301,477	92,733	305,748	226,197	79,551
2002	141,865	515,028	402,020	113,009	373,163	285,070	88,093
2003	32,750	520,683	428,553	92,130	487,934	376,840	111,094
2004	-15,102	395,451	340,549	54,902	410,554	341,466	69,088
2005	25,294	402,734	351,116	51,617	377,440	321,640	55,799
2006	59,448	446,377	391,126	55,251	386,929	329,462	57,467
2007	110,609	592,760	506,964	85,796	482,151	410,366	71,785
2008	30,039	709,541	580,855	128,686	679,503	582,615	96,888
2009	371,123	1,006,552	856,710	149,841	635,428	525,205	110,224
2010	232,351	1,089,708	964,467	125,241	857,357	742,629	114,728
2011	117,734	1,103,833	976,235	127,599	986,099	870,191	115,908
2012	306,256	1,246,826	1,121,300	125,526	940,570	838,280	102,289
2013	-70,771	1,308,455	1,159,285	149,170	1,379,225	1,190,855	188,371
2014	43,600	1,278,590	1,174,510	104,080	1,234,990	1,138,147	96,843
2015	-25,270	1,197,117	1,090,671	106,446	1,222,387	1,119,993	102,395
2016	106,897	1,316,219	1,188,357	127,862	1,209,322	1,102,532	106,790
2017	260,162	1,416,653	1,268,447	148,206	1,156,492	1,032,629	123,863

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>2</sup> 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.

<sup>3</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

<sup>4</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

<sup>5</sup> 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			Hybrid funds			Investment grade			Bond funds				
	Capital appreciation	World	Total return	Hybrid funds			High yield	World	Government	Multisector	State muni	National muni		
2000	\$262,090	\$58,195	-\$4,580	-\$36,722			\$5,460	-\$4,631	-\$16,663	-\$4,439	-\$5,456	-\$9,010		
2001	-22,779	-23,206	79,469	7,285			49,253	-1,151	24,769	2,436	6,293	5,983		
2002	-52,387	-4,451	27,529	8,043			64,575	2,953	53,048	4,475	5,337	11,549		
2003	27,126	24,361	92,591	39,079			30,199	21,945	-22,124	5,539	-8,309	1,471		
2004	-11,497	71,583	111,859	53,055			22,080	-3,045	4,310	-26,259	3,160	-7,939		
2005	-25,359	106,918	42,379	42,754			36,749	-13,529	6,404	-14,211	5,171	1,232		
2006	-26,823	150,935	23,692	19,857			36,993	3,044	10,936	-17,834	11,203	3,876		
2007	-43,112	141,788	-25,369	40,384			75,916	-4,822	21,132	-2,242	9,646	3,358		
2008	-47,984	-66,686	-101,087	-25,525			8,522	-6,360	6,087	20,600	-6,628	-2,302		
2009	-7,263	29,624	-20,348	19,792			202,055	22,384	32,554	18,950	24,801	6,084		
2010	-26,724	56,679	-54,340	35,612			110,784	19,345	70,076	4,059	16,427	-2,838		
2011	-44,385	4,124	-89,102	39,771			51,100	21,654	44,468	3,393	8,736	-9,890		
2012	-39,022	6,563	-120,218	46,183			104,800	34,287	42,969	33,743	40,285	8,539		
2013	-2,981	141,377	21,085	73,696			-97,547	56,034	66,239	-51,214	14,210	-22,420		
2014	-41,233	85,387	-18,696	28,905			9,317	-44,125	24,402	5,752	20,266	-1,064		
2015	-54,254	94,296	-115,662	-20,825			-736	-36,741	-23,568	12,431	8,552	682		
2016	-138,374	-22,899	-96,757	-45,828			83,735	6,811	-39,538	11,328	21,559	2,454		
2017	-103,187	76,686	-133,140	-33,682			138,304	-17,484	47,240	2,061	63,718	-2,010		

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			Hybrid funds			Bond funds					
	Capital appreciation	World	Total return	Hybrid funds	Investment grade	High yield	World	Government	Multisector	State muni	National muni	
2000	\$574,322	\$342,511	\$403,176	\$56,973	\$79,200	\$27,405	\$8,267	\$24,359	\$6,787	\$16,989	\$24,180	
2001	306,550	251,663	395,391	65,634	127,711	36,277	8,948	58,987	12,245	25,028	32,282	
2002	250,056	245,152	398,810	75,664	173,496	39,665	10,920	93,874	14,537	26,360	43,168	
2003	250,597	205,236	381,649	96,811	187,545	65,577	18,946	71,167	20,084	20,546	44,688	
2004	268,027	184,371	474,533	125,438	166,268	48,346	18,132	38,512	17,923	16,820	34,548	
2005	263,542	239,620	513,960	126,616	172,174	42,175	23,786	32,063	20,628	21,959	38,331	
2006	302,048	354,878	557,457	127,532	184,658	45,724	29,025	29,690	29,478	25,566	46,985	
2007	368,541	479,180	658,926	183,482	248,106	55,721	45,546	34,593	38,826	29,590	54,582	
2008	340,290	374,604	616,737	155,076	277,361	47,425	53,469	64,527	37,527	30,562	69,983	
2009	273,511	284,643	474,109	150,048	426,898	70,370	69,216	90,702	57,875	28,386	113,264	
2010	309,445	379,531	547,220	181,871	450,221	96,171	129,602	79,464	71,230	28,530	109,250	
2011	340,379	398,432	583,581	234,480	448,976	129,052	138,829	72,240	76,840	19,797	90,501	
2012	335,524	362,982	561,719	239,810	489,072	124,216	132,763	109,826	106,453	30,912	128,058	
2013	395,529	511,267	734,288	300,924	466,425	173,017	193,007	74,507	116,834	23,833	111,661	
2014	425,118	543,065	829,577	289,456	492,808	147,894	194,845	70,546	128,570	22,423	117,425	
2015	423,155	584,767	787,679	265,534	466,850	124,920	154,000	80,030	126,835	24,301	113,737	
2016	384,479	500,317	838,058	258,098	530,460	130,664	114,885	90,988	132,484	34,344	154,531	
2017	417,581	614,258	913,178	244,443	554,140	125,797	160,039	74,636	176,854	28,886	148,095	

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			Hybrid funds			Investment grade			Bond funds					
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni	World	Government	Multisector	State muni	National muni
2000	\$343,618	\$169,388	\$139,153	\$13,473	\$10,298	\$3,011	\$15,829	\$1,662	\$5,304	\$10,870					
2001	176,020	85,824	114,363	17,912	11,378	2,057	24,779	2,860	5,348	13,686					
2002	144,274	71,084	104,740	18,021	11,201	2,373	37,280	3,460	5,625	13,602					
2003	94,572	41,777	100,330	19,117	17,110	3,528	18,355	4,664	4,288	10,218					
2004	57,575	27,630	84,373	18,025	8,944	2,056	7,023	4,314	2,750	6,135					
2005	55,786	38,396	81,244	17,651	7,270	2,780	6,575	4,742	2,983	6,435					
2006	64,339	56,926	81,392	18,555	7,295	2,740	5,972	7,024	3,450	6,869					
2007	60,892	68,791	92,973	22,933	7,931	4,630	10,226	5,035	5,706	10,680					
2008	58,651	49,364	86,998	26,361	7,414	8,506	27,495	10,048	7,039	17,767					
2009	44,896	47,478	69,464	24,169	13,182	7,976	18,336	8,641	5,161	20,037					
2010	41,943	55,916	71,888	23,959	13,071	9,482	14,512	10,791	3,852	15,280					
2011	48,425	40,006	81,686	29,589	14,820	10,801	14,323	10,756	3,736	13,944					
2012	45,113	47,473	96,843	26,653	13,419	9,807	14,912	12,957	3,685	16,171					
2013	68,219	44,075	110,827	36,775	19,000	26,824	13,320	10,305	4,900	22,131					
2014	61,403	48,136	101,717	31,476	12,179	10,140	7,231	9,738	3,600	15,107					
2015	64,289	55,766	96,951	31,120	14,502	13,955	9,151	9,391	3,899	14,222					
2016	54,178	49,001	116,359	38,587	14,309	15,466	10,613	9,712	4,106	20,874					
2017	65,153	83,047	144,783	40,880	14,180	18,661	11,255	14,063	4,122	19,422					

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			Hybrid funds			Investment grade			Bond funds				
	Capital appreciation	World	Total return	Hybrid funds	High yield	World	Government	Multisector	State muni	National muni	Government	Multisector	State muni	National muni
2000	\$367,939	\$288,253	\$375,927	\$77,219	\$37,560	\$11,447	\$35,865	\$10,431	\$21,877	\$31,908				
2001	307,031	264,414	320,298	58,850	34,381	9,538	37,939	10,367	18,584	27,401				
2002	276,869	243,479	355,287	67,407	36,207	11,383	53,918	11,082	20,889	33,434				
2003	222,877	183,743	300,910	63,329	47,355	15,501	79,437	14,856	25,700	41,443				
2004	269,656	122,228	366,980	77,520	49,051	13,819	58,824	14,628	22,817	39,625				
2005	274,036	148,065	455,983	86,199	52,217	18,358	43,913	15,546	20,457	34,488				
2006	313,778	223,271	510,265	106,066	42,462	18,602	43,975	19,036	21,692	36,205				
2007	394,164	347,697	647,231	144,066	57,163	26,374	38,850	28,060	25,838	46,949				
2008	375,920	413,224	678,271	165,396	51,012	49,488	59,781	44,521	32,200	63,070				
2009	273,993	254,623	483,124	127,179	51,338	40,269	69,920	35,644	22,762	56,421				
2010	329,575	317,496	591,359	146,546	79,907	62,812	74,239	55,216	29,101	93,398				
2011	377,058	383,010	657,427	191,199	108,351	95,480	69,572	69,157	28,412	92,128				
2012	367,394	354,582	660,153	195,767	92,202	92,006	77,394	70,307	22,815	89,798				
2013	401,196	374,285	721,341	233,080	121,790	141,365	117,158	101,509	40,542	139,022				
2014	464,838	459,219	849,251	264,871	186,795	170,248	63,799	110,856	23,917	92,168				
2015	480,434	501,098	894,585	282,783	157,117	181,379	68,938	119,449	23,870	102,699				
2016	509,013	512,824	933,288	302,172	126,400	155,357	81,462	114,212	31,051	134,988				
2017	508,096	548,269	1,023,983	277,815	142,278	119,059	74,464	115,745	30,533	121,955				

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			Hybrid funds			Investment grade				Bond funds			
	Capital appreciation	World	Total return	Hybrid funds			High yield	World	Government	Multisector	State muni	National muni		
2000	\$287,910	\$165,451	\$170,982	\$29,948			\$18,715	\$4,463	\$20,986	\$2,457	\$5,872	\$12,153		
2001	198,317	96,279	109,988	17,410			23,098	12,393	21,058	2,301	5,499	12,583		
2002	169,848	77,208	120,734	18,234			30,232	11,706	24,188	2,440	5,758	11,787		
2003	95,166	38,910	88,478	13,520			38,764	13,387	32,209	4,354	7,443	11,992		
2004	67,443	18,190	80,067	12,887			25,168	11,284	12,969	4,450	4,692	8,467		
2005	70,651	23,033	96,843	15,314			19,597	10,757	8,936	4,653	3,253	6,798		
2006	79,432	37,597	104,893	20,165			22,074	7,513	9,521	6,263	3,449	6,420		
2007	78,381	58,486	130,037	21,965			26,647	11,311	8,210	6,155	6,099	10,692		
2008	71,005	77,430	126,551	41,566			36,712	10,187	11,642	9,682	7,703	14,562		
2009	51,677	47,874	80,797	27,246			52,499	9,830	20,168	6,071	4,702	12,584		
2010	48,536	61,271	82,090	23,672			49,734	9,990	15,678	10,379	6,119	16,632		
2011	56,130	51,303	96,942	33,099			50,005	13,867	13,597	9,703	5,011	14,043		
2012	52,265	49,311	118,628	24,513			45,090	11,147	13,601	8,817	3,243	12,797		
2013	65,533	39,680	102,689	30,923			87,193	14,193	21,882	11,420	10,611	30,844		
2014	62,916	46,595	100,738	27,156			39,212	17,402	8,225	7,186	3,170	11,313		
2015	61,264	45,138	105,708	34,696			42,371	19,046	10,144	7,812	8,225	11,150		
2016	68,019	59,393	117,886	40,341			40,445	11,762	8,811	6,425	4,945	19,869		
2017	77,825	72,349	167,118	41,190			53,744	15,183	12,402	11,454	4,484	17,230		

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 <sup>1</sup>				Broad redemption rates <sup>2</sup>			
	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	16.4	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	43.1
1995	17.4	16.2	15.1	20.3	28.9	29.4	21.3	30.4
1996	17.0	16.2	13.8	20.0	30.0	30.7	19.8	32.0
1997	17.9	17.7	13.7	20.4	30.5	31.9	18.8	30.9
1998	19.7	20.0	15.9	20.5	32.2	34.0	21.6	30.6
1999	21.7	21.2	19.0	25.1	34.5	34.9	25.8	36.8
2000	25.7	25.9	21.0	26.9	39.9	41.5	29.1	36.7
2001	24.0	24.3	16.4	25.7	34.2	35.4	21.2	34.7
2002	27.9	29.0	19.4	27.4	38.7	41.2	24.7	35.9
2003	24.2	22.5	16.2	31.4	31.5	29.5	19.6	40.6
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	27.2	27.0	21.4	30.4
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	35.7
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	20.1	35.7	29.5	24.9	22.8	41.3
2014	24.9	22.1	19.9	33.7	27.6	24.7	22.0	36.6
2015	25.2	22.8	20.9	32.6	27.9	25.4	23.4	35.6
2016	25.3	23.4	22.2	31.2	28.3	26.3	25.2	34.2
2017	23.0	22.0	19.1	26.8	26.2	25.4	21.9	30.0

<sup>1</sup> 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.

<sup>2</sup> 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	\$2,058,275	\$1,215,218	\$259,107	\$190,837	\$245,331	\$141,755	\$6,026
1996	2,623,994	1,718,203	264,972	238,003	245,183	151,988	5,645
1997	3,409,315	2,358,258	282,272	292,770	266,324	198,826	10,866
1998	4,173,531	3,004,184	286,592	389,213	292,395	191,393	9,753
1999	5,233,194	4,059,470	293,552	388,445	267,426	219,098	5,203
2000	5,119,060	3,909,876	309,752	348,926	269,334	277,164	4,008
2001	4,689,315	3,424,265	379,735	371,428	289,651	222,469	1,767
2002	4,117,844	2,687,718	481,476	417,326	320,477	208,938	1,910
2003	5,361,827	3,760,765	504,545	501,862	331,980	259,638	3,038
2004	6,193,796	4,489,310	537,296	533,252	318,354	307,103	8,482
2005	6,864,188	5,054,747	612,803	549,973	330,945	303,181	12,539
2006	8,059,303	6,024,408	644,745	668,271	359,163	346,759	15,956
2007	8,913,946	6,608,704	749,432	784,010	369,055	381,668	21,078
2008	5,788,038	3,733,637	705,026	676,686	336,877	314,280	21,530
2009	7,795,270	5,089,857	849,815	1,021,475	451,151	365,560	17,411
2010	9,029,575	5,869,372	1,084,900	1,258,517	479,667	330,155	6,964
2011	8,941,635	5,507,505	1,186,177	1,318,996	506,843	461,852	-39,737
2012	10,361,321	6,294,176	1,379,382	1,605,036	592,848	516,076	-26,195
2013	12,331,172	8,222,968	1,208,980	1,730,764	512,640	659,016	-3,196
2014	13,148,758	8,795,567	1,213,148	1,841,337	568,192	742,206	-11,694
2015	12,897,314	8,623,484	1,252,987	1,794,328	582,722	670,931	-27,138
2016	13,615,579	9,069,103	1,362,998	1,934,733	607,893	664,038	-23,187
2017	15,898,985	10,816,939	1,513,020	2,113,274	661,765	792,223	1,764
<i>Percent</i>							
1995	100.0%	59.0%	12.6%	9.3%	11.9%	6.9%	0.3%
1996	100.0	65.5	10.1	9.1	9.3	5.8	0.2
1997	100.0	69.2	8.3	8.6	7.8	5.8	0.3
1998	100.0	72.0	6.9	9.3	7.0	4.6	0.2
1999	100.0	77.6	5.6	7.4	5.1	4.2	0.1
2000	100.0	76.4	6.1	6.8	5.3	5.4	0.1
2001	100.0	73.0	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	70.1	9.4	9.4	6.2	4.8	0.1
2004	100.0	72.5	8.7	8.6	5.1	5.0	0.1
2005	100.0	73.6	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	74.1	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	14.8	5.7	5.2	-0.4
2012	100.0	60.7	13.3	15.5	5.7	5.0	-0.3
2013	100.0	66.7	9.8	14.0	4.2	5.3	0.0
2014	100.0	66.9	9.2	14.0	4.3	5.6	-0.1
2015	100.0	66.9	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

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>
<b>Equity funds</b>								
2004	100.0%	95.2%	0.1%	0.4%	0.0%	4.2%	0.1%	\$4,342,272
2005	100.0	95.5	0.1	0.4	0.0	3.9	0.1	4,885,079
2006	100.0	95.6	0.1	0.4	0.0	3.8	0.1	5,832,181
2007	100.0	95.2	0.1	0.4	0.0	4.2	0.2	6,412,760
2008	100.0	93.5	0.2	0.5	0.0	5.6	0.3	3,654,798
2009	100.0	95.8	0.1	0.5	0.0	3.5	0.1	4,871,736
2010	100.0	95.7	0.2	0.5	0.0	3.4	0.1	5,596,202
2011	100.0	95.6	0.3	0.6	0.0	3.5	0.0	5,212,995
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	8,577,266
2017	100.0	96.3	0.2	0.4	0.0	3.0	0.1	10,305,955
<b>Hybrid funds</b>								
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	621,479
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	821,522
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	883,981
2012	100.0	59.5	8.8	21.1	0.5	9.4	0.8	1,031,581
2013	100.0	61.3	7.8	18.6	0.4	11.2	0.6	1,282,571
2014	100.0	59.5	8.2	19.6	0.5	11.7	0.4	1,374,143
2015	100.0	57.7	8.8	19.6	0.6	13.3	-0.1	1,334,258
2016	100.0	57.7	9.1	20.7	0.6	11.9	0.0	1,388,659
2017	100.0	57.5	10.2	19.9	0.6	11.6	0.2	1,525,721
<b>Bond funds</b>								
2004	100.0%	0.8%	36.2%	31.7%	24.2%	6.6%	0.4%	\$1,299,274
2005	100.0	0.8	39.6	30.0	23.9	5.1	0.6	1,357,630
2006	100.0	0.8	37.4	33.5	23.6	4.3	0.5	1,495,619
2007	100.0	1.0	38.9	35.0	21.6	3.0	0.6	1,679,664
2008	100.0	0.6	40.8	33.2	21.2	3.6	0.5	1,570,978
2009	100.0	0.8	34.8	37.4	20.1	6.4	0.4	2,205,954
2010	100.0	0.9	38.2	40.0	18.1	3.0	-0.1	2,591,175
2011	100.0	0.8	37.8	38.2	17.4	7.4	-1.7	2,844,659
2012	100.0	0.9	37.0	39.5	17.1	6.5	-1.0	3,390,984
2013	100.0	1.1	32.9	43.7	15.2	7.4	-0.4	3,286,045
2014	100.0	1.1	31.3	43.9	16.1	8.4	-0.7	3,460,626
2015	100.0	0.9	32.7	43.7	16.7	6.9	-0.9	3,413,449
2016	100.0	0.7	33.3	43.8	16.3	6.6	-0.8	3,649,654
2017	100.0	0.7	32.8	43.3	15.9	7.4	-0.2	4,067,310

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 <sup>e</sup>	\$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	143,497	60,109	19,134	64,254	119,071	54,207	16,989	47,875
2007	180,988	77,538	25,058	78,393	151,756	69,574	22,092	60,090
2008	182,116	70,594	26,032	85,490	153,097	63,631	23,045	66,421
2009	168,004	58,862	22,213	86,930	140,346	53,084	19,388	67,873
2010	180,971	62,178	23,277	95,517	152,315	56,369	20,671	75,275
2011	202,451	68,701	29,026	104,724	172,531	62,432	25,630	84,469
2012	215,308	83,226	24,937	107,145	186,540	76,125	22,678	87,738
2013	209,509	84,509	24,209	100,791	183,916	77,978	22,146	83,793
2014	237,067	101,050	29,951	106,065	211,720	93,770	27,700	90,250
2015	242,387	108,258	31,360	102,769	218,451	100,841	29,140	88,469
2016	244,401	115,463	30,253	98,684	221,592	107,715	28,309	85,568
2017	271,213	128,072	32,673	110,468	246,133	119,414	30,606	96,113

<sup>e</sup> 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 <sup>e</sup>	\$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	73,285	51,455	5,503	16,327	67,438	48,120	5,275	14,043
2012	100,185	66,771	5,563	27,851	93,350	62,866	5,328	25,157
2013	239,185	201,807	22,834	14,544	227,572	191,963	22,138	13,471
2014	399,581	345,744	40,526	13,312	382,164	330,047	39,564	12,554
2015	379,419	331,234	35,248	12,937	363,839	316,955	34,580	12,304
2016	220,403	197,820	14,504	8,079	213,382	191,403	14,277	7,701
2017	370,045	333,628	32,439	3,977	358,548	322,894	31,830	3,824

<sup>e</sup> 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 stocks			Other securities		
	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases	Purchases	Sales	Net purchases
1996	\$2,018,253	\$1,736,884	\$281,370	\$1,151,262	\$927,266	\$223,996	\$866,991	\$809,618	\$57,373
1997	2,384,639	2,108,981	275,659	1,457,384	1,268,983	188,401	927,255	839,997	87,258
1998	2,861,562	2,560,074	301,487	1,762,565	1,597,311	165,255	1,098,997	962,764	136,233
1999	3,437,180	3,224,301	212,878	2,262,505	2,088,544	173,962	1,174,674	1,135,757	38,917
2000	4,922,893	4,698,093	224,800	3,560,638	3,330,319	230,319	1,362,255	1,367,774	-5,518
2001	4,688,508	4,393,065	295,442	2,736,911	2,609,609	127,302	1,951,597	1,783,456	168,141
2002	4,018,952	3,807,362	211,590	2,176,345	2,141,723	34,622	1,842,606	1,665,638	176,968
2003	4,281,599	3,998,743	282,856	2,054,372	1,884,689	169,683	2,227,227	2,114,054	113,173
2004	4,310,169	4,019,254	290,915	2,390,912	2,198,559	192,353	1,919,256	1,820,695	98,561
2005	4,834,298	4,532,139	302,159	2,765,037	2,610,777	154,259	2,069,262	1,921,362	147,900
2006	5,737,360	5,398,079	339,280	3,330,054	3,172,193	157,861	2,407,306	2,225,886	181,420
2007	7,098,576	6,721,245	377,330	3,835,539	3,733,124	102,414	3,263,037	2,988,121	274,916
2008	7,353,006	7,294,530	58,476	3,655,810	3,715,554	-59,744	3,697,196	3,578,976	118,220
2009	6,933,199	6,453,536	479,663	2,644,810	2,543,343	101,468	4,288,388	3,910,193	378,195
2010	7,336,164	6,866,428	469,736	2,811,438	2,752,134	59,304	4,524,726	4,114,294	410,432
2011	8,533,292	8,127,287	406,005	3,033,217	3,033,850	-632	5,500,075	5,093,437	406,638
2012	8,193,662	7,606,403	587,259	2,772,459	2,827,106	-54,647	5,421,203	4,779,297	641,906
2013	9,252,780	8,732,546	520,234	3,408,690	3,225,193	183,497	5,844,090	5,507,353	336,737
2014	8,525,847	7,967,168	558,679	3,521,592	3,445,821	75,772	5,004,254	4,521,348	482,907
2015	8,879,662	8,424,429	455,233	3,595,375	3,557,983	37,392	5,284,287	4,866,446	417,841
2016	8,564,757	8,170,614	394,144	3,411,700	3,536,420	-124,720	5,153,057	4,634,194	518,864
2017	9,042,900	8,467,833	575,067	3,469,798	3,619,051	-149,253	5,573,101	4,848,782	724,320

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	\$1,116,906	\$896,644	\$220,262	\$1,050,884	\$832,486	\$218,397	\$66,022	\$64,157	\$1,865
1997	1,421,211	1,223,463	197,748	1,352,085	1,166,649	185,436	69,126	56,814	12,312
1998	1,723,752	1,557,212	166,540	1,635,842	1,475,384	160,458	87,909	81,827	6,082
1999	2,232,828	2,049,540	183,288	2,126,860	1,941,505	185,355	105,968	108,035	-2,067
2000	3,515,538	3,258,536	257,002	3,392,984	3,144,017	248,966	122,554	114,518	8,036
2001	2,707,337	2,593,405	113,931	2,571,160	2,464,538	106,622	136,177	128,867	7,310
2002	2,140,780	2,112,729	28,051	2,017,830	1,999,797	18,032	122,950	112,931	10,019
2003	1,965,413	1,822,731	142,682	1,902,712	1,758,120	144,592	62,701	64,611	-1,910
2004	2,278,744	2,110,587	168,157	2,216,937	2,053,633	163,303	61,807	56,953	4,854
2005	2,671,094	2,524,312	146,782	2,591,996	2,452,229	139,766	79,098	72,083	7,016
2006	3,231,132	3,063,793	167,339	3,129,818	2,966,114	163,705	101,313	97,679	3,634
2007	3,760,199	3,658,390	101,809	3,582,723	3,490,169	92,554	177,476	168,221	9,255
2008	3,628,232	3,698,253	-70,021	3,361,858	3,426,439	-64,581	266,374	271,813	-5,440
2009	2,749,751	2,676,473	73,278	2,433,105	2,339,013	94,092	316,646	337,459	-20,813
2010	2,828,661	2,828,689	-29	2,568,323	2,532,499	35,824	260,338	296,191	-35,853
2011	2,914,564	2,942,894	-28,329	2,755,693	2,785,232	-29,538	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	3,340,274	3,399,324	-59,050	3,089,503	3,172,270	-82,767	250,771	227,054	23,717

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	\$21,872	\$22,033	\$92,485	\$88,464	\$4,021	\$131,420	\$113,408	\$18,011
1997	255,207	234,820	20,387	98,109	94,976	3,132	157,099	139,844	17,255
1998	282,651	257,096	25,555	115,703	111,401	4,301	166,948	145,694	21,254
1999	296,235	296,850	-615	128,303	138,923	-10,620	167,932	157,927	10,005
2000	308,821	335,531	-26,711	158,039	174,998	-16,960	150,782	160,533	-9,751
2001	357,557	334,161	23,396	155,235	134,368	20,868	202,322	199,794	2,528
2002	340,650	320,591	20,059	145,370	129,204	16,166	195,280	191,387	3,893
2003	360,653	312,111	48,542	137,490	113,785	23,706	223,163	198,326	24,837
2004	404,955	337,219	67,736	163,795	132,966	30,829	241,160	204,253	36,907
2005	397,695	346,260	51,435	165,487	150,166	15,321	232,208	196,094	36,114
2006	408,861	381,376	27,485	191,740	197,120	-5,380	217,122	184,256	32,865
2007	529,061	465,049	64,011	241,633	230,855	10,778	287,428	234,194	53,233
2008	594,156	577,635	16,521	281,814	273,655	8,159	312,342	303,980	8,363
2009	477,006	443,131	33,876	200,907	194,826	6,081	276,099	248,305	27,794
2010	512,564	463,315	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	721,472	659,580	61,892	252,692	236,492	16,200	468,780	423,087	45,692
2013	909,495	828,636	80,859	344,090	326,715	17,375	565,406	501,921	63,485
2014	930,649	863,411	67,238	370,372	385,024	-14,652	560,277	478,387	81,890
2015	942,813	910,005	32,809	377,769	403,131	-25,362	565,044	506,873	58,171
2016	874,807	839,463	35,345	348,690	373,358	-24,668	526,117	466,104	60,013
2017	905,502	870,928	34,574	322,028	378,004	-55,976	583,474	492,924	90,550

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	\$677,442	\$638,368	\$39,075	\$7,893	\$6,316	\$1,578	\$669,549	\$632,052	\$37,497
1997	708,221	650,698	57,523	7,190	7,358	-167	701,031	643,340	57,691
1998	855,159	745,767	109,392	11,020	10,525	496	844,139	735,242	108,897
1999	908,117	877,911	30,205	7,342	8,115	-773	900,774	869,796	30,978
2000	1,098,534	1,104,026	-5,491	9,615	11,303	-1,688	1,088,919	1,092,722	-3,803
2001	1,623,614	1,465,499	158,115	10,515	10,703	-188	1,613,099	1,454,796	158,303
2002	1,537,522	1,374,042	163,480	13,146	12,723	423	1,524,376	1,361,320	163,057
2003	1,955,533	1,863,902	91,632	14,171	12,785	1,386	1,941,363	1,851,117	90,246
2004	1,626,470	1,571,448	55,022	10,181	11,959	-1,779	1,616,290	1,559,489	56,801
2005	1,765,509	1,661,567	103,942	7,554	8,382	-828	1,757,955	1,653,185	104,770
2006	2,097,367	1,952,910	144,456	8,496	8,960	-464	2,088,871	1,943,950	144,921
2007	2,809,317	2,597,806	211,511	11,183	12,100	-917	2,798,134	2,585,706	212,428
2008	3,130,618	3,018,643	111,975	12,138	15,460	-3,321	3,118,480	3,003,183	115,297
2009	3,706,442	3,333,933	372,509	10,798	9,503	1,295	3,695,643	3,324,429	371,214
2010	3,994,939	3,574,424	420,515	17,925	15,271	2,654	3,977,014	3,559,153	417,861
2011	4,958,264	4,587,646	370,618	22,859	19,105	3,754	4,935,405	4,568,541	366,864
2012	4,832,373	4,250,688	581,685	20,356	18,929	1,427	4,812,017	4,231,760	580,258
2013	5,164,424	4,910,506	253,918	20,942	21,415	-473	5,143,481	4,889,091	254,390
2014	4,294,009	3,912,782	381,226	30,475	27,766	2,709	4,263,534	3,885,016	378,518
2015	4,551,343	4,205,732	345,610	29,312	33,261	-3,949	4,522,030	4,172,471	349,559
2016	4,454,573	4,003,653	450,919	37,454	34,866	2,587	4,417,119	3,968,787	448,332
2017	4,797,125	4,197,582	599,543	58,267	68,777	-10,510	4,738,857	4,128,805	610,052

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 <i>Millions of dollars</i>				Number of funds				Number of share classes			
	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	\$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	1,549	442	633	474
1998	1,351,678	312,907	854,061	184,711	1,026	277	410	339	1,627	462	675	490
1999	1,613,146	333,726	1,079,523	199,897	1,045	281	423	341	1,730	488	742	500
2000	1,845,248	367,780	1,243,598	233,869	1,039	275	429	335	1,855	534	797	524
2001	2,285,310	461,631	1,564,598	259,081	1,015	269	421	325	1,948	573	832	543
2002	2,265,075	453,157	1,535,621	276,297	988	259	418	311	2,006	581	882	543
2003	2,040,022	410,041	1,339,689	290,291	973	251	409	313	2,031	572	890	569
2004	1,901,700	379,706	1,209,995	311,999	944	240	399	305	2,053	577	900	576
2005	2,026,822	399,330	1,291,119	336,373	870	221	372	277	2,031	570	894	567
2006	2,338,451	426,838	1,542,584	369,029	847	215	358	274	2,013	579	875	559
2007	3,085,760	760,389	1,857,280	468,092	805	203	342	260	2,015	574	873	568
2008	3,832,236	1,490,208	1,848,349	493,680	783	200	334	249	1,990	584	859	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	2,690,950	970,075	1,429,178	291,697	632	166	265	201	1,730	544	711	475
2012	2,693,169	928,749	1,476,993	287,426	580	158	242	180	1,623	519	655	449
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	518	285	272
2017	2,847,304	2,260,750	455,428	131,126	382	225	74	83	1,180	704	245	231

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 <sup>1</sup>				Institutional money market funds <sup>2</sup>			
	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	\$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	1,351,678	312,907	854,061	184,711	835,624	121,664	571,834	142,126	516,054	191,243	282,227	42,585
1999	1,613,146	333,726	1,079,523	199,897	965,289	132,915	676,590	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	2,285,310	461,631	1,564,598	259,081	1,135,500	169,883	776,132	189,484	1,149,810	291,748	788,466	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	2,040,022	410,041	1,339,689	290,291	939,224	141,248	607,364	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	2,026,822	399,330	1,291,119	336,373	876,493	126,244	546,843	203,406	1,150,328	273,085	744,276	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	3,085,760	760,389	1,857,280	468,092	1,226,440	185,526	755,324	285,590	1,859,321	574,863	1,101,955	182,503
2008	3,832,236	1,490,208	1,848,349	493,680	1,370,803	289,731	777,860	303,212	2,461,433	1,200,476	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	2,690,950	970,075	1,429,178	291,697	950,652	203,677	550,525	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

<sup>1</sup> 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.

<sup>2</sup> 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 37**  
**Money Market Funds: Net New Cash Flow<sup>1</sup> by Type of Fund**  
*Millions of dollars, annual*

Year	All money market funds			Retail money market funds <sup>2</sup>			Institutional money market funds <sup>3</sup>		
	Total	Government	Tax-exempt	Total	Government	Tax-exempt	Total	Government	Tax-exempt
1996	\$89,422	\$20,572	\$58,935	\$52,940	\$6,181	\$39,559	\$36,481	\$14,391	\$19,376
1997	103,466	20,129	69,107	46,745	4,781	32,206	56,721	15,347	36,901
1998	235,457	45,178	167,909	131,072	15,835	100,508	104,386	29,343	67,401
1999	193,681	8,486	174,957	82,215	-757	73,145	111,466	9,243	101,812
2000	159,365	14,412	118,354	43,576	504	24,417	115,789	13,908	93,937
2001	375,291	86,621	267,329	36,449	13,579	12,827	338,842	73,043	254,502
2002	-45,937	-11,131	-51,060	-80,065	-10,174	-71,219	34,128	-957	20,159
2003	-263,403	-50,998	-222,179	-151,338	-20,609	-125,822	-112,065	-30,389	-96,358
2004	-156,744	-36,125	-139,213	-88,769	-15,871	-75,331	-67,975	-20,254	-63,882
2005	62,085	13,182	28,009	2,358	-3,652	-4,781	59,728	16,834	32,790
2006	245,162	19,615	200,115	96,543	9,317	71,069	148,619	10,297	129,046
2007	654,412	319,240	251,219	172,657	38,769	83,264	481,755	280,471	167,955
2008	637,155	697,443	-73,523	114,128	98,267	2,099	523,027	599,176	-75,621
2009	-539,150	-414,948	-28,571	-308,406	-104,057	-136,444	-230,744	-310,891	107,873
2010	-525,064	-253,927	-201,765	-124,197	-25,964	-69,829	-400,867	-227,962	-131,937
2011	-124,073	107,294	-192,713	-1,348	20,461	-12,544	-122,725	86,833	-180,169
2012	-178	-43,343	47,096	-1,195	-781	-7,602	1,017	-42,563	54,697
2013	15,037	29,348	2,473	-12,210	-1,143	-4,275	27,247	30,491	6,748
2014	6,235	48,232	-31,890	-30,663	-5,843	-18,335	36,898	54,075	-13,556
2015	21,462	40,682	-13,719	5,270	20,579	-11,153	16,192	20,103	-2,566
2016	-30,256	850,698	-764,865	-70,353	169,635	-161,149	40,097	681,063	-603,716
2017	106,857	30,088	76,287	5,394	-8,376	14,039	101,464	38,464	62,248

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>2</sup> 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.

<sup>3</sup> 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 <sup>1</sup>	Sales			Redemptions		
		New + exchange	New <sup>2</sup>	Exchange <sup>3</sup>	Regular + exchange	Regular <sup>4</sup>	Exchange <sup>5</sup>
1984	\$35,077	\$640,021	\$620,536	\$19,485	\$604,944	\$586,990	\$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	1,389,439	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	90,295	2,770,172	2,673,464	96,707
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	3,144,834	3,001,968	142,866
1996	89,422	4,156,985	3,959,014	197,971	4,067,563	3,868,772	198,791
1997	103,466	5,127,328	4,894,226	233,102	5,023,863	4,783,096	240,767
1998	235,457	6,407,574	6,129,140	278,434	6,172,116	5,901,590	270,526
1999	193,681	8,080,959	7,719,310	361,649	7,887,278	7,540,912	346,367
2000	159,365	9,826,677	9,406,287	420,391	9,667,312	9,256,350	410,962
2001	375,291	11,737,291	11,426,804	310,487	11,362,000	11,065,468	296,533
2002	-45,937	12,008,801	11,712,587	296,215	12,054,738	11,783,209	271,530
2003	-263,403	11,177,118	10,952,544	224,574	11,440,521	11,213,929	226,592
2004	-156,744	10,874,608	10,708,117	166,492	11,031,353	10,861,076	170,277
2005	62,085	12,493,636	12,317,491	176,145	12,431,551	12,260,771	170,779
2006	245,162	15,706,879	15,495,624	211,255	15,461,717	15,269,074	192,643
2007	654,412	21,314,339	21,039,253	275,086	20,659,927	20,408,620	251,307
2008	637,155	24,452,430	24,067,371	385,059	23,815,275	23,498,612	316,663
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	-124,073	15,248,902	15,128,158	120,744	15,372,976	15,259,873	113,102
2012	-178	14,291,619	14,211,202	80,417	14,291,797	14,204,776	87,021
2013	15,037	14,976,597	14,867,969	108,629	14,961,561	14,857,792	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	106,857	17,517,259	17,394,583	122,677	17,410,402	17,287,124	123,278

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>2</sup> 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.

<sup>3</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

<sup>4</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

<sup>5</sup> 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	18,503	17,722	781	10,675	10,256	418

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 <sup>1</sup>	Corporate notes <sup>2</sup>	Other assets <sup>3</sup>	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	312,907	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	410,941	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	1,490,208	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	1.0	33

<sup>1</sup> Prior to 1994, bank notes are included in other assets.<sup>2</sup> Prior to 1998, corporate notes are included in other assets.<sup>3</sup> 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 <sup>1</sup>	Corporate notes <sup>2</sup>	Other assets <sup>3</sup>	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	1,079,523	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	1,564,598	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	1,339,689	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	1,291,119	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	1,429,178	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

<sup>1</sup> Prior to 1994, bank notes are included in other assets.<sup>2</sup> Prior to 1998, corporate notes are included in other assets.<sup>3</sup> 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	2,526,235	1,355,715	281,075	889,446	97,759	73,856	11,241	4,124	8,538
1997	3,239,013	1,870,578	341,039	1,027,396	170,302	129,857	21,221	5,329	13,894
1998	3,908,533	2,349,464	383,675	1,175,394	264,998	201,791	35,051	7,962	20,193
1999	4,845,783	3,108,666	572,123	1,164,993	387,411	284,588	63,386	13,130	26,307
2000	4,735,021	3,024,931	552,107	1,157,983	384,039	272,462	72,009	12,644	26,923
2001	4,318,755	2,624,591	433,341	1,260,823	370,560	249,452	73,598	11,128	36,381
2002	3,790,427	2,002,398	358,319	1,429,710	327,417	200,989	69,426	11,050	45,952
2003	4,906,534	2,731,882	516,828	1,657,824	455,293	273,691	112,480	18,218	50,903
2004	5,639,751	3,160,424	687,966	1,791,361	554,044	317,826	147,819	28,236	60,163
2005	6,245,489	3,423,965	912,934	1,908,591	618,699	334,012	171,377	42,792	70,518
2006	7,311,812	3,873,802	1,293,801	2,144,209	747,491	379,765	218,166	66,647	82,913
2007	8,059,231	4,041,749	1,622,873	2,394,609	854,715	394,593	257,850	95,695	106,577
2008	5,168,564	2,307,526	848,471	2,012,567	619,474	252,956	177,975	67,871	120,672
2009	6,959,848	2,979,169	1,215,048	2,765,631	835,422	328,647	256,365	92,507	157,903
2010	8,012,862	3,352,282	1,419,944	3,240,636	1,016,713	375,949	325,276	122,751	192,736
2011	7,847,886	3,121,069	1,236,275	3,490,542	1,093,749	376,582	357,624	121,445	238,098
2012	9,050,245	3,455,039	1,453,175	4,142,031	1,311,077	429,698	439,633	161,212	280,534
2013	10,597,543	4,513,196	1,820,566	4,263,781	1,733,629	574,380	638,869	215,545	304,835
2014	11,095,527	4,795,231	1,838,487	4,461,809	2,053,230	669,057	768,289	242,924	372,959
2015	10,690,760	4,559,552	1,801,202	4,330,006	2,206,554	690,528	795,436	302,890	417,701
2016	10,986,353	4,645,850	1,798,810	4,541,693	2,629,226	806,070	962,815	363,721	496,619
2017	12,533,494	5,266,019	2,299,844	4,967,631	3,365,491	987,488	1,228,273	524,331	625,399

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	Other	World	Hybrid and bond
1993	\$235,621	\$83,873	\$37,940	\$113,808	\$6,428	\$3,994	\$953	\$501	\$980
1994	71,812	67,891	43,812	-39,890	3,348	1,871	515	436	525
1995	110,393	103,022	11,000	-3,630	11,815	8,820	1,038	512	1,446
1996	207,094	147,782	46,483	12,829	24,780	18,447	3,192	1,033	2,108
1997	237,183	158,823	37,028	41,332	34,847	25,208	5,230	818	3,591
1998	195,653	109,872	5,959	79,822	46,143	30,977	8,499	1,568	5,099
1999	108,177	122,176	8,983	-22,982	61,603	38,063	16,102	2,241	5,197
2000	203,276	236,059	56,531	-89,313	25,592	10,783	10,668	1,664	2,477
2001	102,497	38,717	-24,387	88,166	26,735	9,113	8,859	1,181	7,582
2002	95,343	-41,829	-6,120	143,292	25,255	4,818	12,153	1,669	6,616
2003	180,672	88,947	22,162	69,563	35,234	14,231	16,538	2,199	2,266
2004	169,768	72,544	65,922	31,302	40,130	11,739	16,078	5,661	6,651
2005	164,109	5,606	98,462	60,041	27,877	-317	11,731	8,456	8,007
2006	194,135	-17,357	140,261	71,231	32,974	-5,908	20,134	10,674	8,074
2007	163,161	-96,233	124,874	134,520	61,139	-1,440	29,192	16,915	16,473
2008	-259,868	-180,074	-74,383	-5,411	48,624	7,666	23,337	7,697	9,924
2009	333,001	-52,452	21,672	363,780	59,928	8,195	16,646	7,951	27,135
2010	186,018	-95,280	37,603	243,695	57,560	-808	15,024	19,076	24,268
2011	-26,686	-151,218	-13,078	137,610	54,828	-6,868	24,600	17,202	19,895
2012	140,719	-174,236	-8,960	323,914	59,043	-7,139	22,134	15,523	28,525
2013	48,030	-33,978	113,068	-31,059	114,376	5,541	46,541	28,309	33,984
2014	-51,098	-121,496	46,983	23,414	149,062	12,559	49,009	38,403	49,091
2015	-287,439	-216,904	19,364	-89,899	165,724	14,678	32,311	74,932	43,804
2016	-394,135	-320,358	-67,881	-5,895	197,174	30,395	54,833	44,982	66,964
2017	-156,191	-306,594	21,424	128,980	223,030	7,150	63,118	55,262	97,499

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					
	Total	Domestic	World	Hybrid and bond	Total	S&P 500	Domestic	Other	World	Hybrid and bond
1993	3,544	1,226	300	2,018	70	39	15	15	6	10
1994	4,280	1,403	416	2,461	82	43	17	17	7	15
1995	4,641	1,545	521	2,575	87	48	18	18	7	14
1996	5,155	1,820	661	2,674	105	60	22	22	7	16
1997	5,539	2,084	756	2,699	132	72	27	27	12	21
1998	6,132	2,499	875	2,758	156	86	37	37	15	18
1999	6,549	2,848	929	2,772	197	97	59	59	20	21
2000	6,844	3,095	1,029	2,720	271	120	99	99	26	26
2001	7,003	3,373	1,061	2,569	286	126	110	110	24	26
2002	6,941	3,457	990	2,494	313	132	124	124	28	29
2003	6,832	3,396	899	2,537	321	128	134	134	30	29
2004	6,772	3,377	859	2,536	328	127	146	146	28	27
2005	6,784	3,392	883	2,509	322	119	147	147	29	27
2006	6,932	3,465	962	2,505	343	125	157	157	33	28
2007	6,881	3,393	1,023	2,465	354	125	159	159	37	33
2008	6,896	3,369	1,098	2,429	360	122	163	163	42	33
2009	6,602	3,154	1,122	2,326	357	113	151	151	49	44
2010	6,538	3,048	1,144	2,346	365	111	161	161	50	43
2011	6,576	2,979	1,210	2,387	382	111	169	169	57	45
2012	6,638	2,948	1,222	2,468	372	103	166	166	58	45
2013	6,789	2,925	1,288	2,576	371	96	171	171	58	46
2014	7,018	2,959	1,353	2,706	382	94	183	183	58	47
2015	7,231	2,986	1,425	2,820	403	94	194	194	63	52
2016	7,224	2,942	1,445	2,837	421	94	197	197	73	57
2017	7,121	2,894	1,424	2,803	453	93	214	214	81	65

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				Equity				
	Total	Domestic	World	Hybrid and bond	Total	S&P500	Other	World	Hybrid and bond
1993	4,479	1,502	379	2,598	74	43	15	6	10
1994	6,340	1,955	620	3,765	96	54	17	10	15
1995	7,517	2,360	834	4,323	110	63	19	11	17
1996	8,756	2,945	1,144	4,667	143	86	25	11	21
1997	10,248	3,707	1,428	5,113	205	115	38	21	31
1998	11,841	4,672	1,745	5,424	252	148	52	25	27
1999	13,209	5,557	1,937	5,715	323	166	95	31	31
2000	14,417	6,340	2,256	5,821	465	221	163	43	38
2001	15,555	7,302	2,468	5,785	518	238	197	43	40
2002	16,397	7,950	2,462	5,985	578	255	221	53	49
2003	16,687	8,049	2,313	6,325	601	253	243	56	49
2004	17,354	8,470	2,302	6,582	633	262	269	55	47
2005	17,875	8,721	2,439	6,715	647	258	279	62	48
2006	18,551	9,065	2,705	6,781	699	272	303	70	54
2007	18,887	9,117	2,947	6,823	735	276	312	83	64
2008	19,517	9,286	3,290	6,941	755	278	316	96	65
2009	19,044	8,791	3,441	6,812	756	259	291	107	99
2010	19,358	8,646	3,594	7,118	776	253	301	121	101
2011	19,708	8,578	3,809	7,321	856	260	337	144	115
2012	20,152	8,549	3,893	7,710	871	247	349	153	122
2013	20,948	8,623	4,110	8,215	881	234	364	156	127
2014	21,822	8,787	4,388	8,647	908	231	403	148	126
2015	22,671	8,968	4,634	9,069	964	233	433	161	137
2016	22,842	8,967	4,726	9,149	998	234	437	180	147
2017	22,877	8,937	4,678	9,262	1,055	228	469	196	162

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	
	Domestic	World	World	World	Multisector	World		Domestic	World	Multisector	World		
	<b>Total net assets</b>												
	<i>Millions of dollars, year-end</i>												
2007	\$41,504	\$20,343	\$1,149	\$18,619	\$1,392	-	-\$780	\$445	-\$47	-\$632	-\$546	-	-
2008	31,276	17,097	431	12,574	1,174	-	-1,239	-1,013	-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	227,426	51,931	10,907	110,393	2,337	51,857	-15,162	-5,646	2,618	3,030	-186	-14,978	-
2016	213,164	49,201	10,349	116,126	1,968	35,520	-23,366	-4,446	-742	198	-445	-17,930	-
2017	225,764	54,213	12,556	122,522	2,294	34,179	-1,185	440	824	-382	313	-2,380	-
	<b>Number of funds</b>												
	<i>Year-end</i>												
2007	181	126	16	21	18	-	426	296	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	649	330	72	157	52	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	490	177	57	189	29	38	1,358	422	157	577	66	136	-
2016	478	179	61	176	30	32	1,319	423	172	536	70	118	-
2017	472	185	55	175	27	30	1,292	429	145	536	64	118	-

\* 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 objective. 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

<b>Year</b>	<b>Total net assets</b> <i>Millions of dollars, year-end</i>	<b>Net new cash flow*</b> <i>Millions of dollars, annual</i>	<b>Number of funds</b> <i>Year-end</i>	<b>Number of share classes</b> <i>Year-end</i>
2000	\$2,442	-\$288	23	48
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

\* 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

<b>Year</b>	<b>Total net assets</b> <i>Millions of dollars, year-end</i>	<b>Net new cash flow*</b> <i>Millions of dollars, annual</i>	<b>Number of funds</b> <i>Year-end</i>	<b>Number of share classes</b> <i>Year-end</i>
2000	\$23,791	-\$2,626	16	30
2001	19,718	-5,114	23	56
2002	13,392	-5,792	22	52
2003	14,968	-310	20	49
2004	24,032	7,449	23	62
2005	27,485	2,195	25	73
2006	33,619	5,445	23	84
2007	33,667	-2,448	29	103
2008	17,128	-8,169	31	126
2009	28,330	4,362	31	122
2010	47,262	15,050	33	132
2011	60,108	10,225	39	161
2012	76,899	10,655	42	174
2013	141,661	59,974	52	205
2014	119,159	-22,097	53	209
2015	94,484	-22,382	57	231
2016	106,364	3,409	62	242
2017	121,100	10,973	67	264

\* 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:<sup>1</sup> 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 <sup>2</sup> <i>Millions of dollars, annual</i>			
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	\$638,073	\$96,660	\$540,520	\$894	\$126,407	\$17,276	\$108,858	\$273
2008	469,333	42,860	425,207	1,265	60,480	5,712	54,311	457
2009	680,121	55,266	622,820	2,035	70,169	4,146	65,278	745
2010	914,591	80,580	824,609	9,402	118,365	4,964	110,953	2,448
2011	1,035,613	80,693	939,194	15,726	119,673	3,010	111,795	4,868
2012	1,271,565	93,065	1,150,398	28,102	93,817	-2,653	85,602	10,869
2013	1,560,334	128,757	1,393,525	38,051	109,436	12,612	86,470	10,354
2014	1,694,800	127,886	1,519,660	47,254	68,291	11,458	51,963	4,869
2015	1,722,386	136,723	1,531,641	54,021	57,586	8,849	37,524	11,213
2016	1,870,302	149,865	1,663,519	56,918	18,781	-2,683	21,219	245
2017	2,216,420	178,991	1,970,584	66,846	33,295	714	25,463	7,117

Year	Number of funds <i>Year-end</i>				Number of share classes <i>Year-end</i>			
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	704	124	573	7	2,331	295	2,015	21
2008	839	123	706	10	2,782	312	2,443	27
2009	945	131	804	10	3,051	325	2,709	17
2010	979	147	819	13	3,135	348	2,768	19
2011	1,083	157	905	21	3,396	356	2,997	43
2012	1,154	163	961	30	3,728	404	3,249	75
2013	1,257	173	1,050	34	3,993	411	3,493	89
2014	1,331	174	1,116	41	4,229	414	3,709	106
2015	1,402	178	1,185	39	4,549	438	4,005	106
2016	1,441	173	1,227	41	4,666	432	4,128	106
2017	1,400	164	1,195	41	4,685	415	4,177	93

<sup>1</sup> Funds of funds are mutual funds that invest primarily in other mutual funds.

<sup>2</sup> 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:<sup>1</sup> Components of Net New Cash Flow<sup>2</sup>

Millions of dollars, annual

Year	New sales <sup>3</sup>				Exchange sales <sup>4</sup>			
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	\$193,640	\$26,126	\$167,109	\$406	\$33,336	\$7,284	\$26,017	\$35
2008	181,188	20,752	159,718	719	29,613	4,276	25,273	64
2009	171,433	18,309	152,102	1,021	19,079	1,479	17,557	43
2010	265,189	20,330	241,726	3,134	25,235	1,201	24,016	18
2011	322,737	19,618	295,384	7,734	27,732	1,111	26,600	21
2012	304,688	17,097	272,255	15,335	26,003	1,364	24,229	410
2013	362,512	30,706	314,224	17,581	40,058	2,597	37,117	343
2014	368,294	32,584	320,104	15,605	40,588	1,916	38,210	462
2015	403,226	37,004	339,866	26,356	52,215	1,958	49,713	544
2016	372,759	30,677	325,963	16,119	37,605	1,695	35,384	527
2017	421,011	34,702	362,517	23,792	46,938	2,470	43,874	594

Year	Regular redemptions <sup>5</sup>				Exchange redemptions <sup>6</sup>			
	Total	Equity	Hybrid	Bond	Total	Equity	Hybrid	Bond
2007	\$81,898	\$13,073	\$68,681	\$144	\$18,671	\$3,061	\$15,587	\$23
2008	119,872	16,056	103,539	277	30,449	3,260	27,140	49
2009	102,091	14,236	87,559	296	18,252	1,406	16,822	24
2010	150,064	15,167	134,199	698	21,995	1,400	20,590	6
2011	202,694	16,236	183,579	2,879	28,101	1,482	26,610	8
2012	211,577	19,614	187,295	4,667	25,297	1,500	23,587	209
2013	259,959	19,196	233,468	7,295	33,175	1,495	31,404	276
2014	289,411	21,665	256,770	10,976	51,180	1,377	49,581	222
2015	338,704	28,087	295,305	15,312	59,152	2,026	56,750	376
2016	345,060	32,924	296,141	15,996	46,523	2,131	43,987	405
2017	378,824	34,100	327,867	16,857	55,829	2,357	53,061	411

<sup>1</sup> Funds of funds are mutual funds that invest primarily in other mutual funds.<sup>2</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.<sup>3</sup> 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.<sup>4</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.<sup>5</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.<sup>6</sup> 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

Year	Total	Inflation-protected <sup>1</sup>	TIPS <sup>2</sup>	Total	Inflation-protected <sup>1</sup>	TIPS <sup>2</sup>
		Total net assets <i>Millions of dollars, year-end</i>			Net new cash flow <sup>3</sup> <i>Millions of dollars, annual</i>	
2010	\$108,438	\$98,326	\$10,112	\$9,181	\$7,346	\$1,835
2011	133,330	120,065	13,266	11,425	9,900	1,525
2012	150,342	137,116	13,226	7,338	8,289	-951
2013	108,160	95,942	12,218	-31,504	-31,383	-120
2014	107,328	92,360	14,968	-3,089	-5,869	2,780
2015	105,776	86,206	19,570	-976	-5,821	4,845
2016	112,455	90,706	21,749	2,192	821	1,370
2017	127,246	99,630	27,617	11,034	5,487	5,547
		<b>Number of funds</b>			<b>Number of share classes</b>	
		<i>Year-end</i>			<i>Year-end</i>	
2010	59	50	9	200	170	30
2011	63	52	11	217	183	34
2012	68	56	12	234	197	37
2013	69	57	12	242	205	37
2014	65	56	9	232	205	27
2015	68	59	9	258	230	28
2016	67	58	9	252	226	26
2017	66	56	10	260	234	26

<sup>1</sup> Inflation-protected funds are funds that invest in inflation-protected or inflation-indexed securities other than TIPS (Treasury inflation-protected securities).

<sup>2</sup> 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.

<sup>3</sup> 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 Year-end											
	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
2007	\$119,593	\$178,978	\$393,968	\$480,751	\$122,045	\$158,450	\$577,987	\$203,448	\$119,792	\$201,214	\$1,016,543	\$873,932
2008	67,787	92,473	225,666	275,749	78,536	88,564	339,613	111,339	71,867	108,904	636,957	493,352
2009	94,830	128,430	295,647	364,987	104,214	121,027	416,722	140,989	96,987	148,326	816,907	632,531
2010	116,796	159,945	328,486	397,759	130,444	146,334	456,880	159,686	120,735	181,664	922,811	687,874
2011	107,182	146,471	327,897	354,800	120,523	135,540	435,524	156,211	116,873	171,699	911,626	629,798
2012	115,862	161,472	386,181	377,067	133,265	152,990	471,659	175,270	144,896	191,544	1,038,038	699,040
2013	165,727	213,551	508,149	490,856	175,869	209,693	591,338	243,129	207,615	265,240	1,401,939	907,985
2014	158,834	212,405	554,827	507,151	170,461	222,068	630,297	273,179	208,371	286,797	1,621,360	965,363
2015	153,505	200,529	563,046	508,483	145,762	200,505	563,658	258,045	196,653	278,493	1,633,260	925,826
2016	158,867	186,763	521,029	503,947	171,304	224,280	615,901	285,395	234,820	303,518	1,849,344	950,906
2017	193,013	220,649	633,114	600,779	180,191	242,527	666,148	335,730	258,119	344,597	2,236,375	1,125,190
Year	Net new cash flow* Annual											
	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
2007	-\$4,434	-\$755	-\$27,204	\$9,005	-\$4,619	-\$1,511	-\$4,610	\$5,730	-\$5,886	-\$4,562	-\$4,994	-\$4,918
2008	-3,970	-9,687	-13,915	-11,300	-1,936	-8,764	-18,892	-15,187	-7,609	-14,033	-3,491	-31,176
2009	1,860	-1,028	-9,396	-9,317	1,124	2,486	-7,584	-3,438	1,383	-985	3,507	-16,841
2010	-1,783	-1,264	-12,751	-19,342	1,313	375	-13,519	-2,275	150	-503	-10,068	-29,813
2011	-5,467	-6,854	6,618	-33,671	-4,981	-4,838	-18,593	-130	-472	-5,515	-12,353	-42,219
2012	-6,430	-5,520	1,624	-38,496	-8,699	-7,282	-29,485	-10,684	-6,223	-5,649	-10,905	-41,291
2013	3,136	-2,982	-12,380	-16,668	-3,930	2,880	-25,918	14,452	7,768	8,020	29,290	-11,477
2014	-10,104	-15,204	-16,676	-28,491	-10,199	-3,928	-20,669	9,049	-7,551	-2,046	40,276	-23,626
2015	-2,896	-11,603	-17,554	-21,692	-13,983	-7,278	-43,271	-5,761	-4,113	-1,565	4,244	-43,937
2016	-10,316	-21,618	-50,273	-30,908	-7,329	-7,421	-23,736	-6,424	-506	-10,540	22,026	-62,828
2017	-4,980	-9,187	-31,929	-32,476	-8,705	-10,541	-46,488	-1,756	-7,492	-12,615	3,534	-49,076

\* Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

Note: Market capitalization indicates the size of the companies in which a fund invests: small cap (generally up to \$2 billion), mid cap (generally \$1 billion to \$7 billion), large cap (generally more than \$5 billion), and multi cap (generally not limited to company size). Data for funds that invest primarily in other mutual funds were excluded from the series.

**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
2007	246	246	351	209	219	196	400	200	196	145	489	254
2008	237	245	348	208	221	202	395	203	186	148	490	253
2009	213	220	331	190	202	191	369	190	177	139	463	245
2010	207	207	317	181	197	186	358	192	171	133	457	234
2011	204	198	310	169	203	182	339	201	173	139	440	226
2012	198	189	300	164	209	180	328	211	167	135	420	226
2013	191	180	288	165	205	177	321	213	179	130	413	229
2014	188	179	289	160	213	187	324	218	188	128	416	234
2015	183	179	287	160	214	189	323	213	199	134	423	235
2016	182	173	267	158	213	188	322	206	201	134	416	239
2017	179	164	262	155	210	187	323	206	200	134	404	236

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
2007	653	702	960	544	582	533	1,106	532	480	371	1,256	684
2008	652	695	1,004	548	595	563	1,109	551	471	402	1,302	708
2009	606	635	957	530	560	530	1,024	503	450	379	1,248	718
2010	580	611	917	520	561	540	1,025	516	431	356	1,235	700
2011	591	594	905	493	582	543	994	545	436	377	1,224	695
2012	581	570	892	474	598	549	954	570	438	373	1,184	715
2013	560	557	875	485	593	554	948	599	478	361	1,184	741
2014	560	558	888	465	610	592	979	621	521	350	1,213	746
2015	550	565	904	466	626	601	998	605	568	350	1,242	777
2016	575	560	845	467	645	607	1,009	584	596	373	1,224	783
2017	596	546	817	473	643	616	1,004	616	603	373	1,191	774

Note: Market capitalization indicates the size of the companies in which a fund invests: small cap (generally up to \$2 billion), mid cap (generally \$1 billion to \$7 billion), large cap (generally more than \$5 billion), and multi cap (generally not limited to company size). 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

Year	Total net assets								
	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/Telecom	Utilities	Other sectors
2000	\$1,042	\$16,087	\$45,921	\$2,920	\$1,143	\$11,675	\$103,853	\$22,908	\$3,917
2001	1,290	13,901	40,545	2,390	1,314	13,509	62,339	17,744	2,940
2002	1,096	10,885	30,087	2,175	2,486	17,745	31,308	11,275	2,082
2003	1,436	13,138	36,803	3,237	4,227	31,653	46,929	13,481	2,412
2004	1,631	12,917	40,147	5,789	4,270	49,927	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	32,891	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	23,240	1,766
2009	2,439	5,941	32,440	17,380	14,901	44,126	27,610	30,327	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	62,461	35,539	9,727
Year	Net new cash flow*								
	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/Telecom	Utilities	Other sectors
2000	-\$122	-\$534	\$9,256	\$246	-\$214	\$339	\$43,837	\$1,015	-\$187
2001	254	-962	236	-182	-29	430	-4,458	-953	-198
2002	11	-1,603	-2,895	-73	484	3,612	-6,211	-2,076	-288
2003	9	-940	-767	336	447	5,177	73	-292	-145
2004	3	-1,535	-387	1,435	398	7,050	-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	-4,456	556	-49
2007	94	-2,617	-3,378	1,662	-152	-15,282	-2,745	1,992	257
2008	209	96	-3,025	-206	769	1,791	-3,847	-3,397	-488
2009	82	-457	-3,163	1,764	2,253	492	1,768	254	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	-927	-5,234	74

\* 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	18	12	74	132	34	16
2001	9	41	57	17	11	75	155	40	17
2002	12	42	63	14	12	79	145	35	19
2003	11	38	58	15	12	91	124	33	19
2004	14	40	59	16	12	94	115	34	20
2005	14	41	53	17	12	93	103	32	19
2006	18	40	57	19	13	97	108	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	68	38	23

Year	Number of share classes								
	Consumer	Financial	Health	Natural resources	Precious metals	Real estate	Technology/Telecom	Utilities	Other sectors
2000	12	73	91	32	20	151	283	75	23
2001	17	88	145	31	22	156	350	89	25
2002	22	92	171	25	25	172	348	91	28
2003	19	85	155	32	27	214	290	88	28
2004	27	92	159	33	28	238	279	91	29
2005	26	95	137	37	28	240	260	94	27
2006	33	93	147	40	31	246	267	107	37
2007	41	95	133	46	35	252	249	113	42
2008	42	91	124	51	38	246	218	117	33
2009	42	80	101	49	38	246	199	105	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	184	101	36

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:<sup>1</sup> Total Net Assets, Net New Cash Flow,<sup>2</sup> Number of Funds, and Number of Share Classes

Year	Total net assets			Net new cash flow			Number of funds			Number of share classes		
	Millions of dollars, year-end			Millions of dollars, annual			Year-end			Year-end		
	Total	Target date <sup>3</sup>	Lifestyle <sup>4</sup>	Total	Target date <sup>3</sup>	Lifestyle <sup>4</sup>	Total	Target date <sup>3</sup>	Lifestyle <sup>4</sup>	Total	Target date <sup>3</sup>	Lifestyle <sup>4</sup>
1997	\$4,314	\$1,133	\$13,181	\$4,138	\$128	\$4,010	77	9	68	141	14	127
1998	25,413	4,158	21,255	6,015	1,097	4,918	110	14	96	199	20	179
1999	34,849	6,588	28,261	4,928	1,319	3,609	130	16	114	240	27	213
2000	39,716	8,215	31,501	7,581	3,551	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	432	67	365
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	420,931	182,973	237,958	91,922	56,211	35,711	495	246	249	1,840	1,038	802
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	1,097,446	702,702	394,744	41,681	44,588	-2,908	813	542	271	3,074	2,176	898
2015	1,134,790	762,789	372,001	52,808	66,349	-13,541	866	599	267	3,254	2,353	901
2016	1,258,273	886,686	371,587	41,252	64,929	-23,678	910	641	269	3,381	2,469	912
2017	1,514,501	1,115,766	398,735	38,403	67,581	-29,177	883	632	251	3,386	2,505	881

<sup>1</sup> Categories include data for funds that invest primarily in other funds.

<sup>2</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>3</sup> 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.

<sup>4</sup> 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:<sup>1</sup> Components of Net New Cash Flow<sup>2</sup>**  
*Millions of dollars, annual*

Year	Sales						Redemptions					
	New <sup>3</sup>		Exchange <sup>4</sup>		Regular <sup>5</sup>		Exchange <sup>6</sup>		Regular <sup>5</sup>		Total	
	Total	Target date <sup>7</sup>	Lifestyle <sup>8</sup>	Total	Target date <sup>7</sup>	Lifestyle <sup>8</sup>	Total	Target date <sup>7</sup>	Lifestyle <sup>8</sup>	Total	Target date <sup>7</sup>	Lifestyle <sup>8</sup>
1997	\$5,580	\$453	\$5,127	\$1,067	\$0	\$1,067	\$1,763	\$325	\$1,438	\$746	\$0	\$746
1998	8,856	1,175	7,681	2,782	1,335	1,448	3,557	589	2,968	2,066	823	1,243
1999	10,663	1,715	8,948	3,144	1,684	1,460	6,102	912	5,190	2,776	1,167	1,609
2000	15,034	3,798	11,236	4,621	2,532	2,089	8,302	1,312	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	13,065	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	137,682	76,013	61,668	23,456	17,011	6,445	56,646	28,346	28,301	12,570	8,468	4,102
2008	127,548	78,570	48,978	22,099	16,120	5,979	73,889	38,397	35,492	21,314	14,376	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	149,987	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	240,280	186,214	54,067	33,593	28,093	5,500	187,314	129,061	58,253	44,879	40,658	4,221
2015	279,449	239,289	40,160	45,530	40,479	5,051	220,838	166,823	54,015	51,333	46,596	4,737
2016	279,360	241,381	37,980	35,211	30,891	4,320	230,342	169,536	60,805	42,978	37,806	5,172
2017	316,111	286,236	29,876	39,868	35,090	4,779	268,500	209,357	59,143	49,076	44,388	4,688

<sup>1</sup> Categories include data for funds that invest primarily in other funds.

<sup>2</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

<sup>3</sup> 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.

<sup>4</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.

<sup>5</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.

<sup>6</sup> Exchange redemptions are the dollar value of mutual fund shares switched out of funds and into other funds within the same fund group.

<sup>7</sup> 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.

<sup>8</sup> 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 <i>Millions of dollars, year-end</i>			Net new cash flow* <i>Millions of dollars, annual</i>			Number of funds <i>Year-end</i>			
	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Money market
1997	\$473,331	\$364,286	\$92,571	\$40,470	\$33,743	\$6,316	937	535	323	79
1998	615,152	474,961	116,337	44,259	27,857	10,362	1,162	703	377	82
1999	818,958	656,877	128,349	38,543	30,736	-460	1,353	868	404	81
2000	816,800	652,421	131,342	48,461	58,314	-7,790	1,562	1,051	431	80
2001	742,258	558,654	138,848	21,583	4,861	8,035	1,750	1,248	413	89
2002	638,949	438,603	152,276	-1,286	-12,763	11,151	1,903	1,389	422	92
2003	837,443	619,018	182,773	29,749	34,969	6,929	1,889	1,364	437	88
2004	973,910	738,444	202,106	33,505	33,592	2,595	1,881	1,351	443	87
2005	1,072,894	822,105	217,090	16,404	13,254	4,449	1,882	1,356	443	83
2006	1,266,934	975,532	249,210	29,712	17,018	7,192	1,926	1,391	454	81
2007	1,398,318	1,052,868	292,727	31,780	1,581	22,948	1,900	1,367	455	78
2008	928,883	598,713	255,199	-6,134	-30,690	5,018	1,897	1,369	449	79
2009	1,186,750	791,878	337,576	9,969	-3,665	32,440	1,828	1,306	449	73
2010	1,339,987	886,357	405,076	-2,055	-25,434	33,090	1,774	1,256	448	70
2011	1,299,687	800,129	450,685	-20,844	-48,213	27,233	1,739	1,222	453	64
2012	1,442,389	875,004	523,453	-31,388	-55,367	29,111	1,725	1,195	470	60
2013	1,669,719	1,050,470	579,457	-53,733	-61,392	10,297	1,734	1,180	497	57
2014	1,709,454	1,065,125	607,204	-66,975	-58,536	-5,774	1,729	1,150	523	56
2015	1,636,178	1,006,454	590,680	-64,982	-53,813	-12,975	1,705	1,126	526	53
2016	1,674,098	1,027,850	610,356	-80,833	-64,863	-13,633	1,681	1,102	536	43
2017	1,826,583	1,156,265	638,122	-115,384	-89,763	-21,754	1,677	1,094	540	43

\* 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 Flow<sup>1</sup>

Millions of dollars, annual

Year	Sales						Redemptions									
	New <sup>2</sup>			Exchange <sup>3</sup>			Regular <sup>4</sup>			Exchange <sup>5</sup>						
	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond	Total	Equity	Hybrid and bond				
1997	\$105,222	\$67,005	\$15,290	\$22,926	\$24,210	\$13,017	\$2,348	\$8,846	\$65,377	\$33,408	\$9,905	\$22,063	\$23,586	\$12,871	\$1,417	\$9,298
1998	141,464	83,457	23,227	34,780	37,136	18,967	5,502	12,668	99,141	54,024	14,964	30,153	35,199	20,542	3,403	11,254
1999	212,025	130,900	22,004	59,120	40,818	22,080	2,985	15,753	174,418	100,392	22,275	51,750	39,883	21,853	3,174	14,856
2000	334,936	222,945	20,128	91,863	36,326	22,822	1,852	11,652	287,230	166,186	27,483	93,561	30,523	21,267	2,288	12,017
2001	346,166	197,831	33,707	114,628	31,716	15,928	5,185	10,604	325,676	190,977	27,510	107,189	35,623	17,921	3,346	9,356
2002	342,193	183,758	48,179	110,256	34,170	16,428	7,160	10,583	344,224	194,374	38,908	110,942	33,425	18,574	5,281	9,570
2003	282,563	169,043	54,392	59,128	28,791	15,307	5,944	7,540	253,161	136,061	46,632	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	280,246	191,872	51,529	36,846	22,318	10,823	3,425	8,070	250,509	173,300	44,350	32,859	22,344	12,376	3,412	6,555
2007	343,465	218,138	73,991	51,336	37,045	19,701	8,247	9,097	317,180	215,814	55,877	45,488	31,550	20,444	3,413	7,693
2008	380,404	198,184	94,051	88,169	25,445	11,112	5,114	9,220	390,168	227,422	90,601	72,144	21,816	12,564	3,546	5,706
2009	312,818	150,905	100,386	61,528	22,650	14,589	3,767	4,294	302,720	154,776	69,714	78,231	22,778	14,382	1,999	6,397
2010	337,950	164,907	140,079	32,964	17,325	6,755	6,742	3,828	339,752	188,579	108,772	42,401	17,578	8,517	4,959	4,102
2011	332,243	144,692	151,298	36,252	16,269	6,816	6,865	2,589	353,104	189,881	126,314	36,910	16,251	9,840	4,616	1,795
2012	310,829	128,108	154,145	28,575	14,231	10,720	2,102	1,410	341,361	181,579	125,958	33,824	15,087	12,616	1,178	1,293
2013	297,909	142,685	124,476	30,748	23,173	14,353	5,962	2,859	349,990	201,508	113,615	34,867	24,826	16,922	6,526	1,377
2014	258,435	132,904	97,330	28,201	9,562	4,669	1,577	3,316	324,809	189,773	103,993	31,043	10,163	6,335	689	3,139
2015	267,810	137,141	98,308	32,361	16,409	6,576	6,198	3,635	333,186	190,532	111,566	31,089	16,015	6,998	5,916	3,102
2016	270,143	124,422	112,593	33,127	12,106	4,948	4,013	3,145	351,472	187,786	127,592	36,094	11,610	6,448	2,647	2,515
2017	204,538	109,668	65,958	28,912	13,645	7,358	3,031	3,256	320,030	197,914	89,270	32,846	13,537	8,875	1,473	3,189

<sup>1</sup> Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.<sup>2</sup> 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.<sup>3</sup> Exchange sales are the dollar value of mutual fund shares switched into funds within the same fund group.<sup>4</sup> Regular redemptions are the dollar value of shareholder liquidation of mutual fund shares.<sup>5</sup> 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
<b>Total</b>					
2003	\$7,401,849	\$3,653,100	\$447,570	\$1,261,157	\$2,040,022
2004	8,095,496	4,342,272	552,250	1,299,274	1,901,700
2005	8,891,010	4,885,079	621,479	1,357,630	2,026,822
2006	10,397,754	5,832,181	731,503	1,495,619	2,338,451
2007	11,999,706	6,412,760	821,522	1,679,664	3,085,760
2008	9,620,274	3,654,799	562,262	1,570,978	3,832,236
2009	11,111,163	4,871,736	717,580	2,205,954	3,315,893
2010	11,833,089	5,596,202	842,198	2,591,175	2,803,514
2011	11,632,585	5,212,995	883,981	2,844,659	2,690,950
2012	13,054,490	5,938,757	1,031,581	3,390,984	2,693,169
2013	15,048,980	7,762,556	1,282,571	3,286,045	2,717,808
2014	15,873,399	8,313,989	1,374,143	3,460,626	2,724,641
2015	15,652,058	8,149,607	1,334,258	3,413,449	2,754,743
2016	16,343,717	8,577,267	1,388,659	3,649,654	2,728,137
2017	18,746,289	10,305,955	1,525,721	4,067,310	2,847,304
<b>Individual accounts</b>					
2003	\$6,554,007	\$3,463,322	\$435,131	\$1,168,216	\$1,487,338
2004	7,203,976	4,093,243	536,248	1,205,962	1,368,522
2005	7,802,775	4,576,264	600,437	1,235,488	1,390,586
2006	9,098,224	5,437,183	704,116	1,358,138	1,598,787
2007	10,392,550	5,986,138	792,386	1,521,986	2,092,040
2008	7,866,320	3,405,469	544,230	1,425,757	2,490,863
2009	9,293,020	4,502,277	693,742	2,008,822	2,088,180
2010	10,062,693	5,130,989	808,656	2,339,473	1,783,575
2011	9,938,069	4,779,204	845,148	2,579,603	1,734,114
2012	11,240,627	5,449,387	989,384	3,068,044	1,733,812
2013	13,065,532	7,156,876	1,224,828	2,957,139	1,726,689
2014	13,768,894	7,662,416	1,314,179	3,108,088	1,684,210
2015	13,539,546	7,500,108	1,277,560	3,059,216	1,702,662
2016	14,207,804	7,903,600	1,331,651	3,281,321	1,691,233
2017 <sup>p</sup>	16,354,839	9,489,144	1,464,268	3,645,725	1,755,702
<b>Institutional accounts*</b>					
2003	\$847,842	\$189,778	\$12,439	\$92,941	\$552,684
2004	891,520	249,028	16,002	93,312	533,178
2005	1,088,235	308,815	21,042	122,143	636,235
2006	1,299,530	394,998	27,386	137,481	739,664
2007	1,607,157	426,622	29,136	157,678	993,721
2008	1,753,954	249,329	18,031	145,220	1,341,374
2009	1,818,143	369,459	23,839	197,132	1,227,714
2010	1,770,396	465,213	33,542	251,702	1,019,939
2011	1,694,516	433,791	38,832	265,056	956,837
2012	1,813,863	489,369	42,196	322,940	959,357
2013	1,983,449	605,680	57,743	328,906	991,120
2014	2,104,505	651,572	59,964	352,538	1,040,431
2015	2,112,512	649,500	56,697	354,233	1,052,081
2016	2,135,912	673,667	57,008	368,333	1,036,904
2017 <sup>p</sup>	2,391,450	816,812	61,453	421,584	1,091,602

\* 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.

<sup>p</sup> 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 <sup>1</sup>	Nonprofit organizations	Other <sup>2</sup>	
2008	<b>Total</b>	<b>\$1,753,954</b>	<b>\$904,781</b>	<b>\$497,075</b>	<b>\$135,540</b>	<b>\$216,557</b>
	Equity	249,329	70,726	64,978	33,135	80,491
	Hybrid	18,031	5,702	5,708	2,717	3,904
	Bond	145,220	29,355	28,624	22,868	64,373
	Money market	1,341,374	798,998	397,766	76,820	67,789
2009	<b>Total</b>	<b>1,818,143</b>	<b>886,555</b>	<b>510,823</b>	<b>147,413</b>	<b>273,351</b>
	Equity	369,459	106,233	89,278	44,776	129,171
	Hybrid	23,839	7,989	7,126	3,665	5,060
	Bond	197,132	47,265	41,527	29,010	79,331
	Money market	1,227,714	725,069	372,893	69,963	59,790
2010	<b>Total</b>	<b>1,770,396</b>	<b>741,623</b>	<b>515,467</b>	<b>153,371</b>	<b>359,935</b>
	Equity	465,213	121,358	108,380	49,082	186,393
	Hybrid	33,542	10,953	10,186	4,262	8,142
	Bond	251,702	54,172	54,853	33,453	109,224
	Money market	1,019,939	555,140	342,048	66,574	56,177
2011	<b>Total</b>	<b>1,694,516</b>	<b>681,853</b>	<b>488,009</b>	<b>146,415</b>	<b>378,239</b>
	Equity	433,791	102,158	95,039	45,315	191,280
	Hybrid	38,832	12,042	11,390	4,795	10,606
	Bond	265,056	51,823	57,911	36,247	119,075
	Money market	956,837	515,830	323,670	60,058	57,278
2012	<b>Total</b>	<b>1,813,863</b>	<b>684,218</b>	<b>518,708</b>	<b>152,295</b>	<b>458,642</b>
	Equity	489,369	108,787	97,975	51,714	230,893
	Hybrid	42,196	11,218	13,941	5,186	11,851
	Bond	322,940	59,301	68,672	40,321	154,648
	Money market	959,357	504,912	338,120	55,074	61,251
2013	<b>Total</b>	<b>1,983,449</b>	<b>745,386</b>	<b>546,523</b>	<b>165,919</b>	<b>525,621</b>
	Equity	605,680	135,796	119,610	64,374	285,900
	Hybrid	57,743	15,106	17,189	7,432	18,017
	Bond	328,906	58,992	70,325	35,583	164,006
	Money market	991,120	535,492	339,399	58,530	57,698
2014	<b>Total</b>	<b>2,104,505</b>	<b>791,350</b>	<b>576,010</b>	<b>181,936</b>	<b>555,209</b>
	Equity	651,572	149,720	122,366	65,869	313,617
	Hybrid	59,964	15,433	17,996	7,696	18,839
	Bond	352,538	68,594	78,666	39,150	166,127
	Money market	1,040,431	557,603	356,982	69,221	56,627
2015	<b>Total</b>	<b>2,112,512</b>	<b>811,803</b>	<b>574,631</b>	<b>184,005</b>	<b>542,072</b>
	Equity	649,500	149,397	124,322	62,832	312,949
	Hybrid	56,697	15,522	19,023	8,183	13,969
	Bond	354,233	70,321	85,341	38,376	160,196
	Money market	1,052,081	576,563	345,945	74,615	54,958
2016	<b>Total</b>	<b>2,135,912</b>	<b>700,833</b>	<b>651,212</b>	<b>198,263</b>	<b>585,604</b>
	Equity	673,667	150,154	122,946	64,409	336,157
	Hybrid	57,008	14,204	19,180	9,052	14,571
	Bond	368,333	72,537	89,306	40,429	166,062
	Money market	1,036,904	463,937	419,780	84,373	68,814
2017 <sup>p</sup>	<b>Total</b>	<b>2,391,450</b>	<b>752,026</b>	<b>732,064</b>	<b>213,481</b>	<b>693,879</b>
	Equity	816,812	183,007	160,259	75,012	398,533
	Hybrid	61,453	14,738	20,652	10,377	15,686
	Bond	421,584	78,799	118,501	42,570	181,714
	Money market	1,091,602	475,481	432,651	85,522	97,947

<sup>1</sup> Financial institutions include credit unions, accounts of banks not held as fiduciaries, insurance companies, and other financial organizations.

<sup>2</sup> Other institutional investors include state and local governments, funds holding mutual fund shares, and other institutional accounts not classified.

<sup>p</sup> 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 <sup>1</sup>	Nonprofit organizations	Other <sup>2</sup>	
2003	<b>Total</b>	<b>\$515,153</b>	<b>\$270,469</b>	<b>\$194,259</b>	<b>\$32,223</b>	<b>\$18,202</b>
	Institutional funds	428,443	220,562	173,539	22,473	11,870
	Retail funds	86,710	49,907	20,720	9,751	6,333
2004	<b>Total</b>	<b>486,612</b>	<b>277,235</b>	<b>161,810</b>	<b>28,909</b>	<b>18,659</b>
	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	<b>Total</b>	<b>578,538</b>	<b>322,944</b>	<b>197,002</b>	<b>32,896</b>	<b>25,696</b>
	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	<b>Total</b>	<b>677,610</b>	<b>388,596</b>	<b>221,779</b>	<b>37,856</b>	<b>29,379</b>
	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	<b>Total</b>	<b>916,501</b>	<b>514,367</b>	<b>294,432</b>	<b>57,470</b>	<b>50,232</b>
	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	<b>Total</b>	<b>1,253,701</b>	<b>736,036</b>	<b>377,963</b>	<b>74,803</b>	<b>64,900</b>
	Institutional funds	1,129,759	659,901	350,945	60,632	58,282
	Retail funds	123,941	76,134	27,018	14,171	6,618
2009	<b>Total</b>	<b>1,150,656</b>	<b>668,516</b>	<b>356,992</b>	<b>68,124</b>	<b>57,025</b>
	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	<b>Total</b>	<b>961,045</b>	<b>513,038</b>	<b>328,890</b>	<b>65,252</b>	<b>53,865</b>
	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	<b>Total</b>	<b>909,996</b>	<b>481,122</b>	<b>314,508</b>	<b>58,686</b>	<b>55,680</b>
	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	<b>Total</b>	<b>911,741</b>	<b>468,745</b>	<b>328,348</b>	<b>53,961</b>	<b>60,686</b>
	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	<b>Total</b>	<b>946,812</b>	<b>500,390</b>	<b>331,652</b>	<b>57,568</b>	<b>57,202</b>
	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	<b>Total</b>	<b>997,148</b>	<b>523,025</b>	<b>350,410</b>	<b>67,707</b>	<b>56,006</b>
	Institutional funds	927,917	476,948	336,690	65,017	49,263
	Retail funds	69,231	46,078	13,720	2,690	6,743
2015	<b>Total</b>	<b>1,009,731</b>	<b>542,906</b>	<b>339,122</b>	<b>73,427</b>	<b>54,277</b>
	Institutional funds	943,323	499,770	326,717	70,402	46,435
	Retail funds	66,408	43,136	12,405	3,025	7,842
2016	<b>Total</b>	<b>1,031,988</b>	<b>463,566</b>	<b>416,018</b>	<b>83,660</b>	<b>68,744</b>
	Institutional funds	967,188	421,099	406,118	80,115	59,856
	Retail funds	64,800	42,467	9,899	3,545	8,888
2017 <sup>p</sup>	<b>Total</b>	<b>1,087,957</b>	<b>475,177</b>	<b>430,120</b>	<b>84,817</b>	<b>97,843</b>
	Institutional funds	1,024,135	432,870	421,278	81,311	88,675
	Retail funds	63,822	42,307	8,842	3,506	9,168

<sup>1</sup> Financial institutions include credit unions, accounts of banks not held as fiduciaries, insurance companies, and other financial organizations.

<sup>2</sup> Other institutional investors include state and local governments, funds holding mutual fund shares, and other institutional accounts not classified.

<sup>p</sup> Data are preliminary.

Note: Institutional money market funds do not limit all beneficial owners of the fund to natural persons. Institutional investors include endowments, foundations, defined benefit plans, and corporate cash managers. Retail money market funds have policies and procedures reasonably designed to limit all beneficial owners of the fund to natural persons. Retail investors include defined contribution plan participants who direct their own plan investments.

TABLE 63

## Mutual Funds: DC Plan Assets and Estimated Net New Cash Flow by Type of Fund

Billions of dollars

Year	Total net assets Year-end				Estimated net new cash flow* Annual			
	Total	Equity funds		Money market funds	Total	Equity funds		Money market funds
		Domestic	World			Domestic	World	
1997	\$775	\$527	\$56	\$60	\$67	\$45	\$11	-\$3
1998	994	688	67	76	77	44	4	11
1999	1,294	914	109	92	70	45	8	11
2000	1,284	885	115	96	85	68	22	-1
2001	1,226	789	96	119	91	39	2	19
2002	1,102	631	85	132	77	26	6	12
2003	1,423	867	124	122	50	37	7	-11
2004	1,656	1,017	172	110	71	40	21	-14
2005	1,880	1,105	229	112	97	13	27	10
2006	2,223	1,247	334	124	92	-5	47	6
2007	2,493	1,298	422	152	94	-29	35	13
2008	1,711	755	223	198	37	-39	-14	17
2009	2,196	983	323	170	40	-11	12	35
2010	2,510	1,131	371	146	32	-12	7	29
2011	2,475	1,070	323	154	18	-40	-2	16
2012	2,850	1,211	380	154	36	-38	-3	38
2013	3,481	1,621	481	149	59	15	27	-14
2014	3,709	1,762	495	140	18	-17	25	2
2015	3,640	1,694	505	141	-41	-66	24	-21
2016	3,855	1,778	518	130	-59	-88	-5	12
2017	4,540	2,055	692	123	-13	-92	28	36

\* Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

(\*) = between -\$500 million and \$500 million

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 64

## Mutual Funds: IRA Assets and Estimated Net New Cash Flow by Type of Fund

*Billions of dollars*

Year	Total net assets <i>Year-end</i>					Estimated net new cash flow* <i>Annual</i>					
	Total	Equity funds		Hybrid funds	Bond funds	Total	Equity funds		Hybrid funds	Bond funds	Money market funds
		Domestic	World				Domestic	World			
1997	\$787	\$442	\$79	\$84	\$92	\$67	\$54	\$7	\$5	\$7	-\$6
1998	999	586	93	98	107	90	50	6	3	12	19
1999	1,278	797	137	103	110	67	54	2	-1	1	11
2000	1,266	781	136	104	109	62	68	14	-9	-7	-4
2001	1,205	699	111	110	133	69	34	-2	8	20	10
2002	1,090	548	93	110	175	55	3	(*)	10	34	9
2003	1,389	749	131	162	196	50	30	4	24	7	-14
2004	1,598	861	176	218	205	59	19	20	37	-1	-15
2005	1,782	932	231	264	211	64	3	24	34	2	1
2006	2,144	1,067	324	340	234	110	5	36	31	11	27
2007	2,438	1,125	410	409	270	124	-14	33	45	24	36
2008	1,697	654	221	288	262	-1	-43	-15	1	16	41
2009	2,121	834	309	372	376	24	-18	3	13	69	-44
2010	2,426	949	371	444	459	41	-18	11	26	47	-26
2011	2,418	895	316	495	499	26	-38	-11	45	21	9
2012	2,763	1,011	357	583	595	39	-33	-15	28	53	5
2013	3,338	1,361	450	716	581	94	25	26	44	-13	12
2014	3,537	1,483	460	788	587	17	-11	16	35	-13	-10
2015	3,503	1,462	464	783	577	3	-17	16	8	-1	-3
2016	3,718	1,552	465	832	625	-37	-57	-17	-11	19	29
2017	4,293	1,802	607	939	704	-13	-67	16	-10	52	-5

\* Net new cash flow is the dollar value of new sales minus redemptions combined with net exchanges.

(\*) = between -\$500 million and \$500 million

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 65

## Worldwide Regulated Open-End Funds: Total Net Assets

Millions of US dollars, year-end

	2012	2013	2014	2015	2016	2017
<b>World</b>	<b>\$32,252,259</b>	<b>\$36,351,948</b>	<b>\$38,031,591</b>	<b>\$38,190,086</b>	<b>\$40,556,499</b>	<b>\$49,296,857</b>
<b>Americas</b>	<b>16,486,391</b>	<b>18,862,421</b>	<b>20,007,808</b>	<b>19,557,645</b>	<b>21,093,009</b>	<b>24,880,326</b>
Argentina	9,185	11,179	15,630	16,435	20,189	29,213
Brazil	1,070,998	1,018,641	989,542	743,530	1,060,904	1,238,039
Canada	856,504	940,580	981,804	889,610	996,090	1,292,023
Chile	37,900	39,291	44,166	39,898	46,214	54,744
Costa Rica	1,484	1,933	2,092	2,533	2,297	2,446
Mexico	112,201	120,518	119,504	105,940	92,429	109,449
Trinidad and Tobago	6,505	6,586	7,121	6,983	6,781	7,426
United States	14,391,614	16,723,693	17,847,949	17,752,716	18,868,105	22,146,986
<b>Europe</b>	<b>11,929,101</b>	<b>13,601,725</b>	<b>13,804,517</b>	<b>13,740,166</b>	<b>14,119,361</b>	<b>17,742,225</b>
Austria	186,905	194,932	165,084	151,199	150,939	179,198
Belgium	82,695	93,389	100,790	92,115	84,294	117,924
Bulgaria	324	504	496	440	548	770
Croatia	N/A	N/A	2,058	1,975	2,571	2,982
Cyprus	N/A	N/A	N/A	N/A	248	1,581
Czechia	5,122	5,302	5,746	7,812	8,901	12,823
Denmark	103,506	118,702	120,844	111,509	116,910	145,837
Finland	87,522	103,602	86,397	88,351	93,757	110,998
France	1,992,335	2,115,410	1,940,490	1,832,073	1,880,335	2,313,588
Germany	1,694,689	1,934,468	1,842,547	1,799,754	1,893,722	2,312,051
Greece	6,011	6,742	5,256	4,292	4,111	5,390
Hungary	13,063	18,138	15,980	14,825	14,582	16,983
Ireland	1,613,201	1,845,040	2,003,956	2,052,437	2,197,533	2,873,630
Italy	193,448	223,023	217,363	207,867	203,384	260,385
Liechtenstein	37,615	41,915	45,792	44,938	45,624	54,674
Luxembourg	3,145,220	3,606,847	3,757,624	3,817,201	3,901,304	4,988,625
Malta	4,522	4,468	4,423	3,808	2,739	3,437
Netherlands	681,140	781,020	801,397	729,096	771,988	923,269
Norway	98,723	109,325	112,223	102,526	113,957	138,737

Continued on the next page

TABLE 65 CONTINUED

## Worldwide Regulated Open-End Funds: Total Net Assets

Millions of US dollars, year-end

	2012	2013	2014	2015	2016	2017
Poland	26,888	29,515	34,177	32,286	29,572	41,450
Portugal	28,941	28,222	15,786	22,270	20,109	23,697
Romania	2,613	4,000	4,932	5,038	5,072	5,827
Russia	3,260	3,589	1,288	1,383	2,099	3,207 <sup>a</sup>
Slovakia	4,793	5,954	6,514	6,202	6,205	7,889
Slovenia	2,370	2,506	2,550	2,448	2,528	3,106
Spain	202,742	268,380	274,072	274,715	280,826	351,307
Sweden	211,236	255,822	283,683	279,977	286,412	355,957
Switzerland	327,360	425,662	436,431	457,162	475,838	558,769
Turkey	16,478	14,078	15,310	12,887	12,277	13,185
United Kingdom	1,156,379	1,361,170	1,501,308	1,583,580	1,510,976	1,914,949
<b>Asia and Pacific</b>	<b>3,691,617</b>	<b>3,744,934</b>	<b>4,072,792</b>	<b>5,008,346</b>	<b>5,198,307</b>	<b>6,492,544</b>
Australia	1,667,128	1,624,081	1,610,811	1,613,044	1,791,800	2,144,052
China	437,449	460,332	708,884	1,227,540	1,227,540	1,688,981
Chinese Taipei	59,192	62,286	58,049	61,773	61,773	72,835
India	116,974	109,558	136,834	216,805	216,805	307,387
Japan	1,105,421	1,161,194	1,177,233	1,459,705	1,470,910	1,759,449
Korea, Rep. of	267,583	285,172	330,168	370,600	370,600	451,886
New Zealand	31,145	34,185	41,559	48,623	48,623	57,441
Pakistan	3,159	3,464	4,156	5,360	5,360	4,591
Philippines	3,566	4,662	5,098	4,896	4,896	5,922
<b>Africa</b>	<b>145,150</b>	<b>142,868</b>	<b>146,474</b>	<b>122,068</b>	<b>145,822</b>	<b>181,762</b>
South Africa	145,150	142,868	146,474	122,068	145,822	181,762

<sup>a</sup> 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, Republic of 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 from these tables 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

	2012	2013	2014	2015	2016	2017
<b>World</b>	<b>94,475</b>	<b>97,920</b>	<b>101,238</b>	<b>106,523</b>	<b>110,548</b>	<b>114,131</b>
<b>Americas</b>	<b>22,292</b>	<b>23,323</b>	<b>24,378</b>	<b>25,230</b>	<b>25,898</b>	<b>27,254</b>
Argentina	291	297	302	346	420	487
Brazil	7,468	8,072	8,560	8,783	9,224	9,774
Canada	2,866	2,963	3,164	3,283	3,298	3,867
Chile	2,286	2,385	2,418	2,500	2,539	2,673
Costa Rica	66	66	66	65	67	67
Mexico	488	487	486	499	524	553
Trinidad and Tobago	42	43	43	44	44	45
United States	8,785	9,010	9,339	9,710	9,782	9,788
<b>Europe</b>	<b>51,713</b>	<b>52,216</b>	<b>51,724</b>	<b>53,440</b>	<b>53,734</b>	<b>55,055</b>
Austria	1,814	1,842	1,629	1,596	1,575	1,580
Belgium	1,543	1,446	1,231	1,164	962	890
Bulgaria	95	98	104	104	110	116
Croatia	N/A	N/A	82	85	89	94
Cyprus	N/A	N/A	N/A	N/A	30	46
Czechia	83	88	108	128	129	147
Denmark	495	510	526	532	558	565
Finland	507	492	383	371	372	380
France	11,692	11,392	11,273	11,122	10,952	10,860
Germany	5,903	5,917	5,503	5,604	5,678	5,863
Greece	177	166	143	139	135	146
Hungary	361	369	307	316	306	306
Ireland	5,305	5,599	5,833	6,201	6,470	6,831
Italy	744	784	687	713	760	832
Liechtenstein	769	923	946	1,184	1,287	1,367
Luxembourg	13,420	13,685	13,849	14,108	14,211	14,728
Malta	107	114	110	130	126	140
Netherlands	497	501	561	1,015	1,014	991
Norway	406	573	619	700	720	754

Continued on the next page



TABLE 66 CONTINUED

## Worldwide Regulated Open-End Funds: Number of Funds

Year-end

	2012	2013	2014	2015	2016	2017
Poland	324	331	398	391	423	428
Portugal	284	243	184	399	373	344
Romania	62	64	72	74	75	74
Russia	464	443	378	340	296	284 <sup>a</sup>
Slovakia	77	77	87	88	87	87
Slovenia	131	114	110	109	102	98
Spain	2,443	2,374	2,235	2,238	2,342	2,332
Sweden	475	493	522	471	496	519
Switzerland	690	795	843	860	858	918
Turkey	351	373	404	387	396	387
United Kingdom	2,494	2,410	2,597	2,871	2,802	2,948
<b>Asia and Pacific</b>	<b>19,503</b>	<b>21,319</b>	<b>23,965</b>	<b>26,526</b>	<b>29,396</b>	<b>30,196</b>
Australia	N/A	N/A	N/A	N/A	N/A	N/A
China	1,065	1,415	1,763	2,558	3,564	4,361
Chinese Taipei	554	570	577	602	653	714
India	726	738	768	804	795	807
Japan	7,150	7,827	8,778	9,820	10,915	11,662
Korea, Rep. of	9,121	9,876	11,235	11,918	12,626	11,828
New Zealand	700	694	632	609	615	587
Pakistan	139	152	159	160	171	177
Philippines	48	47	53	55	57	60
<b>Africa</b>	<b>967</b>	<b>1,062</b>	<b>1,171</b>	<b>1,327</b>	<b>1,520</b>	<b>1,626</b>
South Africa	967	1,062	1,171	1,327	1,520	1,626

<sup>a</sup> 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, Republic of 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 from these tables 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

TABLE 67

## Worldwide Regulated Open-End Funds: Net Sales

Millions of US dollars, annual

	2012	2013	2014	2015	2016	2017
<b>World</b>	<b>\$1,267,247</b>	<b>\$1,269,406</b>	<b>\$1,807,868</b>	<b>\$1,980,351</b>	<b>\$1,203,622</b>	<b>\$2,715,106</b>
<b>Americas</b>	<b>690,286</b>	<b>658,983</b>	<b>677,819</b>	<b>454,848</b>	<b>376,630</b>	<b>1,088,540</b>
Argentina	N/A	N/A	4,511 <sup>a</sup>	4,421	3,248	7,018
Brazil	56,099	34,713	1,886	13,531	33,568	86,648
Canada	50,697	64,965	90,035	82,238	52,601	84,526
Chile	813	5,394	8,550	983	3,269	3,422
Costa Rica	-221	-305	341	427	-511 <sup>a</sup>	N/A
Mexico	6,869	7,705	10,442	-1,226	782	5,612
Trinidad and Tobago	292	-13	292	-23	17	10
United States	575,737	546,524	561,762	354,497	283,656	901,304
<b>Europe</b>	<b>428,708</b>	<b>462,388</b>	<b>809,914</b>	<b>738,833</b>	<b>476,007</b>	<b>1,013,040</b>
Austria	417	-40	4,688	3,198	-370	3,510
Belgium	N/A	N/A	N/A	N/A	N/A	N/A
Bulgaria	16	129	36	(*)	112	116
Croatia	N/A	N/A	-52	249	1,295	-1,969
Cyprus	N/A	N/A	N/A	N/A	45	80
Czechia	161	256	712	1,426	1,170	1,417
Denmark	8,038	7,439	8,137	5,945	7,362	5,467
Finland	3,223	5,617	10,933	7,888	3,437	2,306
France	11,630	-99,007	-26,455	24,945	31,991	51,883
Germany	98,958	116,538	121,923	149,783	108,464	112,770
Greece	-330	-741	-303	-444	-242	-73
Hungary	37	2,856	1,297	226	-715	-41
Ireland	117,666	74,644	155,231	127,605	154,311	335,902
Italy	-17,140	14,831	38,415	11,339	9,908	22,902
Liechtenstein	2,685	-726	8,364	993	-448	2,682
Luxembourg	159,722	256,919	337,851	331,873	110,662	348,648
Malta	662	-628	122	-267	-568	152
Netherlands	-1,017	875	-5,261	-5,826	13,004	-2,340
Norway	7,048	4,727	17,184	1,733	4,639	9,399

Continued on the next page

TABLE 67 CONTINUED

## Worldwide Regulated Open-End Funds: Net Sales

Millions of US dollars, annual

	2012	2013	2014	2015	2016	2017
Poland	3,931	2,610	3,167	465	-1,656	3,467
Portugal	-538	1,354	-221	-94	-844	258
Romania	432	1,075	1,288	378	80	59
Russia	6	571	-940	35	238	917 <sup>b</sup>
Slovakia	-451	148	855	420	104	622
Slovenia	-140	-54	52	86	15	41
Spain	-13,580	30,744	47,704	26,866	15,728	23,479
Sweden	652	8,708	15,714	8,136	2,317	9,385
Switzerland	15,887	5,780	30,075	31,736	17,466	20,418
Turkey	166	969	-625	-160	748	395
United Kingdom	30,567	26,794	40,023	10,299	-2,246	61,188
<b>Asia and Pacific</b>	<b>134,457</b>	<b>127,966</b>	<b>310,113</b>	<b>778,781</b>	<b>339,954</b>	<b>603,409</b>
Australia	N/A	N/A	N/A	N/A	N/A	N/A
China	90,505	-3,842	167,834	470,457	122,744	395,965
Chinese Taipei	-1,015	1,472	-3,835	7,124	-3,597	-503
India	16,142	2,387	7,978	33,195	42,892	40,465
Japan	18,896	131,203	99,644	235,590	138,354	157,018
Korea, Rep. of	6,822	-4,876	34,917	29,190	35,337	6,336
New Zealand	2,468	231	3,551	2,966	3,839	3,104
Pakistan	10	-89	28	-68	264	536
Philippines	629	1,480	-4	327	121	488
<b>Africa</b>	<b>13,796</b>	<b>20,069</b>	<b>10,022</b>	<b>7,889</b>	<b>11,031</b>	<b>10,117</b>
South Africa	13,796	20,069	10,022	7,889	11,031	10,117

(\*) = between -\$0.5 million and \$0.5 million

<sup>a</sup> Data are only for October through December.<sup>b</sup> 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, Republic of 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 from these tables 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

# 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 on page 104.

**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 on page 82.

**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 on UITs, see page 50.

## 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).<sup>1</sup>

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. Over the past few decades, the percentage of funds organized as Massachusetts business trusts has declined as more and more funds have formed as Maryland corporations, as well as Delaware statutory trusts—the most favored form of mutual fund organization.

---

<sup>1</sup> Fewer than 900 funds, or about 9 percent, have chosen other forms of organization, such as limited liability partnerships, or other domiciles, such as Ohio or Minnesota.

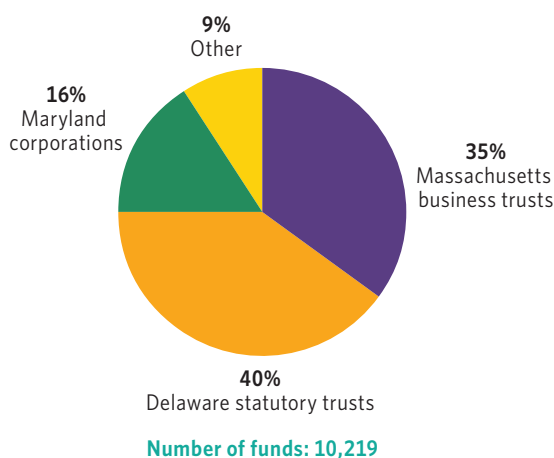
Developments in the late 1980s gave asset management companies these other attractive choices. For example, in 1987, Maryland revised its law to align it with interpretations of the Investment Company Act concerning when funds are required to hold annual meetings. As a result, Maryland corporations became 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 its current dominance over other forms of mutual fund organization.

Mutual funds have officers and directors (if the fund is a corporation) or trustees (if the fund is a business trust).<sup>2</sup> The fund’s board plays an important role in overseeing fund operations, described in more detail on page 296.

**FIGURE A.1**

**The Most Popular Forms of Mutual Fund Organization**

*Percentage of funds, year-end 2017*



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.

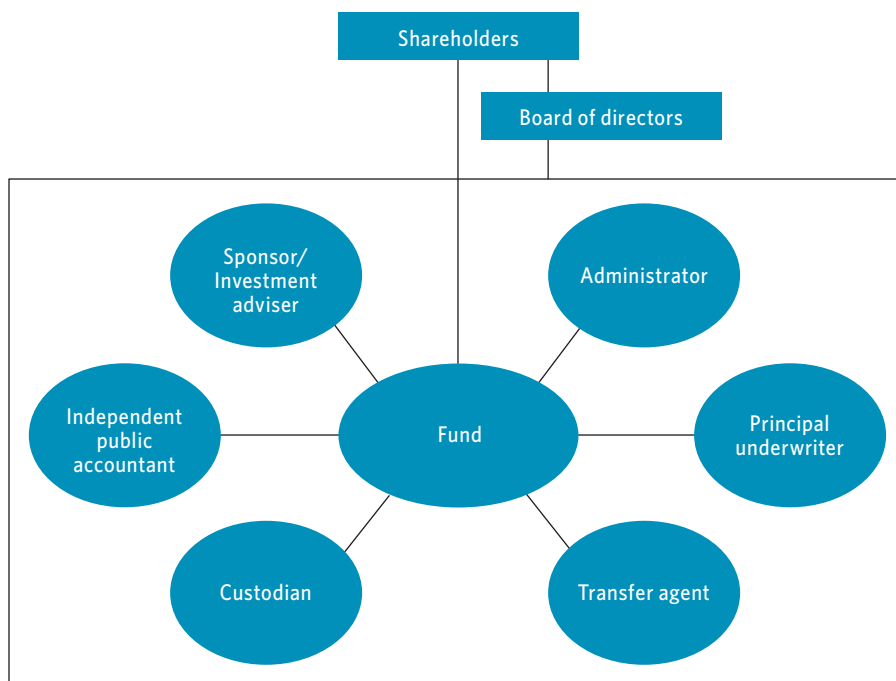
<sup>2</sup> For ease of reference, this appendix refers to all directors and trustees as *directors* and all boards as *boards of directors*.



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 296.

## 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 investment objectives or fundamental 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.<sup>3</sup> 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

---

<sup>3</sup> 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](http://www.sec.gov/divisions/investment/invcoreg121504.htm).

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.

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 297.

## 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.

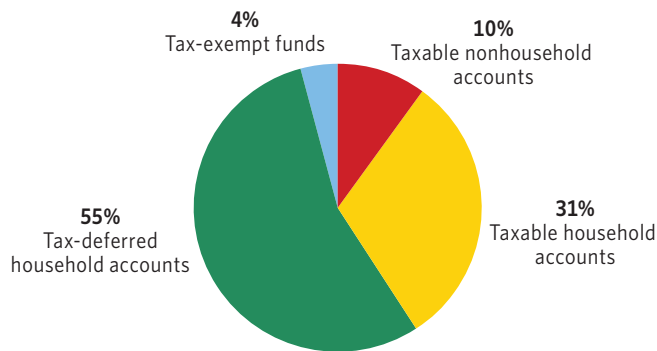
## Mutual Fund Assets by Tax Status

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 2017, 4 percent of all mutual fund assets were held in tax-exempt funds, and 55 percent were invested in tax-deferred accounts held by households.

FIGURE A.3

### 59 Percent of Mutual Fund Total Net Assets Were Held in Tax-Deferred Accounts and Tax-Exempt Funds

Percentage of total net assets, year-end 2017



Mutual fund total net assets: \$18.7 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 \$290 billion in dividends to fund shareholders in 2017. Bond and money market funds accounted for 45 percent of all dividend distributions in 2017. Forty percent of all dividend distributions were paid to tax-exempt fund shareholders and tax-deferred household accounts. Another 53 percent were paid to taxable household accounts.

FIGURE A.4

### Dividend Distributions

Billions of dollars, 2000-2017

Year	Tax-deferred household accounts and tax-exempt funds	Taxable household accounts	Taxable nonhousehold accounts	Total
2000	\$74	\$87	\$25	\$186
2001	68	72	23	162
2002	59	43	12	114
2003	57	37	9	103
2004	65	41	10	117
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	121	74	12	208
2012	128	80	13	222
2013	123	81	14	218
2014	137	93	15	245
2015	140	94	16	250
2016	107	130	16	253
2017	115	153	21	290

Note: Components may not add to the total because of rounding.



## 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 \$370 billion in capital gains to shareholders in 2017. Forty-seven percent of these distributions were paid to tax-exempt fund shareholders and tax-deferred household accounts, and another 49 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 2017, 65 percent of equity fund share classes made a capital gains distribution, and 79 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, 2000-2017*

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	6	1	14
2004	30	21	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	30	4	73
2012	58	37	5	100
2013	147	82	11	239
2014	253	130	17	400
2015	250	114	15	379
2016	117	96	8	220
2017	175	180	16	370

Note: Capital gains distributions include long-term and short-term capital gains. Components may not add to the total because of rounding.

## 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.<sup>4</sup> 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.<sup>5</sup> These funds also amend registration statements throughout the year as necessary to reflect material changes to their disclosure.

---

<sup>4</sup> 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.

<sup>5</sup> 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. Shareholders receive audited annual and unaudited semiannual reports within 60 days after the end and the midpoint of the fund's fiscal year, respectively. These reports contain updated financial statements, a list of the fund's portfolio securities,<sup>6</sup> management's discussion of financial performance, and other information current as of the date of the report.

Following their first and third quarters, funds file Form N-Q with the SEC, which discloses the complete schedule of their portfolio holdings.<sup>7</sup> Additionally, funds must file census-type information semiannually on Form N-SAR.<sup>8</sup> 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-SAR, and Form N-PX to shareholders, but the forms are publicly available via the SEC's EDGAR database.<sup>9</sup>

The combination of prospectuses, SAls, annual and semiannual shareholder reports, Form N-Q, Form N-SAR, 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.

---

<sup>6</sup> 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.

<sup>7</sup> As of March 2019, certain non-money market funds will be required to make Form N-PORT filings monthly, providing much more detailed information about a fund's portfolio holdings in a structured data format. The form will replace Form N-Q, as funds will attach their complete schedule of portfolio holdings at the end of the first and third fiscal quarters. The form also will require each fund to provide information regarding, among other items, each portfolio investment, flows, monthly returns, securities lending, and—for funds investing in more than a minimum amount of fixed-income securities—portfolio-level risk metrics. Beginning September 2019, Form N-PORT filings at the end of each fiscal quarter will be publicly disclosed within 60 days after the end of the reporting period. Money market funds, which already must file portfolio holdings monthly on Form N-MFP and disclose those holdings on their websites, will not need to file Form N-PORT.

<sup>8</sup> Beginning in June 2018, Form N-CEN will replace Form N-SAR and require much more detailed census-type information annually, including information about ETFs, closed-end funds, and securities lending activities.

<sup>9</sup> Similarly, funds will not be required to mail Form N-PORT or Form N-CEN to shareholders, but those forms will be publicly available via the SEC's EDGAR database.

## 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.<sup>10</sup>

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.<sup>11</sup> 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.

---

<sup>10</sup> ICI has published several papers on the mutual fund valuation process. For more information, see two white papers by ICI, the Independent Directors Council, and ICI Mutual Insurance Company titled *Valuation and Liquidity Issues for Mutual Funds* (February 1997 and March 2002) and two installments of ICI's Fair Value 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](http://www.ici.org/pdf/pub_15_valuation_update_vol1.pdf) and [www.ici.org/pdf/pub\\_15\\_valuation\\_update\\_vol2.pdf](http://www.ici.org/pdf/pub_15_valuation_update_vol2.pdf).

<sup>11</sup> 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 in order 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.,<sup>12</sup> 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)<sup>13</sup> or delay payments of redemption proceeds for more than seven days.

No more than 15 percent of a mutual fund’s portfolio may be invested in illiquid assets,<sup>14</sup> in part to ensure that redemptions can be made. In 2016, the SEC adopted a liquidity risk management program rule and related reporting and disclosure requirements applicable to mutual funds and open-end ETFs, which will supersede the SEC’s current liquidity guidance and substantially enhance funds’ regulatory obligations in this area. For most funds, the compliance dates for these new requirements are December 1, 2018, and June 1, 2019 (depending on the requirement).

---

<sup>12</sup> 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.

<sup>13</sup> Natural disasters and other emergencies that disrupt fund pricing do occur, but 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 280.

<sup>14</sup> Money market funds are held to different liquidity standards. For more information on this topic, see Types of US Investment Companies on page 280 and [www.ici.org/mmfs/current/16\\_mmf\\_reg\\_summ](http://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, both at the fund and adviser levels (see Compliance Programs on page 297), 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.<sup>15</sup>

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 owe shareholders the duties of loyalty and care under state law. 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.

---

<sup>15</sup> 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](http://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 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.<sup>16</sup> 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.

---

<sup>16</sup> 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,<sup>17</sup> 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.

---

<sup>17</sup> 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.”<sup>18</sup>

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

---

<sup>18</sup> 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](http://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 2017, for example, the median number of stocks held by US equity mutual funds was 79.<sup>19</sup>

---

<sup>19</sup> This number—tabulated using Morningstar data—is the median among domestic equity mutual funds, excluding sector mutual funds and funds of funds.

## 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.
-

<b>1971</b>	Money market funds are introduced.
<b>1974</b>	The Employee Retirement Income Security Act of 1974 (ERISA) creates the individual retirement account (IRA).
<b>1976</b>	The Tax Reform Act of 1976 permits the creation of municipal bond funds. The first retail index fund is offered.
<b>1978</b>	The Revenue Act of 1978 creates new Section 401(k) retirement plans and simplified employee pensions (SEPs).
<b>1981</b>	The Economic Recovery Tax Act establishes “universal” IRAs for all workers. IRS proposes regulations for Section 401(k).
<b>1986</b>	The Tax Reform Act of 1986 reduces IRA deductibility.
<b>1987</b>	ICI welcomes closed-end funds as members.
<b>1990</b>	Mutual fund assets top \$1 trillion.
<b>1993</b>	The first exchange-traded fund (ETF) shares are issued.
<b>1996</b>	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.
<b>1997</b>	The Taxpayer Relief Act of 1997 creates the Roth IRA and eliminates restrictions on portfolio management that disadvantage fund shareholders.
<b>1998</b>	The SEC approves the most significant disclosure reforms in the history of US mutual funds, encompassing “plain English,” fund profiles, and improved risk disclosure.
<b>1999</b>	The Gramm-Leach-Bliley Act modernizes financial services regulation and enhances financial privacy.
<b>2001</b>	Enactment of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) significantly expands retirement savings opportunities for millions of working Americans.
<b>2003</b>	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.

- 
- 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.
- 
- 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.
-

## GLOSSARY

You can find more information about many of these entries in the chapters and appendix of this book and on [www.ici.org](http://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 an exchange-traded fund's (ETF) intraday value. 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.

# Index

A page number with an *f* indicates a figure; an *n* indicates a note; a *t* indicates a table. Page numbers in **bold** indicate a definition.

## A

### accountants

- independent public, 283, 283f, **310**
- as mutual fund purchase sources, 151, 151f, 152f

actively managed bond funds, 126, 126f, 249t, 250t, 251t, 252t

actively managed domestic equity funds, 43f, 48, 77, 77f, 249t

actively managed equity funds, 122, 122f, 124, 249t, 250t, 251t, 252t

actively managed ETFs, 42n, 43n, 84, 88, 129f, 218t, 219t, 220t

actively managed hybrid funds, 249t, 250t, 251t, 252t

actively managed mutual funds, **305**

- advisers and, 280
- expense ratios, 124, 126-127, 126f
- market share, 42f
- total net assets, 249t

administrators, mutual fund, 283, 283f, 285

advisers, **311** (investment advisers)

- as authorized participants, 90
- compensation of, 118, 127, 130, 131, 132
- fund management, 53
- as purchase sources, 151, 151f
- regulation of, 285, 297
- responsibilities, 284-285
- rollover decision research and, 188, 189f

affiliated transaction prohibitions, 300

Africa region, 273t, 275t, 277t

after-tax returns, 288

age demographics

- of closed-end fund owners, 115, 115f
- demand for regulated funds and, 19
- of education savers, 200, 201f
- of ETF owners, 102f
- 401(k) account balances and, 183, 183f
- 401(k) asset allocation and, 179, 180f, 181, 181f
- households owning IRAs, 190
- internet use and, 161f
- IRA and Roth IRA asset allocation and, 190, 191f
- IRA distributions and, 192, 192f
- of mutual fund owners, 143f, 144-146, 144f, 145f, 146f, 153-155, 153f, 155f
- of retirement savers, 164, 164f
- rollover decision research and, 188

agency securities, 39, 40f, 247t, 248t

alternative investment funds (AIFs), 12

alternative minimum tax, 289

alternative strategy funds, 253t

American Taxpayer Relief Act of 2012, 199

Americas region, 63, 67, 272t, 274t, 276t

amortized cost method of pricing, 280

annual reports, 293, **305**

annuities. *See also* variable annuities

- assets, 168
- closed-end fund holder ownership of, 114, 114f
- ETF-owning households holding, 101, 101f
- IRA assets in, 185f
- retiree income and, 173, 173f

arbitrage, 93

Argentina, 63

Asia-Pacific region

- assets, 14
- ETF market, 86f
- GDP growth, 63
- investor demand for regulated funds, 13
- market gains (2017), 14
- money market funds, 21f
- net sales, 277t
- net sales of regulated long-term funds, 25f
- number of funds, 275t
- stock market gains (2017), 15f
- total net assets, 23f, 24, 273t

asset allocation, 67

asset allocation funds, 75. *See also* hybrid funds

asset allocation strategy, 67

asset-based fees, 127, 130, 132, 133

asset class, **305**

asset-weighted turnover rate, 68, 68f

at-the-market offerings, 106, **305**

auditors, 285, 297, **305**

authorized participants (APs), 88-89, 89f, 90, 91f, 93, **305**

average hourly earnings, 62

average portfolio maturity, **305**

## B

Baby Boom Generation

- bond funds and, 73
- employer-sponsored retirement plans and, 153, 153f, 155f
- mutual funds and, 140, 141f, 143f, 144-145, 144f, 145f
- risk tolerance, 158, 158f

back-end load, 131, 132, 133f, 134f, **305**. *See also* contingent deferred sales load

balanced funds, 75. *See also* hybrid funds; lifestyle funds; target date funds

- assets, 13f
- equity fund portion, 181f
- as 401(k) investment options, 178f, 179, 180f
- non-target date, 190, 191f
- shareholder risk tolerance for, 159, 159f

Bank of England, 63  
 banker's acceptances, 247t, 248t  
 banks  
   as custodians, 299  
   401(k) asset allocation and, 180f, 181f  
   as intermediaries, 44, 44f  
   IRA assets in, 185f  
   as mutual fund purchase sources, 151, 151f, 152f  
   retirement assets held by, 168  
 basis points, 62n, **305**  
 benchmark, **305**  
 blend funds, 259t, 260t  
   expense ratios, 123f  
 boards of directors, 53, 282, 283f, 284, 296  
 bond and income funds, 210t, 212t  
 bond closed-end funds, 105f, 107, 108f, 109f, 191f, 216t, 217t  
 bond ETFs, 94f, 97, 98, 98f, 99f, 191f, 218t, 219t, 220t  
 bond funds, **306**. See also bonds; government bond funds;  
   high-yield bond funds; index bond funds;  
   investment grade bond funds; multisector bond  
   funds; municipal bond funds; world bond funds  
   alternative strategies, 253t  
   assets, 35, 35f  
   assets in regulated funds, 12, 13f, 14  
   capital gains paid and reinvested, 237t  
   closed-end, 105f, 107, 191f, 216t  
   DC plan assets in, 270t  
   dividends paid and reinvested, 236t  
   ETF-owning households holding, 101, 101f  
   exchange redemptions, 232t  
   exchange sales, 230t  
   expense ratios, 118, 119f, 123f  
   as 401(k) investment options, 178f, 180f  
   household ownership of, 114, 114f  
   individual accounts, 267t  
   institutional accounts, 267t, 268t  
   IRA assets in, 190, 191f, 271t  
   liquidity assets, 222t  
   liquidity ratios, 222t, 223t  
   in long-term mutual funds, 60n  
   managing investor flows, 71-72  
   net new cash flow, 61f, 69-70, 69f, 70f, 224t, 227t, 228t  
   new sales, 229t  
   number of, 213t  
   number of share classes, 214t  
   redemptions, 233t  
   regular redemptions, 231t  
   retirement assets in, 150, 194, 194f, 195f, 196  
   sales/redemptions, 227t  
   shareholder risk tolerance for, 159, 159f  
   taxable long-term, 214t  
   tax-exempt, 289  
   total net assets, 210t, 211t, 267t  
   total portfolio, common stock, and other securities:  
     purchases, sales, net purchases, 241t  
   bond funds (*continued*)  
     trends, 57f  
     in US mutual fund total net assets, 58, 58f  
     variable annuity, 265t, 266t  
     worldwide net sales, 18f  
 bond funds of funds, 256t, 257t  
 bond index funds. See index bond funds  
 bond market, 39  
 bond trusts, as UITs, 50  
 bonds, **306**. See also bond funds  
   directly held, 114, 114f  
   ETF-owning households holding, 101  
   government, 234t, 235t  
   as investment company assets, 39, 40f  
   IRA assets in, 184, 185f, 191f  
   as retirement resource, 168  
   tender option, 111, 113, 113f  
 borrowing, limits on, 298  
 Brazil, 63  
 breakpoints, 130, **306**  
 broad-based domestic equity ETFs, 97, 98f, 99f, 218t, 219t, 220t  
 brokerage accounts, 84, 184  
 brokerage firms, 44, 44f  
 broker-dealers, **306**  
 brokers, 120, 151, 151f, **306**  
 business corporation assets, 38, 268t, 269t  
 business equity, 168  
 business investments, 62

**C**  
 capital appreciation equity funds  
   exchange redemptions, 232t  
   exchange sales, 230t  
   liquidity ratios, 223t  
   net new cash flow, 228t  
   new sales, 229t  
   number of funds, 213t  
   number of share classes, 215t  
   redemptions, 231t  
   total net assets, 211t  
 capital gains  
   distributions, 110, 110f, 288, 291, 291f, **306**  
   paid and reinvested, 237t  
   tax liability for, 289  
 capital market development, 26, 27f  
 cash reserves, 247t, 248t  
 catch-up contributions, 187, **306**  
 CBO (Congressional Budget Office), 79f, 166  
 CCO (chief compliance officer), 283, 285, 296, 297  
 CDSL (contingent deferred sales load), 131, **307**  
 certificates of deposit, 191f, 247t, 248t  
 CFTC (Commodity Futures Trading Commission), 79f, 86  
 Chicago Board Options Exchange Volatility Index (VIX), 66  
 chief compliance officer (CCO), 283, 285, 296, 297

- China, 21f, 29f, 63. *See also* Asia-Pacific region
- CITs (collective investment trusts), 75, 78–79, 79f
- civil service retirement and disability fund, 169f
- Class A, B, or C shares. *See* share classes
- closed-end funds, 104, **306**
- assets, 34f, 216t
  - bond, 105f, 107, 108f, 109f, 191f, 216t, 217t
  - characteristics of, 106, 281
  - composition, by investment objective, 108f
  - custody rules, 299n
  - distributions, 110, 110f
  - diversification standards, 301
  - domestic bond, 108f, 109f, 216t, 217t
  - domestic equity, 108f, 109f, 216t, 217t
  - equity, 107, 109, 109f, 191f, 216t, 217t
  - global/international, 108f, 109f, 216t
  - gross issuance/redemptions, 217t
  - household ownership of, 114–115, 114f, 115f
  - IRA assets in, 184, 185f
  - leverage, 111–113, 111f, 112f, 113f, 299
  - municipal bond, 108f, 109f, 216t, 217t
  - net issuance, 35, 107, 109, 109f, 217t
  - number of funds, 52, 107f, 108, 216t
  - number of investment companies for, 52f
  - preferred shares, 24f, 106, 107f, 112, 112f, 216t, 217t
  - pricing, 294, 294n11
  - regulation of, 292n4, 293n8
  - shareholder characteristics, 114–115, 114f, 115f
  - taxable bond, 108f, 109f, 216t, 217t
  - total assets, 107–108, 107f
- collective investment trusts (CITs), 75, 78–79, 79f
- commercial paper, 40f, 41, 247t, 248t, **307**
- commodity ETFs, 84, 98f, 99f, 218t, 219t, 220t
- Commodity Exchange Act, 86
- Commodity Futures Trading Commission (CFTC), 79f, 86
- common stock, **307**
- as portfolio holdings, 234t, 235t
  - purchases, sales, and net purchases of, 238t, 239t, 240t, 241t
- company stock holdings, 179, 180f, 181f
- confidence of consumers, 160, 160f
- Congressional Budget Office (CBO), 166
- consumer durables as retirement resource, 168
- Consumer Price Index, 62
- contingent deferred sales load (CDSL), 131, **307**
- corporate bond funds. *See* high-yield bond funds; investment grade bond funds
- corporate bonds, 39, 40f, 71, 234t, 235t
- cost basis, 289
- costs. *See* mutual fund expenses and fees
- Coverdell education savings accounts (ESAs), 60n, 156f, 199, 201f
- creation units, 88, 89f, **307**
- currency ETFs, 84, 99n
- custodians, 283f, 299
- D**
- DB plans. *See* defined benefit plans
- DC plans. *See* defined contribution plans
- dealers, **307**
- defined benefit (DB) plans, 150, 164, 164f, 167, 167f, 168, 170, 170f, 172f, **307**
- defined contribution (DC) plans, **307**. *See also* 457 plans; 401(k) plans; 403(b) plans; Thrift Savings Plans
- asset location, 195–196, 195f
  - assets, 163f, 168, 169f, 170, 170f, 175f, 270t
  - characteristics of, 174, 175f
  - CITs in, 78, 79f
  - in closed-end fund-owning households, 115f
  - in ETF-owning households, 102, 102f
  - household ownership of, 36, 37f, 156, 156f
  - index funds in, 198, 198f
  - IRA rollovers from, 150
  - lifestyle funds in, 196, 197f
  - mutual fund assets in, 60n, 150, 194, 194f
  - net new cash flow, 270t
  - purchase sources, 151, 151f, 152, 152f, 155f
  - retiree income and, 172f
  - as retirement resource, 164, 164f, 167f
  - target date funds in, 73, 197f, 198
  - total net assets, 270t
- Delaware statutory trusts, 281, 282, 282f
- demographics. *See also* age demographics; income demographics
- bond fund demand and, 73
  - closed-end fund investors, 114–115, 114f, 115f
  - education level, 102, 102f, 161f, 200, 201f
  - of education savings investors, 200, 201f
  - ETF investors, 102, 102f
  - 401(k) investors, 179, 180f, 181, 181f, 183, 183f
  - internet use by shareholders, 161, 161f
  - long-term mutual fund flows and, 64
  - mutual fund investors, 143f
  - retirement plan investors, 164f
  - savings goals and, 165, 165f
  - trends in, 56, 61
  - worldwide regulated fund trends and, 23, 26
- Depository Trust Company (DTC), 90
- derivative instruments, 71, 113, 298
- Deutscher Aktienindex (DAX), 63
- directors, 53, 282, 283f, 284, 296, **307**
- disclosure, 92, 288, 292–293
- discount brokers, 151, 151f, 152, 152f, 154f
- discount calculation, closed-end funds and, 294n11
- distributions, **307**
- capital gains, 110, 110f, 237t
  - charges, 118
  - dividends, 236t, 246t, 288, 290, 290f
  - ETF fees, 127n
  - from IRAs, 192–193, 192f
- diversification, 301

dividends, **308**  
 exempt-interest, 289  
 ordinary distributions, 288, 290, 290f  
 paid and reinvested, 236t, 246t  
 reinvestments, 106

domestic bond closed-end funds, 108f, 109f, 216t, 217t  
 domestic bond funds, 177, 178f  
 domestic equity closed-end funds, 108f, 109f, 216t, 217t  
 domestic equity ETFs  
 index, 48, 77, 77f  
 large-cap, 98, 99f  
 liquidity providers, 90  
 net issuance, 67, 97, 98, 98f  
 number of funds, 218t  
 total net assets, 99f, 218t  
 trading, 94f

domestic equity funds  
 actively managed, 43f, 48, 77, 77f, 249t  
 alternative strategies, 253t  
 assets, 35, 35f  
 DC plan assets in, 270t  
 entering and exiting industry, 59  
 expense ratios, 120f  
 as 401(k) investment options, 177, 178f  
 index domestic equity ETFs and, 77, 77f  
 IRA assets held in, 271t  
 net new cash flow, 64, 66f, 250t  
 new sales, 100  
 number of funds, 212t, 251t  
 number of share classes, 214t, 252t  
 retirement assets in, 195, 195f  
 total net assets, 210t, 249t  
 trends, 66-67

domestic equity index funds, 43-44, 43f, 249t  
 domestic high-yield bond ETFs, 90, 94f, 95-96, 95f  
 domestic municipal bond closed-end funds, 108f, 109f, 216t, 217t  
 domestic taxable bond closed-end funds, 108f, 109f, 216t, 217t

**E**

economic climate, 45, 62-66, 65f  
 Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2001, 199  
 economies of scale, expense ratios and, 121  
 EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system, 292, 293  
 education  
 IRA withdrawals for, 193, 193f  
 as savings goal, 56, 64, 149, 149f, 164, 199-200  
 education IRA. *See* Coverdell education savings accounts  
 emergencies  
 fund pricing disruptions due to, 295n13  
 IRA withdrawals for, 193, 193f  
 preparation for, as savings goal, 56, 149, 149f  
 emerging market bond ETFs, 90, 94f  
 emerging market debt mutual funds, 254t  
 emerging market equity ETFs, 90, 94f, 99f  
 emerging markets, 67, **308**  
 Employee Benefit Research Institute (EBRI), 179  
 Employee Retirement Income Security Act of 1974 (ERISA), 184, 186, 186f  
 employer-sponsored retirement plans, **308**. *See also* defined benefit plans; defined contribution plans; 457 plans; 401(k) plans; 403(b) plans; SAR-SEP IRAs; SEP IRAs; SIMPLE IRAs  
 assets, 168  
 Baby Boom Generation and, 155, 155f  
 fee structures for, 136  
 as first mutual fund purchase, 148, 148f  
 household accounts, 150  
 Millennial Generation and, 154, 154f  
 mutual fund assets in, 150, 194-198  
 purchase sources, 150-152, 151f, 152f  
 retiree income and, 172-173, 172f  
 as retirement resource, 164f, 167, 167f  
 rollovers from, 150  
 employment, investment industry, 53-55, 53f, 54f, 55f  
 equity, **308**. *See also* stock  
 equity closed-end funds, 109, 109f, 191f, 216t, 217t  
 equity ETFs, 94f, 191f, 218t, 220t  
 equity funds, **308**. *See also* capital appreciation equity funds; domestic equity funds; index equity funds; total return equity funds; world equity funds  
 alternative strategies, 253t  
 assets, 12, 13f, 14  
 capital gains paid and reinvested, 237t  
 closed-end, 107, 109, 109f, 191f, 216t, 217t  
 DC plan assets in, 270t  
 dividends paid and reinvested, 236t  
 in ETF-owning households, 101, 101f  
 exchange redemptions, 232t  
 exchange sales, 230t  
 expense ratios, 118, 119f, 121f, 122, 123f, 138, 139f  
 as 401(k) investment options, 138, 139f, 178f, 179, 180f, 181f  
 household ownership of, 114, 114f  
 index equity funds as share of, 76f  
 individual accounts, 267t  
 institutional accounts, 267t, 268t  
 IRA assets in, 190, 191f, 271t  
 liquidity, 222t, 223t  
 in long-term mutual funds, 60n  
 net new cash flow, 61f, 64-65, 65f, 66f, 224t, 225t, 228t  
 new sales, 225t, 229t  
 number of funds, 212t, 213t  
 number of share classes, 214t, 215t  
 redemptions, 225t, 233t  
 regular redemptions, 231t  
 retirement assets in, 150, 194, 194f  
 Roth IRA assets in, 190

- equity funds (*continued*)
  - sales/redemptions, 225t
  - shareholder risk tolerance for, 159, 159f
  - total net assets, 210t, 249t, 267t
  - total portfolio, common stock, and other securities:
    - purchases, sales, net purchases, 239t
  - turnover rate, 68f
  - in US mutual fund total net assets, 58, 58f
  - variable annuity, 265t, 266t
  - worldwide net sales, 18f
- equity funds of funds, 256t, 257t
- equity index funds. *See* index equity funds
- equity unit investment trusts (UITs), 50, 51f, 221t
- ESAs (Coverdell education savings accounts), 60n, 156f, 199, 201f
- ETFs. *See* exchange-traded funds
- euro, exchange rate for, 15n, 16-17, 16f
- eurodollar CDs, 247t, 248t
- Europe
  - ETF market, 86f
  - GDP growth, 63
  - net sales, 25, 25f, 276-277t
  - number of funds, 274-275t
  - regulated open-end funds, 272-273t
  - stock market gains (2017), 15f
  - total net assets, 23f, 24
- European Central Bank, 19
- exchange rates, 15n, 16-17, 16f
- exchange redemptions, 225t
- exchange sales, 226t
- exchanges of shares, 289
- exchange-traded funds (ETFs), **308**. *See also* domestic equity ETFs
  - actively managed ETFs, 42n, 43n, 84, 88, 129f, 218t, 219t, 220t
  - adviser purchase recommendations, 78f
  - assets, 34f, 35, 35f
  - assets at largest complexes, 47-48, 47f
  - assets worldwide, 18, 18f
  - authorized participants, 88-89, 89f, 90, 91f, 93
  - bond, 94f, 97, 98, 98f, 99f, 191f, 218t, 219t, 220t
  - broad-based domestic equity, 97, 98f, 99f, 218t, 219t, 220t
  - characteristics of, 84, 281
  - commodity-based, 84, 98f, 99f, 218t, 219t, 220t
  - creation of, 88-89, 89f, 94f
  - currency-based, 84, 99n
  - custody rules, 299n
  - demand for, 35, 38, 48, 67, 82, 92, 96-98, 97f, 98f, 99f, 100
  - distribution fees, 127n
  - diversification standards, 301
  - emerging market bond, 90, 94f
  - emerging market equity, 90, 94f, 99f
  - entering and exiting industry, 48, 49f, 100, 100f
  - equity, 94f, 191f, 218t, 220t
  - exchange-traded funds (ETFs) (*continued*)
    - expense ratios, 127-129
    - funds of funds structure, 218t, 219t, 220t
    - futures, 84, 99n
    - global/international equity, 97, 98, 98f, 100, 218t, 219t, 220t
    - high-yield bond, 90, 94f, 95-96, 95f
    - history, 84
    - household assets invested by adviser type, 77
    - households owning, 101-103, 101f, 102f
    - hybrid, 97, 98, 98f, 99f, 218t, 219t, 220t
    - index-based, 77
    - international equity ETFs, 94f, 98f, 99f, 100
    - IRA assets in, 184, 185f
    - leverage limits, 298
    - liquidations, 48, 49f, 100
    - mergers, 48, 49f
    - mutual funds compared with, 85
    - net asset value, 85-86
    - net issuance, 83f, 96-97, 97f, 220t
    - non-1940 Act (nonregistered), 86, 97f, 98f, 99f, 127, 218t, 219t, 220t
    - nonfinancial business assets, 38
    - number of funds, 87f, 218t, 219t
    - number of investment companies for, 52f
    - origination of, 87-88
    - overview, 82
    - pricing, 294, 294n11
    - primary markets, 88-89, 89f, 90, 93, 94
    - redemptions, 88, 89, 94f
    - registered, 86, 97f, 98f, 99f, 127, 218t, 219t, 220t
    - regulation of, 12, 293n8
    - secondary markets, 85, 89, 89f, 90, 91f, 93-96, 95f
    - sector equity, 218t, 219t, 220t
    - shareholder risk tolerance, 103, 103f
    - total net assets, 34f, 86, 86f, 87f, 96, 218t
    - trading, 92-96, 94f, 95f
    - transparency and disclosure, 84, 92, 292
    - trends, 46, 46f
  - exempt-interest dividends, 289
  - expense ratios, **308**. *See also* mutual fund expenses and fees
    - asset-based fees and, 132
    - asset-weighted average, 118n, 120, 121f, 126f, 136, 137f, 138
    - competition, 121
    - equity funds, 117f, 121f
    - ETFs, 127-129
    - mutual funds, 119f, 120-122, 120f, 121f, 124-127, 126f

## F

- factor, **308**
- fair value, **308**
- Federal Employees Retirement System (FERS), 37f, 169f
- federal funds rate, 61, 62, **308**
- federal government employee retirement plans, 168, 174
- Federal Reserve, 19, 59, 61, 62, 63, 80



fee-based advisers, 77, 78f  
 fees, asset-based, 127, 130, 132, 133. *See also* sales charge  
 financial advisers. *See* advisers  
 financial crisis of 2007–2009, 19, 45, 62, 71, 75  
 Financial Industry Regulatory Authority (FINRA), 279, 296, 297, **308**  
 financial institution assets, 268t, 269t  
 financial professionals. *See* advisers; investment professionals  
 financial services companies, 44, 189f  
 Financial Times Stock Exchange (FTSE), 63  
 529 plans, 60n, 156f, 199, 199f, 200f, 201f, **309**  
 fixed annuities, 101, 101f, 114, 114f  
 fixed-income investments, 190  
 fixed-income markets, 71  
 fixed-income securities, 14, 179, 180f, **309**  
 flexible portfolio funds, 75  
 floating-rate high-yield bond funds, 255t  
 follow-on offerings, 106, **309**  
 foreign bonds, 39, 40f  
 foreign securities. *See* *global/international entries*; *international entries*; *world entries*  
 foreign service retirement and disability fund, 169f  
 forward pricing, 85, 295, **309**  
 457 plans, **309**  
   assets, 169f, 174, 175f  
   as first mutual fund purchase, 148f  
   household financial assets in, 37f  
   household mutual fund assets in, 156f  
   index funds in, 198f  
   lifestyle funds in, 197f  
   mutual fund assets in, 194, 195f  
   purchase sources, 151f, 152f, 155f  
   as retirement resource, 167f  
   target date funds in, 197f, 198f  
 401(k) plans, **309**  
   account balances, 183, 183f  
   asset allocation, 179, 180f  
   assets, 169f, 174, 175f  
   CITs in, 79, 79f  
   employer contributions to, 176, 176f, 177  
   as first mutual fund purchase, 148f  
   household financial assets in, 37f  
   household mutual fund assets in, 156f  
   index funds in, 198f  
   investment options, 177, 178f  
   IRA rollovers from, 150  
   lifestyle funds in, 197f  
   loan activity, 184  
   mutual fund assets in, 150, 194, 195f  
   plan design, 176–177, 176f  
   purchase sources, 151f, 152f, 155f  
   as retirement resource, 167f  
   services and expenses, 136, 137f, 138, 139f  
   target date funds in, 182, 182f, 197f, 198f  
 403(b) plans, **309**  
   assets, 169f, 174, 175f  
   as first mutual fund purchase, 148f  
   household financial assets in, 37f  
   household mutual fund assets in, 156f  
   index funds in, 198f  
   investment options, 177  
   lifestyle funds in, 197f  
   mutual fund assets in, 194, 195f  
   plan design, 176–177  
   purchase sources, 151f, 152f, 155f  
   as retirement resource, 167f  
   target date funds in, 197f, 198f  
 France, 63. *See also* Europe  
 front-end load, 130, 132, 133f, 134f, **309**  
 FTSE (Financial Times Stock Exchange), 63  
 full-service brokers, 77, 78f, **309**  
 fund board. *See* boards of directors  
 fund complexes, 47–48, 47f, **309**  
 funds of funds, 74n, 217t, 218t, 219t, 220t, 256t, 257t, **309**  
 futures ETFs, 84, 99n

**G**  
 GDP (gross domestic product), 26, 27f, 28, 62, 63  
 Generation X, 143f, 144–145, 144f, 145f, 153, 153f, 158, 158f  
 Germany, 63. *See also* Europe  
 GICs (guaranteed investment contracts), 177, 178f, 179, 180f  
 GI Generation, 143f, 144–145, 144f, 145f, 153, 153f, 158, 158f  
 global economic climate, 62–63  
 global/international bond closed-end funds, 108f, 109f, 216t, 217t  
 global/international equity closed-end funds, 108f, 109f, 216t, 217t  
 global/international equity ETFs, 97, 98, 98f, 100, 218t, 19t, 220t  
 global/international index funds, 124  
 government agency securities, 39, 40f, 247t, 248t  
 government bond funds  
   exchange redemptions, 232t  
   exchange sales, 230t  
   expense ratios, 123f  
   liquidity ratios, 223t  
   net new cash flow, 228t  
   new sales, 229t  
   number of, 213t  
   number of share classes, 215t  
   regular redemptions, 231t  
   total net assets, 211t  
 government bond portfolio holdings, 234t, 235t  
 government bonds, 234t, 235t, **309**  
 government money market funds, 242t, 243t, 244t, 247t, 280, **310**  
 government securities, **310**

gross domestic product (GDP), 26, 27f, 28, 62, 63  
growth funds, 123, 123f, 259t, 260t  
guaranteed investment contract (GIC), 177, 178f, 179, 180f  
guaranteed/protected funds, 13f

## H

hedge funds, 38, **310**

high-yield bond ETFs, 90, 94f, 95–96, 95f

high-yield bond funds

exchange redemptions, 232t

exchange sales, 230t

expense ratios, 123f

floating-rate, 255t

liquidity ratios, 223t

net new cash flow, 70, 228t

new sales, 229t

number of, 213t

number of share classes, 215t

regular redemptions, 231t

total net assets, 211t

home price index, 62

home purchase, repair, or remodeling

IRA withdrawals for, 193, 193f

as savings goal, 56, 149f, 164

homeownership as retirement resource, 164, 164f, 167, 168

household financial assets. *See also* demographics;

household IRAs; household mutual fund accounts;

individual investors; retirement market assets

asset location of, 28, 29f, 36, 37f, 77, 78f

capital gains distributions, 291, 291f

closed-end funds as, 114–115, 114f, 115f

employer-sponsored retirement plans, 150–156

ETFs, 101–103, 101f, 102f, 103f

investment company holdings, 36, 37f

long-term mutual funds as, 64

purchase sources, 150–152, 151f, 152f

retirement resource pyramid and, 164–165, 164f

savings goals of investors, 56, 58, 64, 149, 149f, 165, 165f

taxable accounts, 287, 287f, 290f, 291f

tax-deferred accounts, 287, 287f, 290f, 291f

tax-exempt accounts, 287, 287f

trends, 62

household IRAs

age and income demographics, 190

asset location, 150–156

IRA rollover decision research, 188, 189f

IRA withdrawals, 193, 193f

in near-retiree households, 167, 167f

household mutual fund accounts

asset location, 150–156

first purchases, 148, 148f

owner characteristics, 142, 143f

owner confidence in funds, 160, 160f

owner risk tolerance, 159, 159f

purchase sources, 151, 151f, 152f

household mutual fund accounts (*continued*)

retail investors, 60, 60f, 64

as share of financial assets, 56

as share of US mutual fund total net assets, 60, 60f  
by tax status, 287, 287f

hybrid ETFs, 97, 98, 98f, 99f, 218t, 219t, 220t

hybrid funds, **310**. *See also* target date funds

alternative strategies, 253t

assets, 35, 35f

capital gains paid and reinvested, 237t

closed-end fund holder ownership of, 114f

DC plan assets in, 270t

dividends paid and reinvested, 236t

ETF-owning households holding, 101f

exchange redemptions, 232t

exchange sales, 230t

expense ratios, 118, 119f, 123f

individual accounts, 267t

institutional accounts, 267t, 268t

IRA assets held in, 191f, 271t

lifestyle funds, 196, 197f, 198, 198f, 263t, 264t

liquidity, 222t, 223t

in long-term mutual funds, 60n

net new cash flow, 61f, 74–75, 74f, 224t, 226t, 228t

new sales, 226t, 229t

number of funds, 212t, 213t

number of share classes, 214t, 215t

redemptions, 226t, 231t, 233t

retirement assets in, 150, 194, 194f, 195f, 196

shareholder risk tolerance for, 159, 159f

total net assets, 210t, 211t, 267t

total portfolio, common stock, and other securities:

purchases, sales, net purchases, 240t

in US mutual fund total net assets, 58, 58f

variable annuity, 265t, 266t

hybrid funds of funds, 256t, 257t

hybrid index funds. *See* index hybrid funds

## I

IIV (intraday indicative value), 92, **311**

income demographics

closed-end fund owners, 115, 115f

education savers, 200, 201f

ETF owners, 102, 102f

households owning IRAs, 190

internet use and, 161f

mutual fund owners, 143f, 144–147, 144f, 145f, 146f, 147f

near-retiree households, 167f

retiree income and, 171–172, 172f

retirement savings and, 164–166, 165f, 166f

income distributions, 110, 110f, 288

independent directors, 296, **310**

independent financial planners, 151, 151f, 152f

independent fund advisers, 44, 44f

independent public accountants, 283, 283f, **310**

index, **310**

index-based ETFs (index ETFs)

- characteristics of, 84
- expense ratios, 127-129
- net issuance, 220t
- number of funds, 219t
- origination of, 87, 88
- trends, 75, 77, 77f

index bond ETFs, 128, 128f, 129, 129f

index bond funds

- net new cash flow, 76f, 250t
- number of funds, 251t
- number of share classes, 252t
- total net assets, 125f, 249t

index domestic equity funds, 43, 43f, 249t

index equity ETFs, 128, 128f, 129f

index equity funds

- in DC plans, 198n
- domestic, 76f, 77, 249t
- expense ratios, 122-129, 123f
- net new cash flow, 250t
- number of funds, 251t
- number of share classes, 252t
- total net assets, 249t
- world, 249t, 250t, 251t, 252t

index funds, **310**. *See also* index bond funds; index equity funds; index hybrid funds; index-based ETFs

- asset share at largest complexes, 48
- bond, 249t
- DC plan assets in, 198, 198f
- demand for, 41, 61
- expense ratios, 124-129
- as 401(k) investment options, 178f
- net new cash flow, 75, 76f
- number of, 125f
- retirement assets in, 196, 198, 198f
- total net assets, 124, 125f, 249t
- trends, 41

index hybrid ETFs, 129f

index hybrid funds

- net new cash flow, 76f, 250t
- number of funds, 251t
- number of share classes, 252t
- total net assets, 125f, 249t

index world equity funds, 76f, 249t, 250t, 251t, 252t

individual investors. *See also* demographics; mutual fund shareholders

- bond funds held by, 267t
- equity funds held by, 267t
- ETFs held by, 93-96
- hybrid funds held by, 267t
- mutual fund ownership by, 142, 142f, 143f
- non-US, tax requirements for, 288
- regulated open-end funds held by, 13-14, 13f
- risk tolerance of, 103, 103f, 158-159, 158f, 159f

individual investors (*continued*)

- savings goals, 149
- shareholder sentiment, 157, 157f
- total net assets held by, 267t

individual retirement accounts (IRAs), **310**. *See also* Roth IRAs; SAR-SEP IRAs; SEP IRAs; SIMPLE IRAs

- age and income demographics, 190
- asset allocation, 190, 191f
- asset location, 150-156, 195-196, 195f
- assets, 163f, 168, 169f, 170, 170f, 184, 185f
- bonds and bond funds in, 184, 185f, 191f, 271t
- catch-up contributions, 187
- characteristics of, 184
- closed-end fund owners and, 115f
- closed-end funds in, 184, 185f
- as component of US retirement assets, 164, 164f, 167, 167f
- contributions to, 187-188, 189f, 190
- distributions, 192-193, 192f, 193f
- equities and equity funds in, 190, 191f, 271t
- estimated net new cash flow, 271t
- ETF-owning households and, 102, 102f
- household assets in, 36, 37f, 156, 156f
- investor demographics, 186-188, 186f
- lifestyle funds in, 196, 197f
- money market funds in, 191f, 271t
- mutual funds in, 60n, 150-156, 184, 185f, 194-198, 194f
- in near-retiree households, 167, 167f
- net new cash flow, 65
- retiree income and, 172-173, 172f
- as retirement resource, 164f, 167, 167f
- rollovers into, 150, 187-188, 187f, 189f
- target date funds in, 197f
- total net assets, 271t

inflation, 67

inflation-protected mutual funds, 258t

initial public offerings (IPOs), 106

institutional funds, 12

institutional investors, **310**

- bond funds held by, 267t, 268t
- equity funds held by, 38, 268t
- ETFs held by, 96
- hybrid funds held by, 267t, 268t
- mutual fund holdings by, 60, 60f
- total net assets held by, 267t, 268t, 269t
- types, 268t, 269t

institutional money market funds, **310**

- municipal, 280
- net new cash flow, 244t
- prime, 280
- taxable, 269t
- total net assets, 243t, 267t, 268t, 269t

institutional no-load share classes, 120, 134f, 135f

insurance companies, 38, 44, 44f, 151, 151f, 152f

interest income, bond fund redemption requests and, 71

interest rates, 19, 22, 25, 63, 69–70, 73, 258n2. *See also* economic climate; federal funds rate

intermediaries, 44, 44f

Internal Revenue Code, 286

international bond closed-end funds, 108f, 109f, 216t, 217t

international bond funds, 178f. *See also* world bond funds

international equity closed-end funds, 108f, 109f, 216t, 217t

international equity ETFs, 94f, 98f, 99f, 100, 218t, 219t, 220t

international equity funds. *See* world equity funds

international index equity funds. *See* world index equity funds

international index funds, 124

International Investment Funds Association (IIFA), 12, 12n, 273t, 275t, 277t

international stock market performance, 15f, 63, 97

internet use by shareholders, 161, 161f

intraday indicative value (IIV), 92, **311**

investment advisers, 283, 283f, **311**

Investment Advisers Act of 1940, 279

investment companies, **311**. *See also* closed-end funds; exchange-traded funds; *mutual fund entries*; regulation of investment companies; unit investment trusts

- assets, 33f, 34–35
- definition, 34n
- employment data, 53–55, 53f, 54f, 55f
- financial markets, role of, 39, 40f, 41
- history, 278–279, 302–303
- household ownership of, 36, 36f, 37f
- index funds as share of market, 41, 42f, 43, 43f
- intermediary types, 44, 44f
- nonfinancial business assets in, 38, 38f
- number of, 47–48, 47f, 52–53, 52f
- total net assets by type, 34f, 35f
- types, 280–281

Investment Company Act of 1940

- ETF authorization by, 85, 86, 87f, 97f, 98f, 99f, 127, 218t, 219t, 220t
- regulatory authority of, 78, 279, 280, 284, 295, 296, 298, 299
- 12b-1 fees, 130

investment grade bond funds

- exchange redemptions, 232t
- exchange sales, 230t
- expense ratios, 123f
- liquidity ratios, 223t
- net new cash flow, 228t
- new sales, 229t
- number of funds, 213t
- number of share classes, 215t
- redemptions, 231t
- total net assets, 211t

investment objectives, 123, 123f, 129, 129f, 211t, 213t, **311**

investment professionals. *See also* advisers

- asset-based fee structure, 127, 130, 132, 133
- ETF purchases through, 127
- as mutual fund purchase sources, 120, 125, 132, 151–152, 151f, 152f, 154f
- rollover decision research and, 188, 189f

investment risk, 103, 103f. *See also* risk tolerance

investors. *See also* individual investors; institutional investors

- confidence of, 160, 160f, 278, 279
- sentiment of, 157, 157f, 279

IRA Investor Database, 187, 188, 190

IRAs. *See* individual retirement accounts

**J**

Japan, 14, 28, 63. *See also* Asia-Pacific region

**L**

labor market, 62

large-cap blend funds, 124

large-cap domestic equity ETFs, 98, 99f

large-cap mutual funds, 259t, 260t

level load, 118, 131, 133f, 134f, 135f, **311**

leverage, 111–113, 112f, 113f, 298–299

lifecycle funds. *See* target date funds

life insurance, 180f, 181f, 185f

lifestyle funds, 196, 197f, 198, 198f, 263t, 264t, **311**

limited liability partnerships, 281n

liquid alternative funds, 71

liquid asset portfolio holdings, 234t, 235t

liquidity, 72, 222t, 223t, 280, 294–295, 298, **311**

liquidity providers, 90, 91f, 91n

load (sales charge), 130–133, 133f, 134f, 135f, **314**

load funds, **311**

load share classes, 130–131

local government employee retirement plans, 168, 174

long-term bond funds

- taxable, 214t

long-term capital gains, 289, 291f

long-term interest rates, 19, 69, 70

long-term mutual funds, **311**. *See also* bond funds; equity funds; hybrid funds; *mutual fund entries*

- annual redemption rates, 233t
- capital gains paid and reinvested, 237t
- demand for, 46, 46f, 58
- dividends paid and reinvested, 236t
- exchange redemptions, 232t
- exchange sales, 230t
- gross sales, 134f
- household mutual fund assets in, 156f
- liquid assets, 222t
- liquidity ratios, 222t, 223t
- net new cash flow, 64–67, 224t, 228t
- new sales, 229t
- no-load share classes, 134f, 135f

- long-term mutual funds (*continued*)
  - number of funds, 212t
  - number of share classes, 214t
  - portfolio holdings and percentage of total net assets, 234t, 235t
  - redemptions, 231t, 233t
  - retirement assets in, 150
  - size of, in global capital markets, 31f
  - total net assets, 135f, 210t, 234t
  - total portfolio, common stock, and other securities:
    - purchases, sales, net purchases, 238t
  - in US mutual fund total net assets, 60f
  - worldwide net sales, 18, 18f
  - worldwide net sales by region, 25, 25f
- long-term US government bonds, 234t, 235t

## M

- management fees, 284, **311**
- margin purchases, 298
- market capitalization, 259t, 260t
- Maryland corporations, 281, 282, 282f
- Massachusetts business trusts, 281, 282f
- maturity, **311**
- mid-cap domestic equity ETFs, 99f
- mid-cap index funds, 124
- mid-cap mutual funds, 259t, 260t
- Millennial Generation
  - mutual fund-owning, 143f, 144-145, 144f, 145f, 153-154, 153f, 154, 154f
  - risk tolerance, 158, 158f
- monetary policies, global, 63
- money market, **312**
- money market deposit accounts (MMDAs), 80, 81f, 81n
- money market funds, **312**. *See also* institutional money market funds; taxable money market funds; tax-exempt money market funds
  - asset composition, 247t, 248t
  - assets, 12, 13f, 14, 35, 267t
  - characteristics of, 280
  - closed-end fund holder ownership of, 114f
  - commercial paper holdings, 40f
  - DC plan assets in, 270t
  - dividends paid and reinvested, 246t
  - ETF-owning households holding, 101f
  - exchange redemptions, 245t
  - exchange sales, 245t
  - expense ratios, 123f
    - as 401(k) investment options, 177, 178f, 179, 180f
  - government, 242t, 243t, 244t, 247t, 280
  - household mutual fund assets in, 156, 156f
  - individual accounts, 267t
  - IRA assets in, 191f, 271t
  - net new cash flow, 61f, 80, 80f, 81f, 244t, 245t
  - new sales, 245t
  - nonfinancial business assets in, 38, 38f

- money market funds (*continued*)
  - number of funds, 212t, 213t, 242t
  - number of share classes, 214t, 215t, 242t
  - prime, 41, 80, 80f, 81f, 242t, 243t, 244t
  - redemptions, 245t
    - as regulated funds, 12
  - regulation of, 293n7
  - retail, 243t, 244t, 269t, 280
  - retirement assets in, 150, 194, 194f, 195f, 196
  - shareholder risk tolerance for, 159, 159f
  - total net assets, 210t, 211t, 242t, 243t, 267t
  - in US mutual fund total net assets, 58, 58f, 60, 60f
  - variable annuity, 265t, 266t
  - worldwide net sales, 20-22, 21f
- money purchase plans, 175f
- Morningstar, 293, 301n
- multi-cap mutual funds, 259t, 260t
- multisector bond funds
  - alternative strategies, 253t
  - exchange redemptions, 232t
  - exchange sales, 230t
  - liquidity ratios, 223t
  - net new cash flow, 70, 228t
  - new sales, 229t
  - number of, 213t
  - number of share classes, 215t
  - regular redemptions, 231t
  - total net assets, 211t
- municipal bond closed-end funds, 108f, 109f, 216t, 217t
- municipal bond funds. *See also* national municipal bond funds; state municipal bond funds
  - closed-end fund assets, 106
  - demand for, 70, 70f
  - expense ratios, 123f
  - interest distributions, 289
  - net new cash flow, 70, 70f
  - number of funds, 212t
  - number of share classes, 214t
  - total net assets, 210t
- municipal bond portfolio holdings, 234t, 235t
- municipal bonds, 106, 234t, 235t
- municipal money market funds, 280
- municipal securities, 39, 40f, 247t, 248t
- mutual fund characteristics. *See also* mutual fund industry data; regulation of investment companies
  - bond fund inflows, 57f
  - definition and overview, 56
  - distribution types, 288
  - ETFs compared with, 85
  - pricing, 294-295
  - redeemable securities, 280, 294
  - tax features, 286-291, 287f
  - turnover rate, 68, 68f
  - valuation, 294-295

- mutual fund companies
  - characteristics of, 280-281
  - purchases directly from, 151, 152, 152f
- mutual fund expenses and fees. *See also specific classification, such as equity funds*
  - actively managed funds, 126, 126f
  - asset-based, 127, 130, 132, 133
  - asset-weighted vs. simple average, 118n, 120, 121f, 126f, 136, 137f, 138
  - back-end load, 131, 132, 133f, 134f
  - competition and, 121
  - decline in, 119f, 120-122, 120f, 124-127, 126f, 128, 128f
  - distribution charges, 118
  - economies of scale and, 121
  - expense ratios, 119f, 120-122, 120f, 121f, 124-127, 126f
  - fee structures, 130-131
  - 401(k) plans, 136, 137f, 138, 139f
  - front-end load, 130, 132, 133f, 134f
  - fund size and, 120, 120f
  - index funds, 124-129
  - institutional no-load share classes, 120, 134f, 135f
  - investment objectives and, 123, 123f, 129, 129f
  - level load, 118, 131, 133f, 134f, 135f
  - load fees, 116, 132-134
  - no-load shares, 120, 131, 132-133, 133f, 134f
  - ongoing expenses, 116, 118
  - shareholder views about, 121, 121f
  - trends, 118, 119f, 120-122, 120f, 121f, 122f, 123f, 12b-1 fees, 118, 130, 131, 132
- mutual fund industry data, 216t. *See also bond funds; equity funds; exchange-traded funds; hybrid funds; long-term mutual funds; money market funds; retirement mutual funds; worldwide regulated open-end funds*
  - asset composition, 211t, 213t
  - asset share at largest complexes, 47-48, 47f
  - assets worldwide, 13f
  - capital gains distributions, 110, 110f, 288, 291, 291f
  - dividend distributions, 236t, 246t, 288, 290, 290f
  - exchange redemptions, 209t
  - exchange sales, 209t
  - new sales, 209t
  - number of funds, 22, 22f, 208t, 212t, 274-275t
  - number of share classes, 208t, 214t, 215t
  - redemptions, 209t
  - research publications, xi-xiv
  - total net assets, 208t, 210t, 211t, 249t, 267t, 268t
  - total sales, 209t
  - worldwide net sales, 276-277t
  - worldwide number of funds, 274-275t
  - worldwide total net assets, 272-273t
- mutual funds, **312**. *See also household mutual fund accounts; investment companies; long-term mutual funds; mutual fund characteristics; mutual fund industry data; regulation of investment companies; retirement mutual funds*
  - asset location, 150-156
  - assets, 10, 13f, 23f, 24, 34f, 35, 35f
  - asset-weighted turnover rate, 68, 68f
  - bond funds, 69-73, 69f, 70f, 72f
  - commercial paper holdings by, 41
  - creation of, 284
  - demand for, 58-59
  - education savings role of, 199-200
  - entering and exiting industry, 48, 49f, 59, 59f
  - ETF investments by, 38
  - expense ratios, 122
    - as 401(k) investment options, 181f
  - history, 278-279, 302-303
  - household assets invested by adviser type, 78f
  - hybrid funds, 74-75, 74f
  - index funds, 75, 76f
    - as investment companies, 280
  - investor demand for, 58-59
  - investors in, 60, 60f
  - IRA assets in, 150-156, 184, 185f
  - largest inflows to, 57f
    - by market capitalization, 259t, 260t
  - mergers and liquidations, 48, 49f
  - money market funds, 80, 80f, 81f
  - net new cash flow, 61-67, 61f, 65f, 66f
  - number of investment companies for, 52f
  - organization of, 281-283, 282f, 283f
  - prime money market fund holdings, 41
  - purchase sources, 150-152, 151f, 152f
    - as regulated funds, 12
    - as retirement resource, 168
  - retirement savings role of, 194-198
  - securities held by, 40f
  - tax features of, 286-291
  - total net assets, 58, 58f
- mutual fund shareholders. *See also demographics; retirement account holders*
  - asset location of investments, 150-156
  - confidence of, 160, 160f, 278, 279
  - ETF ownership by, 101-103, 101f, 102f, 103f
  - first fund purchase by, 143f, 148, 148f
  - internet use by, 161, 161f
  - investor sentiment, 157, 157f
  - lower expenses, preferences for, 121, 121f
  - risk tolerance, 103, 103f, 158-159, 158f, 159f
  - savings goals of, 56, 58, 64, 149, 149f
  - taxable transactions by, 289
  - voting rights, 284

mutual fund trends. *See also* mutual fund expenses and fees  
adviser purchase recommendations, 78f  
assets, 34-35, 34f, 35f  
expenses and fees, 118, 119f, 120-122, 120f, 121f, 122f, 123f  
global economic and financial markets, 62-63  
index ETFs, 75, 77, 77f  
index funds, 41, 42f, 43, 43f  
investor demand for funds, 13-14, 13f, 26, 27f, 28, 58-59  
long-term funds, 46, 46f

## N

national municipal bond funds  
exchange redemptions, 232t  
exchange sales, 230t  
liquidity ratios, 223t  
net new cash flow, 228t  
new sales, 229t  
number of funds, 213t  
number of share classes, 215t  
redemptions, 231t  
total net assets, 211t

National Securities Clearing Corporation (NSCC), 90  
natural disasters, fund pricing disruptions due to, 295n13  
near-retiree households, 167n3, 167f  
net asset value (NAV), 94n, **312**  
for ETFs, 85, 88, 294n11  
for mutual funds, 280, 294-295  
for UITs, 50  
net investment income (NII), 288  
net new cash flow, 61f, 64-67, 65f, 66f, 72, 72f, 224t, 225t, **312**  
net share issuance, **312**  
no-load funds, 120, 131, 132-133, 133f, 134f, **312**  
non-1940 Act ETFs, 86, 97f, 98f, 99f, 127, 218t, 219t, 220t  
nonprofit organization assets, 268t, 269t  
non-target date mutual funds, 178f, 179, 180f, 190, 191f  
non-US fund advisers, 44, 44f  
non-US investors, US tax requirements for, 288

## O

officers, mutual fund, 282  
open-end funds. *See* worldwide regulated open-end funds  
open-end investment companies, 84, 281, **312**. *See also* *mutual fund entries*  
operating expenses, **312**

## P

passive management, 124. *See also* index funds  
PCAOB (Public Company Accounting Oversight Board), 297  
penny rounding, 280  
pension funds, 38, 43, 169f. *See also* defined benefit plans  
Pension Protection Act (PPA) of 2006, 73, 199  
pooled investing, 180f, 181f, 182, 278-279, **312**  
portfolio, **313**

portfolio leverage, 111, 111n, 113, 113f  
portfolio managers, **313**  
portfolio turnover rate, 68, 68f, 138, **313**  
PPA (Pension Protection Act) of 2006, 73, 199  
precious metals funds, 261t, 262t  
preferred stock, **313**  
as portfolio holdings, 234t, 235t  
premium calculation, closed-end funds and, 294n11  
pricing process, 294-295, 294n11  
primary markets, 88-89, 89f, 90, 93, 94, **313**  
prime money market funds, 41, 80, 80f, 81f, 242t, 243t, 244t, **313**  
principal underwriters, 283, 283f, 285, **313**  
private-sector retirement plans. *See* defined benefit plans; defined contribution plans  
profit-sharing plans, 175f  
prohibited transactions, 300  
prospectus, 279, 292, 292n, **313**. *See also* summary prospectus  
Public Company Accounting Oversight Board (PCAOB), 297

## R

real estate funds, 12, 13f  
real estate investments, 100, 101f, 114, 114f, 168  
redeem, **313**  
redeemable securities, 280, 294  
redemption price, **313**  
redemption requests, bond fund management of, 71-72  
registered investment advisers. *See* advisers  
registered investment companies, 32-55, **313**. *See also* regulation of investment companies; unit investment trusts  
registered market makers, 90, 91n  
regulated funds. *See* worldwide regulated open-end funds  
regulated investment companies (RICs), 286, 301, **314**  
regulation of investment companies  
advisers and, 297  
auditors, 297  
boards of directors, 296  
compliance programs, 297  
core principles, 292-300  
custody rules, 299  
diversification, 301  
ETFs, 12, 84, 293n8  
legislation, 279  
leverage limits, 298-299  
liquidity, 294-295  
money market funds, 12, 293n7  
oversight and accountability, 296, 297  
prohibited transactions, 300  
Sarbanes-Oxley Act, 297  
taxation and, 286-291, 287f, 290f, 291f  
transparency and disclosure, 292-293  
valuation, 294-295, 294n10  
reinvesting, IRA withdrawals for, 193, 193f

replacement rate, Social Security, 166, 166f, 172, 172f  
 repurchase agreements, 106, 247t, 248t, **314**  
 required minimum distribution (RMD), 192, 192f, **314**  
 research publications, xi-xiv  
 retail investors, **314**. *See also* household financial assets;  
     individual investors; retirement account holders  
 retail money market funds, 243t, 244t, 269t, 280, **314**  
 retail no-load share classes, 133f, 134f, 135f  
 retiree income, 172-173, 172f  
 retirement  
     IRA withdrawals and, 193  
     as savings goal, 56, 58, 64, 149, 149f, 165, 165f  
 retirement account holders  
     demographics, 115, 115f  
     investment goals of, 56, 58  
 retirement market assets  
     DC plans, 37f, 102, 163f, 174, 175f  
     employer-sponsored retirement plans, 37f  
     ETFs, 102, 102f  
     457 plans, 169f, 174, 175f  
     401(k) plans, 169f, 174, 175f, 176-181  
     403(b) plans, 169f, 174, 175f  
     IRAs, 102, 102f, 115f, 150-156, 163f, 184, 185f,  
         194-198, 194f  
     lifestyle funds, 196, 197f, 198, 198f  
     in mutual funds, 37f  
     retirement resource pyramid and, 164-168, 164f,  
         165f, 166f, 167f  
     target date funds, 190, 191f, 196, 197f, 198, 198f, 263t  
     total US, 169f  
     unfunded benefit plan liabilities and, 170, 170f  
 retirement mutual funds. *See also* employer-sponsored  
     retirement plans; individual retirement accounts;  
     mutual fund expenses and fees; retirement market  
     assets; *specific classification, such as* bond funds  
     asset location, 150-156  
     assets, 194-198  
     as first fund purchase, 148, 148f  
     household accounts, 36, 37f, 150-156  
     purchase sources, 150-152, 151f, 152f  
     “R” share classes, 133f, 134f  
     types used by investors, 195, 195f  
 retirement plans. *See also* defined benefit plans; defined  
     contribution plans; employer-sponsored  
     retirement plans; individual retirement accounts  
     as first mutual fund purchase, 148, 148f  
     research publications, xi-xii  
     sponsors offering CITs for, 79, 79f  
     unfunded pension liabilities, 170, 170f  
 retirement resource pyramid, 164-165, 164f  
 return of capital, 110, 110f  
 reverse repurchase agreements, 111, 113, 113f  
 RICs (regulated investment companies), 286, 301, **314**  
 rights offerings, 106, **314**  
 risk tolerance, 103, 103f, 158-159, 158f, 159f  
 RMD (required minimum distribution), 192, 192f, **314**  
 rollovers, 150, 187, 187f, 188, 189f, **314**  
 Roth IRAs, **314**  
     asset allocation, 190, 191f  
     asset location, 150-156  
     assets, 169f  
     catch-up contributions, 187  
     distributions, 192, 192f  
     index funds in, 198f  
     investors in, 186, 186f, 190  
     lifestyle funds in, 197f  
     mutual funds in, 150  
     near-retiree accounts, 167f  
     as retirement resource, 167f, 184  
     rollovers into, 187, 187f  
     target date funds in, 197f, 198f  
 “R” share classes, 133f, 134f  
 Russia, 63

**S**  
 SAIs (statements of additional information), 292  
 salary reduction simplified employee pensions. *See*  
     SAR-SEP IRAs  
 sales charge (load), 130-133, 133f, 134f, 135f, **314**  
 Sarbanes-Oxley Act, 297  
 SAR-SEP IRAs (salary reduction simplified employee  
     pensions), **315**  
     assets, 169f  
     as first mutual fund purchase, 148f  
     household mutual fund assets in, 156f  
     index funds in, 198f  
     investors in, 186, 186f  
     lifestyle funds in, 197f  
     mutual fund assets in, 195f  
     near-retiree accounts, 167f  
     purchase sources, 151f, 152f, 155f  
     as retirement resource, 167f, 184  
     target date funds in, 197f, 198f  
 savings goals of investors, 56, 58, 64, 149, 149f, 165, 165f  
 savings incentive match plan for employees. *See* SIMPLE IRAs  
 savings institutions, 151, 151f, 152f  
 secondary markets, **315**  
     for ETFs, 85, 89, 89f, 90, 91f, 93-96, 94f, 95  
     for UITs, 51  
 Section 529 plans, 60n, 156f, 199, 199f, 200f, 201f, **309**  
 sector equity ETFs, 218t, 219t, 220t  
 sector funds, 123, 123f, 124, 261t, 262t, **315**. *See also*  
     multisector bond funds  
 Securities Act of 1933, 86, 279, 284, 292n  
 Securities and Exchange Commission (SEC). *See also*  
     regulation of investment companies  
     affiliated transaction prohibitions, 300  
     custody rules, 299n  
     disclosure requirements, 288, 292, 293  
     ETF regulation by, 84, 127



Securities and Exchange Commission (SEC) (*continued*)  
 registration with, 284, 292–293  
 regulatory authority of, 279, 280  
 12b-1 fees, 130  
 valuation and liquidity requirements, 294–295

Securities Exchange Act of 1934, 279, 285

seed capital, 284, 285

selling short, 298

semiannual reports, 293

senior securities, 298

SEP IRAs (simplified employee pension plans), **315**  
 assets, 169f  
 as first mutual fund purchase, 148f  
 household mutual fund assets in, 156f  
 index funds in, 198f  
 investors in, 186, 186f  
 lifestyle funds in, 197f  
 mutual fund assets in, 195f  
 purchase sources, 151f, 152f, 155f  
 as retirement resource, 167f, 184  
 target date funds in, 197f, 198f

separate accounts, **315**

series trust funds, 46, **315**

service providers, 53, 283, 284–285

share classes, 120, 130–133, 133f, 134f, 208t, 242t, **315**

shareholder sentiment, 157, 157f, 279

shareholders. *See* mutual fund shareholders; retirement account holders

short positions, 298

short-term capital gains, 289, 291f

short-term funds. *See* money market funds

Silent Generation, 143f, 144–145, 144f, 145f, 153, 153f, 158, 158f

SIMPLE IRAs (savings incentive match plan for employees), **315**  
 assets, 169f  
 as first mutual fund purchase, 148f  
 household mutual fund assets in, 156f  
 index funds in, 198f  
 investors in, 186, 186f  
 lifestyle funds in, 197f  
 mutual fund assets in, 195f  
 near-retiree accounts, 167f  
 purchase sources, 151f, 152f, 155f  
 as retirement resource, 167f, 184  
 target date funds in, 197f, 198f

simplified employee pension plans. *See* SEP IRAs

Small Business Job Protection Act of 1996, 186f

small-cap equity ETFs, 99f

small-cap index funds, 124

small-cap mutual funds, 123, 259t, 260t

Social Security, 164–167, 164f, 166f, 171f, 172–173, 172f

South America, 63

S&P 500 index, 63, 66, 84, **315**

S&P 500 index funds, 124, 249t, 250t, 251t, 252t

sponsors, 45, 45f, 50, 53, 283f, 284, **315**

stable value funds, 179, 180f, **315**

state government employee retirement plans, 168, 174

statements of additional information (SAIs), 292

state municipal bond funds  
 exchange redemptions, 232t  
 exchange sales, 230t  
 liquidity ratios, 223t  
 net new cash flow, 228t  
 new sales, 229t  
 number of funds, 213t  
 number of share classes, 215t  
 redemptions, 231t  
 total net assets, 211t

statutory trusts, 281, 282

stock  
 common, 234t, 235t, 238t, 239t, 240t, 241t  
 company, 179, 180f, 181f  
 directly held, 101, 101f, 102, 102f, 114, 114f, 115f, 178f  
 IRA assets in, 184, 185f, 190, 191f  
 as portfolio holdings, 234t, 235t  
 preferred, 234t, 235t  
 as retirement resource, 168  
 returns on, 64  
 Roth IRA assets in, 190  
 short positions, 298

stock bonus plans, 175f

stock funds. *See* equity funds

stock market performance  
 equity fund correlation to, 64–67, 65f, 66f  
 ETF demand and, 97  
 index fund share, 43f  
 international, 15f, 63, 97  
 investment company assets and, 40, 40f  
 US stock markets, 15f, 63, 64–67  
 volatility and, 66  
 world equity funds and, 67

structural leverage, 111, 111f, 112, 112f

summary portfolio schedule, 293n6

summary prospectus, **316**

**T**

target date fund CITs, 79

target date funds, **316**  
 asset allocation and, 67  
 characteristics of, 67, 73, 74n, 182  
 exchange redemptions, 264t  
 exchange sales, 264t  
 expense ratios, 123f  
 as 401(k) investment options, 177, 178f, 179, 180f  
 IRA assets in, 190, 191f  
 market share, 182f

- target date funds (*continued*)
    - net new cash flow, 263t, 264t
    - new sales, 264t
    - number of funds, 263t
    - number of share classes, 263t
    - redemptions, 264t
    - retirement assets in, 190, 191f, 196, 197f, 198, 198f
    - total net assets, 263t
  - target risk (lifestyle) funds. *See* lifestyle funds
  - taxable bond closed-end funds, 108f, 109f, 216t, 217t
  - taxable bond funds, 70, 70f, 210t, 212t
  - taxable bond trusts, 50
  - taxable debt unit investment trusts, 51f, 221t
  - taxable government money market funds, 242t, 243t, 244t, 247t
  - taxable income reduction, as savings goal, 149
  - taxable long-term bond mutual funds, 214t
  - taxable money market funds
    - asset composition, 247t
    - dividends paid and reinvested, 246t
    - government, 242t
    - institutional, 243t, 244t, 267t, 268t, 269t
    - net new cash flow, 244t
    - number of funds, 212t, 213t, 242t
    - number of share classes, 214t, 215t, 242t
    - prime, 242t
    - total net assets, 210t, 211t, 242t, 243t, 269t
  - taxable nonhousehold accounts, 287f, 290f, 291f
  - taxable prime money market funds, 242t
  - tax-exempt bond funds, 289
  - tax-exempt money market funds
    - dividend distributions, 289
    - dividends paid and reinvested, 246t
    - institutional, 243t, 244t, 267t, 268t, 269t
    - net new cash flow, 244t
    - number of funds, 212t, 213t, 242t
    - number of share classes, 214t, 215t, 242t
    - total net assets, 210t, 211t, 242t, 243t
  - tax-exempt mutual funds, 287f, 289
  - tax features of mutual funds, 286-291
    - assets by tax status, 287, 287f
    - capital gain or loss, 291
    - distributions, 290, 290f, 291f
    - distribution types, 288
    - diversification standards, 301
    - net investment income tax, 288
    - non-US investors, 288
    - RIC qualification, 286
    - taxable transactions, 289, 290f, 291f
  - tax-free bond trusts, 50
  - tax-free debt unit investment trusts, 51f, 221t
  - Tax Reform Act of 1986, 186f
  - Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, 199
  - Taxpayer Relief Act of 1997, 186, 186f
  - Taxpayer Relief Act of 2012, 199
  - T-bills (Treasury bills), 247t, 248t, **317**
  - tender offer, **316**
  - tender option bonds, 111, 113, 113f
  - thrift deposits, 167f, 185f
  - thrifts, 44, 44f
  - Thrift Savings Plans (TSPs), 37f, 169f, 174, 175f
  - TIPS mutual funds, 258t
  - total net assets, **316**
  - total return, **316**
  - total return equity funds
    - exchange redemptions, 232t
    - exchange sales, 230t
    - liquidity, 223t
    - net new cash flow, 228t
    - new sales, 229t
    - number of funds, 213t
    - number of share classes, 215t
    - redemptions, 231t
    - total net assets, 211t
  - traditional IRAs, **316**. *See also* individual retirement accounts (IRAs)
  - transfer agents, 283, 283f, 285, **316**
  - transparency, 92, 292-293
  - Treasury bills, 247t, 248t, **317**
  - Treasury inflation-protected mutual funds, 258t
  - Treasury securities, 39, 40f, 62, 247t, 248t, **317**
  - trustees, 282, **317**. *See also* directors
  - turnover rate
    - asset-weighted, 68, 68f
    - portfolio, **313**
  - 12b-1 fees, 118, 130, 131, 132, **317**
- ## U
- Undertakings for Collective Investment in Transferable Securities (UCITS), 12, 24
  - underwriters, 283, 283f, 285, 297, **317**
  - unemployment rate, 62
  - unfunded benefit plan liabilities, 170, 170f
  - unit investment trusts (UITs), **317**
    - characteristics of, 50-51, 243, 281
    - custody rules, 299n
    - diversification standards, 301
    - new deposits, 35, 221t
    - number of, 50, 52
    - number of investment companies for, 52f
    - number of trusts, 221t
    - regulation of, 292n4, 299n
    - total net assets, 34f, 51f, 221t
  - United Kingdom, 28, 63, 273t, 275t, 277t. *See also* Europe
  - US bond market, 71
  - US dollar performance, 14, 16-17, 16f, 67, 97
  - US fund expenses and fees. *See* mutual fund expenses and fees

US government agency issues, 39, 40f, 247t, 248t  
 US government bond portfolio holdings. *See* government bond funds; government bonds  
 US investment companies. *See* investment companies; regulation of investment companies  
 US Labor Department, 73  
 US mutual fund expenses and fees. *See* mutual fund expenses and fees  
 US mutual fund owner characteristics. *See* mutual fund shareholders  
 US mutual funds. *See* mutual funds  
 US retirement system, 164-170, 164f, 165f, 166f, 167f, 169f, 170f. *See also* defined contribution plans; individual retirement accounts; retirement resource pyramid; Social Security  
 US stock market. *See* stock market performance  
 US Treasury securities, 39, 40f, 62, 247t, 248t, **317**

## V

valuation of funds, 294-295. *See also* net asset value  
 value funds, 123f, 259t, 260t  
 variable annuities, **317**  
     ETF-owning households holding, 101  
     holdings by tax status, 287  
     household ownership of, 78f, 114, 114f, 156f  
     mutual fund assets in, 150  
     no-load share classes, 133f, 134f  
     in US mutual fund total net assets, 60n  
 variable annuity mutual funds  
     bond, 265t, 266t  
     equity, 265t, 266t  
     exchange redemptions, 266t  
     exchange sales, 266t  
     gross sales, 134f  
     hybrid, 265t, 266t  
     money market, 265t, 266t  
     net new cash flow, 265t, 266t  
     new sales, 266t  
     number of funds, 265t  
     redemptions, 266t  
     total net assets, 265t  
 VIX (Chicago Board Options Exchange Volatility Index), 66

## W

wirehouse, 78f1n, **317**  
 world bond funds  
     alternative strategies, 253t  
     exchange redemptions, 232t  
     exchange sales, 230t  
     expense ratios, 123f  
     liquidity ratios, 223t  
     net new cash flow, 70, 228t  
     new sales, 229t  
     number of funds, 213t  
     number of share classes, 215t  
     redemptions, 231t  
     total net assets, 211t  
 world equity funds  
     alternative strategies, 253t  
     assets, 35, 35f  
     DC plan assets in, 270t  
     entering and exiting industry, 59  
     exchange redemptions, 232t  
     exchange sales, 230t  
     expense ratios, 123, 123f  
     as 401(k) investment options, 177, 178f  
     IRA assets held in, 271t  
     liquidity ratios, 223t  
     net new cash flow, 66f, 67, 228t, 250t  
     new sales, 229t  
     number of funds, 212t, 213t, 251t  
     number of share classes, 214t, 215t, 252t  
     redemptions, 231t  
     retirement assets in, 195f  
     total net assets, 210t, 211t, 249t  
 world index equity funds, 249t, 250t, 251t, 252t  
 worldwide regulated open-end funds, **317**  
     assets, 10, 11f  
     exchange rates and, 16-17, 16f  
     factors influencing demand for, 26, 27f, 28  
     household ownership of, 28, 29f  
     investor demand for, 13-14, 13f  
     net sales, 276-277t  
     number of funds, 22, 22f, 274-275t  
     size of, in global capital markets, 30, 31f  
     total net assets, 13-14, 13f, 15f, 272-273t  
     total net assets and net sales by region, 23-25, 23f, 25f  
     types, 12  
     worldwide net sales, 18-22, 18f, 20f, 21f



1401 H Street, NW, Suite 1200  
Washington, DC 20005-2148  
202-326-5800  
[www.ici.org](http://www.ici.org)

110 Bishopsgate  
19th Floor, Suites 19-06 and 19-07  
London EC2N 4AY, United Kingdom  
+44 (0) 207 961 0830  
[www.iciglobal.org](http://www.iciglobal.org)

Level 19, Two Chinachem Central  
26 Des Voeux Road Central  
Central, Hong Kong  
+852 2168 0