

ICI RESEARCH REPORT

The IRA Investor Profile

ROTH IRA INVESTORS' ACTIVITY, 2010–2018

NOVEMBER 2021



The IRA Investor Database™

The Investment Company Institute maintains an account-level database on millions of individual retirement account (IRA) investors. The aim of this database is to increase public understanding of this important segment of the US retirement market by expanding on the existing household surveys and Internal Revenue Service (IRS) tax data on IRA investors. By tapping account-level records, research drawn from the database can provide important insights into IRA investor demographics, activities, and asset allocation decisions. The database is designed to shed light on key determinants of IRA contribution, conversion, rollover, and withdrawal activity, and the types of assets that investors hold in these accounts.

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.

Suggested citation: Holden, Sarah, and Daniel Schrass. 2021. "The IRA Investor Profile: Roth IRA Investors' Activity, 2010–2018." *ICI Research Report* (November). Available at www.ici.org/files/2021/21_rpt_ira_roth.pdf.

Copyright © 2021 by the Investment Company Institute. All rights reserved.

The IRA Investor Profile: Roth IRA Investors' Activity, 2010–2018

Contents

1 Executive Summary

- 2 Roth IRA Investors' Activities, 2010–2018
 - 3 Snapshot of Roth IRA Investors at Year-End 2018 Provides Additional Insight into Roth IRA Investors' Activities
 - 3 *New Roth IRAs Often Are Created by Contributions*
 - 3 *More Than Three in 10 Roth IRA Investors Make Contributions to Their Roth IRAs*
 - 3 *Roth IRA Conversion Activity Responds to Rule Changes*
 - 4 *Few Roth IRA Investors Have Rollovers*
 - 4 *Few Roth IRA Investors Take Withdrawals*
 - 4 *Roth IRA Balances Tend to Increase with Investor Age*
 - 4 *Equity Holdings Figure Prominently in Roth IRAs*
 - 5 *Roth IRA Investors Are Quite Different from Traditional IRA Investors*
-

11 Introduction

- 11 The Role of IRAs in US Retirement Planning
 - 12 Sources of IRA Data
 - 12 The IRA Investor Database™
 - 13 Research Agenda for This Report
-

15 CHAPTER 1: Following Roth IRA Investors over Time

- 15 Financial and Regulatory Developments
- 18 Changes in Roth IRA Assets
- 18 Changes in Consistent Individual Investors' Roth IRA Balances, 2010–2018
 - 20 *Contribution Activity for Consistent Roth IRA Investors, 2011–2018*
 - 23 *Conversion Activity for Consistent Roth IRA Investors, 2011–2018*
 - 24 *Withdrawal Activity for Consistent Roth IRA Investors, 2011–2018*
 - 25 *Equity Investing in Roth IRAs*
- 30 Changes in Consistent Individual Investors' Roth IRA Balances Between 2010 and 2018 by Investor Age

33	CHAPTER 2: Roth IRA Investors' Contribution Activity in 2018
33	Contributions Often Were the Source of New Roth IRAs in 2018
34	Contributions to Roth IRAs
36	Contributions to Roth IRAs in 2018 by Investor Age
37	<i>Roth IRA Contribution Amounts in 2018 by Investor Age</i>
39	<i>Roth IRA Investors' Contribution Amounts Varied in 2018</i>
40	<i>Older Roth IRA Contributors Were More Likely to Contribute at the Limit in 2018</i>
41	Persistence in Contribution Activity Among Roth IRA Investors from 2017 to 2018
42	<i>Contributions at the Limit Tend to Persist</i>

43	CHAPTER 3: Roth IRA Investors' Conversion and Rollover Activity in 2018
43	Roth IRA Conversion Activity
44	Roth IRA Conversion Activity in 2018 by Investor Age
46	Roth IRA Conversion Amounts in 2018 by Investor Age
47	Roth IRA Rollover Activity Is Rare
48	Conversions and Rollovers Tend to Have a Positive Impact on Roth IRA Balances

49	CHAPTER 4: Roth IRA Investors' Withdrawal Activity in 2018
49	Roth IRA Withdrawal Activity
50	Roth IRA Withdrawal Activity in 2018 by Investor Age
52	Roth IRA Withdrawal Amounts in 2018 by Investor Age
53	Roth IRA Withdrawal Activity in 2018 by Age and Account Balance

55	CHAPTER 5: Roth IRA Investors' Balances at Year-End 2018
55	Roth IRA Balances in 2018 by Investor Age
56	<i>Distribution of Roth IRA Balances by Size in 2018</i>

59	CHAPTER 6: Snapshots of Investments in Roth IRAs at Year-End 2010 and Year-End 2018
59	Investments in Roth IRAs in 2018 by Investor Age
63	Snapshots of Allocation to Equity Holdings Between 2010 and 2018

67	Appendix
67	Role of IRAs in US Household Balance Sheets
68	The IRA Investor Database Contains a Comprehensive Cross Section of IRA Investors
70	Contributions Often Were the Source of New Roth IRAs in 2018
72	Exposure to Equity Holdings Among Roth IRA Investors by Account Size

77	Notes
-----------	--------------

83	References
-----------	-------------------

Figures

The following, unless otherwise specified, apply to all data in this report: components may not add to the totals presented because of rounding.

Executive Summary

- 5 FIGURE E.1 Roth IRA Investors Are Younger Than Traditional IRA Investors
- 6 FIGURE E.2 New Roth IRAs Often Are Opened with Contributions; New Traditional IRAs Often Are Opened with Rollovers
- 7 FIGURE E.3 Roth IRA Investors Rarely Take Withdrawals; Traditional IRA Investors Are Heavily Affected by RMDs
- 8 FIGURE E.4 Roth IRA Assets Have a Higher Allocation to Equities
- 9 FIGURE E.5 Roth IRA Investors Have Higher Concentration in Equity Holdings

CHAPTER 1: Following Roth IRA Investors over Time

- 16 FIGURE 1.1 Financial Events and Changing Rules Surrounding Roth IRAs
 - 17 FIGURE 1.2 Roth IRA Assets and Flows
 - 19 FIGURE 1.3 Domestic Stock and Bond Market Total Return Indexes
 - 21 FIGURE 1.4 Factors Influencing Changes in Consistent Individual Investors' Roth IRA Balances
 - 22 FIGURE 1.5 Contribution Activity for Consistent Roth IRA Investors
 - 25 FIGURE 1.6 Withdrawal Activity for Consistent Roth IRA Investors
 - 26 FIGURE 1.7 Equity Holdings Account for Majority of Assets in Roth IRAs
 - 28 FIGURE 1.8 Changes in Concentration of Consistent Roth IRA Investors' Equity Holdings
 - 29 FIGURE 1.9 Changes in Zero Allocation to Equity Holdings Among Consistent Roth IRA Investors
 - 30 FIGURE 1.10 Changes in 100 Percent Allocation to Equity Holdings Among Consistent Roth IRA Investors
 - 31 FIGURE 1.11 Roth IRA Balances Among Consistent Roth IRA Investors
 - 32 FIGURE 1.12 Roth IRA Balances Among Consistent Roth IRA Investors by Investor Age
-

CHAPTER 2: Roth IRA Investors' Contribution Activity in 2018

- 34 FIGURE 2.1 Paths to Roth IRA Ownership
- 35 FIGURE 2.2 Roth IRA Contribution Rates
- 36 FIGURE 2.3 Contribution Activity of Roth IRA Investors by Investor Age
- 37 FIGURE 2.4 Roth IRA Contribution Amounts by Investor Age
- 38 FIGURE 2.5 Traditional and Roth IRA Contribution Limits Set by the Internal Revenue Code
- 39 FIGURE 2.6 Four in 10 Roth IRA Contributors Contributed at the Limit in 2018
- 40 FIGURE 2.7 Older Roth IRA Contributors Were More Likely to Contribute at the Limit
- 41 FIGURE 2.8 Most Roth IRA Investors at the Limit in Tax Year 2017 Continued to Contribute at the Limit in Tax Year 2018

CHAPTER 3: Roth IRA Investors' Conversion and Rollover Activity in 2018

- 44 FIGURE 3.1 Roth IRA Investors' Conversion Activity Responds to Tax Law Changes
- 45 FIGURE 3.2 Conversion Activity of Roth IRA Investors by Investor Age
- 46 FIGURE 3.3 Roth IRA Investors with Conversions by Investor Age
- 47 FIGURE 3.4 Very Few Roth IRA Investors Have Rollovers
- 48 FIGURE 3.5 Recent Conversions and Rollovers Provide a Boost to Roth IRA Balances

CHAPTER 4: Roth IRA Investors' Withdrawal Activity in 2018

- 50 FIGURE 4.1 Withdrawal Activity of Roth IRA Investors
- 51 FIGURE 4.2 Withdrawal Activity of Roth IRA Investors by Investor Age
- 52 FIGURE 4.3 Roth IRA Withdrawals by Investor Age
- 53 FIGURE 4.4 Roth IRA Withdrawal Activity by Investor Age and Account Size
- 54 FIGURE 4.5 Median Withdrawal Ratio by Roth IRA Investor Age and Account Size

CHAPTER 5: Roth IRA Investors' Balances at Year-End 2018

- 56 FIGURE 5.1 Roth IRA Balances Tended to Increase with Investor Age
 - 57 FIGURE 5.2 Roth IRA Balances by Investor Age
-

CHAPTER 6: Snapshots of Investments in Roth IRAs at Year-End 2010 and Year-End 2018

- 60 FIGURE 6.1 Equity Holdings Figure Prominently in Roth IRA Investments
- 61 FIGURE 6.2 Investments in Roth IRAs by Investor Age
- 62 FIGURE 6.3 Number of Target Date Funds Owned by Roth IRA Investors
- 64 FIGURE 6.4 Share of Roth IRA Balances Allocated to Equity Holdings Has Increased Slightly Since 2010
- 65 FIGURE 6.5 Exposure to Equity Holdings Among Roth IRA Investors

Appendix

- 68 FIGURE A.1 Role of IRAs in US Household Balance Sheets
 - 69 FIGURE A.2 The IRA Investor Database Covers All IRA Types
 - 70 FIGURE A.3 IRA Investors Represent a Wide Cross Section of Age Groups
 - 71 FIGURE A.4 Sources of New Roth IRAs by Investor Age
 - 73 FIGURE A.5 Exposure to Equity Holdings Among Roth IRA Investors by Account Size
 - 75 FIGURE A.6 Investments in Roth IRAs by Broad Investor Age Group
-

The IRA Investor Profile: Roth IRA Investors' Activity, 2010–2018

Sarah Holden, ICI senior director of retirement and investor research, and Daniel Schrass, ICI economist, prepared this report.

Executive Summary

First available in 1998, Roth individual retirement accounts (IRAs) had accumulated \$1.2 trillion in assets by year-end 2020. Congress created Roth IRAs to provide a contributory retirement savings vehicle on an after-tax (nondeductible) basis with qualified withdrawals distributed tax-free. Individuals also may invest in Roth IRAs through conversions—in a conversion, taxes are paid on assets in a non-Roth IRA that move into a Roth IRA. In 2010, income limits on conversion activity were lifted (with special tax treatment of conversions made in 2010 as well). Since 2006, direct rollovers from designated Roth accounts in employer-sponsored retirement plans to Roth IRAs have been permitted, and since 2008, rollovers from non-Roth employer-sponsored retirement plan accounts also have been allowed. Roth IRAs are managed by individuals, and policymakers are interested in how Roth IRA investors manage their Roth IRAs over time.

Analysis of the contribution, conversion, rollover, withdrawal, and asset allocation activity of 2.2 million consistent Roth IRA investors—those with accounts in every year from 2010 through 2018—can show how consistent Roth IRA investors fared in the wake of the global financial crisis of 2007–2009. In addition, analysis of a snapshot of 4.1 million Roth IRA investors in 2018 can provide more detailed insight into how individuals manage their Roth IRAs.

Roth IRA Investors' Activities, 2010–2018

Contributions, Conversions, Rollovers, and Withdrawals. During the economic recovery immediately following the global financial crisis of 2007–2009, stock values generally increased and unemployment rates decreased. Even though contribution rates among consistent Roth IRA investors aged 26 or older in 2018 declined in each year between tax year 2011 and tax year 2018, about 45 percent made at least one contribution in that eight-year period. Among those contributing during that eight-year period, 83 percent contributed in multiple years. Conversion activity edged up in response to the change in eligibility in 2010; however, few Roth IRA investors have conversions in any year.¹ Rollover activity among Roth IRA investors is extremely rare. Withdrawal rates rose slightly between 2011 and 2018, but still only a very small fraction of Roth IRA investors took money out of their Roth IRAs.

Asset Allocation. From 2010 to 2018, Roth IRA investors' allocation to equity holdings—equities, equity funds, and the equity portion of balanced funds—generally was little changed. For example, consistent Roth IRA investors aged 26 to 59 in 2018 held 85 percent of their Roth IRA assets in equity holdings at year-end 2010, and 86 percent of their Roth IRA assets were invested in equity holdings at year-end 2018. IRA investors in their sixties at year-end 2018 had the same allocation to equities (77 percent) as at year-end 2010, while allocation to equities among Roth IRA investors in their seventies in 2018 was 76 percent at year-end 2018 compared with 72 percent at year-end 2010. Between year-end 2010 and year-end 2018, few Roth IRA investors changed to or from equity concentrations of zero or 100 percent of their Roth IRA balances. Fifty-one percent of consistent Roth IRA investors had their Roth IRA balances entirely invested in equity holdings at year-end 2010, and that share edged down between year-end 2010 and year-end 2018, to 49 percent.

Account Balances. The movement of Roth IRA balances reflected the impact of investment returns, which relate to asset allocations; investors' contribution, conversion, rollover, and withdrawal activity; and the rules governing Roth IRAs. Consistent Roth IRA investors in all age groups saw their account balances increase on average between year-end 2010 and year-end 2018. Traditional IRA investors, beginning at age 70½, become ineligible to make contributions and typically must begin to take withdrawals.² In contrast, Roth IRA investors of the same age may contribute to their Roth IRAs and typically are not subject to required minimum distributions (RMDs).³

Snapshot of Roth IRA Investors at Year-End 2018 Provides Additional Insight into Roth IRA Investors' Activities

It also is possible to analyze a snapshot of all Roth IRA investors in the database in any given year. This report primarily focuses on the 4.1 million Roth IRA investors in 2018.

New Roth IRAs Often Are Created by Contributions

Investors open Roth IRAs primarily through contributions. In 2018, more than three-quarters of Roth IRAs were opened exclusively with contributions.

More Than Three in 10 Roth IRA Investors Make Contributions to Their Roth IRAs

In any given year, more than three in 10 Roth IRA investors contribute to their Roth IRAs. On average, in recent years, estimates suggest that about \$21 billion of contributions flowed into Roth IRAs per year. In tax year 2018, 34.1 percent of Roth IRA investors aged 18 or older contributed to their Roth IRAs, and four in 10 of these contributors did so at the legal limit. Roth IRA investors display persistence in their contribution activity from year to year. For example, seven in 10 Roth IRA investors who contributed at the limit in tax year 2017 did so again in tax year 2018.

Roth IRA Conversion Activity Responds to Rule Changes

Few Roth IRA investors made conversions into their Roth IRAs, but conversion activity picked up in 2010 when income limits on conversions were lifted and taxpayers could choose to pay the taxes on 2010 conversions in 2011 and 2012. In 2010, more than 5 percent of Roth IRA investors made conversions, up from less than 2 percent in recent prior years. Between 2011 and 2018, Roth conversion activity declined again, to about 3 percent—during this time, there were no income restrictions on conversions, but Roth investors no longer had the special tax payment option. Roth IRAs with recent conversions tend to have larger balances than those without conversions, particularly among older Roth IRA investors.

Few Roth IRA Investors Have Rollovers

In any given year, fewer than 3 percent of Roth IRA investors made rollovers.

Few Roth IRA Investors Take Withdrawals

Withdrawals are rare among Roth IRA investors—only about 4 percent of Roth IRA investors took withdrawals in 2018. Unlike traditional IRAs, Roth IRAs have a five-year holding period but do not require distributions to start after the investor turns 70½.⁴ Similar to traditional IRAs, withdrawals taken from Roth IRAs before the investor reaches age 59½ may incur a penalty, unless an exception applies. Only about 3 percent of Roth IRA investors younger than 60 took withdrawals in 2018, and only about 7 percent of Roth IRA investors aged 60 or older took withdrawals.

Roth IRA Balances Tend to Increase with Investor Age

Roth IRA balances tended to increase with investor age and vary within investor age groups in 2018. At year-end 2018, 57.2 percent of Roth IRA investors aged 18 to 24 had balances less than \$5,000 compared with only 8.6 percent of Roth IRA investors aged 75 or older.

Equity Holdings Figure Prominently in Roth IRAs

Roth IRAs hold a range of investments, with the largest share of Roth IRA assets invested in equities and equity funds, both in aggregate and across investor age groups. The pattern of investment holdings in Roth IRAs varies with investor age, typically as expected across the life cycle. For the most part, younger Roth IRA investors had a higher proportion of their accounts invested in equity holdings—equities, equity funds, and the equity portion of balanced funds—than did older investors. On average, Roth IRA investors younger than 60 had more than 80 percent of their Roth IRAs invested in equity holdings, while Roth IRA investors aged 60 or older had about 76 percent of their Roth IRAs invested in equity holdings.

Roth IRA Investors Are Quite Different from Traditional IRA Investors

Roth IRA investors tend to be younger than traditional IRA investors. At year-end 2018, 33 percent of Roth IRA investors were younger than 40, compared with 16 percent of traditional IRA investors (Figure E.1). Only 26 percent of Roth IRA investors were 60 or older, compared with 44 percent of traditional IRA investors. This younger age distribution reflects, in part, the rules governing access to Roth IRAs, including income limits on contributions and (until 2010) on conversions, as well as the historically limited scope for rollover activity.

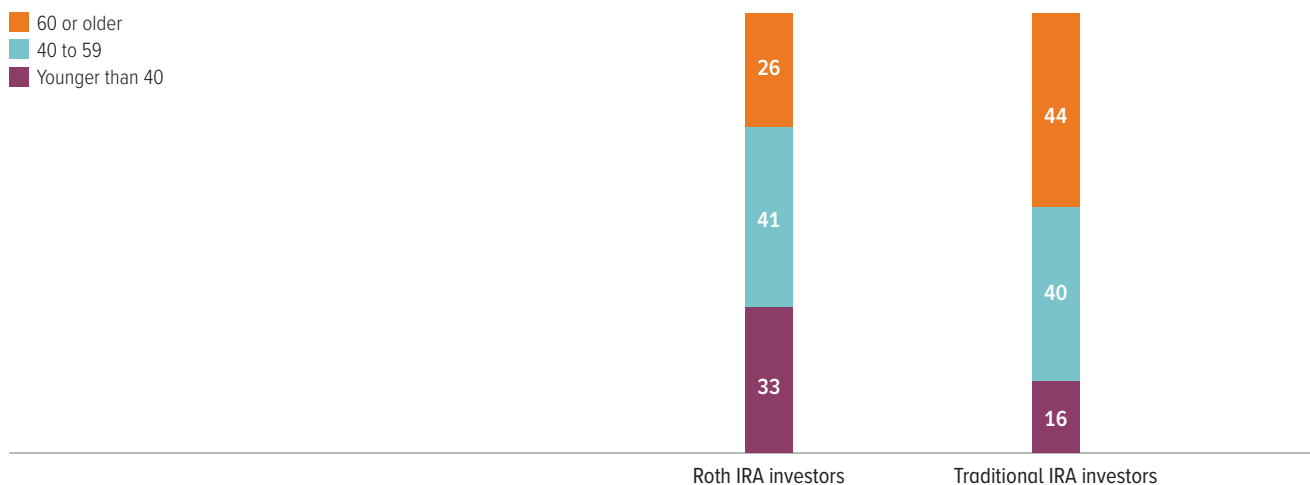
FIGURE E.1

Roth IRA Investors Are Younger Than Traditional IRA Investors

Percentage of IRA investors by type of IRA, year-end 2018

Age of IRA investor

- 60 or older
- 40 to 59
- Younger than 40



Note: The samples are 4.1 million Roth IRA investors aged 18 or older at year-end 2018 and 6.3 million traditional IRA investors aged 18 or older at year-end 2018.

Source: The IRA Investor Database™

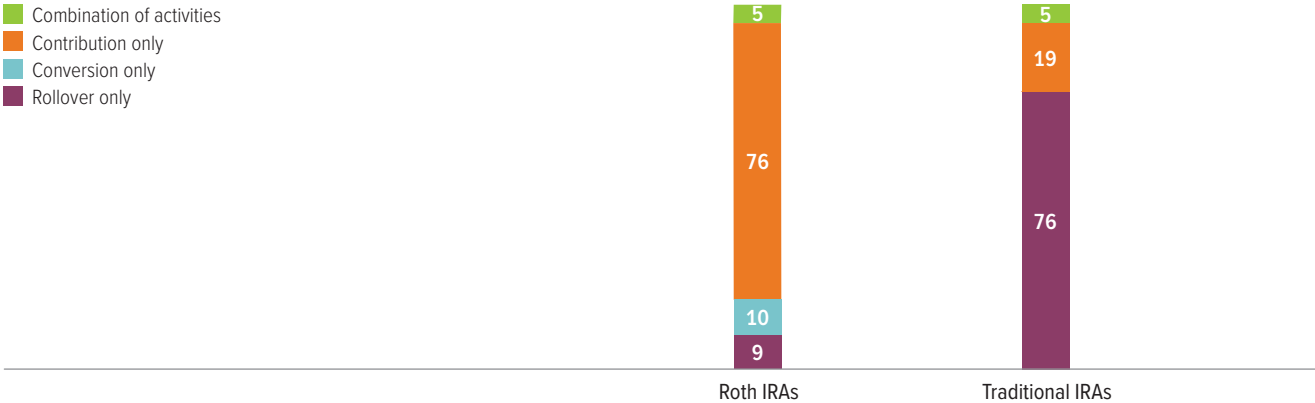
Traditional IRAs were originally created to provide workers with a contributory retirement savings account and a repository for rollovers,⁵ while the main focus of Roth IRAs was after-tax contribution activity and tax-free distribution after a suitable time in the account. With the proliferation of retirement accumulations that can be rolled over, whether from defined contribution accounts or as lump-sum distributions from defined benefit plans, most (76 percent of) new traditional IRAs in 2018 were opened only with rollovers (Figure E.2) and nearly 60 percent of traditional IRA-owning households in 2020 report having rollovers in their traditional IRAs.⁶ By contrast, rollovers play a less important role in Roth IRAs, and only 21 percent of Roth IRA-owning households in 2020 report that their Roth IRAs contain amounts that were initially rolled over from employer-sponsored retirement plans.⁷

Contribution activity is much more important to Roth IRA investors, with the majority of new Roth IRAs (76 percent) opened only with contributions (Figure E.2). In any given year, Roth IRA investors are more likely to make contributions than traditional IRA investors. In tax year 2018, more than one-third of Roth IRA investors (aged 18 or older) made contributions, compared with about one in 10 traditional IRA investors (aged 18 to 69).⁸

FIGURE E.2

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

Percentage of new IRAs opened in 2018 by type of IRA



Note: New IRAs are accounts that did not exist in the IRA Investor Database in 2017 and were opened by one of the paths indicated in 2018. The calculation excludes IRAs that changed financial services firms. The samples are 0.2 million new Roth IRA investors aged 18 or older at year-end 2018 and 0.3 million new traditional IRA investors aged 18 to 74 at year-end 2018.

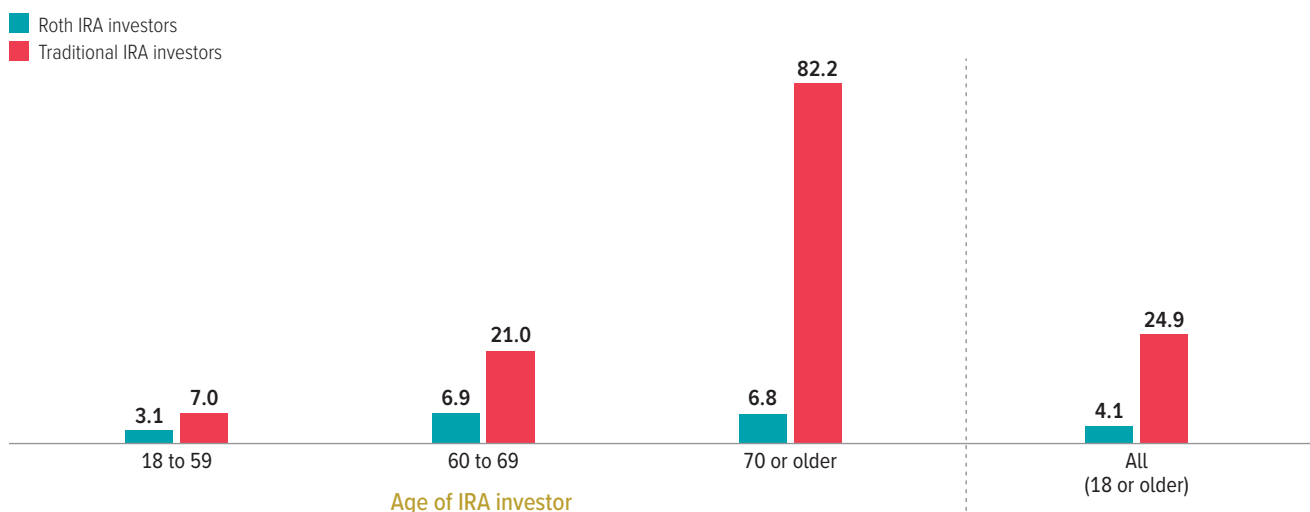
Source: The IRA Investor Database™

In contrast to traditional IRAs, which require investors aged 70½ or older to take RMDs, Roth IRAs have no RMDs (unless the Roth IRAs are inherited).⁹ As a result, withdrawal activity is much lower among Roth IRA investors. In 2018, 4 percent of Roth IRA investors aged 18 or older made withdrawals, compared with 25 percent of traditional IRA investors (Figure E.3).¹⁰ Early withdrawal penalties can apply to both Roth and traditional IRA investors aged 59½ or younger, and withdrawal activity is lower among investors younger than 60 compared with investors aged 60 or older.

FIGURE E.3

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, 2018



Note: The samples are 4.1 million Roth IRA investors aged 18 or older at year-end 2018 and 6.3 million traditional IRA investors aged 18 or older at year-end 2018.

Source: The IRA Investor Database™

Roth IRA assets are allocated more to equity holdings than are traditional IRA assets. At year-end 2018, 66 percent of Roth IRA assets were invested in equities and equity funds—mutual funds, exchange-traded funds (ETFs), and closed-end funds—compared with 51 percent of traditional IRA assets (Figure E.4). Allocation to target date funds and non–target date balanced funds was similar between Roth IRAs (23 percent) and traditional IRAs (25 percent), but Roth IRAs had less allocated to bonds and bond funds (7 percent) than traditional IRAs (18 percent). Roth IRAs also had lower allocation to money market funds (4 percent) than traditional IRAs (6 percent). Some of the differences in allocation reflect the different age distributions (Figure E.1). Another factor is the impact of default rollover asset allocation to money market funds and deposits in traditional IRAs.¹¹

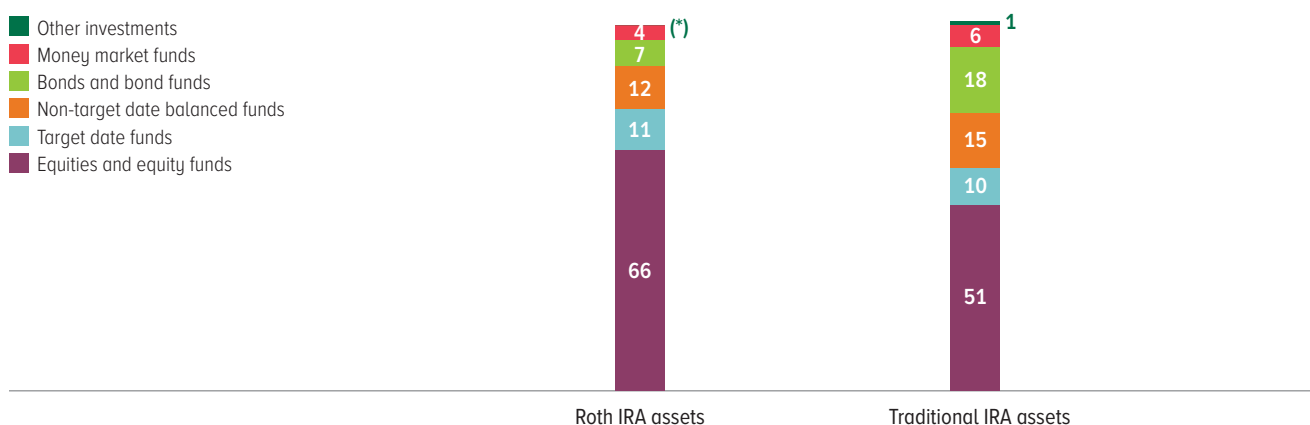
FIGURE E.4

Roth IRA Assets Have a Higher Allocation to Equities

Percentage of IRA assets by type of IRA, year-end 2018

Investments in IRAs

- Other investments
- Money market funds
- Bonds and bond funds
- Non-target date balanced funds
- Target date funds
- Equities and equity funds



Note: See Figure 6.1 for descriptions of the investment categories. Percentages are dollar-weighted averages. The samples are 4.1 million Roth IRA investors aged 18 or older at year-end 2018 and 6.3 million traditional IRA investors aged 18 or older at year-end 2018.

(*) = less than 0.5 percent

Source: The IRA Investor Database™

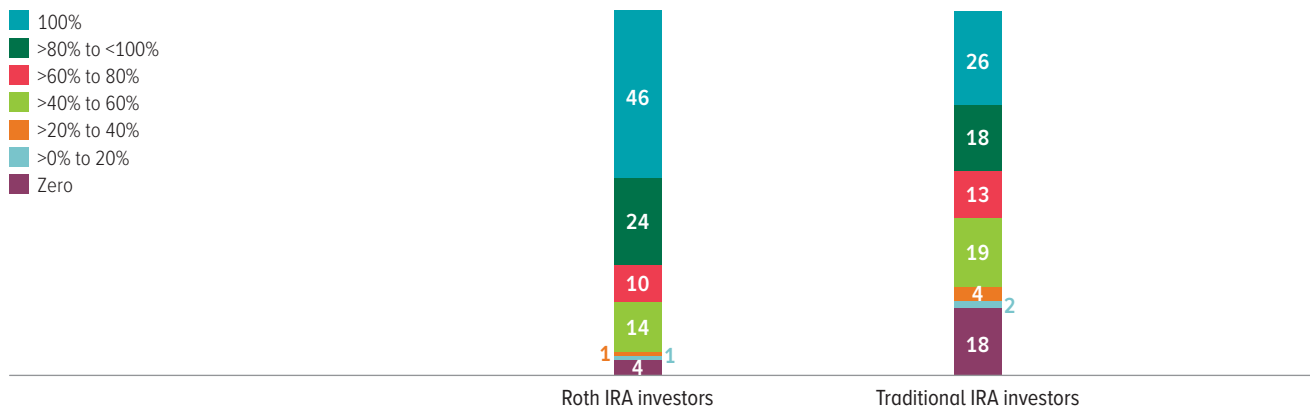
Roth IRA investors have higher concentrations in equity holdings than do traditional IRA investors. At year-end 2018, only 4 percent of Roth IRA investors had no equity holdings (equities, equity funds, and the equity portion of balanced funds), while 18 percent of traditional IRA investors held none (Figure E.5). At the other extreme, 46 percent of Roth IRA investors were 100 percent invested in equity holdings, compared with 26 percent of traditional IRA investors fully invested in equity holdings.

FIGURE E.5

Roth IRA Investors Have Higher Concentration in Equity Holdings

Percentage of IRA investors, year-end 2018

Percentage of account balance invested in equity holdings



Note: Equity holdings are the sum of equities, equity funds, and the equity portion of target date and non-target date balanced funds. The samples are 4.1 million Roth IRA investors aged 18 or older at year-end 2018 and 6.3 million traditional IRA investors aged 18 or older at year-end 2018.

Source: The IRA Investor Database™

Some of this higher average concentration in equity holdings reflects the younger average age of Roth IRA investors compared with traditional IRA investors (Figure E.1) and the tendency of younger investors to hold higher concentrations in equity holdings. However, it also is the case that Roth IRA investors within any given age group tend to have higher concentrations in equity holdings. For example, 32 percent of traditional IRA investors aged 30 to 39 had no equity holdings in their traditional IRAs at year-end 2018,¹² compared with only about 2 percent of Roth IRA investors aged 30 to 39 (see Figure 6.5). Fifty-five percent of traditional IRA investors aged 30 to 39 had more than 80 percent of their traditional IRAs invested in equity holdings at year-end 2018,¹³ compared with 83 percent of Roth IRA investors aged 30 to 39.

Fifty-five percent of traditional IRA investors with smaller accounts (a balance of \$5,000 or less at year-end 2018) had no equity holdings at year-end 2018,¹⁴ reflecting in part the impact of default rollover investment rules; in contrast, only 6 percent of Roth IRA investors with smaller Roth IRA balances had no equity holdings (see Figure A.5 in the appendix). Even in larger accounts, where default rollover investment rules are likely to have less of an impact, Roth IRA investors tended to have higher allocations to equity holdings at year-end 2018 compared with traditional IRA investors. For example, at year-end 2018, 69 percent of Roth IRA investors with larger accounts (a balance of more than \$5,000 at year-end 2018) had more than 80 percent of their Roth IRAs invested in equity holdings, compared with about 48 percent of traditional IRA investors with larger accounts, who had more than 80 percent of their traditional IRAs invested in equity holdings.¹⁵

Introduction

The Role of IRAs in US Retirement Planning

The Employee Retirement Income Security Act of 1974 (ERISA) created individual retirement accounts (IRAs).¹⁶ Forty-seven years later, IRAs have become a significant component of US households' retirement assets. All told, 47.9 million US households, or 37.3 percent, owned one or more types of IRAs in mid-2020.¹⁷ Households held \$12.2 trillion in IRAs at year-end 2020, or more than one-third of the \$34.9 trillion in total US retirement assets,¹⁸ and IRAs accounted for about 10 percent of US households' total financial assets (see Figure A.1 in the appendix). Traditional IRAs, the first type of IRA created, are the most common type.¹⁹ Over the years, policymakers have changed the rules governing traditional IRAs and introduced other types of IRAs. This report focuses on the Roth IRA, a nondeductible individual retirement savings account created by the Taxpayer Relief Act of 1997.²⁰ At year-end 2020, Roth IRAs held \$1.2 trillion and accounted for 10 percent of all IRA assets.²¹

Roth IRAs, first available in 1998, permit only after-tax (nondeductible) contributions. Individuals 70½ or older may not contribute to traditional IRAs, but Roth IRAs do not have that age restriction.²² Roth IRAs also can be created through conversions, a process by which non-Roth IRA assets are withdrawn and converted into Roth IRAs. In addition, direct rollovers from designated Roth accounts in retirement plans to Roth IRAs have been permitted since 2006 and direct rollovers of non-Roth qualified retirement plan accumulations into Roth IRAs have been permitted since 2008. Distributions of both principal and earnings generally are not subject to federal income tax if taken after the Roth IRA owner reaches age 59½, dies, or becomes disabled (provided the five-year holding period is met).²³ Distributions of principal before the Roth IRA owner reaches age 59½ generally are not subject to tax, but investment earnings may be subject to tax and possibly a 10 percent penalty if taken before age 59½, death, or disability. Like traditional IRAs, there are exemptions to the early distribution penalty for a first-time home purchase, qualified education expenses, and the other exceptions. Unlike traditional IRAs, there are no required minimum distributions (RMDs) during the Roth IRA holder's lifetime.²⁴

Whether funded by contributions, conversions, or rollovers, Roth IRAs are managed by individuals, and asset allocation plays an important role in the Roth IRA returns and how they vary by investor. Thus, policymakers and researchers are seeking to better understand the asset allocation of Roth IRA balances across investors, as well as understanding how Roth IRA investors managed their Roth IRAs after the financial crisis. In addition, policymakers want to know how people manage these accounts, including how much they are withdrawing before retirement (which is often called leakage) and how they are tapping their Roth IRAs throughout retirement.

Sources of IRA Data

Researchers have relied primarily on household surveys and Internal Revenue Service (IRS) tax data to examine policy questions about IRAs. Several household surveys for analyzing households' retirement savings²⁵ are publicly available; in addition, ICI conducts two annual household surveys that provide information on IRA-owning households.^{26, 27} Though household surveys provide a comprehensive picture of household finances and activities—and can provide insights into the reasoning behind decisions—they can suffer from inaccurate respondent recall, which can cause data problems and reduce the level of detail that can be obtained on some financial assets or activities. In addition, because Roth IRAs are newer than traditional IRAs, sample sizes tend to be smaller than for traditional IRAs.²⁸

The IRS collects a rich array of information about IRAs, including contributions, assets, conversions to Roth IRAs, rollovers into IRAs, and withdrawals from IRAs, from a variety of tax returns (e.g., Form 1040) and information returns (e.g., Form 5498 and Form 1099-R). The IRS Statistics of Income Division publishes tabulations of these data and research reports using the data.²⁹ The tax data, however, do not have information about the types of assets that investors hold in their IRAs.

The IRA Investor Database™

To augment the existing survey information and tax data for IRAs, ICI embarked on a data collection effort—the IRA Investor Database—to examine administrative, or recordkept, data on IRAs. To date, this collection effort has gathered data on IRAs from 2007 through 2018. The IRA Investor Database contains account-level information from a wide range of mutual fund and insurance companies, which provided data for more than 10 million IRA investors in 2018. The database, which contains information about IRA asset levels, investments, contributions, conversions, rollovers, and withdrawals, provides a more complete picture of account-level holdings and activity for IRA investors. Throughout this report, the term IRA investor refers to a unique IRA investor at a given data provider.³⁰ The IRA Investor Database contains data on 10.7 million IRA investors at year-end 2018, of which 59 percent hold traditional IRAs, 39 percent hold Roth IRAs, 12 percent hold SIMPLE IRAs, and 5 percent own SEP or SAR-SEP IRAs (see Figure A.2 in the appendix).³¹

Research Agenda for This Report

This report provides insight into how Roth IRA investors fared during and after the financial crisis by analyzing data on a group of consistent Roth IRA investors—those holding accounts with the same financial services provider at the end of each year from 2010 through 2018—drawn from the IRA Investor Database. In addition, it analyzes Roth IRA contributions, conversions, withdrawals, asset allocation, and account balances in 2018 by investor age.

After summarizing the financial developments and regulatory changes affecting Roth IRAs, chapter 1 analyzes the contribution, conversion, rollover, and withdrawal activity for 2.2 million consistent Roth IRA investors (those with accounts at the end of each year from 2010 through 2018). The chapter also explores changes in asset allocation and account balances among consistent Roth IRA investors.

The rest of the report focuses primarily on a snapshot of 4.1 million Roth IRA investors aged 18 or older at year-end 2018. Chapter 2 notes that the vast majority of new Roth IRAs opened in 2018 were opened with contributions. It examines contribution activity by investor age, exploring which Roth IRA investors had contributions and how many of them contributed at the maximum legal limit. Chapter 3 looks at how conversion activity varied by investor age in 2018, and briefly touches upon rollover activity, which is rare in Roth IRAs. Chapter 4 explores withdrawals, which very few Roth IRA investors take in any given year, likely discouraged by the five-year holding period and early withdrawal penalties. In addition, in contrast to traditional IRA investors, Roth IRA investors are not required to start distributions at age 70½ (unless the Roth IRA is inherited). Chapter 5 reports variation in Roth IRA balances by investor age. Chapter 6 compares the asset allocation of Roth IRA balances among cross sections of Roth IRA investors at year-end 2010 and year-end 2018, focusing on the changes in allocation to equity holdings by investor age.

CHAPTER 1

Following Roth IRA Investors over Time

The IRA Investor Database contains data on millions of IRA investors from year-end 2010 through year-end 2018, which makes it possible to analyze snapshots, or cross sections, of IRA investors in any given year. In addition, one of the advantages of the IRA Investor Database is that it can show whether investor activities and behaviors are persistent or change from year to year.

This chapter features such an analysis, focusing on the 2.2 million Roth IRA investors who had accounts at the same financial services provider at the end of each year from 2010 through 2018. These Roth IRA investors will be referred to as *consistent Roth IRA investors*. They were aged 26 or older at year-end 2018 (and thus aged 18 or older at year-end 2010, the first year in the longitudinal analysis). After reviewing the economic and regulatory influences on Roth IRAs between 2010 and 2018, the chapter examines how consistent Roth IRA investors fared after the financial crisis, looking at patterns of contribution, conversion, rollover, and withdrawal activities, as well as changes in asset allocation. The chapter also analyzes the movement of their Roth IRA balances from year-end 2010 to year-end 2018

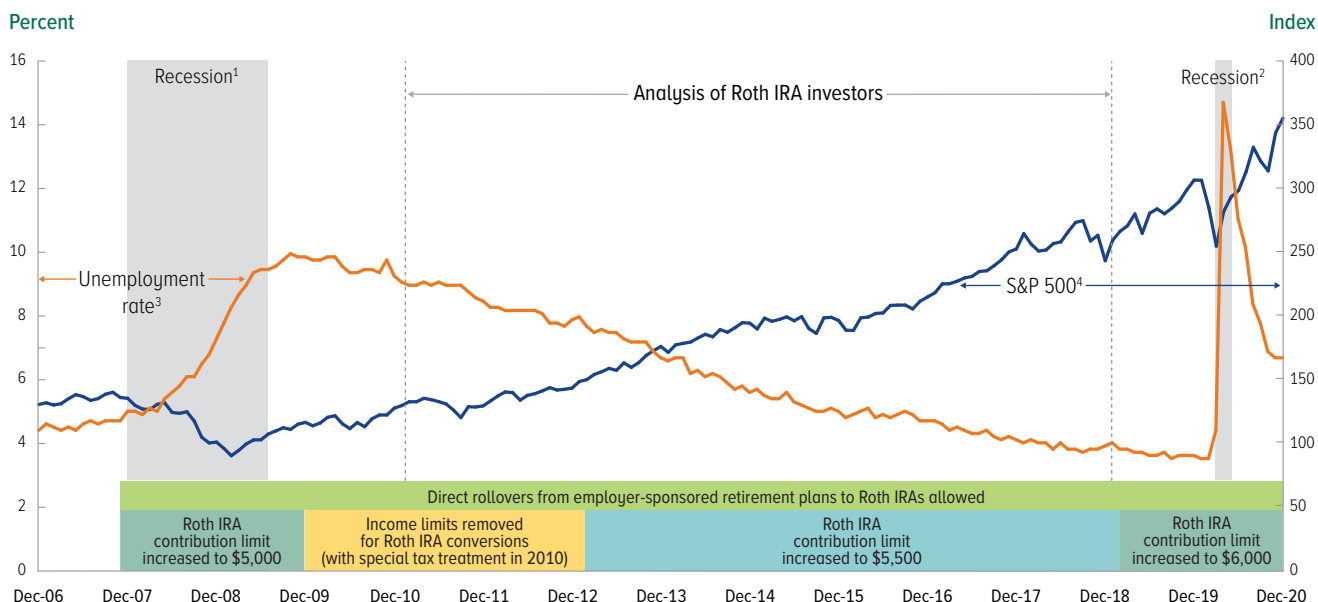
Financial and Regulatory Developments

Between 2007 and 2009, the United States experienced two dramatic events: a major financial crisis and a deep recession. During that period, large-cap stocks contracted in value, falling 37.0 percent in 2008 (Figure 1.1), an annual drop exceeded only in 1931 when large-cap stock values fell 43.3 percent over the year.³² Large-cap stocks peaked in value on October 9, 2007, and fell 55.3 percent to their record low, which occurred on March 9, 2009.³³ Bond market investors also saw rocky returns over this period, as interest rates on many nongovernment fixed-income securities rose, and corporate bond prices declined 22.2 percent between September 9, 2008, and October 17, 2008.³⁴

The US economy also contracted sharply, falling into recession between December 2007 and June 2009.³⁵ The unemployment rate rose, peaking at 10.0 percent in October 2009, and disposable personal income fell.³⁶ The financial crisis and recession weakened household balance sheets during much of this period. In addition, housing values fell more than 25 percent between February 2007 and December 2011.³⁷ From 2010 through 2018, as the economy and financial sector began to recover, household income and net worth began to rise again.

FIGURE 1.1

Financial Events and Changing Rules Surrounding Roth IRAs



¹ The National Bureau of Economic Research (NBER) dates this recession from December 2007 to June 2009.

² NBER dates this recession from February 2020 to April 2020.

³ The unemployment rate is the number of unemployed individuals as a percentage of the labor force and has been seasonally adjusted.

⁴ The S&P 500 is an index of 500 stocks chosen for market size, liquidity, and industry group representation. The index is normalized to 100 in December 2006.

Sources: Bureau of Labor Statistics, Standard and Poor's, and ICI summary of legislative changes

Roth IRA assets largely followed the movement of the stock market. Tracked on an annual basis, Roth IRA assets were \$232 billion at year-end 2007, but had fallen to \$177 billion at year-end 2008 despite contributions and conversions (Figure 1.2). Aggregate Roth IRA assets then rose to \$355 billion by year-end 2010, bolstered by \$65 billion in conversions. Roth IRA assets continued to increase, rising to \$842 billion at year-end 2017 and \$846 billion at year-end 2018.

Regulations governing Roth IRAs also changed between 2010 and 2018. In 2010, the income limits on Roth conversions were lifted,³⁸ and taxpayers had the option of paying taxes due on amounts converted in 2010 over two years—2011 and 2012. In 2013, automatic adjustment for inflation increased the Roth IRA contribution limit for investors younger than 50 from \$5,000 to \$5,500 (Figure 1.1). For investors aged 50 or older, the limit rose to \$6,500, including catch-up contributions (see Figure 2.5).

FIGURE 1.2

Roth IRA Assets and Flows

Billions of dollars

	Inflows			Outflows	Total assets ²
	Contributions	Rollovers ¹	Roth conversions	Withdrawals	Year-end
1998	\$8.6	N/A	\$39.3	N/A	\$56.8
1999	10.7	N/A	3.7	N/A	76.2
2000	11.6	N/A	3.2	\$4.7	77.6
2001	11.0	N/A	3.1	0.3	79.3
2002	13.2	N/A	3.3	1.2	77.6
2003	13.5 ^e	N/A	3.0 ^e	2.3 ^e	105.8 ^e
2004	14.7	N/A	2.8	1.9	139.9
2005	18.0	N/A	2.6	0.4	156.1
2006	18.7	N/A	2.8	0.4	196.1
2007	18.7	N/A	2.2	0.4	232.3
2008	18.2	N/A	3.7	3.7	176.6
2009	17.6	\$2.7	6.8	0.5	238.6
2010	18.6	7.8	64.8	0.6	354.9
2011	18.0	4.3	11.3	0.5	359.9
2012	18.7	4.8	18.1	4.1	438.9
2013	21.0	5.5	7.5	4.2	547.7
2014	21.9	5.7	8.3	4.0	599.9
2015	21.7	8.4	9.0	4.4	625.1
2016	22.2	8.6	9.1	3.8	697.1
2017	23.5	9.9	10.0	4.5	842.0
2018	24.3	12.5	13.7	4.8	845.9
2019	N/A	N/A	N/A	N/A	1,040.0 ^e
2020	N/A	N/A	N/A	N/A	1,210.0 ^e

¹ Rollovers are primarily from employer-sponsored retirement plans.² Total assets are the fair market value of assets at year-end.^e Data are estimated.

N/A = not available

Sources: Investment Company Institute and Internal Revenue Service Statistics of Income Division

Changes in Roth IRA Assets

Several factors affect the amount of Roth IRA assets investors hold:

- » contributions into Roth IRAs (+);
- » conversions of non-Roth IRA assets into Roth IRAs (+);³⁹
- » rollovers from employer-sponsored retirement plans into Roth IRAs (+);
- » distributions, or withdrawals, out of Roth IRAs (-);⁴⁰ and
- » returns on investments, which vary with asset allocation.

In a typical year, contributions in aggregate provide the largest inflows into Roth IRAs, running at an average of \$21.4 billion a year between 2011 and 2018 (Figure 1.2). A relatively new activity, rollovers account for only a small amount of inflows into Roth IRAs, averaging \$7.5 billion a year since 2010. Roth conversions have tended to be minor, with the exception of 1998 and 2010, when special tax incentives were available.⁴¹ The tax law change lifting income limits on Roth conversion activity starting in 2010 and providing special tax incentives in 2010 increased Roth conversion activity. Between 2009 and 2010, conversions to Roth IRAs increased nearly tenfold, from \$6.8 billion to \$64.8 billion.⁴² Withdrawals are only a small drag on Roth IRA accumulations, because few Roth IRA investors take withdrawals.

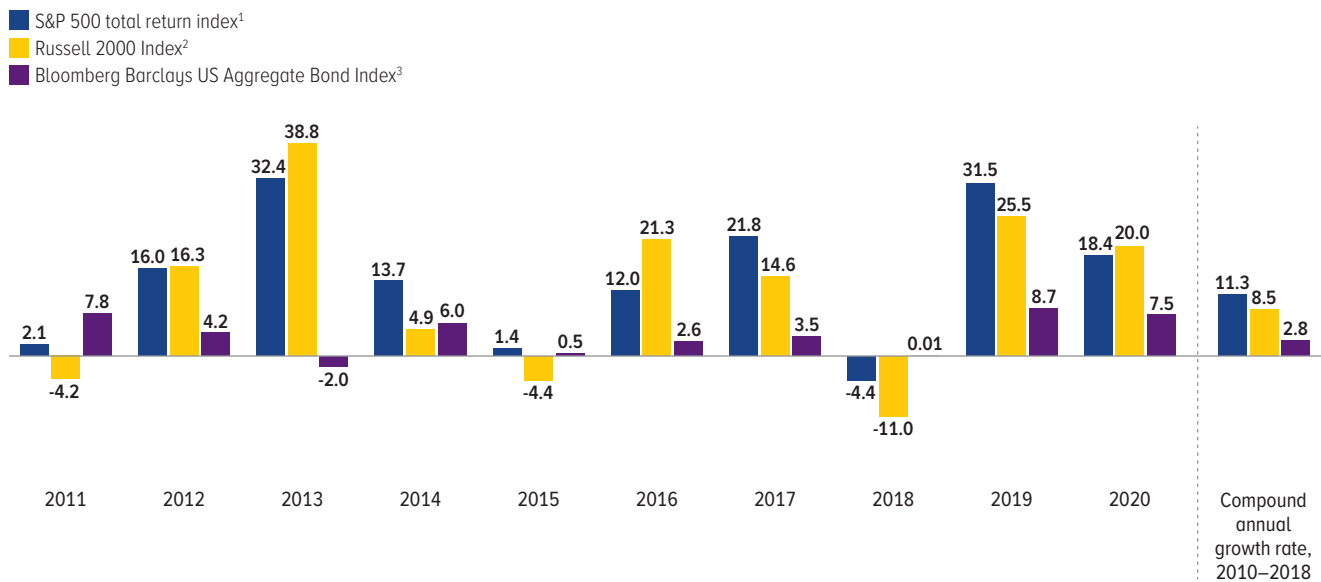
Changes in Consistent Individual Investors' Roth IRA Balances, 2010–2018

When analyzing how investor account balances change over time, having a consistent sample is important. Comparing average account balances across year-end snapshots can lead to false conclusions. For example, the addition of a large number of new investors with smaller balances would pull down the average account balance. This could then be mistakenly described as an indication that balances are declining, but actually would reveal nothing about the experiences of individual investors. Because of this, the following analysis covers Roth IRA investors with account balances at the end of each year from 2010 to 2018.

To analyze changes in Roth IRA balances from year-end 2010 to year-end 2018, the flow activity of the Roth IRA investors from 2011 through 2018 needs to be understood. Although detailed information on the exact timing of flows into and out of the Roth IRA balances analyzed is not available, the presence of annual contributions, conversions, rollovers, or withdrawals can be tracked. Because Roth IRA investors younger than 59½ may be subject to penalties if they take withdrawals, they are analyzed as a group. Although all Roth IRA investors aged 59½ or older may withdraw without penalty (provided they meet the five-year holding period), the sample is divided into two additional groups based on age at year-end 2018: 60 to 69, and 70 or older. This enables comparison with traditional IRA investors, who must take withdrawals once they reach age 70½ or be subject to penalty.⁴³ Contribution, conversion, rollover, and withdrawal activity is analyzed for these three groups of consistent Roth IRA investors.

Finally, investment returns affect the value of assets held in Roth IRAs and will vary depending upon the individual investor’s portfolio. Roth IRA investors’ concentrations in equity holdings are analyzed from year-end 2010 to year-end 2018. It is not possible to calculate rates of return specific to Roth IRA investors in the database. However, aggregate market return data indicate that from year-end 2010 to year-end 2018, the compound average annual return was 11.3 percent on large-cap equities, 8.5 percent on small-cap equities, and 2.8 percent on bonds (Figure 1.3).

FIGURE 1.3
Domestic Stock and Bond Market Total Return Indexes
 Percent change



¹ The S&P 500 total return index is an index of 500 stocks chosen for market size, liquidity, and industry group representation.

² The Russell 2000 Index measures the performance of the 2,000 smallest US companies (based on total market capitalization) included in the Russell 3000 Index (which tracks the 3,000 largest US companies).

³ The Bloomberg Barclays US Aggregate Bond Index is composed of securities covering government and corporate bonds, mortgage-backed securities, and asset-backed securities (rebalanced monthly by market capitalization). The index’s total return consists of price appreciation/depreciation plus income as a percentage of the original investment.

Sources: Bloomberg, Frank Russell Company, and Standard & Poor’s

Contribution Activity for Consistent Roth IRA Investors, 2011–2018

Contribution activity slowed a bit among consistent Roth IRA investors from 2011 through 2018. For example, 23.0 percent of consistent Roth IRA investors aged 26 or older in 2018 made contributions in tax year 2018, while 31.9 percent of them made contributions to their Roth IRAs in tax year 2011, when they were aged 19 or older (Figure 1.4, first panel). The pattern is similar across age groups. For example, 18.5 percent of consistent Roth IRA investors aged 60 to 69 in 2018 made contributions in tax year 2018, while 30.2 percent of them made contributions to their Roth IRAs in tax year 2011, when they were aged 53 to 62 (Figure 1.4, third panel). Some of the decline could have resulted from Roth IRA investors getting older—perhaps moving them to higher incomes and out of eligibility to contribute.

Even though contribution activity among consistent Roth IRA investors declined between 2011–2018, there is persistence in contribution activity among investors who make contributions. For example, 44.9 percent of consistent Roth IRA investors aged 26 or older in 2018 made at least one contribution between tax years 2011 and 2018 (Figure 1.5, first panel). Among those contributing during that period, 30.9 percent contributed in all eight years, 7.8 percent contributed in seven of the eight years, 7.4 percent contributed in six of the eight years, 7.8 percent contributed in five of the eight years, 8.3 percent contributed in four of the eight years, 9.5 percent contributed in three of the eight years, and 11.7 percent contributed in two of the eight years. Persistent contribution activity was highest among consistent Roth IRA investors aged 26 to 59 in 2018. However, older consistent Roth IRA investors (aged 60 to 69) also had repeat contribution activity, with 44.1 percent making at least one contribution between tax years 2011 and 2018 (Figure 1.5, third panel). Among Roth IRA investors aged 60 to 69 who were contributing, 24.3 percent did so in all eight years.

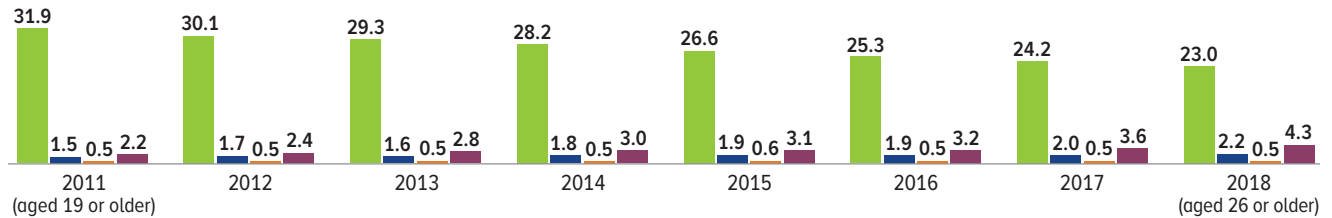
FIGURE 1.4

Factors Influencing Changes in Consistent Individual Investors' Roth IRA Balances

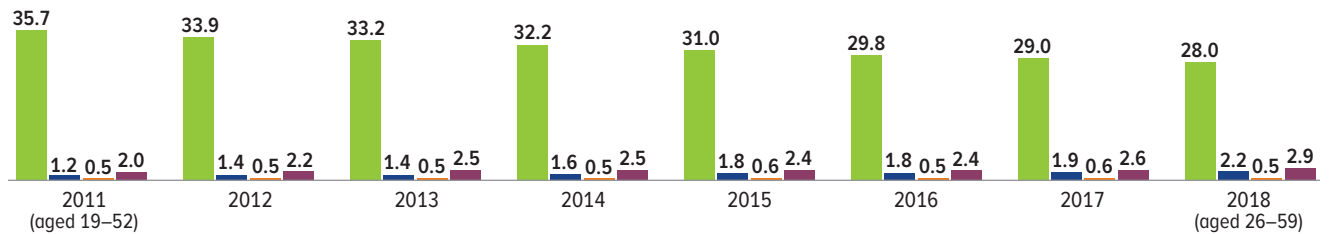
Percentage of consistent Roth IRA investors with account balances at the end of each year

- Contribution
- Conversion
- Rollover
- Withdrawal

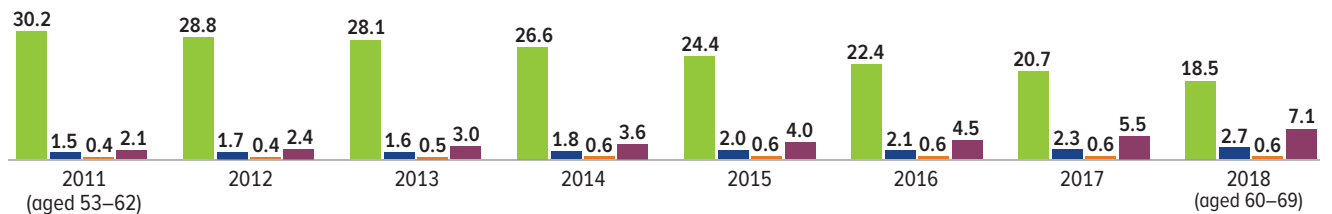
Flow activity among Roth IRA investors aged 26 or older



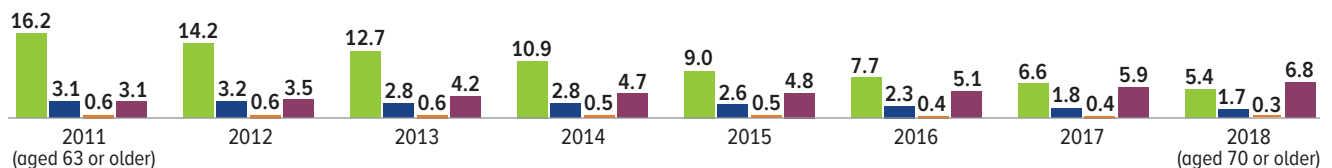
Flow activity among Roth IRA investors aged 26 to 59



Flow activity among Roth IRA investors aged 60 to 69



Flow activity among Roth IRA investors aged 70 or older



Note: The sample is 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018. Age is based on the age of the Roth IRA investor in 2018. Activity is for the tax year indicated.

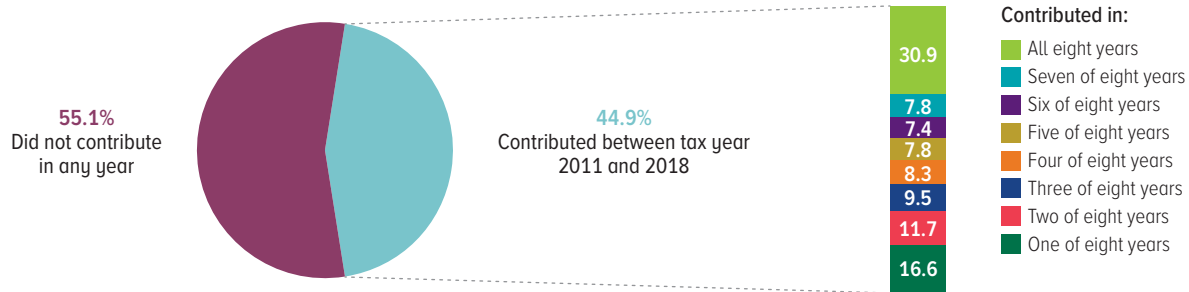
Source: The IRA Investor Database™

FIGURE 1.5

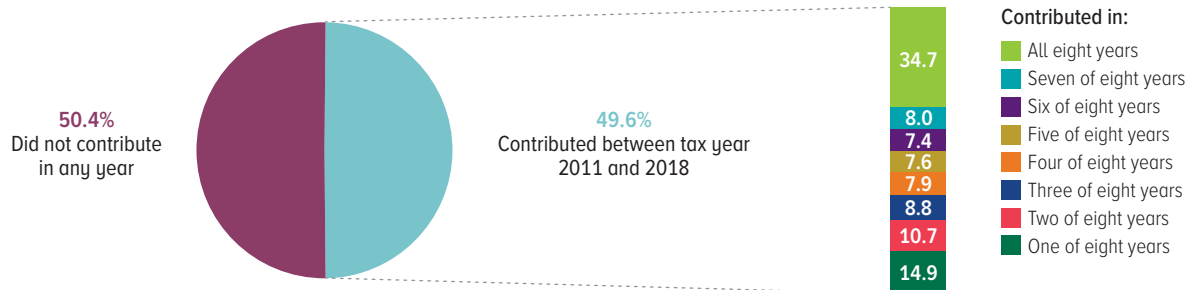
Contribution Activity for Consistent Roth IRA Investors

Percentage of consistent Roth IRA investors with account balances at the end of each year

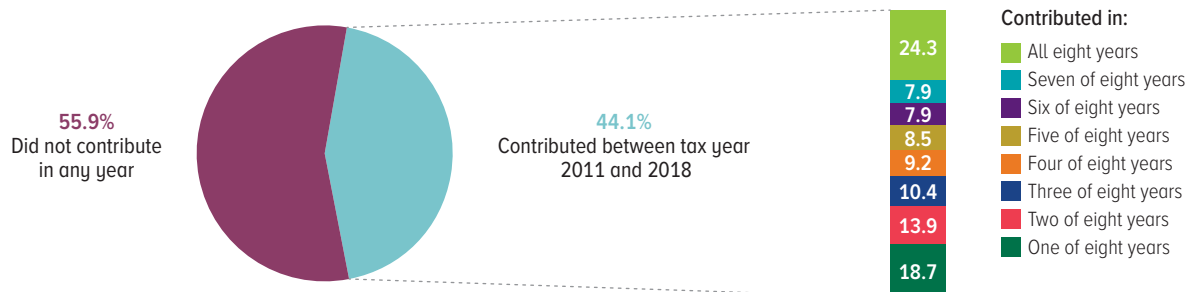
Roth IRA investors aged 26 or older



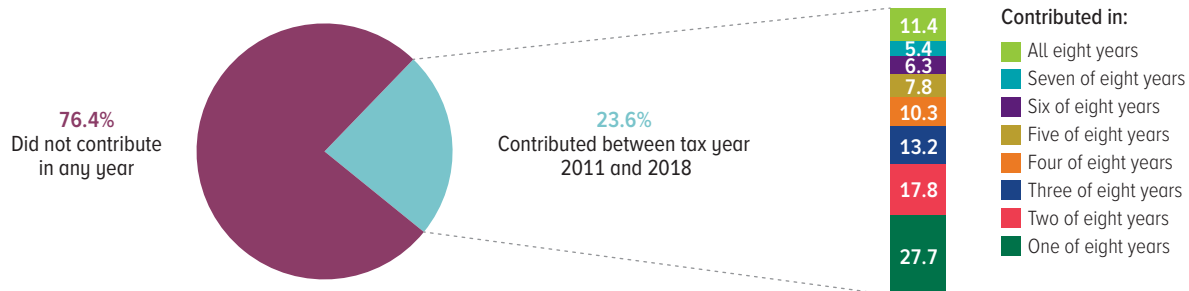
Roth IRA investors aged 26 to 59



Roth IRA investors aged 60 to 69



Roth IRA investors aged 70 or older



Note: The samples are 2.2 million Roth IRA investors aged 26 or older in 2018, 1.5 million Roth IRA investors aged 26 to 59 in 2018, 0.5 million Roth IRA investors aged 60 to 69 in 2018, and 0.3 million Roth IRA investors aged 70 or older in 2018, all holding Roth IRA balances from year-end 2010 through year-end 2018. Age is based on the age of the Roth IRA investor in 2018.

Source: The IRA Investor Database™

Conversion Activity for Consistent Roth IRA Investors, 2011–2018

A Roth IRA conversion occurs when assets in a non-Roth IRA are transferred to a Roth IRA or redesignated as a Roth IRA.⁴⁴ Generally the assets converted are taxable in the year of the conversion. Conversion activity tends to increase when the taxes owed on the amounts converted can be spread over multiple years (Figure 3.1).⁴⁵ However, conversion activity varied little between 2011 and 2018. For example, 1.5 percent of consistent Roth IRA investors aged 26 or older in 2018 made conversions into their Roth IRAs in 2011 (when they were 19 or older), compared with 1.7 percent in 2012, 1.6 percent in 2013, and about 2 percent in 2014, 2015, 2016, 2017, and 2018 (Figure 1.4, first panel).⁴⁶ A similar pattern is observed across the 26 to 59 and 60 to 69 age groups, although older Roth IRA investors tended to have slightly higher levels of conversion activity in most years compared with younger ones (Figure 1.4; second, third, and fourth panels). Conversion activity for consistent Roth IRA investors aged 70 or older rose from 3.1 percent making conversions in 2011 (when they were 63 or older) to 3.2 percent in 2012 before falling back to 2.8 percent in 2013, 2.8 percent in 2014, 2.6 percent in 2015, 2.3 percent in 2016, 1.8 percent in 2017, and 1.7 percent in 2018 (Figure 1.4, fourth panel).

Rollovers. Direct rollovers from designated Roth accounts in employer-sponsored retirement plans to Roth IRAs have been permitted since 2006. Before 2008, Roth IRAs generally were not eligible for direct rollovers from non-Roth employer-sponsored retirement plan accounts. The Pension Protection Act of 2006 allowed direct rollovers from non-Roth employer-sponsored plan accounts to Roth IRAs beginning in 2008.⁴⁷ Less than 1 percent of consistent Roth IRA investors made rollovers in any year in the study, regardless of age group (Figure 1.4).

Withdrawal Activity for Consistent Roth IRA Investors, 2011–2018

If a withdrawal is made from a Roth IRA within five years of the first contribution or made before age 59½, the investment return portion of the withdrawal is generally subject to income tax and may be subject to a 10 percent penalty. For both traditional and Roth IRAs, the 10 percent penalty does not apply to withdrawals made in cases of death or disability; if used for certain medical expenses, first-time homebuyer expenses, qualified higher-education expenses, or health insurance expenses of unemployed individuals; or as part of a series of substantially equal periodic payments (SEPPs) made over the life expectancy of the individual.⁴⁸ In addition, provided the five-year holding period is satisfied, the investment returns portion of withdrawals made before age 59½ from a Roth IRA in cases of death, disability, or qualified first-time homebuyer expenses are not subject to income tax. In contrast to traditional IRAs, Roth IRAs are not subject to RMDs during the account holder's lifetime.⁴⁹

Very few consistent Roth IRA investors took withdrawals in any year during the study period. Few Roth IRA investors younger than 60 took withdrawals in any given year, likely reflecting, in part, the early withdrawal penalty that may apply. This also was the case among the consistent group of Roth IRA investors aged 26 to 59 at year-end 2018. Over 2011 and 2012, about 2 percent took withdrawals (Figure 1.4, second panel); over 2013 and 2017, about 2.5 percent took withdrawals; and in 2018, nearly 3 percent took withdrawals.

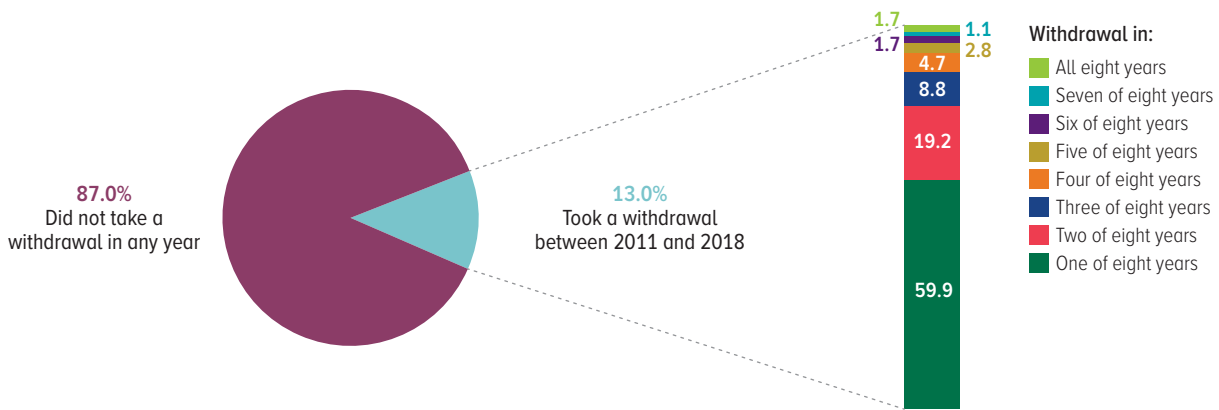
The pattern of withdrawal activity edges up a bit over the same period among Roth IRA investors aged 60 or older in 2018. In 2011, 2.1 percent of Roth IRA investors aged 60 to 69 in 2018 took withdrawals, when they were aged 53 to 62 (Figure 1.4, third panel). Withdrawal activity edged up between 2012 and 2018, rising to 7.1 percent in 2018. Withdrawals for the group aged 70 or older in 2018 also followed a similar pattern (Figure 1.4, fourth panel): 3.1 percent took withdrawals in 2011, rising over the next seven years to 6.8 percent in 2018.

Withdrawal activity is rare among Roth IRA investors, and financial stresses appear to have caught up with only a small number of Roth IRA investors in the wake of the financial crisis. Among consistent Roth IRA investors aged 26 or older in 2018, 13.0 percent took withdrawals in at least one year between 2011 and 2018 (Figure 1.6). Among those taking withdrawals, 59.9 percent only took withdrawals in one of the eight years (2011 through 2018), and 19.2 percent only took withdrawals in two of the eight years.

FIGURE 1.6

Withdrawal Activity for Consistent Roth IRA Investors

Percentage of consistent Roth IRA investors with account balances at the end of each year



Note: The sample is 2.2 million Roth IRA investors aged 26 or older in 2018 with Roth IRA balances from year-end 2010 through year-end 2018.

Source: The IRA Investor Database™

Equity Investing in Roth IRAs

Because, on average, the majority of Roth IRA assets are invested in equity holdings, the movement of the stock market had a large impact on Roth IRA balances between year-end 2010 and year-end 2018. For example, on average, the sample of consistent Roth IRA investors aged 26 to 59 in 2018, when they were aged 18 to 51 at year-end 2010, had 85.2 percent of their Roth IRA assets invested in equity holdings—equities, equity funds, and the equity portion of balanced funds (Figure 1.7). Equity holdings fell to 83.8 percent of this group’s Roth IRA assets at year-end 2011, reflecting a slowing in the stock market. As stock values generally moved up between 2012 and 2017, equity holdings rose to 87.2 percent of this group’s Roth IRA assets by year-end 2017. As stock prices generally fell in 2018, equity holdings edged down to 86.1 percent at year-end 2018 when this group was aged 26 to 59.

Older Roth IRA investors generally had lower average allocations to equity holdings, although equity holdings represented significant shares of their assets over the entire period (Figure 1.7). The older investors' average allocation to equity holdings also mirrored the stock market movement. For example, consistent Roth IRA investors aged 60 to 69 in 2018 had 76.5 percent of their Roth IRA assets invested in equity holdings at year-end 2010, when they were aged 52 to 61. Their average allocation to equity holdings fell to 74.4 percent at year-end 2011, before rising to 79.1 percent at year-end 2017 and settling at 77.1 percent at year-end 2018.

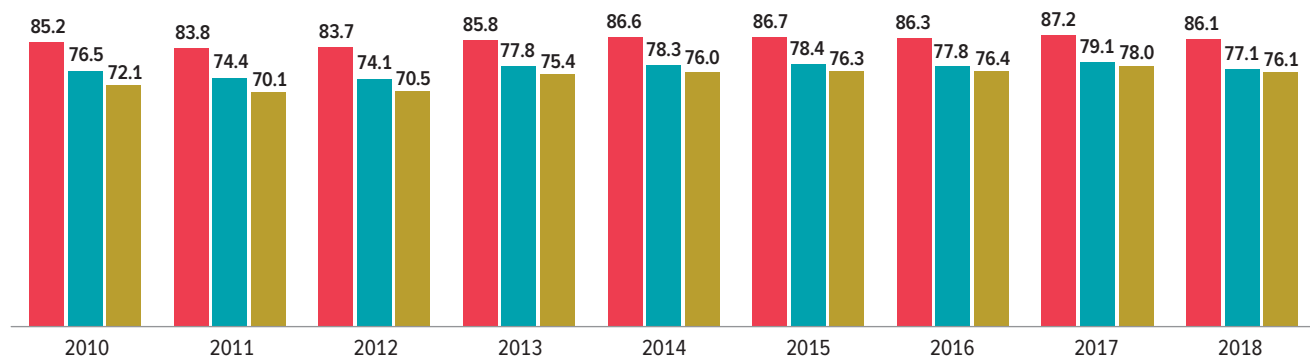
FIGURE 1.7

Equity Holdings Account for Majority of Assets in Roth IRAs

Percentage of consistent Roth IRA assets¹ invested in equity holdings² by investor age³

Age of Roth IRA investor³

- 26 to 59
- 60 to 69
- 70 or older



¹ Percentages are dollar-weighted averages at year-end.

² Equity holdings include equities, equity funds, and the equity portion of balanced funds.

³ Age is based on the age of the Roth IRA investor in 2018.

Note: Consistent Roth IRA investors are 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018.

Source: The IRA Investor Database™

Movement in the share of equity holdings in Roth IRA investors' accounts results from changes in stock values, in addition to reallocation activity by investors. Although information on specific trading activity of Roth IRA investors is not available in the database, activity into or out of zero or 100 percent equity holdings at year-end can be observed.

On these equity concentration measures, there was little activity among Roth IRA investors between year-end 2010 and year-end 2018. For example, analyzing consistent Roth IRA investors aged 26 to 59 at year-end 2018, the data show that 0.6 percent, on net, moved away from a zero equity holding allocation—3.6 percent of this group had no equity holdings at year-end 2010 and 3.0 percent had no equity holdings at year-end 2018 (Figure 1.8, upper panel). This net change reflects 1.7 percent of these Roth IRA investors moving from zero equity holdings to at least some, 1.1 percent moving from some to zero, and 1.9 percent sticking with zero holdings in both 2010 and 2018 (Figure 1.9). Older Roth IRA investors displayed slightly higher reallocation activity away from zero equity holdings, but some of their activity could have come in anticipation of retirement rather than in response to financial market movements. Indeed, household survey information indicates that households anticipate rebalancing their portfolios as they age.⁵⁰

More than half (51.2 percent) of consistent Roth IRA investors had their entire Roth IRA balances invested in equity holdings at year-end 2010, but that share edged down to 49.4 percent at year-end 2018 (Figure 1.10). To be 100 percent invested in equity holdings, the Roth IRA investor would have allocated their full Roth IRA balance to equities or equity funds.⁵¹ Analyzing consistent Roth IRA investors aged 26 to 59 at year-end 2018, the data show that 1.8 percent, on net, moved away from a 100 percent equity holding allocation—53.9 percent of this group at year-end 2010 and 52.0 percent at year-end 2018 were 100 percent invested in equity holdings (Figure 1.8, lower panel). This net change reflects 6.1 percent moving away from the 100 percent allocation to something less, 4.3 percent moving to a 100 percent allocation, and 47.8 percent sticking with 100 percent equity holdings in both 2010 and 2018 (Figure 1.10). Roth IRA investors aged 60 to 69 in 2018 displayed slightly higher reallocation activity away from 100 percent equity holdings, but again, some of their activity may have resulted simply from reallocation in anticipation of retirement rather than in response to the financial market movements.⁵²

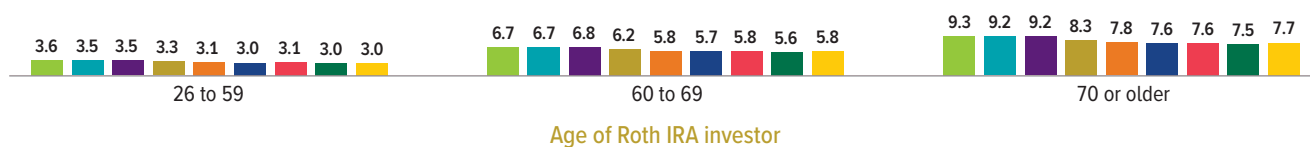
FIGURE 1.8

Changes in Concentration of Consistent Roth IRA Investors' Equity Holdings



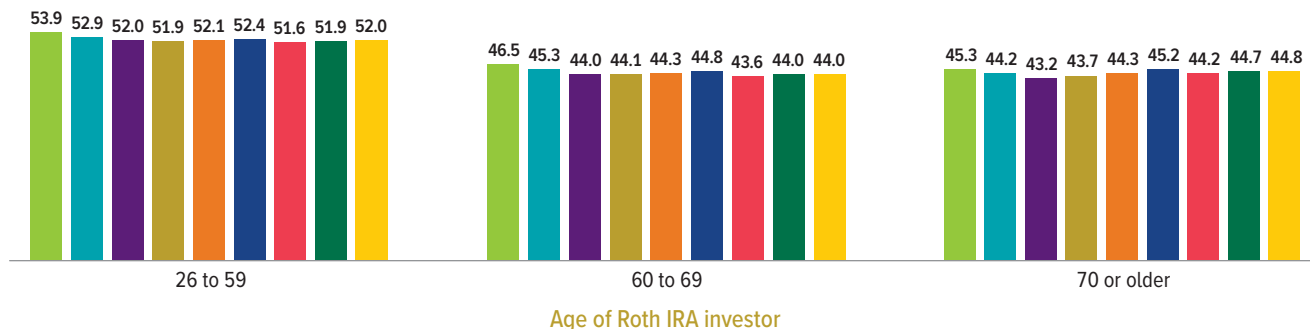
Zero allocation to equity holdings¹

Percentage of consistent Roth IRA investors with no equity holdings¹ by age²



100 percent allocation to equity holdings¹

Percentage of consistent Roth IRA investors with 100 percent equity holdings¹ by age²



¹ Equity holdings include equities, equity funds, and the equity portion of balanced funds at year-end.

² Age is based on the age of the Roth IRA investor in 2018.

Note: Consistent Roth IRA investors are 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018.

Source: The IRA Investor Database™

FIGURE 1.9

Changes in Zero Allocation to Equity Holdings Among Consistent Roth IRA Investors

Percentage of consistent Roth IRA investors by age, year-end

Age	Zero in 2010	Moved away from zero by 2018	Remained at zero	Moved to zero by 2018	Net change	Zero in 2018
26 to 29	3.3%	-2.0%	1.2%	0.6%	-1.5%	1.8%
30 to 34	3.0	-1.8	1.3	0.6	-1.1	1.9
35 to 39	2.7	-1.4	1.3	0.7	-0.7	2.0
40 to 44	2.8	-1.4	1.4	0.9	-0.5	2.3
45 to 49	3.3	-1.5	1.8	1.1	-0.4	2.9
50 to 54	4.0	-1.8	2.2	1.3	-0.5	3.5
55 to 59	5.1	-2.3	2.8	1.7	-0.6	4.5
60 to 64	6.1	-2.9	3.2	2.1	-0.8	5.3
65 to 69	7.4	-3.5	3.9	2.3	-1.1	6.3
70 to 74	8.7	-4.0	4.7	2.4	-1.7	7.0
75 or older	9.9	-4.1	5.8	2.4	-1.6	8.3
All	5.0	-2.3	2.7	1.5	-0.8	4.2
26 to 59	3.6	-1.7	1.9	1.1	-0.6	3.0
60 to 69	6.7	-3.1	3.6	2.2	-0.9	5.8
70 or older	9.3	-4.0	5.2	2.4	-1.6	7.7

Note: The sample is 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018. Equity holdings include equities, equity funds, and the equity portion of balanced funds at year-end.

Source: The IRA Investor Database™

FIGURE 1.10

Changes in 100 Percent Allocation to Equity Holdings Among Consistent Roth IRA Investors

Percentage of consistent Roth IRA investors by age, year-end

Age	100 percent in 2010	Moved away from 100 percent by 2018	Remained at 100 percent	Moved to 100 percent by 2018	Net change	100 percent in 2018
26 to 29	48.7%	-4.9%	43.8%	6.3%	1.4%	50.1%
30 to 34	50.5	-5.7	44.8	4.8	-0.9	49.6
35 to 39	51.2	-5.7	45.6	4.4	-1.2	50.0
40 to 44	54.1	-5.6	48.5	4.1	-1.5	52.6
45 to 49	56.6	-5.8	50.8	4.0	-1.8	54.8
50 to 54	55.9	-6.3	49.6	4.1	-2.2	53.7
55 to 59	53.1	-7.2	45.9	4.3	-2.9	50.2
60 to 64	48.2	-7.9	40.3	5.0	-2.9	45.3
65 to 69	44.4	-7.9	36.5	5.9	-2.0	42.4
70 to 74	44.2	-7.3	37.0	6.4	-0.8	43.4
75 or older	46.5	-6.5	40.1	6.2	-0.2	46.3
All	51.2	-6.6	44.6	4.8	-1.8	49.4
26 to 59	53.9	-6.1	47.8	4.3	-1.8	52.0
60 to 69	46.5	-7.9	38.6	5.4	-2.5	44.0
70 or older	45.3	-6.9	38.5	6.3	-0.5	44.8

Note: The sample is 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018. Equity holdings include equities, equity funds, and the equity portion of balanced funds at year-end.

Source: The IRA Investor Database™

Changes in Consistent Individual Investors' Roth IRA Balances Between 2010 and 2018 by Investor Age

Analysis of the group of 2.2 million consistent Roth IRA investors 2010 to 2018 finds that investor actions and the impact of the stock market varied across traditional IRA investors by age. Though exposure to equity holdings, on average, was higher for younger Roth IRA investors, only a small share of Roth IRA investors of any age completely eschewed equity holdings between 2010 and 2018 (Figures 1.8, 1.9, and 1.10). Contribution activity edged back only a bit in the wake of the financial crisis (Figure 1.4). Conversion and rollover activity increased as a result of rule changes, and both can provide boosts to Roth IRA balances. Withdrawal activity edged up in 2012, 2013, 2014, 2015, 2016, 2017, and 2018 (Figures 1.4 and 1.6), although very few Roth IRA investors take withdrawals. Altogether, these forces combine to influence the balances held in Roth IRAs.

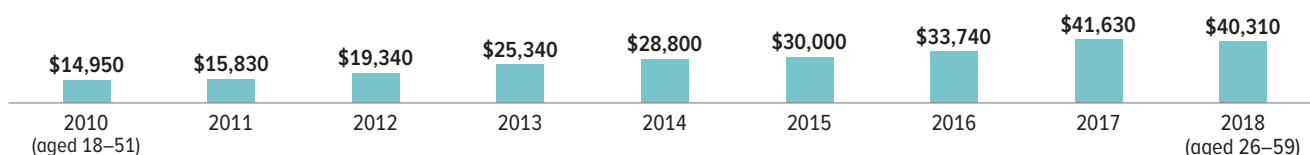
Roth IRA investors generally saw growth in their Roth IRA balances between year-end 2010 and year-end 2018. All told, the average Roth IRA balance among consistent Roth IRA investors aged 26 to 59 at year-end 2018 was \$40,310 at year-end 2018, more than double the year-end 2010 average balance of \$14,950 (Figure 1.11). The average Roth IRA balance among this group rose each successive year, reaching \$41,630 at year-end 2017, before falling to \$40,310 at year-end 2018. Movement in the average account balance is not as dramatic as the changes observed in the stock market because the majority of these investors had at least some non-equity investments in their Roth IRAs.⁵³ In addition, in any given year, about three in 10 had contributions, and fewer than one in 25 had withdrawals (Figure 1.4). Changes in the average account balance varied with investor age (Figure 1.12).

FIGURE 1.11

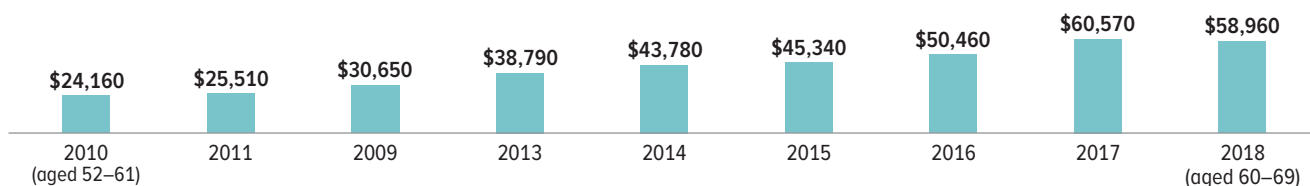
Roth IRA Balances Among Consistent Roth IRA Investors

Average Roth IRA balance for consistent Roth IRA investors, year-end

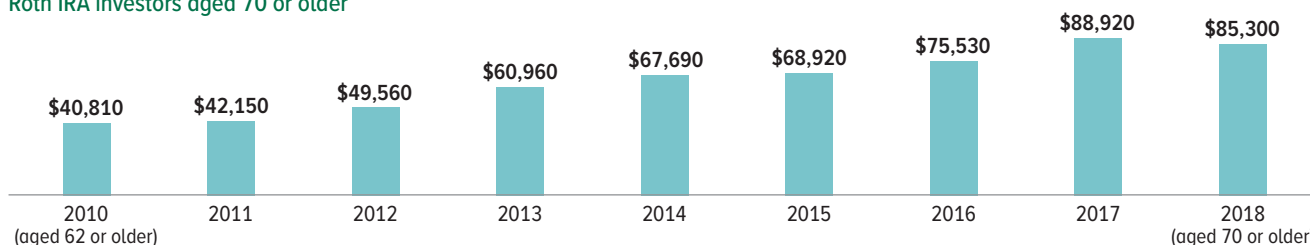
Roth IRA investors aged 26 to 59



Roth IRA investors aged 60 to 69



Roth IRA investors aged 70 or older



Note: Consistent Roth IRA investors are 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018. Age is based on the age of the Roth IRA investor in 2018. See Figure 1.12 for additional detail.

Source: The IRA Investor Database™

FIGURE 1.12

Roth IRA Balances Among Consistent Roth IRA Investors by Investor Age

Average Roth IRA balance for consistent Roth IRA investors by age, year-end

Age	2010	2011	2012	2013	2014	2015	2016	2017	2018
26 to 29	\$6,710	\$7,460	\$9,550	\$13,080	\$15,460	\$16,710	\$19,540	\$25,070	\$24,740
30 to 34	8,210	9,290	12,020	16,470	19,340	20,690	24,020	30,400	29,740
35 to 39	11,130	12,170	15,350	20,570	23,630	24,830	28,310	35,390	34,250
40 to 44	13,810	14,680	18,080	23,790	27,030	28,120	31,700	39,290	37,920
45 to 49	15,790	16,540	20,080	26,210	29,630	30,680	34,310	42,200	40,680
50 to 54	17,720	18,480	22,230	28,820	32,510	33,670	37,580	46,040	44,550
55 to 59	19,410	20,350	24,500	31,620	35,830	37,230	41,580	50,730	49,310
60 to 64	22,210	23,450	28,230	36,010	40,740	42,240	47,070	56,700	55,090
65 to 69	26,490	27,980	33,550	42,120	47,420	49,050	54,510	65,210	63,600
70 to 74	32,930	34,430	41,050	51,100	57,290	58,910	65,130	76,970	74,000
75 or older	49,210	50,360	58,620	71,470	78,760	79,570	86,610	101,660	97,350
All	20,370	21,410	25,790	32,970	37,190	38,470	42,880	51,980	50,290
26 to 59	14,950	15,830	19,340	25,340	28,800	30,000	33,740	41,630	40,310
60 to 69	24,160	25,510	30,650	38,790	43,780	45,340	50,460	60,570	58,960
70 or older	40,810	42,150	49,560	60,960	67,690	68,920	75,530	88,920	85,300

Note: Consistent Roth IRA investors are 2.2 million Roth IRA investors aged 26 or older in 2018 with an account balance from year-end 2010 through year-end 2018. Age is based on the age of the Roth IRA investor in 2018.

Source: The IRA Investor Database™

CHAPTER 2

Roth IRA Investors' Contribution Activity in 2018

Policymakers created Roth IRAs to provide taxpayers with (1) the option of paying taxes now on contributions going into Roth IRAs, (2) the ability to reinvest interest and dividends without being taxed, and (3) the ability to take qualified withdrawals tax-free. There are income restrictions on Roth IRA contribution activity, but in contrast to traditional IRAs, older workers (aged 70½ or older) are permitted to contribute.⁵⁴ The majority of new Roth IRAs are opened with contributions. In fact, contributions provide steady inflows into Roth IRAs (see Figure 1.2), and in most years, aggregate contributions to Roth IRAs have been greater than aggregate contributions to traditional IRAs.⁵⁵ This chapter analyzes the contribution activity for a snapshot, or cross section, of Roth IRA investors, primarily focusing on how contribution activity varied in 2018 by investor age.

Contributions Often Were the Source of New Roth IRAs in 2018

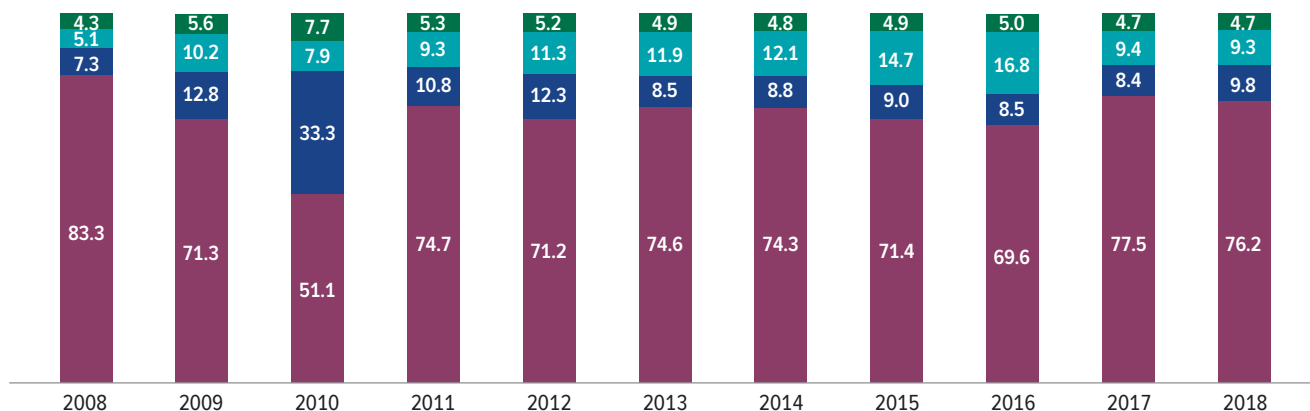
Roth IRAs can be opened with contributions, conversions, or rollovers, but contributions tend to be the most common source for new Roth IRAs. In 2018, more than three-quarters (76.2 percent) of new Roth IRAs in the IRA Investor Database were opened only with contributions (Figure 2.1). Another 9.8 percent were opened only with conversions, and 9.3 percent were opened only with rollovers. Another 4.7 percent of new Roth IRAs in 2018 were opened through a combination of contributions, conversions, and/or rollovers. Contributions have historically been the most common way to open a new Roth IRA; however, when special tax treatment is available for conversions, they tend to become more important than usual (see chapter 3 for discussion of conversion activity). For example, in 2010, when the income limits on conversions were lifted and individuals could spread the tax bill over the next two years, one-third of new Roth IRAs were opened only with conversions, while about half were opened only with contributions.

FIGURE 2.1

Paths to Roth IRA Ownership

Percentage of new Roth IRAs

- Combination of contribution, conversion, and/or rollover
- Rollover only
- Conversion only
- Contribution only



Note: New Roth IRAs are accounts that did not exist in the IRA Investor Database in the prior year and were opened by one of the paths in the year indicated. The calculation excludes Roth IRAs that changed financial services firms. See Figure A.4 in the appendix for additional information on 2018.

Sources: The IRA Investor Database™

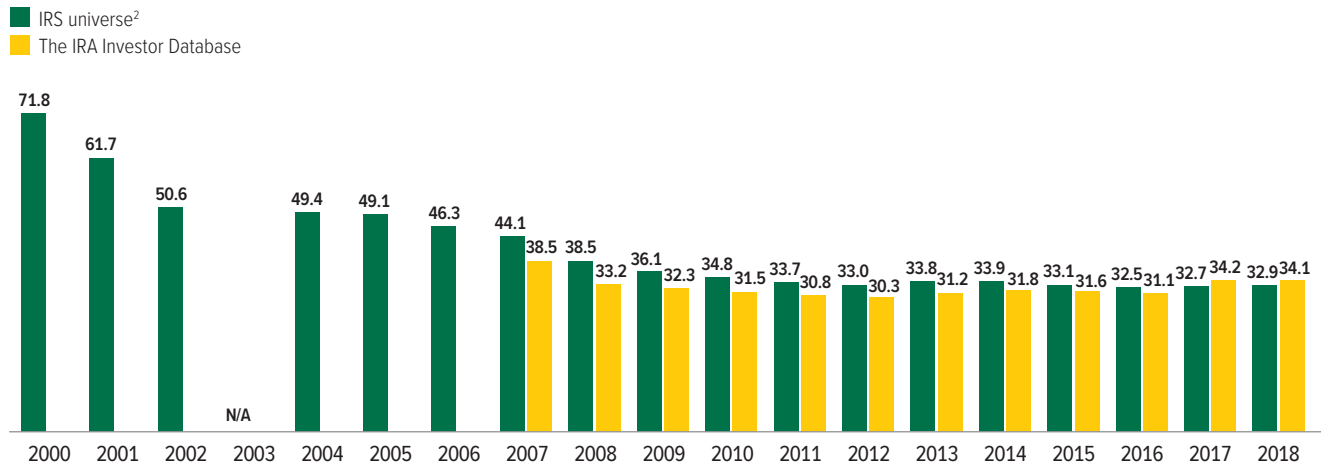
Contributions to Roth IRAs

Between 2008 and 2018, about three in 10 Roth IRA investors aged 18 or older have made contributions to their Roth IRAs in any given year (Figure 2.2). For example, in tax year 2018, 34.1 percent of Roth IRA investors aged 18 or older made contributions to their Roth IRAs. This recent contribution activity is slightly lower than for the earliest years, likely because of the growing base of Roth IRA investors, among other factors. As the base of Roth IRA investors grows, so too does the likelihood that some investors experience income growth that moves them out of eligibility to contribute to their Roth IRAs.⁵⁶ Some Roth IRA investors who were ineligible to contribute may have opened their accounts with conversions. Others may prefer to direct savings into their traditional IRAs.⁵⁷ Nevertheless, contribution activity is higher in Roth IRAs (36.9 percent of Roth IRA investors aged 18 to 69 versus 10.9 percent of traditional IRA investors aged 18 to 69 in tax year 2018).⁵⁸

FIGURE 2.2

Roth IRA Contribution Rates

Percentage of Roth IRA investors aged 18 or older with contributions¹



¹ This group is Roth IRA investors aged 18 or older who made contributions to their Roth IRAs in the tax year indicated.

² In the IRS universe, data are for Roth IRA investors of all ages.

N/A = not available

Sources: The IRA Investor Database™ and Internal Revenue Service Statistics of Income Division

Contributions to Roth IRAs in 2018 by Investor Age

Younger Roth IRA investors were more likely to contribute to their Roth IRAs than were older Roth IRA investors (Figure 2.3). Part of the reason for the lower incidence of contribution activity among older investors is the increased likelihood that some of these investors are no longer eligible to make contributions (having created the Roth IRAs to hold conversions or with contributions made in the past when their incomes were lower, and they were eligible to contribute). Among Roth IRA investors aged 18 to 24 making contributions in tax year 2018, 40.9 percent opened their Roth IRA with that contribution. In contrast, only 5.1 percent of Roth IRA investors aged 75 or older in 2018 did the same.

The highest level of contribution activity in tax year 2018, 64.5 percent, was observed among Roth IRA investors aged 18 to 24 (Figure 2.3). This level fell across the remaining age groups—for example, in tax year 2018, 35.3 percent of Roth IRA investors in their early forties, 16.1 percent of Roth IRA investors in their late sixties, 8.8 percent of Roth IRA investors in their early seventies, and 4.6 percent of Roth IRA investors aged 75 or older made contributions.

FIGURE 2.3

Contribution Activity of Roth IRA Investors by Investor Age

Number of Roth IRA investors and Roth IRA contributors¹ by age, 2018

Age	Roth IRA investors		Roth IRA contributors ¹		Memo:	
	Number Thousands	Share ² Percent	Number Thousands	Share ² Percent	Percentage of Roth IRA investors who made contributions ¹	Percentage of contributions that created new accounts ³
18 to 24	159.3	3.9%	102.7	7.3%	64.5%	40.9%
25 to 29	317.6	7.7	188.3	13.4	59.3	23.8
30 to 34	433.3	10.5	213.1	15.2	49.2	15.7
35 to 39	465.8	11.3	189.2	13.5	40.6	11.2
40 to 44	417.9	10.1	147.6	10.5	35.3	9.2
45 to 49	422.0	10.2	134.9	9.6	32.0	8.5
50 to 54	408.2	9.9	125.4	8.9	30.7	8.6
55 to 59	425.5	10.3	128.0	9.1	30.1	8.2
60 to 64	384.4	9.3	99.7	7.1	25.9	7.4
65 to 69	302.5	7.3	48.8	3.5	16.1	6.8
70 to 74	206.7	5.0	18.1	1.3	8.8	7.2
75 or older	178.3	4.3	8.2	0.6	4.6	5.1
All	4,121.6	100.0	1,404.1	100.0	34.1	14.3

¹ This group is Roth IRA investors aged 18 or older who made contributions to their Roth IRAs in tax year 2018.

² Share is the percentage of the total.

³ New Roth IRAs are accounts that did not exist in the IRA Investor Database in 2017.

Source: The IRA Investor Database™

Roth IRA Contribution Amounts in 2018 by Investor Age

In 2018, the Roth IRA contribution limit was \$5,500 for individuals younger than 50 and \$6,500 for individuals aged 50 or older because of catch-up contributions (Figure 2.5). Even though older Roth IRA investors are less likely than younger investors to make contributions, they tend to make larger contributions. Among Roth IRA contributors aged 18 to 24, the median contribution was \$2,630 in tax year 2018 (Figure 2.4). For Roth IRA contributors aged 45 to 49, the median contribution was \$3,200 in tax year 2018. Among contributors aged 65 or older, the median contribution was \$6,500, meaning that more than half of those who made contributions did so at the full contribution amount, including catch-up contributions (Figure 2.5).

FIGURE 2.4

Roth IRA Contribution Amounts by Investor Age

Number and amount of contributions¹ to Roth IRAs by age, 2018

Age	Roth IRA contributors ¹		Roth IRA contributions ¹		Roth IRA contribution amount	
	Number Thousands	Share ² Percent	Amount Millions	Share ² Percent	Median	Mean
18 to 24	102.7	7.3%	\$310.8	6.1%	\$2,630	\$3,030
25 to 29	188.3	13.4	670.2	13.2	5,000	3,560
30 to 34	213.1	15.2	751.1	14.8	4,650	3,530
35 to 39	189.2	13.5	626.7	12.3	3,500	3,310
40 to 44	147.6	10.5	478.2	9.4	3,000	3,240
45 to 49	134.9	9.6	441.9	8.7	3,200	3,270
50 to 54	125.4	8.9	484.1	9.5	4,000	3,860
55 to 59	128.0	9.1	535.5	10.5	5,100	4,180
60 to 64	99.7	7.1	444.3	8.7	6,000	4,460
65 to 69	48.8	3.5	223.9	4.4	6,500	4,590
70 to 74	18.1	1.3	83.9	1.6	6,500	4,620
75 or older	8.2	0.6	37.5	0.7	6,480	4,580
All	1,404.1	100.0	5,088.2	100.0	4,200	3,620

¹ This group is Roth IRA investors aged 18 or older who made contributions to their Roth IRAs in tax year 2018.

² Share is the percentage of the total.

Source: The IRA Investor Database™

FIGURE 2.5

Traditional and Roth IRA Contribution Limits Set by the Internal Revenue Code



Note: After 2008, IRA contributions are indexed for inflation in \$500 increments. IRA catch-up contributions are not indexed for inflation.

Source: Investment Company Institute summary of US Internal Revenue Code

Roth IRA Investors' Contribution Amounts Varied in 2018

Although four in 10 Roth IRA contributors contributed the maximum amount in tax year 2018, the amounts investors contributed varied widely. For example, while 35.6 percent of Roth IRA contributors aged 18 to 69 contributed \$2,000 or less, 27.9 percent contributed \$5,500, and 14.2 percent made at least some portion of a catch-up contribution—contributing more than \$5,500 up to the maximum of \$6,500 (Figure 2.6). Overall, 39.9 percent of all Roth IRA contributors contributed the maximum amount allowed by law, including catch-up contributions for Roth IRA investors aged 50 or older. In fact, 42.1 percent of Roth IRA investors aged 50 or older made the full age-allowed contribution of \$6,500 in tax year 2018.

FIGURE 2.6

Four in 10 Roth IRA Contributors Contributed at the Limit in 2018

Percentage of Roth IRA contributors¹ contributing the amount indicated by age, 2018

Age	Amount of Roth IRA contribution ²									
	≤\$2,000	>\$2,000 to ≤\$3,000	>\$3,000 to ≤\$4,000	>\$4,000 to <\$5,000	\$5,000	>\$5,000 to <\$5,500	\$5,500 ³	>\$5,500 to ≤\$6,000 ³	>\$6,000 to <\$6,500 ³	\$6,500 ³
18 to 24	44.9%	9.4%	5.2%	2.7%	1.8%	1.7%	34.3%	0.0%	0.0%	0.0%
25 to 29	34.4	8.2	4.3	2.7	1.3	3.0	46.1	0.0	0.0	0.0
30 to 34	34.8	8.7	4.5	3.2	1.1	4.3	43.4	0.0	0.0	0.0
35 to 39	38.7	9.6	4.8	3.6	1.0	5.3	37.0	0.0	0.0	0.0
40 to 44	39.8	10.3	4.8	4.0	1.2	5.8	34.1	0.0	0.0	0.0
45 to 49	39.0	10.5	5.1	4.1	1.4	5.9	34.0	0.0	0.0	0.0
50 to 54	35.2	10.0	5.4	3.8	1.4	2.1	1.3	2.4	3.5	34.9
55 to 59	30.3	9.5	5.3	3.3	1.4	1.1	0.5	3.5	4.2	40.9
60 to 64	26.2	8.6	5.0	3.1	1.5	1.0	0.5	4.1	3.6	46.4
65 to 69	24.5	7.9	4.8	3.0	1.5	0.8	0.5	3.8	2.8	50.4
70 to 74	23.6	7.8	5.2	3.1	1.7	1.0	0.5	4.0	2.4	50.7
75 or older	24.1	7.6	5.4	3.5	2.4	1.0	0.6	4.2	1.9	49.3
All	35.4	9.3	4.9	3.4	1.3	3.5	27.3	1.0	1.1	12.8
Memo:										
18 to 69	35.6	9.3	4.8	3.4	1.3	3.5	27.9	1.0	1.1	12.1
50 or older	29.7	9.2	5.2	3.3	1.5	1.3	0.7	3.4	3.6	42.1

¹ This group is Roth IRA investors aged 18 or older who made contributions to their Roth IRAs in tax year 2018.

² The contribution limit in tax year 2018 was \$5,500 for Roth IRA investors younger than 50 and \$6,500 for Roth IRA investors aged 50 or older. Income limits may phase these amounts down for deductible contributions for some taxpayers.

³ In total, 39.9 percent of Roth IRA contributors appear to have contributed at the limit. If individuals who were apparently eligible for catch-up contributions—and who contributed at least \$5,500—are included, 42.2 percent of Roth IRA contributors made contributions at the limit.

Note: The sample is 1.4 million Roth IRA investors aged 18 or older with contributions in tax year 2018.

Source: The IRA Investor Database™

Older Roth IRA Contributors Were More Likely to Contribute at the Limit in 2018

About 40 percent of Roth IRA contributors contributed at the limit in tax year 2018, and older Roth IRA contributors were more likely to contribute at the limit. For example, 34.3 percent of Roth IRA contributors aged 18 to 24 and 43.4 percent of Roth IRA contributors aged 30 to 34 contributed at the \$5,500 limit in tax year 2018 (Figure 2.7). Among contributors aged 65 to 69, 50.4 percent contributed at the full \$6,500 limit, including catch-up contributions. If investors who contributed at least \$5,500 are considered, then 57.5 percent of Roth IRA contributors aged 65 to 69 reached the limit. Overall, 42.2 percent of Roth IRA contributors in tax year 2018 contributed at least \$5,500 to their Roth IRAs.

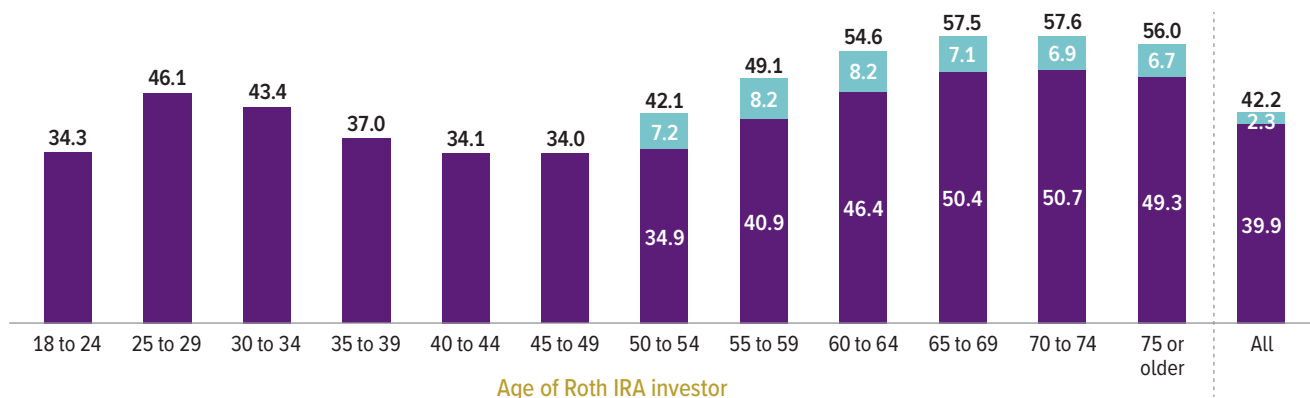
FIGURE 2.7

Older Roth IRA Contributors Were More Likely to Contribute at the Limit

Percentage of Roth IRA contributors¹ contributing at the limit² as a percentage of Roth IRA contributors by age, tax year 2018

Amount of Roth IRA contribution

- Made at least a \$5,500 contribution
- Made full age-allowed contribution



¹ This group is Roth IRA investors aged 18 or older who made contributions to their Roth IRAs in tax year 2018.

² The contribution limit in tax year 2018 was \$5,500 for Roth IRA investors younger than 50 and \$6,500 for Roth IRA investors aged 50 or older. Income limits may phase these amounts down for some taxpayers.

Note: The sample is 1.4 million Roth IRA investors aged 18 or older with contributions in tax year 2018.

Source: The IRA Investor Database™

Persistence in Contribution Activity Among Roth IRA Investors from 2017 to 2018

In the IRA Investor Database for 2018, there are 3.8 million Roth IRA investors aged 19 or older who also had Roth IRAs at the same financial services firm in the 2017 database. The tracking of the same individual IRA investors over time makes it possible to analyze persistence in contribution activity. The persistence in both the decision to contribute at all and the decision to contribute at the age-allowed limit is very high. This reinforces a key insight about IRA contributors that emerges from the earlier analysis: for Roth IRA investors who make contributions in a given year, the IRA is likely a key saving vehicle.

The overall persistence in Roth IRA contribution activity between 2017 and 2018 is 82 percent, which means that more than eight in 10 Roth IRA investors who contributed in tax year 2017 also contributed in tax year 2018 (Figure 2.8).

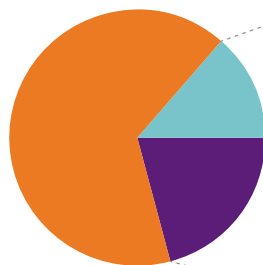
FIGURE 2.8

Most Roth IRA Investors at the Limit in Tax Year 2017 Continued to Contribute at the Limit in Tax Year 2018

2017 contribution amount

Percentage of Roth IRA investors present in both 2017 and 2018

65.6%
Made no contribution¹



13.6%
Contributed at the limit²

20.8%
Contributed less than the limit²

2018 contribution amount

Percentage of Roth IRA investors by 2017 contribution amount

70.1
Contributed at the limit²

10.9
Contributed less than the limit²

19.1
Made no contribution

7.0
Contributed at the limit²

75.9
Contributed less than the limit²

17.1
Made no contribution

¹ Among the 65.6 percent of Roth IRA investors who did not contribute in tax year 2017, 2.4 percent contributed at the limit in tax year 2018 and 2.6 percent contributed less than the limit in tax year 2018.

² The contribution limit in tax years 2017 and 2018 was \$5,500 for Roth IRA investors younger than 50 and \$6,500 for Roth IRA investors aged 50 or older. Income limits may phase these amounts down for some taxpayers. Investors were considered at the limit if they contributed their full age-allowed amount.

Note: The sample is 3.8 million Roth IRA investors aged 19 or older in 2018 with Roth IRA balances in both 2017 and 2018.

Source: The IRA Investor Database™

Contributions at the Limit Tend to Persist

Most Roth IRA investors who contributed at the full legal limit in tax year 2017 continued to contribute in tax year 2018—and did so at the limit again. Among Roth IRA investors aged 19 or older in 2018 with account balances in both 2017 and 2018, 34.4 percent contributed to their Roth IRAs in tax year 2017, with 13.6 percent contributing at the limit (Figure 2.8). Among those contributing at the limit in tax year 2017, about eight in 10 contributed again in tax year 2018, with 70.1 percent continuing to contribute at the limit. Among those contributing less than the limit in tax year 2017, more than eight in 10 contributed again in tax year 2018, with 75.9 percent continuing to contribute less than the limit, and 7.0 percent increasing their contributions up to the full limit.

CHAPTER 3

Roth IRA Investors' Conversion and Rollover Activity in 2018

When Congress created Roth IRAs, contributions (subject to income limits), conversions (subject to income limits until 2010), and rollovers were allowed. Direct rollovers from designated Roth accounts in retirement plans to Roth IRAs have been permitted since 2006, and direct rollovers of non-Roth qualified retirement plan accumulations into Roth IRAs have been permitted since 2008. Although contributions are the main inflows to, and origin of, Roth IRAs, conversion activity responds to rule changes designed to promote Roth IRAs. A conversion occurs when an individual withdraws money from a non-Roth IRA, pays the taxes due on the withdrawal, and converts the assets into a Roth IRA.⁵⁹ Rollover activity is extremely rare into Roth IRAs to date, but recent rule changes and the increased adoption of Roth features in 401(k) plans may serve to increase Roth rollovers in the future.⁶⁰

This chapter analyzes the conversion activity of Roth IRA investors, focusing on variation in conversion activity in 2018 by investor age. It also briefly examines rollover activity among Roth IRAs, where direct rollovers from non-Roth employer-sponsored plan accounts have only been possible since 2008. Direct rollovers from designated Roth accounts in employer-sponsored retirement plans to Roth IRAs have been permitted since 2006. Finally, it explores the variation in Roth IRA balances in 2018 by the presence of recent conversions and recent rollovers

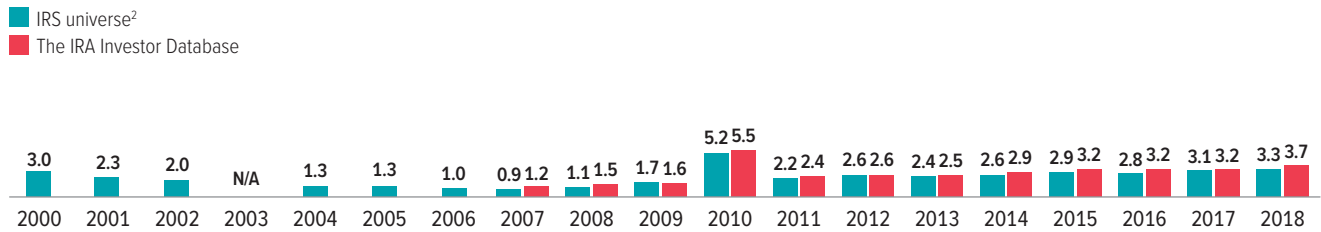
Roth IRA Conversion Activity

Typically, few Roth IRA investors have conversions. Between 2004 and 2009, less than 2 percent of Roth IRA investors had conversions in any given year (Figure 3.1). In 2010, when income limits were lifted for conversions and the taxes owed on amounts converted could be spread over 2011 and 2012,⁶¹ more than 5 percent of Roth IRA investors had conversions. Since 2010, conversion activity has been higher than before, but is at lower levels now that the special tax payment option is no longer available. In 2018, 3.7 percent of Roth IRA investors had conversions into their Roth IRAs.

FIGURE 3.1

Roth IRA Investors' Conversion Activity Responds to Tax Law Changes

Percentage of Roth IRA investors aged 18 or older with conversions¹



¹ This group is Roth IRA investors aged 18 or older who had conversions in the year indicated.

² In the IRS universe, data are for Roth IRA investors of all ages.

N/A = not available

Sources: The IRA Investor Database™ and Internal Revenue Service Statistics of Income Division

Roth IRA Conversion Activity in 2018 by Investor Age

In 2018, 3.7 percent of Roth IRA investors made conversions, and conversion activity varied by investor age. For example, 1.2 percent of Roth IRA investors aged 18 to 24 had conversions, compared with 5.5 percent of Roth IRA investors aged 35 to 39, 2.6 percent of Roth IRA investors aged 55 to 59, and 5.0 percent of Roth IRA investors aged 65 to 69 (Figure 3.2). Roth IRA conversion activity was distributed across all age groups.

The bulk of younger Roth IRA investors making conversions in 2018 did so to open a new account. That includes more than half of Roth IRA investors aged 18 to 24 and nearly four in 10 Roth IRA investors aged 25 to 29 with conversions in 2018 (Figure 3.2). Still, even among Roth IRA investors aged 65 to 69 with conversions in 2018, 15.3 percent of those conversions opened new accounts.

FIGURE 3.2

Conversion Activity of Roth IRA Investors by Investor Age

Number of Roth IRA investors and Roth IRA conversions¹ by age, 2018

Age	Roth IRA investors		Roth IRA investors with conversions ¹		Memo:	
	Number Thousands	Share ² Percent	Number Thousands	Share ² Percent	Percentage of Roth IRA investors who made conversions ¹	Percentage of conversions that created new accounts ²
18 to 24	159.3	3.9%	1.9	1.3%	1.2%	54.8%
25 to 29	317.6	7.7	10.4	6.8	3.3	37.6
30 to 34	433.3	10.5	23.4	15.3	5.4	27.5
35 to 39	465.8	11.3	25.8	16.9	5.5	20.7
40 to 44	417.9	10.1	18.5	12.1	4.4	17.1
45 to 49	422.0	10.2	13.6	8.9	3.2	16.2
50 to 54	408.2	9.9	11.4	7.4	2.8	16.2
55 to 59	425.5	10.3	11.0	7.2	2.6	17.7
60 to 64	384.4	9.3	12.8	8.3	3.3	18.3
65 to 69	302.5	7.3	15.1	9.9	5.0	15.3
70 to 74	206.7	5.0	5.6	3.7	2.7	12.9
75 or older	178.3	4.3	3.5	2.3	2.0	11.8
All	4,121.6	100.0	153.0	100.0	3.7	20.7

¹ This group is Roth IRA investors aged 18 or older who converted traditional IRA assets to a Roth IRA in tax year 2018.

² Share is the percentage of the total.

³ New Roth IRAs are accounts that did not exist in the IRA Investor Database in 2017.

Source: The IRA Investor Database™

Roth IRA Conversion Amounts in 2018 by Investor Age

Conversion amounts tend to rise with investor age, reflecting the longer amount of time that older investors have had to build retirement accumulations outside of Roth IRAs.⁶² The median conversion amount among Roth IRA investors aged 18 to 24 with conversions in 2018 was \$3,280, rising to \$21,010 for Roth IRA investors aged 65 to 69 and \$15,000 for investors aged 75 or older (Figure 3.3). Mean conversion amounts rose from \$4,160 among Roth IRA investors aged 18 to 24 with conversions in 2018, to \$40,390 among those aged 65 to 69 and \$34,380 for investors aged 75 or older. Although Roth IRA investors aged 50 or older accounted for nearly 40 percent of conversions, nearly 70 percent of the money converted in 2018 came from this group. In fact, Roth IRA investors aged 65 to 69 accounted for nearly one-quarter of all conversion money, reflecting their high average conversion amounts as well as the large number of conversions that came from this age group.

FIGURE 3.3

Roth IRA Investors with Conversions by Investor Age

Number and amount of conversions¹ to Roth IRAs by age, 2018

Age	Roth IRA investors with conversions ¹		Roth IRA conversions ¹		Roth IRA conversion amount	
	Number Thousands	Share ² Percent	Amount Millions	Share ² Percent	Median	Mean
18 to 24	1.9	1.3%	\$8.0	0.3%	\$3,280	\$4,160
25 to 29	10.4	6.8	72.3	2.9	5,500	6,930
30 to 34	23.4	15.3	178.4	7.2	5,500	7,610
35 to 39	25.8	16.9	205.0	8.3	5,500	7,950
40 to 44	18.5	12.1	161.6	6.5	5,500	8,740
45 to 49	13.6	8.9	137.6	5.6	5,500	10,140
50 to 54	11.4	7.4	138.5	5.6	6,500	12,170
55 to 59	11.0	7.2	201.7	8.2	6,510	18,400
60 to 64	12.8	8.3	416.4	16.9	13,350	32,660
65 to 69	15.1	9.9	609.7	24.7	21,010	40,390
70 to 74	5.6	3.7	221.5	9.0	18,000	39,320
75 or older	3.5	2.3	119.7	4.8	15,000	34,380
All	153.0	100.0	2,470.6	100.0	5,790	16,150

¹ This group is Roth IRA investors aged 18 or older who converted traditional IRA assets to a Roth IRA in tax year 2018.

² Share is the percentage of the total.

Source: The IRA Investor Database™

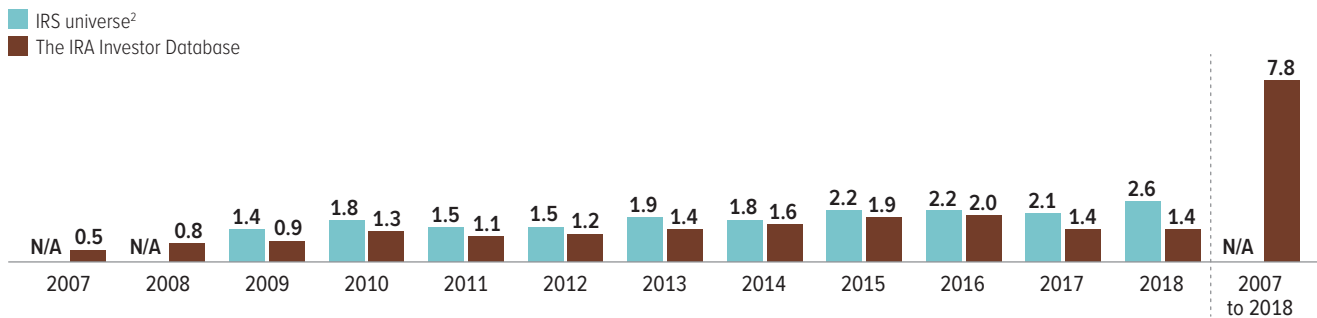
Roth IRA Rollover Activity Is Rare

Roth IRAs have always been permitted to accept rollovers from other Roth IRAs, and since 2006, they have been able to accept rollovers directly from designated Roth accounts in employer-sponsored retirement plans (which could be established starting in 2006). Direct rollovers of non-Roth qualified retirement plan accumulations into Roth IRAs have been permitted since 2008. In the database, rollovers between IRAs generally are not reported as rollovers; rather, it tends to capture rollovers from employer-sponsored retirement plans to IRAs. In any given year, only about 2 percent of Roth IRA investors had rollovers into their Roth IRAs (Figure 3.4). This low number could be explained by the fact that rollovers tend not to be repeated from year to year—but even when rollover activity is aggregated from 2007 to 2018, only 7.8 percent of Roth IRA investors at year-end 2018 had made rollovers into their Roth IRAs.⁶³

FIGURE 3.4

Very Few Roth IRA Investors Have Rollovers

Percentage of Roth IRA investors aged 18 or older with rollovers¹



¹ This group is Roth IRA investors aged 18 or older who had rollovers into their Roth IRAs in the year or years indicated.

² In the IRS universe, data are for Roth IRA investors of all ages.

Note: Rollovers made prior to 2007, as well as rollovers made prior to a change in financial services providers, cannot be identified in the database.

N/A = not available

Sources: The IRA Investor Database™ and Internal Revenue Service Statistics of Income Division

The low level of rollover activity in Roth IRAs is in stark contrast to the high rollover activity in traditional IRAs. Traditional IRAs most often are opened with rollovers from employer-sponsored retirement plans (defined benefit and defined contribution), and in any given year about one in 10 traditional IRA investors aged 18 to 74 have rollovers.⁶⁴ In 2018, \$516.7 billion in rollovers flowed into traditional IRAs,⁶⁵ compared with rollovers of \$12.5 billion into Roth IRAs (see Figure 1.2). Rollovers tend to occur as individuals change jobs or retire, and thus, typically different groups of individuals have rollovers each year.⁶⁶ Household survey data indicate that 59 percent of traditional IRA-owning households in 2020 had rollovers in their traditional IRAs, while only 21 percent of Roth IRA-owning households indicated that some of the assets in their Roth IRAs initially were employer-sponsored retirement plan assets.⁶⁷

Conversions and Rollovers Tend to Have a Positive Impact on Roth IRA Balances

Conversions into Roth IRAs appear to have a substantial, positive impact on the size of account balances.⁶⁸ The impact of recent conversions can be seen most clearly among older Roth IRA investors. For example, among Roth IRA investors aged 70 to 74 with conversions between 2010 and 2018, the median Roth IRA balance at year-end 2018 was \$102,120, compared with \$22,990 for those without recent conversions or rollovers (Figure 3.5). Household survey data also find a substantial effect of conversions on Roth IRA balances.⁶⁹ Recent rollovers into Roth IRAs also have a positive impact on the size of account balances, especially among older Roth IRA investors.

FIGURE 3.5

Recent Conversions and Rollovers Provide a Boost to Roth IRA Balances

Median account balances among Roth IRA investors by age, year-end 2018

Age	Recent Roth IRA Activity		
	Without recent conversion or recent rollover	With recent rollovers	With recent conversions
18 to 24	\$4,050	\$3,590	\$6,500
25 to 29	6,710	8,510	13,160
30 to 34	10,070	15,430	19,720
35 to 39	12,310	21,260	27,610
40 to 44	14,400	25,350	36,760
45 to 49	15,440	25,790	44,470
50 to 54	16,230	26,010	51,630
55 to 59	17,470	29,090	57,690
60 to 64	18,890	38,060	70,390
65 to 69	21,110	50,290	88,520
70 to 74	22,990	60,670	102,120
75 or older	26,280	67,890	108,500
All	13,820	23,410	42,820

Note: Recent conversions and rollovers are those that occurred between 2007 and 2018. Conversions or rollovers made prior to a change in financial services provider cannot be identified in the database. Roth IRA investors with both recent conversions and recent rollovers are counted in both the recent conversion and recent rollover groups. The sample is 4.1 million Roth IRA investors aged 18 or older at year-end 2018. At year-end 2018, 10.5 percent of Roth IRA investors had made conversions into their Roth IRAs between 2007 and 2018 and 7.8 percent of Roth IRA investors had made rollovers into their Roth IRAs between 2007 and 2018. See Figure 3.2 for sample counts by age group.

Source: The IRA Investor Database™

CHAPTER 4

Roth IRA Investors' Withdrawal Activity in 2018

IRA investors can decide when and how to draw down the assets they hold inside their Roth IRAs, although IRS penalties or distribution requirements may apply. This chapter first briefly reviews the distribution, or withdrawal, rules governing Roth IRAs. It then analyzes the withdrawal activity of Roth IRA investors, primarily focusing on variation in withdrawal activity in 2018 by investor age and size of Roth IRA balance.

The main distribution rules governing access to Roth IRAs involve whether five years have elapsed since the tax year of the first contribution to the Roth IRA and the investor's age.⁷⁰ For investors younger than 59½, distributions from Roth IRAs may be subject to a 10 percent penalty. However, as with traditional IRAs, there are some exceptions to the penalty, including distributions for the purchase of a first home (up to \$10,000) or certain qualified higher-education expenses.⁷¹ Unlike traditional IRAs, income tax typically is not due on qualified Roth IRA distributions and there are no RMDs for the original Roth IRA investor. However, inherited Roth IRAs must be distributed pursuant to RMD rules.⁷²

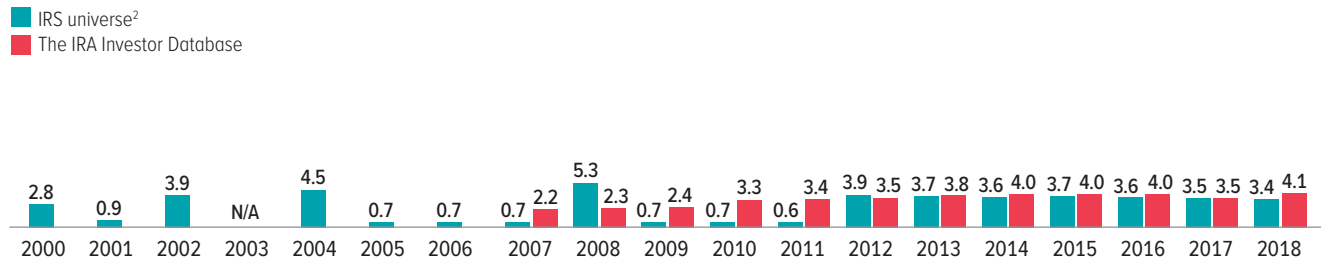
Roth IRA Withdrawal Activity

Very few Roth IRA investors take withdrawals from their Roth IRAs in any given year. Nevertheless, the percentage of Roth IRA investors taking distributions from their Roth IRAs in any given year has risen somewhat in the wake of the financial crisis. Analysis of Roth IRA investors in the IRA Investor Database in 2007, 2008, and 2009 shows that nearly 2.5 percent of Roth IRA investors had distributions in each of those years (Figure 4.1). The percentage taking distributions edged up to 3.3 percent in 2010, 3.4 percent in 2011, 3.5 percent in 2012, 3.8 percent in 2013 to 4.0 percent in 2014, 2015, and 2016. The percentage taking distributions declined to 3.5 percent in 2017 before rising to 4.1 percent in 2018.

FIGURE 4.1

Withdrawal Activity of Roth IRA Investors

Percentage of Roth IRA investors with withdrawals¹



¹ The figure reports the percentage of Roth IRA investors aged 18 or older at year-end who had withdrawals from their Roth IRAs in the tax year indicated.

² In the IRS universe, data are for Roth IRA investors of all ages.

N/A = not available

Sources: The IRA Investor Database™ and Internal Revenue Service Statistics of Income Division

Roth IRA Withdrawal Activity in 2018 by Investor Age

Not only do few Roth IRA investors take withdrawals in any given year, but withdrawal activity varies little across investor age. In the IRA Investor Database, only 4.1 percent of Roth IRA investors took withdrawals from their Roth IRAs in 2018, and withdrawal activity ranges from 2.2 percent of Roth IRA investors aged 18 to 24 to 7.3 percent among Roth IRA investors aged 65 to 69, edging down to 6.7 percent of Roth IRA investors aged 75 or older (Figure 4.2). Withdrawal activity does not vary much between Roth IRA investors facing the age-related penalty (those younger than 59½) and those older. On average, 3.1 percent of Roth IRA investors younger than 60 took withdrawals, compared with 6.9 percent of Roth IRA investors aged 60 or older. Withdrawal activity of the oldest Roth IRA investors varied little from the others, as RMDs generally do not apply (unless the Roth IRAs are inherited).

FIGURE 4.2

Withdrawal Activity of Roth IRA Investors by Investor Age

Number of Roth IRA investors and Roth IRA investors with withdrawals¹ by age, 2018

Age	Roth IRA investors		Roth IRA investors with withdrawals ¹		Memo: percentage of Roth IRA investors who had withdrawals ¹
	Number Thousands	Share ² Percent	Number Thousands	Share ² Percent	
18 to 24	159.3	3.9%	3.6	2.1%	2.2%
25 to 29	317.6	7.7	8.4	5.0	2.7
30 to 34	433.3	10.5	12.3	7.3	2.8
35 to 39	465.8	11.3	13.8	8.3	3.0
40 to 44	417.9	10.1	12.6	7.5	3.0
45 to 49	422.0	10.2	13.8	8.3	3.3
50 to 54	408.2	9.9	14.1	8.4	3.5
55 to 59	425.5	10.3	14.9	8.9	3.5
60 to 64	384.4	9.3	25.4	15.2	6.6
65 to 69	302.5	7.3	22.1	13.2	7.3
70 to 74	206.7	5.0	14.3	8.6	6.9
75 or older	178.3	4.3	12.0	7.2	6.7
All	4,121.6	100.0	167.3	100.0	4.1
Memo:					
18 to 59	3,049.7	77.0	93.5	55.9	3.1
60 to 69	686.9	17.3	47.5	28.4	6.9
70 or older	385.0	9.7	26.3	15.7	6.8
25 or older	3,962.3	100.0	163.8	97.9	4.1

¹ This group is Roth IRA investors aged 18 or older who had withdrawals from their Roth IRAs in tax year 2018.

² Share is the percentage of the total.

Note: Withdrawals resulting from excess contributions generally are excluded.

Source: The IRA Investor Database™

Roth IRA Withdrawal Amounts in 2018 by Investor Age

Roth IRA withdrawal amounts tend to be higher among older Roth IRA investors (Figure 4.3). In 2018, the median distribution among Roth IRA investors aged 18 to 24 with withdrawals was \$1,500, for those 25 to 29 it was \$3,000. The median withdrawal among Roth IRA investors aged 30 to 59 was less than \$5,000, while those aged 60 or older typically took \$5,000 or more in withdrawals. The average Roth IRA withdrawal amounts increased with investor age, rising from \$3,590 among the youngest Roth IRA investors to \$15,920 among the oldest.

FIGURE 4.3

Roth IRA Withdrawals by Investor Age

Number and amount of withdrawals¹ from Roth IRAs by age, 2018

Age	Roth IRA investors with withdrawals ¹		Roth IRA withdrawals ¹		Roth IRA withdrawal amount	
	Number Thousands	Share ² Percent	Amount Millions	Share ² Percent	Median	Mean
18 to 24	3.6	2.1%	\$12.8	0.8%	\$1,500	\$3,590
25 to 29	8.4	5.0	41.5	2.5	3,000	4,920
30 to 34	12.3	7.3	82.2	4.9	4,000	6,710
35 to 39	13.8	8.3	109.0	6.4	4,470	7,880
40 to 44	12.6	7.5	105.0	6.2	4,400	8,330
45 to 49	13.8	8.3	117.1	6.9	4,200	8,460
50 to 54	14.1	8.4	124.2	7.3	4,500	8,800
55 to 59	14.9	8.9	138.4	8.2	4,380	9,300
60 to 64	25.4	15.2	320.7	18.9	6,000	12,640
65 to 69	22.1	13.2	267.5	15.8	5,530	12,110
70 to 74	14.3	8.6	184.8	10.9	5,000	12,910
75 or older	12.0	7.2	191.3	11.3	6,000	15,920
All	167.3	100.0	1,694.4	100.0	5,000	10,130

¹ This group is Roth IRA investors aged 18 or older who had withdrawals from their Roth IRAs in tax year 2018.

² Share is the percentage of the total.

Note: Withdrawals resulting from excess contributions generally are excluded.

Source: The IRA Investor Database™

Roth IRA Withdrawal Activity in 2018 by Age and Account Balance

In the IRA Investor Database for 2018, there are 3.8 million Roth IRA investors aged 19 or older who also had Roth IRAs at the same financial services firm in the 2017 database. The tracking of the same individual IRA investors over time makes it possible to analyze the size of Roth IRA withdrawals in relation to year-end 2017 Roth IRA balances. Few Roth IRA investors take withdrawals in any given year, and withdrawal activity varies little across investor age and account size (Figure 4.4). In the IRA Investor Database, only 4.2 percent of Roth IRA investors aged 19 or older who also had Roth IRAs at the same financial services firm in the 2017 database took withdrawals from their Roth IRAs in 2018. Withdrawal activity among Roth IRA investors tends to be low because RMDs generally do not apply (unless the Roth IRAs are inherited).

FIGURE 4.4

Roth IRA Withdrawal Activity by Investor Age and Account Size

Percentage of Roth IRA investors with account balances in both 2017 and 2018 who took a withdrawal in 2018 by age and account balance

Age	Size of Roth IRA balance at year-end 2017							
	Less than \$5,000	\$5,000 to <\$10,000	\$10,000 to <\$20,000	\$20,000 to <\$30,000	\$30,000 to <\$40,000	\$40,000 to <\$70,000	\$70,000 to <\$100,000	\$100,000 or more
19 to 24	2.4	2.4	2.7	3.5	5.7	8.9	6.1	12.3
25 to 29	3.5	2.8	2.6	2.2	2.3	2.8	2.9	5.5
30 to 34	3.9	2.9	2.9	2.6	2.4	2.2	1.9	3.6
35 to 39	4.5	3.1	3.0	2.6	2.4	2.3	2.1	2.2
40 to 44	4.9	3.0	3.0	2.7	2.5	2.3	2.0	2.1
45 to 49	5.2	3.2	3.2	3.1	3.0	2.6	2.5	2.4
50 to 54	5.1	3.3	3.3	3.2	3.2	3.0	2.8	3.1
55 to 59	5.1	3.1	3.4	3.4	3.2	3.1	3.2	3.5
60 to 64	8.0	5.6	6.4	6.9	6.8	6.9	6.7	6.9
65 to 69	8.7	6.1	7.2	7.6	7.7	7.8	7.2	7.5
70 to 74	8.4	5.8	6.6	7.1	7.2	7.2	6.6	7.5
75 or older	7.9	5.3	5.7	6.3	6.3	6.7	6.5	8.5

Note: The sample is 3.8 million Roth IRA investors aged 19 or older in 2018 with Roth IRA balances in both 2017 and 2018. Age is based on the age of the Roth IRA investor in 2018. Account balance is based on the account balance of the Roth IRA investor in 2017.

Source: The IRA Investor Database™

Overall, the median percentage of the account balance withdrawn in 2018 decreases with the size of the Roth IRA balance (Figure 4.5). Among Roth IRA investors aged 19 or older with withdrawals in 2018 who also had Roth IRAs at the same financial services firm in the 2017, a median of 35.6 percent of the account balance was withdrawn. The withdrawal ratio is higher for accounts with less than \$5,000 and decreases as the size of the account balance increases. The impact of the rules surrounding inherited IRAs can also be seen in the amounts that Roth IRA investors withdraw. Younger Roth IRA investors with withdrawals in 2018 most likely reflect inherited Roth IRAs, which are subject to the RMD rules. For example, Roth IRA investors aged 25 to 29 with withdrawals in 2018 withdrew a median of 1.7 percent of their prior year's account balance for those with account balances of \$100,000 or more (Figure 4.5). This is significant, because IRS rules require investors aged 25 to 29 with inherited Roth IRAs to withdraw a minimum of 1.7 percent to 1.8 percent (depending on age) of the prior year's account balance.⁷³ Similarly, the IRS requires individuals aged 30 to 34 to withdraw a minimum of 1.9 percent to 2.0 percent of the prior year's balance, which corresponds to the median percentage withdrawn of 2.0 percent for Roth IRA investors aged 30 to 34 in 2018 with account balances of \$100,000 or more.

FIGURE 4.5

Median Withdrawal Ratio by Roth IRA Investor Age and Account Size

Median percentage of year-end 2017 account balance withdrawn among Roth IRA investors with account balances in both 2017 and 2018 and withdrawals in 2018 by age and account balance

Age	Size of Roth IRA balance at year-end 2017							
	Less than \$5,000	\$5,000 to <\$10,000	\$10,000 to <\$20,000	\$20,000 to <\$30,000	\$30,000 to <\$40,000	\$40,000 to <\$70,000	\$70,000 to <\$100,000	\$100,000 or more
19 to 24	55.8	44.4	33.3	14.7	13.6	6.5	5.7	1.7
25 to 29	59.0	54.0	43.8	29.7	20.1	11.6	7.4	1.7
30 to 34	56.9	54.2	48.6	35.5	27.1	20.9	11.3	2.0
35 to 39	57.0	54.1	46.2	37.2	28.1	22.0	14.2	3.7
40 to 44	56.3	53.6	45.1	35.5	28.5	24.6	13.8	4.8
45 to 49	56.0	52.8	42.3	30.9	27.5	19.4	14.2	4.6
50 to 54	55.4	51.4	38.9	31.8	23.8	18.2	11.2	4.1
55 to 59	54.7	48.1	36.8	27.9	22.8	16.3	11.4	4.1
60 to 64	53.9	52.2	43.5	34.0	26.7	20.3	14.4	7.2
65 to 69	53.0	50.3	36.8	25.8	21.2	15.3	10.3	6.2
70 to 74	52.8	45.5	29.0	20.3	15.6	12.5	8.2	6.6
75 or older	51.5	39.1	23.9	17.6	14.6	13.1	11.0	7.0

Note: The sample is 0.2 million Roth IRA investors aged 19 or older who took a withdrawal in 2018 and had an account balance at both year-end 2017 and year-end 2018. Age is based on the age of the Roth IRA investor in 2018. Account balance is based on the account balance of the Roth IRA investor in 2017.

Source: The IRA Investor Database™

CHAPTER 5

Roth IRA Investors' Balances at Year-End 2018

The amounts accumulated in Roth IRAs depend on contributions, conversions, rollovers, withdrawals, and investment returns, which are based on how the assets are allocated. Contribution, conversion, rollover, and withdrawal activity in Roth IRAs is governed by Internal Revenue Code regulations. Roth IRA investors have access to a wide range of investment options available in the retail financial services market.⁷⁴ This chapter analyzes the variation in Roth IRA balances in 2018 by investor age.

Roth IRA Balances in 2018 by Investor Age

Older investors tend to have larger Roth IRA balances. The median Roth IRA balance was \$15,650 at year-end 2018, but the amount invested varied widely across investors (Figure 5.1).⁷⁵ Roth IRA balances tend to increase with investor age. The median Roth IRA balance for investors aged 18 to 24 was \$4,070, compared with \$32,650 for investors aged 75 or older.

Roth IRA balances varied even among Roth IRA investors of similar ages, as evidenced by the difference between the 25th percentile, median (50th percentile), and 75th percentile for individual age groups. For example, among Roth IRA investors aged 60 to 64, the median balance was \$21,430 at year-end 2018, but the 25th percentile balance was \$7,890, and the 75th percentile balance was \$57,350 (Figure 5.1). This range reflects the variety of histories for these IRA investors, which are affected by variation in factors such as timing and patterns of contribution, conversion, and rollover activity; asset allocations; withdrawals; and lengths of time investing in Roth IRAs.⁷⁶

FIGURE 5.1

Roth IRA Balances Tended to Increase with Investor Age

25th percentile, median, and 75th percentile account balances among Roth IRA investors by age; year-end 2018

Age	25th percentile	Median	75th percentile
18 to 24	\$1,500	\$4,070	\$8,930
25 to 29	2,870	7,080	16,710
30 to 34	4,510	10,840	25,380
35 to 39	5,290	14,020	34,500
40 to 44	5,820	16,240	40,750
45 to 49	6,120	16,990	43,980
50 to 54	6,570	17,930	47,130
55 to 59	7,140	19,330	50,930
60 to 64	7,890	21,430	57,350
65 to 69	9,380	25,900	68,310
70 to 74	10,720	29,190	74,910
75 or older	12,110	32,650	85,400
All	5,680	15,650	41,370

Note: The sample is 4.1 million Roth IRA investors aged 18 or older at year-end 2018.

Source: The IRA Investor Database™

Distribution of Roth IRA Balances by Size in 2018

Perhaps reflecting their limited history (Roth IRAs were first available in 1998) and the restrictions placed on Roth IRAs (e.g., income restrictions on contributions, income restrictions on conversions until 2010, restrictions on rollovers), Roth IRA balances tend to be small.⁷⁷ At year-end 2018, 21.6 percent of Roth IRA balances in the IRA Investor Database were less than \$5,000, and another 16.5 percent were between \$5,000 and \$10,000 (Figure 5.2). However, there is a wide distribution of the Roth IRA balances; for example, 8.6 percent of Roth IRA investors had account balances of \$100,000 or more. Some of the variation in Roth IRA balances is explained by differences in contribution, conversion, and rollover activity; differing withdrawal activity and asset allocations also contribute to the variation.

The range of Roth IRA balances is most pronounced by investor age. Younger Roth IRA investors were more likely than older Roth IRA investors to have small balances in 2018. For example, although 57.2 percent of Roth IRA investors aged 18 to 24 had balances of less than \$5,000, that percentage fell for each successive age group, reaching a minimum of 8.6 percent of Roth IRA investors aged 75 or older (Figure 5.2). At the other extreme, while a negligible number of younger Roth IRA investors had balances of \$100,000 or more, this percentage rose with age, and 21.5 percent of Roth IRA investors aged 75 or older had such large balances.

FIGURE 5.2

Roth IRA Balances by Investor Age

Percentage of Roth IRA investors by age

Age	Size of Roth IRA balance at year-end 2018								
	Less than \$5,000	\$5,000 to <\$10,000	\$10,000 to <\$20,000	\$20,000 to <\$30,000	\$30,000 to <\$40,000	\$40,000 to <\$70,000	\$70,000 to <\$100,000	\$100,000 to <\$200,000	\$200,000 or more
18 to 24	57.2%	20.6%	14.8%	3.9%	1.4%	1.3%	0.5%	0.3%	(*)
25 to 29	37.4	21.1	21.8	9.4	4.9	4.0	0.9	0.5	(*)
30 to 34	27.6	19.1	21.5	11.1	7.0	9.0	3.0	1.6	0.1%
35 to 39	23.4	17.0	19.7	11.2	7.4	11.6	5.4	4.0	0.3
40 to 44	21.2	15.9	18.8	11.0	7.6	12.5	6.3	6.0	0.7
45 to 49	20.2	15.9	18.4	10.8	7.3	12.6	6.5	7.1	1.2
50 to 54	18.5	16.2	18.3	10.8	7.3	12.6	6.6	7.9	1.8
55 to 59	16.6	16.3	18.1	10.8	7.3	12.8	6.8	8.8	2.5
60 to 64	14.8	15.5	17.7	10.8	7.4	13.2	7.3	9.9	3.4
65 to 69	12.4	14.0	16.9	10.5	7.5	14.2	8.2	11.3	5.0
70 to 74	10.3	13.2	16.5	10.7	7.8	14.8	8.5	11.6	6.6
75 or older	8.6	12.3	16.2	10.6	7.7	14.9	8.2	11.8	9.7
All	21.6	16.5	18.7	10.5	7.0	11.4	5.7	6.5	2.1

Note: The sample is 4.1 million Roth IRA investors aged 18 or older at year-end 2018.

(*) = less than 0.05 percent

Source: The IRA Investor Database™

CHAPTER 6

Snapshots of Investments in Roth IRAs at Year-End 2010 and Year-End 2018

IRA investors allocate their IRA assets to individual securities (e.g., stocks and bonds), mutual funds, ETFs, closed-end funds, annuities, deposits, and other investments.⁷⁸ This chapter analyzes the average dollar-weighted asset allocation of Roth IRA balances at year-end 2018 by investor age. Snapshots of Roth IRA asset allocations at year-end 2018 are compared with the asset allocation at year-end 2010. In addition, snapshots of individual Roth IRA investors' concentrations in equity holdings—that is, the percentage of individual Roth IRA balances invested in equities, equity funds, and the equity portion of balanced funds—between year-end 2010 and year-end 2018 also are compared.

On average, equities and equity funds represent the largest investment category among Roth IRA investors. At year-end 2018, on average, equities and equity funds were 66.4 percent of Roth IRA assets held by individuals aged 18 or older (Figure 6.1). Balanced, or hybrid, funds—which invest in a mix of equities and fixed-income securities and include target date funds⁷⁹—were the next largest component, accounting for 23.0 percent of Roth IRA assets. At year-end 2018, 7.0 percent of Roth IRA assets were held in bonds and bond funds, and 3.5 percent of Roth IRA assets were invested in money market funds.

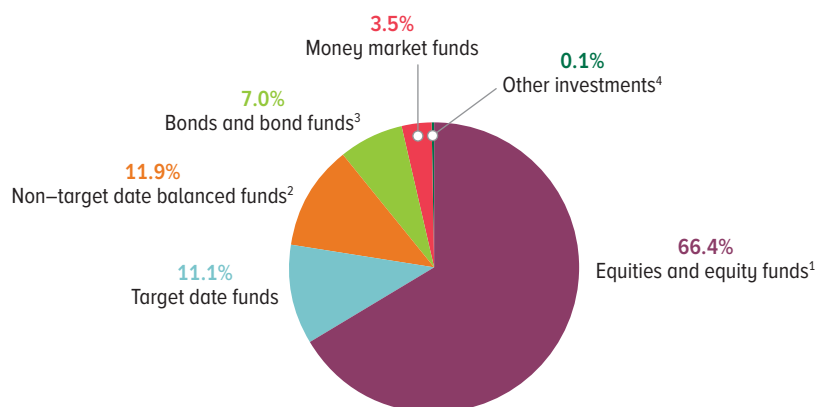
Investments in Roth IRAs in 2018 by Investor Age

Equities and equity funds were the largest component of Roth IRA investors' accounts, on average, representing 66.4 percent of Roth IRA assets at year-end 2018 (Figure 6.2). Investors also may hold equities through balanced funds; at year-end 2018, 81.4 percent of Roth IRA assets were invested in equity holdings (equities, equity funds, and the equity portion of balanced funds). As expected by financial theory and other research, older investors tended to have lower shares in equity holdings. Roth IRA investors younger than 50 had about 88 percent of their assets invested in equity holdings, on average. The share invested in equity holdings generally declined through the age groups, with those aged 50 to 54 having 84.1 percent of their assets invested in equity holdings and those aged 75 or older having 75.5 percent of their assets invested in equity holdings.

FIGURE 6.1

Equity Holdings Figure Prominently in Roth IRA Investments

Percentage of Roth IRA balances, year-end 2018



¹ Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

² Balanced funds invest in a mix of equities and fixed-income securities.

³ Bond funds include bond mutual funds, bond closed-end funds, and bond ETFs.

⁴ Other investments include certificates of deposit and unidentifiable assets.

Note: The sample is 4.1 million Roth IRA investors aged 18 or older at year-end 2018. Percentages are dollar-weighted averages.

Source: The IRA Investor Database™

Younger Roth IRA investors tended to have more of their assets invested in target date funds, compared with older Roth IRA investors. At year-end 2018, 25.3 percent of the Roth IRA assets held by investors aged 18 to 24 were invested in target date funds, on average, and 29.1 percent of the assets held by those aged 25 to 29 were invested in target date funds (Figure 6.2). The share of target date funds then fell by age to 1.7 percent among Roth IRA investors aged 75 or older. This pattern of target date fund use was expected because target date funds are relatively new investment products and younger investors are more likely to have been introduced to them if they recently opened their IRAs, or in their 401(k) plans.⁸⁰

At year-end 2018, target date funds were 11.1 percent of Roth IRA assets and 18.6 percent of Roth IRA investors in the IRA Investor Database owned target date funds.⁸¹ Among Roth IRA investors who owned target date funds, nearly all owned one target date fund, and the bulk of the remainder owned two (Figure 6.3). At year-end 2018, 96.1 percent of Roth IRA investors aged 18 or older who owned target date funds owned one, and another 3.4 percent owned two target date funds. Only 0.5 percent of Roth IRA investors holding target date funds owned three or more.

FIGURE 6.2

Investments in Roth IRAs by Investor Age

Percentage of Roth IRA balance by investor age, year-end 2018

Age	Equities and equity funds ¹	Balanced funds ²				Bonds and bond funds ³	Money market funds	Other investments ⁴	Memo: equity holdings ⁵
		Equity portion		Non-equity portion					
		Target date	Non-target date	Target date	Non-target date				
18 to 24	62.4%	22.0%	4.8%	3.3%	3.6%	1.4%	2.2%	0.3%	89.2%
25 to 29	58.9	25.3	4.7	3.8	3.5	1.8	1.8	0.3	88.9
30 to 34	60.6	23.5	4.6	3.6	3.4	2.5	1.7	0.2	88.7
35 to 39	63.8	19.9	4.7	3.1	3.5	3.1	1.8	0.1	88.4
40 to 44	68.1	14.7	4.9	2.8	3.7	3.6	2.1	0.1	87.7
45 to 49	70.8	10.3	5.4	2.9	4.0	4.2	2.4	0.1	86.5
50 to 54	70.4	7.5	6.2	3.2	4.6	5.0	3.0	0.1	84.1
55 to 59	67.7	5.6	7.3	3.6	5.5	6.5	3.6	0.1	80.6
60 to 64	65.1	4.0	8.3	3.6	6.2	8.4	4.3	0.1	77.4
65 to 69	64.1	2.5	8.8	3.1	6.5	10.1	4.8	0.1	75.4
70 to 74	65.7	1.3	8.5	2.1	6.3	11.1	4.9	0.1	75.5
75 or older	67.4	0.6	7.5	1.1	5.6	12.3	5.3	0.2	75.5
All	66.4	8.2	6.8	2.9	5.1	7.0	3.5	0.1	81.4

¹ Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

² Balanced funds invest in a mix of equities and fixed-income securities. The bulk of target date and lifestyle funds is counted in this category.

³ Bond funds include bond mutual funds, bond closed-end funds, and bond ETFs.

⁴ Other investments include certificates of deposit and unidentifiable assets.

⁵ Equity holdings are the sum of equities and equity funds and the equity portion of target date and non-target date balanced funds.

Note: The sample is 4.1 million traditional IRA investors aged 18 or older at year-end 2018. Percentages are dollar-weighted averages.

Source: The IRA Investor Database™

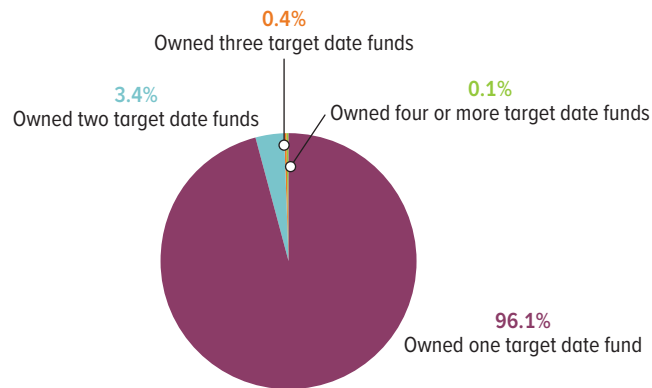
Older Roth IRA investors had higher allocations to bonds and bond funds in their Roth IRAs than younger investors, which follows the typical age-based pattern of bond investing seen in other research.⁸² At year-end 2018, 1.4 percent of the Roth IRA assets held by investors aged 18 to 24 were invested in bonds and bond funds, compared with 12.3 percent of the assets held by those aged 75 or older (Figure 6.2).

Money market fund allocations in Roth IRAs generally followed a rising pattern by age (Figure 6.2). At year-end 2018, Roth IRA investors younger than 40 had about 2 percent of their Roth IRA assets invested in money market funds, while Roth IRA investors aged 70 or older had about 5 percent in money market funds.

FIGURE 6.3

Number of Target Date Funds Owned by Roth IRA Investors

Among Roth IRA investors owning target date funds, percentage of Roth IRA investors by number of target date funds owned, year-end 2018



Note: 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. The sample is 0.8 million Roth IRA investors aged 18 or older who owned target date funds at year-end 2018.

Source: The IRA Investor Database™

Snapshots of Allocation to Equity Holdings Between 2010 and 2018

Since 2010, the percentage of Roth IRA balances invested in equity holdings (equities, equity funds, and the equity portion of balanced funds) has increased across all age groups. At year-end 2010, 75.3 percent of Roth IRA balances held by investors aged 18 or older was invested, on average, in equity holdings (Figure 6.4). By year-end 2018, that share had increased to 81.4 percent. This increase occurred in all categories of equities, with the largest increase occurring in the equity portion of target date funds category. This analysis looks at dollar-weighted averages, and some of the change reflects the relative performance of equity holdings over time.

In addition to observing how Roth IRA balances are invested in aggregate, another way to explore the changes in allocation to equity holdings is to look at the distribution of shares in equity holdings held by individual investors. Looking at the data this way shows that, while the share of balances invested in equity holdings has increased, this is partly a move toward more-diversified portfolios. For example, at year-end 2010, 9.6 percent of Roth IRA investors had no equity holdings, compared with 3.9 percent in 2018 (Figure 6.5). Much of this decrease was balanced by an increase in allocations to equity holdings of more than 80 percent. At year-end 2010, 63.8 percent of Roth IRA investors had more than 80 percent of their balances invested in equity holdings, compared with 70.1 percent at year-end 2018. In addition, the share of Roth IRA investors with a more than 60 percent to 80 percent equities allocation fell, while the share of Roth IRA investors with a more than 40 percent to 60 percent equities allocation rose.

FIGURE 6.4

Share of Roth IRA Balances Allocated to Equity Holdings Has Increased Slightly Since 2010

Percentage of Roth IRA balance by investor age, year-end

Age	2010				2018			
	Equities and equity funds ¹	Equity portion of target date funds	Equity portion of non-target date balanced funds ²	Total	Equities and equity funds ¹	Equity portion of target date funds	Equity portion of non-target date balanced funds ²	Total
18 to 24	60.8%	12.6%	7.6%	81.1%	62.4%	22.0%	4.8%	89.2%
25 to 29	60.0	16.6	5.4	82.0	58.9	25.3	4.7	88.9
30 to 39	66.0	11.1	5.1	82.1	62.5	21.4	4.6	88.5
40 to 49	68.7	6.0	5.5	80.1	69.5	12.3	5.2	87.1
50 to 59	63.8	3.4	6.8	74.1	68.9	6.5	6.8	82.3
60 to 69	62.2	1.4	6.6	70.3	64.6	3.2	8.5	76.4
70 or older	63.5	0.4	5.6	69.5	66.6	0.9	8.0	75.5
All	64.5	4.7	6.1	75.3	66.4	8.2	6.8	81.4

¹ Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

² Balanced funds invest in a mix of equities and fixed-income securities.

Note: The samples are 4.9 million Roth IRA investors aged 18 or older at year-end 2010 and 4.1 million Roth IRA investors aged 18 or older at year-end 2018. Percentages are dollar-weighted averages.

Source: The IRA Investor Database™

FIGURE 6.5

Exposure to Equity Holdings Among Roth IRA Investors

Percentage of Roth IRA investors by age, year-end

Age	Percentage of account balance invested in equity holdings						
	2010						
	Zero	>0% to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80% to <100%	100%
18 to 24	8.6%	0.4%	1.1%	2.1%	18.4%	26.1%	43.3%
25 to 29	8.3	0.6	1.4	2.7	14.2	32.8	40.0
30 to 39	8.0	0.8	1.5	2.8	13.7	31.2	42.0
40 to 49	8.6	1.0	1.7	3.2	19.6	22.0	43.9
50 to 59	10.2	1.3	2.5	5.4	23.2	18.6	38.8
60 to 69	12.1	1.7	3.6	8.6	20.4	18.0	35.6
70 or older	12.9	2.0	4.8	5.6	19.3	18.1	37.3
All	9.6	1.1	2.2	4.5	18.8	23.4	40.4

Age	2018						
	Zero	>0% to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80% to <100%	100%
	18 to 24	1.7	0.5	0.3	6.3	2.9	38.4
25 to 29	2.4	0.8	0.4	7.3	3.9	41.1	44.1
30 to 39	2.4	0.7	0.5	8.5	5.3	38.3	44.3
40 to 49	2.9	0.7	0.7	9.7	11.4	25.2	49.4
50 to 59	4.1	0.9	1.1	16.9	14.7	14.5	47.8
60 to 69	5.7	1.5	2.1	25.2	10.5	13.5	41.5
70 or older	7.7	1.8	5.1	20.2	9.7	12.5	43.0
All	3.9	1.0	1.4	14.1	9.5	24.5	45.6

Note: The samples are 4.9 million Roth IRA investors aged 18 or older at year-end 2010 and 4.1 million Roth IRA investors aged 18 or older at year-end 2018. Equity holdings are the sum of equities, equity funds, and the equity portion of balanced funds.

Source: The IRA Investor Database™

Appendix

Role of IRAs in US Household Balance Sheets

Traditional IRAs, the first type of IRA, were created under the Employee Retirement Income Security Act of 1974 (ERISA).⁸³ 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. Policymakers have since changed the rules governing traditional IRAs and have added more types of IRAs— employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs) and after-tax IRAs (Roth IRAs).

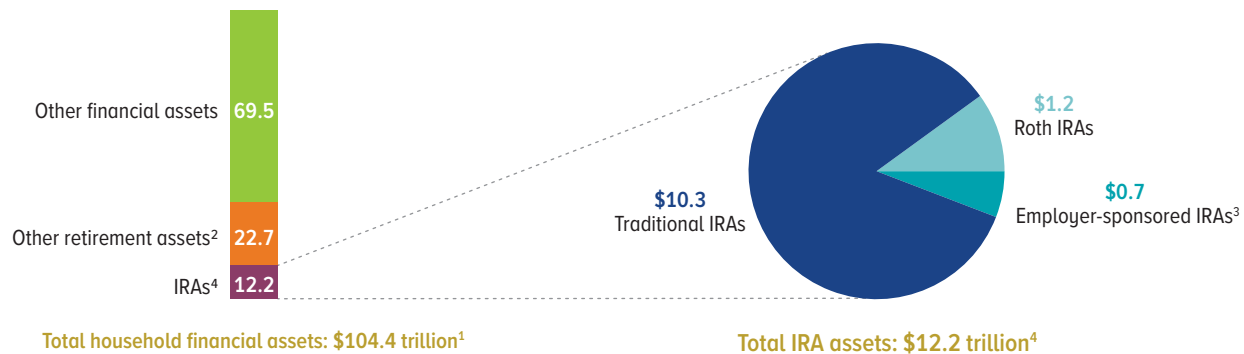
Households held \$12.2 trillion in IRAs at year-end 2020 (Figure A.1). IRAs accounted for about 12 percent of US households' total financial assets. At year-end 2020, assets in traditional IRAs (the most common type of IRA) were \$10.3 trillion, or 84 percent of all IRA assets. At year-end 2020, Roth IRA assets were \$1.2 trillion and accounted for 10 percent of all IRA assets. Assets in employer-sponsored IRAs were \$710 billion and were 6 percent of all IRA assets at year-end 2020.

FIGURE A.1

Role of IRAs in US Household Balance Sheets

Trillions of dollars, year-end 2020

Household financial assets¹



¹ Household financial assets include deposits, fixed-income securities, stocks, retirement savings, mutual funds, equity in noncorporate business, and other financial assets. Financial assets of nonprofit organizations are also included. Household financial assets do not include the household's primary residence.

² Other retirement assets include annuities and employer-sponsored defined benefit and defined contribution plans.

³ Employer-sponsored IRAs include SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs.

⁴ IRA asset data are estimated.

Sources: Investment Company Institute, Federal Reserve Board, American Council of Life Insurers, and Internal Revenue Service Statistics of Income Division; see Investment Company Institute 2021

The IRA Investor Database Contains a Comprehensive Cross Section of IRA Investors

The IRA Investor Database contains a comprehensive and representative sample of IRA investors, which provides important insights into many IRA investor activities. The bulk (59 percent) of the IRA investors in the database held traditional IRAs and 75 percent of all IRA assets were in traditional IRAs at year-end 2018 (Figure A.2). About 4 million Roth IRA investors (39 percent of IRA investors in the database) held 16 percent of all IRA assets in the database. Employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs) represented the remainder. The distribution of IRA investors and IRA assets by type of IRA in the database is roughly similar to the universe of IRAs tabulated by the IRS Statistics of Income Division in 2018 and for earlier years.⁸⁴

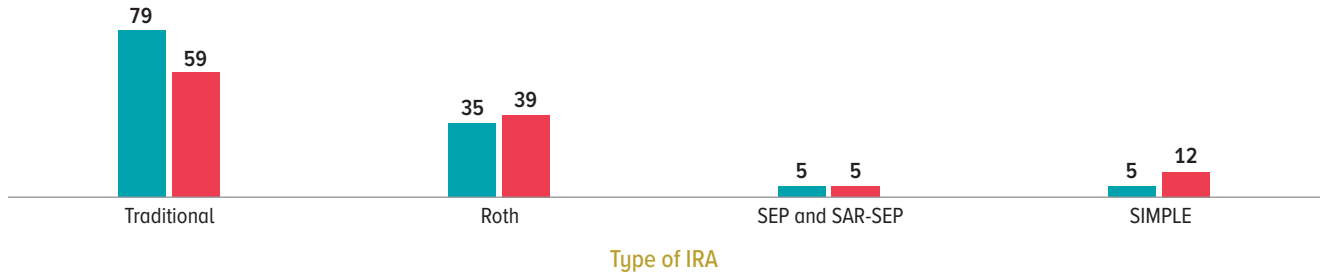
FIGURE A.2

The IRA Investor Database Covers All IRA Types

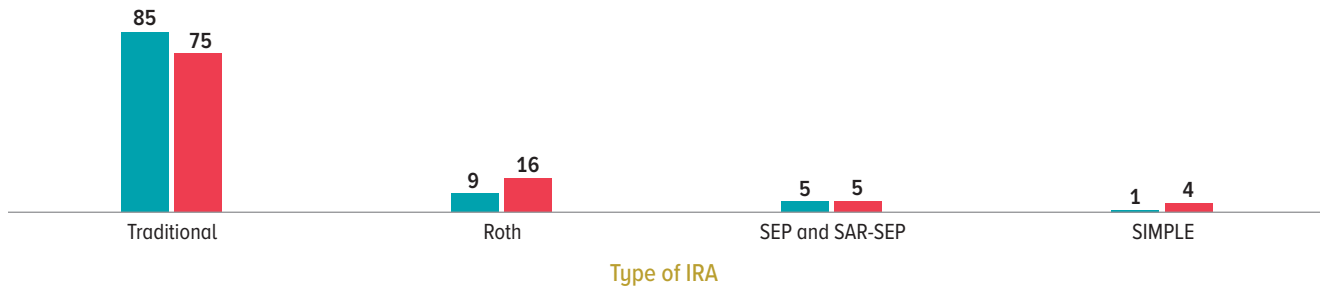
Distribution of IRA investors and assets, percentage of total, year-end 2018

■ 2018 IRS universe
■ 2018 IRA Investor Database

Percentage of IRA investors²



Percentage of IRA assets



¹ In the IRS universe, data are for IRA investors of all ages.

² These percentages add to more than 100 percent because investors may own more than one type of IRA.

Note: The 2018 IRS universe includes 61.5 million IRA investors with \$9,135 billion in assets at year-end 2018. The 2018 IRA Investor Database includes 10.7 million IRA investors with \$997 billion in assets at year-end 2018.

Sources: The IRA Investor Database™ and Internal Revenue Service Statistics of Income Division

The IRA Investor Database contains investors from a wide range of ages (Figure A.3). The analysis of Roth IRA activity in this report focuses on all Roth IRA investors across both the working-age and retired populations—aged 18 or older. The bulk of investors who own Roth IRAs in the database are in their peak earning and saving years. At year-end 2018, 62 percent of Roth IRA investors were between the ages of 30 and 59. Another 17 percent were aged 60 to 69, and the remaining 21 percent were aged 18 to 29 or aged 70 or older.

Roth IRA investors tend to be younger than traditional IRA investors. For example, at year-end 2018, 54 percent of Roth IRA investors were younger than 50, compared with 33 percent of traditional IRA investors (Figure A.3). Thirty-five percent of the assets in Roth IRAs were held by Roth IRA investors younger than 50, whereas about 10 percent of traditional IRA assets were held by traditional IRA investors younger than 50.

FIGURE A.3

IRA Investors Represent a Wide Cross Section of Age Groups

Number of IRA investors and assets by age, 2018

Age	Roth IRA investors		Roth IRA assets		Traditional IRA investors		Traditional IRA assets	
	Number Thousands	Share* Percent	Amount Billions	Share* Percent	Number Thousands	Share* Percent	Amount Billions	Share* Percent
18 to 24	159.3	3.9%	\$1.2	0.8%	43.3	0.7%	\$0.4	0.1%
25 to 29	317.6	7.7	4.0	2.6	196.8	3.1	1.6	0.2
30 to 34	433.3	10.5	8.5	5.5	333.6	5.3	5.2	0.7
35 to 39	465.8	11.3	12.3	7.9	433.3	6.9	12.0	1.6
40 to 44	417.9	10.1	13.1	8.4	471.9	7.5	21.3	2.9
45 to 49	422.0	10.2	14.7	9.4	574.3	9.2	36.8	4.9
50 to 54	408.2	9.9	15.6	10.0	665.2	10.6	56.3	7.5
55 to 59	425.5	10.3	18.0	11.5	804.5	12.8	88.2	11.8
60 to 64	384.4	9.3	18.6	11.9	820.8	13.1	125.8	16.9
65 to 69	302.5	7.3	17.9	11.5	710.4	11.3	139.8	18.7
70 to 74	206.7	5.0	14.8	9.5	523.0	8.4	121.3	16.2
75 or older	178.3	4.3	17.3	11.1	684.7	10.9	137.9	18.5
All	4,121.6	100.0	156.0	100.0	6,261.9	100.0	746.7	100.0

* Share is the percentage of the total.

Source: The IRA Investor Database™

Contributions Often Were the Source of New Roth IRAs in 2018

Roth IRAs can be opened with contributions, conversions, or rollovers, but contributions tend to be the most common source for new Roth IRAs. In 2018, 60.9 percent of new Roth IRAs in the IRA Investor Database were opened with a contribution only (Figure A.4, upper panel). In 2018, 7.8 percent of new Roth IRAs were opened with a conversion only, 7.4 percent were opened with a rollover only, and another 3.8 percent were opened with some combination of a contribution, conversion, or a rollover. The remaining new Roth IRAs (20.1 percent) were transfers from one financial services firm to another and thus were unlikely to represent new Roth IRAs. If these transfer accounts are excluded, 76.2 percent of new Roth IRAs in 2018 were opened exclusively with contributions (Figure A.4, lower panel).

FIGURE A.4

Sources of New Roth IRAs by Investor Age

Roth IRA activity of new Roth IRA investors,¹ 2018

Age	New Roth IRA investors ¹		Source of new account ¹				
	Number Thousands	Share ² Percent	Only contribution	Only conversion	Only rollover	Combination of contribution, conversion, or rollover	Changed financial services firm ³
18 to 24	49.8	15.9%	82.7	1.0	2.5	2.0	11.8
25 to 29	57.9	18.6	73.0	4.0	6.8	4.9	11.3
30 to 34	49.7	15.9	62.8	9.7	7.5	5.2	14.7
35 to 39	35.0	11.2	56.8	12.4	8.2	4.4	18.2
40 to 44	23.4	7.5	54.8	11.0	8.2	3.7	22.2
45 to 49	20.1	6.4	53.8	8.9	8.7	3.3	25.2
50 to 54	19.4	6.2	53.0	7.7	8.7	3.0	27.7
55 to 59	20.3	6.5	48.9	7.7	9.4	2.8	31.2
60 to 64	17.4	5.6	39.6	11.1	11.9	3.7	33.7
65 to 69	11.0	3.5	27.7	18.4	12.1	3.3	38.5
70 to 74	5.0	1.6	24.6	13.2	9.6	2.2	50.4
75 or older	3.2	1.0	12.8	12.6	5.0	0.5	69.1
All	312.0	100.0	60.9	7.8	7.4	3.8	20.1

Excluding Roth IRA investors who changed financial services firms³

18 to 24	43.9	14.1%	93.8	1.2	2.8	2.2
25 to 29	51.4	16.5	82.3	4.5	7.7	5.5
30 to 34	42.4	13.6	73.7	11.4	8.8	6.1
35 to 39	28.7	9.2	69.5	15.2	10.0	5.4
40 to 44	18.2	5.8	70.5	14.2	10.6	4.7
45 to 49	15.0	4.8	71.9	11.9	11.7	4.5
50 to 54	14.0	4.5	73.3	10.6	12.0	4.1
55 to 59	14.0	4.5	71.1	11.2	13.7	4.1
60 to 64	11.5	3.7	59.7	16.7	18.0	5.5
65 to 69	6.8	2.2	45.1	30.0	19.6	5.4
70 to 74	2.5	0.8	49.7	26.6	19.3	4.5
75 or older	1.0	0.3	41.5	40.7	16.1	1.7
All	249.2	79.9	76.2	9.8	9.3	4.7

¹ New Roth IRAs are accounts that did not exist in the IRA Investor Database in 2017.² Share is the percentage of the total.³ These accounts are often asset transfers to a new provider and thus are unlikely to represent a new Roth IRA investor.

Source: The IRA Investor Database™

Exposure to Equity Holdings Among Roth IRA Investors by Account Size

Between 2010 and 2018, the share of Roth IRA balances with high concentrations in equity holdings increased in Roth IRAs with balances of \$5,000 or less and in Roth IRAs with balances of more than \$5,000 (Figure A.5). Although the share of balances with high concentrations in equity holdings has increased, this is partly a move toward more-diversified portfolios. For example, at year-end 2010, 13.7 percent of Roth IRA investors with Roth IRA balances of \$5,000 or less had no equity holdings, compared with 6.4 percent in 2018. For Roth IRA investors with Roth IRA balances of more than \$5,000, 7.6 percent had no equity holdings at year-end 2010, compared with 3.2 percent at year-end 2018. Most of this decrease was balanced by an increase in allocations to equity holdings of more than 80 percent for both groups of Roth IRA investors. At year-end 2010, 65.5 percent of Roth IRA investors with Roth IRA balances of \$5,000 or less had more than 80 percent of their balances invested in equity holdings, compared with 72.5 percent at year-end 2018. For Roth IRA investors with Roth IRA balances of more than \$5,000, 63.0 percent had more than 80 percent of their balances invested in equity holdings at year-end 2010. By year-end 2018, that share rose to 69.4 percent. In addition, the share of Roth IRA investors with a more than 60 percent to 80 percent equities allocation fell, while the share of Roth IRA investors with a more than 40 percent to 60 percent equities allocation rose.

FIGURE A.5

Exposure to Equity Holdings Among Roth IRA Investors by Account Size

Percentage of Roth IRA investors by age, year-end

Equity holdings in all Roth IRAs

Age		Zero	>0% to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80% to <100%	100%
18 to 24	2010	8.6	0.4	1.1	2.1	18.4	26.1	43.3
	2018	1.7	0.5	0.3	6.3	2.9	38.4	49.9
25 to 29	2010	8.3	0.6	1.4	2.7	14.2	32.8	40.0
	2018	2.4	0.8	0.4	7.3	3.9	41.1	44.1
30 to 39	2010	8.0	0.8	1.5	2.8	13.7	31.2	42.0
	2018	2.4	0.7	0.5	8.5	5.3	38.3	44.3
40 to 49	2010	8.6	1.0	1.7	3.2	19.6	22.0	43.9
	2018	2.9	0.7	0.7	9.7	11.4	25.2	49.4
50 to 59	2010	10.2	1.3	2.5	5.4	23.2	18.6	38.8
	2018	4.1	0.9	1.1	16.9	14.7	14.5	47.8
60 to 69	2010	12.1	1.7	3.6	8.6	20.4	18.0	35.6
	2018	5.7	1.5	2.1	25.2	10.5	13.5	41.5
70 or older	2010	12.9	2.0	4.8	5.6	19.3	18.1	37.3
	2018	7.7	1.8	5.1	20.2	9.7	12.5	43.0
All	2010	9.6	1.1	2.2	4.5	18.8	23.4	40.4
	2018	3.9	1.0	1.4	14.1	9.5	24.5	45.6

Equity holdings in Roth IRAs with balances of \$5,000 or less

Age		Zero	>0% to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80% to <100%	100%
18 to 24	2010	9.8	0.2	0.5	1.1	20.2	21.7	46.5
	2018	2.1	0.5	0.2	6.0	1.9	35.9	53.4
25 to 29	2010	11.6	0.3	0.5	1.3	14.9	24.4	47.0
	2018	5.0	1.0	0.2	8.1	2.3	33.0	50.4
30 to 39	2010	12.9	0.5	0.7	1.3	13.5	22.5	48.6
	2018	5.5	0.9	0.3	11.0	2.9	27.0	52.4
40 to 49	2010	13.4	0.6	0.8	1.5	18.3	15.6	49.8
	2018	5.7	0.7	0.4	13.1	8.2	15.4	56.5
50 to 59	2010	14.4	0.6	0.9	2.6	21.5	12.9	47.1
	2018	7.5	0.7	0.6	20.0	10.9	6.6	53.7
60 to 69	2010	17.4	0.7	1.3	4.6	18.4	12.1	45.5
	2018	10.3	0.9	1.0	28.5	5.0	6.2	48.1
70 or older	2010	19.1	0.7	2.3	1.8	18.1	11.1	46.9
	2018	15.5	1.1	4.4	24.1	4.1	5.3	45.5
All	2010	13.7	0.5	0.8	2.0	17.5	17.6	47.9
	2018	6.4	0.8	0.6	14.4	5.3	20.0	52.5

Continued on next page

FIGURE A.5 CONTINUED

Exposure to Equity Holdings Among Roth IRA Investors by Account Size

Percentage of Roth IRA investors by age, year-end

Equity holdings in Roth IRAs with balances of more than \$5,000

Age		Zero	>0% to 20%	>20% to 40%	>40% to 60%	>60% to 80%	>80% to <100%	100%
18 to 24	2010	6.9	0.8	1.9	3.5	16.0	32.2	38.7
	2018	1.2	0.5	0.5	6.6	4.3	41.7	45.2
25 to 29	2010	5.7	0.9	2.0	3.7	13.6	39.7	34.4
	2018	0.9	0.6	0.5	6.9	4.9	45.9	40.3
30 to 39	2010	5.2	0.9	1.9	3.7	13.9	36.2	38.2
	2018	1.3	0.6	0.6	7.6	6.1	42.2	41.6
40 to 49	2010	6.3	1.2	2.2	4.0	20.1	25.1	41.1
	2018	2.2	0.7	0.8	8.8	12.3	27.7	47.5
50 to 59	2010	8.6	1.6	3.0	6.5	23.9	20.8	35.6
	2018	3.4	1.0	1.2	16.2	15.5	16.2	46.5
60 to 69	2010	10.6	2.0	4.2	9.8	21.0	19.8	32.6
	2018	5.0	1.6	2.3	24.6	11.4	14.7	40.4
70 or older	2010	11.4	2.2	5.4	6.5	19.6	19.8	35.1
	2018	6.9	1.8	5.2	19.8	10.3	13.3	42.7
All	2010	7.6	1.4	2.9	5.7	19.4	26.1	36.9
	2018	3.2	1.0	1.6	14.1	10.7	25.7	43.7

Note: The samples are 4.9 million Roth IRA investors aged 18 or older at year-end 2010 and 4.1 million Roth IRA investors aged 18 or older at year-end 2018. There are 1.6 million Roth IRA investors aged 18 or older with Roth IRA balances of \$5,000 or less at year-end 2010 and 0.9 million at year-end 2018. There are 3.3 million Roth IRA investors aged 18 or older with Roth IRA balances of more than \$5,000 at year-end 2010 and 3.2 million at year-end 2018. Equity holdings are the sum of equities, equity funds, and the equity portion of balanced funds.

Source: The IRA Investor Database™

Figure A.6 presents the data displayed in Figure 6.2 by broader age groups. At year-end 2018, younger Roth IRA investors tended to have more invested in equities, equity funds, and target date funds, on average, than older Roth IRA investors (Figure A.6).

FIGURE A.6

Investments in Roth IRAs by Broad Investor Age Group

Percentage of Roth IRA balance by investor age, year-end 2018

Age	Equities and equity funds ¹	Balanced funds ²				Bonds and bond funds ³	Money market funds	Other investments ⁴	Memo: equity holdings ⁵
		Equity portion		Non-equity portion					
		Target date	Non–target date	Target date	Non–target date				
18 to 29	59.7	24.5	4.7	3.7	3.5	1.7	1.9	0.3	88.9
30 to 39	62.5	21.4	4.6	3.3	3.4	2.8	1.8	0.1	88.5
40 to 49	69.5	12.3	5.2	2.9	3.9	3.9	2.2	0.1	87.0
50 to 59	68.9	6.5	6.8	3.4	5.1	5.8	3.3	0.1	82.2
60 to 69	64.6	3.2	8.5	3.4	6.4	9.3	4.6	0.1	76.3
70 or older	66.6	0.9	8.0	1.6	5.9	11.8	5.1	0.2	75.5
All	66.4	8.2	6.8	2.9	5.1	7.0	3.5	0.1	81.4

¹ Equity funds include equity mutual funds, equity closed-end funds, and equity ETFs.

² Balanced funds invest in a mix of equities and fixed-income securities. The bulk of target date and lifestyle funds is counted in this category.

³ Bond funds include bond mutual funds, bond closed-end funds, and bond ETFs.

⁴ Other investments include certificate of deposits and unidentifiable assets.

⁵ Equity holdings are the sum of equities and equity funds and the equity portion of target date and non-target date balanced funds.

Note: The sample is 4.1 million Roth IRA investors aged 18 or older at year-end 2018. Percentages are dollar-weighted averages.

Source: The IRA Investor Database™

Notes

- ¹ Prior to 2010, there were restrictions on conversions based on household income. In 2010, the income limits for Roth conversions were lifted. For additional detail, see Internal Revenue Service 2011.
- ² The Setting Every Community Up for Retirement Enhancement (SECURE) Act of 2019 repealed the maximum age for making traditional IRA contributions and increased the age at which RMDs must start from 70½ to 72. The Coronavirus Aid, Relief, and Economic Security (CARES) Act (enacted March 27, 2020) suspended RMDs in 2020. Neither of these changes affected IRA investors between 2010 to 2018.
- ³ Individuals with inherited Roth IRAs must take distributions from the accounts. See note 72 and Internal Revenue Service 2021b.
- ⁴ Individuals with inherited Roth IRAs must take distributions from the accounts. See note 72 and Internal Revenue Service 2021b. Neither SECURE Act nor CARES Act changes affected IRA investors between 2010 and 2018; see note 2.
- ⁵ See Holden et al. 2005.
- ⁶ See Holden, Schrass, and Bass 2021 and Holden and Schrass 2021.
- ⁷ See Holden and Schrass 2021.
- ⁸ See Holden, Schrass, and Bass 2021.
- ⁹ Neither SECURE Act nor CARES Act changes affected IRA investors between 2010 and 2018; see note 2.
- ¹⁰ For more information on traditional IRA withdrawal activity, see Holden, Schrass, and Bass 2021 and Holden and Schrass 2021. For information on retirement plan participants' reactions to the RMD suspension of 2009, see Brown, Poterba, and Richardson 2014. For a discussion of how RMD rules affect traditional IRA withdrawals, see Mortenson, Schramm, and Whitten 2016.
- ¹¹ See Holden, Schrass, and Bass 2021.
- ¹² Ibid.
- ¹³ Ibid.
- ¹⁴ Ibid.
- ¹⁵ Ibid.
- ¹⁶ For a history of IRAs, see Holden et al. 2005.
- ¹⁷ For additional discussion of IRA-owning households, see Holden and Schrass 2021.
- ¹⁸ ICI reports total IRA assets and total retirement market assets on a quarterly basis. For additional information on the US retirement market through 2021:Q2, see Investment Company Institute 2021.
- ¹⁹ See Holden and Schrass 2021 and Investment Company Institute 2021.
- ²⁰ For a history of IRAs, see Holden et al. 2005. For a discussion of the changes to IRAs included in the Taxpayer Relief Act of 1997, see Joint Committee on Taxation 1997 (page 43), which indicates that Roth IRAs were created because “Congress believed that some individuals would be more likely to save if funds set aside in a tax-favored account could be withdrawn without tax after a reasonable holding period for retirement or certain special purposes. Some taxpayers might find such a vehicle more suitable for their savings needs.”
- ²¹ See Investment Company Institute 2021.

- ²² The SECURE Act of 2019 repealed the maximum age for making traditional IRA contributions, but that change would not have affected IRA investors prior to 2020.
- ²³ See Internal Revenue Service 2021b for the complete requirements for qualified Roth distributions.
- ²⁴ Individuals with inherited Roth IRAs must take distributions from the accounts. See Internal Revenue Service 2021b.
- ²⁵ One of the frequently analyzed household surveys is the Survey of Consumer Finances (SCF), which is administered by the Federal Reserve Board. The SCF is a triennial interview survey of US families sponsored by the Board of Governors of the Federal Reserve System and the US Department of Treasury. The sample design of the survey aims to measure a broad range of financial characteristics. The sample has two parts: (1) a standard geographically based random sample and (2) a specially constructed oversampling of wealthy families. Weights are used to combine the two samples to represent the full population of US families. The 2019 SCF interviewed 5,783 families, representing 128.6 million families. Data available on the Federal Reserve Board's website are altered to protect the privacy of individual respondents and include weights. For an overview of the 2019 SCF results, see Bhutta et al. 2020. For a full description of the SCF and recent SCF data, see www.federalreserve.gov/econres/scfindex.htm. For an overview of the 2016 SCF results, see Bricker et al. 2017. For an overview of the 2013 SCF results, see Bricker et al. 2014. For a special panel analysis that resurveyed households from the 2007 SCF in 2009, see Bricker et al. 2011. Researchers interested in the behavior of older households use another publicly available household survey, the Health and Retirement Study (HRS), which is administered by the University of Michigan. For an extensive bibliography of papers using HRS data, see <https://hrs.isr.umich.edu/publications/biblio>. The Survey of Income and Program Participation (SIPP), which is administered by the US Census Bureau, is another commonly used household survey. For a complete description, see www.census.gov/sipp.
- ²⁶ ICI conducts the Annual Mutual Fund Shareholder Tracking Survey each year to gather information on the demographic and financial characteristics of US households. The most recent survey was conducted from May to June 2021 and was based on a dual-frame telephone sample of 3,001 US households (1,351 households from a landline random digit dial [RDD] frame and 1,650 households from a cell phone RDD frame), of which 36.7 percent owned IRAs. All interviews were conducted over the telephone with the member of the household who was the sole or co-decisionmaker most knowledgeable about the household's savings and investments. The margin of sampling error for the 2021 sample of households is ± 1.8 percentage points at the 95 percent confidence level. For the 2021 survey results, see Holden, Schrass, and Bogdan 2021. For reporting of 2020 IRA incidence, see Holden and Schrass 2021.
- ²⁷ ICI conducts the IRA Owners Survey each year to gather information on the characteristics and activities of IRA-owning households in the United States. The most recent survey was conducted in June 2020 using the KnowledgePanel[®], a probability-based online panel designed to be representative of the US population. The KnowledgePanel[®] was designed and administered by Ipsos, an online consumer research company. The 2020 sample of IRA owners included 3,277 representative US households owning traditional IRAs or Roth IRAs. All surveys were conducted online with the member of the household aged 18 or older who was the sole or co-decisionmaker most knowledgeable about the household's savings and investments. The standard error for the total sample is ± 1.7 percentage points at the 95 percent confidence level. In 2020, households owning traditional or Roth IRAs were surveyed, and thus households only owning employer-sponsored IRAs (SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs) or Coverdell education savings accounts (formerly called education IRAs) are not included. For results from the 2020 survey, see Holden and Schrass 2021.
- ²⁸ For example, in the 2019 Survey of Consumer Finances, 11.9 percent of US households owned Roth IRAs, based on 907 respondents indicating they had Roth IRAs. In the 2019 ICI Annual Mutual Fund Shareholder Tracking Survey, 19.4 percent of US households indicated they owned Roth IRAs.
- ²⁹ For the latest published tabulations, see Bryant and Gober 2013. For the 2000 through 2018 data, see Internal Revenue Service, Statistics of Income Division 2021.

- ³⁰ Though it is possible to track the same individuals over time within the same data provider, it is not possible to link individuals across providers. Therefore, it is possible that some IRA investors will be counted more than once if they own IRAs across multiple service providers. For additional detail on the variables collected and the data collection methodology, see Holden and Bass 2012.
- ³¹ These percentages add to more than 100 percent because individuals may hold more than one type of IRA.
- ³² Another significant annual drop occurred in 1937, when large-cap stocks contracted 35.0 percent in value. See Ibbotson et al. 2018.
- ³³ This change is based on the S&P 500 total return index.
- ³⁴ See Citigroup corporate 10+ year bond index.
- ³⁵ See National Bureau of Economic Research 2021.
- ³⁶ For unemployment statistics, see US Bureau of Labor Statistics 2021. For information on households' balance sheets and disposable personal income, see US Federal Reserve Board 2021.
- ³⁷ See Standard & Poor's Case-Shiller Home Price Indices.
- ³⁸ The ability to contribute to Roth IRAs is restricted based on household income. Prior to 2010, there were restrictions on conversions based on household income; starting in 2010, the income limits for Roth conversions were lifted. For additional detail, see Internal Revenue Service 2011 and 2021a.
- ³⁹ Some of the amounts converted include amounts originating in employer-sponsored retirement plans that were rolled over to traditional IRAs and then converted.
- ⁴⁰ Distributions also can result from recharacterization of contributions, but statistically, these amounts have been negligible.
- ⁴¹ In 1998, individuals doing Roth IRA conversions could spread the tax bill generated over four years (1998 to 2001). In 1998, \$39.3 billion was converted (see Figure 1.2). For more information, see discussion in Campbell, Parisi, and Balkovic 2000. In 2010, individuals doing Roth IRA conversions could choose to pay the taxes in 2011 and 2012. For more information, see Internal Revenue Service 2011.
- ⁴² See Bryant and Guber 2013. For the 2011 through 2018 Roth IRA conversion data, see Internal Revenue Service, Statistics of Income Division 2021.
- ⁴³ Neither SECURE Act nor CARES Act changes affected IRA investors between 2010 and 2018; see note 2.
- ⁴⁴ See note 38.
- ⁴⁵ See note 41.
- ⁴⁶ Conversion rates are lower among these consistent Roth IRA investors than in the annual cross-sectional snapshots (see Figure 3.1) because conversions can open new Roth IRAs (see Figures 3.2 and 2.1). The consistent Roth IRA investors have existing Roth IRAs by 2011.
- ⁴⁷ For a complete discussion of the specific rules and the change, see Internal Revenue Service 2009.
- ⁴⁸ See Internal Revenue Service 2021b.
- ⁴⁹ Inherited Roth IRAs are subject to RMD rules. See Internal Revenue Service 2021b.
- ⁵⁰ See Sabelhaus, Bogdan, and Schrass 2008.
- ⁵¹ Because no target date funds have a 100 percent equity allocation, investors with a 100 percent allocation to target date funds would not be counted as having 100 percent equity holdings.
- ⁵² See Sabelhaus, Bogdan, and Schrass 2008.
- ⁵³ At year-end 2010, 46.1 percent of consistent Roth IRA investors aged 26 to 59 at year-end 2018 had less than a full allocation to equity holdings, including 3.6 percent who had no equity holdings at all (see Figures 1.9 and 1.10). At year-end 2018, 48.0 percent had less than a full allocation to equity holdings, including 3.0 percent who had no equity holdings at all (see Figures 1.9 and 1.10).
- ⁵⁴ Neither SECURE Act nor CARES Act changes affected IRA investors between 2010 and 2018; see note 2.

- ⁵⁵ See Investment Company Institute 2021.
- ⁵⁶ There are income limits on eligibility to make Roth IRA contributions. See Internal Revenue Service 2021a.
- ⁵⁷ For example, in 2018, contribution rates among Roth IRA investors aged 18 to 69 increased from 36.9 percent to 40.3 percent if contributions to traditional IRAs at the same financial services firm were included.
- ⁵⁸ For traditional IRA contribution activity in 2018, see Holden, Schrass, and Bass 2021.
- ⁵⁹ Some of the amounts converted include amounts originating in employer-sponsored retirement plans that were rolled over to traditional IRAs and then converted. Generally, the assets converted are taxable in the year of the conversion to the Roth IRA. See Internal Revenue Service 2021a.
- ⁶⁰ A Roth IRA rollover may include the transfer of an investor's assets from a designated Roth account such as a Roth 401(k) to a Roth IRA—due to changing jobs, for instance—without tax consequences. A Roth IRA rollover also may include the transfer of a non-Roth employer-sponsored retirement plan account into a Roth IRA (which is generally taxable in the year of the rollover).
- ⁶¹ See Internal Revenue Service 2011.
- ⁶² The investor may have a traditional IRA that has been open for many years, or may have rollovers from employer-sponsored retirement plans in the traditional IRAs. The EBRI/ICI 401(k) database finds that 401(k) balances tend to rise with investor age and job tenure (see Holden, VanDerhei, and Bass 2021a). In addition, at retirement, defined contribution plan account owners often choose to roll over their balances to IRAs. See Sabelhaus, Bogdan, and Holden 2008 and Alling and Clark 2021.
- ⁶³ This statistic undercounts the percentage of Roth IRA investors in 2018 with rollovers in their Roth IRAs because some may have had rollovers prior to 2007, and those rollovers cannot be identified in the database. In addition, rollovers made at a prior financial services firm cannot be identified in the database.
- ⁶⁴ See Holden, Schrass, and Bass 2021.
- ⁶⁵ See Investment Company Institute 2021; Bryant and Gober 2013; and Internal Revenue Service, Statistics of Income Division 2021. In addition, \$4.5 billion was rolled over into SEP IRAs, SAR-SEP IRAs, and SIMPLE IRAs in 2018.
- ⁶⁶ See Sabelhaus and Schrass 2009; Holden, Sabelhaus, and Bass 2010b; and Holden, Schrass, and Bass 2021.
- ⁶⁷ See Holden and Schrass 2021.
- ⁶⁸ Individuals may have significant accumulations outside of Roth IRAs, perhaps through the higher contribution limits for employer-sponsored retirement plans, the steady buildup of assets that can occur in these plans over the course of a career, and the longer availability of traditional IRAs. Though direct rollovers from employer-sponsored retirement plans to Roth IRAs have not always been permitted, individuals have had (and still have) the option of rolling over those accumulations into a traditional IRA and then converting the traditional IRA into a Roth IRA. Household survey information indicates that 21 percent of Roth IRA-owning households reported that some of their Roth IRA assets were initially in an employer-sponsored retirement plan; see Holden and Schrass 2021.
- ⁶⁹ See Holden and Schrass 2021.
- ⁷⁰ For the complete rules governing distributions from Roth IRAs, see Internal Revenue Service 2021b.
- ⁷¹ For more information, see Internal Revenue Service 2021b.
- ⁷² Individuals with inherited Roth IRAs must take distributions from the inherited Roth IRA. In general, the entire balance of the inherited Roth IRA must be distributed by the end of the fifth calendar year after the year of the owner's death unless the balance is paid out to the beneficiary over the life or life expectancy of the beneficiary. See Internal Revenue Service 2021b.
- ⁷³ Among those Roth IRA investors with inherited Roth IRAs with withdrawals taking less than the self RMD amount, it is possible that they used a Roth IRA at another financial services firm to fulfill the RMD. In addition, some may not be required to take RMDs yet. See Internal Revenue Service 2021b.

- ⁷⁴ See Internal Revenue Service 2021a for investment restrictions. Roth IRA investors can generally select from the full range of mutual funds, ETFs, closed-end funds, stocks, bonds, bank, and annuity products.
- ⁷⁵ Though the IRS Statistics of Income Division is able to aggregate IRAs across financial services providers for a given taxpayer, the IRA Investor Database is not. Nevertheless, the IRA Investor Database has comparable average Roth IRA balances. For example, at year-end 2018, the average Roth IRA balance in the database is \$37,860, compared with \$39,108 reported by the IRS (2018 is the latest published IRS data available). See Internal Revenue Service, Statistics of Income Division 2021.
- ⁷⁶ In the IRA Investor Database, it is not possible to determine the tenure of existing IRAs. ICI household surveys find that traditional and Roth IRA balances tend to increase with length of IRA ownership (see Holden and Schrass 2021). Similarly, 401(k) balances tend to increase with job tenure (see Holden, VanDerhei, and Bass 2021a).
- ⁷⁷ The IRS Statistics of Income data also find that taxpayers with Roth IRAs have, on average, lower account balances than taxpayers with traditional IRAs. At year-end 2018, the average balance among taxpayers with Roth IRAs was \$39,108, compared with an average of \$159,717 in traditional IRAs. See Internal Revenue Service, Statistics of Income Division 2021.
- ⁷⁸ Household survey data indicate that Roth IRA-owning households hold their Roth IRAs at a variety of financial services firms. In 2020, 66 percent of Roth IRA-owning households held their Roth IRAs through investment professionals (e.g., full-service brokers, independent financial planning firms, bank or savings institutions, or insurance companies) and 34 percent held their Roth IRAs through direct sources (e.g., mutual fund companies or discount brokers). See Holden and Schrass 2021.
- ⁷⁹ A target date fund pursues a long-term investment strategy, using a mix of asset classes, or asset allocation, that the fund provider adjusts to become less focused on growth and more focused on income as the fund approaches and passes the target date, which is usually mentioned in the fund's name. The asset allocation path that the target date fund follows to shift its focus from growth to income is typically referred to as the glide path. Because discussions of asset allocation usually focus on the percentage of the portfolio invested in equities, the glide path generally reflects the declining percentage of equities in the portfolio as it approaches and passes the target date. The target date generally is the date at which the typical investor for whom that fund is designed would reach retirement age and stop making new investments in the fund. For additional information on target date funds, see ICI's Target Retirement Date Funds Resource Center at www.ici.org/trdf.
- ⁸⁰ For the pattern of use of target date funds in 401(k) plans, see Holden, VanDerhei, and Bass 2021a and 2021b.
- ⁸¹ Target date fund use is more widespread among 401(k) plan participants. At year-end 2018, more than half of 401(k) plan participants invested at least some of their accounts in target date funds (including target date mutual funds and target date collective investment trusts); see Holden, VanDerhei, and Bass 2021a. Target date fund use is slightly lower among traditional IRA investors than for Roth IRA investors, despite more direct influence of rollovers on traditional IRAs. At year-end 2018, 14.8 percent of traditional IRA investors held target date funds, and target date funds were 9.6 percent of traditional IRA assets; see Holden, Schrass, and Bass 2021.
- ⁸² For a discussion of how US household investments change over the life cycle, see Sabelhaus, Bogdan, and Schrass 2008. For the pattern of equity versus bond investing across 401(k) participants by age, see Holden, VanDerhei, and Bass 2021a and 2021b. For the pattern of equity versus bond investing across traditional IRA investors by age, see Holden, Schrass, and Bass 2021.
- ⁸³ For a history of IRAs, see Holden et al. 2005.
- ⁸⁴ See Bryant and Gober 2013; and Internal Revenue Service, Statistics of Income Division 2021.

References

Alling, Brian T., and Jeffrey W. Clark. 2021. *How America Saves 2021*. Valley Forge, PA: The Vanguard Group, Vanguard Center for Retirement Research. Available at https://institutional.vanguard.com/content/dam/inst/vanguard-has/insights-pdfs/21_CIR_HAS21_HAS_FSreport.pdf.

Bhutta, Neil, Jesse Bricker, Andrew C. Chang, Lisa J. Dettling, Sarena Goodman, Joanne W. Hsu, Kevin B. Moore, Sarah Reber, Alice Henriques Volz, and Richard A. Windle. 2020. "Changes in US Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 106, no. 5 (September). Available at www.federalreserve.gov/publications/files/scf20.pdf.

Brady, Peter J., Steven Bass, Jessica Holland, and Kevin Pierce. 2017. "Using Panel Tax Data to Examine the Transition to Retirement." SOI Working Paper (April). Washington, DC: Internal Revenue Service. Available at www.irs.gov/pub/irs-soi/17rptrtransitionretirement.pdf.

Bricker, Jesse, Brian Bucks, Arthur Kennickell, Traci Mach, and Kevin Moore. 2011. "Surveying the Aftermath of the Storm: Changes in Family Finances from 2007 to 2009." FEDS Working Paper, no. 2011-17. Washington, DC: Federal Reserve Board (March). Available at www.federalreserve.gov/pubs/feds/2011/201117/201117pap.pdf.

Bricker, Jesse, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Lindsay Jacobs, Kevin B. Moore, Sarah Pack, John Sabelhaus, Jeffrey Thompson, and Richard A. Windle. 2017. "Changes in US Family Finances from 2013 to 2016: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 103, no. 3 (September). Available at www.federalreserve.gov/publications/files/scf17.pdf.

Bricker, Jesse, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Kevin B. Moore, John Sabelhaus, Jeffrey Thompson, and Richard A. Windle. 2014. "Changes in US Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 100, no. 4 (September). Available at www.federalreserve.gov/pubs/bulletin/2014/pdf/scf14.pdf.

Bricker, Jesse, Arthur B. Kennickell, Kevin B. Moore, and John Sabelhaus. 2012. "Changes in US Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 98, no. 2 (June). Washington, DC: Federal Reserve Board. Available at www.federalreserve.gov/pubs/bulletin/2012/pdf/scf12.pdf.

Brown, Jeffrey R., James Poterba, and David Richardson. 2014. "Do Required Minimum Distributions Matter? The Effect of the 2009 Holiday on Retirement Plan Distributions." NBER Working Paper, no. 20464. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/papers/w20464.

Bryant, Victoria L. 2008. "Accumulation and Distribution of Individual Retirement Arrangements, 2004." *Statistics of Income Bulletin* (Spring): 90–101. Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irs-soi/04inretirebul.pdf.

Bryant, Victoria L. 2012. "Accumulation and Distribution of Individual Retirement Arrangements, 2008." *Statistics of Income Bulletin* (Spring): 89–104. Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irssoi/12insprbulretirement.pdf.

Bryant, Victoria L., and Jon Gober. 2013. "Accumulation and Distribution of Individual Retirement Arrangements, 2010." *Statistics of Income Bulletin* (Fall): 193–210. Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irssoi/13inirafallbul.pdf.

Bryant, Victoria L., and Peter J. Sailer. 2006. "Accumulation and Distribution of Individual Retirement Arrangements, 2001–2002." *Statistics of Income Bulletin* (Spring): 233–254. Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irs-soi/02iraart.pdf.

Bucks, Brian K., Arthur B. Kennickell, Traci L. Mach, and Kevin B. Moore. 2009. "Changes in US Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 95 (February). Washington, DC: Federal Reserve Board. Available at www.federalreserve.gov/pubs/bulletin/2009/pdf/scf09.pdf.

Campbell, David, Michael Parisi, and Brian Balkovic. 2000. "Individual Income Tax Returns, 1998." *Statistics of Income Bulletin* (Fall): 8–46. Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irs-soi/98indtr.pdf.

Citigroup corporate 10+ year bond index. New York: Citigroup.

Devlin-Foltz, Sebastian, Alice M. Henriques, and John Sabelhaus. 2015. "The Evolution of Retirement Wealth," FEDS Working Paper, no. 2015-009. Washington, DC: Federal Reserve Board (February). Available at www.federalreserve.gov/econresdata/feds/2015/files/2015009pap.pdf.

Holden, Sarah, and Steven Bass. 2011. "The IRA Investor Profile: Traditional IRA Investors' Asset Allocation, 2007 and 2008." *ICI Research Report* (September). Available at www.ici.org/pdf/rpt_11_ira_asset.pdf.

Holden, Sarah, and Steven Bass. 2012. "The IRA Investor Profile: Traditional IRA Investors' Withdrawal Activity 2007 and 2008." *ICI Research Report* (July). Available at www.ici.org/pdf/rpt_12_ira_withdrawals.pdf.

Holden, Sarah, and Steven Bass. 2013. "The IRA Investor Profile: Traditional IRA Investors' Activity, 2007–2011." *ICI Research Report* (October). Available at www.ici.org/pdf/rpt_13_ira_investors.pdf.

Holden, Sarah, and Steven Bass. 2014. "The IRA Investor Profile: Traditional IRA Investors' Activity, 2007–2012." *ICI Research Report* (March). Available at www.ici.org/pdf/rpt_14_ira_traditional.pdf.

Holden, Sarah, and Steven Bass. 2016. "The IRA Investor Profile: Traditional IRA Investors' Activity, 2007–2014." *ICI Research Report* (August). Available at www.ici.org/pdf/rpt_16_ira_traditional.pdf.

Holden, Sarah, and Steven Bass. 2017. “The IRA Investor Profile: Traditional IRA Investors’ Activity, 2007–2015.” *ICI Research Report* (June). Available at www.ici.org/pdf/rpt_17_ira_traditional.pdf.

Holden, Sarah, and Steven Bass. 2018. “The IRA Investor Profile: Traditional IRA Investors’ Activity, 2007–2016.” *ICI Research Report* (September). Available at www.ici.org/pdf/rpt_18_ira_traditional.pdf.

Holden, Sarah, Kathy Ireland, Vicky Leonard-Chambers, and Michael Bogdan. 2005. “The Individual Retirement Account at Age 30: A Retrospective.” *Investment Company Institute Perspective* 11, no. 1 (February). Available at www.ici.org/pdf/per11-01.pdf.

Holden, Sarah, and Brian Reid. 2008. “The Role of Individual Retirement Accounts in US Retirement Planning.” In *Recalibrating Retirement Spending and Saving*, edited by John Ameriks and Olivia S. Mitchell: 81–111. Oxford: Oxford University Press for the Wharton School, University of Pennsylvania, Pension Research Council.

Holden, Sarah, John Sabelhaus, and Steven Bass. 2010a. “The IRA Investor Profile: Traditional IRA Investors’ Contribution Activity, 2007 and 2008.” *ICI Research Report* (July). Available at www.ici.org/pdf/rpt_10_ira_contributions.pdf.

Holden, Sarah, John Sabelhaus, and Steven Bass. 2010b. “The IRA Investor Profile: Traditional IRA Investors’ Rollover Activity, 2007 and 2008.” *ICI Research Report* (December). Available at www.ici.org/pdf/rpt_10_ira_rollovers.pdf.

Holden, Sarah, and Daniel Schrass. 2018. “The IRA Investor Profile: Roth IRA Investors’ Activity, 2007–2016.” *ICI Research Report* (September). Available at www.ici.org/pdf/rpt_18_ira_roth_investors.pdf.

Holden, Sarah, and Daniel Schrass. 2021. “The Role of IRAs in US Households’ Saving for Retirement, 2020.” *ICI Research Perspective* 27, no. 1 (January). Available at www.ici.org/pdf/per27-01.pdf.

Holden, Sarah, Daniel Schrass, and Steven Bass. 2021. “The IRA Investor Profile: Traditional IRA Investors’ Activity, 2010–2018.” *ICI Research Report* (August). Available at www.ici.org/system/files/2021-08/21_rpt_ira_traditional.pdf.

Holden, Sarah, Daniel Schrass, and Michael Bogdan. 2021. “Ownership of Mutual Funds, Shareholder Sentiment, and Use of the Internet, 2021.” *ICI Research Perspective* 27, no. 11 (October). Available at www.ici.org/system/files/2021-10/per27-11.pdf.

Holden, Sarah, Jack VanDerhei, and Steven Bass. 2021a. “401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2018.” *ICI Research Perspective* 27, no. 2, and *EBRI Issue Brief*, no. 526 (March). Available at www.ici.org/pdf/per27-02.pdf.

Holden, Sarah, Jack VanDerhei, and Steven Bass. 2021b. “Target Date Funds: Evidence Points to Growing Popularity and Appropriate Use by 401(k) Plan Participants.” *ICI Research Perspective* 27, no. 7, and *EBRI Issue Brief*, no. 537 (September). Available at www.ici.org/system/files/2021-09/per27-07.pdf.

Ibbotson, Roger G., Roger J. Grabowski, James P. Harrington, and Carla Nunes. 2018. *2018 SBBI Yearbook: Stocks, Bonds, Bills, and Inflation—US Capital Markets Performance by Asset Class 1926–2017*. Hoboken: John Wiley & Sons, Inc.

Internal Revenue Service. 2009. *Publication 590, Individual Retirement Arrangements (IRAs): For Use in Preparing 2008 Returns*. Available at www.irs.gov/pub/irs-prior/p590--2008.pdf.

Internal Revenue Service. 2011. *Publication 590, Individual Retirement Arrangements (IRAs): For Use in Preparing 2010 Returns*. Available at www.irs.gov/pub/irs-prior/p590--2010.pdf.

Internal Revenue Service. 2013. *Individual Income Tax Returns 2011, Publication 1304* (Rev. 082013, July). Washington, DC: Internal Revenue Service Statistics of Income Division. Available at www.irs.gov/pub/irs-soi/11inalcr.pdf.

Internal Revenue Service. 2021a. *Publication 590-A, Contributions to Individual Retirement Arrangements (IRAs) for Use in Preparing 2020 Returns*. Available at www.irs.gov/pub/irs-pdf/p590a.pdf.

Internal Revenue Service. 2021b. *Publication 590-B, Distributions from Individual Retirement Arrangements (IRAs) for Use in Preparing 2020 Returns*. Available at www.irs.gov/pub/irs-pdf/p590b.pdf.

Internal Revenue Service, Statistics of Income Division. 2021. *SOI Tax Stats: Accumulation and Distribution of Individual Retirement Arrangements (IRA)*. Available at www.irs.gov/statistics/soi-tax-stats-accumulation-and-distribution-of-individual-retirement-arrangements.

Investment Company Institute. 2021. “The US Retirement Market, Second Quarter 2021” (September). Available at www.ici.org/research/stats/retirement.

Joint Committee on Taxation. 1997. “General Explanation of Tax Legislation Enacted in 1997” (December). Washington, DC: US Government Printing Office. Available at www.jct.gov/publications.html?func=startdown&id=1215.

Joint Committee on Taxation. 2009. “General Explanation of Tax Legislation Enacted in the 110th Congress” (March). Available at www.jct.gov/publications.html?func=startdown&id=1990.

Mortenson, Jacob A., Heidi R. Schramm, and Andrew Whitten. 2016. “The Effect of Required Minimum Distribution Rules on Withdrawals from Traditional Individual Retirement Accounts” (May). Available at <http://ssrn.com/abstract=2764435>.

National Bureau of Economic Research. 2021. *US Business Cycle Expansions and Contractions*. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/research/data/us-business-cycle-expansions-and-contractions.

Sabelhaus, John, Michael Bogdan, and Sarah Holden. 2008. *Defined Contribution Plan Distribution Choices at Retirement: A Survey of Employees Retiring Between 2002 and 2007*. Washington, DC: Investment Company Institute. Available at www.ici.org/pdf/rpt_08_dcdd.pdf.

Sabelhaus, John, Michael Bogdan, and Daniel Schrass. 2008. *Equity and Bond Ownership in America*, 2008. Washington, DC: Investment Company Institute (December). Available at www.ici.org/pdf/rpt_08_equity_owners.pdf.

Sabelhaus, John, and Daniel Schrass. 2009. "The Evolving Role of IRAs in US Retirement Planning." *Investment Company Institute Perspective* 15, no. 3 (November). Available at www.ici.org/pdf/per15-03.pdf.

Sailer, Peter J., and Sarah E. Nutter. 2004. "Accumulation and Distribution of Individual Retirement Arrangements, 2000." *Statistics of Income Bulletin* (Spring): 121–134. Washington, DC: Internal Revenue Service. Available at www.irs.gov/pub/irs-soi/00retire.pdf.

Sailer, Peter J., Michael E. Weber, and Kurt S. Gurka. 2003. "Are Taxpayers Increasing the Buildup of Retirement Assets? Preliminary Results from a Matched File of Tax Year 1999 Tax Returns and Information Returns." In *Proceedings: Ninety-Fifth Annual Conference on Taxation*, edited by Ranjana Madhusudhan: 364–369. Washington, DC: National Tax Association. Available at www.irs.gov/pub/irs-soi/petenta.pdf.

Standard & Poor's Case-Shiller Home Price Indices. New York: Standard & Poor's. Available at www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/sp-corelogic-case-shiller-composite/#overview.

US Bureau of Labor Statistics. 2021. "Labor Force Statistics from the Current Population Survey." Available at <http://data.bls.gov/timeseries/LNS14000000>.

US Federal Reserve Board. 2021. *Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts, Second Quarter 2021, Z.1 Release* (September). Washington, DC: Federal Reserve Board. Available at www.federalreserve.gov/releases/Z1/current.

Sarah Holden



Sarah Holden, ICI senior director of retirement and investor research, 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. She is responsible for analysis of 401(k) plan participant activity using data collected in a collaborative effort with the Employee Benefit Research Institute (EBRI), known as the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. In addition, she oversees the IRA Investor Database™, which contains data on millions of IRA investors and allows analysis of IRA investors' contribution, rollover, conversion, and withdrawal activity, and asset allocation. 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, *cum laude*, from Smith College.

Daniel Schrass



Daniel Schrass is an economist in the retirement and investor research division at ICI. He focuses on investor demographics and behavior, as well as trends in household retirement saving activity. His detailed research includes analysis of IRA-owning households and individual IRA investors in the IRA Investor Database™, which includes data on millions of IRA investors. He also conducts research with government surveys such as the Survey of Consumer Finances, the Current Population Survey, and the Survey of Household Economics and Decisionmaking. Before joining ICI in October 2007, he served as an economist at the US Bureau of Labor Statistics. He has an MA in applied economics from the Johns Hopkins University and a BS in economics from the Pennsylvania State University.