The BrightScope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2018

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Key Findings

401(k) Plan Enrollment, Employer Contributions, and Use of Loans

Employers choose the features to include in their 401(k) plans, including whether to automatically enroll participants, whether to offer employer contributions, and whether to offer plan loans. This study analyzes automatic enrollment, employer contributions, and participant loans outstanding in a sample of 62,000 large private-sector 401(k) plans—typically plans with 100 participants or more in 2018.

- **Larger 401(k) plans are more likely to report that they automatically enroll workers into the plan.** More than half of large 401(k) plans in the sample with more than $100 million in plan assets reported that they automatically enrolled their participants, and six in 10 plans with more than $1 billion in plan assets did, compared with about 20 percent of plans in the sample with $10 million or less in plan assets.
- **Most 401(k) plans offer employer contributions.** In 2018, 87 percent of large 401(k) plans covering more than nine out of 10 401(k) participants had employer contributions. Nearly all of the largest plans—about 95 percent of 401(k) plans with 5,000 participants or more—had employer contributions. Employer contributions are also common even among smaller 401(k) plans—87 percent of 401(k) plans in the sample with 100 to 499 participants had them in 2018.
- **Larger 401(k) plans are more likely to report participant loans outstanding.** More than 90 percent of 401(k) plans in the sample with more than $50 million in plan assets had participant loans outstanding, compared with 77 percent of 401(k) plans with $1 million to $10 million in plan assets and 35 percent of plans with less than $1 million. Overall, 78 percent of 401(k) plans in the sample had participant loans outstanding, and 91 percent of participants were in those plans in 2018.
- **Larger 401(k) plans tend to be more likely to have employer contributions, participant loans outstanding, and automatic enrollment.** About 40 percent of plans in the sample with 5,000 participants or more had employer contributions, participant loans outstanding, and automatic enrollment, compared with 13 percent of plans in the sample with fewer than 100 participants. Overall, 24 percent of 401(k) plans in the sample reported evidence of all three activities in 2018.
- **401(k) plans with automatic enrollment are more likely to have both employer contributions and participant loans outstanding than plans without automatic enrollment.** In 2018, more than three-quarters of the large 401(k) plans in the sample with automatic enrollment also had both employer contributions and participant loans outstanding, compared with less than two-thirds of plans in the sample without automatic enrollment.

401(k) Investment Menu Design

When designing their 401(k) plans, employers choose the number and types of investment options in the plan, looking for a diverse range of options. This study also explores the investment menus that employers have chosen for 401(k) plans in the BrightScope Defined Contribution Plan Database and how investments vary by plan size. The BrightScope Defined Contribution Plan Database contains detailed information from audited Form 5500 reports for more than 56,000 large private-sector 401(k) plans—plans with between four and 100 investment options and typically 100 participants or more.

- **401(k) plans offer participants a wide variety of investment options.** In 2018, the average large 401(k) plan offered 28 investment options, of which about 13 were equity funds, three were bond funds, and eight were target date funds. Nearly all plans offered at least one domestic equity fund, international equity fund, and domestic bond fund, and more than four-fifths of plans offered target date funds. Funds include mutual funds, collective investment trusts (CITs), separate accounts, and other pooled investment products.

- **Mutual funds were the most common investment vehicle in 401(k) plans.** Mutual funds held 43 percent of large private-sector 401(k) plan assets in the sample in 2018. CITs held 33 percent of assets, guaranteed investment contracts (GICs) held 7 percent, separate accounts held 3 percent, and the remaining 14 percent were invested in individual stocks (including company stock), individual bonds, brokerage, and other investments. Mutual funds accounted for at least half of the assets in all but the very largest plans, where a larger share of assets was held in CITs.

- **Equity funds accounted for the largest share of assets in 401(k) plans.** In 2018, 42 percent of large 401(k) plan assets were held in equity funds, 28 percent were held in balanced funds (with most of that being held in target date funds), and 8 percent were held in bond funds. GICs and money funds accounted for 9 percent of assets.

- **Target date funds have become more common in 401(k) plans since 2006.** In 2006, 32 percent of large 401(k) plans offered target date funds; this had risen to 84 percent of plans in 2018. Similarly, the percentage of participants who were offered target date funds increased from 42 percent of participants to 82 percent between 2006 and 2018, and the percentage of assets invested in target date funds increased from 3 percent to 25 percent.

- **Index funds make up a significant component of 401(k) assets, holding 37 percent of 401(k) assets in 2018.** Index funds held a greater share of assets in larger 401(k) plans, rising from 28 percent of assets in plans with less than $1 million in plan assets to 41 percent of assets in plans with more than $1 billion. Index funds are widely available across all plan sizes. More than 95 percent of 401(k) plans with more than $10 million in plan assets offered index funds in their plan lineups in 2018, while 82 percent of 401(k) plans with less than $1 million did. Index funds, which tend to be equity index funds, generally have lower expense ratios than actively managed equity funds.

401(k) Plans Engage a Variety of Service Providers

When employers offer a 401(k) plan to their employees, they engage service providers to help manage the operation of the plan. Drawing from the BrightScope Defined Contribution Plan Database, this study explores the types of recordkeepers used by large 401(k) plans and the use of proprietary funds.

» **Employers choose from a range of providers for 401(k) plan recordkeeping.** Insurance companies were the most common recordkeeper type for 401(k) plans and were more likely to provide recordkeeping services for the smaller 401(k) plans in the sample. Asset managers, which include mutual fund companies, were the second most common recordkeepers across plans, and they were more likely to provide recordkeeping services for larger plans. As a result, asset managers provided recordkeeping services for 32 percent of plans but for 42 percent of participants and 57 percent of plan assets in 2018.

Introduction

The Role of 401(k) Plans in US Retirement Planning

A 401(k) is an employer-sponsored defined contribution (DC) retirement plan that enables employees to make tax-deferred contributions from their salaries to the plan. Employers offer 401(k) plans as part of an overall compensation package of wages and benefits in order to attract workers and provide them with a benefit package that helps them save for retirement. Employers determine the features their 401(k) plans will include, within rules governing 401(k) plans, and typically engage service providers to administer the plan and provide investment options.

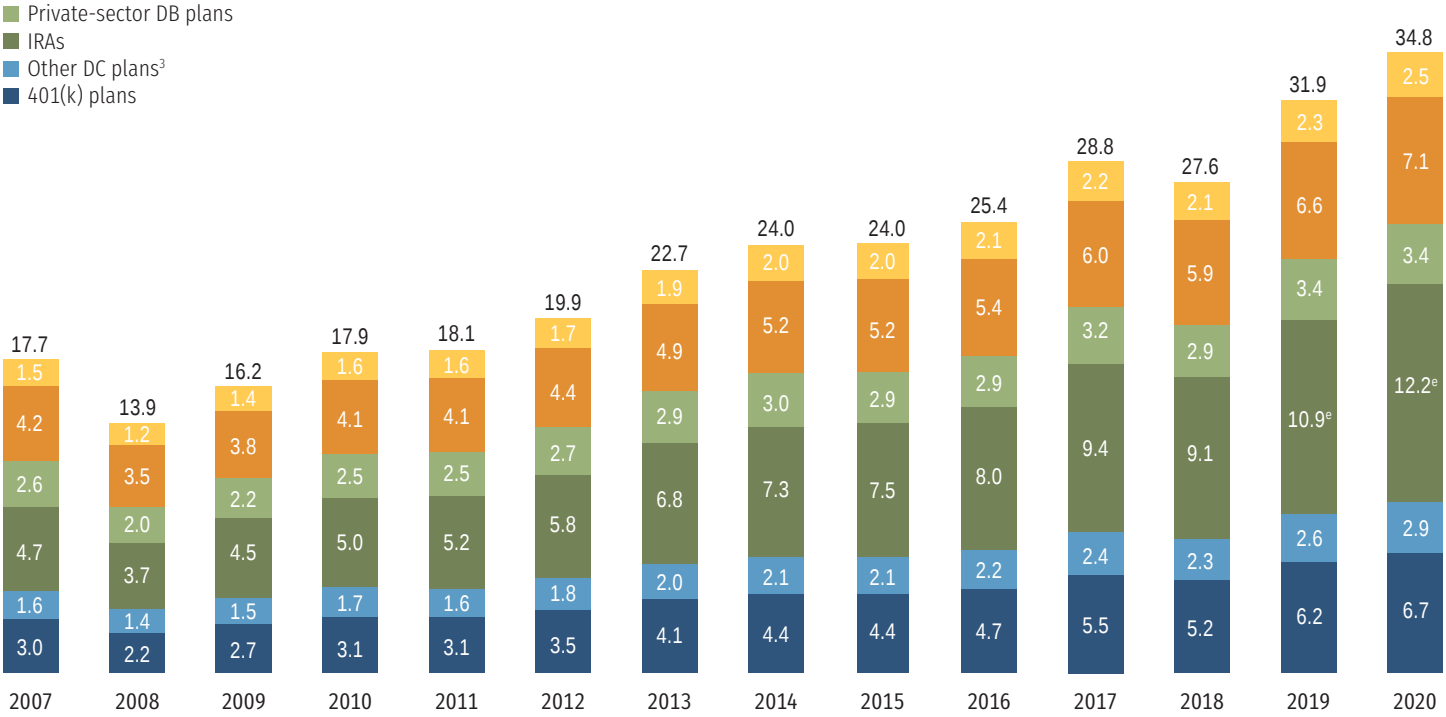
Employers decide whether they will automatically enroll employees or have employees sign up for the plan and whether they will allow access to 401(k) account assets through a loan feature. They may also make employer contributions into employee 401(k) accounts. Typically, plan participants direct the investment of their accounts, choosing from the lineup of options offered in the plan. With $6.7 trillion in assets at the end of 2020, 401(k) plans have become one of the largest components of US retirement assets, accounting for nearly one-fifth of all retirement assets (Exhibit I.1).

As the prevalence of private-sector defined benefit (DB) pension plans has declined, DC plans (such as 401(k) plans) have become a more important component of retirement savings for American workers. Because of the tax advantages they provide and their importance for retirement, researchers and policymakers have an interest in understanding how workers are using 401(k) plans to prepare for retirement. Researchers and policymakers are also interested in how employers have structured their plans, including the incentives to participate, such as automatic enrollment or employer contributions, plan loans, the number and types of investment offerings, and the fees paid to operate the plan.

EXHIBIT I.1

401(k) Plans Hold $6.7 Trillion in Assets

Trillions of dollars, year-end



[1] Annuities include all fixed and variable annuities held outside of retirement plans and IRAs.

[2] Federal DB plans include US Treasury security holdings of the civil service retirement and disability fund, the military retirement fund, the judicial retirement funds, the Railroad Retirement Board, and the foreign service retirement and disability fund. These plans also include securities held in the National Railroad Retirement Investment Trust. The reported assets of federal pension plans for 2017 are adjusted for US Treasury financing activities undertaken after the legal limit on federal government borrowing was reached. These actions temporarily reduced the amount of Treasury securities reported on the balance sheet of the Civil Service Retirement and Disability Fund.

[3] Other DC plans include 403(b) plans, 457 plans, private employer-sponsored DC plans without 401(k) features, and the Federal Employees Retirement System (FERS) Thrift Savings Plan (TSP).

[e] Data are estimated.

Sources: Investment Company Institute, Federal Reserve Board, Department of Labor, National Association of Government Defined Contribution Administrators, American Council of Life Insurers, Internal Revenue Service Statistics of Income Division, and Government Accountability Office; see Investment Company Institute 2021b

The Department of Labor Form 5500 Research File

Private-sector 401(k) plans are required to file Form 5500 with the US Department of Labor (DOL).[1] The information in those filings includes the number of plan participants, assets held in the plan, and other plan features. The DOL makes available not only individual Form 5500 reports but also a comprehensive database for the universe of 401(k) plans, which researchers can analyze.[2] Tabulations of the BrightScope Defined Contribution Plan Database find that there were nearly 590,000 401(k) plans, covering more than 71 million participants in 2018 (Exhibit I.2).[3] Small, medium, and large employers in all industries and covering diverse workforces sponsor these plans, and they choose to design their plans to meet their unique circumstances. Although most plans are small (58.5 percent have less than $1 million in plan assets), most participants[4] are in larger plans (58.6 percent are in plans with more than $50 million in plan assets). Therefore, this report will focus on plan design both from the plan perspective and from the participant perspective. Chapter 1 will discuss plan design with respect to automatic enrollment, employer contribution, and participant loan use across 401(k) plans.

EXHIBIT I.2

Universe of 401(k) Plans

The BrightScope Defined Contribution Plan Database

To better understand DC retirement plans, BrightScope has created the BrightScope Defined Contribution Plan Database, which is compiled by extracting information from audited reports filed annually by larger private-sector DC plans with the DOL. These audited filings supplement the DOL Form 5500 Research File, providing additional detail for the larger plans. Generally, plans with 100 participants or more are required to file an audited report with the DOL.[5] These reports generally contain information on the investments offered by the plan, assets in these investments, and employer contribution structures. BrightScope has also included information from the Form 5500, which private-sector sponsors of 401(k) plans (as well as other types of private-sector employer-sponsored pension plans) are required to file with the DOL annually.[6] These filings contain important information about the plans, including the number of participants covered, total plan assets, and total contributions to and distributions from the plan. In addition, BrightScope has combined the audited data with outside data sources to incorporate the fees paid by 401(k) and other DC plan participants associated with the investments in their plans. For chapters 2, 3, and 4 of this report, the additional detailed data from audited Form 5500 filings for more than 56,000 large 401(k) plans are analyzed (Exhibit I.3). For 2018, the BrightScope Defined Contribution Plan Database contains audited information on 10 percent of 401(k) plans, covering 81 percent of 401(k) plan participants and 84 percent of 401(k) plan assets (Exhibit I.4).[7]

EXHIBIT I.3

BrightScope Audited 401(k) Filings and the Universe of 401(k) Plans by Plan Assets

Distribution of 401(k) plans, participants, and assets by plan assets, 2018

	BrightScope audited 401(k) filings			Department of Labor 401(k) universe		
Plan assets	Plans *Number*	Participants *Thousands*	Assets *Billions of dollars*	Plans *Number*	Participants *Thousands*	Assets *Billions of dollars*
Less than $1M	3,478	847.9	$1.9	343,108	6,007.5	$107.1
$1M to $10M	26,359	6,976.5	125.8	208,789	13,660.6	620.7
>$10M to $50M	18,768	9,133.0	408.9	26,458	9,894.5	532.4
>$50M to $100M	3,365	4,643.3	233.8	3,564	4,808.0	247.1
>$100M to $250M	2,326	6,538.2	362.0	2,407	6,744.8	374.7
>$250M to $500M	991	5,093.5	347.0	1,034	5,395.1	362.1
>$500M to $1B	583	4,643.9	408.6	603	4,763.9	424.1
More than $1B	634	19,539.5	2,379.1	659	20,073.4	2,439.7
All plans	56,504	57,415.8	4,267.0	586,622	71,347.7	5,108.0

Note: BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. Assets are fair market value at the year-end of the plan and include loans.

Source: BrightScope Defined Contribution Plan Database

Because 401(k) plans with fewer than 100 participants are generally not required to file the audited reports required of larger plans, the BrightScope Defined Contribution Plan Database does not contain many small plans. Though most 401(k) plans are small plans, most participants and assets are in larger plans. For example, although the sample analyzed contains information on more than 56,000, or 10 percent, of the nearly 590,000 plans in the DOL 401(k) universe in 2018, it contains $4.3 trillion, or 84 percent, of the $5.1 trillion in assets (Exhibits I.3, I.4, and I.5). Coverage rates in the database are higher for larger plans—more than 95 percent of plans with more than $100 million are included, but the database contains audited information on very few plans with less than $1 million in plan assets (Exhibit I.4). Coverage rates of 401(k) plans in the database grouped by number of plan participants tell a similar story, with larger plans much more likely to be included than smaller plans (Exhibit I.5).

The BrightScope database contributes to an existing body of information on 401(k) plans. Surveys of households and plan sponsors have also contributed to a better understanding of how 401(k) plans are used and structured. ICI conducts two annual household surveys that provide information about 401(k) and other DC plans and participants.[8] These surveys provide information about who participates in 401(k) plans, the assets they hold inside their plans, and their views about the features of their plans. In addition, other publicly available surveys provide important information to help researchers better understand how people use 401(k) plans to prepare for retirement.[9] These surveys can provide detailed information about the people who participate in 401(k) plans (such as age, income, and other demographic characteristics) and how they feel about their plans, but the surveys may be limited in their ability to provide accurate information on account balances and plan design features, which individuals may have difficulty recalling. By using audited plan-level data, the BrightScope database increases the quality of information about plan design and allows for improved understanding about how 401(k) plans are structured.

Detailed information on plan design is also available through various surveys of plan sponsors.[10] These surveys provide information about plan design, including fees and expenses, but can suffer from small, nonrandom samples, which may limit their suitability for extrapolation to the entire 401(k) market. The BrightScope database's sample for this report of more than 56,000 large 401(k) plans in 2018 allows for analysis of a much broader array of DC plans based on regulatory filings. In addition, the BrightScope database has nearly universal coverage of larger plans.

ICI collects data from mutual fund companies directly, as well as from other sources, to gain an understanding of the fees and expenses that 401(k) plan participants pay as a group, on average.[11] The BrightScope database allows for analysis of the variation in mutual fund fees across different 401(k) plan sizes, as well as the ability to track consistent 401(k) plans over time. In addition, by combining mutual fund expense data with expenses on other assets as well as other fees and expenses paid for the operation of 401(k) plans, BrightScope also builds a total plan cost measure for many plans. This provides a comprehensive description of the range of fees and expenses incurred in 401(k) plans.

Researchers have also used administrative data to understand participant-level behavior in 401(k) plans.[12] These data can provide a rich understanding of how 401(k) account balances, asset allocation, and contributions and distributions vary across participants, but they often lack detailed information about the design of the plan itself, which is included in the BrightScope database.

Research Agenda for This Report

This report primarily focuses on plan year 2018 from the DOL Form 5500 Research File and from the BrightScope Defined Contribution Plan Database, which contains details from audited Form 5500 reports, for plans that filed Schedule H—typically plans with 100 participants or more (large plans). The report presents data on how these large 401(k) plans are structured, the types of service providers that plan sponsors engage with, the investment options offered in 401(k) plans, and the fees and expenses paid by 401(k) participants and plan sponsors. To explore changes over time, analysis of prior years is also included, both for all 401(k) plans in a given year and for 401(k) plans that are consistently included in the database.

Chapter 1 reports information about automatic enrollment, employer contributions, and plan loans outstanding, primarily relying on the DOL 2018 Form 5500 Research File. In designing their 401(k) plans, employers may choose to automatically enroll participants. Employers decide if and how much they will contribute to participants' 401(k) accounts. In addition, they may include a loan feature in the 401(k) plan. This chapter explores the combinations of these activities and how they vary across 401(k) plans.

Chapter 2 focuses on the structure of the 401(k) plans, analyzing the number and types of investment options that participants have to choose from, as well as the investment options that the participants do choose, based on the audited 401(k) plans in the BrightScope Defined Contribution Plan Database. Because target date funds have continued to become more prevalent in 401(k) plans over the past several years, this chapter explores how often they are offered in plans, what portion of plan assets are dedicated to these funds, and how these measures have changed in recent years. This chapter also explores the growing role of index funds.

Chapter 3 explores the types of recordkeepers that are engaged in servicing 401(k) plans, based on the audited 401(k) plans in the BrightScope Defined Contribution Plan Database. A wide variety of businesses—such as asset managers (including mutual fund companies), insurance companies, banks, brokerage firms, and pure recordkeepers—provide recordkeeping services. Employers choose from a wide variety of investment options for their plan lineup, including in some cases funds that are sponsored by the plan's recordkeeper, known as proprietary funds. The percentage of plans offering at least one proprietary fund and the percentage of plan assets invested in proprietary funds are presented in this chapter.

Chapter 4 analyzes fees paid to operate 401(k) plans, based on the audited 401(k) plans in the BrightScope Defined Contribution Plan Database and fee information from industry sources. BrightScope has built a total plan cost measure for plans with sufficiently complete information. Because participants and assets tend to be concentrated in larger plans, BrightScope's total plan cost measure is analyzed for the average participant and the average dollar, as well as for the average plan. Then, because investment fees tend to be a significant portion of plan expenses—and because extensive information on mutual fund fees is available—the expense ratios of mutual funds in 401(k) plans are presented, with a special focus on the variation in mutual fund fees across plan size and different investment objectives (e.g., equity funds, balanced funds, bond funds, money market funds, and other funds), often including both index and actively managed funds. This material is intended to provide general information on fees paid by participants in a wide variety of plans to provide insight into average fees across the marketplace. It is not intended for benchmarking the costs of specific plans to the broad averages presented here.

CHAPTER 1

401(k) Plan Enrollment, Employer Contributions, and Use of Loans

When designing their 401(k) plans, employers make decisions regarding elements of plan design, including these key features:

- automatic enrollment of employees into the plan at a given contribution rate to encourage participation;
- provision of employer contributions (perhaps designing those contributions to encourage contribution of at least a certain percentage of salary from participants),[13] eligibility for employer contributions, and vesting time frame; and
- access to plan assets through participant loans.[14]

These plan design features have an impact on employee experience with 401(k) plans, and the thinking on plan design has evolved. In addition to these plan design features, plan sponsors also select the lineup of investment options[15] offered in the plan (which will be discussed in chapter 2).

Employer Plan Design Choices

Although participants generally choose whether and how much to contribute to 401(k) plans and what assets to invest in, employers are responsible for the plan architecture in which those decisions are made. For example, employers pick the investment choices to offer in the plan, whether to automatically enroll employees in the plan, whether to encourage participant contributions through an employer match, and whether to allow access to account assets before retirement. This chapter focuses on three such plan design features: automatic enrollment, employer contributions, and loans. Prior work has tended to focus on the availability of individual plan design features in isolation.[16] However, plans are designed by selecting a package of features in order to attract and retain qualified workers. To understand the choices that employers make, this chapter uses data primarily from the 2018 DOL Form 5500 Research File to focus on the plan feature combinations that employers choose when designing their 401(k) plans.[17, 18]

DATA ON AUTOMATIC ENROLLMENT, EMPLOYER CONTRIBUTIONS, AND USE OF LOANS

This chapter's analysis relies primarily on data from the Department of Labor 2018 Form 5500 Research File focusing on plans that filed Schedule H—typically plans with 100 participants or more (large plans). The use of automatic enrollment by a plan is confirmed by the reported plan feature on the 2018 Form 5500. Determining the presence and amount of employer contributions relies on Form 5500 reports of the income statement of the 401(k) plans. The availability of a loan feature is not reported, but it is possible to determine whether any participants have loans by using the balance sheet item on the Form 5500 for participant loans outstanding. Although the loan analysis captures loan use rather than loan offering, it is likely that at least one participant in such plans offering loans would have a loan outstanding in the larger plans analyzed.

The Role of Automatic Enrollment

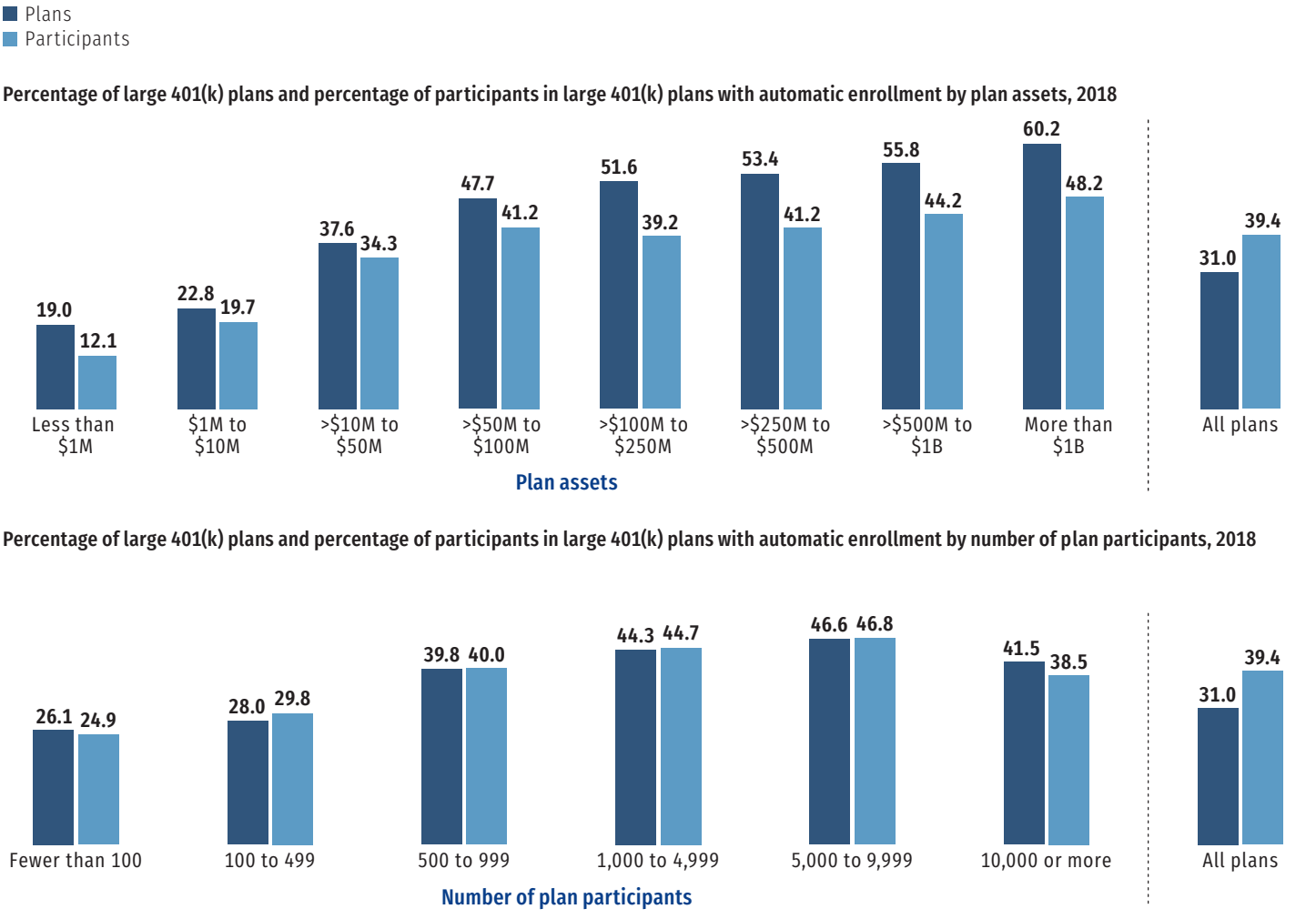
The adoption of automatic enrollment by many plan sponsors marks a significant innovation and change to 401(k) plan design. Employers can choose to automatically enroll employees in 401(k) plans, selecting a default initial contribution rate and a default investment, unless the employee indicates otherwise. The employee can then choose to opt out of the plan entirely, adjust the contribution rate or investment allocation, or leave the default options unchanged.

Larger plans are more likely to report an automatic enrollment feature. Plans were determined to have automatic enrollment if the plan sponsor reported the feature on its 2018 Form 5500.[19]

In 2018, more than half of 401(k) plans in the sample with more than $100 million in plan assets had automatic enrollment, and six in 10 plans with more than $1 billion in plan assets did (Exhibit 1.1). Overall, 31 percent of large 401(k) plans reported that they automatically enrolled participants. Because larger plans are more likely to have automatic enrollment, overall, 39 percent of large 401(k) plan participants were in plans with an automatic enrollment feature.

EXHIBIT 1.1

Larger 401(k) Plans Are More Likely to Automatically Enroll Participants



Note: The sample is 62,003 plans with 60.3 million participants and $4.5 trillion in assets. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

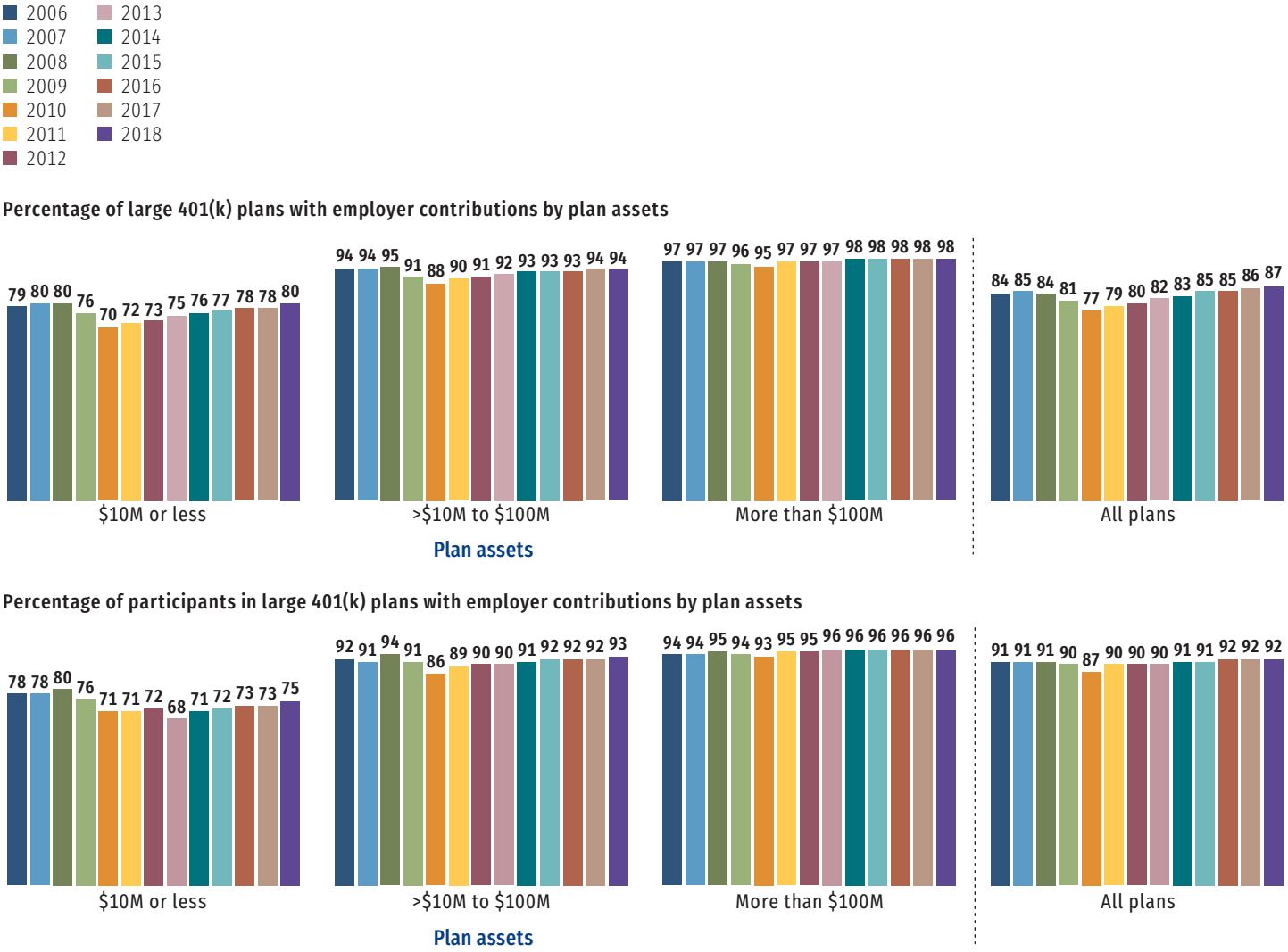
The Role of Employer Contributions

Employers choose whether, how, and how much to contribute to their employees' 401(k) accounts. Employers can choose to make contributions to their employees' 401(k) plan accounts, either through matching employee contributions or by making automatic contributions without regard to employee contribution behavior.

The DOL Form 5500 Research File data for large 401(k) plans indicate that employers made contributions in 87 percent of large 401(k) plans in 2018,[20] which has not changed much over the past few years (Exhibit 1.2). In addition, relatively consistently, about nine out of 10 large 401(k) plan participants were in plans with employer contributions, reflecting the fact that larger 401(k) plans are more likely to have employer contributions.

EXHIBIT 1.2

Employers Make Contributions in Most Large 401(k) Plans

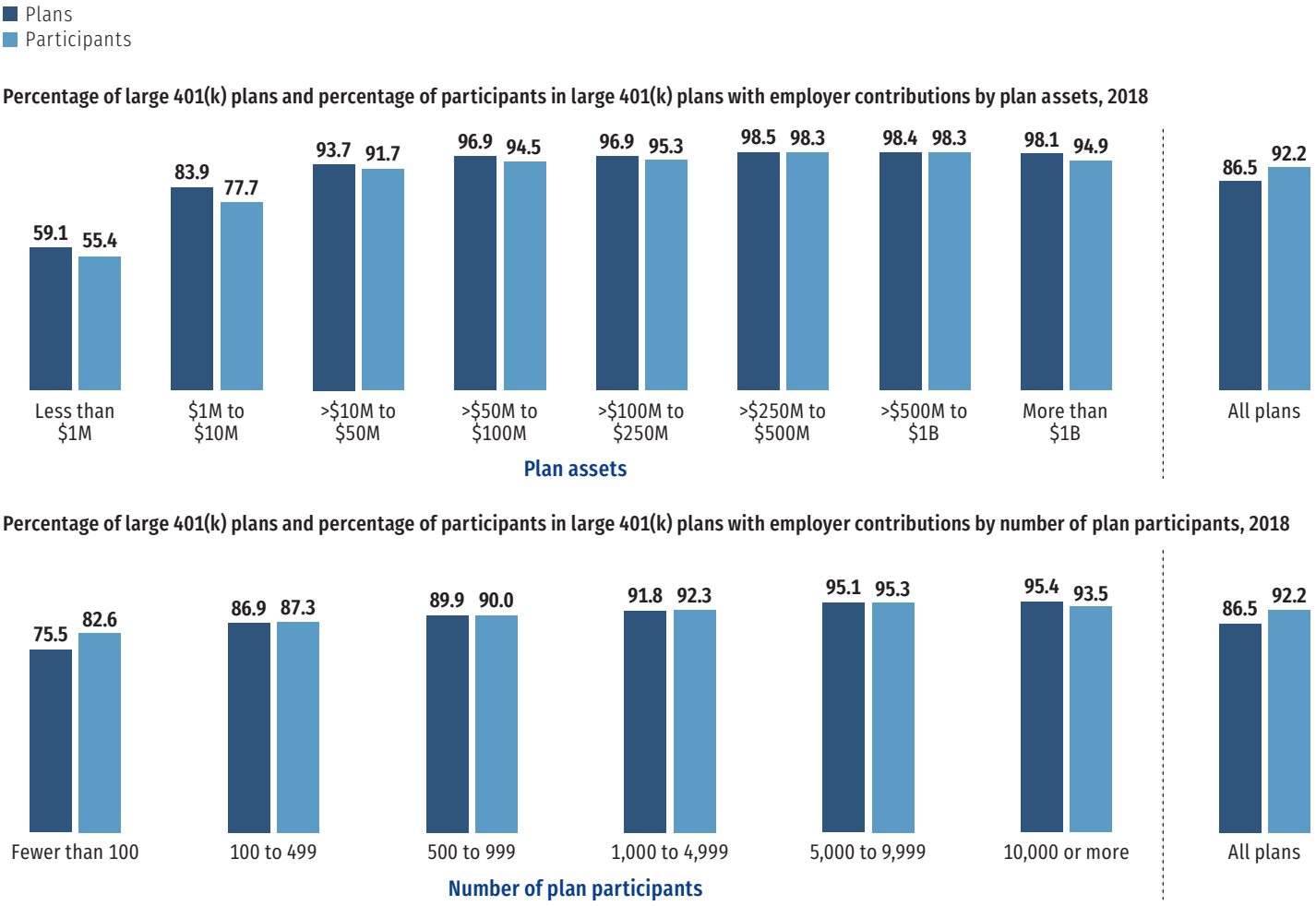


Note: The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. See Exhibit A.3

Larger 401(k) plans were more likely than smaller plans to provide employer contributions. For example, in 2018, more than 90 percent of 401(k) plans with more than $10 million in plan assets had employer contributions, compared with 84 percent of 401(k) plans with $1 million to $10 million (Exhibit 1.3, upper panel). A similar pattern is evident across 401(k) plans analyzed by number of plan participants (Exhibit 1.3, lower panel).[21]

EXHIBIT 1.3

Larger 401(k) Plans Are More Likely to Offer Employer Contributions



Note: The sample is 62,003 plans with 60.3 million participants and $4.5 trillion in assets. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. See Exhibit A.3 in the appendix for data on the full 401(k) universe.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

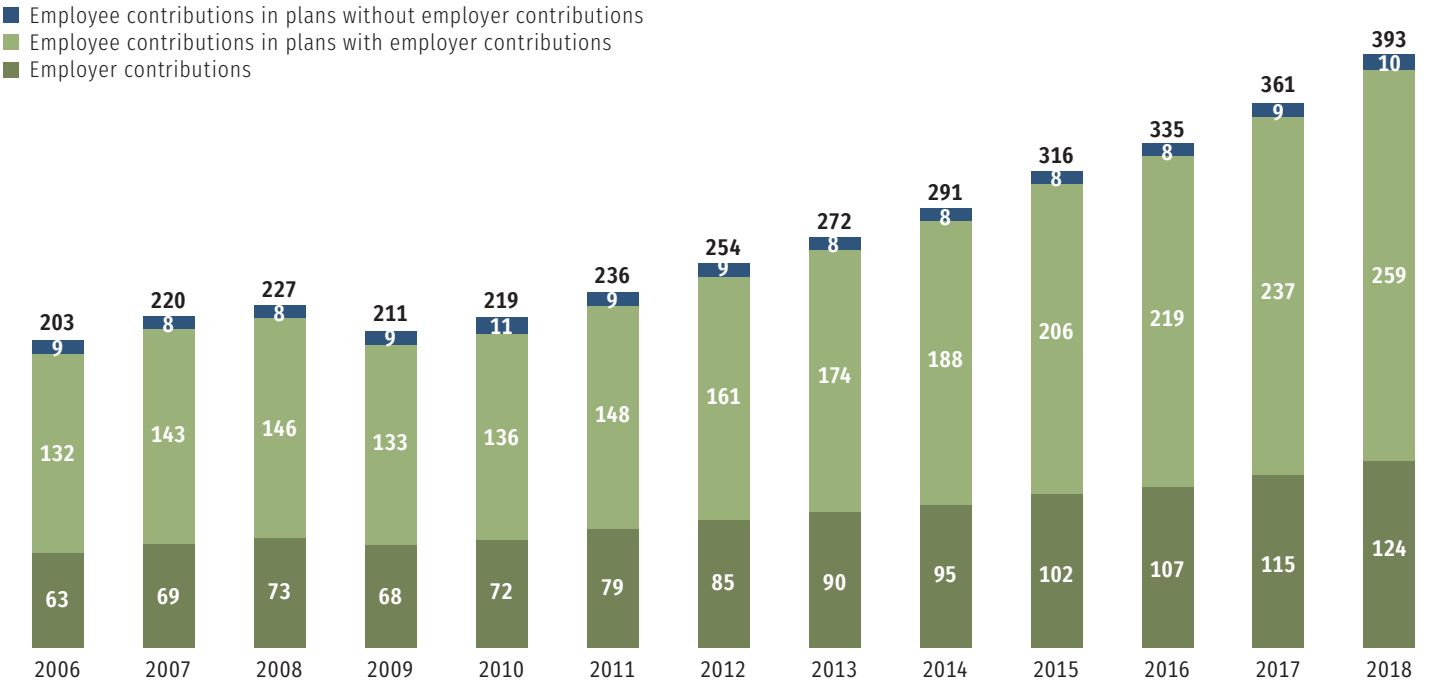
Employer contributions represent a significant portion of contributions flowing into large 401(k) plans. In 2018, $124 billion, or nearly one-third of total contributions into large 401(k) plans, was from employer contributions (Exhibit 1.4).

Employer contributions have represented a relatively steady share of contributions over the past several years; in 2006, 31 percent of contributions were employer contributions.

EXHIBIT 1.4

Employers Make Significant Contributions to Large 401(k) Plans

Contributions to large 401(k) plans, billions of dollars



Note: Employee contributions contain a small amount of contributions from others, which includes rollovers into 401(k) plans. Employer contributions include a de minimis amount of noncash contributions. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. See Exhibit A.4 in the appendix for data on the full 401(k) universe.

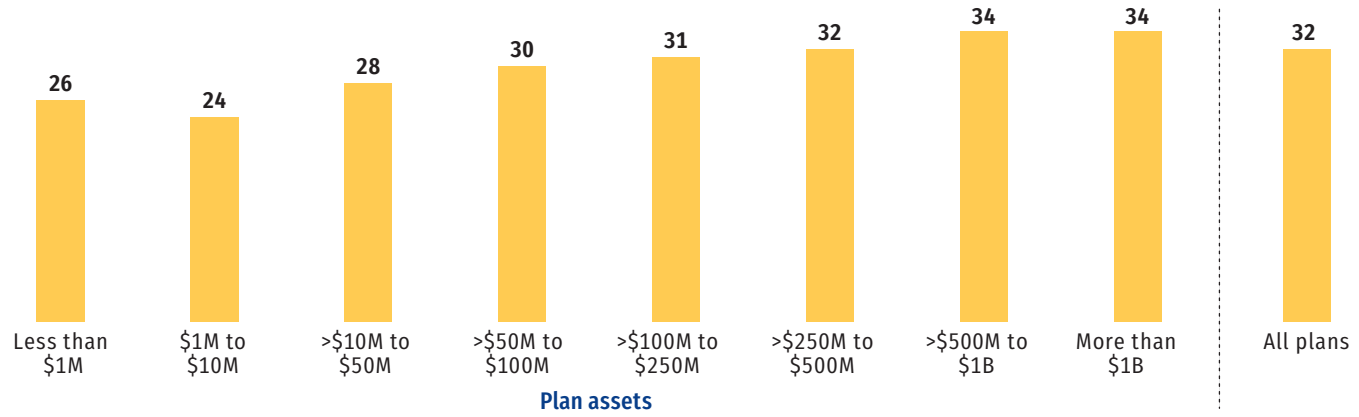
Source: Investment Company Institute tabulations of US Department of Labor Form 5500 Research File

The share of employer contributions in large 401(k) plan contributions varies only slightly by 401(k) plan size. In 2018, 24 percent of total contributions flowing into large 401(k) plans with $1 million to $10 million in plan assets in the sample came from employers, while 34 percent of contributions flowing into 401(k) plans with more than $500 million did (Exhibit 1.5).

EXHIBIT 1.5

Employer Contributions Are a Slightly Larger Share of Total Contributions in Larger 401(k) Plans

Percentage of total large 401(k) plan contributions by plan assets, 2018



Note: The sample is 62,003 plans with 60.3 million participants and $4.5 trillion in assets. Employee contributions contain a small amount of contributions from others, which includes rollovers into 401(k) plans. Employer contributions include a de minimis amount of noncash contributions. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. See Exhibit A.5 in the appendix for data on the full 401(k) universe.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

TYPES OF EMPLOYER CONTRIBUTIONS

Employers choosing to make contributions to their employees' 401(k) plan accounts can choose either to match contributions made by the employees or to make contributions regardless of employee contributions. If the employer chooses to match employee contributions, the options include a simple match formula, a tiered match formula, or a maximum dollar match formula. With a simple match formula, employee contributions are matched up to a fixed percentage of salary (for example, the employer matches 50 percent of employee contributions for the first 6 percent of the employee's salary for a maximum employer contribution of 3 percent of the employee's salary). With a tiered match formula, different levels of employee contributions are matched at different rates (for example, matching 100 percent of the first 4 percent of salary contributed and 50 percent of the next 2 percent for a maximum employer contribution of 5 percent of the employee's salary). With a maximum dollar match formula, employee contributions are matched up to a given dollar threshold (for example, matching 50 percent of the first $2,000 in contributions for a maximum employer contribution of $1,000). In addition, employers can choose to make automatic contributions without regard to participant behavior, either alone or in addition to a matching contribution.

In 2018, simple matching formulas were the most common type of employer contribution. Forty-four percent of large 401(k) plans with employer contributions contributed through a simple matching formula alone, and another 6 percent of large 401(k) plans had automatic contributions in addition to a simple match (Exhibit 1.6). About one-fifth of large 401(k) plans with employer contributions used a tiered matching formula, 2 percent used a maximum dollar match, and about one-quarter contributed money to the plan without regard to how much the employee contributed.[22] Overall, 51 percent of large 401(k) plans with employer contributions had a simple matching formula, and 16 percent made automatic contributions (Exhibits 1.6 and 1.7).

EXHIBIT 1.6

Employer Contribution Matching Formulas

Percentage of large 401(k) plans with employer contributions by plan assets, 2018

	Plan assets					
	$10M or less	>$10M to $50M	>$50M to $100M	>$100M to $250M	More than $250M	All plans
No match data[1]	20.7	18.1	13.0	9.1	17.2	18.4
No match data[1] + automatic contribution[2]	7.4	9.1	11.1	6.8	3.4	8.1
Maximum dollar match[3] only	1.5	2.5	2.8	1.1	1.7	1.9
Maximum dollar match[3] + automatic contribution[2]	0.3	0.2	0.9	0.0	1.7	0.3
Tiered match[4] only	21.4	17.3	22.2	12.5	25.9	19.7
Tiered match[4] + automatic contribution[2]	0.0	1.5	0.9	4.5	3.4	1.0
Simple match[5] only	46.4	43.0	38.9	53.4	29.3	44.4
Simple match[5] + automatic contribution[2]	2.4	8.4	10.2	12.5	17.2	6.2

[1] Plans with missing match data may be included in this category.

[2] Automatic contributions include nonelective employer contributions and lump-sum employer contributions.

[3] Maximum dollar match formulas match some percentage of employee contributions up to a fixed dollar amount (for example, matching 50 percent of the first $2,000 of employee contributions).

[4] Tiered match formulas match employee contributions at different rates for different levels of employee contributions (for example, matching 100 percent of the first 4 percent of salary contributed and 50 percent of the next 2 percent).

[5] Simple match formulas match a specified percentage of employee contributions up to a fixed percentage of employee salary (for example, matching 50 percent of employee contributions up to 6 percent of the employee's salary).

Note: The sample is 1,500 large 401(k) plans with 1.9 million participants and $149.0 billion in assets, drawn from the 86.5 percent of large 401(k) plans with employer contributions (see Exhibit 1.3).

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 audited reports

Many large 401(k) plans across all plan sizes with employer contributions had simple matches (Exhibit 1.7). Larger plans tended to be more likely to make automatic employer contributions—for example, this feature was seen in 10.0 percent of plans with $10 million or less in plan assets, compared with more than 20 percent of plans with more than $50 million in plan assets.

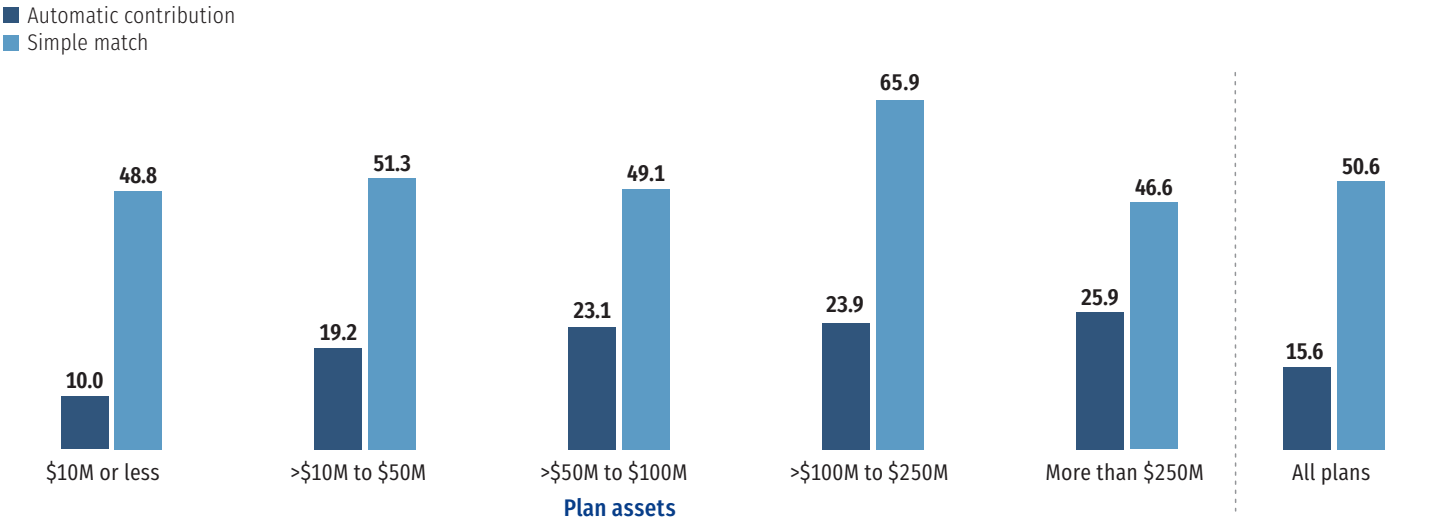
SIMPLE MATCH FORMULAS

For simple match formulas, the employer chooses the percentage of employee contributions to match, as well as the maximum contribution percentage to match. Among the 50.6 percent of large 401(k) plans with employer contributions with simple match formulas, the most common formula was matching

EXHIBIT 1.7

Many Large 401(k) Plans Make Automatic Employer Contributions

Percentage of large 401(k) plans with employer contributions by plan assets, 2018



Note: The sample is 1,500 large 401(k) plans with 1.9 million participants and $149.0 billion in assets, drawn from the 86.5 percent of large 401(k) plans with employer contributions (see Exhibit 1.3). See Exhibit 1.6 for additional detail.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 audited reports

50 percent of contributions up to 6 percent of employee salary, with 22.0 percent of large 401(k) plans using this formula for their matching contributions (Exhibit 1.8). The next most common simple match formula, used by 13.0 percent of large 401(k) plans with simple matches, was a 100 percent match of contributions up to 4 percent of employee salary. Altogether, the most common match rates for employer contributions (with various limits on the maximum employee contribution matched) were 50 percent (used by 42.0 percent of large 401(k) plans with simple matches) and 100 percent (used by 34.5 percent of large 401(k) plans with simple matches). The most common percentage of employee contributions matched (with a variety of limits on the percentage of the contribution matched) was 6 percent, used by 36.5 percent of large 401(k) plans with simple matches.

EXHIBIT 1.8

Employers with Simple Matches Use a Variety of Matching Formulas

Percentage of plans among large 401(k) plans with a simple match, 2018

	Percentage of plans								
	Maximum deferral percentage matched								
	<3%	3%	4%	5%	6%	7%, 8%, or 9%	10% or more	Other	Total
Percentage of deferral matched									
25%	0.7	0.7	4.2	1.6	5.1	1.1	1.1	0.1	**14.5**
50%	2.2	3.2	7.6	3.8	22.0	2.1	0.9	0.1	**42.0**
75%	0.0	0.1	0.1	0.0	0.3	0.0	0.0	0.0	**0.5**
100%	3.2	5.3	13.0	6.1	5.8	0.7	0.1	0.4	**34.5**
Other	0.1	0.3	0.9	1.6	3.3	0.5	1.7	0.0	**8.4**
Total	**6.2**	**9.5**	**26.0**	**13.0**	**36.5**	**4.3**	**3.8**	**0.7**	**100.0**

Note: Plans with no employer contribution, maximum dollar contributions, tiered match formulas, or only a nonmatching contribution were excluded. The sample is the 50.6 percent of large 401(k) plans with employer contributions that had simple match formulas (see Exhibit 1.7). Form 5500 audited 401(k) filings generally include plans with 100 participants or more.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 audited reports

TIMING OF EMPLOYER CONTRIBUTIONS

If employers offer contributions to employees, they can choose to impose a minimum service requirement before employees are eligible to receive the contributions. Employers also can choose to implement a vesting schedule, where employees forfeit some or all of the employer contributions in their accounts if they leave the employer before a specified length of time. (Employees are always 100 percent vested in their own contributions.) The most common combination of contribution eligibility and vesting for large 401(k) plans with employer contributions was for employees to receive employer contributions after a year of service and to be fully vested in those contributions immediately: 21.0 percent of 401(k) plans in the sample of large 401(k) plans providing this information had this combination in 2018 (Exhibit 1.9). This was followed by plans in which employees were eligible for employer contributions after a year but were fully vested in those contributions after six years (17.5 percent of 401(k) plans in the sample). Overall, employees in 45.2 percent of the large 401(k) plans analyzed were immediately vested, and 56.6 percent of plans made employees eligible for employer contributions after one year.

The Use of Participant Loans

Employers may also consider whether to allow access to 401(k) account assets before retirement through a loan feature.[23] In plans that offer loans, participants can take a loan from their own accounts, subject to plan limits. Participants must then repay their loans, plus interest, into their accounts within a set period.[24] Although participants typically must repay any loans shortly after leaving their employers, which can lead to defaults,[25] the existence of a loan feature may encourage workers to sign up for the plan in the first place or to defer more of their salary into the plan.[26] It is possible to determine whether a participant has taken out a loan by gathering data on participant loans outstanding, which are part of the balance sheet reporting on the Form 5500.[27]

Larger 401(k) plans are more likely to have loans outstanding than smaller 401(k) plans. In 2018, overall, 78 percent of the large 401(k) plans analyzed had participant loans outstanding (Exhibit 1.10). More than 90 percent of 401(k) plans in the sample with more than $50 million in plan assets had participant loans outstanding, compared with 77 percent of 401(k) plans in the sample with $1 million to $10 million in plan assets. Because nearly all larger 401(k) plans in the sample had participant loans outstanding, 91 percent of 401(k) plan participants in the sample were in plans that had loans outstanding.[28] Similarly, larger 401(k) plans (as measured by the number of plan participants) were more likely to have participant loans outstanding, rising from 59 percent of plans with fewer than 100 participants to more than 90 percent of plans with 5,000 participants or more. Even though loans are widely available, the amounts borrowed represent less than 2 percent of 401(k) plan assets.[29] In addition, DC plan recordkeeper data indicate that fewer than one in five 401(k) plan participants have loans outstanding.[30]

EXHIBIT 1.9

Eligibility and Vesting in BrightScope Audited 401(k) Plans

Years until fully vested by months until eligible for matching contribution among plans with audited 401(k) filings in the BrightScope database, percentage of plans, 2018

	Years until fully vested							
Months until eligible for matching contribution	**Zero**	**One**	**Two**	**Three**	**Four**	**Five**	**Six**	**Total**
Immediate	6.6	0.2	0.5	0.9	0.5	0.9	1.1	**10.7**
>0 to <12	17.1	0.2	1.3	2.7	1.2	3.7	5.7	**31.9**
12	21.0	0.4	1.3	5.5	2.2	8.8	17.5	**56.6**
More than 12	0.5	0.0	0.1	(*)	(*)	0.1	0.1	**0.8**
Total	**45.2**	**0.8**	**3.2**	**9.1**	**3.9**	**13.5**	**24.4**	**100.0**

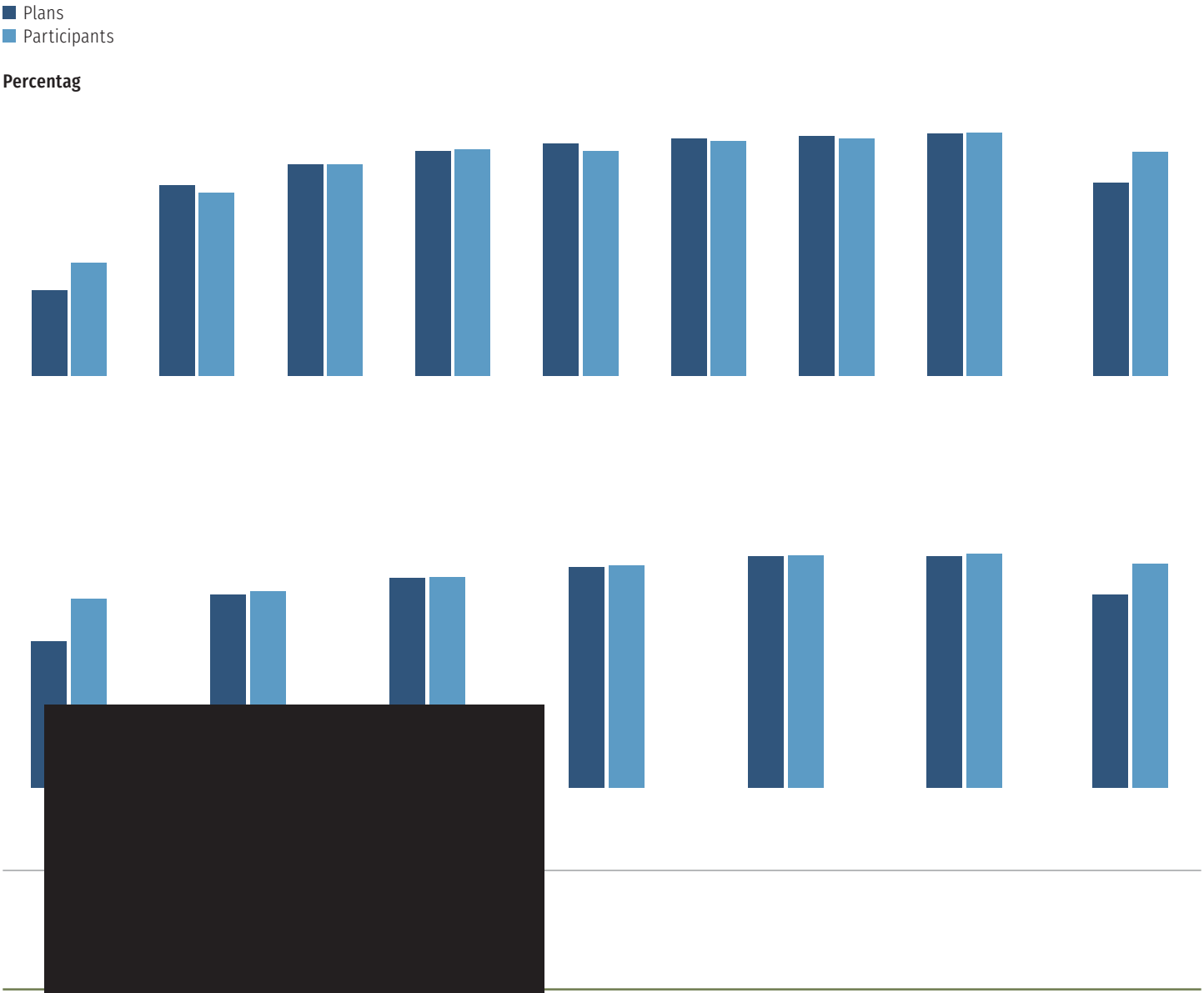
(*) = less than 0.05 percent

Note: The sample is 13,736 plans with information on eligibility and vesting. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

EXHIBIT 1.10

Nearly All Larger 401(k) Plans Have Participant Loans Outstanding



401(k) Plan Activity Combinations

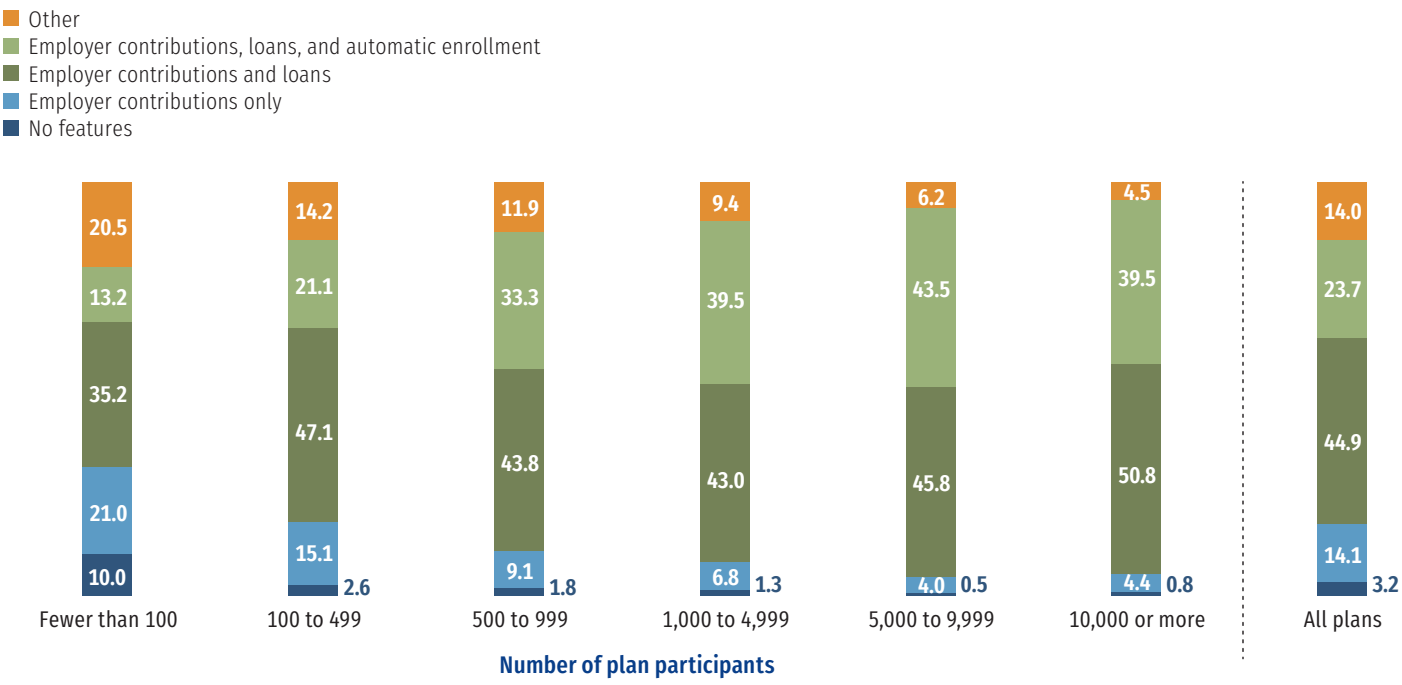
When designing their compensation structures, employers choose a combination of wages and benefits to attract qualified workers. Similarly, employers design 401(k) plans by selecting a combination of features that their employees are likely to value. Nearly all of the sample of 62,000 large 401(k) plans included at least one of the three activities explored in this research. Across the sample of large 401(k) plans in 2018, only 3.2 percent did not offer employer contributions, did not automatically enroll employees, and did not have participant loans outstanding (Exhibit 1.11). The most prevalent combination of plan activities was employer contributions in plans that also had participant loans outstanding, which was observed in 44.9 percent of large 401(k) plans in the sample. Another 14.1 percent of large 401(k) plans had employer contributions only, and 23.7 percent had employer contributions, outstanding loans, and automatic enrollment. The remaining 14.0 percent of 401(k) plans in the sample had some other configuration of some of the three features.

Larger 401(k) plans tend to be more likely to have employer contributions, participant loans outstanding, and automatic enrollment (Exhibit 1.11). In 2018, about 40 percent of 401(k) plans in the sample with 5,000 participants or more had employer contributions, participant loans outstanding, and automatic enrollment, compared with 13 percent of plans in the sample with fewer than 100 participants. Overall, 23.7 percent of 401(k) plans in the sample had reported evidence of all three activities.

EXHIBIT 1.11

Large 401(k) Plans with Selected Plan Activity Combinations

Percentage of large 401(k) plans with selected plan activity combinations by number of plan participants, 2018



Note: The sample is 62,003 plans with 60.3 million participants and $4.5 trillion in assets. Plan activities include employer contributions, automatic enrollment, and participant loans outstanding. A plan was determined to allow participant loans if any participant had a loan outstanding at the end of plan year 2018. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. For additional detail and analysis by plan assets, see Exhibit A.1 in the appendix.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

401(k) Plan Activities by Presence of Automatic Enrollment

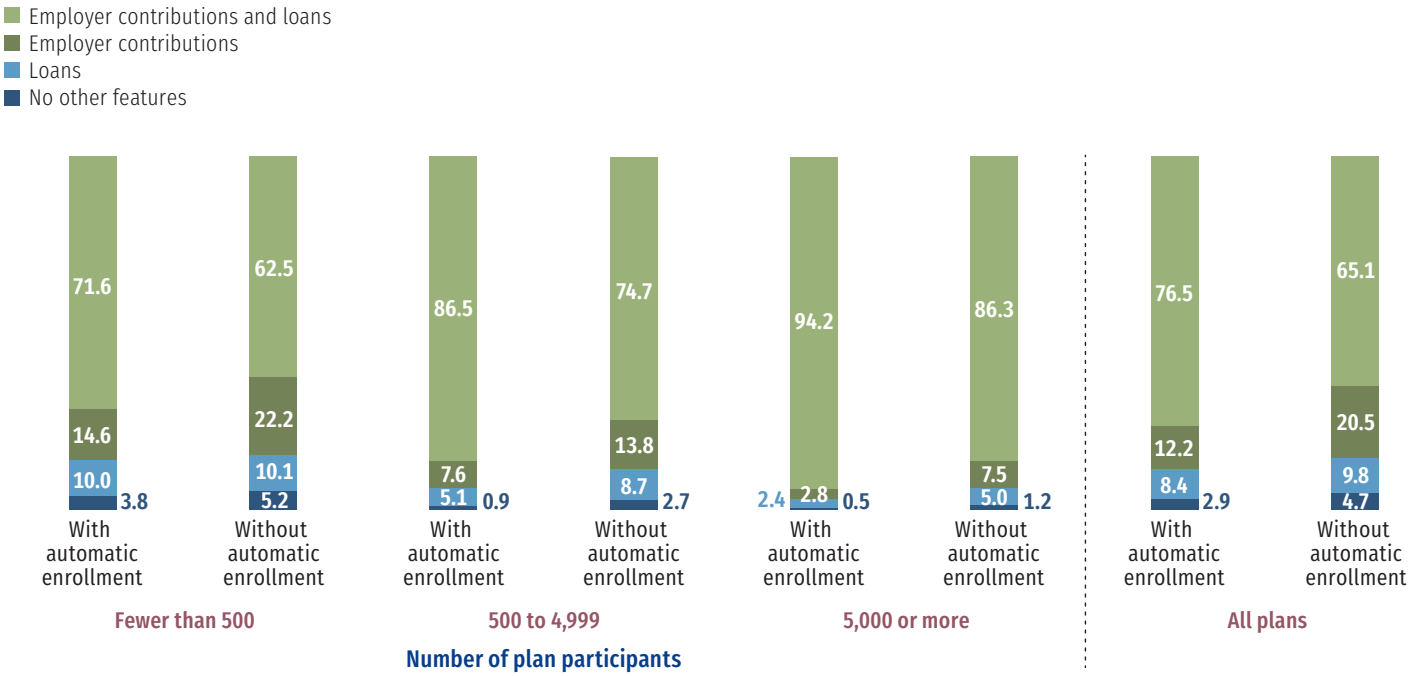
Another way to analyze the plan design combinations that employers choose is to look at how remaining plan design features vary while controlling for one feature. This section discusses employer contributions and outstanding participant loans, comparing their incidence in large 401(k) plans with and without automatic enrollment. The data are explored this way because the participation results achieved with automatic enrollment may also be reflecting the influence of other plan features.

Plans with automatic enrollment are more likely to have both employer contributions and participant loans outstanding than plans without automatic enrollment. In 2018, 76.5 percent of 401(k) plans in the sample with automatic enrollment had employer contributions and outstanding participant loans, compared with 65.1 percent of plans in the sample without automatic enrollment (Exhibit 1.12). Nevertheless, employer contributions are only slightly more likely in 401(k) plans with automatic enrollment: in 2018, 88.7 percent of 401(k) plans in the sample with automatic enrollment had employer contributions, compared with 85.6 percent of plans without automatic enrollment. A similar pattern is observed across plan sizes, although plans with more participants are more likely to have employer contributions and outstanding participant loans whether or not they also automatically enroll participants.

EXHIBIT 1.12

Large 401(k) Plans with Automatic Enrollment Are More Likely to Have Both Employer Contributions and Outstanding Loans

Percentage of large 401(k) plans with selected plan design feature combinations by automatic enrollment and number of plan participants, 2018



Note: The sample is 62,003 plans with 60.3 million participants and $4.5 trillion in assets. Plan activities include employer contributions, automatic enrollment, and participant loans outstanding. A plan was determined to allow participant loans if any participant had a loan outstanding at the end of plan year 2018. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. For additional detail and analysis by plan assets, see Exhibit A.1 in the appendix.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

CHAPTER 2

401(k) Investment Menu Design

Employers choose whether or not to offer 401(k) plans to their employees, and if so, how to design their plans to attract and retain qualified workers.[31] These design choices include the number and types of investment options in the plan. This chapter explores the investment menus that employers have chosen for 401(k) plans in the BrightScope Defined Contribution Plan Database and how investments vary by plan size. The BrightScope Defined Contribution Plan Database contains detailed information from audited Form 5500 reports for large private-sector 401(k) plans that filed Schedule H (typically plans with 100 participants or more). This chapter analyzes plans from the BrightScope database with between four and 100 investment options.

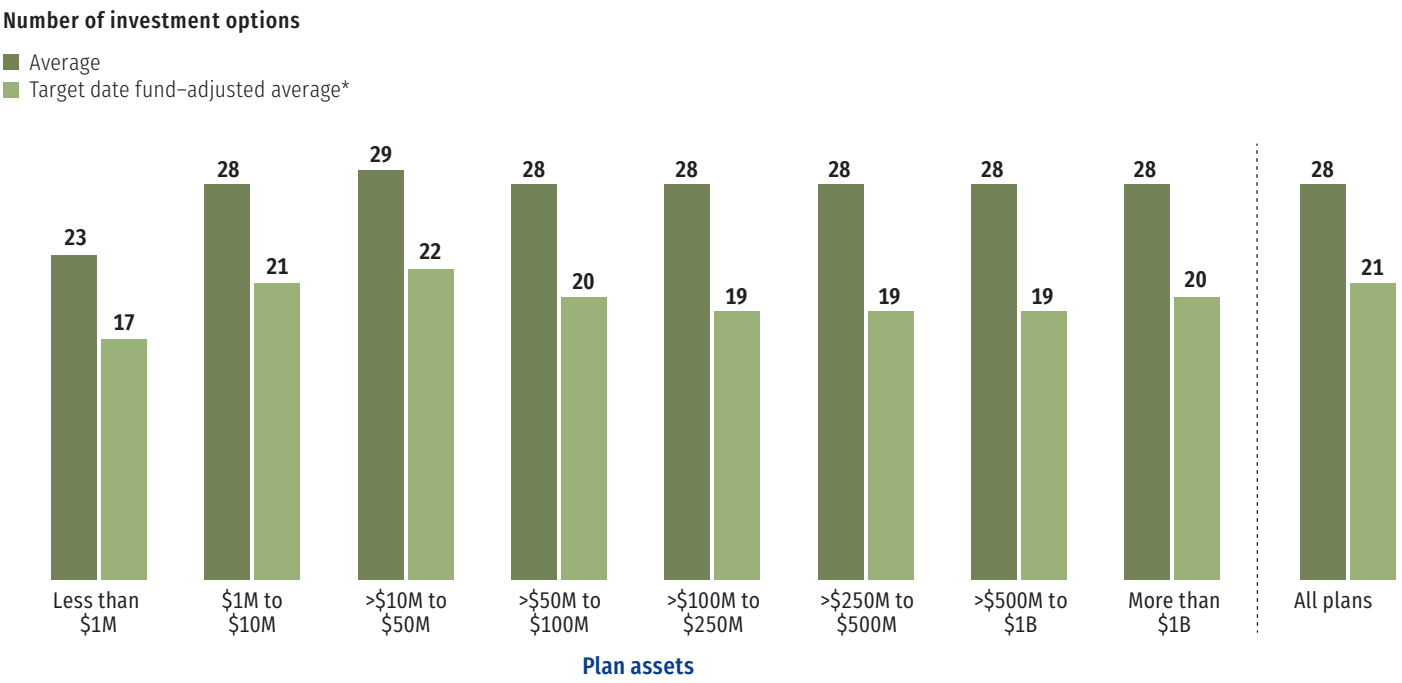
Number and Types of Investment Options

On average, large 401(k) plans in the BrightScope Defined Contribution Plan Database offered participants 28 investment options in 2018 (Exhibit 2.1). The number of investment options offered varies little among 401(k) plans with $1 million or more in plan assets (ranging between 28 options and 29 options). Plans with less than $1 million in plan assets offered 23 options, on average. Because plans may offer suites of target date funds with options tailored to multiple anticipated retirement dates, an adjusted number that counts a suite of target date funds as one investment option is also presented. On average, large 401(k) plans offer 21 options according to this target date fund–adjusted number, similarly with little variation across plan size categories.

EXHIBIT 2.1

Number of Investment Options in 401(k) Plans

Average number of investment options among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



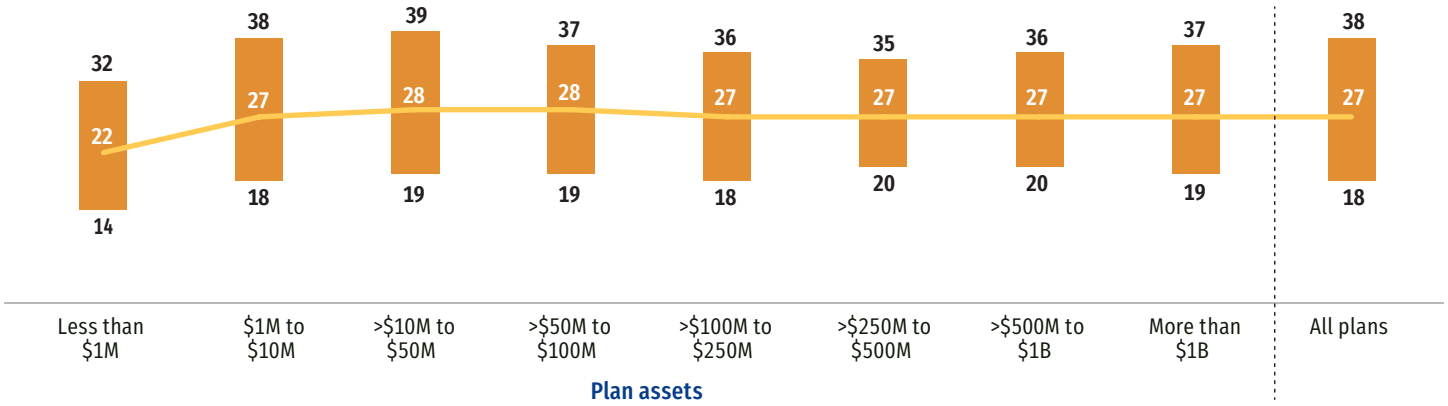
*

Although the average number of investment options varies little by plan size, there is considerable variation between plans. For example, in 2018, 10 percent of these large 401(k) plans offered 18 or fewer investment options, and plans at the 90th percentile offered 38 options (Exhibit 2.2, upper panel). Even with a target date fund–adjusted measure, plans vary considerably, ranging from 13 options to 30 options at the 10th and 90th percentiles (Exhibit 2.2, lower panel).

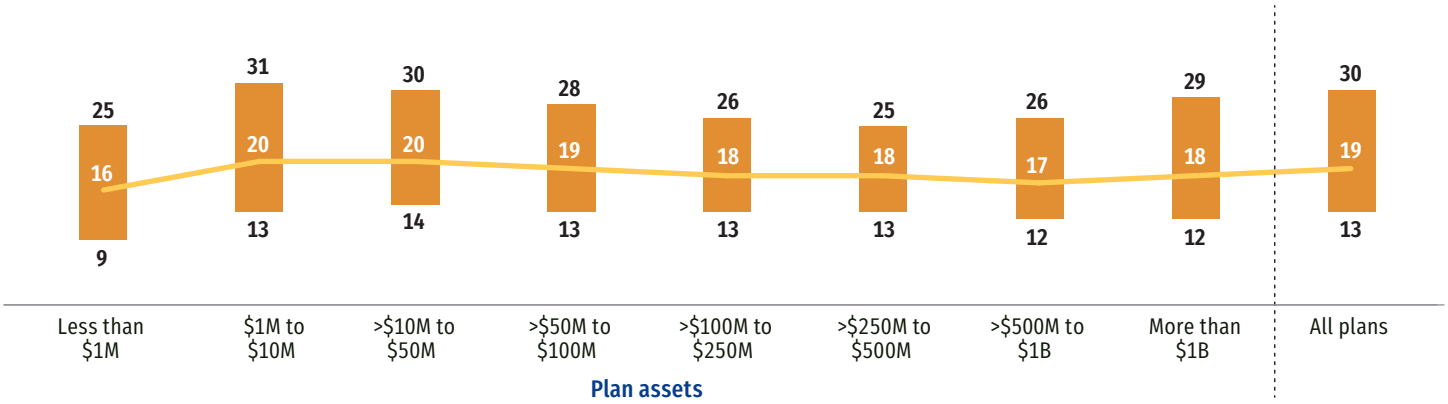
EXHIBIT 2.2

Distribution of Number of Investment Options in 401(k) Plans

10th percentile, median, and 90th percentile number of investment options among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



10th percentile, median, and 90th percentile number of target date fund–adjusted* investment options among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



* This measure counts an entire suite of target date funds as one investment option for plans offering target date funds. 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. A suite will cover a range of anticipated retirement dates.

Note: The sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

Between 2006 and 2018, large 401(k) plans that were in the BrightScope database in every year (referred to as *consistent plans* in this report),[32] added an average of six investment options, on net, to their plan lineups, going from 22 investment options on average in 2006 to 28 in 2018 (Exhibit 2.3).[33] Target date funds accounted for much of the net increase in the number of investment options offered. If a target date fund suite is counted as a single investment option, then the number of investment options offered in consistent plans only increased, on average, from 19 options in 2006 to 20 options in 2018.[34]

EXHIBIT 2.3

Consistent 401(k) Plans Have Increased the Number of Investment Options Offered

Average number of investment options among plans with audited 401(k) filings in the BrightScope database in every year by plan assets

	Average number of investment options												
Plan assets	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
$1M to $10M	21	23	N/A	25	26	27	27	27	27	28	28	29	29
>$10M to $50M	21	23	N/A	24	25	25	25	26	26	26	27	27	27
>$50M to $100M	21	23	N/A	25	26	26	26	26	27	27	27	27	27
>$100M to $250M	22	23	N/A	25	26	26	26	26	26	26	27	28	28
>$250M to $500M	20	23	N/A	24	25	26	27	27	28	27	29	27	26
>$500M to $1B	25	27	N/A	29	30	33	34	33	28	26	27	28	27
More than $1B	27	30	N/A	34	31	29	29	29	29	27	27	28	28
All plans	22	23	N/A	26	26	26	26	27	27	27	27	28	28

	Target date fund–adjusted average number of investment options*												
Plan assets	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
$1M to $10M	19	20	N/A	21	22	22	21	21	21	21	21	21	22
>$10M to $50M	18	19	N/A	20	20	20	19	20	20	20	20	19	20
>$50M to $100M	18	19	N/A	20	20	20	19	20	20	19	19	19	19
>$100M to $250M	18	18	N/A	19	19	19	18	18	18	18	18	19	19
>$250M to $500M	16	17	N/A	18	18	18	18	18	19	18	19	17	17
>$500M to $1B	21	22	N/A	23	22	25	25	25	19	17	18	18	17
More than $1B	25	25	N/A	28	25	23	22	22	22	20	20	20	20
All plans	19	20	N/A	21	21	21	20	20	20	20	20	20	20

* This measure counts an entire suite of target date funds as one investment option for plans offering target date funds. 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. A suite will cover a range of anticipated retirement dates.

N/A = not available

Note: The sample is 1,947 plans in the BrightScope Defined Contribution Plan Database in each year available between 2006 and 2018 (data for 2008 are not available). BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options, more than 100 investment options, or less than $1 million in plan assets are excluded from BrightScope audited 401(k) filings for this analysis. The *lan a*

Domestic equity funds, international equity funds, and domestic bond funds—all of which include both index and actively managed funds—were the most likely investment options to be offered in large 401(k) plans in 2018. Nearly all large plans offered these types of funds, which can be mutual funds, collective investment trusts (CITs), or separate accounts (Exhibit 2.4). More than eight in 10 large plans offered target date funds, and more than six in 10 offered non–target date balanced funds. Forty-five percent of large 401(k) plans offered money funds, and 70 percent offered guaranteed investment contracts (GICs). Two-thirds of large 401(k) plans had other investments, which include individual stocks (including company stock) and bonds. About one-fifth of large 401(k) plans had international bond funds in their investment lineups.

For most investment types, availability by plan size did not vary much. However, larger plans were more likely to offer other investments (which include company stock), GICs, and money funds. For example, 47.3 percent of the smallest plans in the database offered other investments in 2018, compared with 88.0 percent of the largest plans (Exhibit 2.4).[35] Similarly, 37.8 percent of plans with less than $1 million in plan assets offered money funds in 2018, compared with 75.6 percent of plans with more than $1 billion. In contrast, smaller plans were more likely to offer non–target date balanced funds. While 55.5 percent of plans with less than $1 million in plan assets and 64.9 percent of 401(k) plans with $1 million to $10 million offered non–target date balanced funds, 36.3 percent of plans with more than $1 billion did.

EXHIBIT 2.4

Equity and Bond Funds Are the Most Common Investment Options in 401(k) Plans

Percentage of plans with audited 401(k) filings in the BrightScope database offering the specified investment option by plan assets, 2018

	Equity funds		Balanced funds		Bond funds					
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Memo: index funds
Less than $1M	99.3	93.8	85.5	55.5	90.2	20.3	37.8	50.5	47.3	82.0
$1M to $10M	99.7	98.3	84.5	64.9	97.5	24.0	42.0	65.7	65.5	91.6
>$10M to $50M	99.8	99.4	83.9	62.1	99.4	22.6	44.2	75.6	70.9	96.9
>$50M to $100M	99.9	99.3	83.3	56.1	99.3	18.9	52.5	78.7	69.9	98.6
>$100M to $250M	99.7	98.9	85.3	53.5	99.2	16.3	57.3	82.2	72.2	99.3
>$250M to $500M	100.0	99.4	88.2	48.2	99.5	13.7	64.1	83.4	75.2	99.4
>$500M to $1B	100.0	97.9	91.3	45.8	98.3	14.9	68.8	81.0	81.1	98.8
More than $1B	99.8	97.9	82.5	36.3	97.3	17.4	75.6	73.7	88.0	98.7
All plans	99.7	98.5	84.4	61.6	97.9	22.3	44.8	70.1	67.3	93.8

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

[2] *O he* includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds.

Note: The sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

Equity funds (including both index and actively managed funds) were the most common investment option in 2018, with large 401(k) plans offering 13 funds on average, of which 10 were domestic equity funds and three were international equity funds (Exhibit 2.5). The average number of equity funds offered varied from 10 equity funds among the smallest and largest plans to 13 equity funds in plans with $1 million to $50 million in plan assets.

The next most common category in large 401(k) investment lineups in 2018 was balanced funds (including both index and actively managed funds), with 10 funds offered on average, most of which (eight funds) were target date funds (Exhibit 2.5). Larger 401(k) plans tended to have more target date funds for two reasons. First, larger plans tended to be slightly more likely to offer target date funds (Exhibit 2.4). Second, larger plans offered more funds as part of their target date fund suites on average. For example, among plans with more than $1 billion in plan assets, the average target date fund suite included around 10 funds (9.3 target date funds divided by 0.9 target date fund suites) (Exhibit 2.5). For plans with less than $1 million in plan assets, the average target date fund suite included around eight funds (7.1 target date funds divided by 0.9 target date fund suites). On average, there were about nine target date funds in a suite across all plans in the sample.

In 2018, large 401(k) plans included three bond funds (mostly domestic, including both index and actively managed funds) in their investment lineups, on average (Exhibit 2.5). Plans also offered money funds, GICs, and other options. These investments were not offered as widely (Exhibit 2.4) and were often included as the single choice in that investment type (Exhibit 2.6). Larger 401(k) plans tended to be somewhat more likely to offer these options and offered more of these funds when including that investment category.

EXHIBIT 2.5

Average Number of Investment Options in 401(k) Plans by Type of Investment

Average number of investment options among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018

	Equity funds		Balanced funds		Bond funds					Memo	
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Index funds	Adjusted target date fund[3]
Less than $1M	7.6	2.8	7.1	1.2	2.5	0.2	0.4	0.5	0.6	6.3	0.9
$1M to $10M	9.8	3.4	7.7	1.6	3.1	0.3	0.4	0.7	1.0	7.2	0.9
>$10M to $50M	9.9	3.4	8.5	1.3	3.3	0.3	0.5	0.8	1.2	7.6	0.9
>$50M to $100M	9.2	3.1	9.0	1.0	3.1	0.2	0.6	0.9	1.2	8.0	0.9
>$100M to $250M	8.6	3.0	9.4	0.9	2.9	0.2	0.6	0.9	1.3	8.4	0.9
>$250M to $500M	8.3	2.9	10.0	0.7	2.9	0.2	0.7	1.0	1.5	9.4	1.0
>$500M to $1B	7.8	2.7	10.5	0.7	2.8	0.2	0.8	1.0	1.7	10.3	1.0
More than $1B	6.7	2.9	9.3	0.5	3.0	0.2	1.1	1.4	3.0	11.2	0.9
All plans	9.5	3.3	8.2	1.4	3.1	0.3	0.5	0.8	1.1	7.5	0.9

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

[2] Other includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds, but each separate option is counted as a unique investment option.

[3] This measure counts an entire suite of target date funds as one investment option for plans offering target date funds. A suite will cover a range of anticipated retirement dates.

Note: The sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. Exhibit A.6 in the appendix shows the average number of a given investment option offered by plans that have at least one of that investment option.

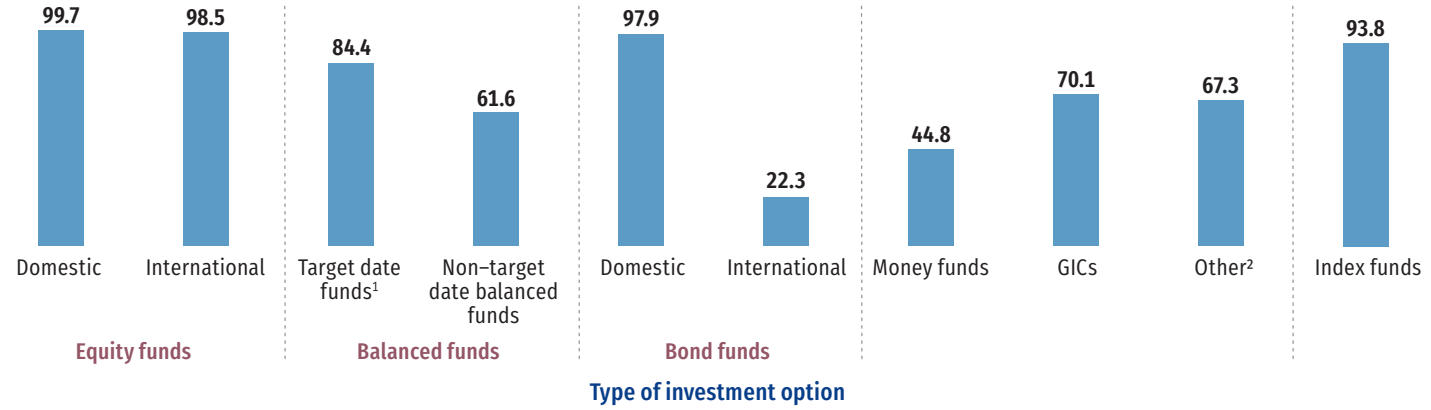
Source: BrightScope Defined Contribution Plan Database

It is instructive to consider availability and then the number of investment options by investment category contingent on that investment category being offered in the 401(k) plan. For example, not only are domestic equity funds (including both index and actively managed funds) widely available, with 99.7 percent of large 401(k) plans including them in their investment lineups in 2018 (Exhibit 2.6, upper panel), but also, when they are an option, multiple domestic equity funds—10 on average—are offered (Exhibit 2.6, lower panel). International equity funds (including both index and actively managed funds) are widely available, offered in 98.5 percent of 401(k) plans in 2018, but, on average, three international equity funds are offered in large 401(k) plans including that investment type. Similarly, domestic bond funds are widely available, offered in 97.9 percent of large 401(k) plans in 2018, but, on average, three domestic bond funds (including both index and actively managed funds) are offered in large 401(k) plans including that investment type. Forty-five percent of large 401(k) plans offer one money fund on average, and about 70 percent of large 401(k) plans offer one GIC on average. More than 90 percent of large 401(k) plans in 2018 had index funds in their investment lineups, offering eight index funds on average.

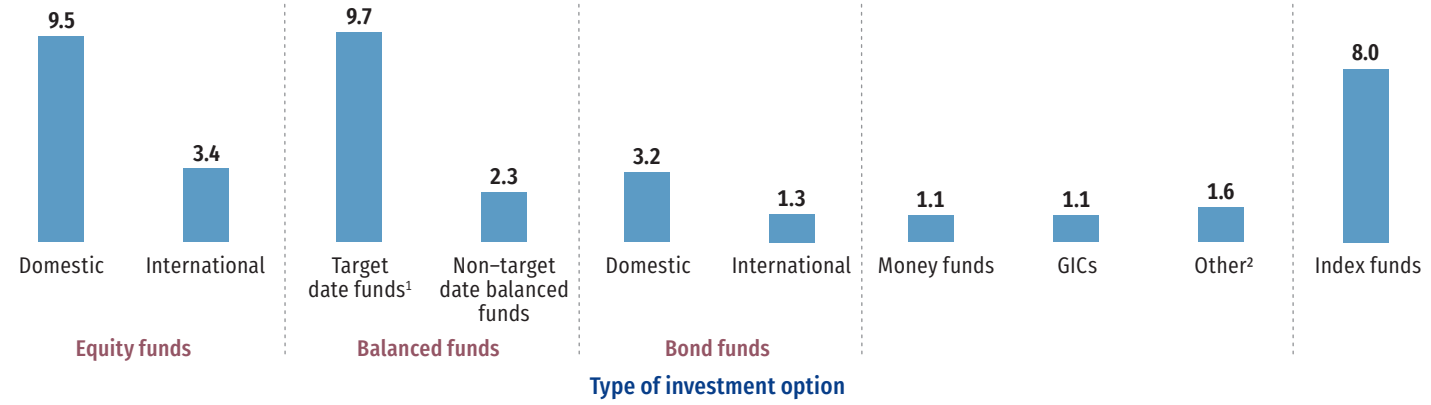
EXHIBIT 2.6

Incidence and Number of Investment Options Offered in 401(k) Plans by Type of Investment

Percentage of plans with audited 401(k) filings in the BrightScope database offering the specified investment option, 2018



Average number of investment options among plans with audited 401(k) filings in the BrightScope database offering a given investment option, 2018



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

[2] *Other* includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds, but each separate option is counted as a unique investment option.

Note: The sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. Exhibit A.6 in the appendix shows the average number of a given investment option offered by plans that have at least one of that investment option.

Source: BrightScope Defined Contribution Plan Database

For large consistent 401(k) plans (plans that were in the BrightScope database from 2006 to 2018), investment offerings remained relatively stable between 2006 and 2018. The largest net change was in target date fund offerings, which increased from three funds per plan on average in 2006 to nine funds per plan in 2018 (Exhibit 2.7). In addition, index fund investing rose in popularity during the same period: in 2006, large consistent 401(k) plans offered two index funds, on average, which increased to eight index funds on average in 2018.

EXHIBIT 2.7

Average Number of Investment Options in Consistent 401(k) Plans

Average number of investment options among plans with audited 401(k) filings in the BrightScope database in every year by plan assets

Average number of investment options, 2006

	Equity funds		Balanced funds		Bond funds					Memo	
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Index funds	Adjusted target date fund[3]
$1M to $10M	10.0	2.7	1.5	2.2	2.3	0.1	0.6	0.7	0.5	1.7	0.3
>$10M to $50M	9.5	2.4	2.8	1.8	2.1	0.1	0.6	0.7	0.8	1.9	0.4
>$50M to $100M	9.1	2.3	3.7	1.7	1.9	0.1	0.6	0.8	1.0	2.5	0.5
>$100M to $250M	9.3	2.1	4.4	1.4	1.9	(*)	0.6	0.8	1.1	2.9	0.6
>$250M to $500M	8.1	1.9	4.4	1.5	1.9	(*)	0.5	0.9	1.2	3.3	0.6
>$500M to $1B	10.5	2.4	4.3	1.8	2.3	0.1	0.9	1.1	1.5	4.2	0.6
More than $1B	10.8	3.3	3.2	1.7	2.8	0.2	1.0	2.0	2.4	4.7	0.5
All plans	9.7	2.5	2.8	1.8	2.2	0.1	0.7	0.9	1.0	2.4	0.4

Average number of investment options, 2018

	Equity funds		Balanced funds		Bond funds					Memo	
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Index funds	Adjusted target date fund[3]
$1M to $10M	10.2	3.4	8.6	1.5	3.1	0.2	0.5	0.8	1.0	6.4	0.9
>$10M to $50M	9.1	3.1	8.6	1.0	2.9	0.2	0.5	0.8	1.1	7.0	0.9
>$50M to $100M	8.6	3.1	9.0	0.7	2.7	0.1	0.6	0.9	1.4	8.2	0.9
>$100M to $250M	8.4	2.8	10.4	0.7	2.7	0.1	0.7	0.9	1.3	8.9	1.0
>$250M to $500M	7.0	2.6	10.3	0.7	2.6	0.2	0.8	1.0	1.3	10.1	0.9
>$500M to $1B	7.1	2.4	10.8	0.6	2.4	0.1	0.8	1.4	1.6	10.6	1.0
More than $1B	5.9	2.7	8.8	0.5	2.8	0.2	1.2	1.5	3.8	11.3	0.9
All plans	8.8	3.1	9.0	1.0	2.9	0.2	0.6	0.9	1.4	7.8	0.9

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

[2] *O he* includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds, but each separate option is counted as a unique investment option.

[3] This measure counts an entire suite of target date funds as one investment option for plans offering target date funds. A suite will cover a range of anticipated retirement dates.

(*) = less than 0.05

Note: The sample is 1,947 plans in the BrightScope Defined Contribution Plan Database in each year available between 2006 and 2018. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options, more than 100 investment options, or less than $1 million in plan assets are excluded from BrightScope audited 401(k) filings for this analysis. The *lan a e* category represents plan assets in 2006.

Source: BrightScope Defined Contribution Plan Database

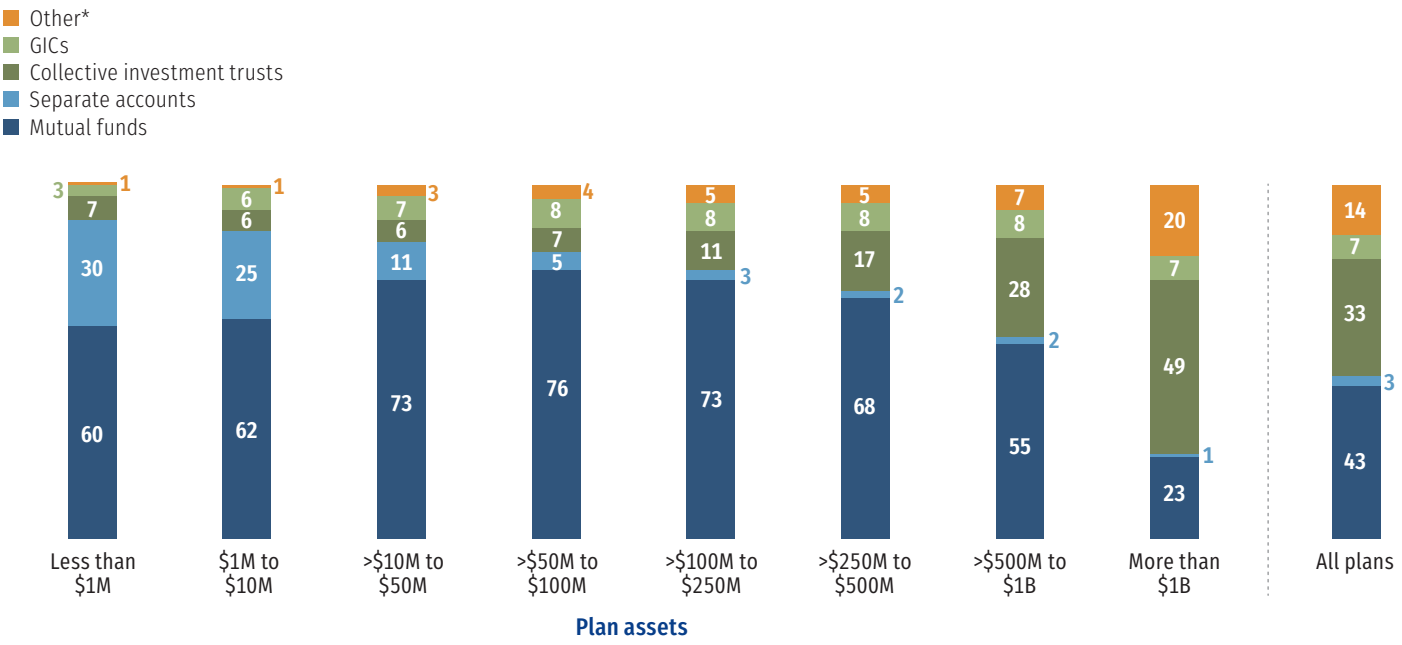
Investment Vehicles

When choosing which investment options to offer, employers also choose the investment vehicles (for example, mutual funds, CITs, or separate accounts) for these options. Mutual funds were the most common investment vehicle in large 401(k) plans in the BrightScope database, representing 43 percent of assets in 2018 (Exhibit 2.8). Mutual funds were a smaller share of assets in the largest 401(k) plans in the sample, accounting for between half and slightly more than three-quarters of assets in plans with less than $1 billion in plan assets but about one-quarter of assets in plans with more than $1 billion in plan assets. CITs accounted for an additional 33 percent of assets, overall, followed by GICs at 7 percent and separate accounts with 3 percent of assets. CITs accounted for a larger share of assets in larger plans, while separate accounts were responsible for a larger share of assets in smaller plans, and GICs accounted for a nearly constant share of assets across nearly all plan size categories. For example, CITs held about 6 percent of assets in 401(k) plans with $100 million or less in plan assets, compared with 49 percent in plans with more than $1 billion. Conversely, separate accounts held 30 percent of assets in 401(k) plans with less than $1 million in plan assets, compared with 1 percent of assets in plans with more than $1 billion. Other investment vehicles, such as individual stocks (including company stock) and individual bonds, accounted for the remaining assets. The largest plans had the highest allocation (20 percent) to other investment vehicles, partially reflecting company stock investing.[36]

EXHIBIT 2.8

Types of Investment Vehicles in 401(k) Plans

Percentage of total assets among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



* *O he* includes individual stocks (including company stock), bonds, brokerage, and other investments. Participant loans are excluded.

Note: The sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

Aggregate Asset Allocation

Although employers choose the investment options offered in 401(k) plans, participants generally choose where to allocate the money in their accounts among the available options.[37] In 2018, equity funds (including both index and actively managed funds) held the largest share (41.7 percent) of large 401(k) plan assets in the BrightScope database, with the bulk invested in domestic equity funds (Exhibit 2.9). Balanced funds held the next largest share with 27.8 percent of large 401(k) plan assets, which was divided between target date funds (25.1 percent of assets) and non–target date balanced funds (2.7 percent of assets). Other investments (which include company stock) followed with 14.1 percent of assets, then bond funds (mostly domestic) with 7.6 percent of assets. GICs held 7.3 percent of assets, and money funds held 1.6 percent.[38]

Participants in larger 401(k) plans in the sample (as measured by plan assets) tended to have less of their assets invested in balanced funds (including both index and actively managed funds). For example, participants in 401(k) plans with less than $1 million in plan assets had more than half of their assets invested in balanced funds, on average, compared with about one-fifth for participants in plans with more than $1 billion in plan assets (Exhibit 2.9). However, participants in these larger 401(k) plans tended to have more of their money invested in other investments. This pattern reflects, in part, the pattern of company stock offering in 401(k) plans.[39] For example, in 2018, participants in plans with less than $1 million in plan assets invested 1.4 percent of their assets in other investments, compared with 21.1 percent in other investments for plans with more than $1 billion in plan assets.

EXHIBIT 2.9

The Largest Share of 401(k) Assets Is Invested in Equity Funds

Percentage of total assets among plans with audited 401(k) filings in the BrightScope database by plan assets or number of plan participants, 2018

	Equity funds		Balanced funds		Bond funds					
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Memo: index funds
Less than $1M	25.2	6.6	47.2	8.2	5.6	0.3	1.9	3.5	1.4	28.2
$1M to $10M	31.6	7.3	35.2	8.7	7.1	0.3	1.7	5.8	2.1	27.6
>$10M to $50M	35.7	7.6	30.4	5.8	7.5	0.3	1.6	7.4	3.7	27.1
>$50M to $100M	36.8	7.3	29.8	4.1	7.6	0.2	1.6	7.8	4.8	28.8
>$100M to $250M	36.7	7.1	29.8	3.7	7.4	0.2	1.6	8.2	5.4	30.5
>$250M to $500M	36.4	6.7	31.8	2.8	7.1	0.1	1.5	7.6	5.9	34.3
>$500M to $1B	35.2	6.4	31.9	2.6	7.0	0.1	1.7	7.6	7.4	36.8
More than $1B										

Since 2006 (the earliest data in the BrightScope database), large 401(k) plans have become more likely to offer target date funds.[40] In 2018, 84 percent of large 401(k) plans in the BrightScope database offered target date funds, compared with 58 percent in 2009 and 32 percent in 2006 (Exhibit 2.10).[41] The share of plan assets invested in these funds also increased, rising from 3 percent in 2006 to 8 percent in 2009 and 25 percent in 2018.[42] Smaller plans were more likely than larger plans to add target date funds to their investment lineups between 2006 and 2018. For example, 25.4 percent of plans with $1 million to $10 million in plan assets offered target date funds in 2006, and 84.5 percent did so in 2018 (Exhibit 2.11, upper panel). For plans with more than $1 billion in plan assets, 43.6 percent offered target date funds in 2006, and 82.5 percent did so in 2018. Smaller plans also experienced the largest increase in the share of plan assets invested in target date funds. For example, in 2006, 3.5 percent of plan assets for plans with $1 million to $10 million in plan assets were invested in target date funds (Exhibit 2.11, lower panel). That rose to 35.2 percent in 2018. For plans with more than $1 billion in plan assets, the percentage of plan assets invested in target date funds rose from 2.2 percent to 20.3 percent over the same period.

Index Funds

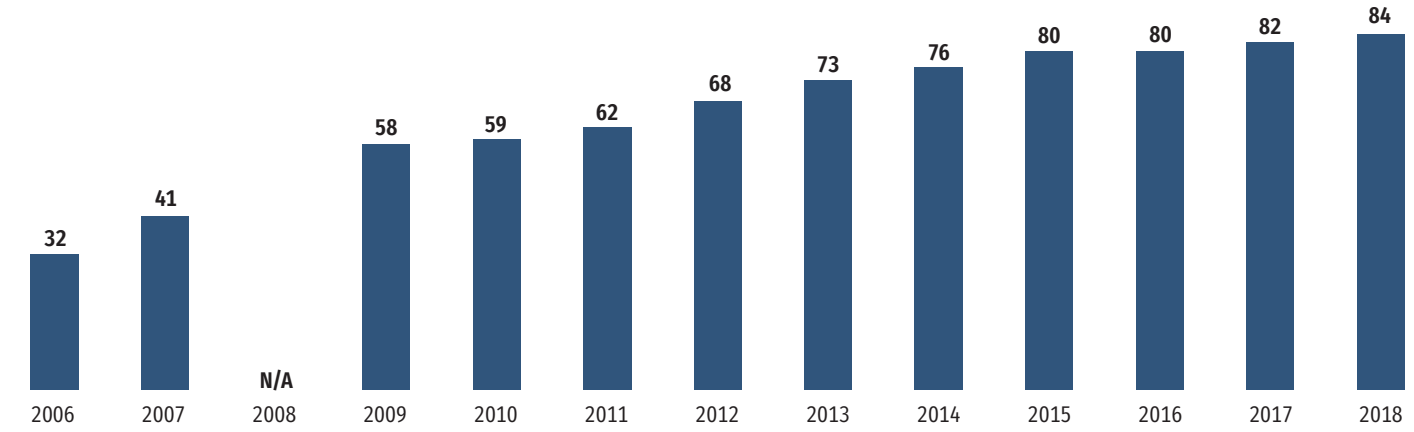
Index funds have also grown in popularity since 2006 (the earliest data in the BrightScope database).[43] In 2006, 79 percent of large 401(k) plans in the BrightScope database offered index funds, and 17 percent of plan assets were invested in such products (Exhibit 2.12). The use of index funds increased to 94 percent of large 401(k) plans and 37 percent of assets in 2018. Although the percentage of large 401(k) plans offering index funds increased for all plan asset groups, smaller plans experienced larger increases (Exhibit 2.13, upper panel). As a result, index funds are widely offered across large 401(k) plans. More than 95 percent of large 401(k) plans with more than $10 million in plan assets offered index funds in their plan lineups in 2018, and 82 percent of large 401(k) plans with less than $1 million offered them.

Index funds also generally claimed a greater share of assets in larger 401(k) plans in the sample than in smaller plans. On average, 36.9 percent of large 401(k) assets in the BrightScope database were invested in index funds in 2018, but this fraction ranged from 28.2 percent of assets in plans with less than $1 million in plan assets to 41.3 percent of assets in plans with more than $1 billion (Exhibit 2.13, lower panel). Similarly, 26.1 percent of assets in plans with fewer than 100 participants were invested in index funds, compared with 40.7 percent of assets in plans with 10,000 participants or more (Exhibit 2.9, lower panel).

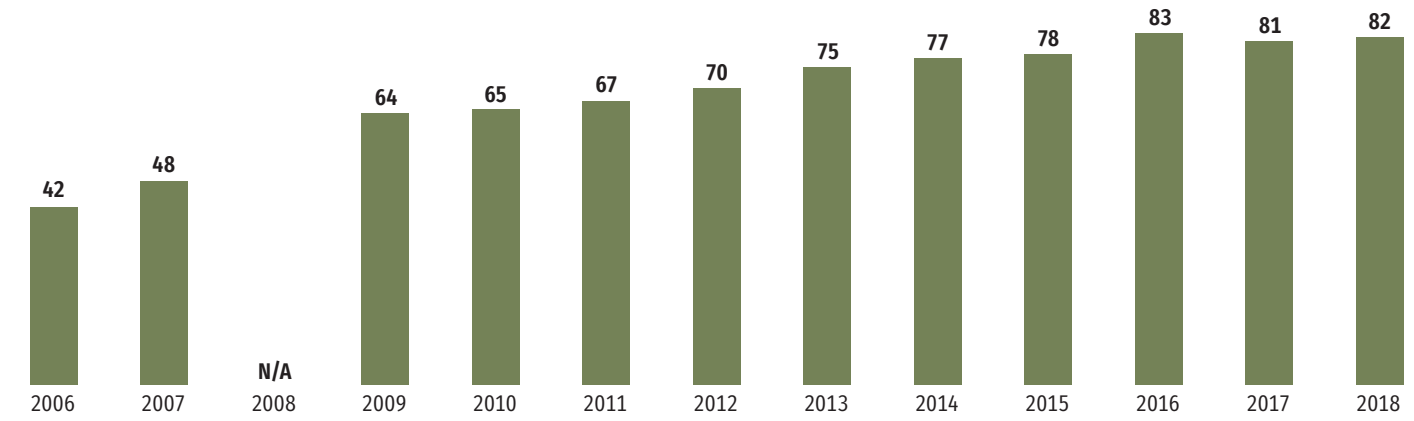
EXHIBIT 2.10

Target Date Fund Use Has Increased in 401(k) Plans

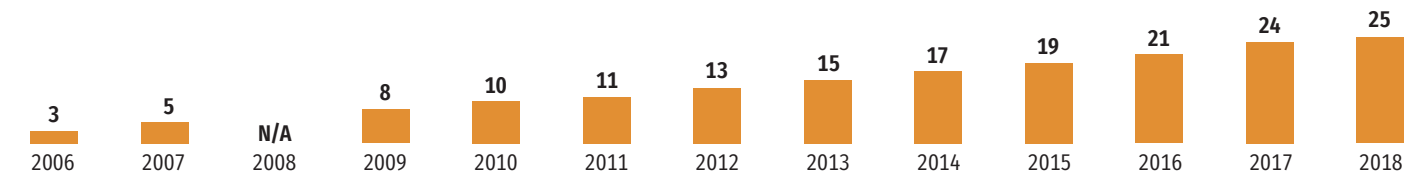
Percentage of plans offering target date funds* among plans with audited 401(k) filings in the BrightScope database



Percentage of participants offered target date funds* among plans with audited 401(k) filings in the BrightScope database



Percentage of assets in target date funds* among plans with audited 401(k) filings in the BrightScope database



* 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. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products.

N/A = not available

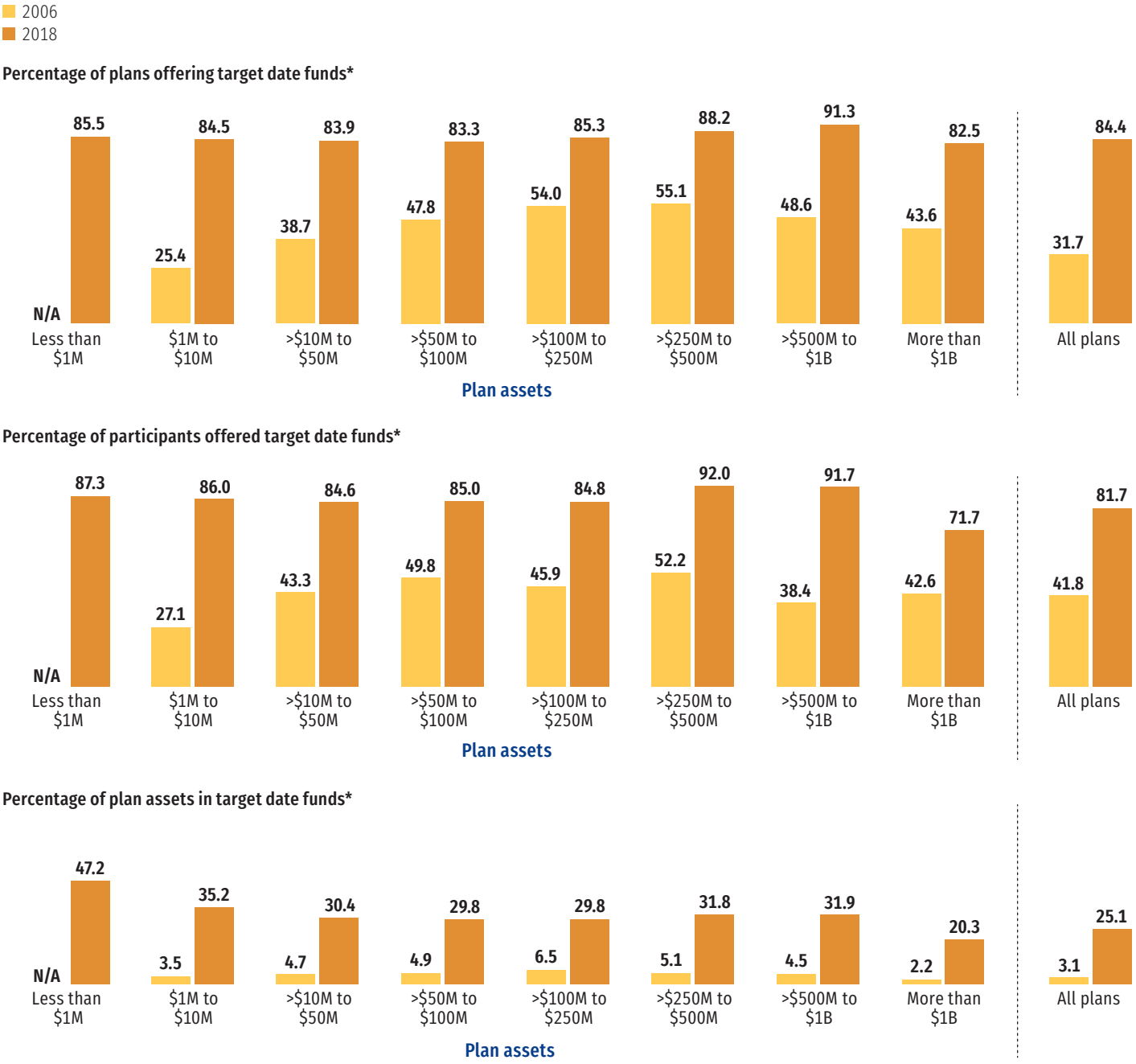
Note: BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. In 2018, the sample is 56,504 plans with 57.4 million participants and $4.3 trillion in assets.

Source: BrightScope Defined Contribution Plan Database

EXHIBIT 2.11

Larger 401(k) Plans Tend to Be More Likely to Offer Target Date Funds

Percentage of plans offering, participants offered, and plan assets in target date funds* among plans with audited 401(k) filings in the BrightScope database by plan assets



* 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. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products.

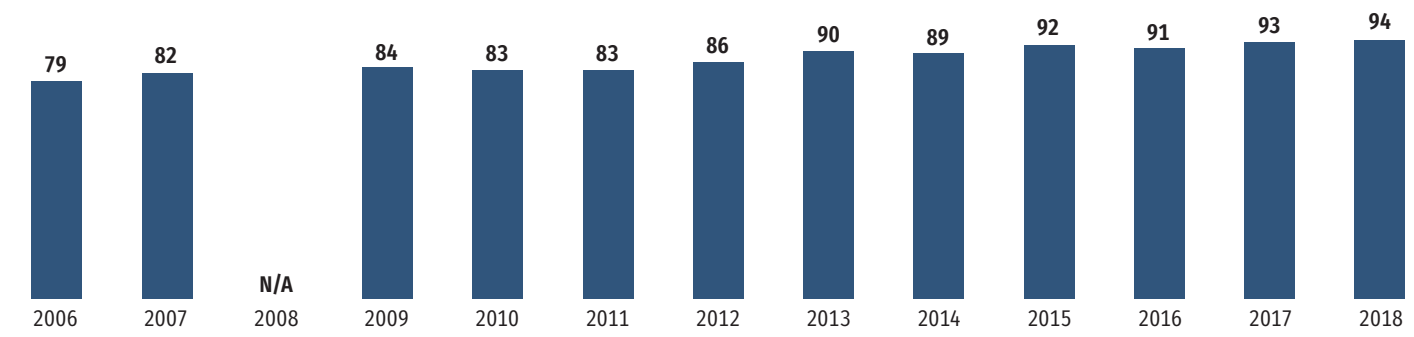
Note: The samples are 22,592 plans in 2006 and 56,504 plans in 2018. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) plans for this analysis.

Source: BrightScope Defined Contribution Plan Database

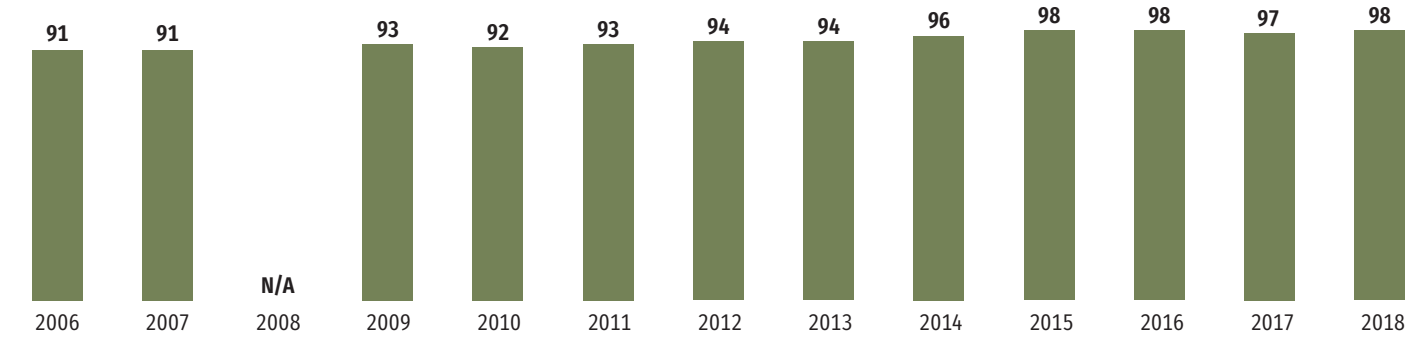
EXHIBIT 2.12

Index Fund Use Has Increased in 401(k) Plans

Percentage of plans offering index funds* among plans with audited 401(k) filings in the BrightScope database



Percentage of participants offered index funds* among plans with audited 401(k) filings in the BrightScope database



Percentage of assets in index funds* among plans with audited 401(k) filings in the BrightScope database

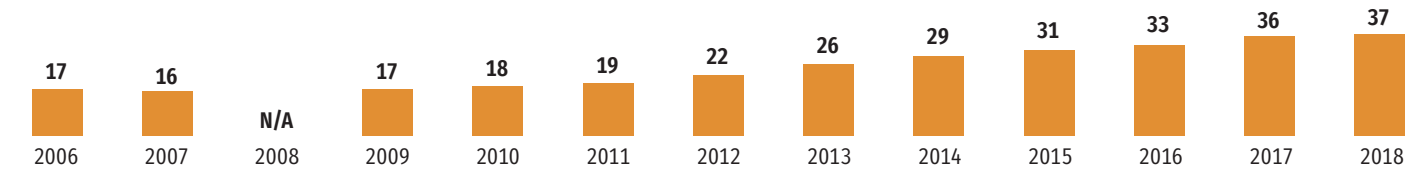
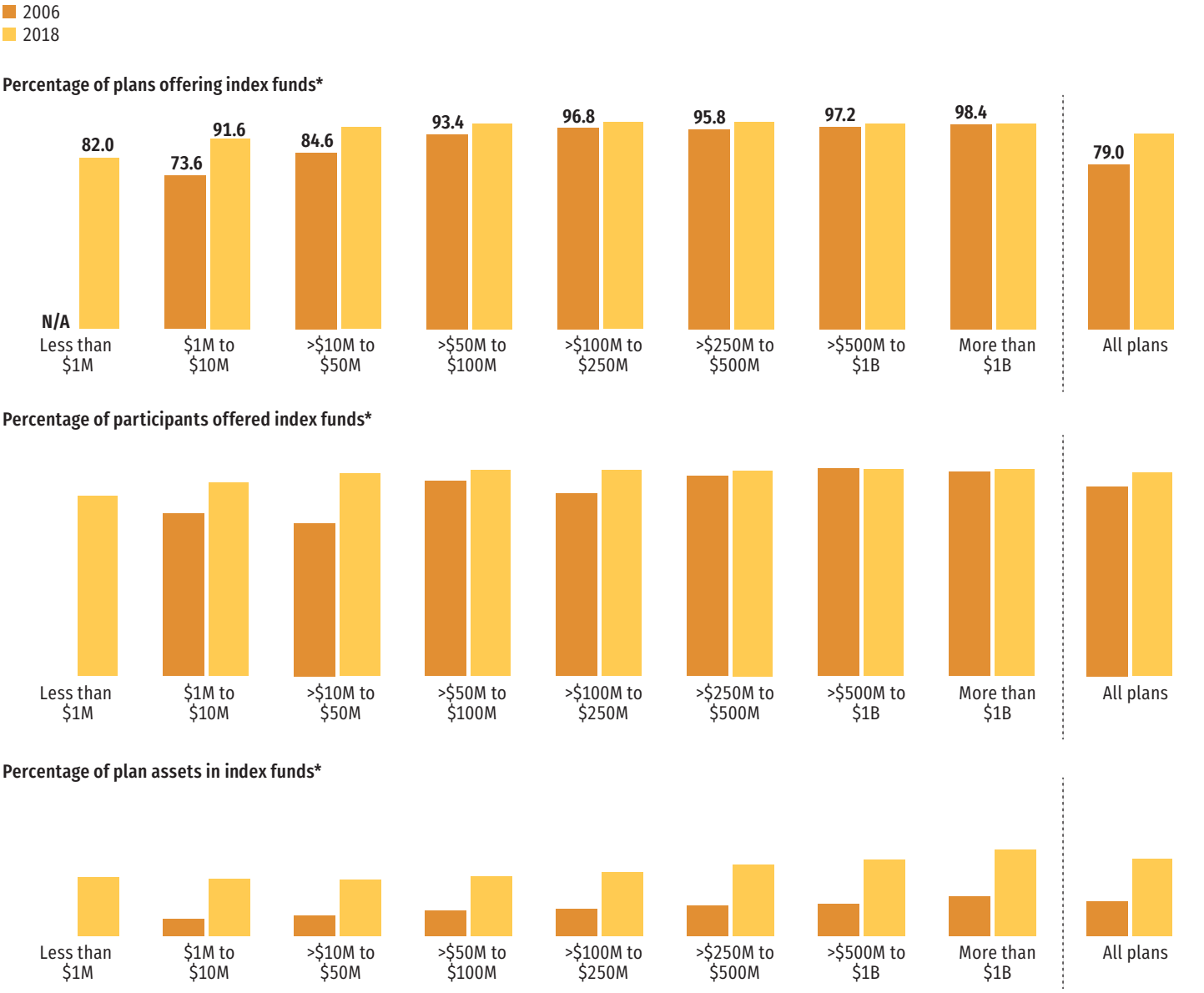


EXHIBIT 2.13

Index Fund Use Is Nearly Universal in Larger 401(k) Plans

Percentage of plans offering, participants offered, and plan assets in index funds* among plans with audited 401(k) filings in the BrightScope database by plan assets



CHAPTER 3

401(k) Plans Engage a Variety of Service Providers

When employers offer a 401(k) plan to their employees, they also engage service providers to help manage the operation of the plan. This chapter focuses on the service providers engaged to provide recordkeeping for the plan, including maintaining plan records, processing employee contributions and distributions, and issuing account statements to employees. Employers can choose from a large number of service providers to provide recordkeeping services for their plans. Asset managers, insurance companies, brokerage firms, banks, or pure recordkeepers can provide these services.[44] This chapter analyzes subsamples drawn from the more than 56,000 large 401(k) plans in 2018 with between four and 100 investment options and typically 100 participants or more.

Types of Recordkeepers

In 2018, insurance companies were the most common type of recordkeeper, providing recordkeeping services for 49.5 percent of large 401(k) plans in the BrightScope database (Exhibit 3.1).[45] Insurance companies were significantly more likely to provide recordkeeping services for smaller plans, doing so for more than half of plans with $10 million or less in plan assets but less than one-fifth of the plans with more than $500 million.

Asset managers—which include mutual fund companies—serving as recordkeepers were more likely to provide services to larger plans. In 2018, asset managers provided recordkeeping services for 12.0 percent of plans with less than $1 million in plan assets, 61.7 percent of plans with more than $500 million to $1 billion, and 62.4 percent of plans with more than $1 billion. Overall, asset managers provided recordkeeping for 31.5 percent of large 401(k) plans.

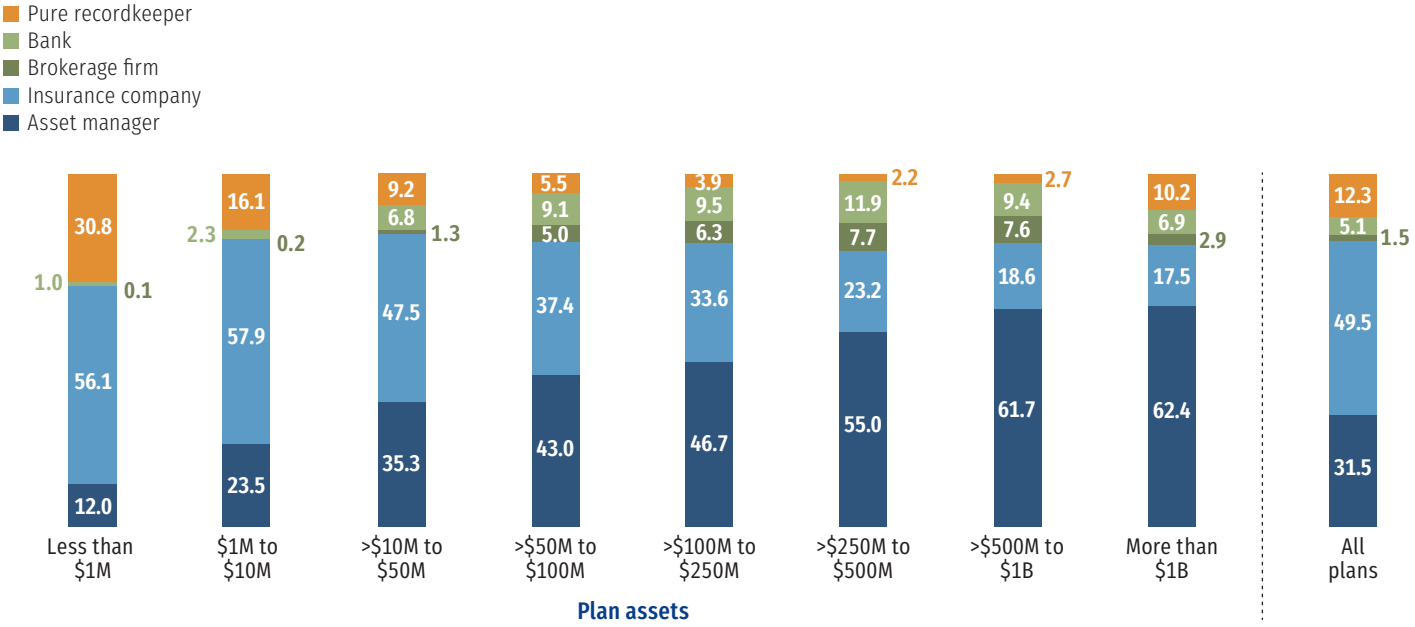
Banks, which provided recordkeeping for 5.1 percent of plans, tended to be more likely to do so for midsize plans. Although banks provided recordkeeping services for only 1.0 percent of plans with less than $1 million in plan assets and 6.9 percent of plans with more than $1 billion in 2018, banks' recordkeeping activity rose to 11.9 percent of plans with more than $250 million to $500 million in plan assets.

Pure recordkeepers (firms that only offer recordkeeping servet of plans witk

EXHIBIT 3.1

Larger 401(k) Plans Are More Likely to Use Asset Managers for Recordkeeping

Percentage of plans among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



Note: The sample is 39,256 plans with $3.3 trillion in assets. The top 40 recordkeepers among audited 401(k) plans in the BrightScope database were classified according to their primary business, and only plans recordkept by those recordkeepers are included in this analysis. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

Because asset managers were more likely to provide recordkeeping services for large plans, their share of 401(k) assets is greater than their share of 401(k) plans. In 2018, asset managers provided recordkeeping services for 31.5 percent of large 401(k) plans (Exhibit 3.2, upper panel) but 56.5 percent of assets (Exhibit 3.2, lower panel) and 41.9 percent of participants (Exhibit 3.2, middle panel). Insurance companies, because they were more likely to provide recordkeeping for smaller plans, represented a smaller share of assets and participants than plans (22.3 percent of assets and 32.8 percent of participants versus 49.5 percent of plans). Brokerage firms (3.8 percent of assets), banks (8.7 percent), and pure recordkeepers (8.8 percent) provided the remaining recordkeeping services.

EXHIBIT 3.2

Types of Recordkeepers Used by 401(k) Plans

Percentage of plans among plans with audited 401(k) filings in the BrightScope database by type of recordkeeper, 2018

Plan assets	Asset manager	Insurance company	Brokerage firm	Bank	Pure recordkeeper
Less than $1M	12.0	56.1	0.1	1.0	30.8
$1M to $10M	23.5	57.9	0.2	2.3	16.1
>$10M to $50M	35.3	47.5	1.3	6.8	9.2
>$50M to $100M	43.0	37.4	5.0	9.1	5.5
>$100M to $250M	46.7	33.6	6.3	9.5	3.9
>$250M to $500M	55.0	23.2	7.7	11.9	2.2
>$500M to $1B	61.7	18.6	7.6	9.4	2.7
More than $1B	62.4	17.5	2.9	6.9	10.2
All plans	31.5	49.5	1.5	5.1	12.3

Percentage of participants among plans with audited 401(k) filings in the BrightScope database by type of recordkeeper, 2018

Plan assets	Asset manager	Insurance company	Brokerage firm	Bank	Pure recordkeeper
Less than $1M	15.2	57.3	0.1	1.5	26.0
$1M to $10M	23.1	58.1	0.2	3.2	15.4
>$10M to $50M	32.5	48.3	1.3	8.9	9.0
>$50M to $100M	37.2	38.9	2.9	16.1	4.9
>$100M to $250M	38.6	37.6	3.6	14.8	5.4
>$250M to $500M	47.4	23.0	4.9	23.4	1.2
>$500M to $1B	54.7	16.4	6.0	21.1	1.8
More than $1B	50.0	21.3	1.0	18.8	8.9
All plans	41.9	32.8	2.3	15.5	7.5

Percentage of plan assets among plans with audited 401(k) filings in the BrightScope database by type of recordkeeper, 2018

Plan assets	Asset manager	Insurance company	Brokerage firm	Bank	Pure recordkeeper
Less than $1M	11.9	58.6	0.1	0.8	28.5
$1M to $10M	26.7	55.7	0.2	2.8	14.6
>$10M to $50M	36.7	45.8	1.7	7.3	8.5
>$50M to $100M	43.2	37.2	5.1	9.1	5.4
>$100M to $250M	47.2	32.6	6.5	9.9	3.9
>$250M to $500M	56.1	22.6	7.4	11.7	2.2
>$500M to $1B	61.6	18.6	7.7	9.5	2.7
More than $1B	63.7	13.7	2.2	8.3	12.2
All plans	56.5	22.3	3.8	8.7	8.8

Note: The sample is 39,256 plans with $3.3 trillion in assets. The top 40 recordkeepers among audited 401(k) plans in the BrightScope database were classified according to their primary business, and only plans record kept by those recordkeepers are included in this analysis. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

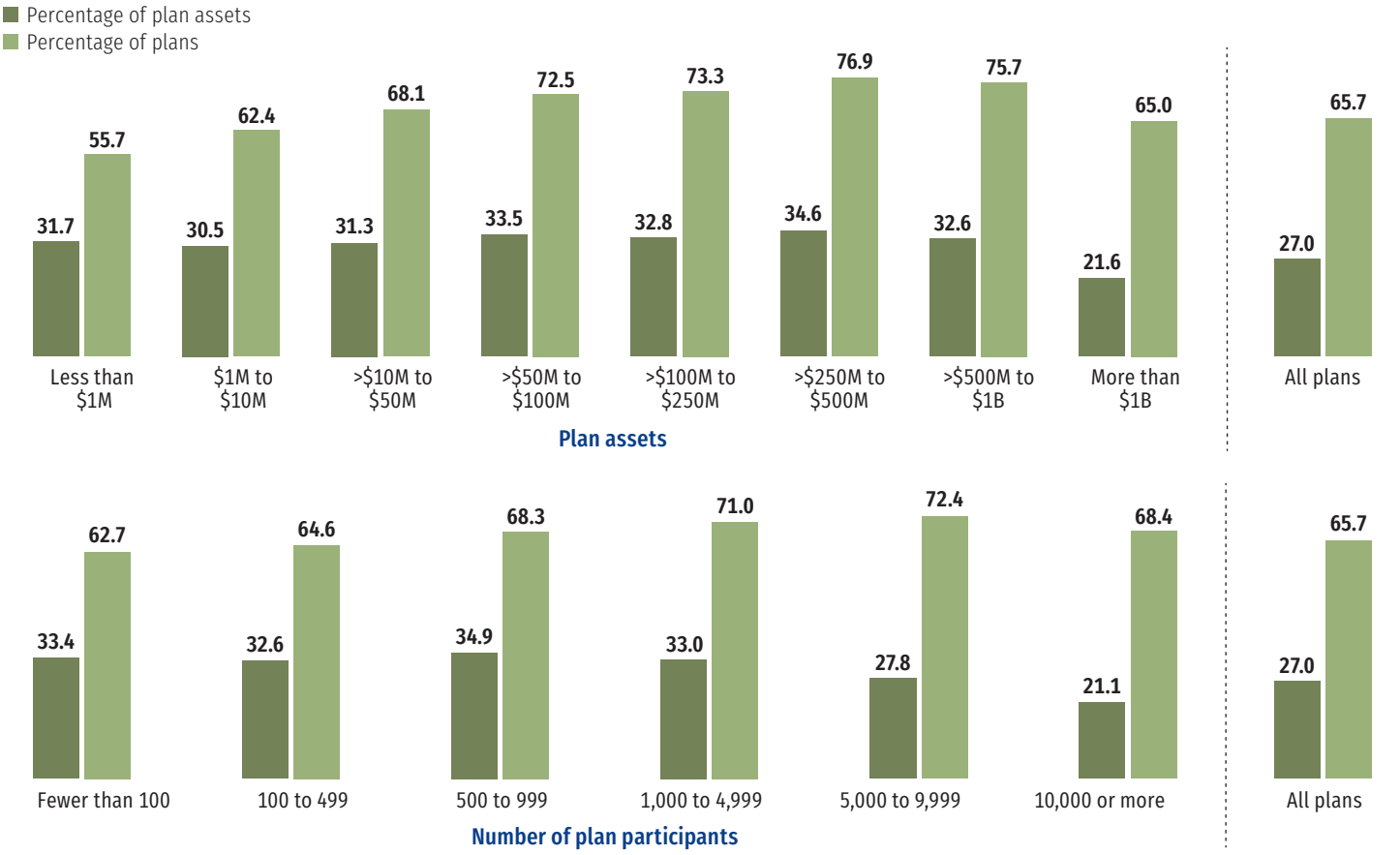
Proprietary Funds

Employers may consider many factors when deciding on a recordkeeper, including the recordkeepers' proprietary funds. That is, the employer may choose the XYZ asset manager for recordkeeping and choose to include one or more XYZ mutual funds, XYZ collective investment trusts, or XYZ separate accounts in the investment lineup. In 2018, 65.7 percent of large 401(k) plans in the sample included proprietary funds in their investment lineups, and proprietary fund assets accounted for 27.0 percent of plan assets (Exhibit 3.3, upper panel). Larger plans tended to be more likely to include proprietary funds in their investment lineups, although this effect was reversed for the largest plans (those with more than $1 billion in plan assets). For example, 55.7 percent of plans with less than $1 million in plan assets, 76.9 percent of plans with more than $250 million to $500 million in plan assets, and 65.0 percent of plans with more than $1 billion in plan assets included proprietary funds. However, even though plans with more than $250 million to $500 million in plan assets were significantly more likely to offer proprietary funds than the smallest of the plans analyzed, participant investment in proprietary funds was similar. For all plan size groups with less than $1 billion in plan assets, proprietary funds accounted for about one-third of plan assets. Participants in plans with more than $1 billion in plan assets held a lower share of their assets (21.6 percent) in proprietary funds. A roughly similar pattern emerges when variation across plans by number of plan participants is analyzed (Exhibit 3.3, lower panel).

EXHIBIT 3.3

Proprietary Fund Use Varies with 401(k) Plan Size

Percentage of plan assets invested in proprietary funds* and percentage of plans offering proprietary funds among plans with audited 401(k) filings in the BrightScope database by plan assets or number of plan participants, 2018



* Proprietary funds are the investment products of the recordkeeping financial services firm. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products.

Note: The sample is 48,233 plans with $3.5 trillion in assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options assets are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

CHAPTER 4

401(k) Plan Fees

Employers offering 401(k) plans typically hire service providers to assist in operating the plans, and those service providers charge fees for their services. Many types of services are required to operate a 401(k) plan, including administrative services (e.g., recordkeeping and transaction processing), participant-focused services (e.g., participant communication, education, or advice), regulatory and compliance services (e.g., plan document services; consulting, accounting, and audit services; and legal advice), and investment management. As with any other employee benefit, the employer typically decides how the costs will be shared. In order to cover the expenses of providing a 401(k) plan, fees are paid by the plan itself, the employer, and/or the plan participants. These fees can be levied based on the number of participants, the amount of assets, or as a fixed dollar amount for the plan as a whole. In order to better understand the impact of fees, BrightScope has developed a *total plan cost* measure that includes all fees on the audited Form 5500 reports as well as fees paid through investment expense ratios (see "About BrightScope's Total Plan Cost" below). This chapter analyzes nearly 55,000 large 401(k) plans (between four and 100 investment options and typically 100 participants or more) with total plan cost information; more than 45,000 large 401(k) plans with mutual fund investments; and a sample of more than 18,000 consistent large 401(k) plans with mutual funds present from 2009 to 2018.

Total Plan Cost

In the calculation of overall 401(k) plan fees, it is important to consider the sample to be analyzed. Fees can be calculated at the plan level (where each plan is treated equally), at the participant level (where each participant is treated equally), or at the asset level (where each dollar is treated equally). Because the average plan tends to be small and the average participant and average dollar are in larger plans, the focus of the fee analysis can produce different answers. For this reason, this paper presents the total plan cost weighted by plans, participants, and assets.

ABOUT BRIGHTSCOPE'S TOTAL PLAN COST

Total plan cost includes asset-based investment management fees, asset-based administrative and advice fees, and other fees (including insurance charges) from the Form 5500 and audited financial statements of 401(k) plans covered by ERISA. When plans use products registered under the Investment Company Act of 1940—such as mutual funds—expense data from Lipper are used to calculate fees. When plans use non–1940 Act products, such as CITs and pooled separate accounts, BrightScope uses an algorithm to estimate investment management fees.

In 2018, the average 401(k) plan in the BrightScope sample had a total plan cost of 0.94 percent of assets, while the average participant was in a plan with a total plan cost of 0.60 percent of assets, and the average dollar was in a plan with a total plan cost of 0.38 percent of assets (Exhibit 4.1; upper, middle, and lower panels). This pattern occurs for a couple of reasons. First, participants and assets tend to be concentrated in larger plans. For example, although only 1 percent of audited 401(k) plans in the BrightScope Defined Contribution Plan Database have more than $1 billion in plan assets, more than one-third of participants are in these plans, and they hold 56 percent of 401(k) assets (see Exhibit I.3). A similar pattern occurs in the DOL 401(k) universe.

Another reason that participant-weighted and asset-weighted total plan costs are lower than plan-weighted total plan cost is because larger plans tend to have a lower total plan cost when measured as a percentage of plan assets. For example, 401(k) plans with less than $1 million in plan assets had an average total plan cost of 1.44 percent of plan assets in 2018, compared with 0.47 percent of plan assets for plans with more than $100 million to $250 million and 0.29 percent of plan assets for plans with more than $1 billion (Exhibit 4.1, upper panel). Similar patterns occur for both the participant-weighted and asset-weighted numbers. One reason that larger plans tend to have lower fees is because a greater share of their assets are invested in index funds (Exhibit 2.13), which tend to have lower expenses than other types of investments (Exhibit 4.5). In addition, there are fixed costs associated with offering a 401(k) plan. As a plan grows in size, those fixed costs can be spread over more participants and a larger asset base, lowering the total plan cost as a percentage of assets.

Since 2009, total plan cost has decreased whether measured on a plan-, participant-, or asset-weighted basis (Exhibit 4.1). For example, among the large 401(k) plans analyzed, total plan cost decreased from 1.02 percent in 2009 to 0.94 percent in 2018 on a plan-weighted basis, from 0.65 percent to 0.60 percent on a participant-weighted basis, and from 0.47 percent to 0.38 percent on an asset-weighted basis. All plan size groups saw reductions in total plan cost between 2009 and 2018, but the largest reduction tended to occur for the smallest plans.

Total 401(k) plan costs varied around the plan-weighted average of 0.94 percent in 2018. For example, 10 percent of plans had a total plan cost of 0.40 percent or less, while another 10 percent had a total plan cost of 1.54 percent or more (Exhibit 4.2). Although there is significant diversity in total plan cost, the difference between the 10th percentile and 90th percentile plans tends to decrease as plan size increases. For example, in 401(k) plans with less than $1 million in plan assets, total plan cost for 80 percent of plans ranged between 0.38 percent and 2.66 percent of assets. For plans with more than $1 billion in plan assets, that range was significantly narrower, varying from 0.15 percent of assets to 0.45 percent.

EXHIBIT 4.1

Total Plan Cost by 401(k) Plan Assets

Total plan cost* as a percentage of assets among plans with audited 401(k) filings in the BrightScope database by plan assets

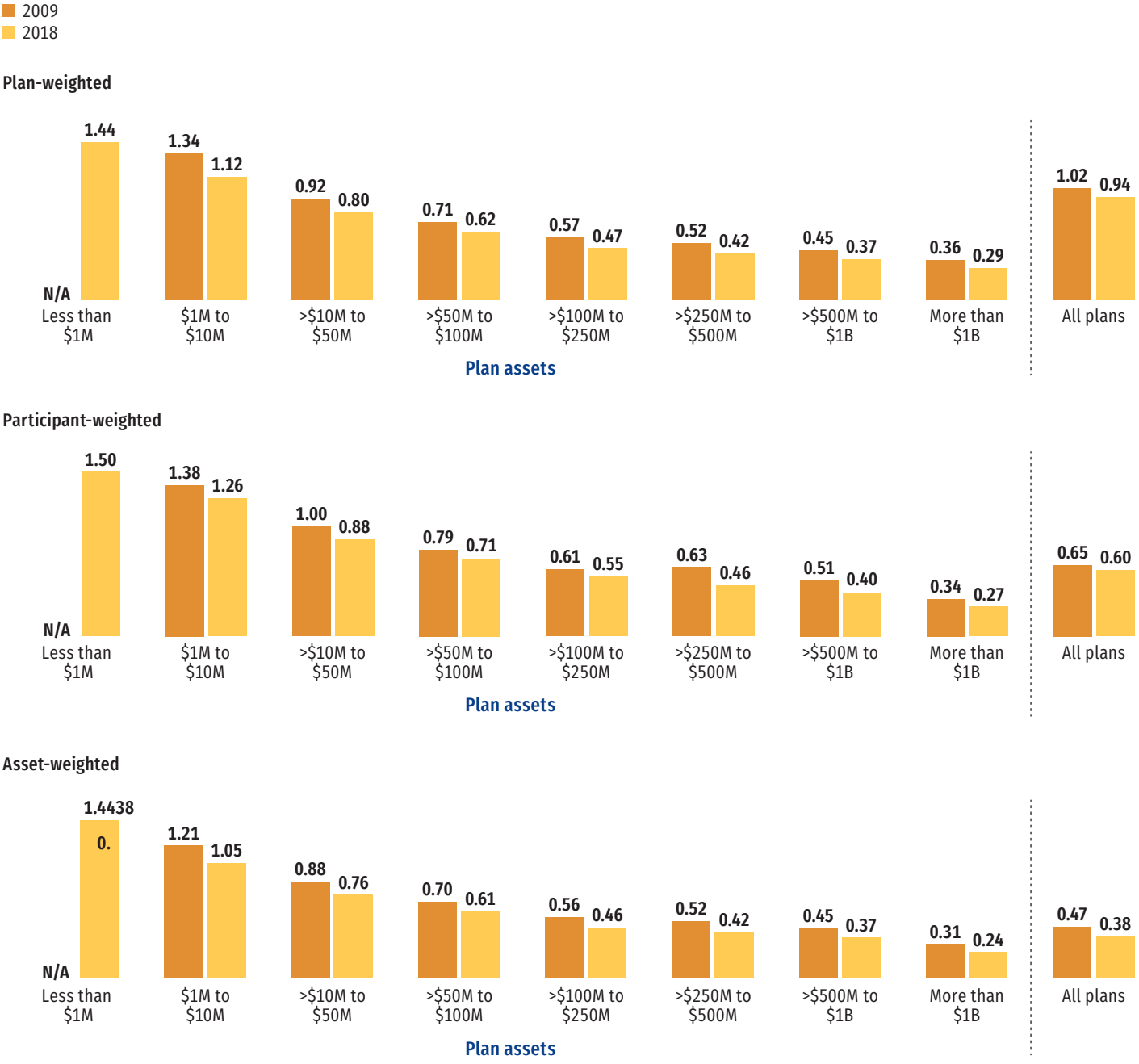
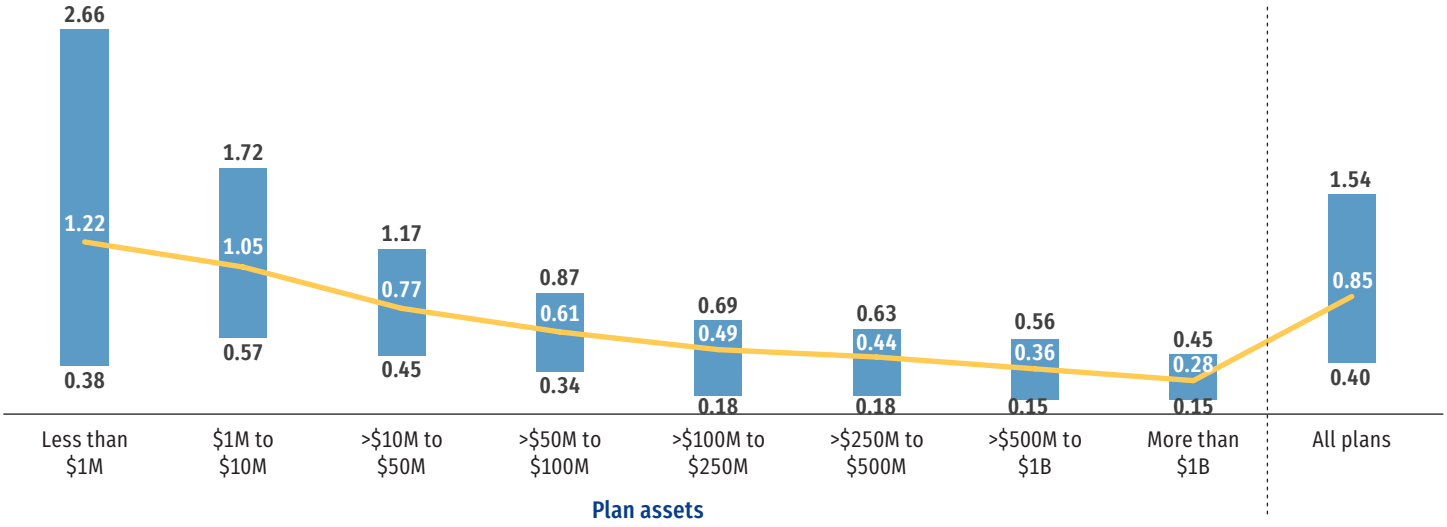


EXHIBIT 4.2

Distribution of Total Plan Cost by 401(k) Plan Assets

10th percentile, median, and 90th percentile plan-weighted total plan cost* as a percentage of assets among plans with audited 401(k) filings in the BrightScope database by plan assets, 2018



* *Total plan cost* is BrightScope's measure of the total cost of operating the 401(k) plan and includes asset-based investment management fees, asset-based administrative and advice fees, and other fees (including insurance charges) from the Form 5500 and audited financial statements of ERISA-covered 401(k) plans. Total plan cost is computed only for plans with sufficiently complete information.

Note: The sample is 54,808 plans with $4.2 trillion in assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Sources: BrightScope Defined Contribution Plan Database and Lipper

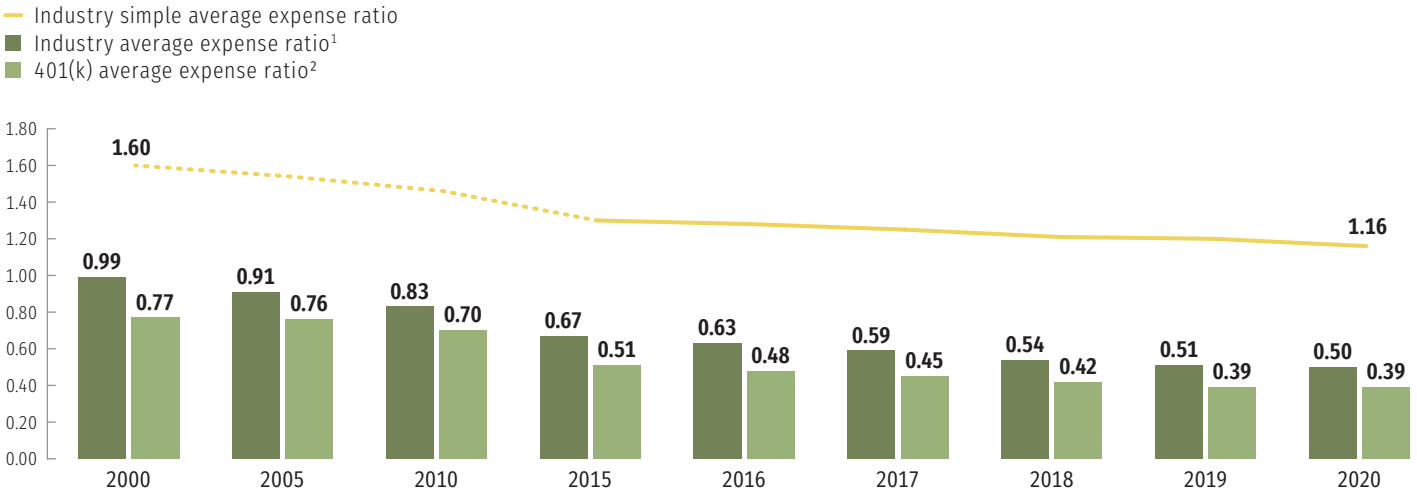
Mutual Fund Expenses

Some of the main costs of a 401(k) plan are the expenses associated with the investments in the plan.[46] Therefore, it is important to understand factors associated with these expenses (such as plan size or investment objective). ICI has analyzed mutual fund expenses for both the entire industry[47] and 401(k) plans specifically,[48] combining Morningstar and Lipper fee information with ICI mutual fund asset data at a share class level (see "Fees Paid on Mutual Funds Held in 401(k) Plans" on page 53). The ICI analysis has found that, for both mutual funds industrywide and mutual funds in 401(k) plans, fund expenses have declined significantly since 2000. For example, the simple average expense ratio for equity mutual funds (including both index and actively managed funds) was 1.60 percent in 2000; it had declined to 1.16 percent by 2020 (Exhibit 4.3).[49] However, mutual fund investors tend to concentrate their assets in lower-cost funds. The 0.50 percent asset-weighted industry average expense ratio in 2020, which gives greater weight to funds with higher assets, was less than half of the 1.16 percent industry simple average, and the asset-weighted average 401(k) expense ratio was even lower, at 0.39 percent.

EXHIBIT 4.3

401(k) Mutual Fund Investors Tend to Pay Lower-Than-Average Expenses for Equity Mutual Funds

Percent



[1] The industry average expense ratio is measured as an asset-weighted average.

[2] The 401(k) average expense ratio is measured as a 401(k) asset-weighted average.

Note: Data include both index and actively managed funds and exclude mutual funds available as investment choices in variable annuities.

Sources: Investment Company Institute, Lipper, and Morningstar; see Holden, Duvall, and Chism 2021

Comparison of ICI and BrightScope Mutual Fund Expense Analyses

The asset-weighted mutual fund expense ratios in 401(k) plans in the BrightScope database tend to be fairly similar to the ICI data analysis. For example, the asset-weighted total expense ratio paid by 401(k) participants for equity mutual funds (including both index and actively managed funds) was 0.44 percent of assets in 2018 in the BrightScope database and 0.42 percent in the ICI database, while the expense ratio for balanced mutual funds in the BrightScope database was 0.41 percent of assets, compared with 0.49 percent in the ICI database (Exhibit 4.4). The average expense ratio for bond mutual funds in the BrightScope database was 0.37 percent, compared with 0.34 percent in the ICI database.

Mutual Fund Expenses by 401(k) Plan Size

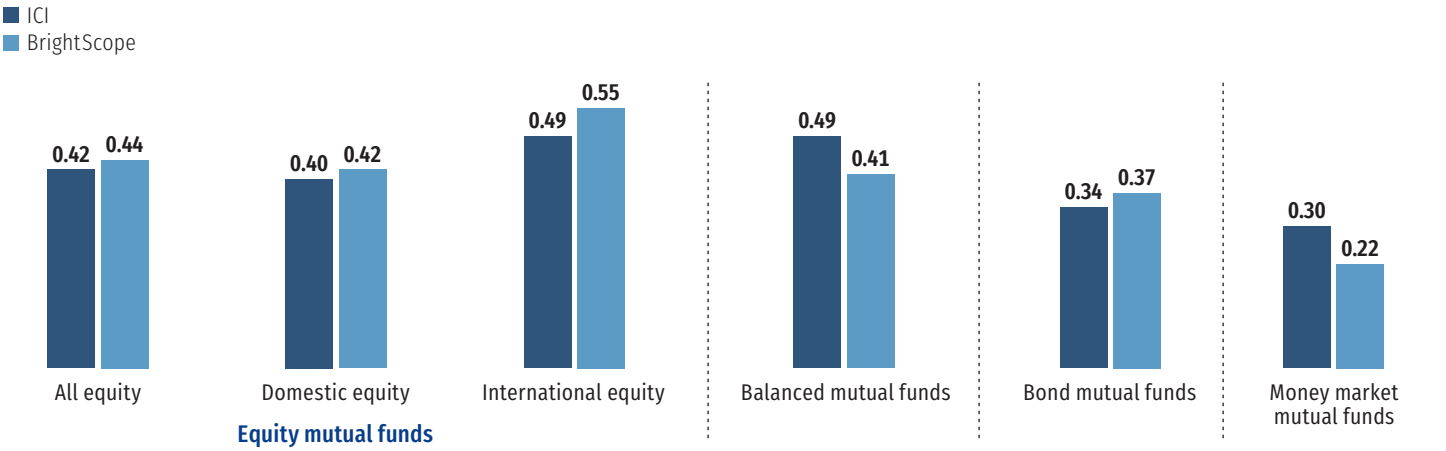
In 2018, the asset-weighted average expense ratios of mutual funds in 401(k) plans in the BrightScope Defined Contribution Plan Database varied both with the size of the plan (with larger plans, measured by assets or participants, tending to have concentrated assets in mutual funds with lower expense ratios) and the type of investment (with domestic investment mutual funds tending to have lower expense ratios than international mutual funds, and money market mutual funds tending to have lower expense ratios than equity or bond mutual funds) (Exhibit 4.5).

The asset-weighted average expense ratio for domestic equity mutual funds (including both index and actively managed funds)

EXHIBIT 4.4

ICI and BrightScope Analyses of 401(k) Mutual Fund Expenses

Asset-weighted average expense ratio as a percentage of assets by mutual fund investment objective, 2018



Note: The 401(k) average expense ratio is measured as a 401(k) asset-weighted average. See the box on page 53 for a description of the fee analysis.
Sources: Investment Company Institute, BrightScope Defined Contribution Plan Database, Morningstar, and Lipper

held in 401(k) plans in 2018 was 0.42 percent of assets, ranging from 0.69 percent in 401(k) plans with less than $1 million in plan assets to 0.36 percent in plans with more than $1 billion (Exhibit 4.5, upper panel).[50] Expense ratios for international equity mutual funds held in 401(k) plans were higher compared with domestic equity mutual funds, with an asset-weighted average of 0.55 percent of assets, ranging from 0.93 percent of assets in 401(k) plans with less than $1 million in plan assets to 0.47 percent in plans with more than $1 billion. Plans with more participants also tended to have equity mutual funds with lower expense ratios. For example, domestic equity mutual funds ranged from an asset-weighted average expense ratio of 0.51 percent of assets in plans with fewer than 100 participants to 0.39 percent in plans with 10,000 participants or more, and international equity mutual fund asset-weighted average expense ratios ranged from 0.71 percent of assets in plans with fewer than 100 participants to 0.48 percent in plans with 10,000 participants or more (Exhibit 4.5, lower panel).

The average expense ratio for domestic bond mutual funds (including both index and actively managed funds) was lower than the average expense ratio for domestic equity mutual funds (0.36 percent of assets for domestic bond mutual funds compared with 0.42 percent of assets for domestic equity mutual funds), but expense ratios for international bond mutual funds were higher than those for international equity mutual funds (0.57 percent of assets for international bond mutual funds and 0.55 percent of assets for international equity mutual funds) in 2018 (Exhibit 4.5, upper and lower panels). Balanced mutual funds, which invest in a mix of equity and fixed-income securities, tend to have expense ratios that reflect the share of their investments in the different asset categories. Money market mutual funds had the lowest expense ratio of any of the asset classes, with an asset-weighted average expense ratio of 0.22 percent of assets in 2018 for money market mutual funds in large 401(k) plans.

Index mutual funds, which tend to be domestic equity index mutual funds,[51] typically had lower expense ratios than other fund types.[52] For example, the asset-weighted average expense ratio for index mutual funds in 401(k) plans was 0.08 percent of assets in 2018, compared with 0.42 percent of assets for domestic equity mutual funds (including both index and actively managed funds) (Exhibit 4.5, upper and lower panels). Like other mutual fund types, index mutual funds also tend to have

FEES PAID ON MUTUAL FUNDS HELD IN 401(k) PLANS

Each year, ICI updates its analysis of the fees paid by 401(k) investors in mutual funds on the funds held in their 401(k) plans, combining Morningstar and Lipper fee information with ICI data on 401(k) plan investments in mutual funds, share class by share class.[53] Because mutual fund company recordkeeping systems cannot see through to the underlying 401(k) plans, it is not possible to analyze how mutual fund fees vary by plan size using these data. The resulting asset-weighted measure of fees paid on 401(k) plan mutual fund investments reflects where the assets are invested and what 401(k) investors as a group paid on average for their 401(k) plan mutual fund investments.

BrightScope's database of audited 401(k) Form 5500 filings contains reporting of mutual fund holdings by share class in large DC plans for more than 80 percent of the funds in the BrightScope database. In the remaining cases where the mutual fund is known but not the specific share class, BrightScope assigns a share class to the mutual fund holdings in a given DC plan based on the size of the plan's investment in the mutual fund. If the DC plan has less than $1 million invested in the mutual fund, a retail-type share class is assigned to the holding. If the DC plan has $1 million or more invested in the mutual fund, then an institutional-type share class is assigned. Because BrightScope has plan-level information, it is possible to report how mutual fund fees vary across plan size and in aggregate.

The fund investment categories used in this report are broad and encompass diverse investment styles within the investment types (e.g., active and index); a range of general investment types (such as domestic equity funds, which aggregates growth, sector, alternative strategies, value, and blend); and a variety of arrangements for shareholder services, recordkeeping, or distribution charges (known as 12b-1 fees). This material is intended to provide general information on fees paid by participants in a wide variety of plans to provide insight into average fees across the marketplace. The fees of a particular plan will depend on factors specific to the plan, such as the exact investment options the plan offers and whether administrative and recordkeeping fees are included in the expense ratios or charged outside of them. Consequently, this material is not intended for benchmarking the costs of specific plans to the broad averages presented here.

lower expense ratios in larger plans. For example, index mutual funds in plans with less than $1 million in plan assets had an average expense ratio of 0.18 percent of assets, compared with 0.06 percent in plans with more than $500 million in plan assets. Similarly, index mutual funds in plans with fewer than 100 participants had an asset-weighted average expense ratio of 0.11 percent of assets, compared with 0.06 percent in plans with 5,000 to 9,999 participants and 0.07 percent in plans with 10,000 participants or more.

Mutual fund expenses decreased between 2009 and 2018 in 401(k) plans across all asset classes, according to cross-sectional data. For example, domestic equity mutual funds (including both index and actively managed funds) had an asset-weighted average expense ratio of 0.42 percent in 2018, down from 0.65 percent in 2009 (Exhibits 4.5 and 4.6).

EXHIBIT 4.5

Average Expense Ratios of Mutual Funds in 401(k) Plans, 2018

Asset-weighted average expense ratio as a percentage of mutual fund assets among plans with audited 401(k) filings in the BrightScope database by mutual fund investment objective and plan size

	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Plan assets	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Less than $1M	0.69	0.93	0.66	0.76	0.68	0.71	0.51	0.73	0.18
$1M to $10M	0.57	0.79	0.51	0.58	0.55	0.62	0.41	0.71	0.14
>$10M to $50M	0.50	0.69	0.46	0.48	0.48	0.58	0.34	0.68	0.11
>$50M to $100M	0.45	0.61	0.42	0.43	0.40	0.56	0.28	0.66	0.09
>$100M to $250M	0.43	0.57	0.39	0.39	0.37	0.55	0.23	0.64	0.08
>$250M to $500M	0.42	0.56	0.38	0.39	0.34	0.57	0.23	0.62	0.08
>$500M to $1B	0.39	0.50	0.39	0.34	0.30	0.55	0.18	0.59	0.06
More than $1B	0.36	0.47	0.37	0.30	0.31	0.57	0.17	0.43	0.06
All plans	0.42	0.55	0.41	0.38	0.36	0.57	0.22	0.59	0.08

	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Number of plan participants	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Fewer than 100	0.51	0.71	0.47	0.48	0.49	0.59	0.36	0.65	0.11
100 to 499	0.49	0.67	0.46	0.48	0.45	0.56	0.33	0.67	0.11
500 to 999	0.45	0.61	0.42	0.44	0.40	0.56	0.26	0.67	0.09
1,000 to 4,999	0.41	0.55	0.38	0.38	0.34	0.59	0.21	0.64	0.08
5,000 to 9,999	0.37	0.49	0.43	0.37	0.31	0.48	0.21	0.55	0.06
10,000 or more	0.39	0.48	0.39	0.31	0.34	0.61	0.17	0.43	0.07
All plans	0.42	0.55	0.41	0.38	0.36	0.57	0.22	0.59	0.08

* 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.

Note: The sample is 45,540 plans with $1.7 trillion in mutual fund assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. See the box on page 53 for a description of the fee analysis.

Sources: BrightScope Defined Contribution Plan Database and Morningstar

EXHIBIT 4.6

Average Expense Ratios of Mutual Funds in 401(k) Plans, 2009

Asset-weighted average expense ratio as a percentage of mutual fund assets among plans with audited 401(k) filings in the BrightScope database by mutual fund investment objective and plan size

	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Plan assets	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Less than $1M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
$1M to $10M	0.91	1.07	0.84	0.88	0.72	0.85	0.48	1.11	0.33
>$10M to $50M	0.79	0.95	0.74	0.71	0.58	0.82	0.42	1.01	0.23
>$50M to $100M	0.70	0.88	0.66	0.62	0.49	0.85	0.37	0.90	0.18
>$100M to $250M	0.65	0.83	0.62	0.57	0.45	0.82	0.36	0.87	0.16
>$250M to $500M	0.62	0.81	0.61	0.49	0.43	0.74	0.33	0.76	0.14
>$500M to $1B	0.60	0.79	0.62	0.53	0.41	0.79	0.28	0.85	0.12
More than $1B	0.55	0.76	0.47	0.44	0.37	0.79	0.22	0.80	0.13
All plans	0.65	0.83	0.62	0.56	0.46	0.80	0.31	0.89	0.16

	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Number of plan participants	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Fewer than 100	0.81	0.98	0.76	0.77	0.62	0.90	0.44	1.07	0.24
100 to 499	0.80	0.97	0.74	0.72	0.59	0.82	0.42	1.02	0.23
500 to 999	0.71	0.90	0.67	0.64	0.51	0.81	0.35	0.96	0.18
1,000 to 4,999	0.66	0.84	0.63	0.56	0.45	0.79	0.34	0.89	0.16
5,000 to 9,999	0.60	0.79	0.59	0.52	0.42	0.79	0.29	0.67	0.13
10,000 or more	0.57	0.77	0.55	0.47	0.39	0.79	0.24	0.85	0.14
All plans	0.65	0.83	0.62	0.56	0.46	0.80	0.31	0.89	0.16

* 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.

N/A = not available

Note: The sample is 17,430 plans with $0.9 trillion in mutual fund assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options, more than 100 investment options, or less than $1 million in plan assets are excluded from BrightScope audited 401(k) filings for this analysis. See the box on page 53 for a description of the fee analysis.

Sources: BrightScope Defined Contribution Plan Database and Lipper

Variation in Mutual Fund Expenses

In addition to the average expense ratio, it is important to examine different points in the distribution of expenses to understand the range of mutual fund expenses paid in 401(k) plans. For example, though the asset-weighted average expense ratio on equity mutual funds (including both index and actively managed funds) held in 401(k) plans was 0.44 percent in 2018 (Exhibit 4.4), 10 percent of assets were invested in funds with expense ratios of 0.04 percent or less, and 10 percent of assets were invested in funds with expense ratios of 0.90 percent or more (see Exhibits 4.7 and A.7). Similar patterns were observed for both domestic and international equity mutual funds.

Although 401(k) mutual fund expenses tend to decrease as total assets in a 401(k) plan increase, mutual fund expenses vary in plans of all sizes. For example, expenses for equity mutual funds (including both index and actively managed funds) ranged from 0.05 percent at the asset-weighted 10th percentile to 1.41 percent at the asset-weighted 90th percentile in 401(k) plans with less than $1 million in plan assets (see Exhibits 4.7 and A.7). Similarly, equity mutual fund expenses in 401(k) plans with more than $1 billion in plan assets ranged between 0.02 percent of assets at the asset-weighted 10th percentile to 0.81 percent at the asset-weighted 90th percentile. The range in expenses is at least partly attributable to differences in fee arrangements. For example, though some or all costs associated with plan recordkeeping can be paid by fees associated with the mutual fund investment, other costs may be paid as a per-participant charge by participants or the employer. Expenses may also be paid through a combination of these methods.[54] In addition, the expense ratios applicable to funds vary within a given investment category.[55] For example, actively managed mutual funds can offer investors the chance to earn superior returns, access specialized sectors, or take advantage of alternative investment strategies, all of which can make a fund more expensive to manage. Similarly, equity mutual funds have different expense ratios depending on the extent to which they invest in small-cap, mid-cap, or emerging market stocks (which tend to be more expensive to manage) instead of large-cap or developed market stocks (which tend to be less expensive to manage).

EXHIBIT 4.7

Distribution of Mutual Fund Expense Ratios Paid by 401(k) Plan Participants

10th percentile, median, and 90th percentile asset-weighted mutual fund expense ratios as a percentage of plan assets among plans with audited 401(k) filings in the BrightScope database by mutual fund investment objective and plan assets, 2018

Note: The sample is 45,540 plans with $1.7 trillion in mutual fund assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. For detailed expense information, see Exhibit A.5 in the appendix. See the box on page 53 for a description of the fee analysis.

Sources: BrightScope Defined Contribution Plan Database and Morningstar

Changes in Mutual Fund Expenses in Consistent 401(k) Plans, 2009–2018

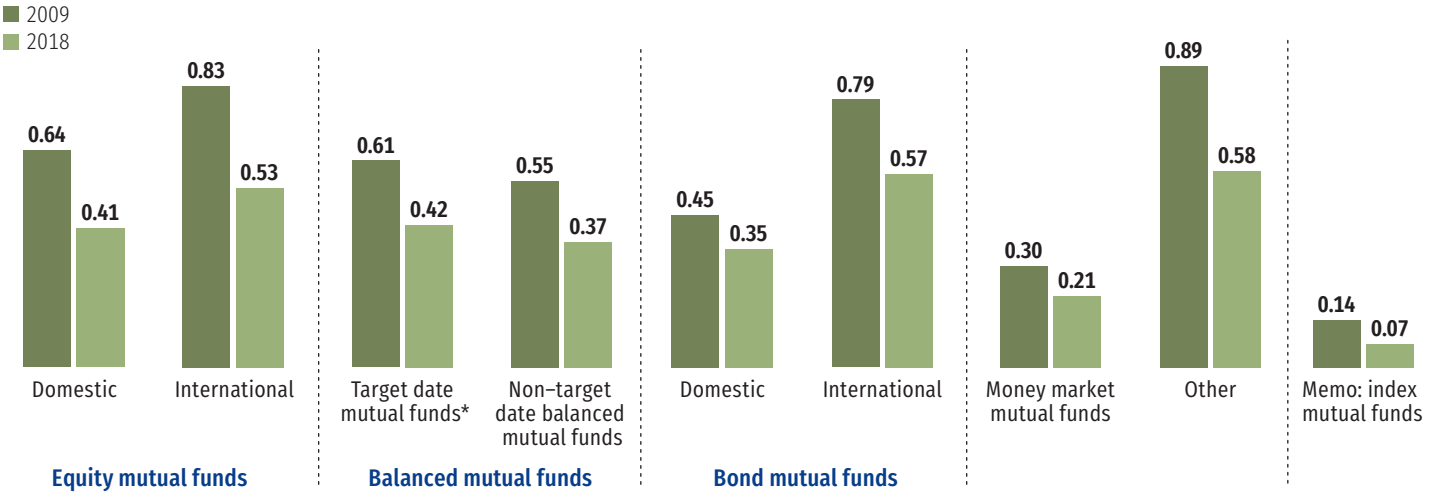
The BrightScope Defined Contribution Plan Database permits the tracking of the same plans over time; for this analysis, a large sample of more than 18,000 401(k) plans with mutual fund assets were followed from 2009 through 2018. Asset-weighted average mutual fund expenses decreased for the consistent 401(k) plans as a group and across all plan size asset and mutual fund investment categories. This is similar to the analysis of snapshots of 401(k) plans over time. For example, the asset-weighted average expense ratio for domestic equity mutual funds (including both index and actively managed funds) decreased from 0.64 percent of assets in 2009 to 0.41 percent of assets in 2018, a decline of 23 basis points, among 401(k) plans in the database every year between 2009 and 2018 (Exhibit 4.8). The asset-weighted average expense ratio for international equity mutual funds fell 30 basis points, from 0.83 percent in 2009 to 0.53 percent in 2018, and money market mutual fund expenses fell by 9 basis points, from 0.30 percent in 2009 to 0.21 percent in 2018. The asset-weighted average expense ratio for target date mutual funds decreased from 0.61 percent in 2009 to 0.42 percent in 2018 in these consistent 401(k) plans. Even index mutual fund fees fell for these consistent 401(k) plans, from 0.14 percent in 2009 to 0.07 percent in 2018.

The asset-weighted average mutual fund expenses decreased across all plan sizes and mutual fund investment categories. For example, among plans with $1 million to $10 million in plan assets in 2009 and consistently in the database through 2018, the asset-weighted average expense ratio of domestic equity mutual funds (including both index and actively managed funds) fell from 0.91 percent in 2009 to 0.59 percent in 2018, a decline of 32 basis points (Exhibit 4.9). Among plans with more than $1 billion in plan assets in 2009 and consistently in the database through 2018, the asset-weighted average expense ratio of domestic equity mutual funds fell from 0.55 percent in 2009 to 0.37 percent in 2018, a decline of 18 basis points.

EXHIBIT 4.8

401(k) Plan Mutual Fund Fees in Consistent Plans Tended to Decrease Between 2009 and 2018

Asset-weighted average expense ratio as a percentage of plan assets among plans with audited 401(k) filings in the BrightScope database in every year by mutual fund investment objective



* 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.

Note: The sample is 18,009 plans in the BrightScope Defined Contribution Plan Database in each year between 2009 and 2018 with $0.7 trillion in mutual fund assets in 2009 and $1.4 trillion in mutual fund assets in 2018. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options, more than 100 investment options, or less than $1 million in plan assets are excluded from BrightScope audited 401(k) filings for this analysis. See the box on page 53 for a description of the fee analysis.

Sources: BrightScope Defined Contribution Plan Database, Morningstar, and Lipper

EXHIBIT 4.9

Average Expense Ratios of Mutual Funds in Consistent 401(k) Plans by Plan Assets, 2009 and 2018

Asset-weighted average expense ratio as a percentage of plan assets among plans with audited 401(k) filings in the BrightScope database in every year by mutual fund investment objective

2009	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Plan assets	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
$1M to $10M	0.91	1.07	0.85	0.87	0.73	0.82	0.48	1.12	0.31
>$10M to $50M	0.79	0.96	0.74	0.71	0.58	0.80	0.42	1.02	0.21
>$50M to $100M	0.70	0.89	0.66	0.61	0.48	0.81	0.37	0.93	0.17
>$100M to $250M	0.65	0.84	0.63	0.58	0.45	0.88	0.35	0.89	0.14
>$250M to $500M	0.63	0.81	0.63	0.49	0.44	0.72	0.33	0.77	0.13
>$500M to $1B	0.60	0.79	0.63	0.54	0.41	0.76	0.28	0.88	0.12
More than $1B	0.55	0.77	0.48	0.45	0.38	0.80	0.22	0.84	0.12
All plans	0.64	0.83	0.61	0.55	0.45	0.79	0.30	0.89	0.14

2018	Equity mutual funds		Balanced mutual funds		Bond mutual funds				
Plan assets	Domestic	International	Target date mutual funds*	Non–target date balanced mutual funds	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
$1M to $10M	0.59	0.79	0.54	0.58	0.56	0.66	0.41	0.73	0.14
>$10M to $50M	0.51	0.69	0.47	0.48	0.47	0.58	0.34	0.70	0.11
>$50M to $100M	0.46	0.61	0.42	0.43	0.40	0.54	0.28	0.67	0.09
>$100M to $250M	0.44	0.57	[illegible]						

Appendix

EXHIBIT A.1

401(k) Plan Activity Combinations

Percentage of plans with selected plan activity combinations by plan assets or number of plan participants, 2018

Plan assets	No features	Employer contributions only	Outstanding loans only	Automatic enrollment only	Employer contributions and outstanding loans	Employer contributions and automatic enrollment	Outstanding loans and automatic enrollment	Employer contributions, outstanding loans, and automatic enrollment
Less than $1M	20.5	31.5	11.5	6.2	17.6	7.3	2.8	2.7
$1M to $10M	2.5	16.6	9.6	0.6	48.5	3.5	3.4	15.3
>$10M to $50M	0.6	9.9	3.6	0.2	48.4	3.8	2.0	31.5
>$50M to $100M	0.2	5.5	1.6	0.1	45.1	3.2	1.2	43.2
>$100M to $250M	0.4	3.3	1.7	0.1	43.0	2.3	1.0	48.2
>$250M to $500M	0.0	2.7	1.1	0.0	42.8	1.3	0.5	51.6
>$500M to $1B	0.3	1.6	1.0	0.0	41.3	1.2	0.3	54.3
More than $1B	0.0	1.4	0.6	0.2	37.9	0.6	1.2	58.2
All plans	3.2	14.1	6.7	0.9	44.9	3.8	2.6	23.7

Number of plan participants	No features	Employer contributions only	Outstanding loans only	Automatic enrollment only	Employer contributions and outstanding loans	Employer contributions and automatic enrollment	Outstanding loans and automatic enrollment	Employer contributions, outstanding loans, and automatic enrollment
Fewer than 100	10.0	21.0	7.6	3.7	35.2	6.1	3.1	13.2
100 to 499	2.6	15.1	7.3	0.6	47.1	3.7	2.7	21.1
500 to 999	1.8	9.1	5.5	0.5	43.8	3.7	2.3	33.3
1,000 to 4,999	1.3	6.8	4.6	0.3	43.0	2.6	2.0	39.5
5,000 to 9,999	0.5	4.0	3.1	0.1	45.8	1.8	1.2	43.5
10,000 or more	0.8	4.4	2.5	0.4	50.8	0.7	0.9	39.5
All plans	3.2	14.1	6.7	0.9	44.9	3.8	2.6	23.7

Note: The sample is 62,003 plans with $4.5 trillion in assets. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. A plan was determined to allow participant loans if any participant had a loan outstanding at the end of plan year 2018. See the box on page 13 for a description of the activities.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

EXHIBIT A.2

Distribution of Participants by 401(k) Plan Activity Combinations

Percentage of participants in plans with selected plan activity combinations by plan assets and number of plan participants, 2018

Plan assets	No features	Employer contributions only	Outstanding loans only	Automatic enrollment only	Employer contributions and outstanding loans	Employer contributions and automatic enrollment	Outstanding loans and automatic enrollment	Employer contributions, outstanding loans, and automatic enrollment
Less than $1M	20.6	27.7	16.8	3.5	22.8	2.5	3.7	2.3
$1M to $10M	6.6	15.4	11.8	0.7	46.5	3.2	3.3	12.6
>$10M to $50M	0.8	9.7	4.7	0.3	50.4	3.7	2.4	28.0
>$50M to $100M	0.4	5.4	3.4	0.5	49.7	2.0	1.2	37.5
>$100M to $250M	0.8	6.5	2.9	0.1	50.7	1.6	0.9	36.5
>$250M to $500M	0.0	3.5	0.7	0.0	54.6	1.5	1.0	38.7
>$500M to $1B	0.9	2.6	0.6	0.0	51.6	0.7	0.2	43.3
More than $1B	0.0	1.4	2.2	(*)	48.2	0.3	2.9	45.0
All plans	1.5	6.1	3.9	0.3	49.2	1.6	2.1	35.3

Number of plan participants	No features	Employer contributions only	Outstanding loans only	Automatic enrollment only	Employer contributions and outstanding loans	Employer contributions and automatic enrollment	Outstanding loans and automatic enrollment	Employer contributions, outstanding loans, and automatic enrollment
Fewer than 100	3.5	16.2	9.2	1.1	46.2	3.0	3.7	17.2
100 to 499	2.4	14.0	7.0	0.5	46.7	3.7	2.7	22.9
500 to 999	1.8	8.9	5.5	0.5	43.8	3.7	2.2	33.6
1,000 to 4,999	1.2	6.3	4.4	0.3	43.4	2.2	1.8	40.5
5,000 to 9,999	0.4	3.7	3.0	0.1	46.1	1.8	1.2	43.7
10,000 or more	1.5	3.4	2.6	0.1	53.9	0.4	2.2	35.8
All plans	1.5	6.1	3.9	0.3	49.2	1.6	2.1	35.3

(*) = less than 0.05 percent

Note: The sample is 62,003 plans with $4.5 trillion in assets. The results include plans that filed Form 5500 Schedule H (typically plans with 100 participants or more) and exclude 403(b) plans with a 401(k) feature. A plan was determined to allow participant loans if any participant had a loan outstanding at the end of plan year 2018. See the box on page 13 for a description of the activities.

Source: Investment Company Institute tabulations of US Department of Labor 2018 Form 5500 Research File

EXHIBIT A.3

Employer Contribution Activity in 401(k) Plans

Percentage of 401(k) plans with employer contributions by plan assets

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Less than $1M	72	72	73	71	67	68	68	68	69	71	71	72	73
$1M to $10M	88	89	88	85	81	82	83	84	85	87	87	88	89
>$10M to $50M	94	94	94	91	88	90	91	92	93	94	94	94	94
>$50M to $100M	95	95	95	93	92	95	95	95	95	96	96	96	97
>$100M to $250M	97	97	97	95	94	96	97	97	97	98	98	97	97
>$250M to $500M	97	97	98	97	96	96	97	98	98	98	98	98	98
>$500M to $1B	97	98	97	96	96	97	97	98	98	98	98	98	98
More than $1B	95	96	96	96	96	97	97	98	98	98	99	98	98
All plans	78	78	78	76	72	73	74	76	77	78	79	79	80

Percentage of participants in 401(k) plans with employer contributions by plan assets

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Less than $1M	66	67	67	66	62	62	63	63	63	64	66	66	68
$1M to $10M	84	84	86	81	76	78	78	76	78	79	80	80	82
>$10M to $50M	91	91	93	90	85	88	88	89	90	91	91	91	92
>$50M to $100M	93	93	96	93	88	91	93	93	93	94	94	94	95
>$100M to $250M	97	96	97	94	92	95	95	97	97	98	96	97	95
>$250M to $500M	98	98	98	97	96	98	98	98	98	98	98	98	98
>$500M to $1B	98	98	97	95	97	96	98	99	97	97	99	99	98
More than $1B	91	91	92	92	91	95	94	95	95	94	95	95	95
All plans	88	89	89	87	85	87	88	88	89	89	90	90	91

Note: The results exclude 403(b) plans with a 401(k) feature.

Source: Investment Company Institute tabulations of US Department of Labor Form 5500 Research File

EXHIBIT A.4

401(k) Contributions in the 401(k) Universe

Billions of dollars

401(k) contributions	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Employer contributions	79	87	98	85	89	96	102	109	115	122	129	138	148
Employee contributions in plans with employer contributions	158	172	174	159	161	175	188	204	220	241	255	277	301
Employee contributions in plans without employer contributions	14	14	14	14	17	15	14	14	14	14	14	15	16
Total contributions	251	273	286	258	267	285	305	327	349	378	399	429	464

Note: Employee contributions contain a small amount of contributions from others, which includes rollovers into 401(k) plans. Employer contributions include a de minimis amount of noncash contributions. The results exclude 403(b) plans with a 401(k) feature.

Source: Investment Company Institute tabulations of US Department of Labor Form 5500 Research File

EXHIBIT A.5

Employer Contributions as a Share of Total Contributions in the 401(k) Universe

Percentage of total 401(k) plan contributions by plan assets, 2018

Plan assets	Percent
Less than $1M	29
$1M to $10M	30
>$10M to $50M	30
>$50M to $100M	30
>$100M to $250M	31
>$250M to $500M	32
>$500M to $1B	34
More than $1B	34
All plans	32

Note: The sample is 588,368 plans with $5.2 trillion in assets. Employee contributions contain a small amount of contributions from others, which includes rollovers into 401(k) plans. Employer contributions include a de minimis amount of noncash contributions. The results exclude 403(b) plans with a 401(k) feature.

Source: Investment Company Institute tabulations of US Department of Labor Form 5500 Research File

EXHIBIT A.6

Conditional Average Number of Investment Options in 401(k) Plans by Type of Investment

Average number of investment options among plans with audited 401(k) filings in the BrightScope database offering a given investment option by plan assets, 2018

	Equity funds		Balanced funds		Bond funds					
Plan assets	Domestic	International	Target date funds[1]	Non–target date balanced funds	Domestic	International	Money funds	GICs	Other[2]	Memo: index funds
Less than $1M	7.7	3.0	8.3	2.2	2.8	1.0	1.1	1.0	1.3	7.7
$1M to $10M	9.8	3.5	9.1	2.5	3.2	1.3	1.0	1.1	1.5	7.9
>$10M to $50M	9.9	3.4	10.1	2.1	3.3	1.3	1.1	1.1	1.7	7.8
>$50M to $100M	9.2	3.1	10.8	1.8	3.1	1.1	1.1	1.1	1.7	8.1
>$100M to $250M	8.6	3.0	11.0	1.7	2.9	1.2	1.0	1.1	1.8	8.5
>$250M to $500M	8.3	2.9	11.3	1.5	2.9	1.5	1.1	1.2	2.0	9.5
>$500M to $1B	7.8	2.8	11.5	1.5	2.8	1.3	1.2	1.2	2.1	10.4
More than $1B	6.7	3.0	11.3	1.4	3.1	1.1	1.5	1.9	3.4	11.3
All plans	9.5	3.4	9.7	2.3	3.2	1.3	1.1	1.1	1.6	8.0

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

[2] Other includes commodity funds, real estate funds, and individual stocks (including company stock) and bonds, but each separate option is counted as a unique investment option.

Note: The sample is 56,504 plans with $4.3 trillion in assets. Participant loans are excluded. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

Source: BrightScope Defined Contribution Plan Database

EXHIBIT A.7

Detailed Distribution of Mutual Fund Expense Ratios Paid by 401(k) Plan Participants

10th percentile, median, and 90th percentile asset-weighted mutual fund expense ratios as a percentage of plan assets among plans with audited 401(k) filings in the BrightScope database by mutual fund investment objective and plan assets, 2018

	Equity mutual funds			Balanced mutual funds			Bond mutual funds					
10th percentile	All	Domestic	International	All	Target date mutual funds*	Non–target date balanced mutual funds	All	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Less than $1M	0.05	0.04	0.17	0.13	0.13	0.13	0.10	0.10	0.17	0.11	0.12	0.05
$1M to $10M	0.04	0.04	0.16	0.13	0.13	0.13	0.07	0.07	0.17	0.11	0.12	0.04
>$10M to $50M	0.04	0.04	0.11	0.13	0.13	0.13	0.05	0.05	0.17	0.11	0.12	0.04
>$50M to $100M	0.04	0.04	0.10	0.13	0.12	0.13	0.04	0.04	0.13	0.10	0.12	0.04
>$100M to $250M	0.04	0.04	0.08	0.09	0.09	0.14	0.04	0.04	0.11	0.10	0.10	0.03
>$250M to $500M	0.04	0.03	0.08	0.09	0.09	0.17	0.04	0.04	0.11	0.09	0.10	0.03
>$500M to $1B	0.03	0.03	0.08	0.09	0.09	0.16	0.04	0.04	0.11	0.10	0.10	0.02
More than $1B	0.02	0.02	0.06	0.09	0.09	0.16	0.04	0.03	0.07	0.10	0.10	0.02
All plans	0.04	0.03	0.08	0.09	0.09	0.14	0.04	0.04	0.11	0.10	0.10	0.02

	Equity mutual funds			Balanced mutual funds			Bond mutual funds					
Median	All	Domestic	International	All	Target date mutual funds*	Non–target date balanced mutual funds	All	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Less than $1M	0.74	0.67	0.99	0.70	0.70	0.71	0.69	0.70	0.60	0.42	0.75	0.14
$1M to $10M	0.63	0.59	0.82	0.53	0.50	0.57	0.52	0.51	0.58	0.39	0.76	0.13
>$10M to $50M	0.57	0.54	0.70	0.47	0.47	0.52	0.45	0.45	0.58	0.35	0.75	0.10
>$50M to $100M	0.50	0.49	0.53	0.42	0.42	0.44	0.44	0.44	0.56	0.30	0.77	0.08
>$100M to $250M	0.49	0.48	0.53	0.39	0.39	0.28	0.42	0.42	0.56	0.18	0.77	0.07
>$250M to $500M	0.49	0.47	0.50	0.38	0.36	0.44	0.42	0.42	0.59	0.17	0.77	0.06
>$500M to $1B	0.44	0.32	0.49	0.39	0.40	0.28	0.39	0.39	0.59	0.11	0.75	0.04
More than $1B	0.32	0.31	0.49	0.36	0.40	0.17	0.42	0.37	0.59	0.11	0.18	0.04
All plans	0.49	0.36	0.49	0.40	0.40	0.28	0.42	0.42	0.59	0.12	0.69	0.05

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EXHIBIT A.7 CONTINUED

Detailed Distribution of Mutual Fund Expense Ratios Paid by 401(k) Plan Participants

10th percentile, median, and 90th percentile asset-weighted mutual fund expense ratios as a percentage of plan assets among plans with audited 401(k) filings in the BrightScope database by mutual fund investment objective and plan assets, 2018

	Equity mutual funds			Balanced mutual funds			Bond mutual funds					
90th percentile	All	Domestic	International	All	Target date mutual funds*	Non–target date balanced mutual funds	All	Domestic	International	Money market mutual funds	Other	Memo: index mutual funds
Less than $1M	1.41	1.38	1.54	1.31	1.27	1.37	1.25	1.24	1.64	0.99	1.46	0.37
$1M to $10M	1.16	1.15	1.28	1.01	1.00	1.08	0.99	0.99	1.01	0.76	1.35	0.19
>$10M to $50M	1.04	1.00	1.14	0.86	0.83	0.93	0.86	0.85	0.97	0.69	1.26	0.15
>$50M to $100M	0.93	0.90	1.04	0.73	0.72	0.78	0.73	0.72	0.94	0.42	1.24	0.15
>$100M to $250M	0.88	0.85	0.96	0.72	0.72	0.71	0.71	0.70	0.92	0.42	1.11	0.14
>$250M to $500M	0.87	0.85	0.95	0.72	0.72	0.64	0.66	0.63	0.96	0.42	1.04	0.14
>$500M to $1B	0.85	0.85	0.88	0.72	0.72	0.59	0.59	0.57	0.91	0.42	1.02	0.13
More than $1B	0.81	0.81	0.85	0.66	0.70	0.57	0.63	0.61	0.83	0.42	1.02	0.13
All plans	0.90	0.88	0.98	0.73	0.73	0.71	0.72	0.72	0.92	0.42	1.23	0.14

* 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.

Note: The sample is 45,540 plans with $1.7 trillion in mutual fund assets. BrightScope audited 401(k) filings generally include plans with 100 participants or more. Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis. See the box on page 53 for a description of the fee analysis.

Sources: BrightScope Defined Contribution Plan Database and Morningstar

EXHIBIT A.8

Sample Sizes

2018

	Plans *Number*	Participants *Millions*	Assets *Trillions of dollars*	Exhibits
US Department of Labor universe	586,622	71.3	5.1	I.2–I.5, A.3–A.5
Schedule H	62,003	60.3	4.5	1.1–1.5, 1.10–1.12, A.1–A.2
Employer contribution information	1,500	1.9	0.1	1.6–1.7
With simple match	759	1.1	0.1	1.8
BrightScope audited 401(k) filings[1]	56,504	57.4	4.3	I.3–I.5, 2.1–2.2, 2.4–2.6, 2.8–2.13, A.6
With vesting information	13,736	16.8	1.2	1.9
2006–2018 consistent plans, $1 million or more in assets	1,947	12.4	1.4	2.3, 2.7
Top 40 recordkeepers	39,256	45.7	3.3	3.1–3.2
With proprietary fund information	48,233	50.4	3.5	3.3
With total plan cost	54,808	56.4	4.2	4.1–4.2
B igh Sc● e a di ed ,! (k) ling i h m al f nd ·.	45,540	51.0	1.7	4.4–4.5, 4.7, A.7
2009–2018 consistent plans,[2] $1 million or more in assets	18,009	36.3	1.4	4.8–4.9

[1] Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

[2] Assets reported are assets held in mutual funds.

Sources: BrightScope Defined Contribution Plan Database, Investment Company Institute, and US Department of Labor 2018 Form 5500 Research File

Notes

[1] Though the Form 5500 is a joint form with the Pension Benefit Guaranty Corporation (PBGC) and Internal Revenue Service (IRS), the Department of Labor (DOL) gathers and processes the information from the regulatory reports. See US Department of Labor, Employee Benefits Security Administration, "Forms and Filing Instructions."

[2] The US Department of Labor Form 5500 Research Files are available at www.dol.gov/agencies/ebsa/researchers/data/private-pension-plan-data.

[3] The figures presented in Exhibit I.2 (and Exhibits I.3 and I.5) are slightly lower than the 401(k)-type plan figures published in US Department of Labor, Employee Benefits Security Administration 2021a because 403(b) plans that also reported 401(k) features have been excluded from this analysis.

[4] As used in this report, participants are workers eligible to participate in their employer's 401(k) plan, whether or not they have enrolled in the plan. Before 2005, DOL private pension plan bulletins reported a count of active 401(k) plan participants that had been adjusted from the number of active participants actually reported in the Form 5500 filings to exclude (1) individuals eligible to participate in a 401(k) plan who had not elected to have their employers make contributions; and (2) nonvested former employees who had not (at the time the Form 5500 filings were submitted) incurred the break in service period established by their plan (see US Department of Labor, Employee Benefits Security Administration 2012a for further detail). This change in methodology results in a dramatic increase in the number of individuals reported as active participants in 401(k) plans; in 2004, the number of active participants increased to 53.1 million (new method) from 44.4 million (old method; see US Department of Labor, Employee Benefits Security Administration 2021b). As the DOL notes: "In a purely economic sense, and for research purposes, individuals in these groups should not be included in the count of active participants." However, the form schedule needed to make the adjustment is no longer required.

[5] For more information on filing requirements, see US Department of Labor, Employee Benefits Security Administration 2012e.

[6] See US Department of Labor, Employee Benefits Security Administration 2021a.

[7] Plans with fewer than four investment options or more than 100 investment options are excluded from BrightScope audited 401(k) filings for this analysis.

[8] 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 2020 and was based on a dual-frame sample of 3,001 US households. Of these, 1,350 households were from a landline random digit dial (RDD) frame, and 1,651 households were from a cell phone RDD frame. Of the households contacted, 1,219 (40.6 percent) had 401(k) plans. 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 standard error for the 2020 sample of households is ±1.8 percentage points at the 95 percent confidence level. For the 2020 survey results, see Holden, Schrass, and Bogdan 2020. In addition, ICI conducts an annual survey to gather information about respondents' views on DC account saving and their confidence in 401(k) and other DC plan accounts. The most recent survey consists of answers to questions included in a national survey that NORC fielded using the AmeriSpeak® panel from November to December 2020, covering a total sample of 2,092 American adults. For the 2020 survey results, see Holden, Schrass, and Chism 2021.

[9] 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: a standard geographically based random sample and 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 US Federal Reserve Board 2020. For an overview of the 2016 SCF results, see Bricker et al. 2017. For a special panel analysis that resurveyed households from the 2007 SCF in 2009, see Bricker et al. 2011. For an overview of the 2010 SCF results, see Bricker et al. 2012. For an overview of the 2013 SCF results, see Bricker et al. 2014. For analysis of the impact of the financial market crisis and recession on household balance sheets, see Devlin-Foltz, Henriques, and Sabelhaus 2015. 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. 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.

[10] Deloitte Consulting LLP and ICI have conducted surveys of DC plan sponsors, focusing on fees paid to provide the plan. The most recent survey, conducted in 2013, found that DC plan "all-in" fees tended to be lower for larger plans and higher for plans with larger allocation to diversified equity holdings. For more information, see Deloitte Consulting LLP and Investment Company Institute 2014. Deloitte Consulting LLP conducts a biennial survey of DC plan sponsors. For results from the most recent survey, see Deloitte Consulting LLP 2019. Plan Sponsor Council of America also conducts an annual survey of profit sharing and 401(k) plans. For results covering plan year 2019, see Plan Sponsor Council of America 2020.

[11] See Holden, Duvall, and Chism 2021.

[12] ICI conducts a quarterly survey of DC plan recordkeepers, collecting information on changes in contributions and asset allocation, loans, and distributions. For results covering 2020, see Holden, Schrass, and Chism 2021. The Employee Benefit Research Institute (EBRI) and ICI keep a database of active 401(k) participants, including information on asset allocation, account balances, and loan activity. The EBRI/ICI 401(k) database has data on 401(k) participants from 1996 to 2018. The year-end 2018 database covered 14.6 million participants in 90,987 plans with $1.1 trillion in assets; see Holden, VanDerhei, and Bass 2021. For the most recent set of results, exploring consistent participants who were in the database every year between 2007 and 2018, see Holden et al. 2020.

[13] For information on employer contribution structures, see Exhibits 1.6 and 1.7 and the discussion on page 18.

[14] 401(k) plan participants may also have access to account assets through withdrawals. The Form 5500 filings do not have information on the plan design features surrounding withdrawal activity. There are two possible types of in-service withdrawals from DC plans: nonhardship and hardship. Generally, participants withdrawing after age 59½ are categorized as nonhardship withdrawals. A participant seeking a hardship withdrawal must demonstrate financial hardship and generally faces a 10 percent penalty on the taxable portion of the withdrawal. Prior to 2019, if a plan allowed loans, participants were generally required to take a loan before they were permitted to take a hardship withdrawal. For DC plan participants' withdrawal activity, see Holden, Schrass, and Chism 2021.

[15] The plan sponsor also generally selects the default investment option. Plan Sponsor Council of America 2020 reports the different default investment options selected among its member plans with automatic enrollment.

[16] For example, see Plan Sponsor Council of America 2020; Deloitte Consulting LLP 2019; and Holden, VanDerhei, and Bass 2021. The Vanguard Group also releases an annual report focusing on defined contribution plans in its recordkeeping system. For the most recent report, focusing on 2020 plan data, see Alling and Clark 2021.

[17] The Form 5500 is an annual disclosure submitted to the DOL by ERISA-covered employer-sponsored retirement plans, including 401(k) plans. The filings include information on plan assets, covered employees, contributions, withdrawals, loans, and automatic enrollment. For tabulations from the most recent release of Form 5500 data, see US Department of Labor, Employee Benefits Security Administration 2021a.

[18] For data covering plan year 2017, see BrightScope and Investment Company Institute 2020.

[19] A plan was determined to have automatic enrollment if it was specified on the 2018 Form 5500; this may undercount the number of plans with automatic enrollment. At year-end 2020, 54 percent of plans in Vanguard's recordkeeping system had an automatic enrollment feature (see Alling and Clark 2021). Deloitte Consulting LLP 2019 reports that 69 percent of plans in its survey automatically enrolled workers. Plan Sponsor Council of America 2020 reports that 60.2 percent of plans in its survey automatically enrolled workers. The lower incidence of automatic enrollment in the Form 5500 data partly results from the higher share of small plans (which have lower adoption of automatic enrollment) in the DOL data, but even among larger plans, the DOL data report lower incidence compared to these other data sources.

[20] In 2020, 96 percent of DC plans in Vanguard's recordkeeping system had employer contributions (see Alling and Clark 2021). Deloitte Consulting LLP 2019 reports that 92 percent of plans in its survey offered employer contributions. Plan Sponsor Council of America 2020 reports that 95.1 percent of plans in its survey offered employer contributions in 2019.

[21] Exhibit A.3 in the appendix presents the analysis for the full universe of 401(k) plans and finds similar results.

[22] Plans with employer matches but missing descriptions of the employer match may be included in this category.

[23] Plans may also allow withdrawals (see note 14).

[24] Participant loans generally must be paid back within five years; however, loans for the purchase of a principal residence may qualify for a longer repayment period. Participants who separate from employment with an outstanding loan generally must repay the loan shortly after separation. Otherwise, the outstanding balance is deemed distributed and potentially subject to taxation and penalties. For more information, see US Department of the Treasury, Internal Revenue Service 2015.

[25] Although the Form 5500 data do not allow quantification of the amount of loans defaulted in any given year, in plan year 2018, outstanding participant loans made up only 1.4 percent ($72.0 billion) of the $5.2 trillion in 401(k) plan assets. See Table D6 in US Department of Labor, Employee Benefits Security Administration 2021a. Additionally, Lu et al. 2015 estimates that $6 billion on average annually flows out of 401(k) plans as a result of loan defaults, which is small compared with the asset base and other distribution activity at job change or retirement.

[26] Research on the impact of the availability of a loan feature on 401(k) plan participation and contributions has found either positive effects or no discernible impact, depending on the study. For example, Beshears et al. 2010 finds that adding a loan option increases 401(k) plan participation but does not find a conclusive impact on contributions. Mitchell, Utkus, and Yang 2007 finds no impact of loans on participation rates but concludes that the loan option increases the contribution rate by 10 percent among non–highly paid participants. Regression analysis in US Government Accountability Office 1997 finds that, controlling for firm size, the employer match rate, and the presence of another pension plan, a loan provision was associated with a participation rate that was about 6 percentage points higher and a 36.8 percent higher average employee deferral rate. Holden and VanDerhei 2001 and Munnell, Sundén, and Taylor 2000 find that the presence of a loan provision increases 401(k) participant contribution rates.

[27] Plans are classified as having a loan provision if any participant in the plan has an outstanding loan balance. This may understate the number of plans offering loans because some plans may have offered a loan option, but no participant had taken out a loan. It is likely that this omission is small, as US Government Accountability Office 1997 found that more than 95 percent of 401(k) plans that offer loans had at least one plan participant with an outstanding loan.

[28] Holden, VanDerhei, and Bass 2021 finds that 53 percent of 401(k) plans had a loan provision, and 88 percent of participants were in plans offering loans at year-end 2018. Alling, Clark, and Stinnett 2020 finds that "in 2020, 79 [percent] of Vanguard DC plans permitted participants to borrow from their plan, and 88 [percent] of active participants had access to a loan feature." Plan Sponsor Council of America 2020 reports that 82.6 percent of 401(k) plans in their survey allowed loans in 2019.

[29] US Department of Labor, Employee Benefits Security Administration 2021a reports $72.0 billion of participant loan balances outstanding from 401(k) plans in plan year 2018, which is 1.4 percent of the $5.2 trillion in 401(k) plan assets.

[30] For example, see Holden, Schrass, and Chism 2021 and Holden, VanDerhei, and Bass 2021.

[31] See Holden, Duvall, and Chism 2021 for a discussion of the services and expenses associated with offering 401(k) plans.

[32] Data for 2008 were not provided to BrightScope; therefore, consistent plans are those in the database in 2006, 2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, and 2018.

[33] In cross sections of all 401(k) plans in the BrightScope Defined Contribution Plan Database, the average number of investment options offered rose from 21 in 2006 to 28 in 2018. Adjusted to count target date fund suites as one investment option, the average number of investment options for all plans rose from 20 to 21 over the same period. This represents the net change in the number of investment options offered and does not represent all changes to fund lineups.

[34] Plans may offer multiple target date fund suites; however, the vast majority of plans that offered a target date fund suite offered one. In 2018, 94 percent of 401(k) plans in the BrightScope database that offered a target date fund suite offered one suite, while 5 percent offered two suites, and 1 percent offered more than two suites.

[35] Other investments include company stock, which cannot consistently be identified in the BrightScope database. Research from the EBRI/ICI 401(k) database finds that at year-end 2018, company stock was 4.5 percent of 401(k) plan assets. See Holden, VanDerhei, and Bass 2021. Tabulations of US Department of Labor 2018 Form 5500 Research File data show that employer securities (including company stock) were held in 1.6 percent of 401(k) plans with fewer than 100 participants, compared with 20.1 percent of plans with 5,000 participants or more.

[36] Other investments include company stock, which cannot consistently be identified in the BrightScope database. The EBRI/ICI 401(k) database finds that at year-end 2018, company stock was 4.5 percent of 401(k) plan assets. See Holden, VanDerhei, and Bass 2021. Tabulations of US Department of Labor 2018 Form 5500 Research File data show that employer securities (including company stock) rose from 0.8 percent of plan assets for 401(k) plans with fewer than 100 participants to 5.0 percent of assets for plans with 5,000 participants or more.

[37] Participants in 91 percent of 401(k) plans direct all of their 401(k) investments. See Table D5(b) in US Department of Labor, Employee Benefits Security Administration 2021a.

[38] Asset allocation in the BrightScope Defined Contribution Plan Database is broadly similar to the EBRI/ICI 401(k) database. At year-end 2018, the EBRI/ICI 401(k) database shows that equity funds held 39.0 percent of assets, balanced funds held 31.2 percent; bond funds held 8.1 percent; money funds held 2.4 percent; GICs and other stable value funds held 6.3 percent; and company stock, other, and unknown assets accounted for the remaining 13.1 percent of assets. See Holden, VanDerhei, and Bass 2021.

[39] See notes 35 and 36.

[40] Investment Company Institute 2021b reports target date mutual fund assets from 1996 through the year-end 2020. Target date mutual fund assets have grown from $1 billion at year-end 1996 to $114 billion at year-end 2006 to $1,587 billion at year-end 2020. At year-end 2020, DC plans held 67 percent of target date mutual fund assets, individual retirement accounts (IRAs) held 18 percent, and other investors held 15 percent.

[41] The EBRI/ICI 401(k) database reports 79 percent of 401(k) plans in 2018 offered target date funds, compared with 57 percent in 2006. See Holden, VanDerhei, and Bass 2021 and Investment Company Institute 2021a.

[42] Similarly, research from the EBRI/ICI 401(k) database finds that target date fund assets accounted for 27 percent of total assets at year-end 2018, compared with 5 percent at year-end 2006. See Holden, VanDerhei, and Bass 2021 and Investment Company Institute 2021a.

[43] Investment Company Institute 2021b reports index mutual fund assets from 1996 through year-end 2020. Index mutual fund assets have grown from $98 billion at year-end 1996 to $747 billion at year-end 2006 and to $4,807 billion at year-end 2020.

[44] Because recordkeepers can be engaged in one or more of these business categories, they were classified according to their primary business line.

[45] The top 40 recordkeepers among BrightScope 401(k) plans were classified according to their primary business, and only plans recordkept by those recordkeepers are included in this analysis.

[46] The 2013 Deloitte/ICI 401(k) Fee Study found that investment fees accounted for 82 percent of total fees (on a participant-weighted basis). See Deloitte Consulting LLP and Investment Company Institute 2014.

[47] See Duvall 2021 and chapter 6 in Investment Company Institute 2021a.

[48] See Holden, Duvall, and Chism 2021.

[49] For industrywide mutual fund fee data for 2020, see Duvall 2021.

[50] Funds for which fee data were not available have been excluded. In addition, the 2018 audited Form 5500 reports contain share class data for more than 80 percent of mutual funds in the BrightScope database. For the remainder, if a plan's investment in a fund was less than $1 million in assets, it was assumed that the plan was invested in retail-type shares (A shares or their equivalents), while a plan's investment of $1 million or more in a fund was assumed to be invested in institutional-type shares (institutional shares or their equivalents). The impact of this assumption was tested by assigning to each fund the simple average expense ratio of all of its share classes. This tends to increase the average expense ratios presented but does not significantly alter the remaining analysis (whether the comparison is across asset categories or across number of plan participants).

[51] At year-end 2018, 67 percent of index mutual fund assets were invested in domestic equity indexes, 13 percent were in world equity indexes, and the remaining 19 percent were in bond and hybrid indexes. See Investment Company Institute 2021a.

[52] The patterns of 401(k) expenses are similar to industrywide mutual fund expense patterns. See Duvall 2021; chapter 6 in Investment Company Institute 2021a; and Holden, Duvall, and Chism 2021.

[53] See Holden, Duvall, and Chism 2021.

[54] For more information about the services offered in 401(k) plans and fees charged for these services, see Holden, Duvall, and Chism 2021 and Deloitte Consulting LLP and Investment Company Institute 2014.

[55] For a discussion of the range of services offered in S&P 500 index funds, see Collins 2005.

Glossary

automatic enrollment

The practice of enrolling eligible employees in a plan and initiating participant deferrals unless the employee opts out. automatic increase A provision found in some defined contribution plans in which an employee's contribution rate is automatically increased at a preestablished point in time, unless the employee chooses otherwise.

defined contribution (DC) plan

An employer-sponsored retirement plan, such as a 401(k) plan or a 403(b) plan, in which contributions are made to individual participant accounts. Depending on the type of DC plan, contributions may be made by the employee, the employer, or both. The employee's benefits at retirement or termination of employment are based on the employee and employer contributions and earnings and losses on those contributions. See also 401(k) plan and 403(b) plan.

eligible plan participant

Any employee who is eligible to participate in and receive benefits from a plan.

employer contribution

A contribution made by the company to the account of the participant (often in the form of a company match based on a ratio to contributions made by the participant).

ERISA

The Employee Retirement Income Security Act of 1974 is a federal law governing private-sector employee benefit plans.

expense ratio

A measure of what it costs to operate a fund—disclosed in the prospectus and shareholder reports—expressed as a percentage of its assets.

fixed annuity

An investment contract sold by an insurance company. Capital is accumulated at a specified rate of interest with the option to convert to an income stream in retirement.

Form 5500

An annual disclosure submitted to the US Department of Labor by ERISA-covered employer-sponsored retirement plans, including 401(k) and certain 403(b) plans.

Form 5500 audited filing

An independently audited report generally required by federal law for ERISA-covered employer-sponsored retirement plans with 100 participants or more.

401(k) plan

An employer-sponsored retirement plan that enables employees to make tax-deferred contributions from their salaries to the plan. See also defined contribution (DC) plan.

403(b) plan

An employer-sponsored retirement plan that enables employees of universities, public schools, and nonprofit organizations to make tax-deferred contributions from their salaries to the plan. See also defined contribution (DC) plan.

fund

A pooled investment product. Funds include mutual funds, collective investment trusts, separate accounts, and other pooled investment products.

index fund

A fund designed to track the performance of a market index. The fund's portfolio of securities is either a replicate or a representative sample of the designated market index. Often referred to as passively managed portfolios.

mutual fund

An investment company registered with the Securities and Exchange Commission that buys a portfolio of securities selected by a professional investment adviser to meet a specified financial goal (investment objective). Mutual funds can have actively managed portfolios, in which a professional investment adviser creates a unique mix of investments to meet a particular investment objective, or passively managed portfolios, in which the adviser seeks to track the performance of a selected benchmark or index. One hallmark of mutual funds is that they issue redeemable securities, meaning that the fund stands ready to buy back its shares at their current net asset value (NAV).

plan assets

The total assets held among all participants within the plan.

recordkeeper

A recordkeeper maintains plan records; processes employee enrollment; processes participants' investment elections, contributions, and distributions; and issues account statements to participants.

target date fund

A balanced fund that follows a predetermined reallocation of risk over a working career and into retirement for a person expecting to retire at the target date of the fund (which is usually included in the fund's name). These funds invest in a mix of asset classes and typically rebalance their portfolios over time to become less focused on growth and more focused on income as the fund approaches and passes the target date. Also known as a lifecycle fund.

total plan cost

BrightScope's measure of the total cost of operating a DC plan, which includes asset-based investment management fees, asset-based administrative and advice fees, and other fees (including insurance charges) from the Form 5500 and audited financial statements of ERISA-covered DC plans.

variable annuity

An investment contract sold by an insurance company. Capital is accumulated, often through mutual fund investments, with the option to convert to an income stream in retirement.

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