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The Impact of the Default Investment Decision on Participant Deferral Rates:

Managed Accounts vs Target-Date Funds

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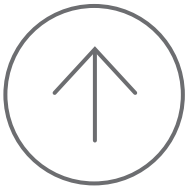
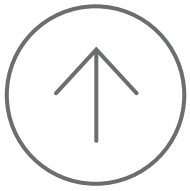




September 2, 2016

The Challenge

Target-date funds have been a boon to plan sponsors because they can be simple, relatively cost-effective options to help employees save for retirement. Once a target-date series has been selected, it's easy for the employee to get invested in an appropriate fund without worrying about complex investment decisions.

Key Findings

Managed accounts participants save more compared to target-date fund investors.

- The median defined contribution plan participant defaulted into a managed account saves 2% of salary more, on average, than the median participant defaulted into a target-date fund, at 6% and 4%, respectively.
- At the median plan level, defaulted managed accounts participants saved 1% of salary more than those defaulted in target-date funds, at 6% and 5%, respectively.
- Much of the difference can be explained by different attributes of participants in plans that utilize managed accounts as the default (vs TDFs). Plans with managed accounts as the default tend to have older participants with higher levels of plan tenure and higher salaries, and each of these attributes are associated with higher savings levels.
- However, after controlling for these variables and other important plan characteristics, individuals defaulted into managed accounts still tend to save about 0.5% more for retirement, although the level differs by model (i.e., regression) ranging from 0.3% to 1.9%.

Participant deferral rates are generally lower for plans with automatic enrollment (versus voluntary enrollment) unless the default deferral rate is at least 6%.

- A plan with a 3% default enrollment rate will have deferral rates that are approximately 1.6 percentage points lower than if the plan offered voluntary enrollment.
- While automatic enrollment may increase overall plan participation, it will likely result in lower savings rates among participants in the plan unless the default savings rate is set at 6% or above.
- Managed accounts participants exhibit a much wider dispersion of equity allocations, especially near retirement, showing the greater customization capability of managed accounts.

The potential benefits of increased savings likely outweigh the costs of managed accounts for many participants.

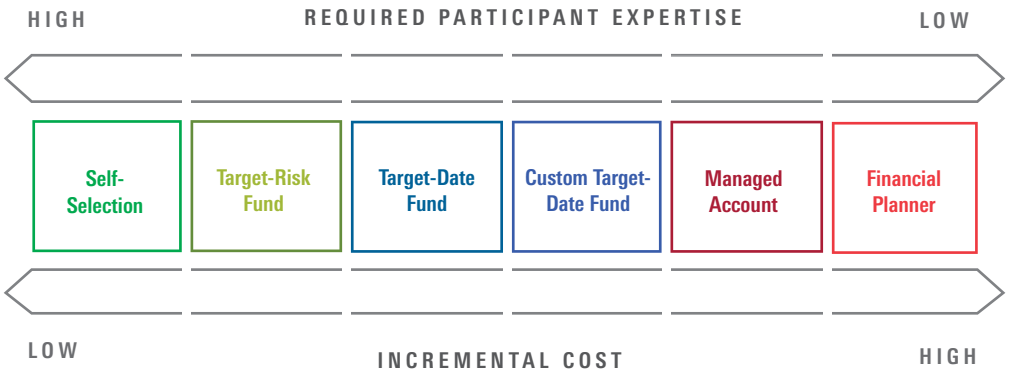
- For the "average" participant, who is assumed to be 45 years old, does not rollover a previous 401(k) balance, and stays in the plan for five years, the annual fee required to equalize the balances after five years would 2.4%.
- That fee-hurdle level is significantly higher than the fees charged by the majority of managed accounts providers, which tend to be less than 0.5%.

The Advice Continuum

Target-date funds and managed accounts are two key options on the retirement advice continuum, a spectrum of the primary defined contribution retirement plan advice solutions differentiated by expertise required by the participant and cost. The advice continuum is displayed in Figure 1.

On the right side of the spectrum—the high-cost/low-expertise-required side—we find the financial planner. In the absence of costs or minimum asset requirements, participants would arguably be best served meeting regularly with an independent, accredited financial planner. At the other end of the retirement advice continuum is the do-it-yourself investor: someone who self-selects from the available investment options or, in some cases, uses a brokerage window. Self-selection delivers the worst retirement outcomes for the typical participant and requires the highest participant expertise, but generally has the lowest incremental cost (from a fee perspective).

Figure 1: The Advice Continuum



Target-date funds, or TDFs, are the most common default investment vehicle today, with approximately 75% of defined contribution plans using TDFs as the qualified default investment alternative, or QDIA. TDFs are projected to continue to capture significant assets in the future; for example, Cerulli Associates (2014) forecasted that target-date funds will capture 88% of new contributions and represent 35% of total DC assets by the end of 2019.

Customized advice is becoming increasingly available in DC plans, although these offerings are not generally being used as the default (e.g., Callan (2015) notes that among plans offering managed accounts, only 3.4% of them used it as the default investment). According to the PLANSPONSOR 2014 DC Plan Benchmarking Survey, 70.4% of plans offered some type of advice at the time, with 35.6% of plans offering managed accounts. Callan added that the majority of DC plan sponsors (79.1%) offered some form of investment guidance, where online advice (which includes managed accounts) was the most prevalent, with onsite seminars second. We expect this trend of making advice available to accelerate.

DC plan sponsors evaluating managed accounts and TDFs often focus on investment performance, trying to determine which product has had a higher return. Return is only one way to compare the products, though, because the portfolios can often differ significantly based on the unique situation of each participant. Also, for many participants, improving returns is not going to be nearly as meaningful as improving savings rates in terms of driving retirement readiness.

Comparing Target-Date Funds and Managed Accounts

Target-date funds and managed accounts aim for the same goal: investing on behalf of the uninvolved retirement saver. However, as previously discussed, trade-offs made in moving along the Advice Continuum can affect not just the investment portfolio but retirement readiness, the participant's confidence and comfort in spending down saved assets. Here we review some of those trade-offs.

TDF | Advantages

1. Simplicity: Generally prepackaged solutions that are relatively easy to implement with significant public information available.
2. "Everyone Else is Doing It": DC plan sponsors are generally risk-averse, especially when it comes to career risk. Use of off-the-shelf TDFs by such a large number of plan sponsors creates a perception of risk mitigation.
3. Cost: Many low-cost TDF options exist. In most instances there is no additional cost with the off-the-shelf TDF apart from the underlying fund expenses (e.g., Fidelity doesn't charge extra to bundle its funds into a TDF series).
4. Custom TDFs: Custom TDFs incorporate plan- and industry-specific attributes into a glide path. Additionally, custom target-date products often utilize the core menu.

TDF | Disadvantages

1. Lack of Understanding/Misuse: Participants rarely fully understand how off-the-shelf TDFs work because they often appear as a "black box" and, therefore, often improperly use the TDFs by combining them with other investments in the core menu.
2. Benchmarking: Finding an appropriate performance benchmark for TDFs is considerably more complex than it is for single-strategy investment vehicles (e.g., a small-cap value equity fund) given the unique differences in TDFs at the glide path, asset class, and manager allocation levels.
3. Single-Fund Family Investments: Most off-the-shelf TDFs are built using proprietary mutual funds as the underlying investment options. It's hard to believe that any manager has the best offerings in every asset class.
4. One Size Fits All: TDFs do not allow for different asset allocations for participants other than at different ages. With only basic data available to any recordkeeper, there can be significant differences in the optimal equity allocations across participants.

Managed Accounts | Advantages

1. Helps Solve the Complete Retirement Picture: Managed accounts have the ability to consider a unique retirement goal for each participant. Once a goal is determined, a managed-accounts strategy can develop a personalized retirement strategy that includes a tax-efficient deferral rate recommendation, a retirement age recommendation, and an ongoing asset allocation—all designed to help achieve that retirement goal.
2. Greater Level of Personalization: The ability to customize a portfolio to each participant and provide holistic advice are perhaps the most important benefits of managed accounts.
3. Retirement Income Modeling: The ability to help participants accumulate and spend assets in a tax-efficient manner can benefit many participants.
4. Using Core Investment Options: Using the funds within the plan's existing core menu has many advantages for the plan sponsor, including leveraging the work of the consultant and/or investment committee and possible reductions in fund pricing. Further, when a core menu includes both active and passive options, a managed account program can provide a thoughtful mix of the two, far beyond what most target-date funds offer. Additionally, managed accounts programs have the ability to work off a noncore investment menu, granting participants access to more specialized asset classes.

Managed Accounts | Disadvantages

1. Cost: Because more is provided in a managed accounts service, generally providers command fees higher than those for TDFs, although the cost varies significantly by provider. Some providers include the cost in the base recordkeeping fee, while others charge 70 basis points or more of assets managed by the service (although 50 bps or less is more common).
2. Due Diligence: Evaluation of managed accounts can be difficult for a number of reasons, such as understanding the technology integration, methodology for portfolio assignment, the asset allocation, etc.
3. Performance Reporting: Unlike a TDF, which is a single set of portfolios, participants in managed accounts often have many different allocations, even if the participant has the same target equity allocation/portfolio. This obstacle may be overcome by providing performance on a standard set of models (e.g., those with a specific asset allocation).
4. Unknown Information: It can be hard to get managed account providers the data they need to build personalized portfolios for participants. Most information usually comes from the recordkeeper (e.g., age, salary, account balance, savings rate, gender, etc.). In these cases, information outside the plan (e.g., outside assets, marital status, etc.) is unknown unless the participant engages with the managed accounts provider, which historically few participants have done.
5. Benchmarking: There are relatively few managed accounts providers, with the largest ones controlling the vast majority of DC participants and assets. Each provider has a different approach toward portfolio assignment (i.e., determining the optimal participant equity allocation) and portfolio management. These differences reduce the meaningfulness of comparison.

Analysis

To determine the differences in savings rates from using managed accounts or target-date funds as the default, we analyzed data from a recordkeeper (Charles Schwab) for 195 plans covering 66,297 participants. We looked only at participants who were defaulted into the respective investment option, either managed accounts or a target-date fund. Within the test group, 27.08% (17,950) of participants and 33.33% (65) plans used managed accounts as the default; the remaining participants and plans used TDFs. The managed accounts providers were either Morningstar Investment Management LLC, or GuidedChoice, Inc.

We used only participants for whom data on age, years of participation in the DC plan, salary, asset allocation, and default investment type (managed accounts or target-date fund) were all available. At the plan level, information on whether the plan offered automatic enrollment (and, if so, the default savings rate), progressive savings (and, if so, the progressive savings rate), annual re-enrollment, and maximum matching limit also needed to be available or the entire plan was excluded. Data on gender was also available for some participants, although it was not a required field (i.e., among the 66,297 participants, 21,395 were coded as male, 22,403 as female, and 22,499 as unknown). Table 1 shows median data by participant and plan, across all types or by default-type.

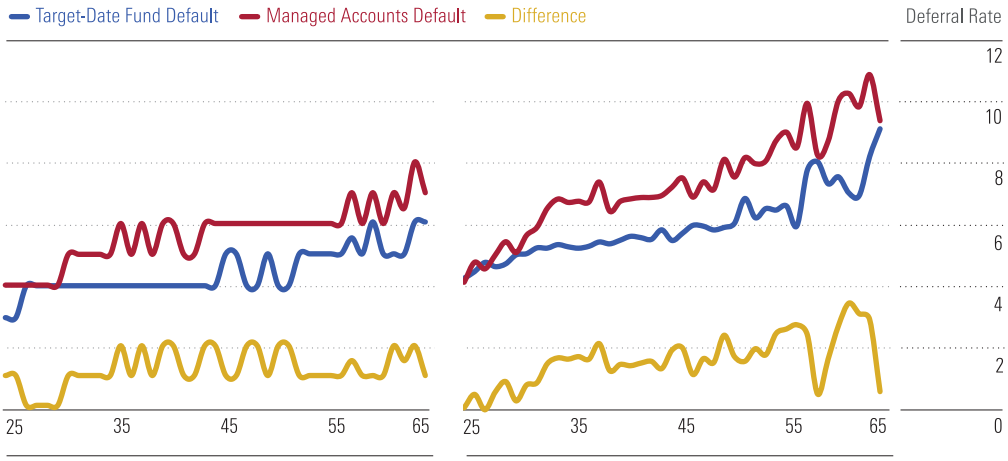
Table 1: Median Participant and Plan-Level Attributes by Default-Type

	Participant Medians			**Plan-Level Medians**		
Attribute	All Ppts	TDF Default	MA Default	All Plans	TDF Default	MA Default
Participant Deferral Rate (%)	4.0	4.0	6.0	5.0	5.0	6.0
Age (Years)	38.47	36.53	43.15	41.93	39.54	44.75
PlanTenure (Years)	2.69	2.33	4.20	3.50	2.79	6.91
Salary	$44,977	$41,585	$56,758	$55,853	$55,015	$59,592
PlanDefaultSavingsRate (%)	3	3	2	3	3	2
SavingsIncrease?	No	No	Yes	No	No	Yes
AnnualLookback?	No	No	No	No	No	No
Maximum Match Level (%)	6	6	6	5	5	4

The median participant (or median plan) deferred 6% (also 6%) in managed accounts versus 4% (5%) in a target-date fund. The median (Panel A) and average (Panel B) differences in savings rates by age are included in Figure 2.

Figure 2 illustrates that participants defaulted into managed accounts tend to save more than participants defaulted into TDFs, and that this difference increases by age. While the analysis in Figure 2 controls for age, there are other important variables that could be driving the differences in savings between the two default investment types. For example, plans with managed accounts as the default tend to have older participants with higher salaries and longer plan tenures, attributes which are generally positively correlated to higher savings rates. Therefore, to control for these other variables, we conducted an ordinary least squares (OLS) regression using equation 1.

Figure 2: Deferral Rates by Age



Panel A: Median Deferral Rates

Panel B: Average Deferral Rates

The dependent variable for the regression was the deferral rate, which was either the individual participant deferral rate, or the median or average deferral rate within a given plan, based on the model. The independent variables were age (Age), years of plan participation (PlanTenure), salary (Salary), and maximum level of employer match (MaxMatch), which was top-coded at 15%. Dummy variables included whether or not the plan has automatic enrollment (AutoEnroll, where voluntary enrollment plans are the omitted variable), whether or not the plan has progressive savings (IncSavings, where not offering progressive savings is the omitted variable), whether or not the plan does an annual re-enrollment (Reenroll, where not offering annual re-enrollment is the omitted variable), gender (either male (Male) or female (Female), where participants of unknown gender are the omitted variable), and whether or not the default is managed accounts or a target-date fund (ManagedAccts, where TDFs is the omitted variable).

$$Def\,\% = \alpha + \beta_1 Age + \beta_2 PlanTenure + \beta_3 ln(Salary) + \beta_4 AutoEnroll + \beta_5 DefaultSav + \beta_6 IncSavings + \beta_7 Reenroll + \beta_8 Male + \beta_9 Female + \beta_{10} MaxMatch + \beta_{11} ManagedAccts + \varepsilon_s$$

We performed seven regressions. Model 1 used a multivariate OLS regression, where the actual participant deferral rate was the dependent variable and the actual participant and/or plan demographics were the independent variables. Model 2 used a weighted multivariate OLS regression, where the median plan deferral rate was the dependent variable and the median plan attributes were the independent variables; the plan variables were weighted based on the number of participants in the plan. Model 3 used a multivariate OLS regression on all plans, where the median plan deferral rate was the dependent variable and the median plan attributes were the independent variables. Model 4 used a multivariate OLS regression on only plans with at least 30 participants, where the median plan deferral rate was the dependent variable and the median plan attributes were the independent variables. Model 5 used a weighted multivariate OLS regression, where the average plan deferral rate was the dependent variable and the average plan attributes

were the independent variables; the plan variables were weighted based on the number of participants in the plan. Model 6 used a multivariate OLS regression on all plans, where the average plan deferral rate was the dependent variable and the average plan attributes were the independent variables. Model 7 used a multivariate OLS regression on only plans with at least 30 participants, where the average plan deferral rate was the dependent variable and the average plan attributes were the independent variables.

While seven models may seem excessive, they have varying levels of usefulness. For example, a benefit of model 1 is that it includes each participant; however, it overweights plans with more participants. Model 4 is also instructive since it is the median value within a given plan and includes only those plans with at least 30 participants. The results of the regressions are included in Table 2.

Table 2: OLS Regression Results

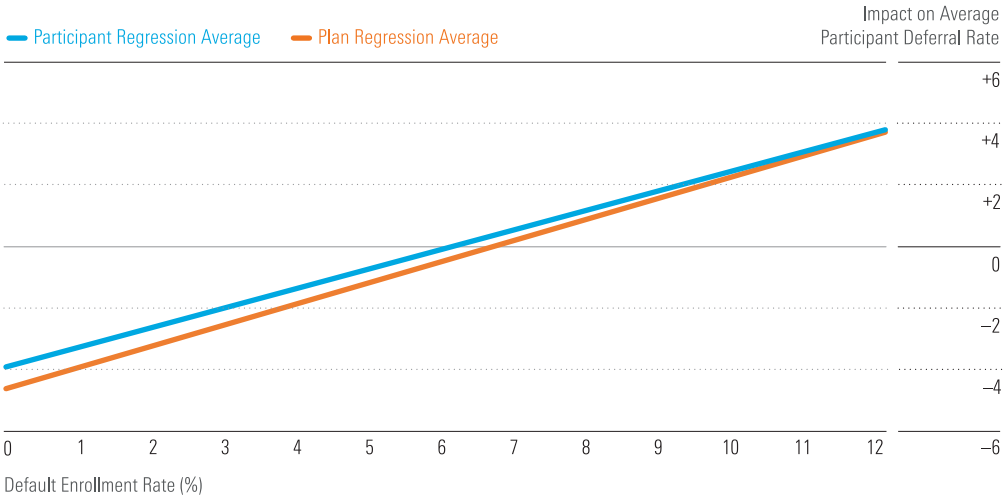
	Model Number						
	1	2	3	4	5	6	7
Intercept	-5.029***	-4.991**	-2.179	-3.349	-6.987***	-6.428	-6.074**
Age	0.059***	0.017	0.013	0.020	0.017	0.037	0.051
PlanTenure	0.104***	-0.035	-0.083	-0.012	-0.066	-0.136*	-0.066
ln (Salary)	0.776***	0.966***	0.725***	0.776***	1.186***	1.123***	0.993***
AutomaticEnrollment	-3.580***	-4.020***	-4.837***	-4.630***	-3.856***	-4.973***	-4.304***
PlanDefaultSavingsRate	0.645***	0.633***	0.690***	0.711***	0.653***	0.730***	0.673***
SavingsIncrease	1.947***	1.965***	1.205***	1.468***	1.995***	1.239**	1.102***
AnnualLookback	1.230***	1.676***	1.014**	1.569***	1.293***	0.862	1.318***
Male	0.139**	-0.649***	0.000	-0.309	0.061	0.416	0.025
Female	-0.235***	-0.752**	-0.350	-0.838**	-0.030	-0.082	-0.094
MaxMatchLevel	0.031***	-0.019	0.080*	0.061	0.028	0.082	0.105**
Managed Accounts	0.304***	0.355	1.120**	0.655*	0.697*	1.893***	1.110**
R Square	9.88%	68.30%	43.90%	59.03%	66.80%	38.30%	51.68%
Adjusted R Square	9.86%	66.39%	40.53%	55.48%	64.80%	34.59%	47.49%
Observations	66,297	195	195	139	195	195	139

*** p < 1%, ** p < 5%, * p < 10%

After controlling for the varying participant- and plan-level attributes, the benefit of managed accounts (over TDFs) from a deferral perspective changes significantly; that is, it generally decreases but participants defaulted into managed accounts still tend to save more on average (note the positive coefficient for the managed accounts dummy variable). However, this benefit is not always statistically significant. The savings rates increases range from 30 basis points to 189 bps, depending on the model.

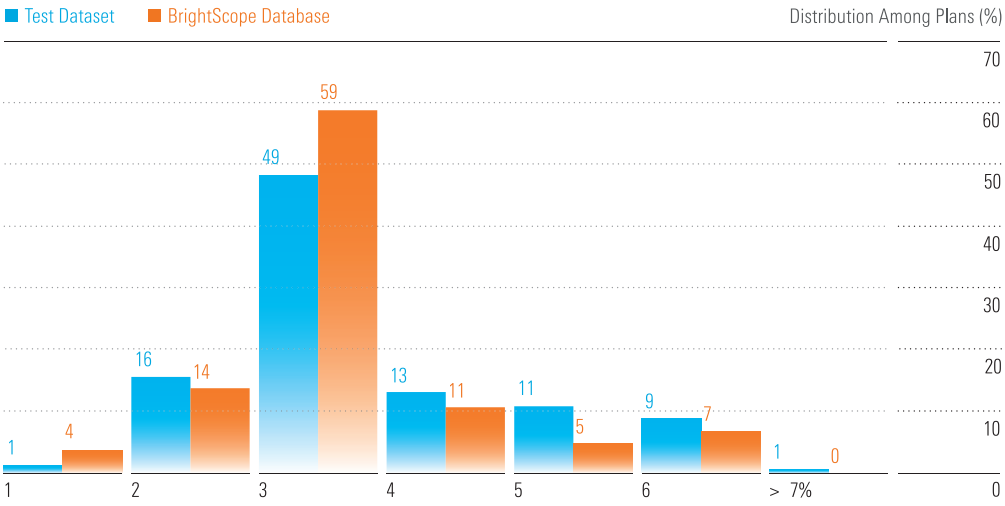
Another notable takeaway from Table 2 is the importance of selecting the optimal default savings rate if automatic enrollment is available for the plan. The relative impact on participant savings for different automatic enrollment rates versus using a voluntary election scheme is shown in Figure 3.

Figure 3: Impact on Deferral Rates Versus No Auto-Enrollment



An average participant, to have the same deferral rate in a plan with automatic enrollment versus voluntary enrollment, would require the default automatic enrollment rate to be approximately 6% (i.e., where the impact becomes positive in Figure 3). This is concerning given the prevalence of lower default enrollment rates (e.g., 3%) that are often selected by plan sponsors. The distribution of automatic enrollment rates across a large number DC plans, as well as the test dataset, is included in Figure 4 to provide some perspective.

Figure 4: Distribution of Automatic Enrollment Rates Across 401(k) Plans

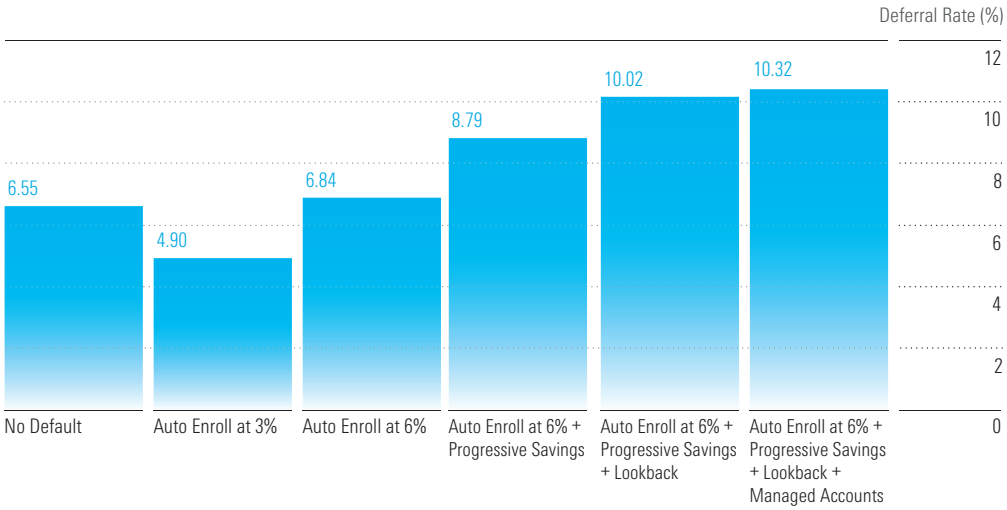


An automatic enrollment rate of 3% is by far the most popular default enrollment rate today. Less than 10% of plans have default enrollment rates that are 6% or higher. In recent years, many plan sponsors have begun supplementing a lower default rate with auto savings escalation, which

ensures that each participant's deferral rate increases automatically every year, unless a participant elects out of the automatic savings program. Automatic escalation is highly effective and beneficial for participants who remain employed at the firm, and active within the plan. However, the median tenure of employees is typically less than five years (especially for younger workers), based on data from the Bureau of Labor Statistics. This means that for many employees, as they regularly seek new employment, joining and rejoining DC plans, they will enter each new plan with a low initial savings rate and not stay active in the plan long enough to increase their savings rate sufficiently. We believe that a low default savings rate, even when coupled with automatic savings escalation, is not enough to help ensure participants are on track to meet their retirement goals. Therefore, it is essential that the default savings rate be 6% or greater.

While discussing savings, it is important to look at the various plan design decisions that sponsors can make to encourage increased participant savings rates. Figure 5 displays how average deferral rates change with respect to plan design features such as default enrollment, progressive savings, lookbacks, and managed accounts.

Figure 5: Impact of Various Plan Default Schemes Based on Regression

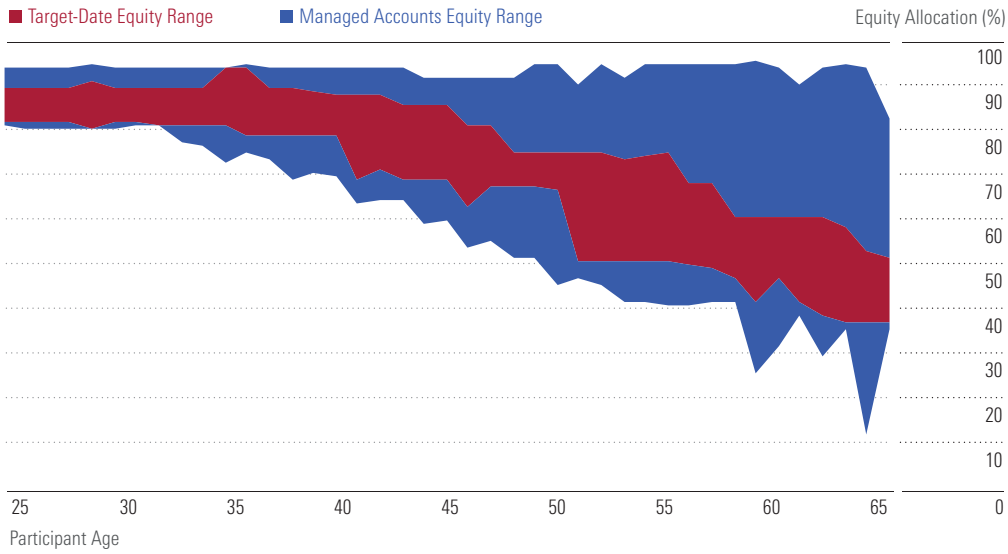


As one would expect, when no automatic enrollment rate is set, participation declines—but the participants that choose to participate in the plan do so with a higher deferral rate, hence the base deferral rate of 6.55%. Including automatic enrollment, but at 3%, has a negative overall impact on savings rates, and the average deferral rate declines from 6.55% to 4.90%. As other features are added, such as automatic enrollment, progressive savings, annual lookback, and managed accounts, deferral rates continue to increase. Also, while potentially selecting managed accounts as the default is important (we are using a relatively low estimate of a savings improvement of 0.3%) the other decisions made by plan sponsors (e.g., the automatic enrollment rate, the decision to include progressive savings or annual lookback) are much more likely to impact overall participant savings rates than the decision of whether to use TDFs or managed accounts as the default.

Equity Allocation Differences

An automated financial planning tool, such as managed accounts, can collect participant details such as age, compensation, savings rate, balance, and years of plan participation, from the recordkeeper, and use that information to deliver a personalized asset allocation recommendation. In contrast, a TDF uses the participant's age (or years to retirement) as the sole variable to determine the suitable asset allocation. Therefore, we would expect some differences in the equity recommendations between the two options. These differences are included in Figure 6, which includes the 95th percentile distribution of equity allocations for participants who are defaulted into TDFs versus managed accounts (in order words, 95% of participants defaulted in managed accounts or TDFs fall within this range).

Figure 6: Equity Distributions: TDFs Versus Managed Accounts



There are number of notable takeaways from Figure 6. First, the distribution in the equity allocation among managed account participants is wider than those for participants defaulted into TDFs. This is not all that surprising given the customization associated with a managed accounts recommendation. There is some variation among TDF-defaulted participants, but that's a function of different plans selecting different TDF providers (e.g., Vanguard versus Schwab). The range of equity allocations for participants defaulted into managed accounts tends to increase as the participant ages (i.e., approaches retirement). This is likely caused by a variety of factors, although the dispersion mirrors the dispersion in equity allocations among open-end mutual fund TDFs, which also tend to increase closer to retirement (i.e., the range in the equity allocations across TDF providers is wider for the 2015 funds versus the 2055 funds).

Impact of Managed Accounts Fees as an Offset to the Potential Savings Benefits

Next we looked at the cost hurdle managed accounts need to overcome for the savings improvements to be a net positive for participants. We analyzed the median deferral rate and salary data, assuming a fixed employer contribution of 3% of compensation. The employer contribution was assumed to be fixed and unaffected by participant savings levels. The analysis assumes monthly contributions and a real portfolio return of 4%. Figure 7 shows the deferral rate and salary data for reference.

Figure 7: Base Salary and Savings Assumptions for Fee Breakeven Analysis

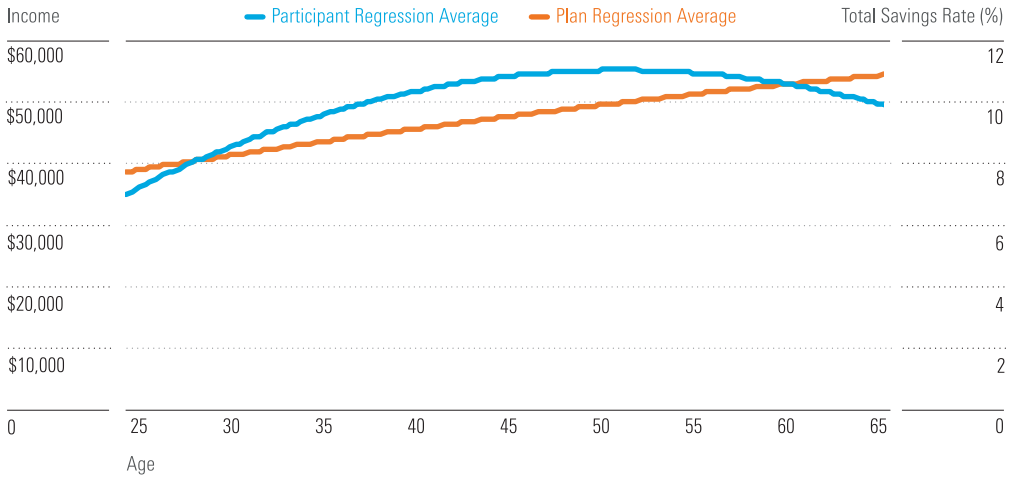


Table 3 may be used to determine, for a given level of savings, what the fee for the service would need to be to eliminate the savings benefit. There are three things varied for the analysis: the improvement in savings rate; the years the plan (i.e., until rollout); and the initial balance. The benefit equalization level for each scenario is determined via a Morningstar Wealth Solver routine.

Table 3: Fee Breakeven Required to Offset the Benefit of Higher Savings Rates

	No Rollover Balance					Rollover Balance = 1x Salary					Rollover Balance = 5x Salary					Rollover Balance = 10x Salary				
Change in Savings Rate	1 Year Plan	3 Years Plan	5 Years Plan	10 Years Plan	20 Years Plan	1 Year Plan	3 Years Plan	5 Years Plan	10 Years Plan	20 Years Plan	1 Year Plan	3 Years Plan	5 Years Plan	10 Years Plan	20 Years Plan	1 Year Plan	3 Years Plan	5 Years Plan	10 Years Plan	20 Years Plan
0.25%	6.7%	2.1%	1.2%	0.6%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.50%	>10%	4.1%	2.4%	1.1%	0.5%	0.5%	0.4%	0.4%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1.00%	>10%	8.1%	4.7%	2.2%	1.0%	1.0%	0.9%	0.8%	0.6%	0.4%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
1.50%	>10%	>10%	6.9%	3.3%	1.5%	1.4%	1.3%	1.2%	0.9%	0.6%	0.3%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
2.00%	>10%	>10%	9.1%	4.3%	1.9%	1.9%	1.7%	1.5%	1.2%	0.8%	0.4%	0.4%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%

Programs to improve participant savings rates in DC plans will be the most effective for participants with relatively small balances (i.e., new savers or those who do not rollover their previous DC monies into the new plan), according to Table 3. Since the fee for managed accounts is typically applied to the account balance, the effective cost of managed accounts for a participant with a small balance is going to be very low. The values in Table 3 suggest that for participants who do not roll money into a new plan, even an extremely small change in savings rates can more than offset the cost for managed accounts. However, as the initial (i.e., rollover) balance grows, the required level of savings needed to offset the potential fee for the service increases. For example, a participant with a rollover balance of five times salary would need to increase savings rates by over 2.0% to likely offset the cost of managed accounts.

It is worth noting, though, that the values in Table 3 apply only to savings rates. There may be other benefits associated with different services (like managed accounts) that also provide value in other ways (e.g., information on required savings rates to meet retirement goals).

Conclusions

Using a dataset of 66,297 participants from 195 defined contribution plans that offer either a target-date fund or managed accounts as the plan default investment, we find that participants defaulted in managed accounts tend save more than those defaulted in TDFs. We estimate that participants would save 0.5% more on average if defaulted into a managed account versus a target-date fund. That's based on our seven-model study in which savings rates for managed accounts versus target-date funds rose between 30 basis points and 189 basis points, depending on the model.

The increased savings benefits are likely to outweigh the costs of managed accounts, especially for participants with smaller account balances (since the managed accounts fee is typically based on the account balance). The "average" participant, who is assumed to be 45 years old, does not rollover a previous 401(k) balance, and stays in the plan for five years, would benefit from using a managed account as long as the fee were 2.4% of total assets or lower. In other words, the potential value of the higher deferral rate is worth an annual fee of approximately 2.4%, an amount that is significantly higher than the fees charged by the majority of managed accounts providers, which tend to be less than 0.5%.

We also note the fundamental importance of the automatic enrollment rate. Plans with default savings rates of less than 6% are likely to have lower average savings rates than plans with voluntary enrollment (although they have higher levels of participation). We find considerable differences in the dispersion of equity allocations for participants in TDFs versus managed accounts, with the dispersion being much greater in managed accounts, especially for older participants. This suggests managed accounts can meet the needs of more plan participants than the one-size-fits-all approach of target-date funds.

Overall, while many DC plan consultants and plan sponsors view the selection of target-date funds versus managed accounts as an investment decision, this research would suggest there are important savings considerations as well.

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