



Getting Beyond Ordinary— Managing Plan Costs in Automatic Programs

T. ROWE PRICE
Retirement | *Insights*

INTRODUCTION

Plan sponsors today are faced with unprecedented challenges in offering effective retirement plans. Achieving plan objectives in an environment of constrained budgets, talent competition, and increasingly complex fiduciary requirements can sometimes seem like a difficult balancing act.

However, with the right combination of plan design—employer contributions, eligibility, and vesting—and automated program features, retirement plan effectiveness can often be improved within reasonable budget levels.

In this white paper, we will build on the evolution of automatic program design and the compelling reasons to consider automated program implementation, as covered in our “Solving for Success: Advances in Automatic Savings Program Design” white paper. We will:

- Illustrate ways that costs can be managed when adopting automatic program features by altering plan design components
- Demonstrate how foundational plan design components and automatic programs can interact to drive success in achieving specific plan objectives
- Provide a decision-making guide for revisiting plan design elements and designing a plan to optimize success within the budget available

CREATING THE RIGHT BALANCE FOR A CUSTOM FIT

Effectively balancing costs with the right combination of design elements can result in a retirement plan that can achieve the unique objectives of the company, the plan, and the employees within a sound set of fiduciary standards.



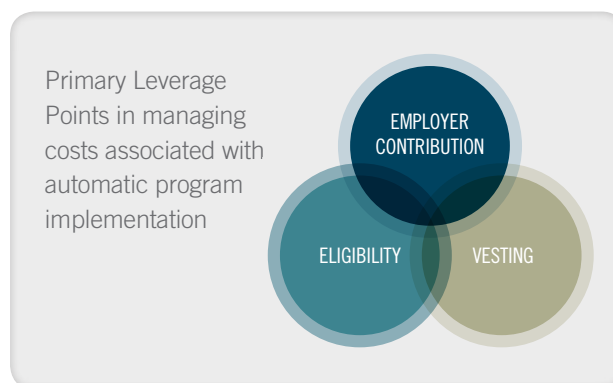
Many plan sponsors have turned to automatic program features to help employees achieve better retirement outcomes. However, others have been reluctant to fully embrace these features, perceiving that more comprehensive automatic programs will result in unacceptable cost increases. This perception can become reality if other plan design elements are not taken into account and adjusted to meet plan and company cost objectives. Yet it is clear that automatic programs can have a dramatic impact on retirement readiness. In fact, in a recent Employee Benefit Research Institute (EBRI) report, “44% of Baby Boomers and Gen Xers are projected to be ‘at risk’ of running short of money in retirement, which is five to eight percent lower than what was estimated in 2003.” EBRI attributes the better numbers to the increasing use of automatic enrollment. (EBRI, 2012)

It is important to note that changes to plan design can affect some employees, while fully implementing automatic programs will affect others. Understanding the specific impacts of any design change on each employee or group of employees is a critical component of the process of determining the “right” design for your organization. Creating a customized solution that is right for each company depends on the objectives of the plan, the right analytics to assist in making good decisions, and solid employee communications. The illustrations

and ideas presented in this paper cover a wide range of options and are meant to serve as a starting point for thinking about design components. Any specific idea presented may not be right for a given company and situation. With these caveats in mind, there are numerous ways that plan design can be structured to manage costs to the desired level generally by changing or adjusting three foundational components of the plan design:

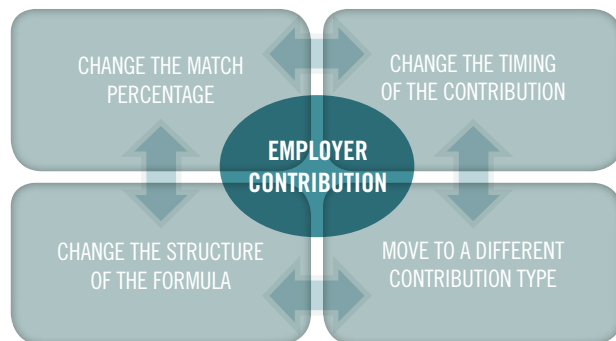
- Employer contributions
- Vesting
- Eligibility

Limits on design creativity can include regulatory requirements, corporate philosophies and constraints, and participant relations and demographics.



Employer Contributions

There is likely no component of design change more impactful in terms of managing direct plan costs than employer contributions. In automatic programs, using employer contributions as the primary incentive to encourage employees to enroll and increase savings becomes less important because the automation itself serves this role. A 2009 Harvard study concluded that participation rates under automatic enrollment decline only modestly when the employer match is eliminated or reduced. According to the report, 401(k) plans with automatic enrollment that offered no match at all, shifting from the typical employer match of 50% on the first 6% of deferrals, only reduced savings-plan participation by 5% to 11%. (John Beshears, James J. Choi, David Laibson, Brigitte C. Madrian, 2009) But, depending on each company's talent competition concerns and employee attitudes and demographics, there may need to be some incentive to encourage employees to remain in the plan and not to opt out of participation.



In looking at possibilities for modifying the employer contribution design, there are four potential types of changes:

1. Change the match percentage while leaving the basic structure intact by changing the match percent or changing the deferral percent eligible for a match
2. Change the structure of the matching formula by applying a different match to different groups of employees or by changing which deferrals are eligible for the match
3. Change the timing of when the contribution is made such as moving to an end of year contribution with a last day rule
4. Move to a different type of contribution such as a profit sharing or nonelective contribution

Each of these design points can be implemented independently, or some can be combined into a multi-formula design. There are numerous choices, all of which have different levels of costs and different impacts to different participant groups. Choosing the right contribution design will depend on the objectives, the existing design, the desired impact to target employee groups, and the desired budget. It is important to consider that certain types of changes may eliminate safe harbor protections, requiring new analytics as to how new contribution designs may impact discrimination testing.

Vesting

While not as impactful as employer contribution design on controlling costs, implementing the right vesting schedule for each type of employer contribution can ensure that those employees who remain with the company receive the greatest benefits. However, there are limits when changing vesting within a plan. There are certain rules regarding protected benefits, and vested balances can never be taken away from a participant. With these limits in mind, there are three primary ways to alter vesting design:

1. Create multiple vesting schedules—one for each type of contribution that is utilized such as a different vesting schedule for a match versus a profit sharing or nonelective contribution
2. Change the timing of when vesting occurs for new contribution types and/or new hires such as lengthening the time on a cliff vesting or shifting to an incremental vesting schedule over a longer time period
3. Change the method by which vesting is calculated by utilizing hours of service versus elapsed time of employment

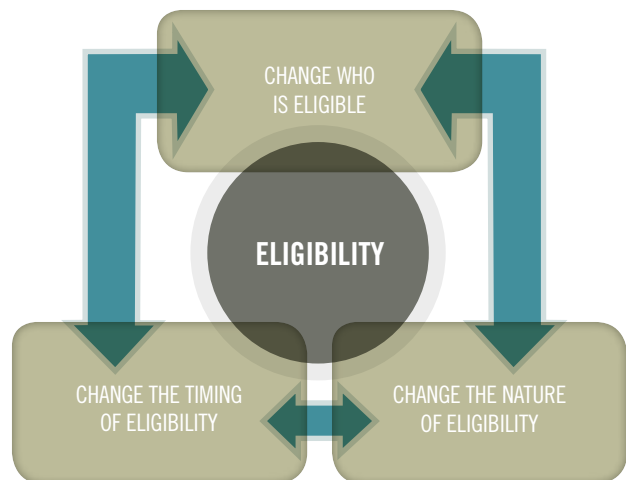
In addition to the design of the vesting itself, ensuring that the plan's forfeitures that result from unvested dollars are considered in the cost control analysis may be important in managing costs. Enabling forfeitures to be used to cover plan administrative costs or enabling their use in reducing employer contributions may be an additional means of reducing overall plan costs.

Eligibility

To promote positive retirement outcomes, it is clearly desirable to allow all employees to save toward their retirement as soon as they are hired. Yet, there are still ways that eligibility design can be used effectively in combination with employer contribution and vesting design options to manage costs.

Like vesting limitations, there are limits to eligibility design related to protected benefits. The implementation of new eligibility rules must be planned, managed, and communicated carefully. With these cautions in mind, there are three primary ways to alter eligibility design:

1. Change who is eligible for each type of contribution utilized such as increasing tenure or age requirements for a profit sharing contribution
2. Change the timing of eligibility such as a provision for a new hire to immediately participate in the plan but not be eligible for a company contribution for a year
3. Change the nature of eligibility calculations such as moving from an elapsed time to an hours of service method



APPLYING THE CONCEPTS

With a good understanding of the impact that core plan design elements can have on cost and plan effectiveness, let's look at how these elements can work together with advanced automatic program features to achieve common plan objectives within a desired budget.

On the following pages we will look at two companies with different plan features who wish to implement automatic programs, and we will consider some possible design changes that could be considered to manage costs and participant outcomes to desired levels.

These illustrations were developed using T. Rowe Price's Plan Meter projection tool—a tool that provides plan sponsors an analysis of projected participant replacement ratios by age group based on current plan design and based on various scenarios of alternative plan designs.

For each company we have suggested a number of ways that plan designs can be modified using the levers of employer contributions and eligibility rules. These illustrations and their results, which are approximations based on plan demographics in two current T. Rowe Price clients, demonstrate how impactful creative plan designs can be.

What to consider before applying methods from the illustrations

When considering plan redesigns, plan sponsors should incorporate actual plan data, comprehensive cost projection models, and detailed participant impact models before making final decisions on plan changes.

To keep the illustrations simple and straightforward, we have only modeled the scenarios within the cost structure of the defined contribution plan itself. It may also be possible to divert dollars from other compensation costs or from other benefit programs to fund some of the additional costs incurred through automatic program adoption. For example, for companies freezing or terminating defined benefit plans, this may be an ideal time to consider changes to the defined contribution plan as well, as this plan now assumes the primary role in helping employees retire successfully.

Also, a well-designed nonqualified deferred compensation program for highly compensated employees is often critical in helping these participants achieve their desired retirement income replacement savings. Here again, automatic features can assist by automatically depositing contributions over the deferral limits in the qualified plan once the employee has enrolled in the nonqualified plan.

Modifying plan design should always be considered carefully as resources are required to decide upon and implement the changes, and employee reactions to changes must always be taken into consideration. However, the proven results of automatic program designs for new hires have demonstrated that these employees have more positive outcomes over time. Employing more advanced automatic program designs that impact all employees through reenrollment, using opt-out features for automatic deferral increases, and periodically resetting assets into the QDIA can simply help more employees more quickly and provide a best practice consideration in saving and investing for existing long-term employees, not just new hires. And all of these results can be achieved by keeping budget targets and constraints in check.

Communication is key

As is true for all types of plan changes, an effective and thorough plan for communicating the changes to employees is critical to success. Similarly, when periodically reenrolling or resetting participants, a strong opt-out communications program for those being impacted will help ensure that participants aren't surprised by actions taken on their behalf and will create an opportunity to present a strong rationale for why the actions are being taken. Throughout this analysis and decision-making process, keeping the plan committee members involved and informed is often critical as this will assist in obtaining their perspective, gauging corporate reactions, and gauging participant reactions.

ADDING A FULL RANGE OF AUTOMATIC FEATURES

ABC Company Plan

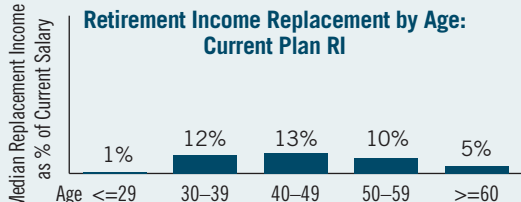
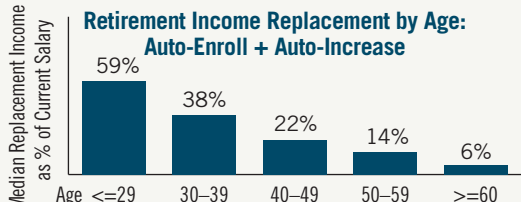
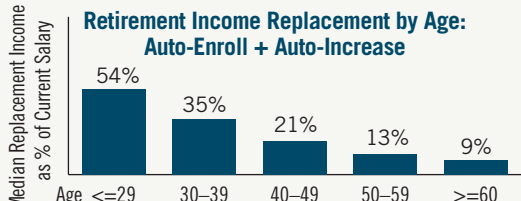
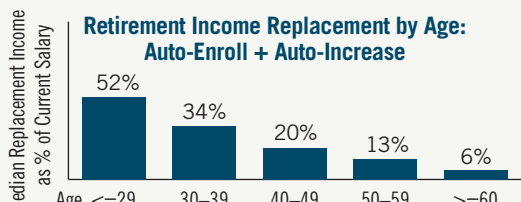
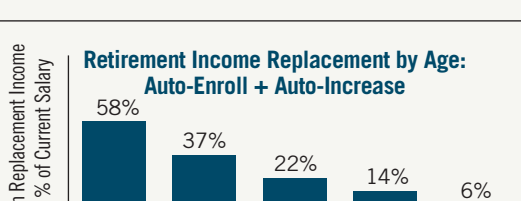
This company, with 3,120 employees, has very low participation in its retirement plan. The vast majority of employees are not on track to achieve a typical 70% target retirement income replacement ratio (from all sources) by the time they reach retirement age. To correct this, ABC is considering a full range of automatic features:

- Automatic enrollment of new hires
- Automatic enrollment of all existing eligible employees
- Automatic increase program for all participants

	Design Features	PLAN COSTS		
		Matching Contribution	Nonelective Contribution	Total Contribution Costs
CURRENT SCENARIO	<ul style="list-style-type: none"> ▪ 100% match on the first 4% of deferrals ▪ 4% nonelective contribution ▪ No automatic program features 	\$4,418,910	\$7,250,820	\$11,669,730
SCENARIO 1 Make no plan design changes other than adding automatic features	<ul style="list-style-type: none"> ▪ 100% match on the first 4% of deferrals ▪ 4% nonelective contribution ▪ Auto-enroll all eligible at 4% ▪ Auto-increase 1% each year up to 10% 	\$7,236,750 <i>a 64% increase</i>	\$7,250,820 <i>no change</i>	\$14,487,570 <i>a 24% increase</i>
SCENARIO 2 Maintain annual costs at close to current rates while improving participant outcomes	<ul style="list-style-type: none"> ▪ 100% match on the first 4% of deferrals ▪ 2.5% nonelective contribution ▪ Auto-enroll all eligible at 4% ▪ Auto-increase 1% each year up to 10% 	\$7,236,750 <i>a 64% increase</i>	\$4,531,760 <i>a 38% decrease</i>	\$11,768,511 <i>a 0.8% increase</i>
SCENARIO 3 Reduce annual costs by at least 7% while improving participant outcomes	<ul style="list-style-type: none"> ▪ 100% match on the first 4% of deferrals ▪ 2.0% nonelective contribution with a last day rule ▪ Auto-enroll all eligible at 4% ▪ Auto-increase 1% each year up to 10% 	\$7,236,750 <i>a 64% increase</i>	\$3,597,650 <i>a 50% decrease</i>	\$10,834,400 <i>a 7.2% decrease</i>
SCENARIO 4 Implement automatic programs with a QACA safe harbor design	<ul style="list-style-type: none"> ▪ 100% match on the first 1% of deferrals ▪ 50% match on the next 5% of deferrals ▪ 4.0% nonelective contribution ▪ Auto-enroll all eligible at 6% ▪ Auto-increase 1% each year up to the limit of 10% 	\$6,332,151 <i>a 43% increase</i>	\$7,250,820 <i>no change</i>	\$13,582,971 <i>a 16.4% increase</i>

The company is concerned about the costs and would like to understand what the likely impact will be on participant outcomes. The scenarios below compare the potential costs and outcomes of the plan's current features with four ways to implement a full range of automatic features.

Scenario 1 is based on adding automatic features alone. In Scenarios 2, 3, and 4, enhanced automatic features are coupled with plan design changes.

Participation Rate	Plan Metrics	Results												
58.7%	<p>Retirement Income Replacement by Age: Current Plan RI</p>  <table border="1"> <caption>Retirement Income Replacement by Age: Current Plan RI</caption> <thead> <tr> <th>Age</th> <th>Median Replacement Income as % of Current Salary</th> </tr> </thead> <tbody> <tr> <td><=29</td> <td>1%</td> </tr> <tr> <td>30-39</td> <td>12%</td> </tr> <tr> <td>40-49</td> <td>13%</td> </tr> <tr> <td>50-59</td> <td>10%</td> </tr> <tr> <td>>=60</td> <td>5%</td> </tr> </tbody> </table>	Age	Median Replacement Income as % of Current Salary	<=29	1%	30-39	12%	40-49	13%	50-59	10%	>=60	5%	
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Age	Median Replacement Income as % of Current Salary													
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Age	Median Replacement Income as % of Current Salary													
<=29	52%													
30-39	34%													
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Age	Median Replacement Income as % of Current Salary													
<=29	58%													
30-39	37%													
40-49	22%													
50-59	14%													
>=60	6%													

ENHANCING A PLAN'S CURRENT AUTOMATIC FEATURES

XYZ Company Plan

This company, with 4,233 employees, has reasonable participation in its retirement plan, reflecting the use of automatic enrollment of newly hired employees. However, the vast majority of employees are not on track to achieve a typical 70% target retirement income replacement ratio (from all sources) by the time they reach retirement age. To correct this, XYZ is considering adding:

- Automatic enrollment of all existing eligible employees
- Automatic increase program for all participants

	Design Features	PLAN COSTS		Participation Rate
		Matching Contribution	Total Contribution Costs	
CURRENT SCENARIO	<ul style="list-style-type: none"> ▪ 100% match on the first 3% of deferrals ▪ 50% match on the next 3% of deferrals ▪ Automatic enrollment for new hires at a 3% default deferral rate 	\$7,543,557	\$7,543,557	85.1%
SCENARIO 1 Make no plan design changes other than enhancing automatic features	<ul style="list-style-type: none"> ▪ 100% match on the first 3% of deferrals ▪ 50% match on the next 3% of deferrals ▪ Auto-enroll all eligible at 6% ▪ Auto-increase 1% each year up to 15% 	\$10,135,134 <i>a 34% increase</i>	\$10,135,134 <i>a 34% increase</i>	99.3% (assumes 5% opt-out rate)
SCENARIO 2 Maintain annual costs at close to current rates while improving participant outcomes	<ul style="list-style-type: none"> ▪ 50% match on the first 6% of deferrals ▪ 25% match on the next 1% of deferrals ▪ Auto-enroll all eligible at 7% ▪ Auto-increase 1% each year up to 15% 	\$7,494,162 <i>a 0.7% decrease</i>	\$7,494,162 <i>a 0.7% decrease</i>	99.3% (assumes 5% opt-out rate)
SCENARIO 3 Reduce annual costs by at least 10% while improving participant outcomes	<ul style="list-style-type: none"> ▪ 100% match on the first 3% of deferrals ▪ Auto-enroll all eligible at 6% ▪ Auto-increase 1% each year up to 15% 	\$6,756,756 <i>a 10.4% decrease</i>	\$6,756,756 <i>a 10.4% decrease</i>	99.3% (assumes 5% opt-out rate)
SCENARIO 4 Implement automatic programs with a QACA safe harbor design	<ul style="list-style-type: none"> ▪ 100% match on the first 1% of deferrals ▪ 50% match on the next 5% of deferrals ▪ Auto-enroll all eligible at 6% ▪ Auto-increase 1% each year up to the limit of 10% 	\$7,882,882 <i>a 4.5% increase</i>	\$7,882,882 <i>a 4.5% increase</i>	99.3% (assumes 5% opt-out rate)

The company is concerned about the costs and would like to understand what the likely impact will be on participant outcomes. The scenarios below compare the potential costs and outcomes of the plan's current features with four ways to implement enhanced automatic features.

Scenario 1 is based on enhancing the plan's automatic features alone. In Scenarios 2, 3, and 4, enhanced automatic features are coupled with plan design changes.

Plan Metrics	Results												
<p>Retirement Income Replacement by Age: Current Plan RI</p> <table border="1"> <caption>Retirement Income Replacement by Age: Current Plan RI</caption> <thead> <tr> <th>Age</th> <th>Replacement Rate</th> </tr> </thead> <tbody> <tr> <td><=29</td> <td>26%</td> </tr> <tr> <td>30-39</td> <td>19%</td> </tr> <tr> <td>40-49</td> <td>13%</td> </tr> <tr> <td>50-59</td> <td>8%</td> </tr> <tr> <td>>=60</td> <td>4%</td> </tr> </tbody> </table>	Age	Replacement Rate	<=29	26%	30-39	19%	40-49	13%	50-59	8%	>=60	4%	
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50-59	11%												
>=60	4%												
<p>Retirement Income Replacement by Age: Auto-Enroll + Auto-Increase</p> <table border="1"> <caption>Retirement Income Replacement by Age: Auto-Enroll + Auto-Increase</caption> <thead> <tr> <th>Age</th> <th>Replacement Rate</th> </tr> </thead> <tbody> <tr> <td><=29</td> <td>46%</td> </tr> <tr> <td>30-39</td> <td>33%</td> </tr> <tr> <td>40-49</td> <td>21%</td> </tr> <tr> <td>50-59</td> <td>11%</td> </tr> <tr> <td>>=60</td> <td>5%</td> </tr> </tbody> </table>	Age	Replacement Rate	<=29	46%	30-39	33%	40-49	21%	50-59	11%	>=60	5%	<p>If XYZ Company were concerned with passing discrimination testing, it could implement a QACA safe harbor design. The company would not be required to perform discrimination testing, would create significantly better outcomes for younger employees, and it would have minimal impact on older workers. This design would increase annual plan costs by 4.5%, a relatively small amount for such a dramatic improvement and safe harbor protections.*</p>
Age	Replacement Rate												
<=29	46%												
30-39	33%												
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50-59	11%												
>=60	5%												

*Additional fiduciary requirements including preparation and mailing of required QACA notices may add a cost factor.

DECISION-MAKING GUIDE

In order to employ a sound decision-making process to maximize the value of the plan for all parties, there are five key steps that are typically required:

Key Steps

	START	COMPLETE
1. Establish the most critical plan objective and the types of advanced automatic features desired.		
2. Analyze the current plan in terms of costs and success against the core objective and the impact of automatic program design costs without any additional design changes.		
3. Model scenarios to optimize plan design within a desired budget level and analyze the impact on specific participant populations. If needed, perform projected discrimination tests (e.g., if safe harbor design is not used).*		
4. Finalize recommendations for plan design changes and obtain corporate and committee approvals for new plan changes.		
5. Develop an implementation and communication plan.		

*The ability to create modeling scenarios is dependent on the level of plan and participant demographic data that a plan sponsor is able to provide to T. Rowe Price.

In addition to working with your plan design consultant and ERISA counsel to provide formal plan design options and detailed cost and impact projections, T. Rowe Price can assist you with tools and resources to help in each of these five key steps.

WORKS CITED

EBRI. (2012). *Retirement Income Adequacy for Boomers and Gen Xers: Evidence from the 2012 EBRI Retirement Security Projection Model*,[®] by Jack VanDerhei, Ph.D.

John Beshears, James J. Choi, David Laibson, Brigitte C. Madrian. (2009). *The Impact of Employer Matching on Savings Plan Participation under Automatic Enrollment*. Harvard University.

RETIREMENT INCOME PROJECTIONS

The future is uncertain; therefore, we predict many futures

To create our projections and model future uncertainty, we use a proprietary Monte Carlo simulation. Monte Carlo simulation is an analytical tool for modeling future uncertainty. In contrast to deterministic tools (e.g., expected value calculations) that model the average case outcome, Monte Carlo simulation generates ranges of outcomes based on our underlying probability model. Thus, outcomes generated via Monte Carlo simulation incorporate future uncertainty, while deterministic methods do not. Although the engine cannot predict future investment performance, by simulating thousands of hypothetical future market scenarios, it can help plan sponsors to more realistically assess whether their employees are likely to achieve their retirement income goals.

Material assumptions

The investment results shown in the various Plan Meter charts were developed with Monte Carlo modeling using the following material assumptions, as well as those outlined in the Plan Meter Report Appendix. The underlying long-term expected annual return assumptions for the asset classes indicated in the charts are not historical returns. Rather, these are based on our best estimates for future long-term periods. Our annual return assumptions take into consideration the impact of reinvested dividends and capital gains. We use these expected returns along with assumptions regarding the volatility for each asset class and the intra-asset class correlations to generate a set of simulated, random monthly returns for each asset class over the specified period of time. These monthly returns are then used to generate 1,000 simulated market scenarios. These scenarios represent a spectrum of possible performance for the asset classes being modeled. The success rates are calculated based on these scenarios. We take taxes and required minimum distributions (RMDs) into consideration, as described in the Appendix, but we assume no early withdrawal penalties. Investment expenses in the form of an expense ratio are subtracted from the expected annual return of each asset class. These expenses are intended to represent the average expenses for a typical actively managed, no-load fund within the peer group for each asset class modeled. The analysis does include all of a participant's assets in the defined contribution plan(s), but categorizes them simply as individual stocks, diversified stock funds, bonds, and short-term investments. Other asset classes not considered or modeled may have characteristics similar or superior to those being analyzed.

The replacement income (in current dollars) is the percentage of the employee's current annual salary withdrawn in the first year of retirement; in each subsequent year, the amounts withdrawn are adjusted to reflect a particular annual rate of inflation. The underlying long-term expected annual return assumptions (gross of fees) used in each of the Monte Carlo simulations are 10% for large-cap individual stocks; 11% for mid-/small-cap individual

stocks; 10% for stock funds; 6.5% for intermediate-term, investment-grade bonds; and 4.75% for money market/stable value investments. The following expense ratios are then applied to arrive at net-of-fee expected returns: 0% for individual stocks; 1.211% for stock funds; 0.726% for intermediate-term, investment-grade bonds; and 0.648% for money market/stable value investments. The simulation success rate of each employee's retirement planning strategy is identified for a sponsor's plans in the Rules and Assumptions section of the Plan Meter Report. Simulation success is defined as having at least one dollar remaining in the portfolio at the end of retirement.

(The retirement period in the simulations is assumed to end at age 95.) The simulation success rate of a particular retirement strategy is determined by counting the number of simulation scenarios that result in at least one dollar remaining, and dividing this figure by the total number of simulation scenarios of that strategy used.

Limitations of the model

Material limitations of the investment model include:

- Extreme market movements may occur more frequently than represented in our model.
- Some asset classes have relatively limited histories. While future results for all asset classes in the model may materially differ from those assumed in our calculations, the future results for asset classes with limited histories may diverge to a greater extent than the future results of asset classes with longer track records.
- Market crises can cause asset classes to perform similarly over time, reducing the accuracy of the projected portfolio volatility and returns. The model is based on the long-term behavior of the asset classes and therefore is less reliable for short-term periods.
- The model assumes that there is no correlation between asset class returns from month to month. This means that the model does not reflect the average periods of "bull" and "bear" markets, which can be longer than those modeled.
- Inflation is assumed to be constant; variations in inflation levels are not reflected in our calculations. These results are not predictions, but they should be viewed as reasonable estimates.

IMPORTANT:

The Plan Meter projections or other information generated by a T. Rowe Price investment analysis tool regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. The simulations are based on a number of assumptions. There can be no assurance that the projected or simulated results will be achieved or sustained. The charts present only a range of possible outcomes. Results may vary with each use and over time, and such results may be better or worse than the simulated scenarios. Clients should be aware that the potential for loss (or gain) may be greater than demonstrated in the simulations.

T. ROWE PRICE AT A GLANCE

Founded in 1937, Baltimore-based T. Rowe Price Group, Inc., is a global investment management organization with \$541.7 billion in assets under management as of June 30, 2012. The organization provides a broad array of investments, subadvisory services, and separate account management for individual and institutional investors, retirement plans, and financial intermediaries. The company also offers sophisticated planning and guidance tools. T. Rowe Price's disciplined, risk-aware investment approach focuses on diversification, style consistency, and fundamental research.

T. Rowe Price Retirement Plan Services, Inc., is a recognized industry leader dedicated to helping your employees prepare for a more financially secure retirement. With extensive research and development efforts, we anticipate emerging trends and provide innovative solutions that transform participant behavior. With world-class service and award-winning technology and education, we seek to provide participants with the best possible plan experience. In short, our priority is the success of your participants.

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