Russell Investments

INVESTMENT FOCUS

Adaptive investing – better data makes better solutions

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Target date funds (TDFs) are a popular investment solution for defined contribution (DC) plans,[1] providing a diversified, age-appropriate portfolio through a process that requires no participant input. Participants do not need to know how to invest retirement assets nor do they need to frequently check to see if the portfolio requires adjustment. The age-based allocation of TDFs automatically adjusts based on the time remaining until retirement.

Russell Investments has developed Personalized Retirement Accounts (PRA), an adaptive solution customized to each participant's situation. PRA improves on the TDF advice by considering additional inputs such as account balance, salary and savings patterns. Better solutions can be customized for each individual than is possible under the one-size-fits-all, age-based target date approach.

PRA is designed as a Qualified Default Investment Alternative (QDIA) and relies on data that can be collected from plan recordkeeping systems and plan sponsors. PRA also takes into account estimated Social Security benefits. It is designed to work well even for participants who are not strongly engaged in their retirement planning and allows for more comprehensive advice if participants are willing to include information about other retirement resources. To keep participants on target for a successful retirement, PRA adjusts market exposures as participant circumstances change either due to market experience or to changes in salary, savings or other characteristics.

TYPICAL PARTICIPANTS VERSUS ACTUAL PARTICIPANTS

While glide paths from some providers may still be constructed through a subjective assessment of the "appropriate" amount of risk for participants of each age, Russell Investments and many other providers follow a more quantitative approach.

Our standard glide path is organized around characteristics of typical U.S. DC participants[2] (age at which working life begins, standard retirement age, salary and savings patterns – including employer match), but we also construct custom glide paths based on the characteristics of the participants in a specific DC plan. The custom glide paths incorporate the typical salary and savings patterns for that specific population including the employer match, specific employee mortality assumptions (if appropriate), retirement dates, available DB benefits and other plan-specific information.

[1] Based on the PSCA 58th Annual Survey (Table 81), TDFs serve as the QDIA for almost 75% of plans with greater usage in plans with more participants. Casey Quirk & Associates has estimated total TDF assets at $760 billion at the end of 2015 and expects that number to grow to $3.7 trillion by 2019 with 88% of new contributions flowing into TDFs by 2019.

[2] The profile is regularly reviewed as part of the ongoing process in which all Russell Investments' portfolios are governed. Due to the long-term nature of the glide path, changes are infrequent and in response to meaningful shifts in the participant profiles or market conditions. The most recent revision was in 2014 (see Y. Fan, D. Gardner, J. Greves and S. Murray, "Review of Russell's Target Date Fund Methodology," Russell Investments, 2014).

Unlike glide paths that are customized to a population of employees, PRA provides a solution customized to the profile of each participant. Further, the system monitors – via record keeper and plan sponsor data feeds – the evolving characteristics of each participant and responds with customized asset allocation model advice through time.

Let's meet four pre-retirees all of whom are 50 years old and 15 years from retirement.

With TDFs, they all would receive the same allocation – now and all the way to retirement at age 65. Consider the hypothetical information summarized in Table 1, which is readily available from the plan sponsor and plan record keeper and could inform a better strategy for each person.

This example does not take into account all of the characteristics that could be considered, such as assets held outside of the retirement plan. The financial health of each participant is a combination of account balance and future 401(k) contributions compared with the retirement income to which each aspires.[3] It is clear that participants with large retirement resources relative to their retirement spending goals (whether due to an early start on retirement savings or being fortunate enough to be in the right investment at the right time) are in a better position.

Jack / Has the highest salary and presumably the highest retirement income target. Social Security will be a smaller portion of his retirement solution suggesting that a higher replacement rate must be supported by his retirement account. Further, Jack's deferral rate is lower than either of the other three.

Jack has the highest salary and presumably the highest retirement income target.

Table 1: Asset allocation based on individual characteristics

	Jack	Tamara	Bill	Crystal
Age	50	50	50	50
Gender	Male	Female	Male	Female
Salary	$150k	$120k	$85k	$100k
Deferral rate	4%	8%	8%	12%
Current account balance	$425k	$475k	$475k	$686k
Target retirement income (annual)	$120k	$96k	$68k	$80k
Expected retirement income (annual)	$75k	$90k	$74k	$102k
PRA growth asset allocation	78%	69%	64%	83%
Target date growth asset allocation	68%	68%	68%	68%

Sample allocations are provided for illustrative purposes only and are based on assumptions provided.

[3] Using appropriate discount assumptions, this relationship can be summarized as a funded ratio.

At first glance, those who are accustomed to DB plan allocation patterns may wonder why Crystal would take more risk as a result of being better-funded.

Tamara / Tamara's plan is modestly off course. She is lagging behind her desired retirement income goal, but with 15 years remaining until retirement, she may be able to catch up without incurring unacceptable risk of falling further behind.

Bill / Is more or less on target with an estimated retirement income roughly equal to the targeted amount.

Crystal / Is in a fairly strong position with a high deferral rate and account value relative to the projected retirement income.

Unlike the allocation to growth assets recommended by a target date glide path, the allocation strategy identified by PRA (shown near the bottom of Figure 1 and the logic of which we will address in the next section) varies among the four.

THE PRA ALLOCATION PATTERN

The PRA allocation pattern for the hypothetical participants in Table 1 is illustrated in Figure 1. The horizontal axis measures the participants' retirement readiness. Retirement readiness is closely related to account balance, but it also takes into consideration planned future savings and the targeted retirement income level. For simplicity, it may be helpful to think of this axis as the participant's current account balance, which is typically the most important component of the relationship and is also the one that varies most widely as market returns are realized through time.

Each of the example participants is plotted on the chart to help illustrate the logic behind the pattern of allocations.[4] The V-curve in Figure 1 reflects the best solution for participants who experience risk as outcomes that fall short of their desired retirement income level. It is important to note that this V-shaped pattern is a reflection of the recommended allocations and not an input to the model.

Crystal / Has a healthy surplus compared to the $80k she seeks. Her expected retirement income is a bit more than 25% higher than her target. At first glance, those who are accustomed to DB plan allocation patterns may wonder why Crystal would take more risk as a result of being better-funded. The answer lies in the fact that, unlike the situation for a DB plan sponsor, Crystal can directly benefit from this surplus and has an incentive to grow it over time as long as she does not imperil her ability to accomplish her targeted retirement income. This buffer allows her to assume modestly greater market risk than her peers. Alternatively, she could revise her goals to seek higher income or for estate-planning purposes.

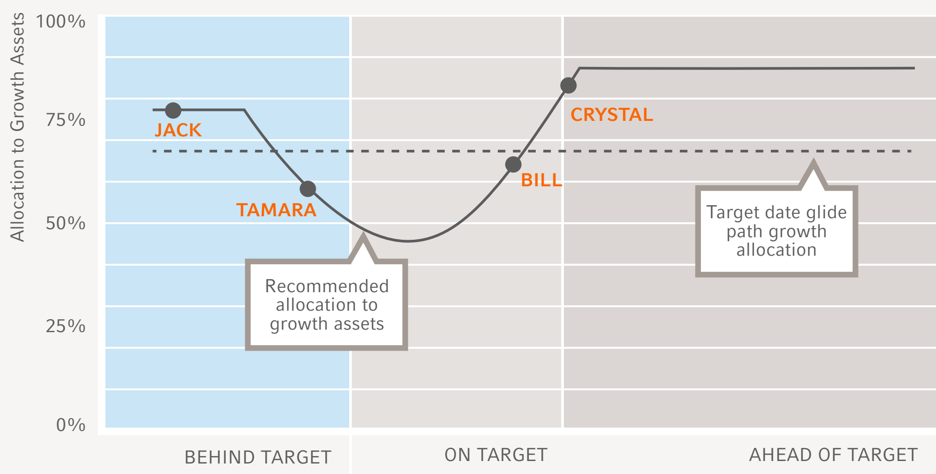
Bill / Is on target to achieve his retirement goal and should maintain a significant exposure to growth assets. Nevertheless, he must maintain a somewhat more cautious stance than Crystal.

Tamara / Is behind target, but is likely to catch up over the remaining 15 years through a slightly higher growth allocation than would be recommended if she were better funded.

Jack / Is well behind where he should be at this point in his career. His recommendation hits the left-side guardrail, which limits growth allocations for participants who are materially underfunded. Jack would benefit much more from a review of his savings rate, his retirement date and retirement income choices than from seeking greater investment risk.

[4] PRA determines the allocation strategy through an optimization process that penalizes shortfalls relative to the targeted retirement income. Large shortfalls receive much bigger penalties than small ones reflecting most participants' sense that missing the target by a small amount is disappointing, but missing by a large amount may be disastrous. A more detailed description of the PRA model and solution process can be found in Fan, Y., Murray, S. and Pittman, S. "Optimizing Retirement Income: An Adaptive Approach Based on Assets and Liabilities, " Journal of Retirement, vol. 1, no. 1, Summer 2013. Pp. 124-135.

Figure 1: Allocation pattern for example participants



Russell Investments' Personalized Retirement Account solution is designed to improve on target date glide path solutions through its focus on the characteristics of each participant.

What will happen to the allocations of each example participant through time?

If market returns are high, Crystal will find her surplus increasing, and will increase her growth allocation until she hits the upside guardrail. Bill will gradually increase his growth allocation as his position improves. Tamara will seek a lower growth allocation as her plan to secure retirement readiness allows her investments to work a bit less to catch up. Jack is likely to stay at the allocation limit since an extremely strong market would be needed to improve the viability of his plan.

The allocation shifts are not a market timing exercise.[5] Tamara does not become more conservative because she feels the high market return is likely to be followed by a move in the other direction, and Bill does not increase his growth allocation based on an assumption of continuing market momentum. The allocation responses are directly tied to the characteristics and retirement readiness of each participant.

CONCLUSION: CUSTOMIZATION AND ADAPTIVITY BENEFIT PARTICIPANTS

Russell Investments' Personalized Retirement Account solution is designed to improve on target date glide path solutions through its focus on the characteristics of each participant including not just age but account balances, gender, desired retirement income, salary and savings patterns. These data are already maintained by the plan record keeper and plan sponsor. The adaptive nature of the solution provides allocations that are responsive to changes in each participant's situation through time and are designed to improved opportunities to achieve the retirement income goal.

5 Russell Investments' strategic forecasts, which are updated semi-annually, are employed in the PRA analysis. These long-term return assumptions vary from each update, but are reflective of equilibrium market behavior and evolve slowly over time. The projections or other information generated by this analysis 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 assumptions do not take fees into consideration and all returns are assumed gross of any fees, including PRA fees.

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