IMPROVING PARTICIPANT OUTCOMES THROUGH AUTOMATIC ASSET ALLOCATION

How portfolio management products can help overcome participant bias and error
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A wealth of data shows today’s plan participants are falling woefully short of building the reserves they’ll need to generate enough income to take them from their Day One of retirement through all the days that follow. The underlying causes are many and varied, from the gradual shift of responsibility from employers (defined benefit plans) to employees (defined contribution plans) to psychological biases that lead plan participants to make poor financial decisions.

Regardless of the root causes, one fact is clear: There is mounting evidence of the positive results of automated plan design. For the best chance for participants to realize adequate retirement income, we believe plan sponsors should structure their plans in a way that guides participants to the right decisions regarding their retirement: when to begin saving, how much to save, how to effectively allocate their savings, and how to turn their savings into guaranteed income.

Our analysis shows that for a DC plan to be truly optimized, it must incorporate all of these design elements making it easier for participants to:

1) Enroll in their plans sooner;
2) Save at optimal rates;
3) Achieve better diversification; and
4) Convert their savings into income.

In our most recent white paper, “Overcoming Participant Inertia: Automatic Features That Improve Outcomes While Improving Your Plan’s Bottom Line,” we explored the improvement in participation and savings rate outcomes that result from the implementation of automatic enrollment and auto-escalation plan features. Now, we turn our attention to the cumulative positive impact on participant outcomes that can be realized when portfolio management products (e.g., automatic asset allocation/rebalancing programs, managed accounts, balanced funds and/or target-date funds) are deployed as the plan’s Qualified Default Investment Alternative (QDIA) in conjunction with the implementation of automatic enrollment and escalation features.

When participants are placed in a professionally managed program, as opposed to making their own portfolio management decisions, the potential risks associated with poor allocation decisions are appreciably mitigated.

On average, defined benefit (DB) plans have earned 76 basis points* more each year than defined contribution (DC) plans, with participants bearing no risk.1

* A 76 basis point difference in the returns of two investments amounts to an almost 24% difference in value over a 30-year period.
SECTION 1:

**Extreme allocations pose extreme risk**

For years, the fundamental 401(k) asset allocation message has preached investing more aggressively when younger and gradually moving to more conservative investments as retirement approaches. The reality reflected in DC participant allocations, however, has been precisely the opposite.

A recent internal Prudential Retirement® study showed that of the group of active participants ages 29 and younger who were not in an asset allocation product or a target-date/balanced fund, 39% had all of their assets invested in stable value or fixed income investments. Many of these millennials entered the workforce right around the time of the recent financial crisis. They saw firsthand the impact it had on their account balances and appear to have gravitated to a philosophy of “fool me once, shame on you; fool me twice, shame on me.” In their reluctance to risk investing in equity markets, however, they’ve taken on a much more serious risk—the risk of not generating sufficient retirement savings due to the typically smaller returns earned from their non-equity investments.

39% of participants age 29 and younger who were not invested in an asset allocation product had all of their assets invested in stable value or fixed income investments.2

To put the risk into perspective, a plan participant who earns $40,000/year and contributes 5% of his pre-tax salary for 35 years would have almost $214,922 upon retirement if he were fully invested in intermediate bonds and received a 5.7% annualized rate of return (see table on the next page). A similar participant contributing at the same rate for the same number of years but invested in a balanced 50/50 portfolio allocated equally between equities and fixed income would have earned an average annual return of 8.5% (2.8% higher than the 100% bond portfolio).

While the slightly higher rate of return may not sound like much on an annual basis, over the course of 35 years, the participant would have saved $401,205, or nearly 87% more.3

Conversely, participants approaching retirement often have too much exposure to equities. According to the Employee Benefit Research Institute (EBRI), 38% of participants over the age of 60 have 60-100% of their accounts invested in equities, with more than one-fifth (21%) having 80-100% invested in equities.4 Given the ongoing volatility of equity markets, this is a significant cause for concern, since the associated “sequencing of returns” risk can have a particularly devastating impact on a portfolio’s ability to generate lifetime income in the years right before and right after retirement.

Between October 2007 and February 2009, the S&P 500 index declined by 52%. Despite the fact that six years later the market has rebounded and hit new highs, the Urban Institute estimated that those closest to retirement will likely lose about 22% of their asset income (inside and outside of retirement accounts) as a result of the decline. And this kind of extreme volatility is hardly abnormal. The S&P similarly lost 23% in 2002, and almost 30% in 1974.5
Extreme allocations pose extreme risk, con’t.

When there is a fast-approaching or imminent need to begin taking distributions, too much equity exposure can have severe adverse consequences during times of market volatility. On the other hand, too little equity exposure can lead to low account value growth that may not even outpace the rate of inflation. It is crucial, therefore, to not only establish the right mix of asset classes but to maintain it over the long term. Consider the following chart illustrating four hypothetical allocation scenarios—three “extreme” allocations (100% in a single asset class) and a balanced 50/50 allocation between equities and fixed income:

<table>
<thead>
<tr>
<th>Investment Mix</th>
<th>100% Equity</th>
<th>100% Bond</th>
<th>100% Cash</th>
<th>50/50 Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Return</td>
<td>9.9%</td>
<td>5.7%</td>
<td>1.7%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Total Return After Inflation</td>
<td>77.8%</td>
<td>36.3%</td>
<td>-3.9%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Standard Deviation (Risk)</td>
<td>18.3%</td>
<td>1.6%</td>
<td>1.8%</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

Although the 100% equity scenario had the highest average return, it also demonstrated the highest risk. The standard deviation result of 18% means that about two-thirds of the time a given year’s return can be expected to exceed or underperform that average by up to 18% (+27.9% to -8.1%). And that’s merely an average. In 2008, retirement investors experienced a distressing 37% drop in equity values.

The 50/50 balanced portfolio captured 86% of the equity portfolio’s returns, but it did so while assuming only half the risk.

Equity market gyrations will continue to have a systemic impact on retirement outcomes. As a result, the importance of creating and maintaining a properly allocated, diverse retirement portfolio has never been greater for plan participants. Even an elementary, undiversified asset allocation approach will yield significantly better risk-return characteristics compared to any “extreme allocation” portfolio.
Behavioral finance can help inform plan design

We all know that powerful emotions like greed and fear can greatly impact an individual’s investment decisions. But so can simple, ordinary human nature. Faced with the complex task of selecting investments for their retirement plan, participants often turn to the same rules of thumb that they rely on to navigate everyday life.

But while these decision-making biases can help us manage day-to-day, routine tasks, they can derail our efforts when applied to more complex tasks such as investment selection. Behavioral finance has identified two significant cognitive biases that often lead to poor asset allocation decisions:

1) Clue-Seeking Bias—People faced with a complex decision will subconsciously look for nonexistent clues to help guide their decision making. For example, they’ll choose the first option on a list of investments, believing that because of its position, it must be what the plan sponsor recommends.7

2) Availability Bias—People who must make a decision tend to place more weight on recent evidence and lend more credence to easily obtainable information, especially if it is emotionally charged. This is what drives the “closing the barn door after the horse is out” behavior we typically see in the aftermath of a steep market drop, when investors flee to the safety of cash and miss out on the subsequent recovery.

Behavioral finance research related to DC retirement plans, such as the work done on automatic enrollment and contribution escalation by Richard Thaler and Shlomo Benartzi,9 has demonstrated that these types of biases can be immensely powerful and extremely difficult for participants to overcome without the help of a plan designed using automated features to counter their influence.

Automatic enrollment and contribution escalation, however, only help to solve the questions of when to join and how much to save. They don’t address the challenging question of “how to invest.” That’s where automated portfolio management products (e.g., automatic asset allocation/rebalancing programs, managed accounts, balanced funds and/or target-date funds) deployed as the plan’s default investment are needed to create a fully automated plan that can avert the tendencies that lead to procrastination and hasty, uninformed decision making. By understanding these biases and constructing an optimized plan design that encourages participants to overcome them, significantly improved outcomes can be achieved.

In the 20-year period ended Dec. 31, 2012, the average stock investor achieved an annualized return, while the S&P 500 averaged +4.3%.

By trying to time the market, investors missed out on nearly half of the positive market performance.8
SECTION 3:

Using automatic allocation tools to overcome investor bias

A 2013 Prudential Retirement study found that despite widespread availability of asset allocation tools, in plans without automatic enrollment with asset allocation as the default, almost half (45%) of participants did not opt to avail themselves of these tools.10

Of even greater concern is the number of those non-users who are considered either extremely allocated (100% in a single asset class) or poorly allocated (having a considerably higher or lower equity or fixed-income allocation than is generally considered appropriate for their age).

Of those participants who are not in an asset allocation product and who are in plans with no automatic enrollment, the percentage of participants who are extremely allocated is 56%. And, as the following table indicates, another 33% are poorly allocated.

That brings the total of either extremely or poorly allocated participants to 89% for those who bypass the use of allocation tools. Of particular concern is the high concentration of those who fall into the 50+ age categories—workers who are closer to retirement and thus considerably more vulnerable to the effects of market volatility.

Clearly, without professional help, most investors are unable to construct and maintain an optimal portfolio. But simply making an asset allocation tool available in the plan is not good enough. (All participants in this analysis had access to an allocation tool.) To be meaningful, the tool should be established as an automatic default for participants.
Among participants in plans offering both, only 36% chose not to invest at least some of their savings in the default, and overall, only 19% of these plans’ participants are extremely allocated.11

As the following table depicts, the two features working in tandem generate an impressive 31% increase in allocation tool adoption—raising usage from 49% for plans with no automatic enrollment to 64% for plans with auto-enrollment and an allocation product as the QDIA—all while markedly reducing extreme allocations.

<table>
<thead>
<tr>
<th>Plan Design</th>
<th>Asset Allocation Tool Adoption</th>
<th>Plan Extreme Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Automatic Enrollment</td>
<td>49%</td>
<td>33%</td>
</tr>
<tr>
<td>Automatic Enrollment with Asset Allocation Program Default</td>
<td>64%</td>
<td>19%</td>
</tr>
</tbody>
</table>

As demonstrated in our previous white paper, “Overcoming Participant Inertia,” which focused on automated features, the number of participants who choose to opt out of automatic enrollment programs is exceedingly small (approximately 8%). Similarly, whether they were defaulted into it or not, participants invested in an asset allocation program tend to remain invested in it. A recent study by Prudential Retirement showed that 93% of continuously active participants who were in a proprietary asset allocation program as of December 2009 were still in the program as of June 2013.12

Studies showed that 93% of continuously active participants who were in a proprietary asset allocation program as of December 2009 were still in the program as of June 2013.12
A tale of two plan designs

According to a study conducted by Aon Hewitt and Financial Engines, participants who used professional investment help (whether it was online advice, target-date funds or managed accounts) realized an annual account growth increase of between 1.86% and 2.92%.

The period covered by the study was 2006–2010, and thus included the 2007–2009 bear market. The study found that:

“Poor portfolio diversification and inappropriate risk choices contributed to the widening performance gap between participants using professional help and those not using help, particularly in 2009. Additionally, some participants also reacted to the market volatility, moving to cash or bonds, and then missed out on the market rally in 2009. Overall, 38% of nonhelp participants had risk levels that were excessive, and 18% had risk levels that were too low. In contrast, participants using professional help maintained more diversified allocations with appropriate risk levels, and also employed a rebalancing strategy.”

Similarly, a study by Prudential Retirement showed that participants in our proprietary asset allocation program, GoalMaker®, (over a four-year period ended in March 2013) had an average annual account growth that was 7.4% higher than participants not in the program.

The studies were done on different bases: The Aon Hewitt study included three allocation tools and was net of cash flows, whereas the Prudential study covered one type of tool and included flows. Nonetheless, they both point to significant long-term benefits that come with receiving asset allocation help.

To put this into perspective, let’s look at two participants on the next page, both age 35 with $50,000 salaries, who are automatically enrolled in their plans at a 4% default deferral rate. The only difference is that Participant 1 does not enroll in an allocation program, whereas Participant 2 invests in his plan’s QDIA allocation program. As the following table illustrates, just the small resulting difference in annual return, when compounded over the course of an earning lifetime, can be considerable. Participant 2, given his 2.92% higher annual rate of return over 35 years, nets 64% more in his plan account than his peer.
In order to fully grasp the potential impact of allocation tools, let’s look at the exact same scenario with one small change. But in addition to investing in their allocation program default investment, Participant 2 also gains the benefit of his plan’s auto escalation (1% annual deferral increase up to a cap of 10%). The results are as follows:

As demonstrated in our “Overcoming Participant Inertia: Automatic Features That Improve Outcomes While Improving Your Plan’s Bottom Line” white paper, the positive impact of auto escalation on participant outcomes is striking. Combined with the benefits of an allocation program default, the resulting dramatic growth in account values is even more profound. Solely due to the implementation of these two plan features in tandem, Participant 2 would retire with an extraordinary 256% more in their plan account than Participant 1.
Automatic rebalancing/reallocating helps optimize performance

For asset allocation programs to work optimally, periodic rebalancing and reallocation are essential components.

The following table depicts the comparable 10-year performance measures for two identical 50/50 balanced portfolios: one is rebalanced annually, while the other undergoes no rebalancing. Not only does the rebalanced portfolio provide 70 basis points of annual outperformance, it does so with a considerable decrease in overall portfolio risk.

<table>
<thead>
<tr>
<th>Investment Mix</th>
<th>50/50 Portfolio (rebalanced annually)</th>
<th>50/50 Portfolio (no rebalancing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Return</td>
<td>8.5%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Total Return After Inflation</td>
<td>64.3%</td>
<td>57.0%</td>
</tr>
<tr>
<td>Standard Deviation (Risk)</td>
<td>9.1%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

During market downturns, these variances would be even more striking. But regardless of market conditions, automatic rebalancing/reallocating affords participants a valuable performance boost—one that can make the difference between confidence and concern. Prudential Retirement’s extensive analysis of its proprietary asset allocation program, GoalMaker, reveals several key findings:

- Between January 2010 and June 2013, on an aggregate basis, program participants had their quarterly reallocations made consistently into fixed income when the equity markets performed well, and into equities when equity markets performed poorly. Not only did this rebalancing process help to maintain participants’ original allocations, it effectively served to “buy low and sell high”* on a consistent basis.

- On average, program participants were 10 times more likely to be reallocated in a given quarter than non-program participants (84% versus 8%), helping to overcome the common challenges of participant inertia and forgetfulness.

- As a result of program reallocation, participants maintained a higher average equity exposure (70% versus 52%) with a 36% lower standard deviation, resulting in a lower level of risk over time.

This process of maintaining the appropriate allocation through rebalancing is a core element of all asset allocation products and programs, and plays a critical role in keeping investors from engaging in detrimental behaviors (e.g., chasing returns or fleeing equities during a downturn) or acting on their previously discussed biases.

*These past results do not guarantee future positive investment performance.
SUMMARY AND CONCLUSION

Proper asset allocation is a challenge few participants are able or willing to master.

Driven by ingrained cognitive biases, when presented with a large plan-investment menu, newly enrolled participants often tend to allocate inappropriately. Anecdotal evidence suggests that unaided allocation decisions are more likely to be driven by random selection (e.g., 25% allocated to each of four familiar funds) or driven by a fund’s recent success, rather than by seeking to construct an appropriate portfolio given the individual’s age, risk tolerance and investment objectives. Other common mistakes, such as investing exclusively in one asset class or trying to time the market, are pervasive and are key drivers of poor allocation and correspondingly poor retirement outcomes.

Proper asset allocation as soon as possible is essential in helping plan participants save for adequate retirement income. Aside from joining the plan and deferring at a meaningful rate, choosing the appropriate investment mix will be the most important decision a participant can make and the principal determinant as to whether they reach their Day One of retirement confident that they’ll have the income they need for all the days that follow.

In addition to benefiting participants, selecting an asset allocation program can benefit the plan sponsor. Under the terms of Pension Protection Act of 2006, plan sponsors can select a default among certain types of investments. Under this Act, the default investments are called Qualified Default Investment Alternatives or QDIAs. If the default meets the investment, participant notification and due diligence guidelines of the Act, the sponsor may be entitled to relief from certain fiduciary responsibilities with respect to assets invested in those funds.

Automation that solves for when to start saving, how much to save and how to invest provides the professional structure and discipline needed by the majority of participants to maximize their retirement outcomes. An asset allocation default investment is the important third leg of a sturdy plan design stool that includes automatic enrollment and automatic contribution escalation.

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FOOTNOTES


6. Returns represented by the return of the S&P 500, Barclays Capital Intermediate U.S. Government Credit Bond Index and average taxable money market fund returns as reported by the U.S. Census and Bank Rate monitor. Average returns are the cumulative return for the period divided by 10. Inflation is based on the yearly averages of monthly CPI.


Keep in mind that application of asset allocation and diversification concepts does not ensure a profit or protect against loss. Also, there is no assurance that higher risk investments will provide greater returns over time or that retirement income objectives will be met with any investment strategy. Past performance is not indicative of future performance and it is always possible to lose money by investing in securities.

DC Optimization strategies may rely on the following Internal Revenue Code (the “Code”) and Treasury Regulation provisions, or a combination of the following Code and Treasury Regulation provisions: (1) non-elective contributions in accordance with Treasury Regulation section 1.401(a)(4)-1; (2) matching contributions in accordance with Code section 401(m); (3) design-based safe harbor in accordance with Treasury Regulation section 1.401(a)(4)-2(b)(2); (4) uniform points non-design based safe harbor in accordance with Treasury Regulation section 1.401(a)(4)-2(b)(3); (5) general nondiscrimination testing in accordance with Treasury Regulation section 1.401(a)(4)-(2)(c).

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0257960-00002-00

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