APPENDIX G

Research and Education

i. The Future of Stable Value

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RESEARCH

OCTOBER 2010

The Future of Stable Value

- Stable value funds, which are a staple principal preservation vehicle in many defined contribution (DC) plans, suffered low market-to-book values during the financial crisis, yet they remain attractive to many plan sponsors and participants.
- The financial crisis provoked changes in the stable value wrap marketplace including higher costs and tighter controls on both underlying portfolios and the plans offering stable value.
- Congress passed legislation in 2010 that defined swaps in a way that could impact stable value wraps. However, the legislation did not immediately affect stable value funds.
- A large divide exists between strong and underperforming stable value funds, which has affected their appeal as DC plan options. Depending on the unique situation of each plan, stable value funds may or may not have a place in DC plan fund line-ups going forward.

Introduction

Stable value suffered its share of turmoil during the financial crisis when market-to-book value ratios plummeted. Today, although market-to-book values have recovered considerably, these funds continue to face many challenges. The industry suffers from soaring wrap costs, lower crediting rates and tighter controls both on underlying portfolios and on the plans offering stable value. Recently, new financial regulations also cast a shadow over the fate of stable value. In this paper Callan explores the ongoing attractiveness of stable value within 401(k) plans and includes insights from individuals with first-hand industry experience: Ken Porter from the American Benefits Council, and the plan sponsor perspectives of Mark Kelliher from Deluxe Corporation and Patrick Baumann from Harris Corporation.

Authored by Callan Associates Inc.

If you have any questions or comments, please email institute@callan.com.

About Callan Associates

Founded in 1973, Callan Associates Inc. is one of the largest independently owned investment consulting firms in the country. Headquartered in San Francisco, Calif., the firm provides research, education, decision support and advice to a broad array of institutional investors through five distinct lines of business: Fund Sponsor Consulting, Independent Adviser Group, Institutional Consulting Group, Callan Investments Institute and the Trust Advisory Group. Callan employs more than 150 people and maintains four regional offices located in Denver, Chicago, Atlanta and Florham Park, N.J.

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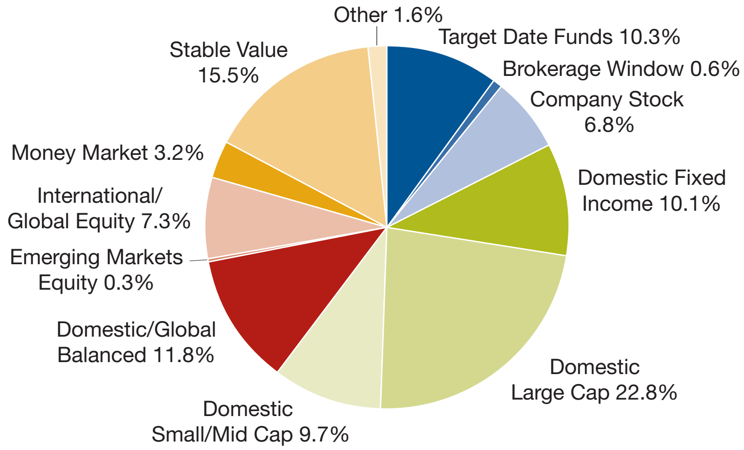
The Callan Investments Institute, established in 1980, is a source of continuing education for those in the institutional investment community. The Institute conducts conferences and workshops and provides published research, surveys and newsletters. The Institute strives to present the most timely and relevant research and education available so our clients and our associates stay abreast of important trends in the investments industry.

Overview of Stable Value

Stable value funds are geared to be capital preservation vehicles and often represent the lowest risk investment in a DC plan lineup. The funds are insured (or "wrapped" by an insurer) to insulate investors against the ups and downs of the underlying portfolio, which is generally invested in short- and intermediate-term bonds. Stable value funds' underlying investments are longer in duration than money market funds, generally contributing to higher yields. The combination of higher yields and stability of principal have made stable value a highly popular investment vehicle among DC plan sponsors and participants.

A recent Defined Contribution Institutional Investment Association (DCIIA) report[1] estimates that stable value funds hold nearly $650 billion in 401(k) assets. According to the Callan DC Index™,[2] in early 2010 66% of DC plans had a stable value fund; in contrast, fewer than half of plans offered a money market fund. As of June 2010, stable value funds made up 15.5% of DC plans **(Exhibit 1).**

Exhibit 1 Callan DC Index – Asset Allocation as of June 30, 2010



Despite the tough times endured by many stable value funds during the financial crisis, 401(k) participants poured money into these vehicles throughout late 2008 and early 2009, reflecting the fact that 401(k) participants continued to view stable value as a safe haven. In fact, in the fourth quarter of 2008—during the very worst of the financial crisis—65% of net flows within the Callan DC Index were into stable value funds.

1 DCIIA. "Financial Regulation and Consequences on America's Retirement Savings." 2010.

2 The Callan DC Index is an equally weighted index tracking the cash flows and performance of approximately 70 plans, representing more than 800,000 defined contribution participants and more than $50 billion in assets.

Changes in the Wrap Market

In the wake of the financial crisis, the wrap market experienced significant changes. Prior to the crisis, wrap providers frequently charged single-digit basis point wrap fees. Today, because of the greater perceived risk of stable value funds, wrap providers more commonly demand 20 basis points or more. Stable value funds that are still struggling with low market-to-book values fight just to maintain their wrap contracts. A number of wrap providers have exited the wrap market altogether, however the market size has remained flat since 2008 at $575 billion[3] as new participants have entered (including many insurance companies wrapping their own products).

Exhibits 2 and 3 show the evolution of market-to-book value ratios and wrap costs within Callan's universe of stable value funds. In the fourth quarter of 2008, the market value of the median stable value fund slipped to 95% of its book value. However, funds in the worst decile saw market-to-book value ratios close to 85%. The decline in market-to-book value ratios translated into an increase in median wrap fees (Exhibit 3) from single to double digits by the second quarter of 2010, with the hardest-hit stable value funds (presumably with the lowest market-to-book value ratios) paying 20 basis points.[4]

Exhibit ❷ Market-to-Book Value Ratios – Callan's Stable Value Database Group

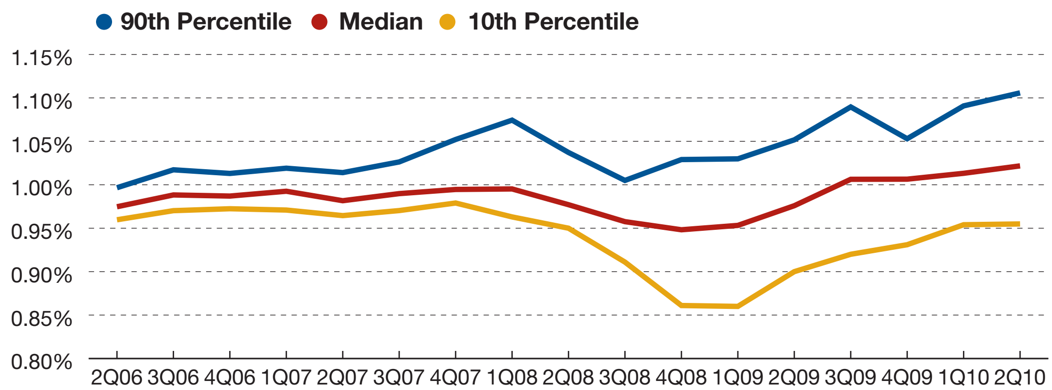
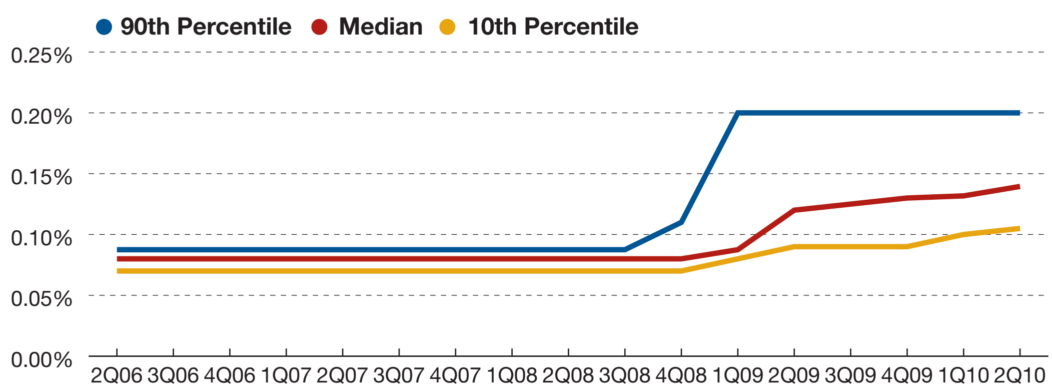


Exhibit ❸ Wrap Fees – Callan's Stable Value Database Group

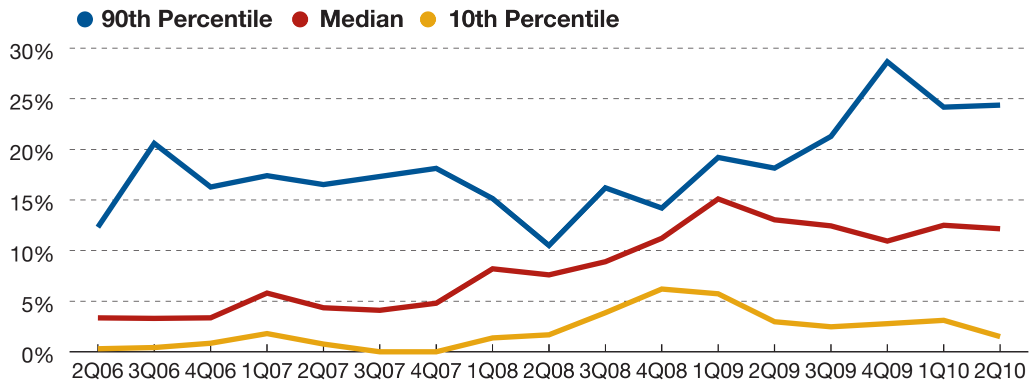


3 J.P. Morgan's Stable Value Group

4 Includes both new, more expensive contracts and older, less expensive contracts.

In addition to higher wrap costs, another major change occurred as investment guidelines imposed by wrap providers have become much more conservative since 2008. Wrap providers have told stable value managers to shorten their durations and improve their credit quality. Most notably, cash allocations within stable value funds have increased. The median cash allocation across Callan's Stable Value Database Group was roughly 4% in mid-2006 according to **Exhibit 4**; this increased to 12.5% in 2010 (note the wide range over time). Stable value funds are also holding more Treasurys and fewer distressed assets in order to meet the guidelines of much more risk-averse wrap providers.

Exhibit ④ Evolution of Cash Allocations Over Time – Callan's Stable Value Database Group



In addition to higher costs and more stringent guidelines, wrap providers have pushed for additional provisions allowing for early termination in new contracts. These provisions allow for termination under certain circumstances, such as changes in laws and regulations governing stable value accounts, changes in ownership or control of a stable value portfolio, or the loss of book value treatment by a stable value account. Under the latter provision, a stable value portfolio may quickly become distressed if it were to lose a single wrap provider during a period of low market-to-book value, as all other wraps could subsequently be terminated.

Evolutions in the wrap landscape have caused some plan sponsors to change their approach to stable value. One plan sponsor reports closely monitoring the historical credit rate which is pub-

"We're closely monitoring the market-to-book value ratio, making sure we're close to 100% or at least in the 98% to 99% range, in addition to the contract quality distribution and the duration distribution. Even though the quality of the assets may not have changed dramatically over the past two or three years, the credit quality of the wrap provider may have changed."
—Patrick Baumann, Harris Corporation

lished for participants. Rather than guaranteeing the rate for a certain period, the plan sponsor has elected to let the credit rate be taken on a daily basis—similar to any other fund. Additionally, many plan sponsors are more carefully monitoring market-to-book values.

Plan sponsors also report that they need to be more up front with the investment committee in explaining why their same wrap provider may view their portfolio quality differently.

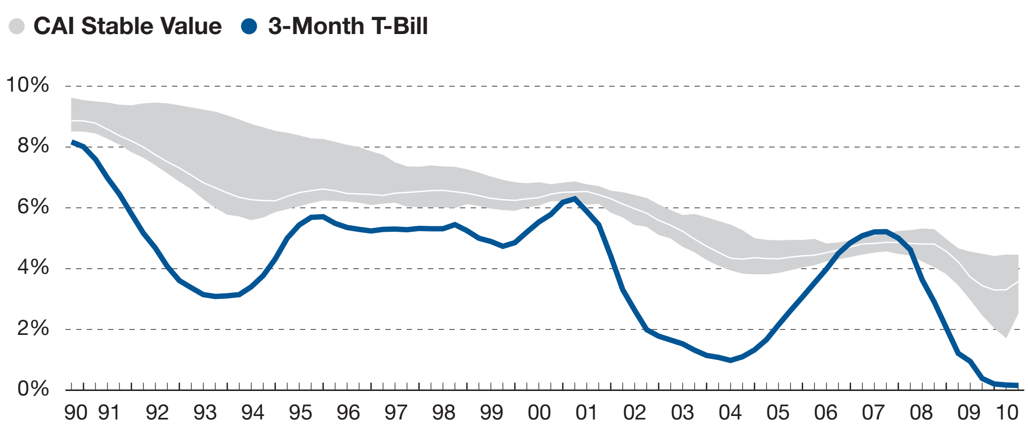
Exhibits 5 and **6** explore the estimated impact of these aggregate changes. Exhibit 5 compares the yield of a typical stable value fund over time to that of the three-month Treasury bill (a proxy for money market funds). Since 1990, stable value funds have not always yielded more than money market funds. However, they have done so most of the time due to two basic assumptions:

- The yield curve is positively sloped over most time periods, resulting in stable value fund yields exceeding those of money market funds (due to stable value funds' longer duration).
- The additional yield achieved through the positive slope has historically compensated the investor for the extra fees and added complexity of stable value funds.

Other assumptions that have historically held true (and most continue to hold true) for stable value to remain attractive relative to money market funds include:

- Additional yield from the positive sloping yield curve will compensate for any negative impact of cash flows.
- Additional yield will also compensate for potential future increases in short-term interest rates.
- Wrap providers are creditworthy.
- The underlying portfolio, which is wrapped, can afford to take more risk than money market funds.

Exhibit ⑤ Rolling One-Year Returns for Callan's Stable Value Database Group and Three-Month Treasury Bills for 20 Years Ended June 30, 2010



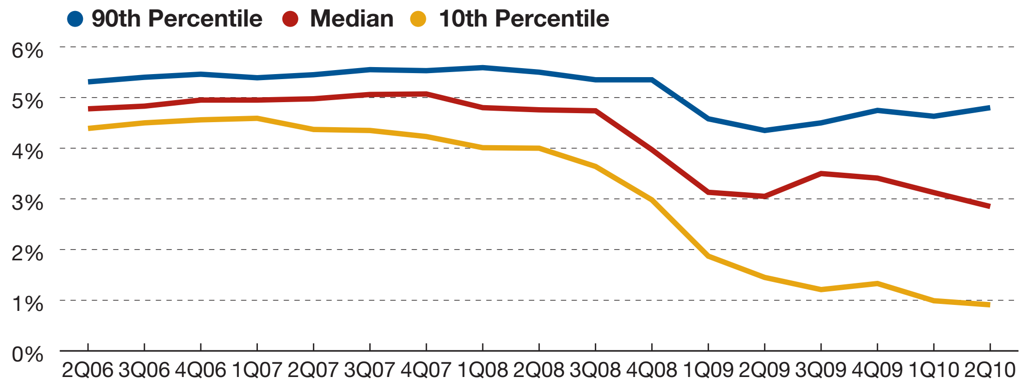
Because of these assumptions, yield premiums of stable value funds over money market funds have historically been about 1.5%. However, eating into these yields are the aforementioned changes mandated by wrap providers. Callan estimates that higher wrap provider costs can shave 10 to 15 basis points from stable value fund yields. The required shorter durations and increased cash allocations potentially remove another 10 to 30 basis points. Meanwhile, higher required Treasury allocations can reduce stable value fund yields by 10 to 40 basis points **(Exhibit 6).**

Exhibit ⑥ Changes in the Wrap Market and Their Effects on Yield

Changes	Effect on Yield
Higher costs	-10 to -15 basis points
Shorter durations	-10 to -30 basis points
Higher Treasury allocations	-10 to -40 basis points

While in 2006 the median stable value fund yielded roughly 5% with a very narrow spread between the highest and lowest crediting rates, today median crediting rates are below 3% **(Exhibit 7).** The spread in stable value yields is also notable. While some stable value funds still have crediting rates close to 5%, others limp along with rates less than 1%.

Exhibit ⑦ Crediting Rates - Callan's Stable Value Database Group



In effect, the differences in wrap provider costs, investment guidelines and consequently crediting rates have turned DC plan sponsors into a universe of haves and have nots when it comes to stable value funds.

"Some of the very organizations that were going to exit the wrap provider market are coming back in and actually increasing capacity. So we're not actually seeing a contraction of wrap writing. It's a reversal from where it was just several months ago—it seems there is a recovery and that things are improving." —Mark Kelliher, Deluxe Corporation

Plan sponsors with high quality stable value portfolios have found themselves somewhat insulated from issues within the wrap provider market, while those whose stable value funds are struggling are subject to some of the most severe restrictions noted above.

Increased fees in the wrap marketplace could potentially entice more providers to return. But if the wrap market is opening up, it may only be for the highest quality stable value funds.

Plan Restrictions by Wrap Providers

The restrictions that wrap providers are imposing on plan sponsors with stable value funds is another area with inconsistent impact. Generally speaking, wrap providers have become much more stringent when it comes to plan provisions that might affect stable value flows. For example, restrictions on potentially competing funds have been ratcheted up considerably and plan sponsors offering separate account stable value funds may find their hands tied when they seek to add TIPS options or self-directed brokerage windows.

"A plan sponsor even considering some M&A activity would basically open the door for the wrap provider to change some of the constructs. That is very concerning."
—Patrick Baumann, Harris Corporation

Lay-offs, mergers and acquisitions, and other changes to participant populations are also being more closely examined by wrap providers—sometimes providing an escape route for separate account wrap providers determined to terminate their contracts. In such cases, if the market-to-book value is below 100%, this could cause considerable discomfort for plan sponsors that would then be faced with a decline in the fund's value.

Another area of concern surrounds rumors that stable value wrap providers will extend put provisions from the traditional one year to three years. While historically plan sponsors in stable value collective trusts were required to provide a one-year notice to exit their stable value fund, today some are facing notification periods as long as three years. Again, depending on the quality of the underlying portfolio and the market-to-book value ratio, some stable value managers and plan sponsors have been able to resist the most draconian of these wrap provider demands.

Impact of Financial Reform on Stable Value

Financial reform created another layer of uncertainty in the stable value market. The Dodd-Frank Wall Street Reform and Consumer Protection Act, which was signed on July 21, 2010, may have the result of classifying certain stable value wraps as swaps.

"We think there will be plenty of room in the legislative and regulatory spheres for swaps to continue. We'll have to watch them very closely."
—Ken Porter, The American Benefits Council

Ultimately, the focus narrowed to synthetic wrappers: if they are classified as swaps, wrap provider costs could go even higher. In a worst-case scenario, the definition of synthetic stable value fund wraps as swaps could make them untenable, dramatically narrowing the wrap market.

The final impact of financial reform on stable value ultimately rests with a joint study under way by the Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission looking at whether synthetic stable value wraps qualify as swaps. In the end, the commissions are in a position to ignore the results of the study if classifying stable value wraps as swaps is deemed to not be in the public's interest. Further, the legislation exempts existing contracts. Nonetheless, the situation requires continued monitoring.

"The study is basically an opportunity to get stable value out of the limelight without necessarily saying that stable value got a special deal in the legislation. My view is that the study is a non-starter and that synthetic stable value wrap providers will not be classified as swaps."
—Mark Kelliher, Deluxe Corporation

Is Stable Value Still Attractive in a DC Plan?

Going forward, do stable value funds belong in DC plans? The answer varies depending on the plan sponsor. Sponsors with struggling stable value funds have admitted that they are simply biding their time until money market yields increase and they are in a position to replace their stable value funds with alternative capital preservation vehicles. Other plan sponsors, like Deluxe and Harris Corporations, remain confident in their stable value funds and will continue to offer them.

"We'll remain a strong proponent of stable value. Stable value clearly complements money market and bond funds as participants build their portfolios. At the same time, it is more important than ever to actively monitor the performance of stable value managers. Plan sponsors need to be very active in managing stable value, the same as they actively manage their credit when they deal with a bank and have a credit facility."
—Patrick Baumann, Harris Corporation

The importance of active stable value fund management has been a key lesson from the crisis. Active management implies due diligence such as benchmarking the underlying portfolio within the stable value fund, keeping track of the market-to-book value ratio and understanding the credit worthiness of the wrap provider. A clear lesson from the crisis is that stable value funds are not commodities and careful due diligence is essential.

Plan sponsors seeking alternatives to stable value have few options. Short-term yields remain too low for many plan sponsors to contemplate replacing the stable value fund with a money market vehicle. Further, timing is critical. Kelliher comments, "You would need to time it so that the stable value fund's market value exceeded its book value, because if you do a changeover like this when market value is less than book value—even a scintilla less—the plan sponsor is on the hook for that loss and not the wrap provider."

Another approach that some plan sponsors have considered is unwrapping the stable value fund. However, doing so turns it into a short to intermediate duration bond fund, which does not qualify as a principal protection vehicle. Most stable value funds serve as principal protection vehicles in DC plans, thus, in this situation, it is again likely that the plan sponsor would also need a money market fund to provide principal preservation.

Despite their low yields, Baumann points to the value of money market funds during financial crises. "We had a money market account with a very low level of utilization prior to the financial crisis, and we thought about terminating it and reallocating those assets to stable value. As the financial crisis progressed we saw a fourfold increase in assets coming into the money market account. Maybe this was due to the money market account being solely invested in U.S. Treasury and agency equivalents. Or perhaps plan participants were looking for safety in their principal rather than return; they were willing to go into the money market fund even though it didn't pay any interest or yield."

Conclusion

In the aftermath of the financial crisis, the stable value landscape shifted and continues to evolve. While stable value seems to have narrowly escaped financial reform, wrap provider changes—including increased costs, more conservative investment requirements and stricter oversight of plan modifications—have impacted these funds' appeal. Additionally, potentially rising interest rates could reduce stable value funds' attractiveness relative to money market funds. By some predictions, the stable value premium over money market funds could fall to less than 1%. Yet stable value funds continue to be favored by plan participants (especially retirees) and, for now, boast crediting rates that typically compete aggressively with low money market yields, albeit at lower rates than before the crisis.

Overall, the major lesson learned is that stable value funds are not a commodity, but vary greatly and require active oversight. Going forward, plan sponsors will need to carefully evaluate wrap providers together with the underlying fund assets to assess whether stable value funds are still attractive with the added constraints, or if other options are more appropriate for their DC plan.

Callan would like to thank the following for contributing to this paper:

Patrick Baumann, Harris Corporation

Since joining Harris Corporation in 1997, Patrick Baumann has served in various international finance and treasury positions of increasing responsibilities. As the Assistant Treasurer, his key responsibilities are bank relations, foreign exchange, 401(k) investment oversight and international cash management. Patrick gained experience with Bank of America (formerly Barnett Bank) and SunTrust for eight years before joining Harris Corp.

Patrick also serves as an Investment Sub-Committee member at the Florida Institute of Technology. He previously served on the Export-Import Bank of the United States' Advisory Board. Patrick earned a B.S. in Business Management from Jones College and an MBA from City University in Zurich. He is accredited as a Certified Treasury Professional (CTP).

Mark Kelliher, Deluxe Corporation

Mark Kelliher oversees $1.6 billion of qualified and non-qualified retirement plan assets for Deluxe Corporation. In this capacity, he is responsible for guiding and executing decisions of the company's governance committees and overseeing the administration of Deluxe's unbundled qualified plan. His duties include oversight of 16 manager accounts and coordinating the recordkeeping and trustee services for 10,000 plan participants.

Prior to being a plan sponsor, Mark was directly involved in asset management as an equity Portfolio Manager for both registered mutual funds and high-net-worth clients. Mark is a CFA Charterholder and earned an MBA from the University of St. Thomas in Minneapolis.

Kenneth Porter, American Benefits Council

Ken Porter is Actuarial and International Benefits Consultant for the American Benefits Council. Ken works with the policy and advocacy staff on the full array of U.S. health, retirement and non-qualified deferred compensation matters on behalf of Council members. In addition, Ken has primary responsibility for international activity. Ken also serves as Executive Director of the American Benefits Institute, the policy and research affiliate of the American Benefits Council.

Before joining the Council staff in 2009, Ken was the Council's Board of Directors representative (and onetime chair) from The DuPont Company. He also served as the Corporate Chief Actuary and as Treasurer of ChemFirst, Inc., a chemical manufacturing subsidiary of DuPont.

Ken has served under the direct appointments of senior administration and congressional officials of the U.S. government. He has also testified before committees and subcommittees of the U.S. Congress, the Department of Labor, the Department of the Treasury, and the Pension Benefit Guaranty Corporation. He is a member of the Wharton Executive Education Advisory Board, and has served in a variety of leadership capacities for the actuarial profession in the United States.

Glossary

Crediting rate: The interest rate on the book value of a stable value fund. The crediting rate may be fixed or it may be reset at predetermined intervals. It will be affected by differences in the market value versus the book value of the stable value fund.

Duration: A measure of the sensitivity of a bond's price to a 1% movement in interest rates. Duration is usually given in years. For example, a four-year duration means a bond will decrease in value by approximately 4% if interest rates rise 1% and will increase in value by approximately 4% if interest rates fall 1%. Stable value funds' underlying bond portfolios have historically had a duration target of three years.

Market-to-book value: The ratio of the current (market) share price to the book value (a fund's historical cost or accounting value) per share. It measures how much a fund is valued at present, in comparison to the amount of capital invested by current and past shareholders. The ratio attempts to indicate performance by identifying whether the portfolio has a gain or loss based on the current value of its securities.

The market-to-book ratio is a closely watched statistic in the stable value industry. Stable value funds provide a guarantee that their investors can make withdrawals at book value (except in certain predefined circumstances) regardless of the fund's market value. The financial crisis was pivotal for stable value funds because it pushed many of these funds' market values significantly below their book values. Had stable value investors stampeded to exit those funds, wrap issuers would have been responsible for the difference between the market and book values of the funds. This provoked wrap providers to initiate changes in the industry to match their perceived increase in risk level.

Swap: A contract by which two parties exchange securities to substitute the maturity (bonds) or quality of issues (stocks or bonds) in order to benefit each party because investment objectives have changed. Stable value funds use derivatives called wrappers that are key to their conservative investment strategies and help to generate steady returns.

Synthetic wrap: A stable value fund using a synthetic wrap holds the investment and insurance components of a traditional Guaranteed Investment Contract (GIC) unbundled in a stable value fund. In a traditional GIC, the plan owns a group annuity contract and the insurance company owns and retains custody of the assets underlying the contract. With a synthetic wrap, the plan holds custody of the assets and negotiates for the wrap contract (which provides book value protection) separately. Synthetic GICs offer wider diversification away from what was previously a single-industry concentration in GIC funds, greater flexibility and ownership of assets.

Typically, the plan trustee holds two contracts: one with the asset manager and another with the wrap provider. Investment policy guidelines such as the duration of the assets and their credit quality are agreed to by all parties at the time of purchase, and the wrap agreement states that book value protection benefits will be paid only if these guidelines are followed.

Glossary (continued)

Wrap contract: A contract issued by insurance companies, banks or other financial companies that provides book value protection of stable value funds' portfolios from interest rate movements and other market value risks. The wrap contract guarantees that participants will receive the fund's book value even if the market value drops (with some exceptions). Large plans often organize the contract directly with the wrap provider, while smaller plans may buy collective trusts from large money managers that have the insurance contract with the provider.

Yield curve: The graphical depiction of the relationship between the interest rate/yield (or cost of borrowing) and the time to maturity between bonds with the same credit quality (usually Treasurys). In most market environments the available yields are higher for longer-term bonds.

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APPENDIX G

Research and Education

ii. Lifetime Retirement Income Solutions

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Lifetime Retirement Income Solutions

A Good Fit For Defined Contribution Plans?

- Lifetime retirement income solutions, including annuities and longevity insurance, are garnering much attention from industry regulators and product providers that are seeking to simplify and ensure retirement income stability for retirees.
- Despite the variety of different solutions available for defined contribution (DC) plan administrators, annuities and other income products are not commonly offered in DC plans, and when they are available their usage by plan participants is quite low.
- Callan finds that it is generally neither practical nor feasible for most plan sponsors to include lifetime retirement income solutions in their DC plans. Fortunately, other options for supporting plan participants in dealing with longevity risk during retirement are readily available from most recordkeepers, including drawdown tools and retirement income projections.

Lifetime income solutions received a lot of air time in 2010. In February, the Department of Labor (DOL) and the U.S. Treasury Department issued a Request for Information (RFI) seeking public comments on what future steps should be taken, if any, to facilitate “access to, and use of, lifetime income or other arrangements designed to provide a stream of lifetime income after retirement.”[1] The RFI elicited nearly 800 responses. In May, the American Association of Retired Persons, the American Society of Pension Professionals and Actuaries, and the Women’s Institute for a Secure Retirement held a Lifetime Income Summit which drew attendance from a wide range of government agencies, legislators and retirement industry professionals. Most recently, the DOL and the Treasury held a joint public hearing to obtain testimony on lifetime income options in employer-sponsored retirement plans.

1 RFI comments can be found at www.dol.gov/ebsa/regs/cmt-1210-AB33.html

Authored by Callan Associates Inc.

If you have any questions or comments, please email institute@callan.com.

About Callan Associates

Founded in 1973, Callan Associates Inc. is one of the largest independently owned investment consulting firms in the country. Headquartered in San Francisco, Calif., the firm provides research, education, decision support and advice to a broad array of institutional investors through five distinct lines of business: Fund Sponsor Consulting, Independent Adviser Group, Institutional Consulting Group, Callan Investments Institute and the Trust Advisory Group. Callan employs more than 150 people and maintains four regional offices located in Denver, Chicago, Atlanta and Florham Park, N.J.

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The Callan Investments Institute, established in 1980, is a source of continuing education for those in the institutional investment community. The Institute conducts conferences and workshops and provides published research, surveys and newsletters. The Institute strives to present the most timely and relevant research and education available so our clients and our associates stay abreast of important trends in the investments industry.

Clearly, the specter of masses of Baby Boomers running out of money in retirement due to poor spend-down planning has drawn attention. How do DC plan sponsors contribute to solving this problem? What retirement income solutions are available, and how should they be incorporated into DC plans?

In this white paper, we analyze the range of emerging DC retirement income solutions, including in-plan and rollover annuities, drawdown tools and managed payout options. We also consider the role of the DC plan in the drawdown phase of workers' financial lives, examining whether a DC plan should focus solely on accumulation of assets for retirement or if it should evolve to also facilitate retirement income management, and the best ways of accomplishing this goal.

Immediate Fixed Annuities

For many, the term "retirement income solution" is synonymous with annuity. Indeed, academics commonly point to immediate fixed annuities as an important way of guaranteeing lifetime income and combating longevity risk. For individuals who expect to live many years in retirement, and who are comfortable losing access to some or all of their lump sum wealth, immediate fixed annuities offer risk pooling that may result in a yield superior to what might be available through self insurance (such as a drawing down based on a 4% spending rule).[2] Yet the fixed annuity take-up rate is generally low, resulting in the "annuity puzzle"; despite the fact that annuities can be an attractive means of insuring against longevity risk for certain individuals, the immediate fixed annuity market remains relatively small. Only 6% of participants in 401(k) plans offering annuities as distribution options elect them upon termination.[3]

Plan sponsors must weigh fiduciary considerations when deciding whether to offer a fixed annuity as a distribution option. In 2008, the Employee Benefits Security Administration amended Interpretive Bulletin 95-1 to eliminate the safest available annuity requirement for DC plans. Further, the 2006 Pension Protection Act established a fiduciary safe harbor for the selection of annuity providers. However, plan sponsors generally find the safe harbor requirements onerous, and DC plans continue to trend away from fixed annuities as a distribution option rather than toward them.

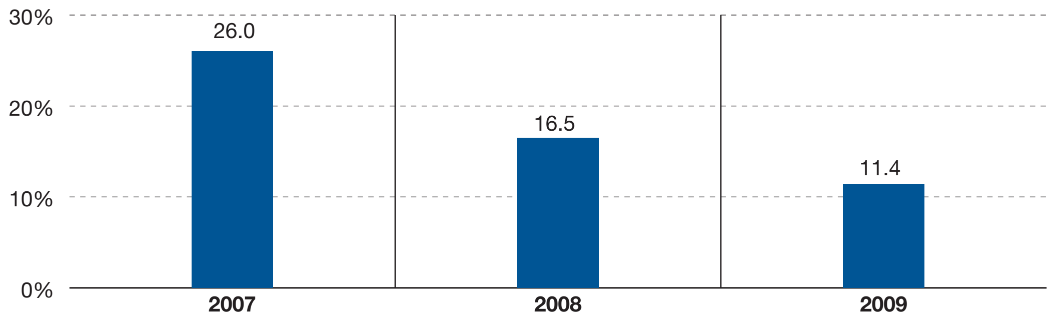
In addition, there are administrative complexities that accompany annuities. For example, all retirement plans that provide life annuities must automatically pay these benefits in the form of qualified joint and survivor annuities. Complying with these rules can impose an administrative burden and expense on plan sponsors due to the notice, waiver, revocation and spousal consent requirements.

2 Brown, Jeffery. "Life Annuities and Uncertain Times." NBER Research Reporter, Research Summary. Spring 2004.

3 *Trends and Experience in 401(k) Plans Survey.* Hewitt Associates. 2005.

Callan's *2010 DC Trends Survey* reveals that since 2007, the availability of annuities as an investment option in DC plans has declined from 26.0% to 11.4% **(Exhibit 1).**

Exhibit 1 Annuity as a Form of Distribution Payment – DC Plan Prevalence



Source: Callan Associates' *2010 Defined Contribution Trends Survey – Getting the DC Plan Back on Track.*

Due to weak participant demand, even fixed annuity rollover services are not widely offered by employers. Fixed annuity rollover services allow companies to offer—often as a voluntary benefit—a service that allows employees to roll over their DC assets into a select array of institutionally priced immediate fixed annuities from highly rated insurance companies. Most major recordkeepers offer either their own version of this rollover service or have links to outside annuity rollover services. The annuity rollover service vets annuity providers, operating much like a fixed annuity broker. The DC participant provides the requirements of the fixed immediate annuity he or she would like (such as joint and survivor, or period certain), and then the annuity rollover service returns the rates available among the annuity providers on its platform. Because the service can be offered as a voluntary benefit, it is arguable that the fiduciary liability of the plan sponsor is limited. Even so, in Callan's *2010 DC Trends Survey,* only 2.9% of large employers offer any type of rollover immediate fixed annuity service to their employees.

In-Plan Guaranteed Income for Life Solutions

There are six key reasons that investors do not like immediate fixed annuities:

- **Bequest motive:** individuals wish to be able to bequeath money to their heirs.
- **Counterparty risk:** individuals do not trust or have confidence in insurance companies, a fear that has been heightened by the recent financial crisis.
- **Control:** individuals wish to have discretion over their money and do not want it "doled out" by an insurance company.
- **Undervaluing longevity risk:** individuals do not appreciate the risks associated with longevity.
- **Nature of transaction:** individuals do not like to engage in irreversible financial transactions involving large lump sums.
- **Un- or under-used benefits:** individuals fear dying too soon to enjoy their income streams.

At the same time, investors demonstrate that they do wish for certain guarantees when it comes to retirement income. In a recent survey, nearly three-quarters (73%) of 401(k) participants gave "very important" ratings to both "knowing they would have a consistent, guaranteed monthly income in retirement other than Social Security" and knowing their "health care costs would be covered."[4]

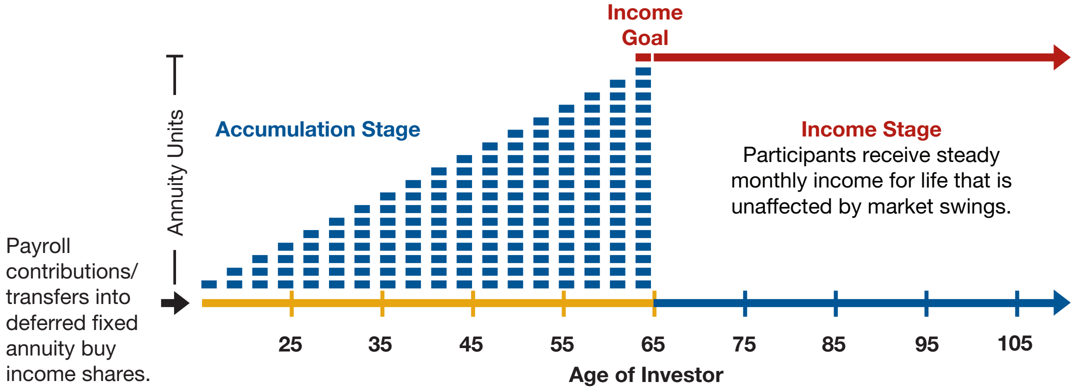
In response, insurance companies and investment managers have been busy creating a new breed of retirement income solutions that are designed to fit into a retirement plan, ideally as part of the default fund. These products seek to address perceived and actual issues investors have with annuities, while providing them with guaranteed income in retirement. Following is a description of three of these evolving products.

1. In-plan deferred fixed annuities

In-plan deferred fixed annuities allow DC participants to build up fixed annuity income over time. These products come in a variety of flavors, but **Exhibit 2** displays their basic operational concept.

Generally speaking, money that goes into the in-plan deferred fixed annuity buys income shares that can be annuitized at retirement. Over time, the shares build up until the desired income level is achieved and the participant is able to receive a certain level of guaranteed monthly income.

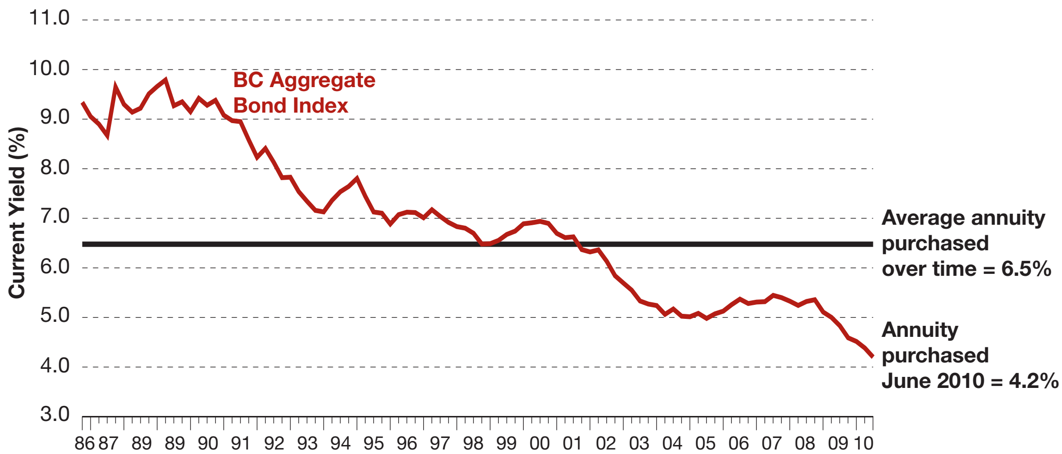
Exhibit ❷ In-Plan Deferred Fixed Annuity Model



4 "Restoring Confidence: Saving for the Future of Retirement Survey." Barclays Global Investors and Boston Research Group. 2009.

The key benefit to having deferred fixed annuities as part of the DC plan, versus simply allowing participants to roll into an immediate fixed annuity at retirement, is the potential reduction in point-in-time risk. This is the risk that an annuity purchase will be made when interest rates are relatively low, thereby resulting in low annuity income. **Exhibit 3** shows historical bond yields as a proxy for interest rates since 1986. If an individual purchased an annuity at retirement in June 2010, for example, his or her income would be tied to a lower interest rate environment than an annuity purchased 20 years earlier. If instead the investor had begun purchasing the annuity in 1990 and continued through retirement in 2010, the dollar-cost-average effect would provide a higher average payout and reduce the point-in-time risk of investing a large sum in a fixed immediate annuity when interest rates are low.

Exhibit 3 Current Yield of the BC Aggregate Bond Index



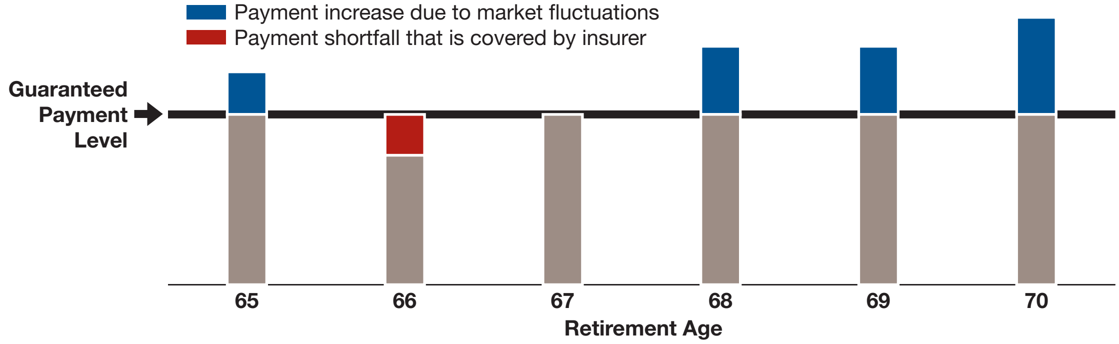
Source: Barclays Capital Inc.

2. In-plan guaranteed minimum income benefit (GMIB) products

In-plan guaranteed minimum income benefit (GMIB) products allow participants to purchase units of guaranteed minimum income that can increase with the value of the underlying investment fund (but that don't decrease below the guaranteed level if the value decreases). Similar to the deferred fixed annuity described above, the participant's contributions to the GMIB purchase lifetime income. The difference between the two, however, is that with the GMIB, the participant's assets are invested in a daily valued balanced portfolio. A "step-up" is available, so that lifetime income can increase as the account value increases during the accumulation phase. During retirement, there is also an opportunity for annual income to increase as the value of the portfolio increases.

Exhibit 4 shows how, conceptually, some in-plan GMIB products protect downside while potentially producing upside in retirement due to market appreciation in the underlying portfolio (of course, products differ depending upon the issuer). During the retirement income phase, a certain level of income is guaranteed, depending on when the income benefit product was purchased and how the underlying balanced portfolio fared. The horizontal line represents the guaranteed payment level. However, the value of the underlying portfolio—a balanced fund—fluctuates, creating potential upside in the guaranteed payment. In this example, at age 65 portfolio fluctuations indeed result in increased income (represented by the blue portion of the bar). However, at age 66, portfolio fluctuations eliminate that increase and then some (as represented by the red portion of the bar). Even so, the guaranteed payment level is maintained. By age 67, market fluctuations eliminate the loss in value, adjusting the payment. At age 70, payments exceed the guaranteed payment level due to underlying portfolio performance.

Exhibit 4 Payments During Income Phase – In-Plan Guaranteed Minimum Income Benefit Model

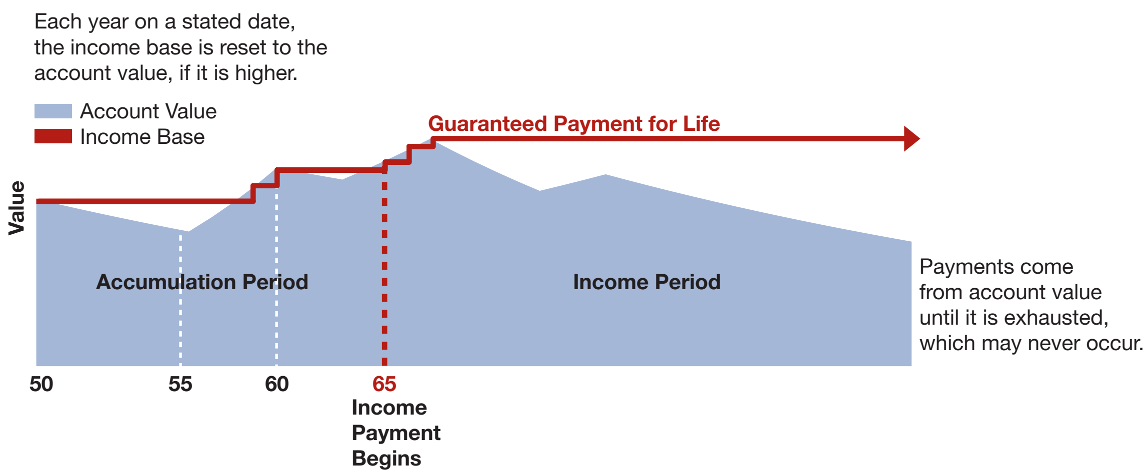


3. In-plan guaranteed minimum withdrawal benefit (GMWB) products

In-plan guaranteed minimum withdrawal benefit (GMWB) products are the most broadly offered in-plan products by insurance companies. They are designed to allow participants to use their contributions to lock in a certain base level of wealth from which their retirement income will be drawn. In the accumulation phase (typically starting at age 50), participants who buy into a GMWB lock in the value of the underlying balanced fund for income distribution purposes. While the account value may fluctuate, the income base is guaranteed by the insurance company.

Exhibit 5 shows a simplified example of how GMWBs generally work. The account value is represented by the blue area and the income base by the red line. At age 50 when the GMWB is purchased, the two are equal in value. However, their values diverge as the account value is affected by market fluctuations, while the income base (which is guaranteed by the insurance company) is not. In fact, the account value in this example declines through age 56 due to market weakness and recovers its original value at about age 58. As the market continues to rebound, the account value exceeds the income base value at age 59. At that point, the step-up feature of the GMWB comes into play. This feature allows the income base to increase on an annual basis to set the account value's new high water mark. Every year that the account value exceeds the income base, the income base can be reset to the higher account value, and it is protected against decline if the account value decreases. At retirement, the guaranteed payments for life (e.g., 5% of the income base) continue at the highest water mark level, even if the account value shrinks during the income or drawdown period. If the account runs out of money during the decumulation phase, annuity payments are still provided to the participant.

Exhibit 5 In-Plan Guaranteed Minimum Withdrawal Benefit Model



The benefits of in-plan annuities are clear: protection of retirement income, mitigation of market risk and avoidance of longevity risk. Further, these products address many issues common with retail or rollover annuities; they potentially offer institutional pricing and a good degree of flexibility, depending on the product.

Yet, despite the breadth of development that has occurred in the in-plan annuity space, few DC plans offer in-plan annuities. According to Callan's *2010 DC Trends Survey,* only 4% of plan sponsors offer an in-plan annuity as an investment option, and only 7% said they were very likely to offer one in the next year. Some of the key reasons that plan sponsors do not offer in-plan annuities include:

- **Fiduciary concerns:** Plan sponsors lack clear guidance on the criteria they should apply in selecting and monitoring annuities. The current safe harbor requirements for distribution annuities are generally considered onerous. Further, the safe harbor does not clearly pertain to in-plan annuities. Without a safe harbor, the extent of plan sponsors' liability is unclear should the insurer fail to make good on their guarantees to participants.
- **Lack of recordkeeper support:** Many DC recordkeepers do not provide data transfers, transaction support or integrated communication for in-plan annuities. Further, there is currently a lack of consistency when it comes to in-plan annuities' infrastructure needs; a recordkeeper that supports in-plan annuity X will not necessarily support annuity Y.
- **Portability issues:** The lack of recordkeeper support also creates portability issues. If a plan sponsor with an in-plan annuity wishes to change recordkeepers, considerable challenges can arise if the in-plan annuity is not supported by the new recordkeeper. Likewise, the plan sponsor may find that terminated participants with balances in an in-plan annuity may be stranded in the plan if they do not have an IRA into which they can roll the in-plan annuity. Finally, if plan sponsors wish to eliminate or change the in-plan annuity, they may be forced to continue supporting the existing version for individuals with balances in it, which poses administrative headaches as well as possible fiduciary concerns.
- **Evaluation of cost:** Insurance costs have risen substantially across the board and may continue to do so. While many in-plan products state costs of 85 to 90 basis points for their insurance features, they also allow for increases—at any time—to maximums as high as 1.5%.
- **Value:** Related to cost is the concept of how much value these products may actually provide. Product contracts specifically state that a strong-performing underlying fund may result in a low likelihood of the insurance company paying *any* of its own money out to participants. In such cases, the insurance fees will have been paid for nothing.
- **Communication concerns:** In-plan annuities can be quite complicated to explain to plan participants. Plan sponsors run the risk of participants unknowingly paying for the insurance afforded by an in-plan annuity without understanding (or desiring) the annuity protection. This is especially a potential issue if the in-plan annuity is part of the default investment fund.

These issues currently create too many complications and potential problems for most plan sponsors to consider offering such products in their plans.

Future Solutions: Longevity Insurance

Product development of retirement income solutions is ongoing, and many within the industry are seeking to address the issues raised above. For example, the SPARK Institute is creating standard file and data formats to address support and portability issues of in-plan annuities. Investment managers are seeking to create in-plan annuity products that are backed by multiple insurers to reduce counterparty risk. Legislators and regulators are actively investigating ways to provide support and guidance to DC plan sponsors in terms of their fiduciary obligations with respect to in-plan annuities.

But the fundamental question remains: do these products fundamentally belong in DC plans? We next examine an emerging version of an in-plan annuity that is creating some interest within the industry: longevity insurance.

Longevity insurance, also known as Advanced Life Deferred Annuities, is a much talked about potential alternative to the in-plan annuities described above. Moshe Milevsky of York University was one of the first academics to envision this product as a new way to solve the dilemma of providing lifetime retirement income. In his paper *Real Longevity Insurance with a Deductible: Introduction to Advanced-Life Delayed Annuities,* Milevsky says, "Engaging in irreversible financial transactions—that is, annuitization—involving large sums of money will never be appealing to individuals regardless of (whether they grasp) the importance of longevity insurance." However, he posits, "The alternative is perhaps slow annuitization over a very long period of time or the gradual purchase of longevity insurance that starts providing income only at any advanced age."[5]

The concept of longevity insurance is to purchase an annuity over many years, beginning at a young age. The annuity pays much later when the risk of outliving one's assets is high—at an advanced age such as 80 or 85. Because annuity payments do not begin immediately, longevity insurance costs could be considerably less than other annuities— as much as 35% to 40% lower by one insurer's estimate. Essentially, longevity insurance can be considered akin to catastrophic health insurance with a high deductible: it only kicks in when longevity risk becomes substantial and financially unsupportable (when one is elderly) and can accordingly be priced less. Another potential advantage of longevity insurance is that it creates a much easier retirement income management equation. Instead of an open-ended pay-down period for retirement savings (i.e., until one dies), longevity insurances provides a finite timeframe for the pay-down period. If the longevity insurance payments begin at age 80, an individual retiring at age 65 knows that his or her retirement nest egg must last for fifteen years, or until the longevity insurance payments become available.

Jason Scott of Financial Engines has gone so far as to assert that, "Almost every retiree would likely benefit from at least a modest allocation of assets to a longevity annuity."[6]

5 North American Actuarial Journal, Volume 9, No. 4.

6 Scott, Jason. "The Longevity Annuity: An Annuity for Everyone?" Financial Engines. June 2007.

Conceptually, longevity insurance has many positive attributes, but there are also a number of drawbacks.

- **Lack of investor interest:** Like all annuity products, the "curb appeal" of longevity insurance is low. Even at a low price point, people are unlikely to be comfortable investing in a product that does not pay off until many years into the future—and potentially does not pay off at all should the investor die prior to the payment date. Further, as with all annuities, investors are likely to shy away from entrusting their distant financial future to a single insurance company, especially in light of the recent financial turmoil.
- **Few or limited products:** Few insurance companies offer longevity insurance due to institutional and regulatory obstacles.
- **Potential violation of required minimum distribution (RMD) rules:** From a plan sponsor perspective, longevity insurance has many of the same drawbacks as other in-plan annuities, such as fiduciary, portability and communication issues. It also could violate RMD rules that require payouts from certain DC plans to begin at age 70.5. Since payouts likely start at age 80 or later with longevity insurance, this would create a critical disconnect for those adhering to the RMD rules in these situations.

In other words, as with all in-plan annuities, while the concept of longevity insurance is appealing, at this time, it fails the practicality and feasibility test for inclusion in the typical DC plan.

Other Avenues of Retirement Support

Beyond in-plan or other types of annuities, there are other ways that plan sponsors can support workers in retirement planning, including income management. Many recordkeepers offer a host of resources for plan sponsors and participants.

Drawdown Tools

One simple approach is to offer participant education on income in retirement. Increasingly, recordkeepers are developing and promoting retirement income modeling and planning tools. These include tools that help employees develop a budget for retirement, identify how much they can afford to spend during retirement without exhausting their savings and even guide them in how to invest during retirement to balance longevity and market risks. The importance of such tools should not be underestimated. A LIMRA report found that, in a series of focus groups involving recently retired workers, the retirement planning and income management process was informal at best:

> *Few participants have developed goals for sufficient asset levels in future years. Nor have many assessed when they should change their asset allocations (e.g., when they retire or as they age) or whether they should change their spending levels at retirement to meet evolving conditions. When asked how they expect to adjust to inevitable changes in costs, health and market conditions, the typical response was, "I'll just know." These participants appear to have relied on intuitive reasoning their entire adult lives and have faith in their ability to sense when change is necessary.*[7]

Recordkeepers are also increasingly helping to educate workers on appropriate retirement income levels by incorporating retirement income needs and projections into participant statements. Many also provide retirement income projections and tools on their benefits site. In some cases, they offer recommendations on how to close the gap between the likely retirement income balance and the required balance: how much more the participant needs to save, how much longer he or she may need to work and better ways to invest.

Repositioning DC savings around retirement income, as opposed to current balances, may also facilitate the use of investments such as fixed annuities in retirement. A key issue many people have with fixed annuities is the sticker shock they experience upon learning that their $250,000 nest egg will net them well under a couple thousand dollars per month in retirement. Accustoming people to think in terms of monthly income instead of a lump sum may make fixed annuities more palatable.

At the same time, some plan sponsors question if there might be additional fiduciary responsibility associated with communicating projected income in retirement to plan participants. In response to the DOL/Treasury RFI released earlier this year on retirement income solutions, a number of commenters

7 "Spending and Investing in Retirement: Is There A Strategy?" Report by The Society of Actuaries and LIMRA. 2006.

asked the DOL to clarify Interpretive Bulletin 96-1, so that plan sponsors would have assurance that retirement management communication would constitute education as opposed to advice. The DOL and Treasury have responded by asking for input at the retirement income solutions hearing about what would constitute useful information to participants for managing and spending their retirement benefits. Additionally, they seek feedback on the value to DC participants of having their DC account balance translated into a projected monthly income stream in retirement within their benefit statement.

Managed Payout Mutual Funds

Plan sponsors can also communicate and facilitate the use of rollover options that manage income in retirement. The specifics of these funds vary, but their fundamental goal is to help retirees protect against longevity risk—to avoid running out of money in retirement. We briefly describe two versions of managed payout mutual funds.

- **Principal preservation vehicles** are one of the more common types of managed payout mutual funds. They seek to generate a steady income stream (e.g., 4% annually) while preserving the investor's capital. Investors decide how much risk they are willing to assume in exchange for different levels of potential income.
- **Time horizon funds** are geared to pay out over a certain period of time rather than perpetually. They aim to preserve an orderly drawdown of accumulated assets in retirement, often with longevity risk and inflation protection features.

These products offer a means to help retirees navigate the retirement income arena more successfully. However, as with the retirement income tools and projections outlined above, they *do not* guarantee that income streams will be paid throughout the lifetime of the retiree. Moreover, as mentioned above, some plan sponsors worry about the fiduciary responsibility they may assume in educating participants about income management in retirement.

Conclusion

Lifetime income solutions—to the extent that they are annuities—are likely not a good fit for many DC plans at the present time. Currently, obstacles to making such investment options available to DC participants are daunting for all but the most paternalistic and dedicated plan sponsors. The majority of plan sponsors do not fit this profile; only 22% of plan sponsors even want retiree accounts to remain in the 401(k) plan.[8]

Although annuities are not appropriate for most plans today, they hold future potential. Certainly, the considerable advances in product development and possible legislative or regulatory support warrant ongoing examination.

8 *Trends and Experience in 401(k) Plans Survey.* Hewitt Associates. 2005.

It is important to remember that lifetime income solutions are not limited to annuities; there are a number of alternative ways that plan sponsors can assist participants in retirement planning and spending. Indeed, in exploring retirement income solutions, plan sponsors may discover that their recordkeeper already offers a variety of tools and other support to assist plan participants, such as drawdown tools that help participants know if their money will last during retirement, pre-retiree seminars and even one-on-one financial planning. For many plan sponsors, communication, education and rollover solutions are the most palatable approaches available today for supporting DC participants in retirement.

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APPENDIX G

Research and Education

iii. 2Q11 DC Observer

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DC Observer

SECOND QUARTER 2011

CASE STUDY: CUSTOM VERSUS OFF-THE-SHELF TARGET DATE FUNDS

Are custom target date funds right for your 401(k) plan? Custom target date funds feature a target date glidepath that is tailored to the plan's needs, and they also leverage the plan's core funds in investment implementation. Ten percent of plans with $100 million to $1 billion in assets and 33% of plans with assets over $1 billion elected to construct customized target date funds.[1] In this issue of the *DC Observer*, we examine the decision-making process of two plan sponsors that examined off-the-shelf and custom target date funds for their target date fund lineups, and arrived at very different conclusions.

The first plan sponsor, "Global Corporation," is a public company that has grown significantly through acquisition. Global Corporation historically offered both defined benefit (DB) and defined contribution (DC) plans. However, the DB plans are now closed. While many current employees will receive a pension benefit, new employees will rely entirely on DC plan for retirement. Recognizing that target date funds were becoming increasingly central to the retirement income adequacy of their plan participants, the investment committee recently decided to reevaluate the target date fund option in their plan, which is their recordkeeper's off-the-shelf offering. More than half of large DC plans offer the target date fund of their recordkeeper according to Callan's *2011 DC Trends Survey*. The target date fund evaluation has been one of many issues competing for the attention of Global Corporation's investment committee and staff.

The second plan sponsor, "Midwestern Corporation," is a private company that has also grown significantly over the past several years. While some employees are invited to become shareholders in the corporation and can expect their share ownership to provide meaningful retirement assets, a majority of the employees are not offered company shares and will depend entirely on the 401(k) plan for their retirement. For a variety of reasons, the company currently requires participants to withdraw their assets from the plan upon retirement. At the same time, the company feels a responsibility to provide adequate retirement income for employees and has historically provided a generous match as well as profit sharing contributions to the plan. After determining that target date funds offer the best available retirement savings solutions for employees, the investment committee recently opted to replace the plan's set of "risk-based" asset allocation funds with target date funds. Selecting the best set of target date funds is a high priority and Midwestern Corporation is willing to devote significant time to the effort.

IN THIS ISSUE

1 Casey Quirk/PSCA. "Target-Date Retirement Funds: The New Defined Contribution Battleground." November 2009.

The *DC Observer is* a quarterly newsletter that offers Callan's observations and opinions on a variety of topics pertaining to the defined contribution industry. Each issue is updated with the latest Callan DC Index™ returns.

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About the Callan Investments Institute

The Callan Investments Institute, established in 1980, is a source of continuing education for those in the institutional investment community. The Institute conducts conferences and workshops and provides published research, surveys and newsletters. The Institute strives to present the most timely and relevant research and education available so our clients and our associates stay abreast of important trends in the investments industry.

About Callan Associates

Founded in 1973, Callan Associates Inc. is one of the largest independently owned investment consulting firms in the country. Headquartered in San Francisco, Calif., the firm provides research, education, decision support and advice to a broad array of institutional investors through four distinct lines of business: Fund Sponsor Consulting, Independent Adviser Group, Institutional Consulting Group and the Trust Advisory Group. Callan employs more than 150 people and maintains four regional offices located in Denver, Chicago, Atlanta and Florham Park, N.J.

Decision One: Which Glidepath is Best?

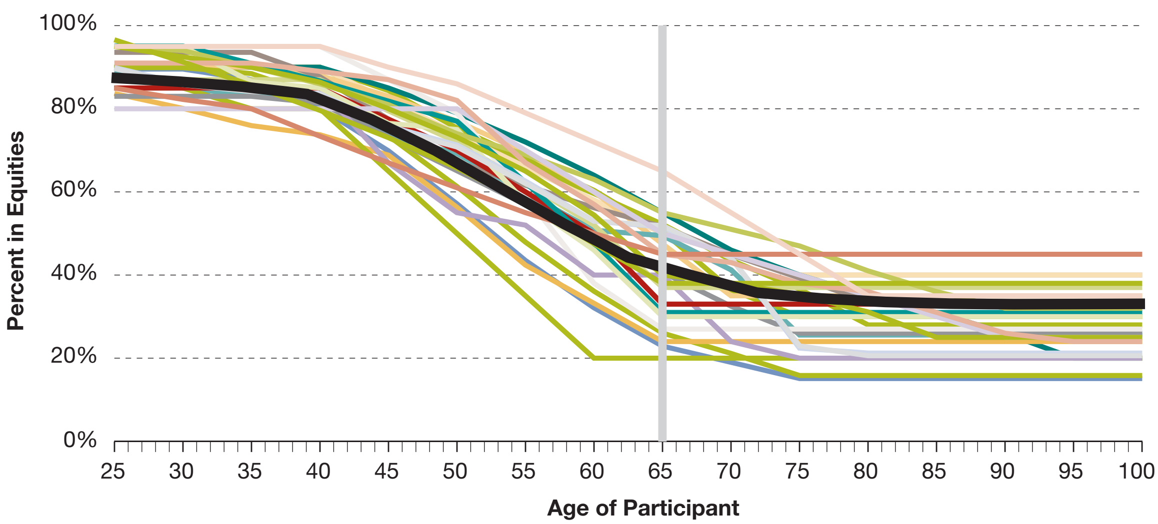
A plan sponsor considering adding or changing target date funds should determine the appropriate glidepath for the participant population before making any decisions regarding implementation. The appropriate glidepath can be meaningfully different from plan to plan depending on the preferences of the plan sponsor and the circumstances of participants. **Exhibit 1** illustrates that point by showing the range of possible glidepaths available via off-the-shelf target date funds. Each line in the graph represents a separate target date fund's equity allocation over time.

Global and Midwestern Corporations began their analyses with an examination of the degree to which various glidepaths would enable plan participants to replace certain levels of income in retirement. As an initial step, they developed assumptions required to model asset accumulation, including:

- Starting salary and salary growth;
- Expected retirement age and expected participant behavior at retirement (whether participants are expected/encouraged to withdraw from the plan at retirement or to remain in the plan);
- Other sources of retirement income (the proportion of retirement income that would be supplied by sources other than the 401(k) plan); and
- The percentage of final income participants need in order to have adequate retirement income (income replacement ratio).

Both companies determined that their 401(k) plans should aim to achieve a 65% income replacement ratio for the average participant, with the expectation that other sources of retirement income, including social security, would be available to supplement the 401(k) plan.

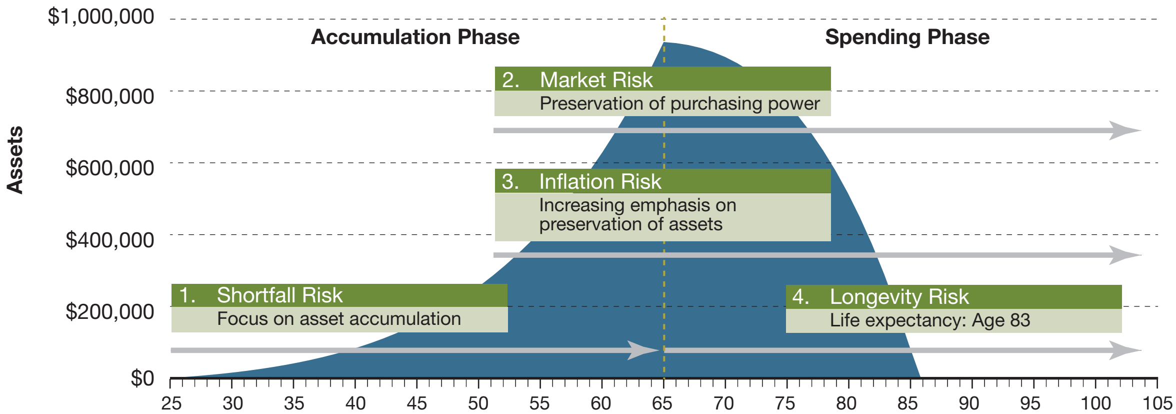
Exhibit 1: Target Date Fund Glidepath Equity Roll Downs



Source: Callan 2011 Target Date Fund Survey

Based on the initial 65% income replacement ratio assumption, Callan modeled glidepath alternatives designed to meet the replacement ratio objective, considering risks in the accumulation and spending phases (**Exhibit 2**). Phase one in the exhibit focuses on asset accumulation. Market risk and inflation risk span both the accumulation and spending phases and require a focus on preservation of purchasing power and assets, respectively. Longevity risk is a concern in the spending phase.

Exhibit 2: Risks in Accumulation and Spending Phases



The analysis suggested that Midwestern could attain their income replacement objective with a conservative glidepath that reduced equity exposure to 25% at retirement. The analysis for Global recommended a glidepath that maintained an equity allocation of 50% at retirement. While variations in assumptions led to significantly different conclusions, the primary determinant of Midwestern achieving its objective with a conservative path was its generous profit-sharing contributions.

The differences in appropriate glidepaths for Global and Midwestern translated into whether available off-the-shelf target date funds would be able to meet plan needs. In the case of Global, which sought a more aggressive glidepath, several off-the-shelf products were similar to their optimal glidepath, and merited serious consideration.

In contrast, Midwestern Corporation discovered that virtually all the available off-the-shelf glidepaths maintained higher equity allocations near and at retirement than their desired conservative path. The investment committee therefore leaned toward custom target date funds.

Decision Two: Essential Glidepath Features

Global and Midwestern next examined other features beyond the target date glidepath, including:

- Asset classes included in the glidepath,
- Fee structure,
- Active versus passive implementation of the glidepath, and
- Underlying funds and managers.

Global identified off-the-shelf products with appropriate glidepaths and proceeded to compare their features. During this process they focused on fees and the value of active versus passive management.

Although Midwestern was already leaning toward custom funds as a result of the glidepath analysis, they compared the anticipated fee structure in a set of custom funds, composed of their current core managers, to the fees of comparable off-the-shelf products. They discovered that custom funds employing their current core managers would have a significantly lower cost than the average off-the-shelf target date fund, reaffirming their decision.

Decision Three: Glidepath Flexibility

Midwestern was now clearly on the path to a custom set of target date funds. They first needed to weigh the benefits and challenges of employing custom target date funds. The benefits include the plan sponsor's ability to:

- Select the underlying managers from existing funds in the core lineup and even incorporate "outside" managers that are not part of the core fund lineup;
- Replace individual managers that do not meet expectations;
- Mix active and passive management;
- Control fees by seeking the lowest fee share class for each manager or utilizing separate accounts or commingled vehicles with negotiable fees; and
- Periodically reevaluate and change the glidepath.

On the other hand, challenges of a custom fund include:

- Additional resources required for the plan sponsor to build and maintain custom funds;
- Implementation and administrative challenges, such as portfolio rebalancing;
- Assuming the role of investment fiduciary with respect to the target date funds; and
- The need to customize participant communication, such as creating custom fund fact sheets.

Midwestern realized they would need to work with the recordkeeper and possibly a separate custodian to create and periodically rebalance the funds. Also, they may find participant communication more complicated. For example, the funds would not have a name brand and, initially, would not have a track record.

Final Decision

Global ultimately selected a set of passively managed off-the-shelf funds. Global was influenced by competing priorities and the limited time and attention the staff and investment committee could devote to managing the challenges associated with custom target date funds. In addition, the staff and investment committee concluded that the asset allocation or glidepath was the primary tool to accomplish the income replacement objective, and that active management would not add significant value. Since they were able to identify a passive off-the-shelf target date fund that met their needs, they felt justified in taking the off-the-shelf route.

Midwestern chose custom target date funds. Their decision was driven by several factors, including the lack of a suitable off-the-shelf fund with an acceptable glidepath. They also valued the fee structure of the custom target date funds. In addition, the investment committee and staff had both the resources and willingness to manage the implementation and administration of custom target date funds. The Midwestern plan had always maintained open architecture in the core investment fund lineup and wished to duplicate that open-architecture approach in their target date fund. Further, they valued the flexibility to modify and enhance the glidepaths at their own discretion.

Conclusion

Global and Midwestern Corporations recognized their need to improve the provision of adequate retirement income for participants in their 401(k) plans. Both concluded that target date funds were the best solution currently available, but acknowledged that target date fund investment is not a commodity, but can range widely in terms of glidepaths and implementation. Therefore, the two companies undertook a thorough and well-documented due diligence process that considered the unique needs and circumstances of their participants. Although the process led the plans down very different roads, both plan sponsors were able to make this important decision on behalf of their plan participants with confidence.

CALLAN DC INDEX™

The DC Index Treads Water

The Callan DC Index™ eked out a negligible 0.23% return in the second quarter. This put the Index's return well behind that of the average corporate DB plan (+ 1.31%). Since its 2006 inception, the average corporate DB plan has bested the DC Index by over 1.5 percentage points annually.[2]

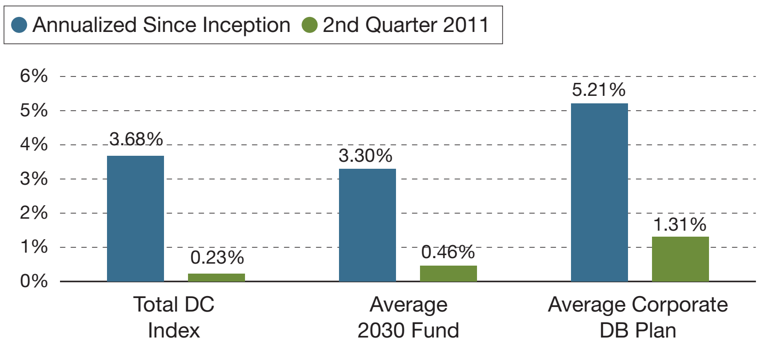
The performance of the DC Index compares more favorably to the average 2030 target date fund over the past five-and-a-half years: 3.68% versus 3.30%, respectively, on an annualized basis. During the second quarter, however, the average 2030 target date fund marginally outperformed the DC Index by 23 basis points.

The average 2030 fund has a higher equity allocation than the plans in the DC Index (78% for the 2030 fund versus 65% for the DC Index); the typical corporate DB plan differs from plans in the DC Index by offering greater diversification into asset classes such as alternatives.

Balances Grow—But Largely Due to Contributions

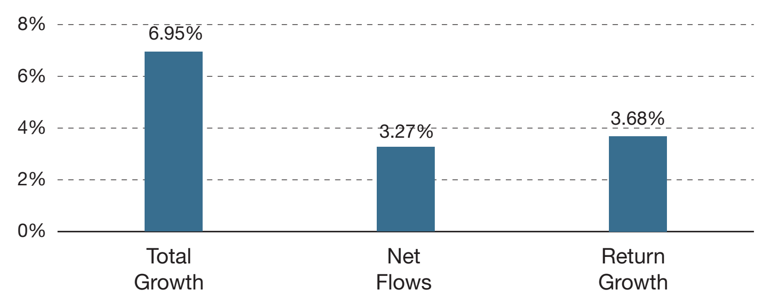
Over the five-and-a-half years of the Index's existence, total annualized growth of participant balances clocks in at 6.95%. Notably, half of this growth comes from plan sponsor and participant contributions (net flows) rather than investment gains. This underscores the importance of programs such as automatic contribution escalation, which can increase participant deferral levels.

Investment Performance



*Performance is gross of fees.

Growth Sources (Annualized Since Inception)

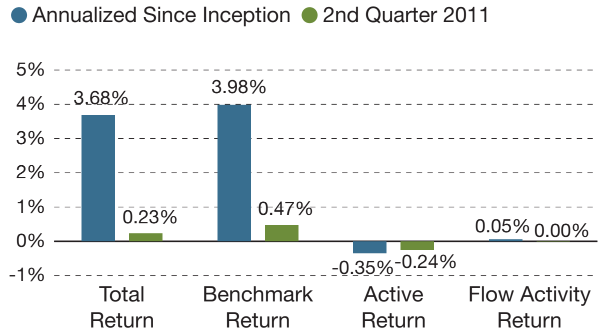


2 This performance edge is partly attributable to the fact that corporate DB plan returns are reported gross of fees while the Index's returns are net of fees.

Active Management: International Managers Win the Day

Active management provided a 24 basis point headwind for the DC Index during the quarter.

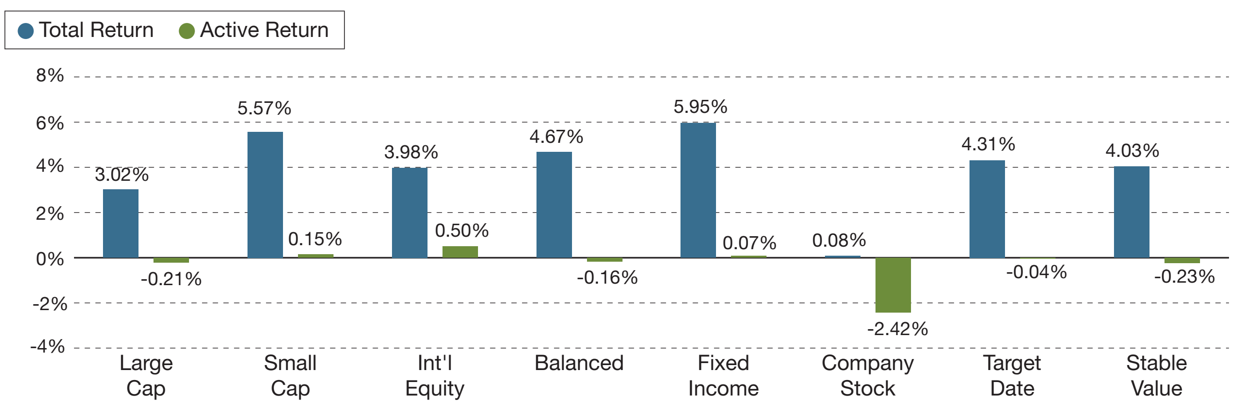
Total Investment Return Components



Since the Index's inception, active management has detracted from the typical plan's total return by an average 35 basis points annually. One bright spot has been international equity funds, where managers have added 50 basis points on an annual basis through active management. In contrast, company stock funds have underperformed by 2.42% annually relative to an investment in the S&P 500 Index.

Passive funds now account for nearly 19% of DC plan assets, an increase of over 6% since the Index's inception.

Asset Class Total Return and Value-Added of Active Management (Annualized Since Inception)



Cash Flows: Heavy Outflows from Domestic Large Cap and Company Stock

Continuing a trend since the Index's inception, target date funds (49%) once again garnered healthy net inflows. In contrast, domestic large cap equity funds and company stock funds saw large outflows—accounting for 51% and 40% of total outflows, respectively, for the quarter. Overall, Index turnover was light at 0.31%, compared to the historical average of 0.71%.[3]

Net Cash Flow Analysis Second Quarter 2011

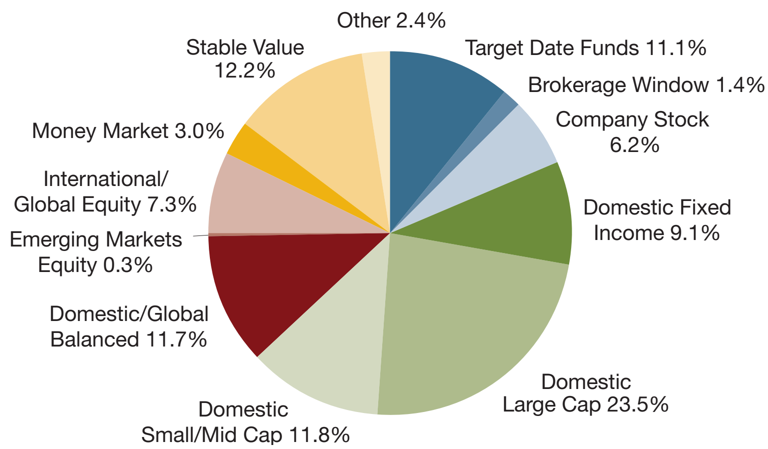
Asset Class	Flows as % of Total Net Flows	Flows as % of Asset Class Market Value	Flows as % of Total Index Market Value
Alternatives/Other	-2.00%	-4.51%	-0.01%
Brokerage Window	-2.76%	-0.59%	-0.01%
Company Stock	-39.84%	-1.88%	-0.12%
Convertible Fixed	0.02%	0.97%	0.00%
Domestic Fixed	24.00%	2.33%	0.20%
Domestic Large Cap	-50.86%	-0.66%	-0.16%
Domestic Small/Mid Cap	2.58%	0.19%	0.02%
Domestic/Global Balanced	3.75%	0.28%	0.03%
Emerging Markets Equity	0.07%	0.23%	0.00%
Global Equity	-4.53%	-1.04%	-0.01%
High Yield Fixed	0.45%	4.05%	0.00%
International Equity	6.06%	0.72%	0.05%
Int'l/Global Fixed	0.93%	7.80%	0.01%
Money Market	1.45%	0.41%	0.01%
Real Estate	1.47%	4.20%	0.01%
Real Return/TIPS	1.87%	5.19%	0.02%
Specialty Equity / Sector	0.04%	0.44%	0.00%
Stable Value	5.34%	0.37%	0.05%
Target Date Funds	49.38%	3.95%	0.42%
Total Turnover			**0.31%**

3 Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

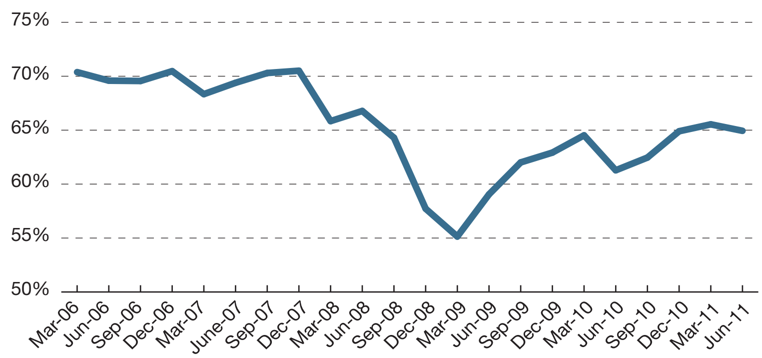
Asset Allocation: 65% is the Magic Number

The share of equities in the DC Index continues to hover around 65% since the start of the year. While large cap equity has the largest share of plan assets at 24%, this is down materially from its high of 32% at the Index's inception. The typical plan offers four large cap domestic equity funds (about the same number as in early 2006)—the highest number of funds for any asset class except target date funds. The Index's overall equity allocation has declined 5% since inception.

Callan DC Index **Asset Allocation as of June 30, 2011**



Average Total Equity Exposure



ABOUT THE CALLAN DC INDEX

The Callan DC Index™ is an equally weighted index tracking the cash flows and performance of over 70 plans, representing more than 800,000 DC participants and over $80 billion in assets. The Index is updated quarterly and reflects 401(k) plans as well as other types of DC plans.

For more in-depth coverage, please see the ***Callan DC Index Performance Summary & Analysis*** or go to www.callan.com.

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APPENDIX G

Research and Education

iv. *2011 DC Trends Survey*

2011 DC Trends Survey

CALLAN INVESTMENTS INSTITUTE

Callan's 2011 Defined Contribution Trends Survey paints a generally positive picture of defined contribution (DC) plan developments. Sponsors are moving their plans forward by increasing company contributions, stepping up use of automatic features and unbundling their DC plans. However, some stumbling blocks remain in terms of compliance and appropriate policies when it comes to terminated participant assets. Plans are likely to see greater prevalence in 2011 of real return and TIPS funds, Roth designated accounts, and custom target date funds. The survey was fielded online in late September and early October 2010. Results incorporate responses from nearly 90 companies across the U.S. ***Other key findings of the survey include:***

POSITIVE TRENDS

- **Company contributions are making a comeback.** No plan sponsors reported the intention of reducing or eliminating company contributions over the next 12 months. Conversely, of the nearly 20% of plan sponsors that had reduced or eliminated the company's contribution to the plan over the past 24 months, more than half (58%) plan to reinstate it over the next 12 months and nearly one-third said they had already at least partially reinstated it.
- **Plans have stepped up implementation of automatic features.** Adoption of automatic enrollment increased from 43.9% in 2009 to 51.3% in 2010. Likewise, the prevalence of automatic contribution escalation increased from 33.8% in 2009 to 46.2% in 2010.
- **Relatively few managers were replaced in 2010 due to weak performance.** Only one in four plan sponsors reported making such a change in 2010, compared to nearly one-third in 2009 and close to 40% in 2008.
- **Greater use of investment consultants.** The proportion of plan sponsors using an investment consultant increased from 64.6% in 2009 to 71.8% in 2010.

AREAS OF CONCERN

- **Continued uncertainty around ERISA Section 404(c) compliance.** Thirteen percent of plan sponsors were uncertain as to whether their plans are in compliance with ERISA Section 404(c). Reviewing 404(c) compliance ranked as the number one step that plan sponsors have taken to improve the fiduciary positioning of their DC plan in the last 12 months.
- **Mixed opinions about retaining retiree and terminated assets in the DC plan.** About one-third (36.1%) of plan sponsors seek to retain both retiree and terminated assets. However, nearly half (44.4%) do not have a policy when it comes to retaining assets and just over 15% do not seek to retain retiree and terminated assets.

Callan Investments Institute

2011 DC Trends Survey

KEY TRENDS (continued):

Decision Making

- **More involvement of treasury/finance and other groups outside of human resources in administrative decision making.** The proportion of plans whose treasury/finance group is responsible for administrative decisions has increased since 2009—from 17.5% to 25.6%. In contrast, plans in which human resources alone oversees administrative decisions has decreased slightly year over year.

Fees

- **Plan fee due diligence remains important.** To improve the fiduciary positioning of their DC plan, one of the most important steps that plan sponsors say they have taken within the past 12 months is to review plan fees. Plan fees also have a top spot as one of the most important areas of focus for plan sponsors going into 2011.
- **Plan sponsors are generally quite vigilant when it comes to fees.** Nearly 85% have calculated their plan fees within the past 12 months, while 94.5% have done so in the past 24 months. Moreover, 84.1% of plan sponsors are benchmarking DC plan fees in addition to calculating them.

Features

- **Increased prevalence of Roth designated accounts.** In 2008, only one in four plan sponsors (27.8%) offered a Roth account in their DC plan, a figure which nearly doubled in 2010. Increased prevalence may be attributed in part to a renewed focus on Roth generally. For 2011, nearly one in 10 (9.4%) plan sponsors that do not offer Roth in their DC plan indicate they will do so. Another one in four say they are considering offering a Roth account.

Investments

- **Plan sponsors are content with the company stock offerings in their plan.** Most plan sponsors that offer company stock do not anticipate making any changes with respect to company stock in the next year (90.5%). The number one approach to limiting liability with respect to company stock is communication around diversification (77.3%).
- **Real return funds remain a hot commodity.** Real return/TIPS funds were the most commonly added options in 2010 and likely will be in 2011, given inflation concerns. TIPS funds are added more frequently than multi-asset class real return funds, where available products still tend to lack a track record.

For a copy of the full survey, please contact Ray Combs or Gina Falsetto at institute@callan.com or 415-974-5060.