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REVISITING ASSET-ALLOCATION STRATEGIES FOR DEFINED CONTRIBUTION RETIREMENT PLANS: A LOOK AT AVAILABLE RISK-MANAGEMENT STRATEGIES

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In the wake of the recent financial crisis, fund trustees, plan sponsors, and administrators are reconsidering traditional asset-allocation strategies. With increasing numbers of people approaching retirement age, the need to manage financial risks through more effective strategies is clear and urgent. Fortunately, there are a number of promising approaches available to help funds select, implement and administer the appropriate strategies.

The recent financial crisis has prompted many questions about the security of retirement funds. With the importance of the retirement sector growing as larger numbers of people approach the end of their working lives, defined contribution (DC) retirement plans in particular are coming under increasing scrutiny because of their vulnerability to sustained market downturns.

The steep market downturn between late 2007 and early 2009 exposed many flaws in traditional asset-allocation principles and risk-management techniques. Consequently, many DC plan administrators are reassessing their approaches, paying special attention to structures and strategies that are designed to manage risk more effectively. This article highlights a number of popular strategies, identifies issues for consideration, and offers a view of the potential implications and evolution of DC systems around the world.

The recent market downturn clearly demonstrated that traditional investment approaches are vulnerable to extended periods of market volatility. This is particularly worrisome to members of DC retirement plans because their investment assets are exposed to market risk. Globally, there has been a substantial shift toward DC plans during the past quarter-century. This development, combined with demographic changes that now see increasing numbers of workers approaching and entering retirement, suggests that it is time to improve upon the risk-management techniques and options currently in place.

The financial crisis not only reinforced the vagaries of market forces but also shook many people's confidence in the institutions that traditionally provided guarantees or insurance against such events. The high-profile corporate failures of institutions such as Lehman Brothers and American International Group (AIG) brought counterparty risk to the forefront. Pension plans that would have looked to institutions such as these as partners who could deliver risk-management solutions to their members paused to reconsider other methods of providing investor security.

As a result, we are now seeing rapid change as funds move toward more sustainable processes and structures for managing their members' investment risks. Much of the focus for these changes is upon independent administration or internal solutions that reduce or eliminate reliance on, and the resulting exposure to, third-party financial institutions.

OVERVIEW OF POTENTIAL STRATEGIES

There are three basic approaches to mitigating risk: diversification, hedging, and insurance. Any of these approaches may be justified depending on the individual investor's circumstances and stage of life.[1]

As risk becomes more relevant to fund members as they enter retirement, new approaches to investment are being assessed. Broadly speaking, they fall into one of three categories:

- administration strategies,
- derivative strategies, or
- insurance/outsourcing.

ADMINISTRATION STRATEGIES

Administration strategies rely on dynamically altering the underlying investment mix to achieve a smoother return or risk-management outcome. Three approaches that appear to be growing in popularity are target-date funds, target-volatility funds, and continuous portfolio protection insurance (CPPI).

Target-date funds: This strategy rebalances investors' assets between different mixes of conservative and growth assets

based on an age-based "glide path," traditionally focused on the investor's planned retirement age. The principle behind target-date funds (also known as life-cycle funds, target-maturity funds, and age-based retirement funds) is that investors need to adopt more conservative investment styles as they approach retirement. Target-date funds, however, have become the subject of much criticism. Debate has centered on the grounds that there is no "one-formula-fits-all" solution to the requirements of investors with widely varying needs, lifestyles, and levels of risk tolerance,[2] and also that, absent risk-management techniques, market volatility can defeat even the most carefully planned glide path.

Target-volatility funds: Like target-date funds, target-volatility or controlled-risk funds attempt to manage investor risk through rebalancing, but instead of focusing on an investor's age, the rebalancing is based on market volatility. The funds are designed to increase allocations to conservative assets in times of high volatility, and growth assets in times of low volatility. Target-volatility funds are relatively new entrants into the market, and time will tell how well they perform.

Continuous portfolio protection insurance: CPPI has been around for some time in various forms. In general, CPPI rebalances investors' assets between bonds and growth assets based on an algorithm designed to replicate an option. The goal is to preserve capital, and CPPI may be combined with options provided by an investment bank to offer a guaranteed solution.

CPPI, however, has suffered because of negative publicity focusing on investors getting locked into cash who were unable to participate when markets rebounded. The next generation of CPPI is on the way, but given the level of administrative complexity involved, it remains to be seen whether this technique will be popular.

DERIVATIVE STRATEGIES

Derivative strategies rely on the use of assets that directly facilitate risk management. Institutions have used derivatives to hedge risk for hundreds of years. Derivative strategies can work by creating exposure and by managing risk.

Creating exposure: Some strategies utilize derivatives to provide market exposure while combining them with conservative assets to provide security—for example, a bond combined with a call option.

In this example, fund members would allocate assets to a bond portfolio that is designed to provide a steady yield over the desired time period. Some of the yield would then be used to purchase call options that provide exposure to stock market returns. The degree of exposure would vary based on the option costs as well as the budget provided for their purchase.

Managing risk: Alternatively, derivatives may be used explicitly to hedge risk. The variety of instruments and methods available gives funds flexibility in structuring solutions that fit with their approach—for example, option budgets, put options, and futures.

In principle, each of these strategies should yield similar outcomes, but in practice they may produce different results depending on the legislative and tax environment within which the investment is structured.

INSURANCE/OUTSOURCING COUNTERPARTIES

There are a variety of outsourcing counterparties available depending on the nature of the risks a fund is looking to protect. Ultimately, institutions such as insurance companies or investment banks provide a "wrapper" for the provision of products utilizing various asset allocation strategies. For example, a fixed annuity provides access to fixed income assets whilst variable annuities provide access to equity, fixed income investments, and derivatives within an insurance context. The attractiveness of these structures is that the insurance company

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is capable of providing investors with a guarantee supported by its balance sheet and capital.

When dealing with counterparties, it is important to ensure that the exposure is managed and that there is sufficient flexibility to alter a fund's arrangements over time without creating legacy issues.

This, together with portability, has been a major concern of fund trustees globally, and perhaps explains the relative lack of third-party insurance solutions within DC pension schemes. As discussed below, new approaches are being developed that may help overcome these issues.

KEY PRINCIPLES

Our experience suggests that, when evaluating competing strategies, there are a number of fundamental principles to consider. Ultimately, selecting the appropriate solution will depend on the circumstances of each particular fund, including demographic profiles and operational requirements, as well as distribution and advice capabilities.

The Value Proposition—What Risks?

Fundamental to each strategy is the need to address underlying member issues. As the focus has shifted from the management of returns to the management of risk, so too have approaches moved away from a pooled or "one size fits all" model to strategies that are customized at an individual level. This shift of approach reflects the need for flexibility and the increasing competition between different sectors of the retirement savings market, which results in a blurring of the line between occupational pensions and retail wealth-management models.

Types Of Risk

In terms of specific risks, market risk has dominated the recent debate, but there are a variety of issues that can affect the sustainability of an individual's retirement savings, including:

- **Longevity risk:** the risk that investors might outlive their assets,
- **Market risk:** the risk that negative investment returns diminish savings,
- **Inflation risk:** the risk that higher-than-anticipated inflation erodes savings faster than expected,
- **Health risk:** the risk of higher-than-expected health care expenses, and
- **Behavioral risk:** the risk of poor planning or investment decisions that can result in inadequate retirement assets.

It is possible to design effective risk-management strategies for any and all of these risks within a variety of products and strategies involving all issues collectively or separately (e.g., managing health risk through health-insurance strategies).

However, it is important to be aware that any risk-management solutions will need to function within the local regulatory environment without impinging on investors' tax or social-security status.

Cost

Whatever approach is adopted, cost will play an important part in both the ability to create an attractive proposition and the ultimate outcome to the investor. Any calculation of costs needs to take into account the following:

- **Market cost of protection:** What is the cost of manufacturing the risk protection required? There is no free lunch here with all solutions bounded by the prices that the capital markets put on risks.
- **Distribution costs:** What is required to inform and educate plan members about the benefits of risk-management strategies?
- **Administration costs:** Any solution is likely to require additional administrative effort and it is important to ensure this is conducted efficiently.
- **Profit for third parties:** Are there any third parties

involved and, if so, what are their profit requirements? For example, in the event that a guarantee is offered, the institution offering the solution will be required to hold capital and will need an adequate incentive (return) to do so.
- **Opportunity cost:** Even in cases that don't require a third party, the solution is likely to involve an opportunity cost commonly experienced through sacrificing market growth or upside in order to fund downside protection.
- **Transparency:** Given the potentially complicated structures underpinning some of these solutions, transparency to fund administrators and members will be vital.

COUNTERPARTY RISK

The long-term nature of retirement, combined with the fiduciary responsibilities of fund trustees, complicates the development of many traditional insurance-based solutions. Problems involving a third party can damage a fund's reputation—not to mention the financial interests of its members. Recent examples across the insurance and banking industries have prompted fund administrators who work with third parties to exercise high levels of scrutiny and monitoring.

Other ways of managing counterparty risk include:
- **Short-term commitments:** adopting approaches that rely on shorter commitments or instruments, or that eventually eliminate or reduce reliance on third parties;
- **Collateralization:** ensuring that third-party obligations are funded—something that is critical to protecting the fund and maintaining the ability to migrate from one provider to the next should a significant event make it necessary;
- **Risk pooling:** spreading risk across multiple counterparties; and
- **Internal or independent administration of solutions.**

Finally, those wishing to adopt solutions will also need to consider the administrative burden of the various solutions and assess whether they have sufficient expertise to administer them over very long time periods.

OTHER CONSIDERATIONS

In addition to developing the risk-management strategy, pension schemes will need to factor in communications to members and trustees, as well as their organizations' operations and expertise.

Funds have a responsibility to communicate with their membership bases whatever strategy they put in place, and will need to invest time and effort in educating members on the risks they face and the risk-mitigation benefits offered by the strategy.

As far as operations and expertise are concerned, many of the available risk-management strategies require sophisticated administrative solutions and a level of expertise that an organization's staff might not have. It is therefore important to take advantage of outside experts who can support the development and administrative effort involved in effective risk management.

PUTTING IT ALL TOGETHER

A number of potential models for developing risk-management strategies appear to be evolving:

- **Outsourcing:** This option is mostly limited to small funds that wish to retain an administrative role but do not have the necessary in-house staff resources and are comfortable outsourcing to a third-party institution. Selecting the correct partner and carefully monitoring performance will be critical.
- **Partnership:** Some funds may elect to work with a third party that assists by independently administering collateralized or pooled structures in order to ensure that the fund's fiduciary duties are met, as well as to provide independent advice as appropriate.
- **Internal operations:** Some large funds will elect to develop their own risk-management solutions, with the option of outsourcing certain operations to others who have the appropriate expertise.

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In summary, there is a wide range of alternative structures available to assist in the management of risk. These ultimately need to be considered in the context of the fund and its members.

Strategy	Description	Comment
Target Date	Allocations between growth and conservative assets is determined based on age	Consistent with existing approaches, but can be ineffective through periods of sustained volatility
Target Volatility	Allocations between growth and conservative assets is determined based on volatility	Theoretically attractive approach that is beginning to gain traction in the market
CPPI	Rebalances assets between bonds and growth assets based on an algorithm designed to replicate an option	Low perceived cost, but administratively complex and potential for "cash lock"
Bond + Call	Bonds provide security and market upside is provided through option exposure	No long-term counterparty exposure
Option Budget	A budget is established for the purchase of options to provide protection	Relatively simple to administer, but budgets can be ineffective in times of high market volatility
Dynamic Replication	Futures are rebalanced to replicate any option-based strategy	No counterparty exposure and low cost, but can be exposed to market gaps if operations are not robust
Insurance	Utilises a third-party insurer to provide an integrated product solution	Can include longevity risk (lifetime income guarantees) and other guarantees, but introduces long-term counterparty exposure

END NOTES

[1] Corrigan, Joshua; Matterson, Wade & Nandi, Sam (July 2009). A holistic framework for life cycle financial planning. Milliman Research Report. Retrieved April 1, 2010, from http://au.milliman.com/perspective/holistic-framework-life-cycle.php.

[2] Rowland, Marilyn M. (Spring 2008). All target date funds are not created equal. Milliman Benefits Perspectives. Retrieved April 1, 2010, from http://www.milliman.com/expertise/employee-benefits/publications/bp/pdfs/BP06-10-08.pdf.

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