The third way: A hybrid model for pensions

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Views expressed here are those of the author, who is solely responsible for any errors and omissions.

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Introduction

Conventional wisdom focuses on two structures for accumulating wealth to provide income for retirement: defined benefit and defined contribution pension schemes. In each case, ownership of both upside and downside risk sits firmly on one side of the table. There is little talk of alternative structures.

In fact, there is a third, more balanced way – a hybrid model where the risk is more equitably shared between the employer and employee for the benefit of all. This structure may be less well known, but it has been tried and tested over the last 30 years in the state of Wisconsin.

By better aligning the interests of the employer and employee, the Wisconsin model creates a virtuous cycle of good governance that leads to better outcomes for both employer and employee as well as society at large.

1. Pensions – who carries the risk?

Today, the two dominant models for pension schemes, those of defined benefit (DB) and defined contribution (DC), share a common thread: Employees defer wages that are invested to provide a future stream of income in retirement.

In both structures, the desired outcome is to have the present value of those deferred wages equal the present value of the income in retirement. In a perfect world there is no excess value creation or destruction, one simply equals the other. But that is a highly unlikely scenario. Almost all of the outcomes will involve value creation or value destruction. In the defined contribution structure, the risk of excess value creation or destruction is owned by the employee. In the defined benefit structure, that risk belongs to the employer or sponsor of the scheme.

Those risks comprise two key areas: investment risk and governance risk. The investment risk is the difference in the present value of the contributions and the present value of the benefits that results when the realised investment returns deviate from the target return.

Governance risk relates to the chance that the management and oversight functions of the structure allow it to break down. This is a complex area of risk involving many different factors such as investment assumptions, wage growth assumptions, funding decisions, cost management and execution risk.

2. Risk aversion and utility theory

If employees and employers were risk neutral in their approach – seeing both a gain and a loss as equally important – they should be happy with the ownership of the risk.

However, if the employee and employer are risk averse, which in reality is more often than not the case, it stands to reason they will be willing to accept a trade-off in exchange for reducing the risk of a retirement income that is below target.

The extent to which employers are risk averse is clear from the slow, steady demise of the DB model. It is reasonable to assume employees are also risk averse. In standard utility theory, people usually derive a bit less utility for each additional unit of income. In prospect theory, a loss has a greater impact on a person than a gain of the same magnitude. Therefore, both expected utility and prospect theories suggest that employees generally have a preference for a lower volatility solution for providing retirement income[1].

3. Governance matters

Governance risk plays a critical role in pension outcomes and is a very important consideration in the discussion of structure. Governance decisions are ultimately equivalent to a change in return and can contribute significantly to volatility of outcomes.

If the governance structure is not balanced, one interest group can influence decisions at the expense of the other group. Both the DB and DC models lack the countervailing force provided by risk sharing.

Deductive reasoning can be used to show the importance of governance in the public pension plan arena. First, in the typical public pension plan, contributions provide about 25% of the capital needed to fund the pension benefit while investment performance provides 75% of the capital. Over long time horizons, the investment returns of public pension plans tend to cluster tightly around the median return.

For example, a commonly used peer group universe for public pension plan performance is published by BNY Mellon. For the ten-year period ending August 2005, the median return from the BNY Mellon peer universe for public pension plans larger than $1 billion was 9.2%. The top quartile return was 9.93% and the bottom quartile return was 8.92%. Similarly, for the ten year period ending August 2015, the median return was 6.28%. For the more recent ten year period, the top quartile return was 6.54% and the bottom quartile return was 5.88% or a range of just 66 basis points.

The funding status of public pension plans falls across a range that is inconsistent with the tightly clustered performance results. According to a 2015 research paper from the Pew Charitable Trusts[2], there are 26 states with funding levels below 70% and 24 states with higher funding ratios. The report lists Wisconsin as 99.9% funded. If the realized returns over ten year horizons are clustered tightly around the mean, one of the key differentiating factors that explains the funding level must be governance.

[1] Daniel Kahneman; Thinking, Fast and Slow, 2011, Penguin Books
[2] The Pew Charitable Trusts, The State Pensions Funding Gap: Challenges Persist, July 14 2015

4. The Third Way

Three decades ago the Wisconsin pension system went through a somewhat serendipitous restructuring programme.

Multiple schemes, including both DB and DC structures, were consolidated in an effort to leverage economies of scale in pension fund management. The consolidation process was not, however, allowed to disadvantage any employees deferring their wages through either structure across the various plans.

The result was a hybrid pension model, whereby a minimum level of benefit is guaranteed by the sponsor and any value creation above that rate at the point of retirement is split between the sponsor and employee.

This model is easily replicable and works thus: The beneficiary population is divided into two groups. The first group consists of the active employees and the second group consists of the retired employees.

Active employees

The active employees will accumulate two account balances while they are working. One account balance is calculated using a formula that grants credit for each year of service – at Wisconsin the credit factor is 1.6%. The result is then multiplied by the average of the three highest year's earnings. This level of benefit is guaranteed by the employer once the member reaches retirement. The target return for the guaranteed benefit based on the combined employee and employer contribution is approximately equal to wage growth plus 4%. In order to compensate the employer for taking the risk of the formula benefit guarantee, part of any value created in excess of the guaranteed benefit can be retained by the employer.

The second account balance is the employee's contributions compounded by the actual performance of the trust.

At retirement, the higher of the two account balances is annuitized at a discount rate of 5% and is established as the base benefit.

Retired employees

Each year, performance of the retiree pool is computed for the trailing five year period. If the pool earns more than 5% in the five year period, the monthly benefits are increased. This creates an adjustment reserve that is added to the liability of the system. This reserve represents the growth of the liability above the original base benefit computed at retirement.

If the performance of the retiree pool is less than 5%, the monthly benefits can be decreased by reducing the retiree pool adjustment reserve. However, the liability cannot be reduced below the base benefit that was calculated at retirement.

Thus, the retirees receive a guaranteed base benefit determined by the 5% discount rate plus a contingent annuity adjustment based on performance above the 5% discount rate.

The goal of the contingent annuity adjustment is to compensate for the erosion of the real value of the benefit caused by inflation.

The risk sharing aspects of this design have profound implications for the governance of the system. Remember, in the defined benefit and the defined contribution pension schemes, the ownership of the upside and the downside risk sits firmly on one side of the table. Interests are not aligned in the two common structures. In the hybrid structure, risk is shared and the alignment of interest that results, contributes to a virtuous cycle of governance.

5. A win for employees

From an employee's perspective, it is easy to see how risk sharing is preferable to assuming all the risk themselves, as they would in a DC structure. Their preference should be towards a hybrid model because Utility theory tells us an employee is willing to accept a trade-off in return for less volatility in their pension provision. The Wisconsin model is naturally less volatile than a DC structure precisely because it shares the risk more equitably.

But even when it comes to DB structures, the hybrid model should be preferable because it creates a more balanced governance structure that is less susceptible to large shocks, which can destabilise the pension plan.

Irrational governance, such as political interference, contribution holidays and benefit improvements without proper funding, or the overstating of investment expectations or understating of contribution rates, can result in poor outcomes. It can in fact be indistinguishable from a large market shock.[3] The role of proper risk allocation is to reduce the incentives for irrational behaviour and create a cycle of good governance.

In a hybrid plan, employees care far more than they would in a DB structure about irrational governance because they share a preponderance of the risk and are therefore less likely to ask their agents to lobby for things that will hurt them in the long-term.

The hybrid plan also mitigates assumption errors. If the assumptions for the rate of return are optimistic, the plan will likely suffer value destruction. Employees' and employers' views of that destruction varies markedly across plans. For the DC plan, the employer is indifferent as they have no skin in the game, while in a DB structure they should oppose the optimism as they carry the full burden of the value destruction. Employees naturally face the opposite situation. In a hybrid plan both employees and employers are incentivized to eliminate optimism as both suffer when value is destroyed.

As a result of the better alignment of interests in a hybrid plan, a virtuous cycle of governance is created, which means the outcomes in terms of benefits to employees (and costs for employers) are less volatile, making it the preferable structure.

[3] Analytical Framework for Promoting Pension Plan Structural Robustness an Informed Governance, David C. Villa, Sorina Zahan and Brian Heimsoth, November 2013

6. A win for employers

From employers' perspective, DC looks like the obvious choice. However, employers effectively want to buy hours of work for the lowest total wage. Lower risk of retirement benefits from the employees' perspective may translate into lower wages needed to compensate the employee for the risk of a defined contribution plan relative to a hybrid plan.

There is evidence to suggest the labour market does make adjustments to wages to offset net benefits. A review of academic literature by Alicia Munnell, the Peter F. Drucker Professor of Management Sciences at Boston College's School of Management, shows wages are 9.5% lower for state and local workers in the U.S. after controlling for education, demographic and other factors[4]. After modifications for pension contributions and additional health benefits, public sector compensation including wages and benefits is about 4% less than that in the private sector. Thus, it appears the labour market gets it right because wages are 5.5% lower to adjust for the value of the pension benefit.

Furthermore, the split in the value creation through the hybrid structure compensates the employer for moving away from the DC model and assuming a greater degree of risk.

7. A win for society

Society would also be better off if we can avoid going off the defined contribution cliff, wherein financially unsophisticated individuals take on large risks that significantly change their wealth in retirement if they get it wrong.

DC has a high hidden cost to society. If a participant in a defined contribution plan experiences extreme value creation, they get to keep that value creation. However, if a participant in a defined contribution plan experiences extreme value destruction, society bears the cost by providing a social safety net. Similarly, when a defined benefit is reduced by a large enough percentage due to poor governance, society pays the cost. This is especially the case for workers with low wages.

Society, therefore, should prefer the lower volatility of the hybrid plan to the volatility and governance risks of the defined benefit and defined contribution structures.

[4] Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz and Laura Quinby, COMPARING COMPENSATION: STATE- LOCAL VERSUS PRIVATE SECTOR WORKERS, Center for Retirement Research at Boston College, September 2011

8. Conclusions

Conventional wisdom focuses on two models for retirement savings, defined contribution and defined benefit. In both cases the vast bulk of both the upside and downside risk sit on one side of the table.

However, pensions are not a zero-sum game between employer and employee. There is a third player – the market, which can either create or destroy value – and where there is a third player, it is possible to create a win-win situation for employee and employer where a minimum level of benefit is guaranteed and both gains and losses are shared. That solution can then be engineered by improving the robustness of the structure and by maximising value creation.

Sharing value creation and destruction – or upside and downside risk – aligns the interests of the employer and employee, which creates a virtuous cycle of governance that reduces the volatility of retirement outcomes for the benefit of all.

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