

Saving Pensions Funds Some Money and Future Headaches **By Arun Muralidhar and Ronald van der Wouden¹**

The recent spate of articles on benchmarking asset managers to liabilities and also the many articles discussing why pension funds should implement risk management systems leaves a lot to be desired. Unfortunately, many of the asset managers commenting on such topics have never managed a pension fund or implemented asset-liability models or risk “management” models for pension funds. They reflect the reaction to a few years of bad performance. However, there are a few nuggets that emerge in the discussion and we try to crystallize them in this article. Having made a few mistakes, and hopefully corrected them, while managing a pension fund, we would like to clarify a few key issues that plan sponsors should think about. We choose to be a bit provocative in this note to elicit further debate to help plan sponsors grow their pension surpluses and keep down costs in the process of doing so. Part 1 deals with the strategic asset allocation issue and Part 2 will deal with risk management.

1. Trying to tie external asset managers to liability benchmarks is nonsense. Plan sponsors are the only ones who can oversee and manage asset-liability risk.

The basis for this recommendation comes from the fact as the equity markets collapsed, many funds did not alter their strategic asset allocation until 3 years later, leading to a continuing deterioration in the funded status (ratio of assets to liabilities). Many clients were rebalancing to the benchmark weights of an outdated asset-liability study; in effect, buying declining equities and selling bonds that were performing well when a revised strategic allocation may have recommended less equity. Some have suggested that having managers do tactical asset allocation with the liabilities as an anchor is a solution. Those who make this recommendation fail to recognize that there are many levels at which decisions are made in a pension fund. As a result, they also fail to recognize that there is a fine interplay between asset allocation decisions and funding policy decisions and pension funds must manage this interplay. One positive is that recent developments in the area of asset-liability management have enabled decision makers to better understand the impact of market movements on their liabilities. Moreover, there are innovative ways to protect surpluses within the existing decision-making structure and current asset management practices. Ultimately, these tools and services will help decision makers do a better job of making their decisions more transparent.

Invariably, there is a pension board (or oversight committee) to whom an investment team reports to and then that investment team hires active managers who report to the team. Typically, the board is tasked with managing asset-liability risk. This involves two activities that are inter-connected: (i) setting benchmarks relative to liabilities called a strategic asset allocation (or SAA), and (ii) determining the long term funding policy.

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Then the investment team tries to find innovative ways to outperform benchmarks through either tactical asset/security decisions or selecting active managers. In the attached chart, we demonstrate the different types of risk, the responsibilities within an organization, and the key decisions that each of these groups must make (along with the frequency).

The problems with trying to tie asset managers to liabilities are simple: (1) not all managers have multi-asset capabilities, and those that do, may not have the best capability in every area; (2) there are a very limited number of professionals at asset management firms who have been on the side of a pension plan, and who understand asset-liability management issues; (3) incorrect asset management decisions could lead to severe funding problems; and most important (4) it is not just the liabilities that drive the asset management decisions, but the objectives of the oversight committee. As a result, two funds with the exact same liabilities can have different benchmarks if one wants to minimize contributions while the other wants to minimize the volatility of contributions. The idea behind a strategic benchmark is to take the liabilities and the objectives and codify them into a relatively market view-neutral setting; thereafter, the indices that make up the overall benchmark can be assigned to external managers who have expertise in understanding these indices and ways to outperform them. This process fits the organization of responsibilities.

Pension Fund Risks - Measure & Manage

	Asset-Liability Risk	Tactical & Benchmark Risk	Manager/Active Risk
Responsibility	Oversight Committee	Internal Staff	Managers
Frequency of Action	Annually	Monthly/Daily	Monthly/Daily
How to Manage the Risk	Strategic Allocations & Funding Policy	Tactical Allocations	Manager Allocations

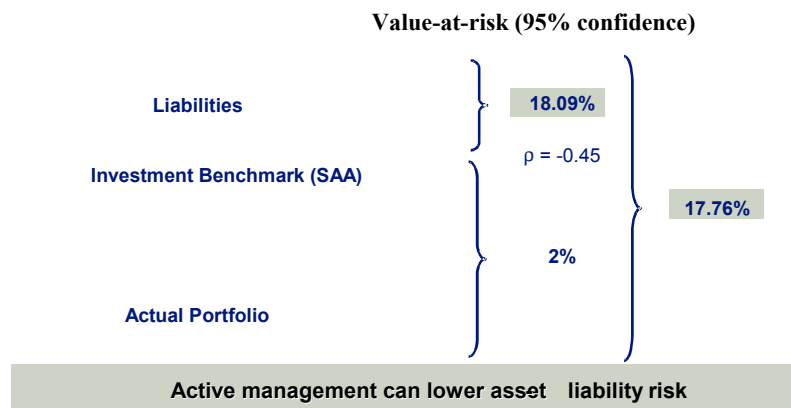
How should a pension fund manage its surplus and contributions more effectively when market variables such as interest rates, inflation, asset returns etc. are variable? There is a simple way to do this within the existing decision-making framework without giving external asset managers benchmarks that they do not understand. We demonstrate in our published research and application to a pension fund that the liabilities, dynamic objectives and dynamic market evolution can be crystallized into a view-neutral dynamic strategic asset allocation strategy that allows for the maintenance of key pension fund objectives. A simple example would be of the form:

*Equity allocation in any period = 15% + 0.5*funded ratio in the previous period.*

We also demonstrate in our research that this strategy performs better than the static strategic asset allocations and those using derivatives – a trend we have seen in the markets, but which do not solve the pension fund problems as the derivatives are written only on assets, not on the funded status or surplus (which is impossible due to the absence of appropriate hedging instruments). This is also better than a static asset allocation plus tactical asset allocation strategy recommended by some active managers as it does not blur the lines of decision-making within a fund and does not mix objectives with market views. There is a place for tactical asset allocation and other active management based on market views, but it is within the oversight of investment staff, not at the level of a board.

We were also able to show that if active management decisions by the investment team and active managers are not correlated with liabilities then asset-liability risk or surplus risk can be reduced. The attached chart is a representation of an average mature pension plan in which we compare the value-at-risk of the liabilities relative to the strategic asset allocation (18.09%) and demonstrate that staff and the active investment strategies lowered that risk (17.76%). As a result, we argued that it is important to make sure that the interests of the investment team are aligned with those of the fund. This responsibility cannot be delegated to the active managers who are quite removed from the fund and will never be able to keep track of the liabilities and objectives of the many clients they manage money for. Within the context of setting up asset and manager allocations, the pension fund staff should make sure that asset-liability risks are minimized. This would be best achieved if their compensation were tied not just to outperforming the strategic asset allocation or investment benchmark, but also to lowering the overall asset-liability risk.

The Risk Tree – Liability Risk is Most Critical



There are some pension funds that appear to have tied asset management directly to liabilities. However, in these funds, the investment teams make the tactical decisions and manage funds internally. This is not the same as external managers doing tactical asset allocation. Therefore, it is critical that a pension fund should adopt a benchmark that reflects liabilities and objectives – it is just not appropriate, under current investment decision processes, for all funds to pass this responsibility on to external managers.

2. Risk Management systems are a misnomer; they are Risk Measurement systems.

We have some experience implementing risk systems and the first thing we realized is that these systems do a great job at measuring risk, but do very little to help with management. The biggest problem is that these software systems were designed for trading desks and then adapted for pension funds. As a result, most of them struggled to incorporate liabilities and as the chart above shows, the risk of either the investment benchmark or the actual portfolio relative to liabilities (approximately 18%) dominates the asset-only risk (2%) that many systems monitor. In short, clients could end up spending lots of money on a risk system that captures only 10% of the risk. Another problem is that the risk systems often break out risk into factors – e.g., duration, convexity or even an equity index. However, since many clients are hiring external managers, they are not making decisions on the factors, but on managers or asset classes. In short, clients are getting a lot of data, but not information that relates to or facilitates the decisions they make.

If deployed correctly, current risk systems and risk service providers can certainly play a crucial role in monitoring external managers; however, data on the security level is not needed to make better manager and/or asset class decisions. It is often the case that incorporating data on the security level complicates risk computations to such a degree that it is very difficult to use the information to evaluate and facilitate a decision. Finally, the biggest problem is that these systems tell you about the risks that the fund engenders after the clients have made all their decisions. They do not help clients make better decisions, and making better decisions, either on a risk or return perspective, is what risk management is all about. What little flexibility they offer (naïve “what-if” scenarios), tell you that overweighting equities could have lowered or raised risk, but on what basis would the client have known this ex-ante and on what basis would the client have made this bet? In other words, what is really useful and relevant to risk management is ex-ante risk analysis not ex-ante risk measurement. A key for successful adoption of risk management in the investment decision process is to fully incorporate performance. The vision for every organization should be to ultimately “transform risk into opportunities” (e.g. allocating risk to decisions that add value).

What is needed is software that emphasizes the unique investment decision process of each client that attributes risks to each of the decisions or decision units. They need to be able to incorporate the liabilities of the fund and ideally software needs to help clients make decisions ex-ante at multiple levels of their portfolio that create the appropriate risk profile. The flexibility to alter the investment decision tree and the ability to effectively test new strategies will definitely benefit the successful use of this software in the

decision making process. This may require patching together different software, but until this is achieved, clients may not be helping themselves with partial views of their portfolios.

In summary, the recent market turmoil is causing greater introspection into key areas of managing pension funds. Pension funds need to be careful that they do not expend valuable resources to get sub-optimal or second best solutions. It is possible to manage the strategic risk relative to liabilities using dynamic strategic asset allocation strategies and have a good ability to manage the same if they can get software to help them understand the risks of all investment decisions (rather than factors). The key though will be in helping clients create better investment decisions to manage risks and for this the market is currently lacking.