

Risk mitigation for defined benefit plans

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A more effective approach to addressing the challenge

Pension management practices have been redefined

	Traditional asset-only approach (Static 65/35)	Our asset-liability approach (Policy portfolios)
Goal	Long-term return on assets	Improve/maintain funding ratio
Return objective	7%-9%	Liability return + X%
Benchmark / Low risk investment	Cash	Liability (i.e., long duration fixed income)
Focus	Selecting managers	Dynamically managing key funding ratio risks
Risks managed	Asset volatility and active management risk	Interest rate, credit spread, market, and active management risk

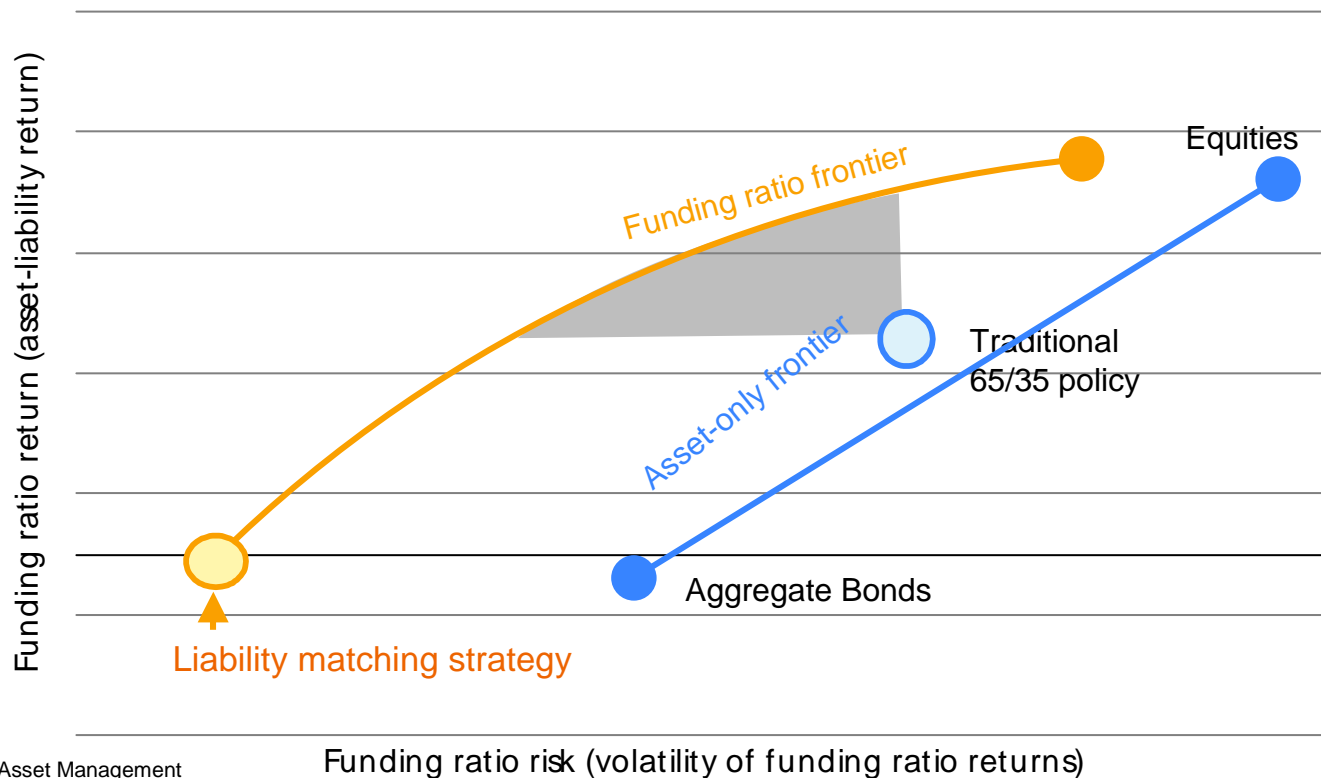
Many of the most sophisticated plans have made the shift

Funding ratio risk/return framework

Liabilities are the benchmark for risk and return measurement

- ◆ Four types of risk can be taken relative to the liability – interest rate, credit spread, market, and active management
- ◆ Goal is to outperform liability by hedging uncompensated risk and taking compensated risks

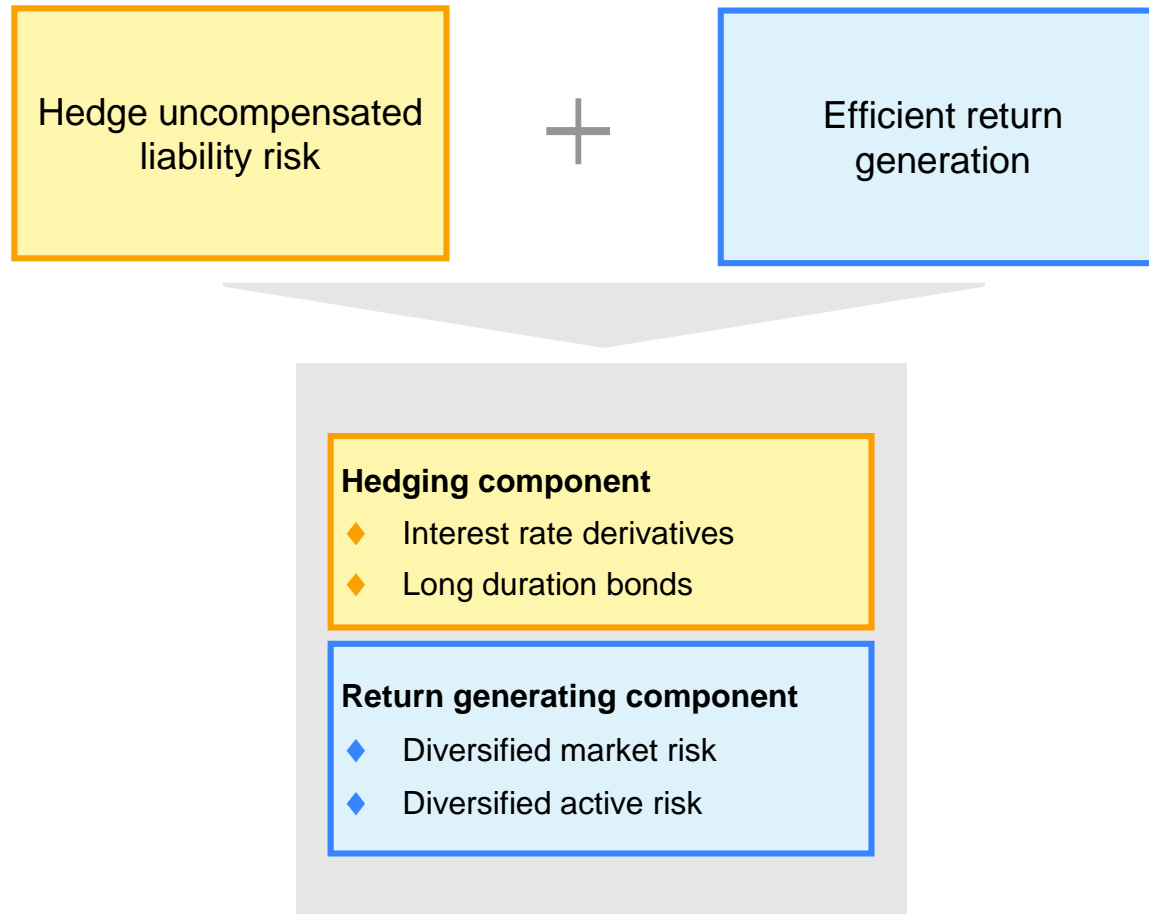
Funding ratio risk/return characteristics



Source: UBS Global Asset Management
For illustrative purposes only.

Constructing efficient portfolios

Take compensated risks and hedge uncompensated risks

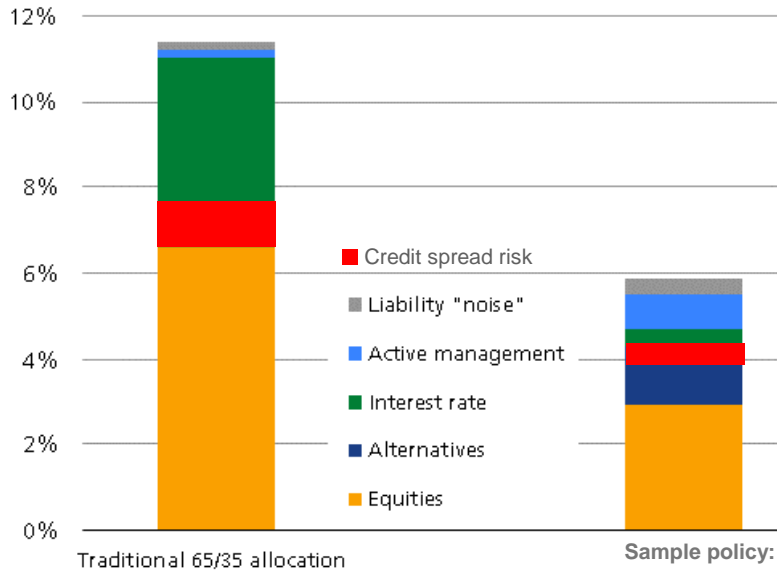


Source: UBS Global Asset Management
For illustrative purposes only.

The importance of managing a plan's funding ratio outcomes

A more efficient allocation of risk

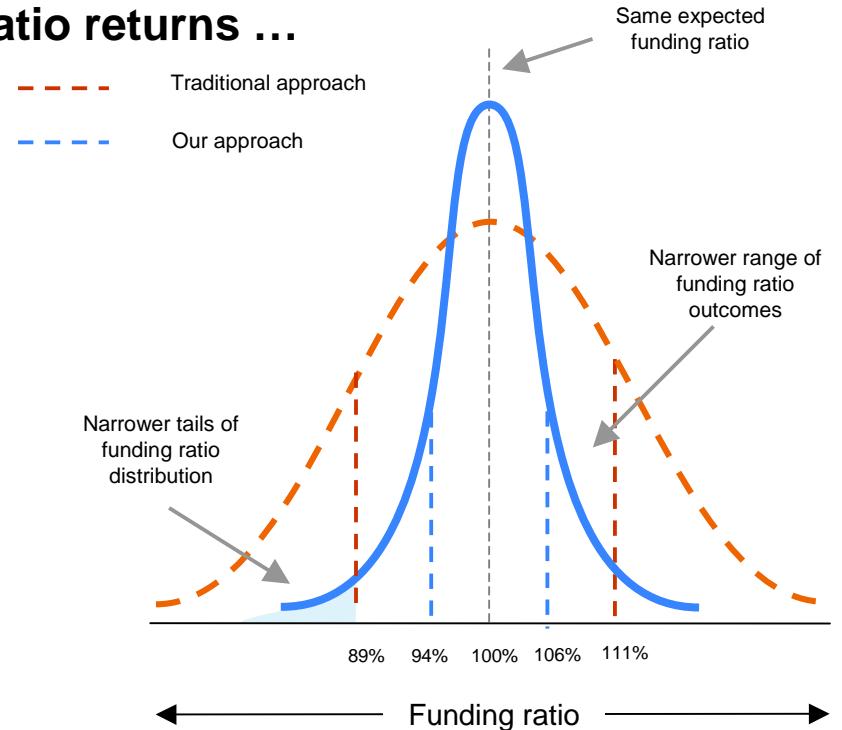
Sources of risk



We believe our approach leads to increased benefit security and predictability of the plan's impact on cash flows, earnings and balance sheet

For illustrative purposes only.

More condensed distribution of funding ratio returns ...



	Traditional allocation	Sample policy
Expected funding ratio	100%	100%
90% Confidence interval	78% - 122%	88% - 112%
95% Funding ratio VaR	82%	90%

Dynamic management of pension risk

1. **Dynamic management of overall risk budget** : Managing the split between liability matching and return generating assets

- ◆ Size of risk budget shrinks (allocation to liability matching assets increases) as the plan's funding ratio increases

2. **Dynamic management of liability risk**: Managing interest rate risk and credit spread risk within the liability matching asset pool

- **Interest rate risk**: As interest rates rise and the plan's funding ratio improves increase the duration of assets to track liabilities more closely
- **Credit spread risk**: As credit spreads narrow, move long duration credit exposure into long duration risk free assets

Our current assessment

Unattractive

Attractive

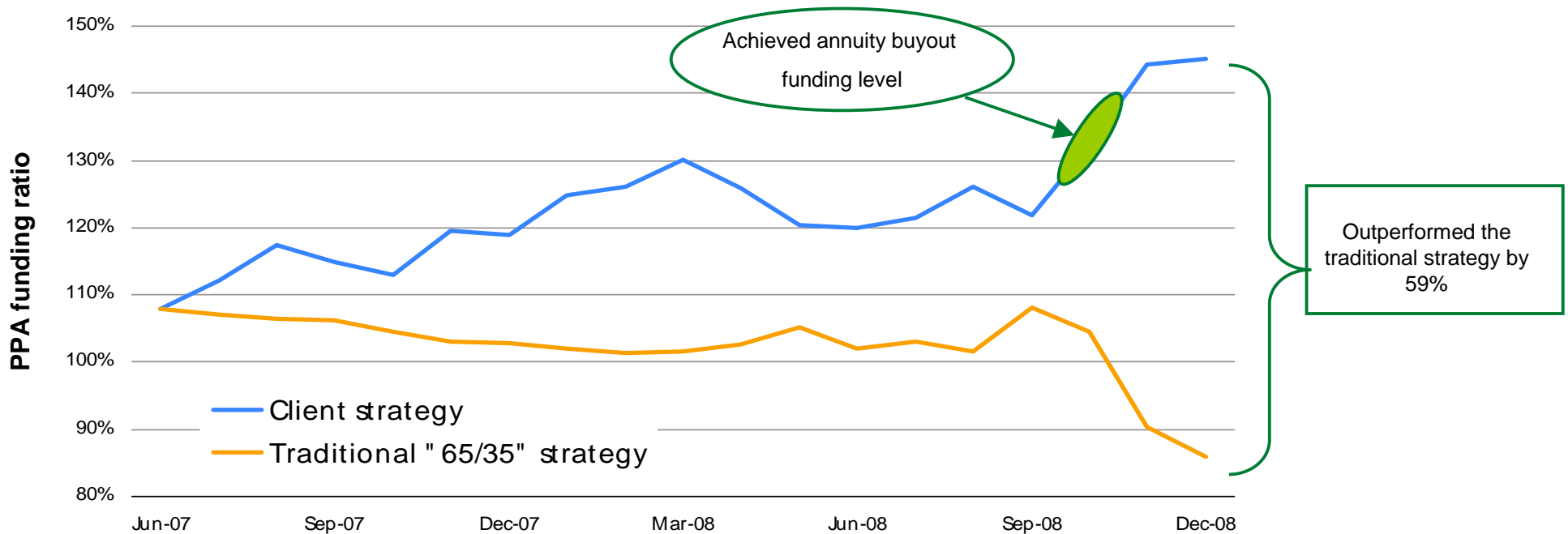
3. **Dynamic management of market risk**: Managing the amount and types of market risk within the return generation asset pool

- **Market risk**: Increase (decrease) the allocation to return generation when risky assets are attractive (unattractive) and adjust the allocation between the various assets based on relative valuations

Attractive

Case study: DB Outsourcing – focused on funding ratio

Improved funding ratio outcome



- ◆ Client has achieved its objective of increasing the plan's funding ratio to the point where they can voluntarily terminate the plan and purchase annuities
- ◆ Transitioned them into an immunization strategy to protect the surplus as they go through the plan termination process

Source: UBS Global Asset Management. Data as of December 11, 2008

PPA funding ratio is defined as the ratio of the market value of the assets to the market value of the liabilities. Market value of the liabilities is calculated using a corporate A-AAA credit discount curve as developed by UBS. Client strategy is representative of a holistic Asset Liability Investment Solutions (ALIS) approach employing an interest rate swap-based hedging component and UBS Global Asset Management Dynamic Alpha Strategy as the return generation component. The improvement in the client's funding ratio can mainly be attributed to the relative performance of the return generation component compared to the equity proxy (S&P 500) of a traditional 65/35 strategy and the effect of the fall in LIBOR rates on the 100% overlay for the interest rate swap-based hedging component. Traditional "65/35" strategy is a typical corporate pension plan with an equity/bond ratio, represented by 65% S&P500, 35% Barclays US Aggregate Bond Index allocation. For illustrative purposes only. This is an example of the implementation of an ALIS strategy with specific investment objectives and funding goals, occurring under certain market conditions. Past performance is no guarantee of future results. Results will vary significantly from client to client based on numerous factors, including but not limited to: time horizon; plan maturity; degree of liability hedging; allocation of assets between return generating and hedging components; funding ratio; interest rates; and contributions.

Ignoring risk at your own peril



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