

2013 WHARTON PENSION
RESEARCH COUNCIL
CONFERENCE
APRIL 25-26, 2013

*RECREATING SUSTAINABLE RETIREMENT:
IMPLICATIONS FOR PLAN SPONSORS
AND THE FINANCIAL MARKET*

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Discussant

Papers to Be Discussed

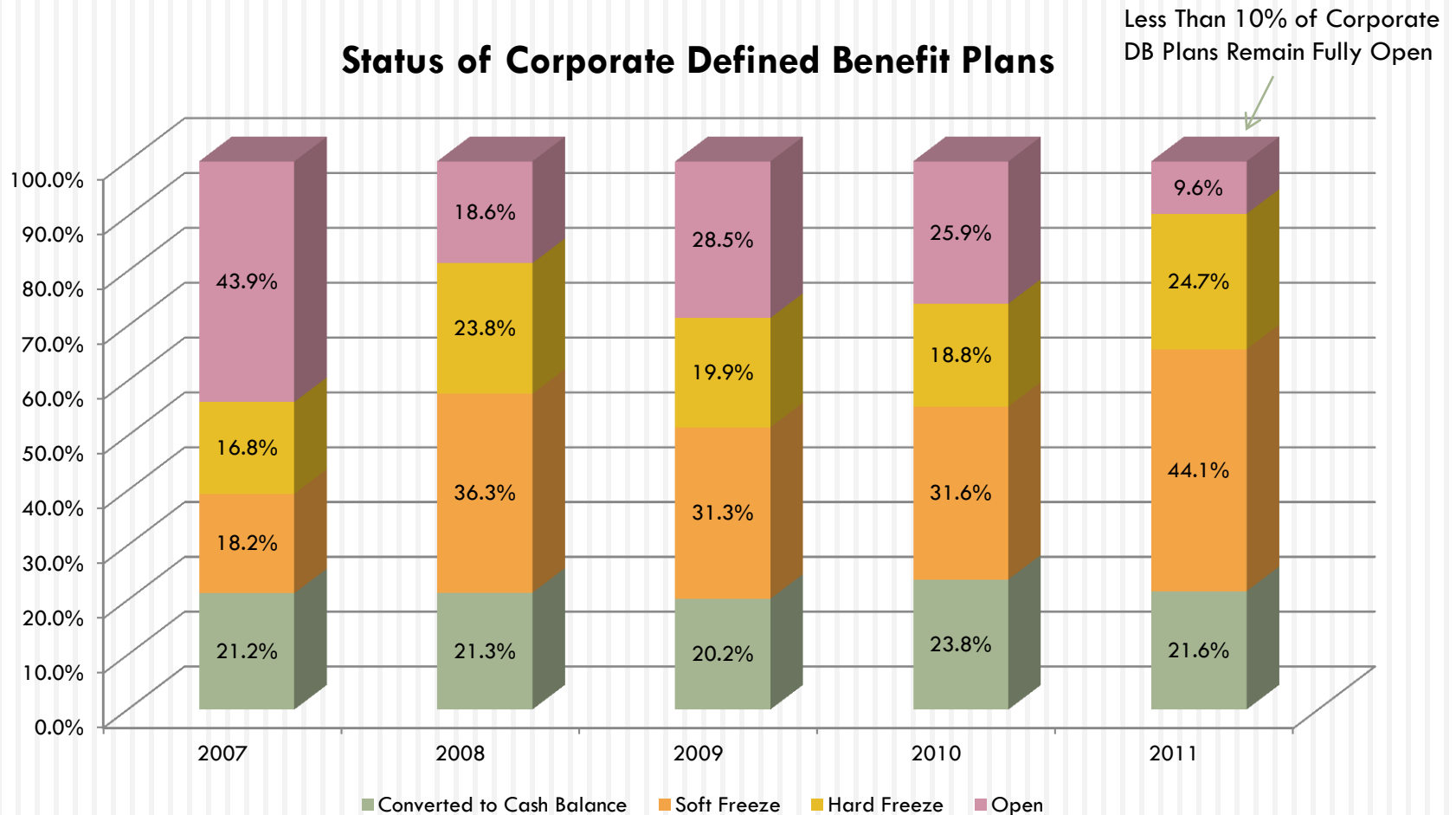


- “Risk Budgeting and Longevity Insurance – Strategies for Sustainable Defined Benefit Pension Funds”, by Amy Kessler
- “The Funding Debate: Optimising Pension Risk Within a Corporate Risk Budget and the Relative Merits of Using Available Cash for Pension Funding”, by Geoff Bauer, Gordon Fletcher, Julien Halfon and Stacy Scapino

Points Common to Both Papers

- Need to take a holistic view of risk at the plan level
 - Equity risk
 - Interest rate risk
 - Inflation risk
 - Longevity Risk
- Appreciation for plan's interrelationship with the sponsoring enterprise
 - Risks at sponsor level vs. plan level
 - Ability and desire to fund the plan
 - Role of plan in maintaining an effective organization

Is This Research Coming Five Years Too Late?



Thoughts on Kessler Paper

- Liability risks discussed
 - ▣ Longevity risk
 - ▣ Inflation risk – both for salaries and benefit COLAs
 - ▣ Interest rate risk
- Asset risks discussed
 - ▣ Exposure to “risky assets”
 - ▣ Interest rate risk
 - ▣ Implied leverage for underfunded plans

Thoughts on Kessler Paper

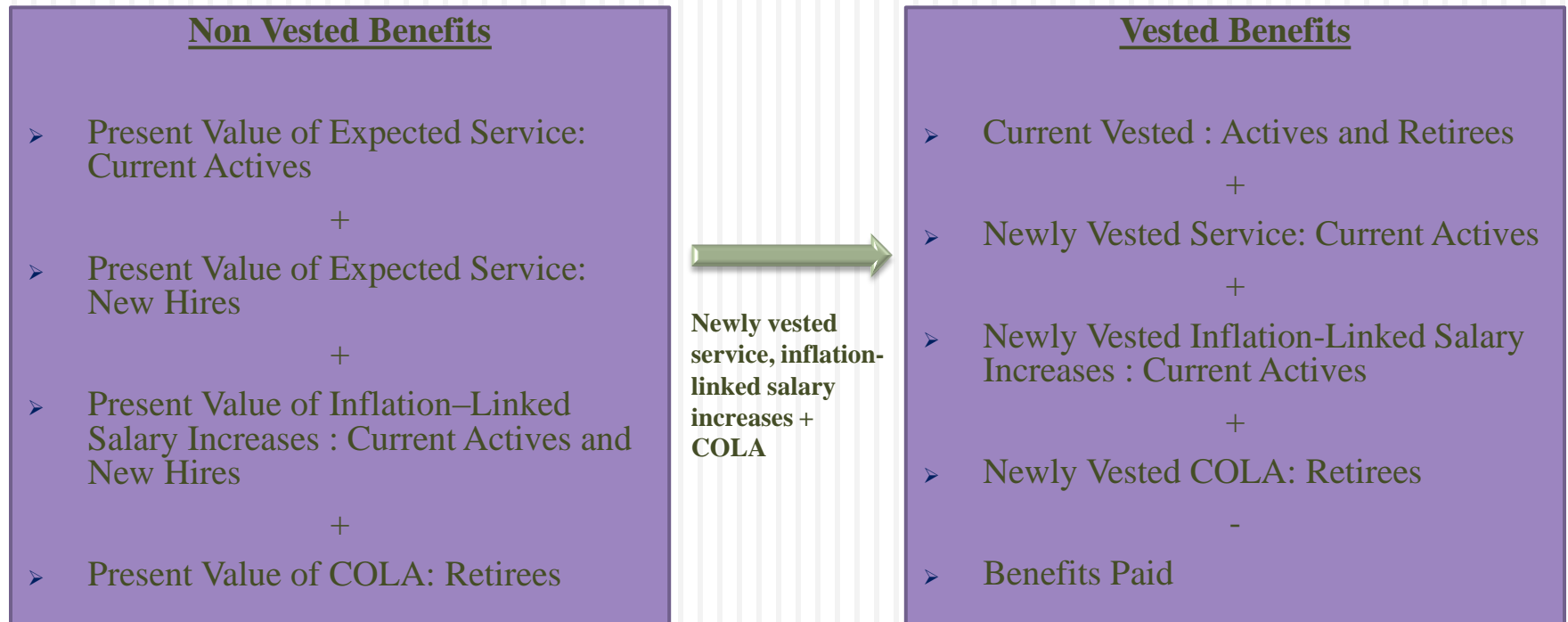
- Longevity risk
 - Appreciated analysis on interaction between inflation and longevity risk
 - But, is longevity risk “the key source of liability risk”, or the “tail wagging the dog”?
 - Market for longevity risk protection not very deep in the US
 - Insurers likely will fully price this risk based on worst case assumptions
 - Economic benefit to employer could only be derived if insurer can benefit from greater risk-sharing across a larger population

Thoughts on Kessler Paper

- Areas for further analysis
 - Look at inflation risk more holistically (i.e., salary growth and COLAs together)
 - Examine plans' risks in the context of the entire enterprise (a la the second paper)
 - Take a longer-term view of investment risk (both ex post and ex ante), particularly in the “return-seeking” portion of the portfolio

A Framework for Looking at Inflation More Holistically

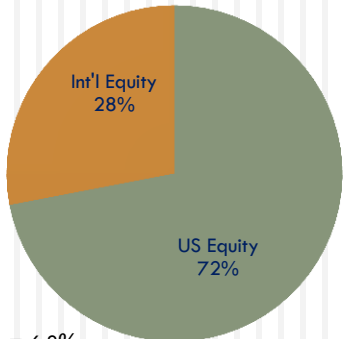
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For the Federal Reserve's DB Plan (an open plan), this framework results in approximately a 50/50 split between non-vested and vested benefits (i.e., liabilities). As one would expect, inflation is a major driver of the non-vested benefits. We then developed/are developing separate investment strategies based on these two vastly different liability profiles.

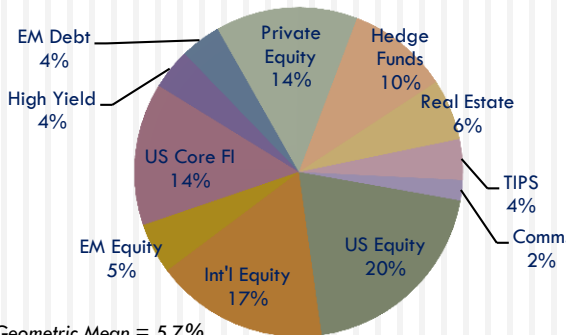
Potential Asset Allocations for a Typical Return-Seeking Portfolio

Current Portfolio



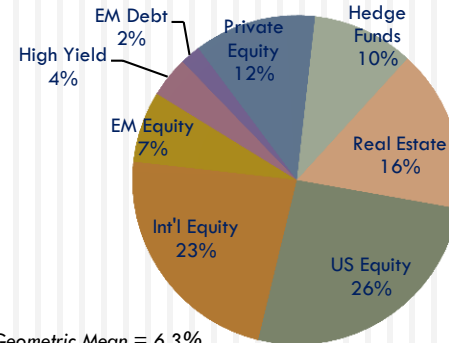
Geometric Mean = 6.2%
 Arithmetic Mean = 7.6%
 Expected Risk = 16.9%

Portfolio-1 (red)



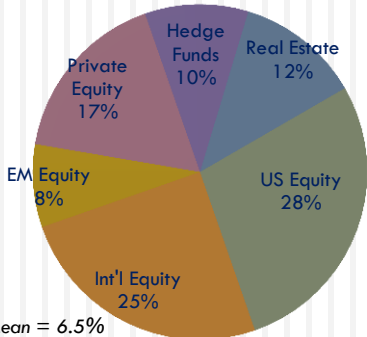
Geometric Mean = 5.7%
 Arithmetic Mean = 6.7%
 Expected Risk = 13.2%

Portfolio-2 (purple)



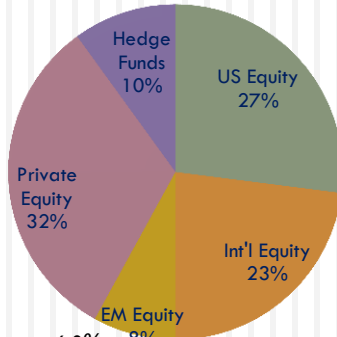
Geometric Mean = 6.3%
 Arithmetic Mean = 7.6%
 Expected Risk = 15.8%

Portfolio-3 (blue)



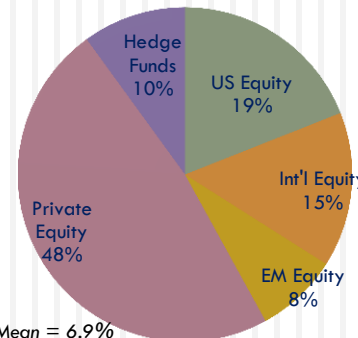
Geometric Mean = 6.5%
 Arithmetic Mean = 7.9%
 Expected Risk = 16.9%

Portfolio-4 (orange)



Geometric Mean = 6.8%
 Arithmetic Mean = 8.5%
 Expected Risk = 19.1%

Portfolio-5 (olive)

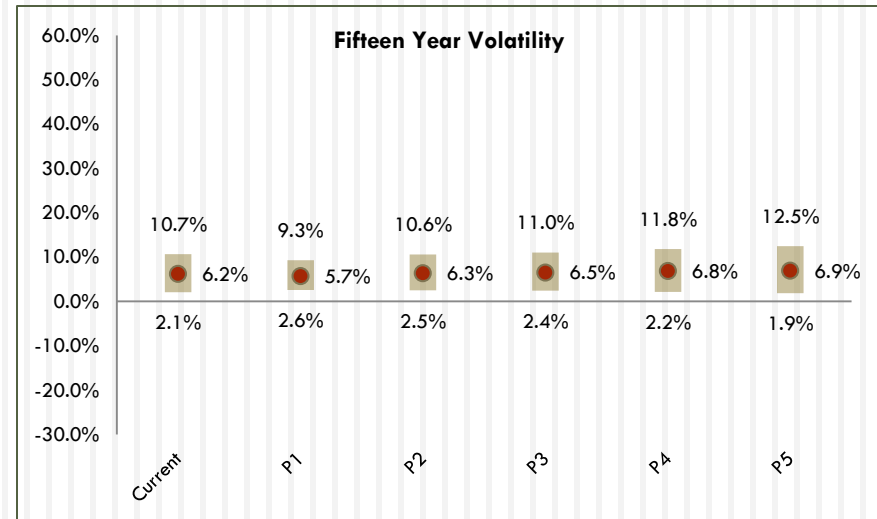
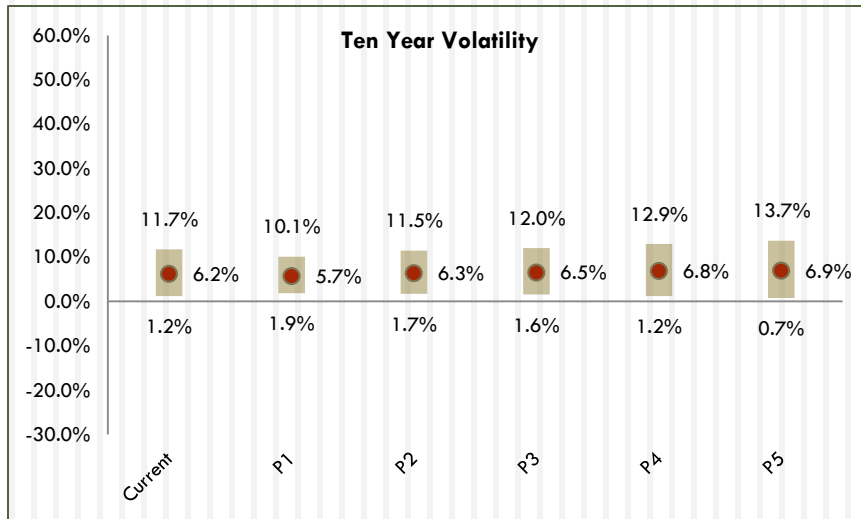
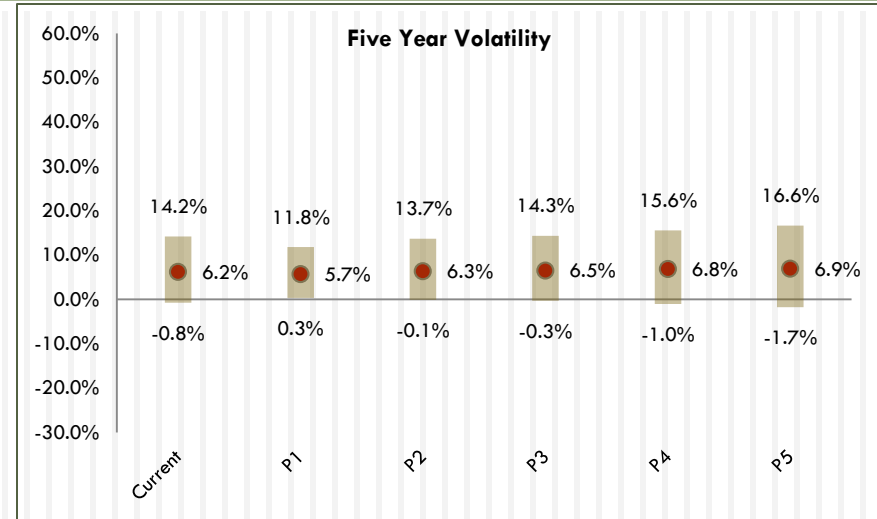
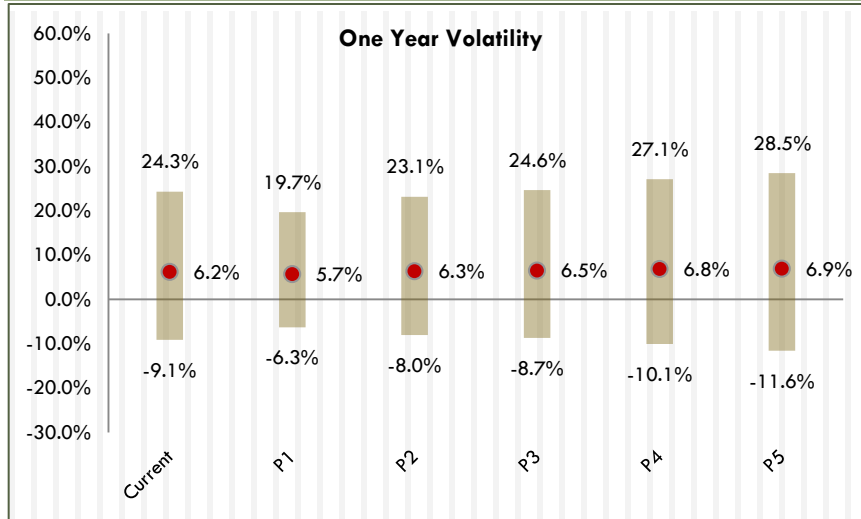


Geometric Mean = 6.9%
 Arithmetic Mean = 9.0%
 Expected Risk = 21.2%

Mean Expected Returns and Volatilities (+/- one standard deviation) of Potential Portfolios Over Different Time Periods

(Note: red dots represent geometric mean returns over the specified period)

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Thoughts on Paper by Bauer, et al.

- Similar discussion of pension risks vs. corporate risks, and the interaction between the two
- “Sponsors covenant”
 - Ability to fund
 - Willingness to fund
- Sponsor’s should consider plan funding relative to other potential uses of cash
- Set risk limits on the pension plan in order to satisfy regulatory requirements and constrain the potential outcomes

Thoughts on Paper by Bauer, et al.

- Areas for further analysis
 - More interest in evaluating the interrelationship between pension plan and employee recruitment and retention strategies
 - Impact of defined benefit plan funded status on credit ratings and borrowing costs
 - Impact of defined benefit plan's existence and funded status on companies' stock prices
 - Reconciling fiduciary role of managing plan assets with advancing needs of the sponsoring enterprise
 - Differences in this framework for public vs. private plan sponsors
 - Evaluation of recent large risk transfer transactions (GM, Verizon, Ford)

Example: Summary of Multiple Regression of Stock Price vs. Independent Variables

Data for period 2002-2011 (S&P Return 9.5%)

Independent Variables	Coefficient	T-Stat
Intercept	-5.057	-2.803
Projected EPS	10.332	82.731
Pension Liability as % of Market Cap	-3.554	-6.160
Funded Status (Pension Assets/Pension Liabilities)	10.480	6.572
Pension Fund Equity Allocation %	13.498	7.140
Contributions/Pension Assets	-0.907	-0.240

Source: "The Effect of Pension Liabilities on Stock Price", Morgan Stanley, October 2012