

Wharton Pension Research Council
Recreating Sustainable Retirement
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County Public Schools

Background

- Montgomery County Public Schools
 - 150,000+ students
 - 22,000+ employees
 - 15,000+ retirees and termed-vested
- Defined Benefit Plan - \$1.2 billion
- Defined Contribution Plans - \$1.1 billion
 - 403(b) and 457(b)
 - 12,000+ participants

Paper 1 – Managing Capital Market Risk

- Enrico Biffis & Robert Kosowski
- Better managing both assets and liabilities
- Continuum – plan closure to risk transfer to risk management
- Emergence and growth of LDI
- New solutions to manage risks post GFC
 - Full and partial transfer of pension obligations
 - Hedging instruments
- Challenges
 - Nomenclature
 - Regulatory
 - Adverse selection
 - Counterparty risk
 - Alignment of incentives

Paper 1 - Observations

- Plan design
- Risk management
- Other variables

Paper 1 - Observations

- **Plan design**
- Risk management
- Other variables
- Plans are changing
- Employee contributions
- Longer vesting
- New benefit formulas
- Hybrid and DC plans
- Plan construct as long-term risk mitigation

Paper 1 - Observations

- Plan design
- **Risk management**
- Other variables
- Investment options include
 - Diversification/Alternatives
 - LDI
 - Risk Parity
 - Smart Beta
 - Low Vol
 - Tail-risk hedging
 - Overlays
 - GTAA
- Strategic → tactical
- Insource or outsource
- Buyer or seller

Paper 1 - Observations

- Plan design
 - Plan management
 - **Other variables**
- Funded status
 - Low interest rate environment
 - Potential conflict with actuarial assumptions
 - Implementation
 - Plan resources
 - Benchmarks/monitoring
 - Expenses
 - Fees
 - Opportunity costs

Paper 2 – Shifting Distribution of Returns

- James Moore & Niels Pedersen
- Long term market returns have critical implications
- Various models yield different range of outcomes
 - Traditional models (multivariate normal, block bootstrap)
 - Regime-switching macro-driven simulation model (LHS)
- Evaluate in the context of DB and DC plans
 - DC – LHS narrower distribution
 - DB – LHS has lowest average required contribution
- Long horizon simulation model has benefits yet should be used as part of a comprehensive tool set

Paper 2 – Observations

- Big Data
- Perspective
- Implementation

Paper 2 - Observations

- **Big Data**
 - Context
 - Implementation
- *It's not complicated...or is it?*



Paper 2 - Observations

- Big Data
- **Context**
- Implementation
- Experience in PE
 - 1,000+ models
 - Accuracy
 - Predictive?
- Models are precise
 - Identify trends
 - Test scenarios
- Benefit of multiple models
- Necessary but not sufficient

Paper 2 - Observations

- Analytics
- Context
- **Implementation**
- Models
 - Add rigor to processes
 - Need to be user friendly
- Identify role of model
 - Asset allocation
 - Manager selection/redemption
- Balance with
 - Qualitative analysis
 - Judgment
- Resources
 - Change skill-sets
 - Work with partners

General Observations

- Asymmetric risks in retirement plans
 - Both papers focus on risk mitigation strategies
 - Plan management in context of uncertainty
- Risks in “left-tail” mindset
 - Potential underperformance
 - Questionable asset allocation
 - The future will be different
- Need to establish realistic expectations
 - Investment rates of return
 - Lower or bounded returns

General Observations (cont.)

- Financial innovation
 - Market efficiencies
 - Fee structures will change
- Agency issues
- Expand
 - Financial literacy
 - Involvement of all stakeholders
- Risk mitigation difficult for self-directed DC plans
- Importance of good governance

Thank You