

Financial Economics and Public Retirement Systems

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NCTR 2007 – Financial Economics

Financial Economics (FE)

- FE is the reigning corporate financial risk model
 - Financial Economics
 - Modern Corporate Finance
 - Pension Finance (corporate)
 - See 2006 “Pension Actuary’s Guide to FE”
- Open question: Are the principles and conclusions of corporate Pension Finance equally applicable to public pension plans?

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What would FE lead to?

- Disclosure of Market Value Liability
 - Frozen benefits at risk-free discount rate
- Funding based on risk-free discount rate
 - Even if invested in equities
 - Avoid intergenerational risk transfer
- Investment only in bonds, not stocks
 - See Bader/Gold “The Case against Stocks in Public Pension Funds”
 - Avoid increasing taxpayers’ equity risk exposure

Slide 3

Why FE is bad for pensions

$$\mathbf{C + I = B + E}$$

Contributions + Investment Income
equals
Benefit Payments + Expenses

- Short term: lower assumed “I” means higher current “C”
- Long term: lower actual “I” means higher “C” or lower “B”

Slide 4

Why FE is bad for pensions

$$C + I = B + E$$

- FE's market linkage denies the pension function of society an equity participation in the economy
 - Pension plans (DB) can only be lenders (bonds)
 - Only Individual Account plans (DC) can be owners (stocks)
 - Ultimately, this supports DC over DB

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Early Symptoms of FE for Public Plans

- Liability Driven Investing (LDI)
 - Includes “Market Value Liability” (MVL) as one of the “liabilities” in your Asset/Liability Model
 - Also called Economic Liability
- Push for routine disclosure of MVL by public plans
 - Along with your funding liabilities

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“Pension Actuary’s Guide to FE” (2006)

- “... this guide [is] to give pension actuaries an introduction to the application of financial economics to pension plans sponsored by widely held corporations”.
- “Pension finance takes a market oriented approach to DB plans.”
- “... actuaries do not need to accept the conclusions that many people reach when they apply financial economic theory to pension plan management ...”

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FE’s Valuation Model for Pensions

- “Law of One Price”
- “Financial Economics tells us that two cash flows that are identical in amount, tax treatment, credit risk liquidity etc. must have identical market values. If this were not the case, there would be an arbitrage opportunity to exchange the higher-priced cash flow for an identical cash flow at a lower price. This is known as the Law of One Price.”
- See Jeremy Gold’s “Absence of Arbitrage” principle
 - Pensions are the market equivalent of bonds

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FE's Agency Model for Pensions

- “A pension plan is not considered to be a self-standing entity, but a pass-through entity. ... Analyses that focus on the pension plan alone (“pension centric” or “plan-centric”) are unable to reflect the shareholder value perspective.”
- See Jeremy Gold’s “Transparency” principle
- “Statements like “a pension plan is a long-term enterprise” or “pension plans can take a long-term view of risk and reward” are not supported. Pension plans cannot be managed on a time horizon that differs from that of the shareholder.”

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What FE concludes about Pensions

- The cost of a pension to the taxpayers is the price the member would have to pay to reproduce the pension in the open market
- ***This is inconsistent with the nature and purpose of a public pension plan***

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Critique of Pension Finance

- FE's market valuation model is appropriate for corporations, but inconsistent with the purpose of public pension plans
 - To provide pensions at a cost to the taxpayer lower than the annuity markets
- FE's agency model is appropriate for corporations but inconsistent with the permanence of public plans and sponsors
 - Permanence allows public plans to do what corporate plans cannot

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Market focus: corporate vs public

- FE's market focus is appropriate for corporations
 - A corporation exists solely to maximize its stock's market price
 - Everything, including its pensions, must be considered as reducible to a market derived value and managed based on that market value.

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Market focus: corporate vs public

- Public sector linkage to the market is less direct
 - Agencies and pension plans participate in the markets
- Purpose of public agencies and pension plans cannot be reduced to a single market defined measure
 - Corporations are “of” the market, while public agencies and plans are only “in” the market.
- FE does not acknowledge this difference

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FE's Transparency Principle

- True for corporations, for various reasons
 - Pensions are incidental to the corporate purpose
 - Neither corporation nor the corporate plan are reliably permanent
- Not true for a public pension plan
 - Reliably permanent self-standing entity
 - Managed on a longer time horizon than that of the individual taxpayer
- FE does not acknowledge this difference

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What about the equity risk?

- Equity investing is more risky than bonds
 - This is not news
 - Public pension plans prudently and successfully balance risk and returns
- FE replaces risk management with risk aversion
 - This comes at a high price to the taxpayers
 - FE does not balance the costs and benefits of accepting that risk across generations

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What about “future generations”

- Intergenerational risk sharing or pooling does entail the risk of intergenerational cost transfers
 - FE focuses only on risk of shifting losses forward
- Risks and advantages are shared by all generations
 - Future taxpayers will eventually be today's!
 - We put risk on our grandchildren because we accept risk from our grandparents
 - FE treats each year of taxpayers as the first year

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“What FE teaches us”

- FE is not a general theory about pensions
- FE is a theory about how pension sponsorship affects a stock corporation
- If you are looking for an entity/vehicle to provide an equity driven pension commitment, do not look to a U.S. corporation and its pension plan.
- The public sector has committed sponsors and permanent plans, so can sustain and anticipate an equity participation in the economy.

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Q U E S T I O N S

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