SOUTHERN CONFERENCE ON TEACHER RETIREMENT

Tradition of Providing Excellence in Pension Education

Financial Economics

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Financial Economics & The Mark to Market Push

- What is this all about?
- What are the key issues?

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Nomenclature

- FE = Financial Economics
- MVL = Market Value Liability
- LDI = Liability Driven Investments
- Mark–to–Market

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What Is Financial Economics?

- Branch of microeconomics concerned with the workings of financial (capital) markets
- Concentrates on money transactions
- One aspect is how markets determine current values of transactions involving a stream of future cash payments

What Is Financial Economics?

- Two well known cash flow transactions are stocks and bonds – stocks generate dividends and/or earnings growth, and bonds generate future interest and principal payments.
- Both trade on the open market and therefore determining their “market” value is straightforward.
- Some cash flow transactions, like pension payments, do not trade openly so determining a “market” value is more difficult.

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What Is Financial Economics?

- FE considers pension payments to be a form of corporate (government?) debt and the assets held in trust to be corporate (government?) assets.
- The plan sponsor is the borrower of the debt and the plan participants are the lenders.
- Economists argue that employee debt is inefficient and therefore sponsors should borrow money elsewhere.

What Is Financial Economics?

- FE views pension plans as pass-through entities, not stand-alone entities.
- A pension plan is a means for shareholders (taxpayers?) to compensate employees for their services.
- FE does not support the concept that a pension plan is a long-term enterprise nor that pension plans can take a long-term view of risk and reward.

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What Is Financial Economics?

- FE concludes, for most pension plans, that all assets should be held in bonds.

- When recognizing the tax treatment of pension trusts, FE argues that shareholders (taxpayers?) are better off on an after-tax basis if the plan holds higher-taxed investments (like bonds) and shareholders (taxpayers?) hold lower-taxed investments (like stocks) in their individual portfolios.

What is MVL?

- A very different calculation from traditional "Actuarial Accrued Liability"
- Based on a plan termination concept
- Based on risk free investment return rather than expected rate of return
- Based on benefits accrued to date rather than projected benefits

What is Traditional Actuarial Liability (AL)?

- Actuary estimates all benefits anticipated to be paid
  - Including future pay
  - Including future work
- Actuary determines total present value of this
  - Based on anticipated fund earnings
- Actuary allocates cost to past, present and future years
- Past portion of this cost is “actuarial liability”

Let's Perform a "mini" Actuarial Valuation

- Imagine you're saving for retirement and have no other pension plans (not even Social Security)
- Your individual demographic data
  - Age 40
  - Earning $50,000 per year
  - You've been working since age 25
  - You plan to retire at 65
  - You want to have 80% income replacement at retirement

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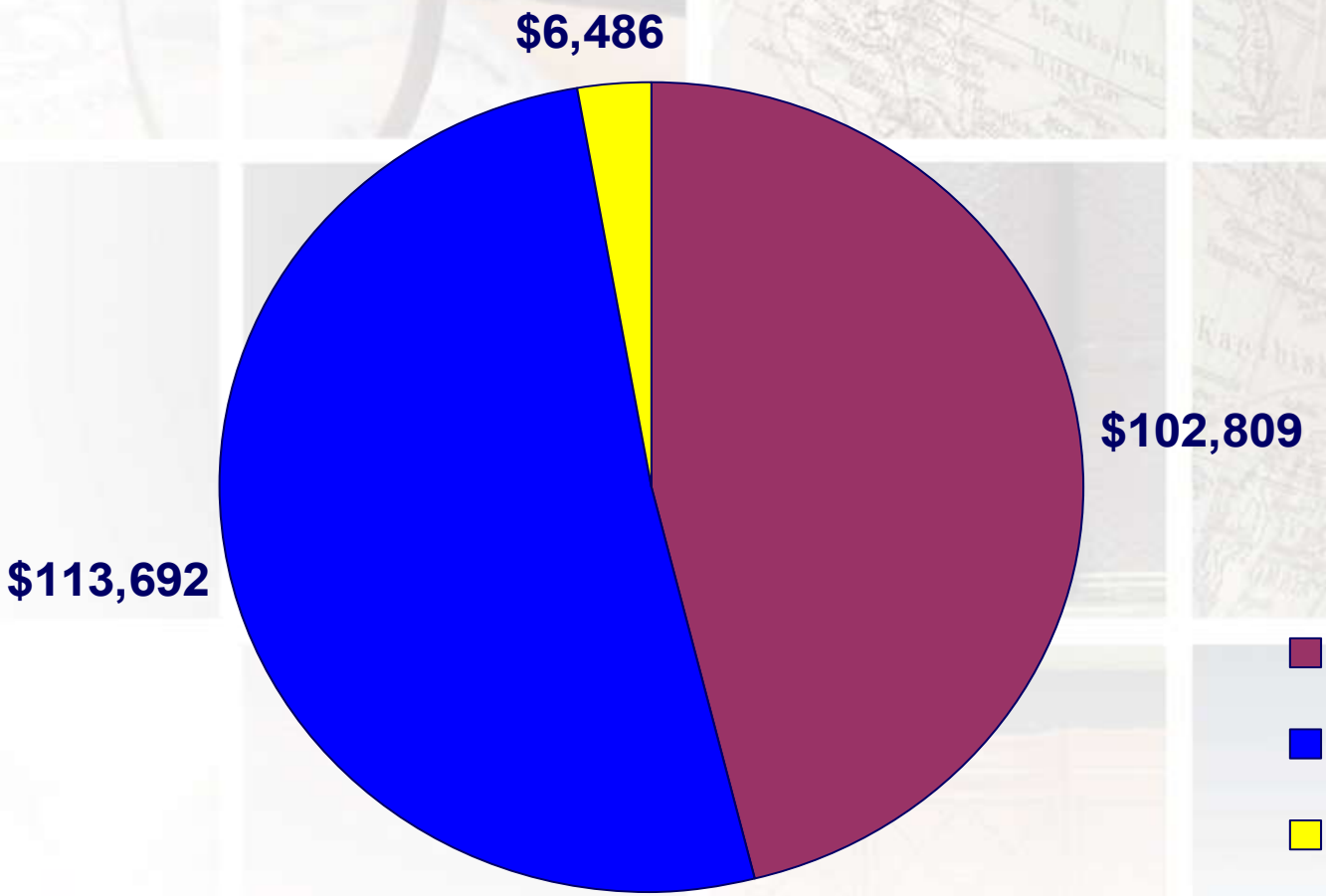
Mini Actuarial Valuation
Let's make some assumptions:

- Investment return of 8% per year
- Salary growth of 5%
- Inflation of 3%
- Life expectancy at 65 of 17 years
- You'll keep working till 65

Entry Age Actuarial Valuation

- Your pay will be $161,255 at age 65
- You'll need $1,527,120 saved up to fund 80% of this
- Some Actuarial Values:
  - Present Value of Projected Benefits = $222,987
  - Normal Cost Percentage = 13.0% of pay
  - Actuarial Accrued Liability = $113,692

Split of $222,987 PVFB



This is Useful Information

- You ought to be saving 13% per year
- You ought to have $113,692 saved up
- If you're over or under $113,692, you should save more or less than 13% to get back on track
  - Similar to the amortization of unfunded liability

MVL would Calculate this on a Termination Basis

- Instead of 80% target benefit, would use 15/40 x 80%, or 30%
- Instead of projecting pay, would use current pay
- Instead of using anticipated earnings, would discount at “risk free” rate (e.g. 5%)
- No inflation would be assumed
- Result would be MVL of only $50,000

***For typical pension plans, MVL is often higher than AL**

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But this MVL Information Will be Useless

- If your pay increases next year
- If you really want to have an inflation adjusted benefit
- If you don't invest in risk-free securities

This is not a good way to save for retirement

Issues Related to MVL

- Actuarial Method
- Discount Rate
- Dogma
- Price versus Value
- Potential Misuse
- Volatility
- Unintended Consequences
- Conflict of Interest
- Private versus Public Sector
- Mark to Market Controversy

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Actuarial Method

- Current Practice is typically Entry Age Normal
- MVL requires Unit Credit (UC)
- EAN results in level cost
- UC tracks the benefit accrual pattern
- UC is back-loaded
- UC matches value of benefit

Discount Rate

- Traditional uses return on assets
- MVL uses risk free rate
- Traditional captures risk premium in advance
- What is risk free rate
- Mismatch if fund earns:
  - Other than assumed rate of return (Traditional)
  - Other than risk free rate (MVL)
- Traditional facilitates manipulation
- MVL would cost more

Dogma

- MVL is the only true value
  - Law of one price
  - Pension is merely a pass-through
  - Not using MVL distorts investment decisions
  - Not using MVL distorts tax consequences
- MVL fails to consider how assets are really invested
  - MVL would mean the end of the world

Price VS. Value

- Traditional method focuses on price
- MVL focuses on value

Potential Misuses

- Potential Misuse of Traditional Methods
  - Manipulating interest assumption
  - Manipulating assumptions of other plan provisions
  - Pension obligation bonds will always look attractive
- Potential Misuse of MVL
  - Overstates cost of DB versus DC
  - Easy leap to terminating DB plans
  - Encourages Liability Driven Investing
  - Pension obligation bonds will never look attractive

Unintended Consequences

- Unintended consequences of traditional methods
  - "Point-in-time" and "average results" thinking
  - Possible understatement of benefit improvement costs
- Unintended consequences of MVL
  - All-bond portfolios
  - Very high annual costs
  - Termination of public sector DB plans

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Conflict of Interest

- Traditional Method
  - Entrenched Actuaries serving their clients
  - Entrenched Systems hooked on low costs

- MVL
  - Bond managers
  - LDI consultants
  - Opponents of DB

Private versus Public Sector

- Public Pensions don't terminate
- Public Pensions aren't of the market
- Public Pensions are run by governments (the people) not shareholders
- Public Pensions have long term time horizon
- Risk of public sector bankruptcy very low

Mark-to-Market Controversy

- Mark-to-Market partially blamed for current problems in financial sector
- Possible repeal of FAS 157
- Certain assets not regularly traded
- Public pensions also not regularly traded
- Possible non-repeal, but revised regulations based on mark-to-market
- Parallel to MVL “disclosure only” approach
- If Mark-to-Market caused collapse of financial sector, could MVL cause collapse of pension system?

Actuarial and Accounting Standards

- MVL is under review by the actuarial and public sector accounting standards-setting organizations
  - Actuarial Standards Board
    - Chiefly via ASOP No. 27
  - Governmental Accounting Standards Board
    - Chiefly via Statements 27 and 27

NCTR and NASRA Activity

- Approved resolutions
- Included the issue in conferences and other gatherings
- Assigned task forces that are collaborating:

NCTR	NASRA
▪ Peggy Boykin ▪ Jeff Ezell ▪ Ronnie Jung ▪ Gary Harbin	▪ Tom Cavanaugh ▪ Gary Findlay ▪ Norm Jones ▪ Pat Robertson

Worth Noting …

- Pat Robertson is a member of GASAC
  - Governmental Accounting Standards Advisory Committee
- NASRA annual conference will feature a session on MVL with:
  - Dave Bean GASB Research Director
  - Robert Attmore, GASB Chairman
  - Dan Ebersole, GASAC Chairman and Georgia State Treasurer

Actuarial Professional Activity

- Last year, ASB issued a request for comments on ASB No. 27, Selection of Economic Assumptions for Measuring Pension Obligations
- In response, 72 directors of mostly statewide systems responded
- Expressed strong reservations about use of MVL

Actuarial Professional Activity

- Also last year, Public Interest Committee of the AAA held a forum in September
- Fourteen panelists were invited
- Others were invited to submit written responses; ~60 did, almost all of which were in opposition to MVL
- PIC subsequently released a statement endorsing the application of MVL to public plans

Actuarial Professional Activity

- Next month, Public Pension Finance Symposium will hear papers written on application of MVL to public pensions
  - **www.soa.org**
- Also, there is discussion of establishing a separate professional actuarial organization for public pension consulting actuaries

GASB Activity

- Project to review Statements 25 and 27 is underway, known as the Post-Employment Benefits (PEB) project
- PEB task force has 18 members, including Tom Cavanaugh, Meredith Williams, Jeremy Gold, and Keith Brainard
- Current phase is the Invitation to Comment (ITC)

GASB Activity

- Invitation to Comment closes July 30
- GASB will review responses and draft either a:
  - Preliminary views document, leading to further research, data collection, and discussion, or
  - Exposure draft, which is akin to “pouring the concrete”
- Be sure to participate in the ITC !

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QUESTIONS?

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