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**Retirement Plan Strategies:
 Pension Risk Transfer**

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What is Pension Risk Transfer

- When a defined benefit pension provider offloads some or all of the plan's risk – e.g.: retirement payment liabilities to former employee beneficiaries. The plan sponsor can do this by offering vested plan participants a lump-sum payment to voluntarily leave the plan, or by negotiating with an insurance company to take on the responsibility for paying benefits (Buy-Out).

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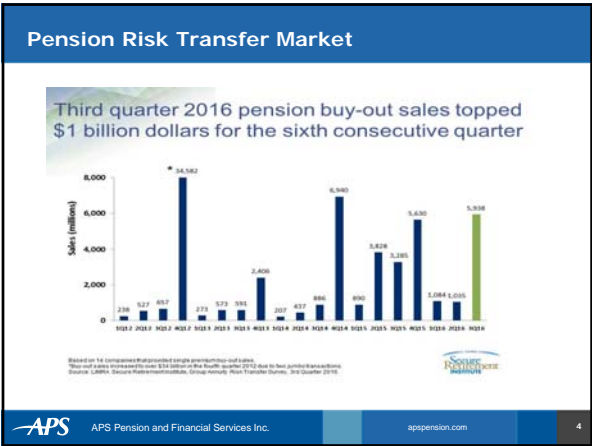
Growing Interest in Pension Risk Transfer

Year	Sales (\$ billions)
2002	\$1,661.1
2003	
2004	
2005	
2006	
2007	\$2,882.4
2008	
2009	
2010	
2011	
2012	\$35,980.8
2013	
2014	
2015	\$13,655.4

The GM and Verizon transactions boosted single premium buy-out sales to \$35.9 billion in 2012.

Source: LIMRA. Sales results based on a non-constant group of companies and reported in millions.

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What is a pension?

- Deferred compensation: earned benefit for services rendered
- Benefit is defined based on a formula
 - “Multiplier”
 - Years of Service
 - Final Average Salary
- Benefit is based on “normal” retirement age – combination of age and years of service

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Pension Formula

- 25 years of service, “multiplier” of 2% and FAS of \$40,000
- $\$40,000 \times 2\% \times 25 = \$20,000$
- Reductions for survivor annuity
- Reductions for retirement prior to “normal” age
- Post-retirement COLAs

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How much does a benefit cost?

- Pre-funding a benefit that is decades away from payment requires assumptions
- Theory: the cost of the plan is spread out over each participant's career to provide payments over a lifetime
- Normal cost: the cost of the benefits earned in the current year.

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Normal Cost (Service Cost)

- Actuarial present value of benefits accrued in the year.
- Pension costs are paid over the life of an employee's career. With investment, the assets should pay for a lifetime annuity.
- Normal cost usually is a percent of payroll

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Critical role of assumptions

- Economic Assumptions: How will market forces affect the cost of the plan?
- Demographic Assumptions: How will participant behavior affect the cost of the plan?

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Economic Assumptions

- Interest Rates. This also leads to the **discount rate** for pension accounting.
- Salary assumption: projecting an individual's pay growth in the future.
- Inflation: Nominal versus real returns. COLAs.

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Demographic Assumptions

- Withdrawal assumptions: length of service and turnover
- Mortality
- Retirement assumptions (age and service)
- Disability assumptions

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Assumptions versus Reality

- Assumptions should be accurate in long term
- In short term, expect deviations
- Investment earning are most volatile
 - Smoothing of deviations
 - Liability Driven Investing can smooth returns and hedge interest rate risk
- Deviations can lead to greater or reduced funding
 - Unfunded Actuarial Liabilities (UAL)

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Unfunded Actuarial Liabilities
Two components: prior service and actuarial gains/losses

- Prior Service Liability: costs for service already performed stemming from failure to fund normal costs or retroactive benefit improvements.
- Actuarial gains/losses: Experience deviates from assumptions. Investment gains/losses are largest component but mortality, salary growth, retirement, turnover, etc. can deviate as well.
- UAL can be amortized over 30 years

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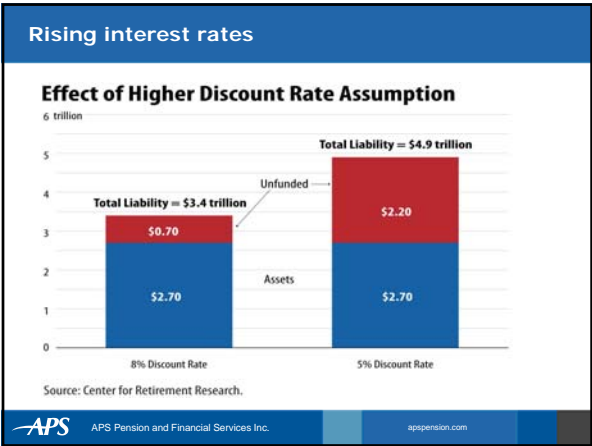
**Accounting meets funding:
Annual Required Contribution**

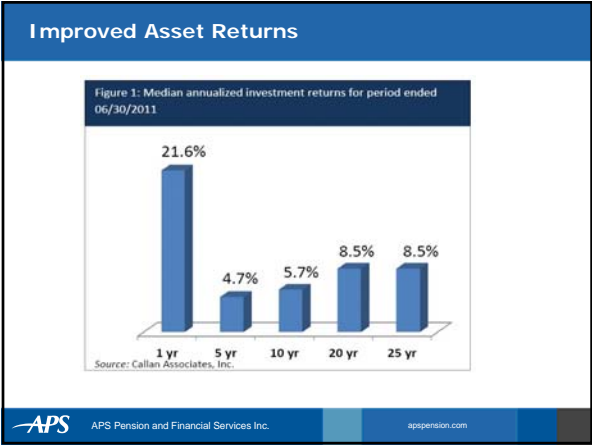
- ARC is not "required" but is the amount necessary to bring plan to full funding over amortization period
- $ARC = \text{normal cost} + \text{amortization of UAL} + \text{admin}$
- Currently, UAL costs equal or exceed normal cost for many plans

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The Perfect Storm for Pension Risk Transfer

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Mortality Costs may be plateauing

	2000 Mortality Tables	2014 Mortality Tables	Change
Life Expectancy 65-Year-Old Male	84.6 years old	86.6 years old	2.4% Increase!
Life Expectancy 65-Year-Old Female	86.4 years old	88.8 years old	2.8% Increase!

**2016 SOA Mortality tables: By incorporating three additional years of data on total U.S. population mortality rates, the SOA now says the average 65-year-old male will live to be 85.8 years, down from last year's projection of 86.2 years, and the average female can expect to live to be 87.8 years, down from last year's projection of 88.2.

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Types of Private Pension Plans

Over-funded Pension Plan

- When interest rates rise, the cost of actuarial liabilities decline.
- When a plan is early terminated with pre funded liabilities
- When investment returns for defined-benefit plans perform higher than expected, there are funds in excess of the amount needed to meet obligations
- Opportunity to de-risk the investment portfolio through LDI (Liability driven investing)
- **Encourages exchange of defined benefit for insured pension purchase (terminal funding solutions through annuities)**
- **Much more common in single owner plans or small pensions.**

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Pension Risk "Management"

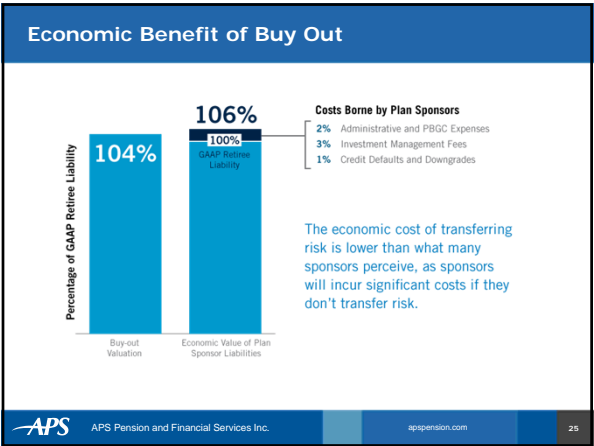
- Plan Design Changes:
 1. Freeze Benefits
 2. Contribution increases
 3. Limit or eliminate COLAs
 4. Increase retirement age
 5. Changes to FAS – career average
 6. Decrease in multiplier
- Liability Driven Investment Strategy
 1. Asset Liability duration matching in portfolio.
 2. Long duration fixed income

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Pension Risk Transfer Solutions

1. Longevity Insurance – Transfers only the longevity risk to insurance company. Combined w/ LDI investment. Mostly utilized in UK
2. Buy-in – Insurance company pays monthly annuity amount to the plan. Assets and Liabilities stay in plan. (Convertible to buyout)
3. **Buy-Out** – All assets and liabilities are transferred irrevocably to the insurance company. Settlement accounting necessary and true up funding may be required if under-funded.**
4. Lump Sum Payouts

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- ### The Buyout Process
1. Preparation – Develop the roles of buy out team. (Plan Sponsor, Strategic Advisor, Annuity Provider, Fiduciary Oversight, Outside Legal Counsel, Transition Manager)
 - Liability valuation
 - Asset analysis
 2. Feasibility Assessment – Assess Insurer options, evaluate use of cash vs. in-kind assets, develop RFP IOIs.
 - Pricing
 - Structure
 3. Structure and Refinement – Fine tune the structure of the buy-out. (Full vs. Partial, etc)
 - Structure and Legal analysis.
 - TPA Administration.
 4. Execution – Final Stage of the buyout. The group annuity is executed, assets are transferred, data reconciliation and plan termination and filings.
 - Communication to whole team.
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How can we help?


If you have a client w/ a Defined Benefit plan and would like to discuss Pension Risk transfer solutions:

Please contact Steve Musmanno at 516 228 8444 or email at smusmanno@appension.com

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Disclosures

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- *Steven J. Musmanno is a Principal and Co-Managing Partner of APS Pension & Financial Services and APS Investment Management, Inc.*

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