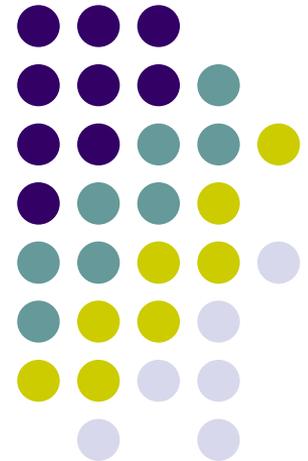
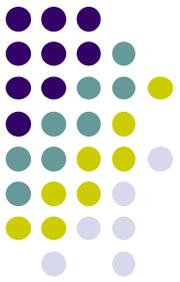


Retirement Plan Reform and Intergenerational Equity

Girard Miller CFA
CIO of OCERS
August 8, 2012



Agenda for My Remarks



- Definitions and historical perspective
- Issues in retirement plan reform
- Recent developments
 - Regulatory
 - Legislative
 - Judicial
 - Electoral
- Looking forward



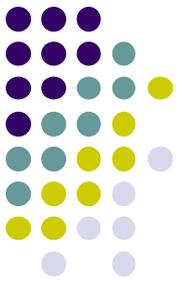
Disclaimer: Girard's opinions here are entirely his own and not necessarily those of OCERS

What is intergenerational equity?



- Key concept in public finance
 - Musgrave and Musgrave's original textbook
- Each generation pays the costs of services it receives
- Never borrow to pay for operating expenses
- Don't borrow money with repayments that extend beyond useful life of facility
- Pre-fund deferred retirement benefits actuarially

When does intergenerational equity become a problem?



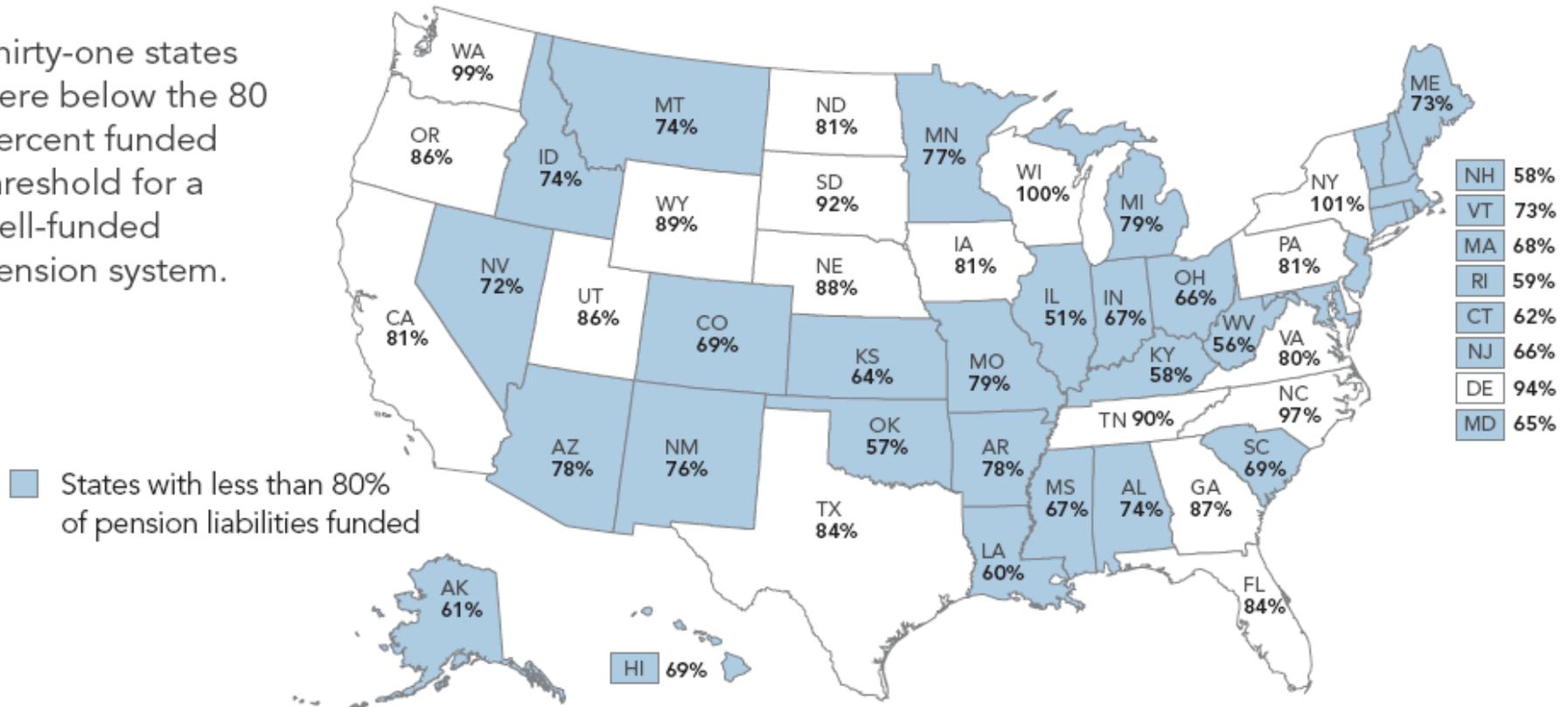
- Never a problem with a defined contribution plan
- Rarely an issue when pensions and OPEB are fully funded on an actuarial basis
- Rarely a problem with a cash balance plan
- Typically a problem when pensions are underfunded with extended amortization
- Always a problem when defined benefits are not funded actuarially
- Always a problem with *ad hoc* COLAs and retroactive benefits increases

Pension Underfunding a National Concern



States' Public Sector Pensions 78% Funded in FY09

Thirty-one states were below the 80 percent funded threshold for a well-funded pension system.



Source: *The Widening Gap: The Great Recession's Impact on State Pension and Retiree Health Care Costs*, a report by The PEW Center on the States, 2011.
For More Detailed Information: see Appendix - I.

Other Post Employment Benefits (“OPEB”)

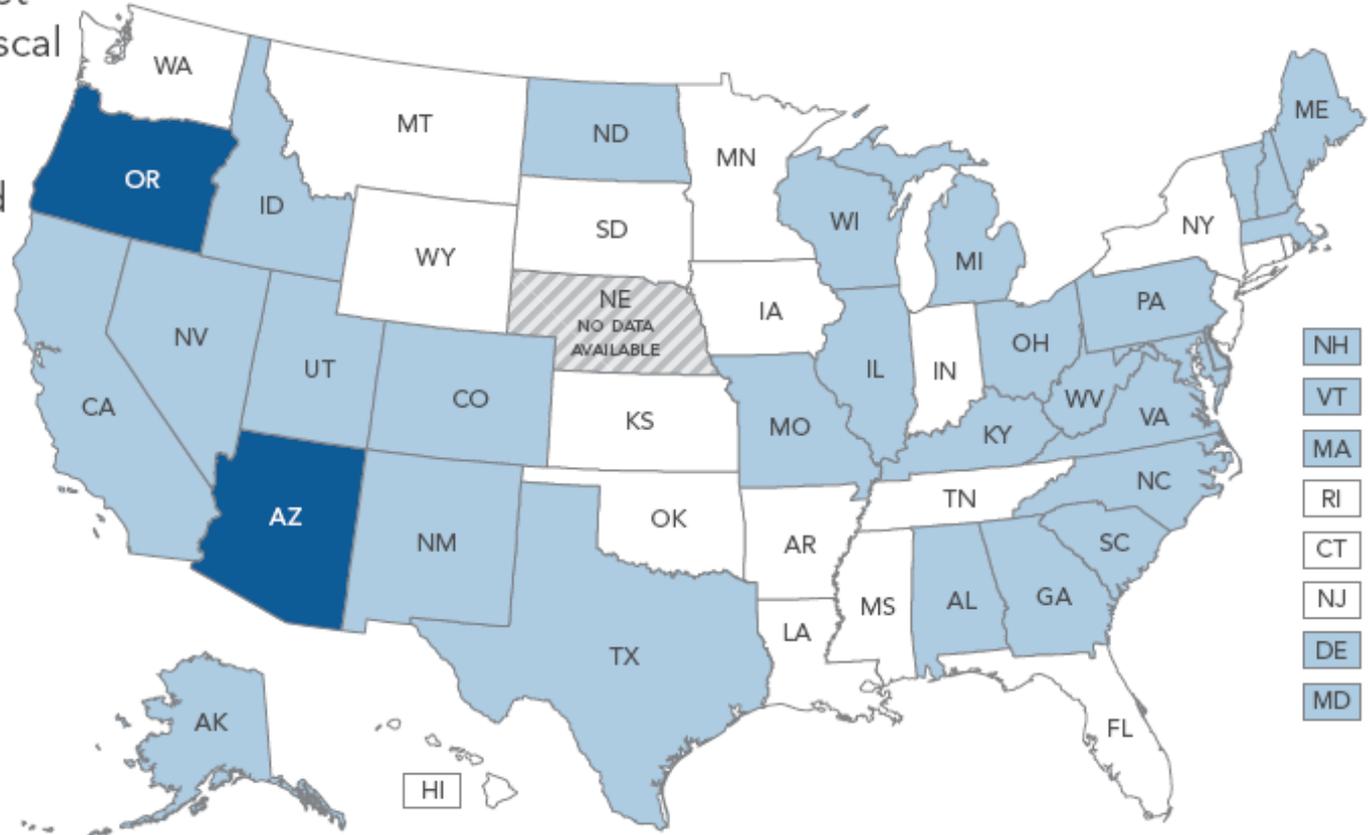


States' Retiree Health Benefits 5% Funded in FY09

Nineteen states had set aside no funds as of fiscal year 2009 to pay their bills coming due for retiree health care and other non-pension benefits. Only seven states had funded at least a quarter of their liability.

Percent of Liability Funded

- 50% and above
- 0.1% to 49%
- 0%



Source: *The Widening Gap: The Great Recession's Impact on State Pension and Retiree Health Care Costs*, a report by The PEW Center on the States, 2011.
For More Detailed Information: see Appendix - II.

A Century of History in Pension Funding



- In the beginning, there were no pensions, no liabilities
 - Many original plans were employee-paid annuities
- But eventually there were unfunded liabilities
 - Some financed actuarially, others not
- Progress toward prudent funding practices in 1950s and 60s
 - MFOA and CORBA championed good funding and pension governance
- Then came 1973: stocks fell 46% and inflation spiked
 - Funding ratios plummeted to (gasp!!) 70% nationally
- And from 1980 to 2000, the markets fixed everything
 - By end of internet bubble, plans were “over-funded”
 - A term that should live in infamy



Roots of the Pension Problem

- **Significant benefits increases over past 30 years**
 - Moved pensions from *part of* a retirement plan to *the primary* retirement plan
 - Benefits increases were often retroactive, creating unfunded liabilities
- **Aggressive investment assumptions**
 - Many adopted a view that returns would be perpetually strong in 1990s and the 2000s
 - Plan designs were set in cement late in the Internet Bubble
 - Instead, markets delivered a decade of low returns in 2000s
- **No increases in employee contributions**
 - In fact, some employers went the wrong way, reducing employee contributions!
- **Legislatures and employers took pension holidays**
- **Absent reforms, unfunded liabilities doubled in 2008 bear market**

Roots of the OPEB Problem



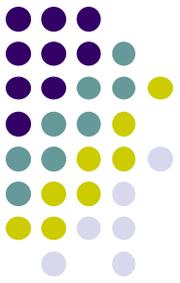
- **Lifetime retiree medical benefits** are common in public sector
 - 1/3 of plans are Cadillacs, 1/3 are Chevys, 1/3 are skateboards
- **Eligibility often tied to pension vesting** with more liberal terms
 - Lifetime entitlement as early as age 55 with 5 years (or 1 day) for many CalPERS employers !
 - Cliff vesting @ 100% of benefit rather than annual accruals
 - Few links to service period – a walking pneumonia
- OPEB (retiree medical) was **never funded**
 - Everybody waited until GASB 45 became effective
 - PAYGO rather than ARC funding during good years in 2003-2007
 - Thus, no money available during lean years 2008 and after
- Meanwhile, **medical inflation** outstrips CPI by 3x so liabilities have increased 50% since GASB 45 data hit the books

Today's pension and OPEB funding challenges

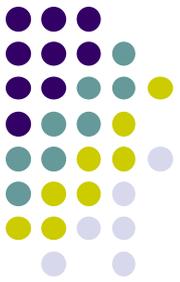


- Underfunding ratios left from the Great Recession
 - Liabilities per \$ invested have often grown by 40 percent since 2007
 - Equity markets still 10 percent below market peak
 - Boston College CRR estimated pension funding ratio of 75%, approximately \$750-900 billion UAAL using conventional math
- Budgetary constraints continue
 - Multiple claims for recovering revenues
 - Deferred maintenance, pension UAAL, service hours restoration
 - “Kick the can” mentality for OPEB Pay-go funding (\$1.5 trillion UAAL)
- Unrealistic investment earnings projections at 8 percent or more
- Intergenerational equity considerations typically ignored
- Plans have ignored business cycle

GASB 67 and 68: Impact on Public Pension Plans



- Employer net pension liabilities move to balance sheet in FY 2015
 - Including all multi-employer plans
 - “Whether or not it’s under our control”
- Investment disclosures:
 - Discount rate and asset allocations, expected investment returns by asset class
- Amortization and smoothing
 - 5 years for investments; avg svc life for others
- “Giant restatement” in first year



Pension disclosure guidelines for bond issuers

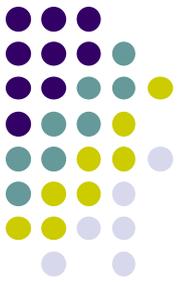
- Focus on foreseeable increases in employers' retirement plan costs
- Clear guidance to disclose more if employer's pension plan has funding ratio below 80% *or can foreseeably be expected to fall below 80%*
- Note: A plan funded at less than 100% at business cycle peak will likely fall below 80%
 - And a plan funded below 90% at mid-cycle has similar disclosure issues

The Maastricht-Yale study



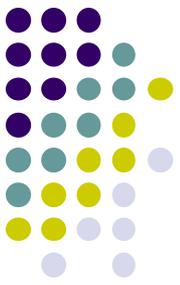
Maastricht University

Yale University



- Researchers studied US public and private plans, Canadian and European pensions
- US public plans took increasing risks in 1990-2010 despite aging participant populations
- Normal asset-liability management would suggest less, not more, risk
- Researchers concluded that GASB discount rate policy encourages perverse risk-taking

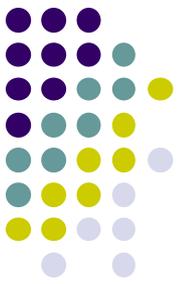
What irks the serious reformers



- Amortization periods that exceed workers' service lives and retirees' life expectancy
 - Burdens next-gen taxpayers for services they didn't receive
- Credit card amortization (e.g. 30 year open amortization)
- Extended actuarial smoothing practices (exceed market cycle)
- Unrealistic investment earnings projections
 - Corollary: riskier investment strategies to “make the number”
- Ad hoc COLAs and retroactive benefits increases
- Continued pay-as-you-go OPEB funding



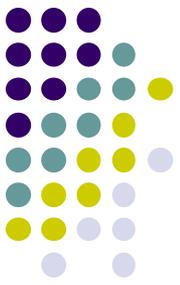
Legislative reforms to date



- 40+ states have “done something”
- Rhode Island arguably most dramatic
 - Lien law and bankruptcy risks = hard cutbacks
- Most states went for the low-hanging fruit
 - New benefits tiers for new hires
 - Contribution changes for incumbents where permissible by law
 - Some DC plans or hybrids for new hires
 - Most “reforms” did little to reduce UAAL



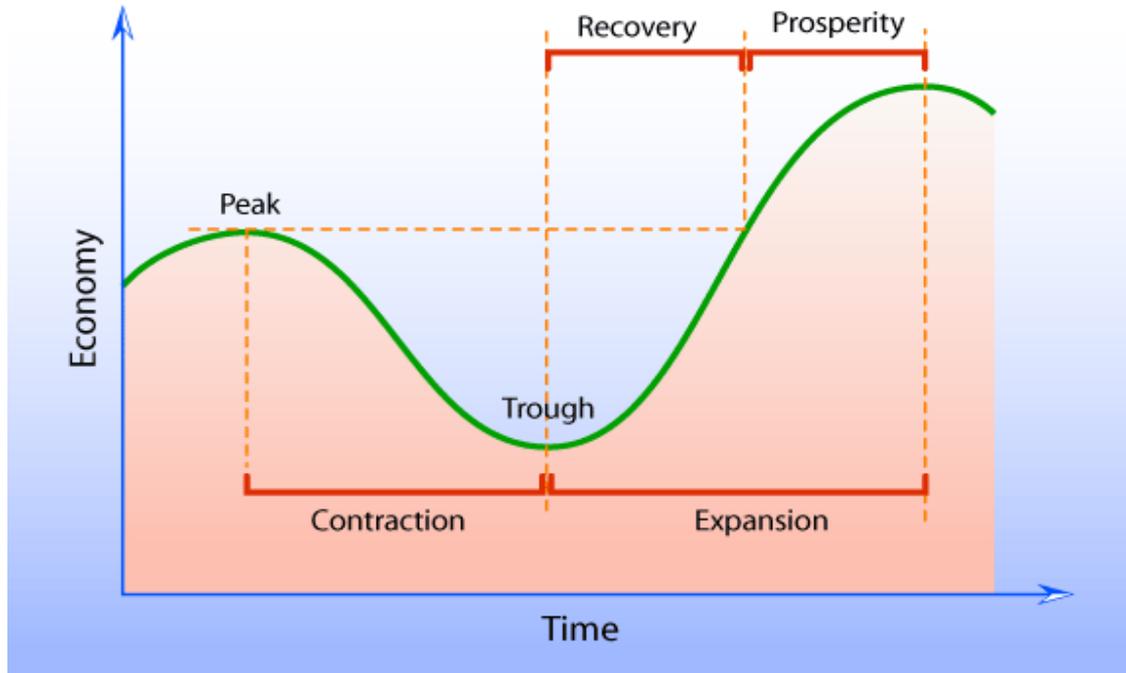
The Problem with Pension and OPEB Debt



- Today estimated at \$750 - \$900 billion for pensions
- OPEB is double that: \$1.5 - \$2 trillion
- Intergenerational problem because standard amortization policies greatly exceed average remaining service lives
 - GASB 67 and 68 won't fix that
- **Serious and growing risk** of even-worse funding hangovers after next recession



What actuaries and thus most pension fiduciaries ignore: The business cycle



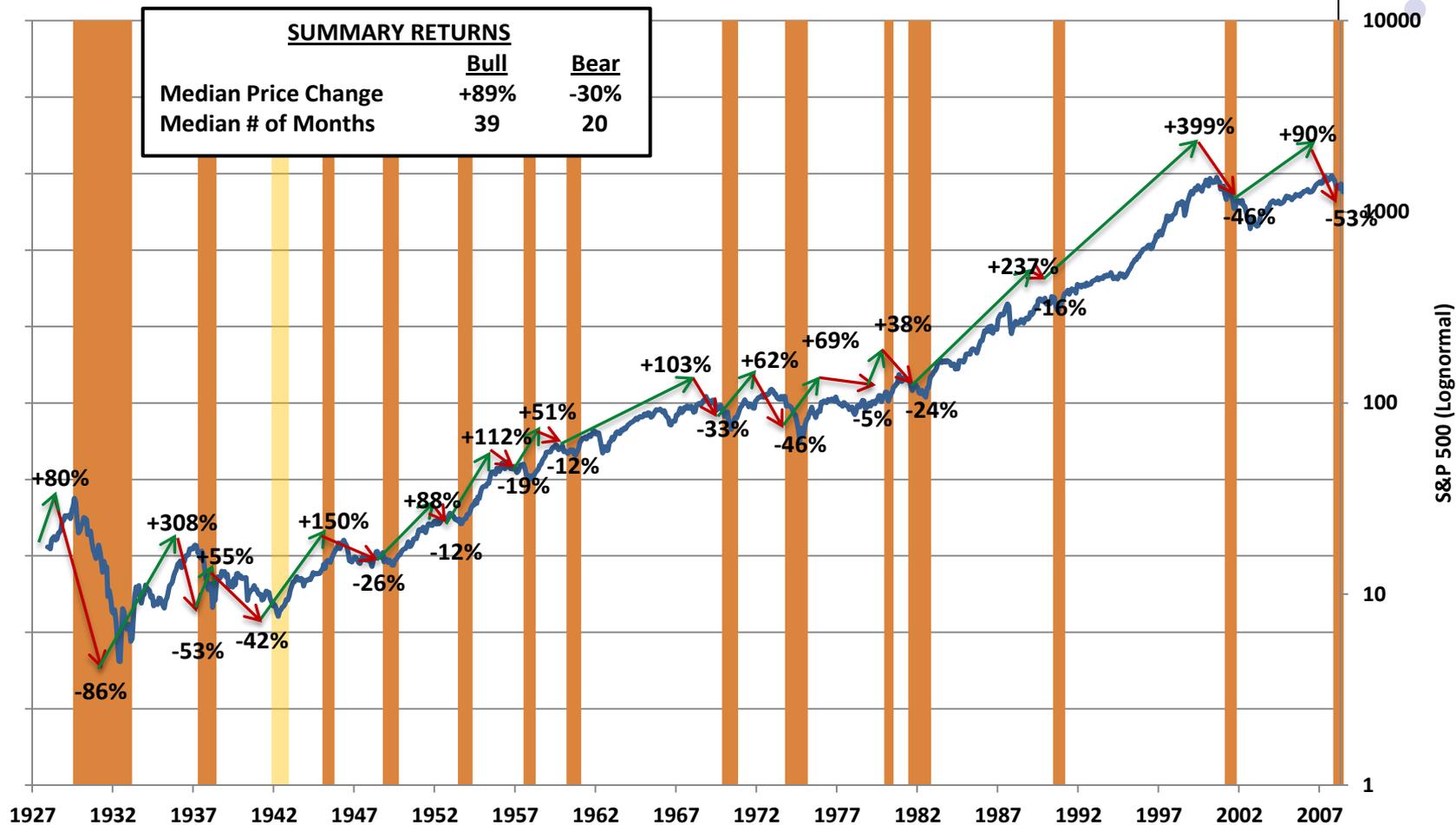
Markets and economies do not follow straight lines, but move from one extreme state of disequilibrium to another. The process is dynamic, defies prediction, but history reveals the common patterns, which never replicate themselves identically.

See *Investing Public Funds* Chapter 11.

To a statistician and a market academician, economies and markets are a random walk.

And to a man with only a hammer, every object is a nail

Bull and Bear Stock Market Phases



Source: Bloomberg ■ NBER Recession ■ "Pearl Harbor Scare" — S&P Level



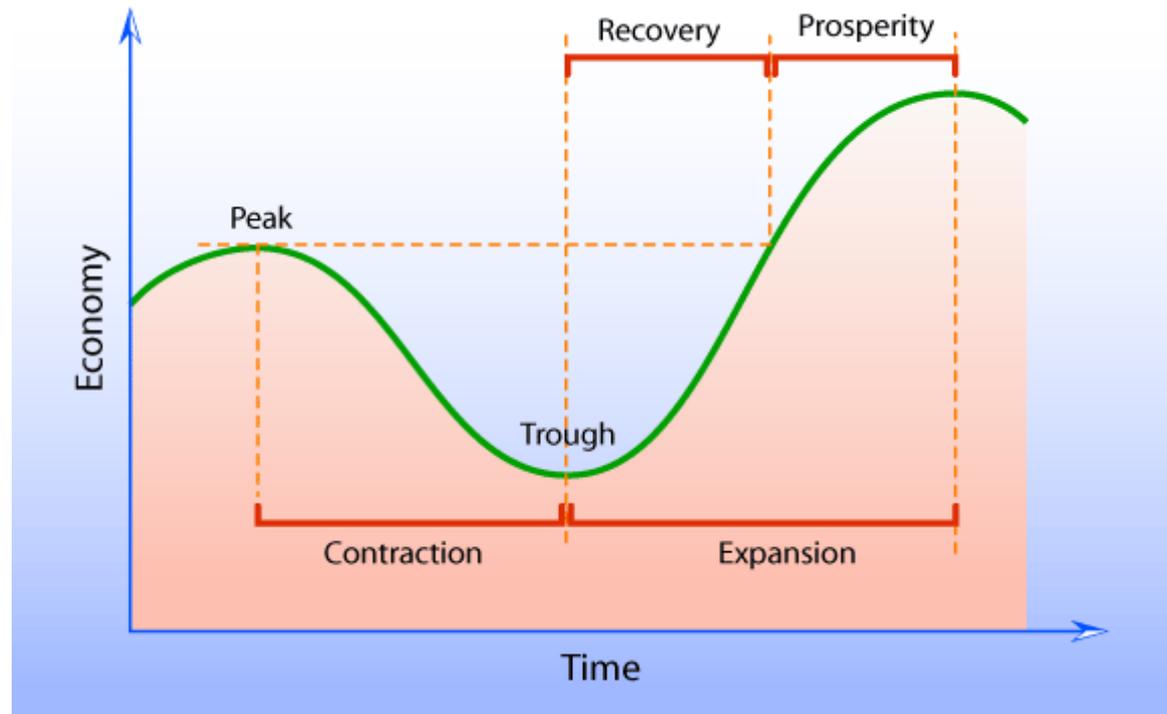
Funding Implications of the Economic and Market Cycle

Researched Ibbotson data series on S&P 500 since 1926

- 14 economic cycles in 86 years
- **Average cycle = 6.2 years**
- Average stock market returns:
- Peak-to-peak growth of 80%
- **Peak-to-valley decline of 30%**
- While long term equity returns averaged 10% annually

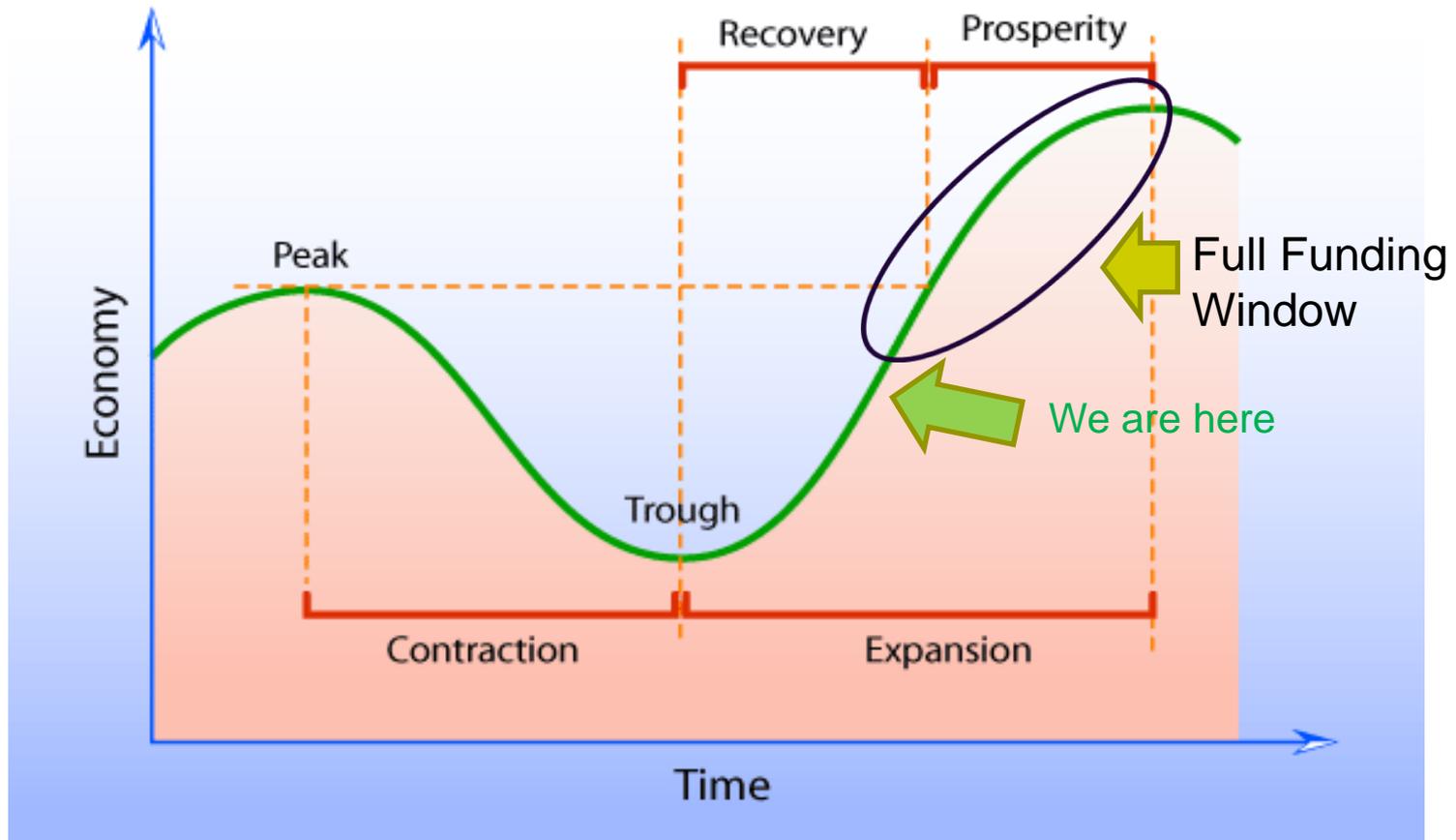
Thus for pension funds with 2/3 equities:

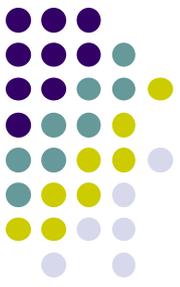
- **Funding ratio falls 20 percent in recessions**
- 100% funded at peak leaves 80% at trough
- 125% at peak leaves 100% at trough
- So why is 80% “good funding” ?
- Why is ratio > 100% at peak called “over-funded”?



Pension liabilities are linear in growth, but pension asset values grow cyclically on trend. Thus, funding ratios are cyclical over trend.

Business Cycle and the Full Funding Window: Action is required now – 2016 will be too late !

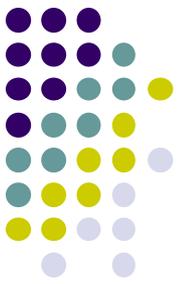




What path for pension reform?



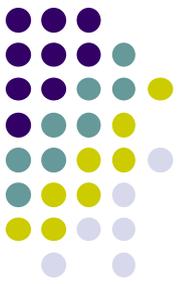
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Looking ahead

- Growing awareness of “the pension problem”
- Media coverage
- Bond market disclosures
- Continued layoffs in state and local sector while pension and OPEB costs escalate
- GASB 67/68 will swamp many municipal balance sheets with pension liabilities
 - Potential for bond downgrades
 - “Depletion” analysis will focus eyes on “Run Out Date”
 - OPEB will be the crushing blow in 2015

Taxpayer groups on warpath



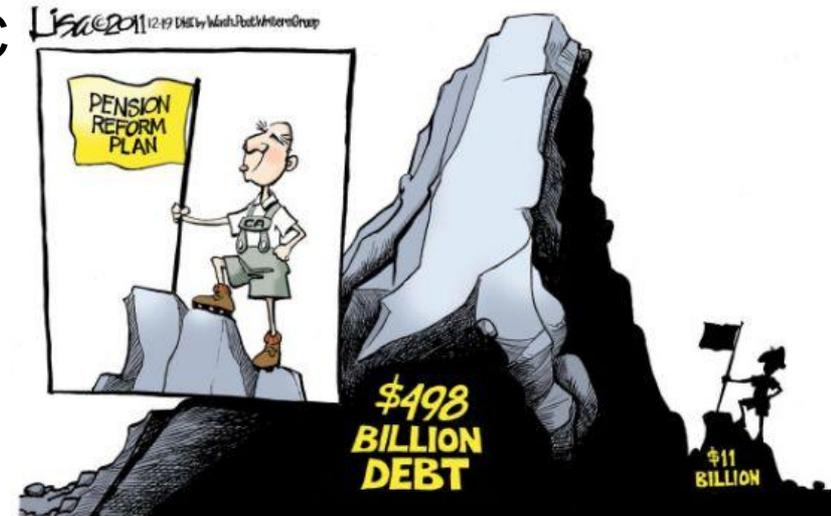
- Some will just never be satisfied
- Others have ideological bias toward 401(k) model, regardless of cost effectiveness
- California may again become a bellwether
 - Legislative “solution” unlikely to satisfy the pension hawks
 - Already talk of two initiatives after 2012
 - Everything from San Diego and San Jose that survives in court, plus additional curbs and controls
 - Equally restrictive “benefits cost control” initiative that could include employers’ current employee health care contributions



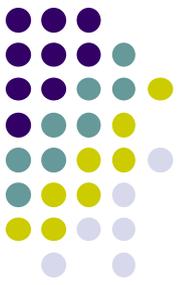
So what's a “reasonable” solution?



- California Governor Brown's 12-point plan was actually pretty rational
 - Anti-abuse measures
 - Effort to address reforms for future hires
 - Retirement age
 - Hybrid plan, half DB half DC
 - Shared costs and risks
 - But it didn't reduce UAALs very much

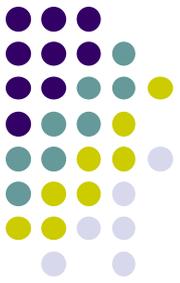


If not the Brown plan, then what?



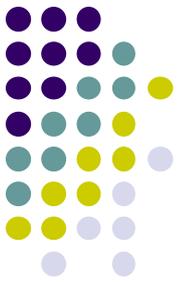
- Anti-abuse provisions are essential
 - Spiking curbs are a no-brainer
 - Maximum pension benefit for higher-paid
 - No more retro benefits increases
 - No more pensions for felons, etc.
 - Establish ERISA anti-cutback rule broadly
- But substantive economic reforms are what's often needed to rebalance the books
 - Shared risk in hybrid plan format
 - Higher retirement ages, capped multipliers
 - Moving the cheese for incumbent employees

Ways to promote intergenerational equity



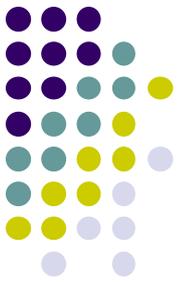
- Greater use of defined contribution plans and hybrids to reduce taxpayer costs of UAAL
 - Stacked DB-DC plan
 - Brown “combo” plan structure
 - Cash balance plans
- Limit amortization of UAAL to remaining average service lives
 - May require phase-in
 - E.g. implement 20 years closed amortization

Measures to improve intergenerational equity (cont'd)



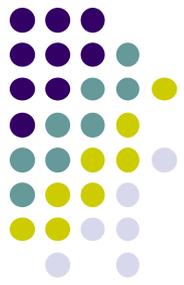
- Use a bond rate to discount the unfunded portion of future liabilities
 - Blended rate closer to original GASB concept
 - Example: Plan with 75% funding blends:
 - $\frac{3}{4}$ at expected investment return
 - $\frac{1}{4}$ at bond yield, with result closer to $6\frac{1}{2}\%$
- Use a bond rate for unfunded liabilities beyond the average remaining service lives
 - Limits GASB “depletion” loophole to ARSL period.

Measures to improve intergenerational equity (cont'd)



- Require reserves for market cyclicality:
 - For pensions:
 - When plan achieves 100% funding ratio
 - For cash balance plans:
 - Sufficient to withstand average of two worst downturns in past 50 years (black swans)

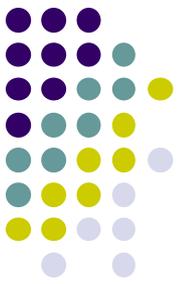
Hybrid plan designs that may gain traction



- Cash balance plan with a 3.5 percent floor rate and required “six sigma” reserves
 - Labor sometimes favors a CB model* (over other DC/hybrid plan features)
 - Opponents will argue that formula can be lobbied
 - US Chamber still hates it (corporate governance)
- Stacked DB-DC hybrid
 - Similar to federal FERS model
 - Cap on maximum pension
- New-hire option for pure DC vs hybrid

**The speaker does not intend to imply general endorsement by any group*

The Portfolio Side Of Public Pension Reform



- Needed: Realistic investment return expectations
 - Low 7 percent range
- Amortization within expected lives, to provide more funding now
- Dynamic Alpha-Beta management



Dynamic Risk Management: The Cyclical Math



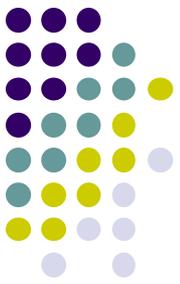
- Capital preservation during recession is imperative when liabilities are amortized over periods exceeding remaining service lives
 - Otherwise, losses extend inter-generationally
- Each successful one percent tactical reduction of equity exposure before recession can increase your funding ratio $\frac{1}{2}$ to 1 percent in next cycle (if not premature)

Final, longer-term concern: Preservation of retirees' purchasing power



- Markets now sense that beyond this business cycle expansion, a haunting but real possibility remains that several democratic societies could thereafter be unable to successfully manage their liabilities and entitlement program costs, including the U.S.
 - Inflation would “resolve” fiscal policy failures, as currency depreciates
 - Potentially worse than 1970s
- Although most plans are technically protected by COLA caps, those are politically vulnerable, and **your active employees' inevitable compensation escalation would bring a re-run of the pension malaise of 1970s**
- Strategies? Tangible portfolio assets vs dialing-down COLA caps or linking to funding ratios





The End

- Questions?
- Clarifications?
- Issues?
- Discussion and Dialogue?

