Alternative Pension Strategies (Part II)

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Olney, Maryland

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Cheiron, Inc.
Washington, D.C.

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Session Agenda

1. Introduction—Making the case for Alternative Pension Strategies
2. Gene Kalwarksi—The Cheiron experience
3. Kelly Coffing—The Milliman experience
4. Wrap-up
The UFCW Pension Experience—
The 2006 Revelation:

• Funding damage in 2000-2002 stock market crash triggered an internal inquiry about pension beliefs:
  – Investment risk—It’s a dangerous world
  – Plan surpluses—Here today, gone tomorrow
  – Investment volatility translates into contribution volatility
  – Contribution volatility begets collective bargaining instability
  – Anticipating the inadvertent consequences of PPA
Questioning the Pre-2000 Pension Model

• Rethinking pension investment risk
  – Asset drawdowns can be severe
  – Risk is as important as return
  – Volatile returns may be unsustainable

• Recognizing the implications of changing demographic trends
  – Plan maturity
  – Negative cash flow effects
  – Leverage effects

• Unintended consequences of flawed public policy
  – Tax deductibility limits fostered costly benefit improvements and contribution holidays
Can The Situation for Pension Plans get Worse?

- Yes—The Great Financial Crisis (GFC) of 2008-2009
- Effective Date of Pension Protection Act (PPA) coincided with the GFC in 2008-2009
- Funding damage sustained in GFC beyond what Congress ever anticipated when they legislated PPA in 2006
- Raised concerns that PPA would make plans unaffordable and unattractive to stakeholders
UFCW Develops a Responsive Pension Strategy

- Find ways to neutralize PPA governance consequences and allow unions and employers to control their pension future
- Stop pension death cycle of rising costs and declining benefits
- Fix legacy cost deficits through private financing or new legislation
- Once legacy cost is under control, parties can consider options to replace current future service plans with sustainable hybrid plan
- Goal of generating adequate and affordable benefits while limiting risk of unfunded liability
UFCW Conceives the Variable Defined Benefit Plan

- Reject traditional DB and DC as inadequate solutions
- Design a plan that is financially sustainable and affordable that can support adequate benefits
- Neutralize investment risk and funding risk through risk sharing
- Create an attractive alternative for all stakeholders
Experience Since 2006

- Kroger pension transaction in 2012—Agreed to legacy solution, but Employer rejected Variable plan
- Other industries adopt and implement variations of Variable plan (IRS issues its first new Variable plan determination letter in 2014)
- 2016—Ten years later the conversation about pension restructuring is gaining traction
- Institutions like pensions do not change overnight—New design models take time to gain acceptance
Making the Case for Alternative Pension Strategies in 2016 and the Future

1. Investment risk
2. Plan maturity risk
3. Regulatory risk
4. Macroeconomic risk
Investment Risk

- Volatile returns since 2010
- Interest rates at historic lows
- Asset price assumptions trending lower—Asset risk assumptions trending higher
- Asset valuations currently at 2007 levels
- Experts predicting 5-10 years of low returns
- Earning plan investment assumption has become a real challenge
Plan Maturity Risk

- Support ratios increasing to unsustainable levels
- Plan maturity generates negative cash flow
- As inactive population gets larger, it creates leverage in the plan, accentuating the impact of asset drawdowns
- Plan maturity makes pension plans more sensitive to “sequence of return risk”
Regulatory Risk

• PPA established a rigid set of funding rules:
  – Annual PPA certifications and zone status certifications are difficult to manage
• PPA failed to anticipate investment environment and return volatility
• Systemic funding risk within Multiemployer system threatens solvency of PBGC
• Will Congress raise PBGC premiums beyond affordability and create a death cycle for Multiemployer plans?
Macroeconomic Risk

- The GFC after-shocks are still with us (debt deleveraging)
- Economic growth and investment still stagnant
- Extraordinary policies of Federal Reserve bank generating historically low interest rates
- Concerns that financial asset bubbles are reappearing
- U.S. public equities are back to 2007 valuations (reversion to the mean)
- Are we in a prolonged low return environment for the next 5-10 years?
Topics

• The Choice Shouldn’t Be Just DB & DC
• Types of Alternative Pension Plans
  – Differentiate in how risk is shared
• Case Studies
Those are Just the Goal Posts!
Lots of Options in Between!!
It Comes Down to Who Bears the Risk
How Any Type of Pension Plan Works

\[ C + I = B + E \]
Tough to Predict the “I” Part

$C + I = B + E$
Investment Earnings = 7.5%
Investment Earnings = 5.0%
Investment Earnings = 10%
The Times They Are a Changin’ . . .

Estimates of what investors needed to earn 7.5%

<table>
<thead>
<tr>
<th>Year</th>
<th>Expected return</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>7.5%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

*Likely amount by which returns could vary
Source: Callan Associates

THE WALL STREET JOURNAL
The Times They Are a Changin’ . . .

Estimates of what investors needed to earn 7.5%

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Bonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected return</td>
<td>7.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>6.0%</td>
<td>8.9%</td>
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THE WALL STREET JOURNAL.
The Times They Are a Changin’ . . .

Estimates of what investors needed to earn 7.5%

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<tr>
<th>Year</th>
<th>Bonds</th>
<th>U.S. Large Cap</th>
<th>U.S. Small Cap</th>
<th>Non-U.S. Equity</th>
<th>Real Estate</th>
<th>Private Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>100%</td>
<td>5%</td>
<td>5%</td>
<td>14%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>20%</td>
<td>8%</td>
<td>22%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>12%</td>
<td>33%</td>
<td>8%</td>
<td>12%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Expected return: 7.5% 7.5% 7.5%
Standard deviation*: 6.0% 8.9% 17.2%

*Likely amount by which returns could vary
Source: Callian Associates

THE WALL STREET JOURNAL.
Increasing Risk . . .

<table>
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<tr>
<th>Expected return</th>
<th>7.5%</th>
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<tr>
<td>Standard deviation</td>
<td>6.0%</td>
<td>8.9%</td>
<td>17.2%</td>
</tr>
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</table>

Rate of Return  
Rate of Return  
Rate of Return
Risk Sharing

Employers

Participants
Innovation: New Structures to Foster Innovative Plan Designs

To encourage innovative approaches that meet the evolving needs of certain plans and industries, the Commission recommends the enactment of statutory language and/or promulgation of regulations that will facilitate the creation of new plan designs that will provide secure lifetime retirement income for participants, while significantly reducing or eliminating the financial exposure to contributing employers.

This would be accomplished through encouraging the development of new flexible plan designs including, but not limited to, variable annuity and “Target Benefit” plans.
Many Options

- Variable Annuity Plans (VAP)
- Variable Defined Benefit plans (VDB)
- Variable Annual Accrual Plans (VARP)
- Adjustable Pension Plans (APP)
- Variable Annuity Pension Plans (VAPP)
- Sustainable Income Plans (SIP)
- The Composite Plan (CP)
- Variable Benefit Accrual Rate (VBAR)
What Can Be Adjusted . . .

- The entire Benefit up or down depending upon plan experience
  - During active service and even into retirement
  - Only during active service, retired pension protected
  - A floor benefit can be protected
- Future Accruals can be adjusted each year, but the past protected
- For both types, what triggers the adjustment can vary widely
The VDB/APP Concept

100% employer ➔ Shared risk ➔ 100% employee

Traditional DB ➔ VDB/APP ➔ Traditional DC (e.g. 401k)

Like a DB Plan

- Retirement and longevity risks are pooled amongst all plan members
- Monies pooled and managed professionally - no individual accounts

Unlike a DB Plan

- Investment performance / risk is shared
- Investment assumptions and strategy far less risky
- At retirement VDB pension will be locked up
How it Works

• Active participant’s accrued benefit is adjusted each year based on actual investment performance as compared to a pre-set hurdle rate (e.g., 5%)
  – Benefit adjusted up if investment performance exceeds the hurdle rate
  – Benefit adjusted down if investment performance is less than the hurdle rate
  – Benefit cannot be adjusted below a floor guarantee
• At retirement, benefit is no longer adjusted
How it Works Over Time

![Chart showing annual pension growth over time with different categories: Floor Guarantee, Variable Benefit, APP.](chart.png)
General Goals of Hybrid Plans

• Share financial risk
• Lower financial volatility
• Better retirement security than a DC plan
  – Pooled mortality risk
  – Investments professionally managed
• Minimize Withdrawal Liability Exposure
## Comparisons

### Adjustable Plans
- **Under ERISA = DB Plan**
  - Has PBGC guarantee and premiums
  - Has withdrawal liability (but odds of having it are very small)
- Does not require legislation
- All assets commingled and professionally managed
- Lower discount rates thus less risky assets
- With lower discount rates benefits will be lower than otherwise
- Allows accrued benefit cuts
  - Some only to active members and not below a floor guarantee
  - Cuts based on investment performance
- For some, employer contributions must increase if assets fall below floor liability

### Composite Plans
- **Under ERISA = DC Plan**
  - No PBGC guarantee or premiums
  - No withdrawal liability
- Requires new legislation
- All assets commingled and professionally managed
- Same high discount rates like today’s DB -> riskier assets
- 120% funding requirement means a lower benefit
- Allows accrued benefit cuts
  - All members can be cut with zero floor guarantee
  - Cuts based on funded status
- Employer contribution increases can only be negotiated
## Adjustable Benefit Plans in Existence

<table>
<thead>
<tr>
<th>Covered Group</th>
<th>ER Type</th>
<th>Plan Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet Metal Workers National Pension</td>
<td>Multi</td>
<td>VBAR</td>
</tr>
<tr>
<td>Sheet Metal Workers Local 20</td>
<td>Multi</td>
<td>VBAR</td>
</tr>
<tr>
<td>NRF</td>
<td>Multi</td>
<td>VBAR</td>
</tr>
<tr>
<td>Unite HERE Local 26</td>
<td>Multi</td>
<td>VDB</td>
</tr>
<tr>
<td>MainePERS</td>
<td>Public</td>
<td>VDB</td>
</tr>
<tr>
<td>Master Mates &amp; Pilots</td>
<td>Multi</td>
<td>VDB</td>
</tr>
<tr>
<td>NewsGuild – NY</td>
<td>Single</td>
<td>AAP</td>
</tr>
<tr>
<td>NewsGuild – CWA</td>
<td>Multi</td>
<td>AAP</td>
</tr>
<tr>
<td>Major League Baseball Players Pension Plan Multi</td>
<td>Multi</td>
<td>VAP</td>
</tr>
</tbody>
</table>
Structural Problems

Most recent zone status (generally 2014) by net cash flow (as % of assets)

- Less Than -9%
- -9% to -6%
- -6% to -3%
- -3% to 0%
- Greater Than 0%

Number of Plans:
- 129
- 148
- 412
- 401
- 176

Net Cash Flow %:
- Median Funded % 6/30/16:
  - 51%
  - 72%
  - 80%
  - 87%
  - 93%

Based on most recent publicly available Form 5500 information
Structural Problems

• Difficulties are the result of underfunding
  – Contribution increases
  – Benefit decreases

• Underfunding is caused by:
  – Investment risk (mismatch between assets/liabilities)
  – Longevity risk (people living longer)

• More difficult for mature plans to manage

• Plans that remain over 100% funded do not suffer from the negative effects of maturity
The Milliman Experience

• Trustees want to take action now to avoid the fate of other Plans in a future downturn

• Trustees’ goals:
  – Plan design that stays funded in all market conditions
  – Continue providing meaningful benefits
  – Remain consistent with union values
  – Create a sustainable path forward
Old Solution

• There is an old design from 1953, called a variable annuity plan
• Plan defines a “hurdle rate”, generally between 3% and 5%
• Plan’s benefit level is based on assumption assets will earning the hurdle rate
• When returns are greater than the hurdle rate, accrued benefits increase by the difference
• When returns are less than the hurdle rate, accrued benefits decrease by the difference
Old Solution

- Suppose the plan has a hurdle rate of 4% and gets a 6% return, benefits would go up about 2% (actually $1.06 / 1.04 - 1$, or 1.92%)
- The plan stays funded in all market conditions
- Liabilities adjust to match the assets
- Adjustments occur while active and when retired
- **We proposed this design to S. AK Carpenters**
Old Solution

- Retiree in a plan with a 60/40 asset allocation

Variable Annuity Plan
Old Solution

• “This design sounds great except for the part where retiree benefits go down.”—Trustee
• “It’s not hard to make decisions when you know what your values are.”—Roy E. Disney
• “Your values become your destiny.”—Mahatma Gandhi
• **Values drive retirement plan design.**
Retirement Plan Values

- **Benefit values**
  - **Guaranteed benefits**: Benefit guaranteed not to go down (difficult promise to keep)
  - **Lifelong income**: Benefit payable for life, amount not guaranteed
  - **Inflation protection**: Rising benefit over time to retain purchasing power
  - **Flexibility in retirement spending**: Annuity for base and cash for infrequent expenditures
  - **Inheritance**: Ability to leave something to heirs
  - **Simplicity**: Design that makes sense and is explainable
Retirement Plan Values

- **Non-benefit values**
  - **Efficiency**: High benefit value for each $1 of contribution
  - **Contribution stability**: Consistent contributions over time, without surprises
  - **Plan stays funded in all market conditions**
  - **Attraction, retention, workforce management**: Keeps workers in the plan and gets them to retire “on-time”
  - **Ability to organize**: Plan design that doesn’t scare new employers away, no unfunded liability (once current underfunding eliminated—This takes many years)
Retirement Plan Values

- Not all values have same importance
- There is give and take to settle on a design that best fits values
- Not all values will be fully met
- This is a process
Main Values List for Carpenters

- Lifelong income, with minimum of benefit declines
- Inflation protection
- Simplicity
- Equitable
- Efficiency
- Contribution stability
- Benefits stay funded
Alternative Designs

- 2014 hybrid regulations made modifications to the variable annuity design permissible
- Most current alternative designs are variations of this design
- Options considered:
  - Conservative asset allocation
  - Different asset allocation for retirees and actives
  - Benefit floor
  - Freezing benefits at retirement
  - Cap and shore strategy
## Conservative Asset Allocation

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Values Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expect to get lower returns over time</td>
<td>Not efficient, doesn’t maximize retirement benefit per dollar of contribution</td>
</tr>
<tr>
<td>Returns less volatile</td>
<td>But retirees can still expect benefit declines</td>
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**This strategy not used.**
Different Asset Allocation for Actives and Retirees

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<td>Returns less volatile</td>
<td>But retirees can still expect benefit declines</td>
</tr>
<tr>
<td>Can lock in poor returns for retirees, depending on year of retirement</td>
<td>Not equitable, may cause uneven retirement behavior</td>
</tr>
</tbody>
</table>

This strategy not used.
## Benefit Floor, Compare Each Year

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Values Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retiree gets better of variable or floor benefit, each year</td>
<td>In prolonged market downturn, plan can get underfunded</td>
</tr>
<tr>
<td>Benefit can vary over time</td>
<td>But retirees can expect benefit declines (benefits still go down)</td>
</tr>
</tbody>
</table>

**This strategy not used.**
## Benefit Frozen at Retirement

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Values Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retiree gets better of variable or floor benefit at retirement, benefit locked in for life</td>
<td>Not equitable, can permanently lock in temporary market downturns</td>
</tr>
<tr>
<td>No benefit changes in retirement</td>
<td>No inflation protection</td>
</tr>
<tr>
<td>Conservative asset allocation, annuity purchase, or immunization for retired liability</td>
<td>Prolonged downturn can cause underfunding</td>
</tr>
<tr>
<td></td>
<td>Results in lower benefits over time, as these strategies produces lower returns</td>
</tr>
</tbody>
</table>

**This strategy not used.**
Benefit Frozen at Retirement

- Retiree in a plan with a 60/40 asset allocation

Retirement at 1/1/2008.
Retirement at 1/1/2009.
Cap and Shore Strategy

- Cap upside benefit increases in years with particularly high returns.
- Use excess return to build reserves
- Reserves usually built from contributions also
- Use reserves to shore-up benefits when they would otherwise have gone down
- Protect highest benefit ever paid
- If reserves run out, shore-ups not paid
- Plan remains fully funded
Cap and Shore Strategy

• We model the plan to determine level of funding needed to maximize the chance of being able to shore-up benefits

• 10,000 scenarios for future returns
  – Balance hurdle rate, cap, reserve contributions, target funded percentage to created desired assurance against benefit decline
  – Example for one plan: 4% hurdle rate, 6% cap, reserve building contributions equal to 10% of value of benefit accruing for year, target 125% funded, probability of benefit decreases is less than 1%
Cap and Shore Strategy

• Plan much more likely to build more reserves than needed than to run out of reserves

• Excess reserves can be used to:
  – Bump benefits up
  – Help fund legacy liability
  – Other
Cap and Shore Strategy

<table>
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<th>Characteristic</th>
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</tr>
</thead>
<tbody>
<tr>
<td>All benefits adjust with returns</td>
<td>Plan stays funded, no contribution volatility</td>
</tr>
<tr>
<td>Stabilization reserves prevent benefit declines</td>
<td>Very small chance of benefit declines, lifelong income</td>
</tr>
<tr>
<td>Benefits expected to rise over time</td>
<td>Some inflation protection expected (not a hedge)</td>
</tr>
<tr>
<td>Balanced portfolio</td>
<td>Efficient, maximizes benefit per $1 of contribution</td>
</tr>
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This strategy became known as the Milliman Sustainable Income Plan™ or SIP.
# Main Values List for Carpenters

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<thead>
<tr>
<th>Value</th>
<th>SIP Achievement of Goal</th>
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<tr>
<td>Lifelong income, with minimum of benefit declines</td>
<td>Probability of benefit declines small</td>
</tr>
<tr>
<td>Inflation protection</td>
<td>Some inflation protection, not a hedge</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Change in mindset, but can be explained in short video</td>
</tr>
<tr>
<td>Equitable</td>
<td>Benefit depends on returns while active and retired, no intergenerational risk transfer</td>
</tr>
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</table>
# Main Values List for Carpenters

<table>
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<tr>
<th>Value</th>
<th>SIP Achievement of Goal</th>
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<tr>
<td>Efficiency</td>
<td>Maximizes benefit per $1 of return, retain balanced portfolio over time</td>
</tr>
<tr>
<td>Contribution Stability</td>
<td>Plan stays funded so no “funding-only” contributions, any new money would increase benefits</td>
</tr>
<tr>
<td>Benefits stay funded</td>
<td>Assets and liabilities move together, resulting in stable funding</td>
</tr>
</tbody>
</table>
The Biggest Impediment to Adopting Alternative Pension Strategies—Unfunded Pension Legacy Costs

- Legacy costs account for, on average, three quarters of current contribution cost.
- Multiemployer total legacy costs are large and foreboding ($150 billion).
- Pension legacy costs are systemic and represent a national crisis.
- Congress has only recently awoken to the Multiemployer plan crisis based on the current status of Teamsters Central States and UMWA pension plans.
- “Bail out” labels confuse the issues and the solutions.
Proposals that Address Unfunded Pension Legacy Solutions

- Borrow to fund approach (private sector only)
- IBT Proposal—Create a Federal Corporation that will guarantee loans to the private sector (joint private/public collaboration)
- UPS Proposal—Federal Government makes direct loans to pension plans
- Gold, Peskin, Berner 2005 Proposals—PBGC swaps obligation bonds with sponsoring contributing employers
Many organizations have been considering alternative pension strategies for the past decade with varying degrees of success.

New pension strategies are a response to the funding crisis caused by the Great Financial Crisis.

Four key pension risks must be addressed in any alternative pension strategy—Investment risk, plan maturity, regulatory risk, and macroeconomic risk.

Unfunded pension legacy costs require a solution as part of any alternative pension design strategy.
2017 Educational Programs

Pensions

63rd Annual Employee Benefits Conference
October 22-25, 2017
Las Vegas, Nevada
www.ifebp.org/usannual

Trustees and Administrators Institutes
February 20-22, 2017
Lake Buena Vista (Orlando), Florida
June 26-28, 2017
San Diego, California
www.ifebp.org/trusteesadministrators

Certificate of Achievement in Public Plan Policy (CAPPP®)
Part I and Part II, June 13-16, 2017
San Jose, California
Part II Only, October 21-22, 2017
Las Vegas, Nevada
www.ifebp.org/cappp

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2016 Retirement Plans Facts
Item #9060
www.ifebp.org/books.asp?9060