Negative Net Cash Flow: Red Flag or Red Herring?

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Agenda

I. Negative Net Cash Flow: Red Flag or Red Herring?
II. An Investment Advisor’s Perspective
III. A Plan Sponsor’s Perspective
Negative Net Cash Flow: Red Flag or Red Herring?

1. What is Negative Net Cash Flow?
2. Current Landscape of Public Pensions
3. Red Flag vs. Red Herring

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What is negative net cash flow?

Net Cash Flow = Contributions – Benefits – Expenses

- **Contributions** refer to inflows from the plan sponsor and participants into the plan
- **Benefits** include any distributions paid out to plan participants
- **Expenses** can include investment, administrative, and other costs associated with maintaining a defined benefit plan
- Note: Investment returns are not factored into the net cash flow equation
Current Landscape

- Funded ratios have been in decline over the past 20 years.
- Funded status does not necessarily track the stock market, as seen in 2001-2008 and 2009-2016.
- A steady decline in the number of actives per annuitant over the past 30 years reduces contributions while increasing distributions.

Current Landscape (continued)

- Looking at U.S. public pension plans in aggregate, cash flow has steadily declined as a percentage of assets.
- Cash flow became “more negative” in the great recession as the markets fell, but did not rebound with the recovery.

Red Flag or Red Herring?

<table>
<thead>
<tr>
<th>Funding Status</th>
<th>Low Capacity for Contributions</th>
<th>Mid Capacity for Contributions</th>
<th>High Capacity for Contributions</th>
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</thead>
<tbody>
<tr>
<td>Below 60%</td>
<td>Red Flag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–80%</td>
<td></td>
<td>Yellow</td>
<td>Green</td>
</tr>
<tr>
<td>Above 80%</td>
<td></td>
<td>Yellow</td>
<td>Green</td>
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</tbody>
</table>

- A quick assessment of two key indicators can help to determine if negative net cash flow is a material or non-material concern:
  - Funding Status
  - Capacity of the Plan Sponsor to make future contributions
Three Key Levers

- Investment Policy
- Funding Policy
- Plan Design
**Investment Lever**

- **Focus:** Increasing returns or mitigating negative cash flow effect
- **First Approach:** Targeting investments with greater expected returns
- **Second Approach:** Targeting more liquid asset classes

The projections and other information regarding potential future events or investment returns are hypothetical in nature, do not represent any specific product or strategy, do not reflect actual investment results and are not guarantees of future results.
Funding Policy Lever

**Funding Policy**

- This lever focuses on increasing contributions or increasing the capacity for contributions

- Methods for doing this include:
  
  - Allocating additional funds from the operating budget to increase contributions on a yearly basis
  
  - Implementing special taxes that flow directly into the Plan, such as an incremental tax on alcohol or tobacco
Plan Design Lever

Plan Design

• This lever focuses on changing the Plan, such as:
  – Reducing benefits or features for actives or retirees
  – Closing or freezing the Plan
  – Moving to a different Plan structure

• The point of this lever is generally to reduce the influx of new liabilities into the Plan
Interaction of the Three Levers

- **Example 1**: Investment policy can directly impact funding policy, and vice versa.
- **Example 2**: Changes to plan design can have indirect impact on investment policy.
- **Example 3**: Making changes to plan design can directly impact funding requirements.
Key Takeaways

- Negative net cash flow is a reality of public pension plans, and is not likely to change in the near to medium term.

- To help mitigate the impact of this, we believe there are three key levers that Plan Sponsors may consider pulling:
  - Investment Policy
  - Funding Policy
  - Plan Design

- These levers need to be understood holistically to help have the intended effect: they should not be considered in isolation.

- Plan Sponsors should work with their investment advisors, plan actuaries and plan design consultants, as applicable, to consider the available options.
An Investment Advisor’s Perspective

1. An Imperfect Storm
2. Case Study – Scenario Analysis & The Lever Process
3. Case Study – Key Considerations

Kirk VanDagens, CIMA
Senior Investment Advisor
PNC Institutional Asset Management
Case Study: City Public Pension Plan
Red Category – Imperfect Storm

• **When did the client fall into the situation?**
  • Positive market experience in 1980s and 1990s led to permanent benefit increases
  • Lost decade 2000-2010, with muted returns early in the decade followed by the Financial Crisis of 2008
  • Real estate valuations plummeted, causing tax revenue to drop precipitously
  • Hurdle rates were unrealistic and routinely not met

• **What is the actuary projecting as to when it will be resolved?** Long term fix, still considering options
An Imperfect Storm: Generous Returns, Generous Increases

1980s and 1990s: The punch bowl has a bottom

• Above average investment environment caused plan funding status to improve. As a result, some employers reduced or suspended pension plan contributions.

• During this period, many employers agreed to increases in retirement benefits.

• Based on abnormally high investment returns, some plans increased their assumed actuarial rate of return. This provided budget “room” to allocate money away from pension plan contributions to fund other priorities – many with ongoing, imbedded costs.

• The combination of increasing the assumed rate of return and suspending or reducing plan contributions placed additional pressure on the investment portfolio to produce greater levels of asset growth to accommodate payments to annuitants.
An Imperfect Storm: Financial Crisis Cripples Asset Base

2000s: Lost Decade Takes A Downturn

- Muted returns experienced during the first half of the decade meant that the funding status of many plans lost ground as assumed rates of returns were not met.

- Smoothing techniques often glossed over the investment return “C-change” which occurred at the beginning of the new decade. During this period, this accounting process served to lower required contributions for some employers.

- Toward the end of the decade, as the financial crisis deepened, home prices plummeted and real estate tax revenues declined significantly, further increasing pressure on government budgets.

- Throughout the decade and as contribution requirements increased, many employers faced budget pressure and offered early retirement programs to shift the immediate cost of future pension payments from payroll to their pension plans.

- The financial crisis in 2008 dealt a crushing blow that most public pension systems are still working diligently to overcome.
Case Study: The Lever Process

**Stakeholders Must Be Coordinated**

- To be most effective, any proposed solution set should involve input from all stakeholders and advisors including the plan sponsor, employees, investment advisor, actuary, and plan design consultant.

**Moving the Levers: A Ongoing Process**

- Ongoing scenario analysis tests projected effect of moving different levers:
  - Investment Policy
    - Capital Market Assumptions
    - Asset Allocation
    - Liquidity Management
  - Funding Policy
    - Budget Changes
    - Other Revenue Sources
    - Amortization Periods
  - Plan Design
    - Benefit Formulas
    - Cost of Living Adjustments
    - Eligibility
Case Study: City Public Pension Plan (continued)

Key Considerations

• Are the decision makers able to take on additional risk?

• Does negative cash flow pressure require the Plan to maintain a higher percentage of liquid assets, thereby lowering expected returns?

• Does the operating budget have room to make larger contributions?

• Are there alternative ways to raise additional revenue, such as special taxes?
A Plan Sponsor’s Perspective

Kelly Fox
Division Chief of Stakeholder Relations
California Public Employees’ Retirement System (CalPERS)
Key Performance Indicator

Funded Status
2015-16
68.3%

Funded Status
December 31, 2017
71.0%
Cashflows Are Improving

Total Contributions and Investment Income

Benefit Payments*

* Does not include other costs such as refunds and administrative costs of retirement and investment-based costs
## Operational & Investment Efficiencies

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>$350 billion</strong></td>
<td>in assets as of December 31, 2017</td>
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<tr>
<td><strong>15.7% investment returns</strong></td>
<td>in calendar year 2017; 11.2% in FY 2016-17</td>
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<tr>
<td><strong>$47 billion</strong></td>
<td>increase in assets in calendar year 2017</td>
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<td><strong>1.5–2% reduction</strong></td>
<td>in overhead costs each of the next 5 fiscal years</td>
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<tr>
<td><strong>300+ → 150 reduction</strong></td>
<td>in external managers</td>
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<tr>
<td><strong>$170 million savings</strong></td>
<td>in reducing investment expenses in FY 2015-16</td>
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Historical and Recent Developments
Asset Liability Management Process

- **Jan. 2017**: Educational Workshop; Public Access
- **Apr. 2017**: Educational Workshop; Private Assets
- **Jun. 2017**: Approval of Capital Market & Economic Assumptions
- **Jul. 2017**: Fiscal Year Investment Returns Announced & Educational Workshop: Leverage
- **Oct. 2017**: CalPERS Educational Forum
- **Nov. 2017**: Experience Study & Educational Workshop: Candidate Portfolios
- **Dec. 2017**: First opportunity for Board to Adopt ALM Changes
- **Feb. 2018**: Second Opportunity for Board to Adopt ALM Changes
- **Jul. 2018**: Implementation of Board Decisions
Keys To Generating Positive Cashflows

• Comprehensive Asset Liability Management cycle
• Education & engagement with employers and stakeholders
• Discount rate reduction to align targets with realistic outcomes
• Reduce operational and administrative expenses
• Careful work with State government to communicate value of paying down UAL
Thank you!

Questions?
Adam Hickman, ASA
Asset Liability Research Director
PNC Institutional Asset Management

Adam is an Asset Liability Research Director for PNC Institutional Advisory Solutions. He is responsible for supporting business initiatives and services for pension plans, including the creation of asset liability modeling studies and the design of liability-driven investing strategies.

Adam has more than 11 years of experience in the actuarial and investment consulting industry and has specialized in measuring and managing risk for defined benefit pension plans using actuarial consulting and quantitative analysis. Previously he served as a senior consultant within Delegated Investment Program Management for Aon Hewitt Investment Consulting where he oversaw investment programs for ERISA 3(38) Fiduciary Model clients.

Adam earned a B.S. degree in actuarial science from the University of Illinois at Urbana-Champaign and holds the Associate of the Society of Actuaries designation.
Kirk VanDagens, CIMA  
Senior Investment Advisor  
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Kirk is a Senior Investment Advisor and member of the Outsourced Chief Investment Officer (OCIO) Portfolio Advisor Team. His key responsibilities include maintaining close working relationships with existing clients, managing portfolios in accordance with the investment policy statement, providing recommendations for strategic and tactical changes in allocation based on each client’s unique needs, and supporting the development of new business opportunities.

Kirk has more than 30 years of investment industry experience, and for the past 28 years has focused on serving various institutional clients, including government, corporate, Taft-Hartley, and nonprofit organizations. His background includes positions in institutional trust administration, portfolio management, sales, product development, and regional management.

Kirk holds a Bachelor of Business Administration degree from Western Michigan University and MBA from Bowling Green State University. He also holds a Certified Investment Management Analyst designation and is a member of the Investment Management Consultants Association.
Kelly Fox currently serves as the Division Chief for Stakeholder Relations for the California Public Employees Retirement System in Sacramento, California.

Stakeholder Relations oversees all activities that directly connect CalPERS with leadership of key stakeholder groups, labor, employers, retiree associations and more, to ensure the development and maintenance of strong partnerships.
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