



Ryan ALM
The Solutions Company

RYAN ALM QUARTERLY

2Q 2020

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Pension Performance Monitor

Pension Liabilities	YTD (%)
Market (Treasury STRIPS)	18.98
ASC 715 (FAS 158)	11.14
PPA (MAP 21 = 3 Segments)	2.95
PPA (Spot Rates)	5.53
GASB /ASOP (7.50% ROA)	3.75

Pension Assets	
Cash (Ryan Cash Index)	0.96
Bloomberg Barclay Aggregate	6.14
S&P 500	-3.09
MSCI EAFE International	-11.03
Asset Allocation Model ¹	-0.16

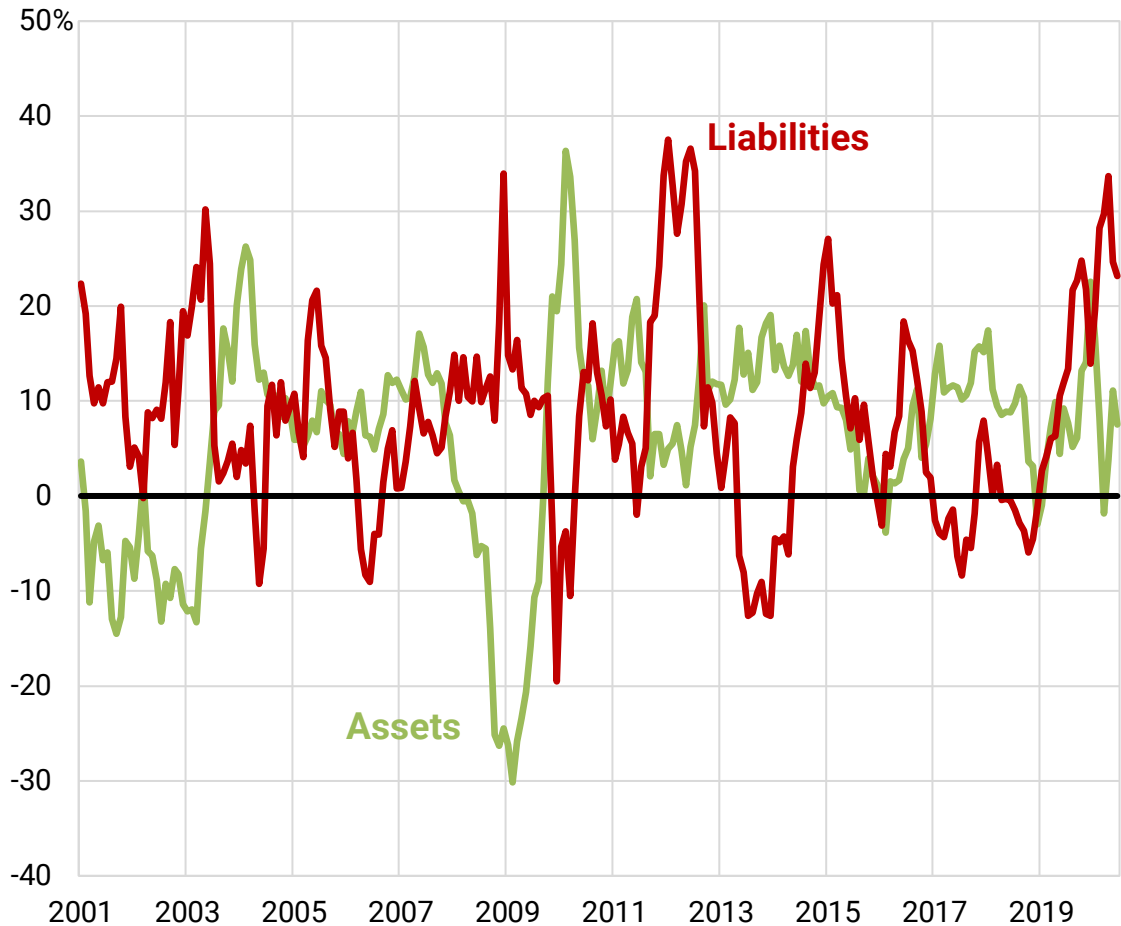
Pension Assets Minus Liabilities	
Market (Treasury STRIPS)	-19.14
ASC 715 (FAS 158)	-11.30
PPA (MAP 21 = 3 Segments)	-3.11
PPA (Spot Rates)	-5.69
GASB/ASOP (7.50% ROA)	-3.91

Based on the weights of the Asset Allocation Model¹, the difference in pension asset versus liability growth YTD remains a challenge despite a significant equity rally in the 2Q. Most pensions underperformed every liability discount rate measurement. As we wrote in our last newsletter, the combination of falling asset values and falling discount rates (interest rates) have combined to damage the funded status of most pension plans. As a result, greater contributions will likely result.

1. Model weights are: 5% Ryan Cash, 30% Bloomberg Barclay Aggregate, 60% S&P 500, and 5% MSCI EAFE International

Assets and Liabilities Through Time

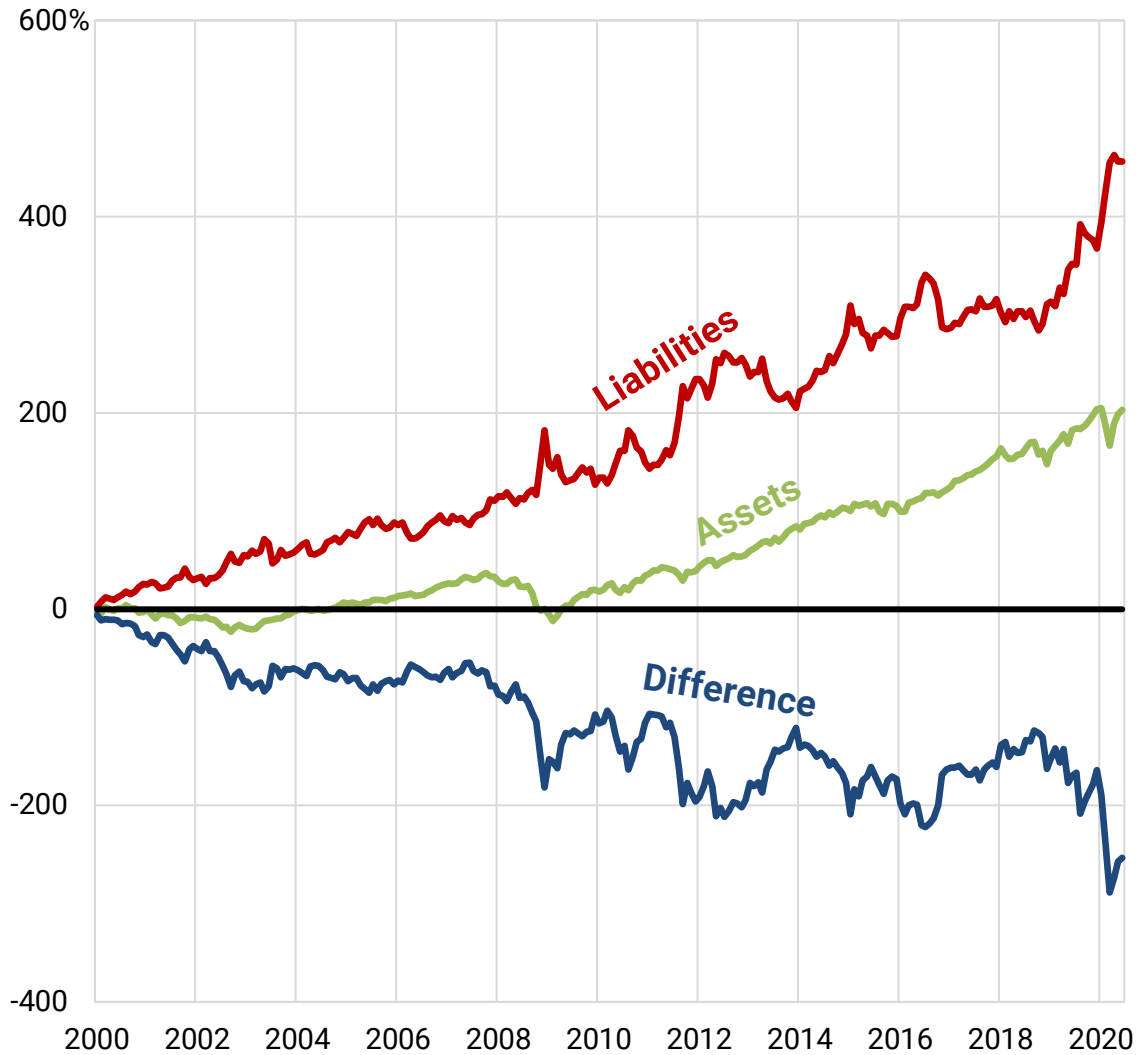
Rolling 12-month asset versus liability growth



Source: Ryan ALM, Inc.

The bull market for equities that lasted more than 10 years did little to help assets versus liability growth, as indicated by the red line in the graph above. While equities were rallying, US fixed income continued one of the longest bull market runs in history, which began in 1982. Failure to manage plan assets relative to plan liabilities lead to significant volatility in both contribution costs and the funded ratio.

Cumulative returns of assets versus liabilities



Source: Ryan ALM, Inc.

Most pension funds enjoyed a funded ratio surplus in 1999, but pension asset growth has underperformed liability growth (based on Treasury STRIPS discount rate) fairly consistently since then by an estimated -253.2% on a compound index basis starting at 100 on 12/31/99. Starting at a funded ratio of 100 on 12/31/99, the estimated funded ratio today would be **only 54.5%**! The lack of focus on plan liabilities has led to this deterioration in funding.

Cumulative returns of assets versus liabilities (%)

	Assets	Liabilities	Difference	Cumulative Difference	Funded Ratio
2000	-2.50	25.96	-28.46	-28.46	77.4
2001	-5.40	3.08	-8.48	-37.59	71.0
2002	-11.41	19.47	-30.88	-73.40	52.7
2003	20.04	1.96	18.08	-60.08	62.0
2004	8.92	9.35	-0.43	-66.13	61.8
2005	4.43	8.87	-4.44	-76.75	59.2
2006	12.25	0.81	11.44	-64.60	66.0
2007	6.36	10.99	-4.63	-77.50	63.2
2008	-24.47	33.93	-58.40	-181.57	35.7
2009	15.73	-19.52	35.25	-106.94	52.9
2010	11.89	10.13	1.76	-115.67	53.8
2011	3.27	33.77	-30.50	-195.73	41.5
2012	11.79	4.46	7.33	-194.30	44.4
2013	19.04	-12.59	31.63	-120.74	60.5
2014	9.74	24.35	-14.61	-177.14	53.4
2015	1.22	-0.49	1.71	-172.78	54.3
2016	8.12	1.92	6.20	-163.36	57.6
2017	15.15	7.94	7.21	-160.34	60.9
2018	-2.96	-1.26	-1.70	-162.67	60.4
2019	22.82	13.92	8.90	-163.93	65.0
2020	-0.16	18.98	-19.14	-253.19	54.5

Source: Ryan ALM, Inc.

Providing Perspective

Maximize the efficiency of the asset allocation

We believe that the primary objective of managing a pension plan is to secure the promised benefits through a cash flow driven investing (CDI) approach. However, there is a very important secondary benefit when using CDI and that is the fact that a plan's asset allocation becomes much more efficient. [Read here](#)

It's all about contributions!

The most significant cause of the current pension crisis is the failure to contribute enough to these plans! As a result, too much emphasis has been placed on generating out-sized returns, which have failed to materialize. Oh, we've had brief moments of glory (decade of the '90s), but far too often we've had these riskier portfolios subjected to significant market corrections. When will we finally choose another course? [Read here](#)

The BLA process would work for Publics, too!

Let's not permit politics to cloud our judgment. Implementing a low-interest rate Federal loan program that requires a disciplined approach to implementation is the way to go before the economic crisis gets worse. [Read here](#)

Not your father's POB

Based on what has transpired since the outbreak of the Covid-19 virus, it is highly likely that state and municipal budgets will be impacted for years to come. DB pension systems are too important to the participants, their communities, and to the local economy to mess around with the funding. Now is the time to adopt a POB, but utilize our implementation and don't play games with the proceeds. [Read here](#)

Pension Risk Redefined

In our risk/reward behavior financial world, it is risk that is the dominant and most critical factor. Most investment policies are written and shaped mainly by risk tolerances. Such policies are created to minimize or avoid risk. Most of these risk constraints came about after some financial disaster affecting the client or the marketplace in general. However, risk is often thought of rather improperly or calculated incorrectly based on the true objectives of the client. This can often lead to inappropriate asset allocation, improper asset management, and inaccurate performance measurement. [Read here](#)

Cash Flow is King

Pensions are all about cash flows. They require asset cash flows including projected contributions to fund projected benefits + expenses. Retired Lives are the most imminent and certain liability cash flows and should be the highest priority to fund and secure these benefits. Cash flow matching Retired Lives chronologically with bonds (Beta assets) is the most prudent way to secure these benefits in a cost efficient manner. Unfortunately, most bond allocations are focused on outperforming some generic bond index whose cash flows are quite dissimilar to Retired Lives. This has led to a mismatch of asset/liability cash flows and a dilution of the cash flows of the performing assets (Alpha assets) who need to grow unencumbered to fund Active Lives. [Read here](#)

Buy Time

U.S. pension plans have been hard hit by rising pension costs since 2000. This has been primarily characterized by spiking contribution costs and volatile funded ratios. A solution to this dilemma is to implement a strategy that will buy time! By separating assets into liquidity (Beta) and performance (Alpha) assets, you can achieve the true objective of a pension, which is to secure benefits. The Beta assets secure Retired Lives benefits chronologically (we recommend 10 years) thereby buying time for the Alpha assets to enhance the funded status, while besting future liability growth. [Read here](#)

Webinar Series with Opal

In April we were pleased to participate in a webinar series that was produced by The Opal Group. The series was titled “Pension Lessons Learned.” The first presentation discussed “Protection from Market disruptions,” while the second focused on “Enhanced Asset Allocation”. We welcome the opportunity to respond to any questions that you may have related to these presentations. [Read here](#)

The Turnkey Solution

Ryan ALM offers a turnkey system of the Custom Liability Index (CLI) and Liability Beta Portfolio™ (LBP) as a pension solution to help plan sponsors secure the promised benefits.

Custom Liability Index - The first step in prudent pension management is to measure and monitor the liability objective frequently and accurately. Until liabilities are packaged as a Custom Liability Index (CLI) the asset side is in jeopardy of managing to the wrong objectives (i.e. generic market indexes). Only a CLI best represents the unique liability schedule of pensions. Just like snowflakes, no two pension liability schedules are alike due to different labor forces, salaries, mortality, and plan amendments. How could a generic market index ever properly represent such a diverse array of pension liabilities? Once the CLI is installed the pension will now know the true economic Funded Ratio which should dictate the appropriate Asset Allocation, Asset Management and Performance Measurement.

Liability Beta Portfolio™ (LBP) – The value added in bonds is the certainty of its cash flow to match and fund liabilities as Dedication, Immunization, and Defeasance have proven for decades. Since liabilities are dynamic calculations, they need a CLI to monitor their risk/reward behavior. The core or Beta portfolio for a pension should be in bonds that match and fund liabilities. A Beta portfolio is defined as the portfolio that matches the objective. If the true objective is liability driven then, by definition, the proper beta portfolio for any liability objective must be a Liability Index Fund or Liability Beta Portfolio.

The Ryan ALM Liability Beta Portfolio™ (LBP) system will invest in high quality securities that match the CLI. This provides our clients with the lowest cost and lowest risk portfolio. It is the lowest risk portfolio since it has:

- No Interest Rate Risk (matches CLI)
- No Liquidity Risk
- No Event Risk
- No Prepay Risk

The Ryan ALM Liability Beta Portfolio™ (LBP) is a cost optimization model that creates the lowest cost portfolio to fund monthly benefits. Our LBP will outyield liabilities by more than our very low fee thereby guarantying each client No Net Fee. Moreover, the Liability Beta portfolio is a cash flow matching liability portfolio that fully funds liabilities thereby reducing the cost and volatility of contributions.

Ryan ALM's mission is to solve liability driven problems through low cost, low risk solutions.

About Ryan ALM, Inc.

Ryan ALM was founded by Ronald J. Ryan, CFA on July 12, 2004 as an Asset/Liability Management firm. The firm builds a turnkey system of proprietary synergistic products designed to measure liabilities as a Custom Liability Index (CLI) and manage assets to the CLI as Liability Beta Portfolios.

Ryan ALM is unique in having its own proprietary Index company named ALM Research Solutions, LLC. This company builds both custom and generic bond indexes. Such indexes range from Custom Liability Indexes to ETF Indexes.

Our Liability Beta Portfolio™ is our proprietary cost optimization model that "cash flow matches" clients projected liability benefit payment schedules at the least cost using investment grade bonds. It is back-tested since 2009 showing a consistent cost savings of 8% to 15%. Our LBP best represents the core portfolio of a pension plan.

Our team has been recognized for our expertise and results including Ron Ryan having won the William F. Sharpe Index Lifetime Achievement Award.



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Asset/Liability Management

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