



Ryan ALM
Asset/Liability Management

RYAN ALM QUARTERLY

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Pension Performance Monitor

Pension Liabilities	YTD (%)
Market (Treasury STRIPS)	-11.4
ASC 715 (FAS 158)	-9.7
PPA (MAP 21 = 3 Segments)	1.5
PPA (Spot Rates)	-3.2
GASB /ASOP (7.50% ROA)	1.8

Pension Assets	
Cash (Ryan Cash Index)	0.1
Bloomberg Barclay Aggregate	-3.4
S&P 500	6.2
MSCI EAFE International	3.6
Asset Allocation Model ¹	2.8

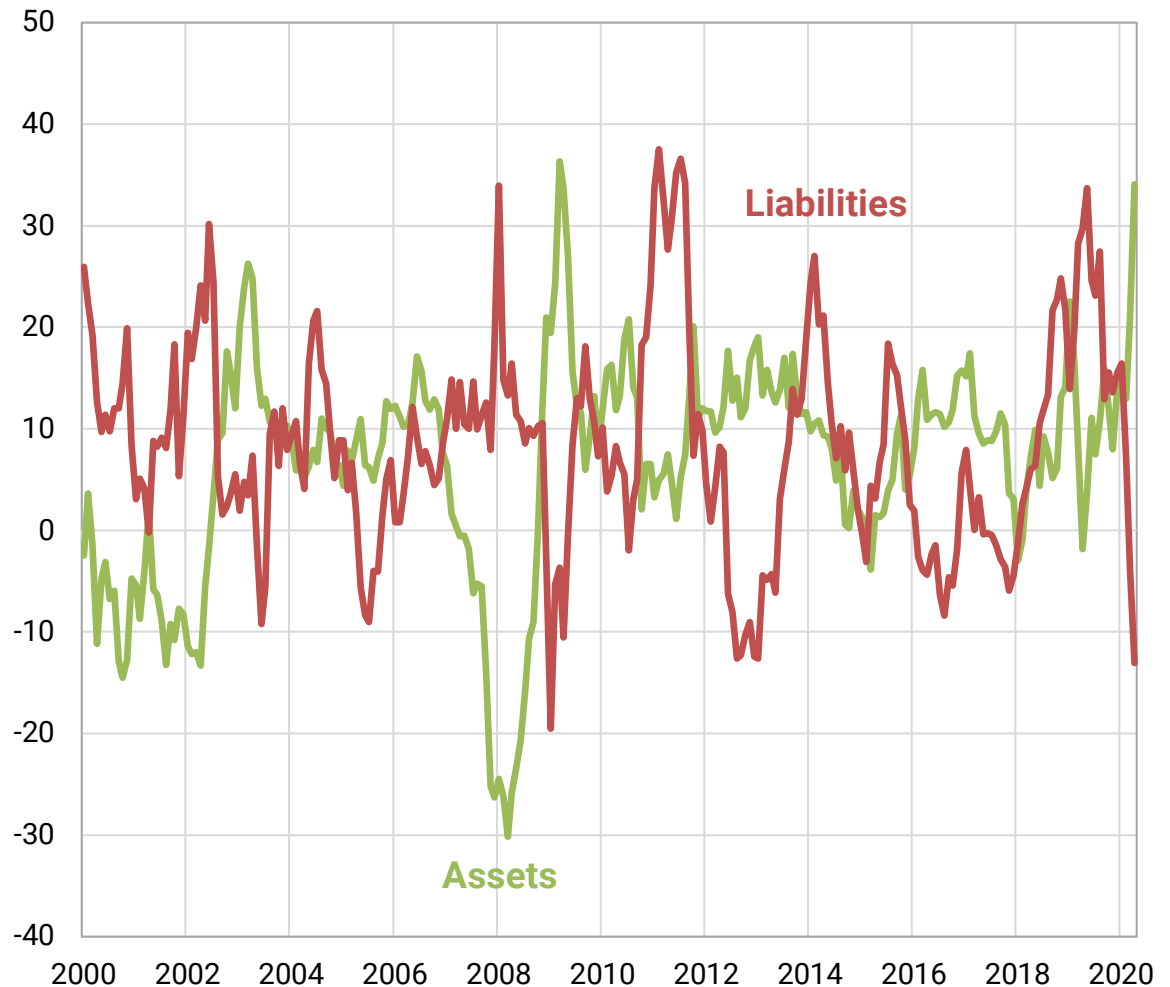
Pension Assets Minus Liabilities	
Market (Treasury STRIPS)	14.2
ASC 715 (FAS 158)	12.5
PPA (MAP 21 = 3 Segments)	1.3
PPA (Spot Rates)	6.0
GASB/ASOP (7.50% ROA)	1.0

Based on the weights of the Asset Allocation Model¹, the difference in pension asset versus liability growth in 2021 was dramatically improved from that which we witnessed in 2020 and for years before. Corporate, Public, and Multiemployer plans showed significant outperformance versus their liability benchmarks. Rising interest rates had a positive impact on discount rates (interest rates), while assets returns were generally positive leading to improved funded status for most pension plans during this period.

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

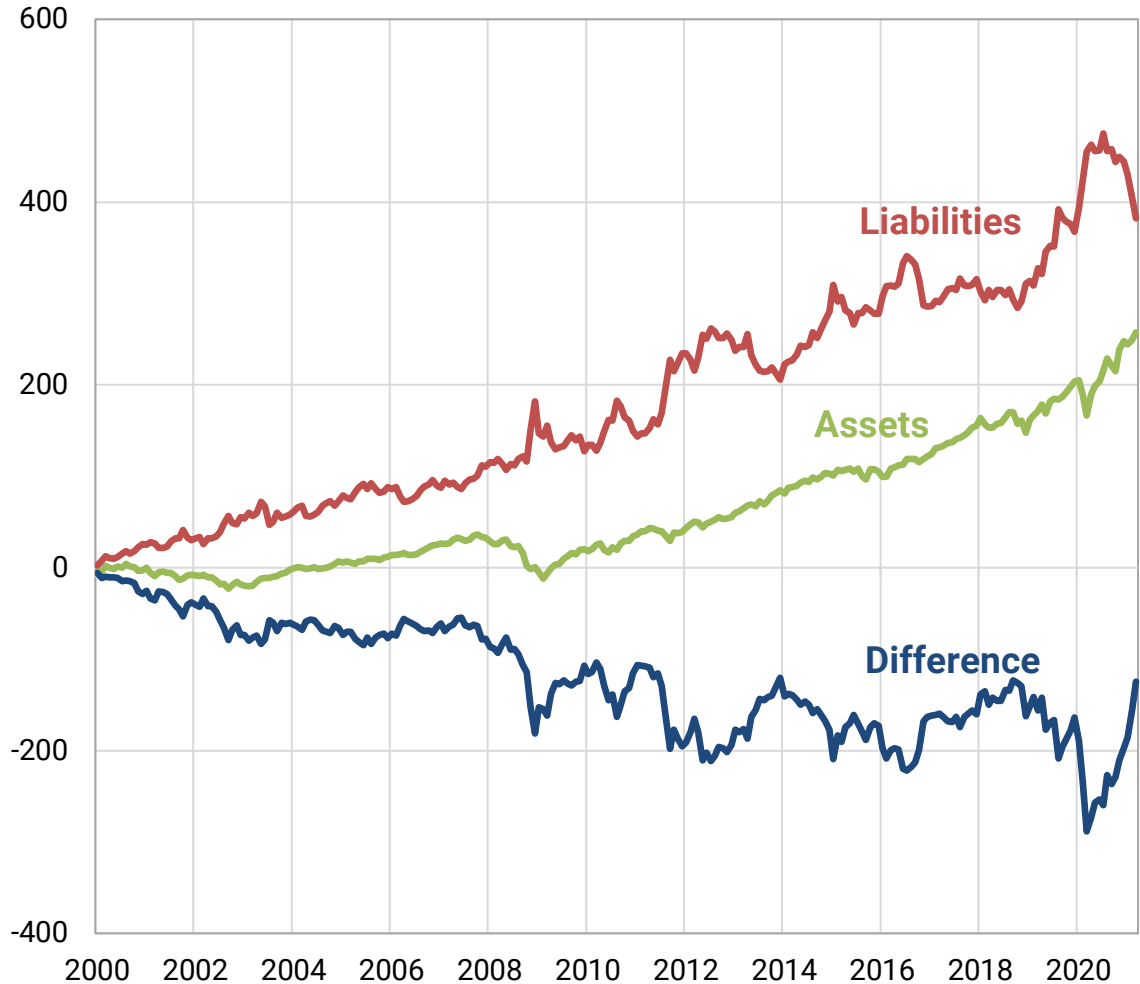
Rolling 12-month asset versus liability growth



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 below. 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. Fortunately, US interest rates have begun to rise. Despite stretched valuations, US equities continue to rally, too. A continuation in these trends would be very favorable for US pension plans.

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 the Ryan ALM Treasury STRIPS discount rate) fairly consistently since then by an estimated -125% 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 is **only 74.1%**! 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	14.40	16.45	-2.05	-197.14	63.8
2021	2.83	-11.43	14.26	-125.02	74.1

Source: Ryan ALM, Inc.

Providing Perspective

IBA Versus Cash Flow Matching

Cash flow matching the liability benefit payment schedule (Retired Lives) at the lowest cost is the ideal way to manage assets for a pension plan. Since Retired Lives are the most certain and most important (most tenured employees) liabilities, cash flow matching is a perfect fit given the certainty of the bond cash flows. Since the pension objective is a cost focus, cash flow matching would produce the optimal cost savings. We urge corporations to do a cost analysis before they buy an IBA! [Read here](#)

Is It Just the Accounting Rules?

Public pension systems can have a higher exposure to alpha assets (non-bonds), but they need to ensure that near-term liabilities are secured before ramping up the risk. With a greater focus on near-term liabilities through a cash-flow matching strategy, the pension fund has now bought time for the alpha assets to grow unencumbered. [Read here](#)

So Many Unknowns

We've been dedicating some time in our blog to the American Rescue Plan Act (ARPA), as it is an incredible piece of legislation designed to protect and preserve struggling multiemployer DB plans for the next 30-years through Special Financial Assistance (SFA) from the U.S. Treasury and the Pension Benefit Guaranty Corporation (PBGC). But is that protection actually there? [Read here](#)

It is Time to Address This Liability

We, at Ryan ALM, don't just focus on DB pension systems, as any entity with a liability is fair game, such as OPEB, E&Fs, Nuclear Decommissioning Trusts, etc. What is important to note, is that we focus all of our energy on modeling that liability and managing to it so as to reduce the cost to the greatest extent possible. Because we believe securing these benefits in a cost-efficient manner and not generating the highest return is the primary goal in managing these programs. [Read here](#)

Another in the Series of Ryan ALM's "Believe it or Not"

Given where equity valuations are at this time, does it really make sense to continue to look at the asset allocation as a single bucket? Separate your assets Beta (liquidity) and Alpha (growth) and buy time for your portfolio to potentially recover from periods of underperformance. [Read here](#)

Why TIPS? They Don't Hedge Pension Inflation

There is nothing efficient in allocating <3% to any strategy and thinking that it will provide value-added to 100% of a pension plan. In the case of TIPS, a <3% allocation is just creating opportunity cost, while becoming a drag on achieving the ROA or any other goal for that matter. [Read here](#)

Latest Thinking

Ryan ALM is engaged in a number of exciting conversations with major public pension systems regarding the appropriateness of using a Pension Obligation Bond (POB) to help close the funding gap, improve liquidity to meet near-term benefit payments and expenses, while also reducing the stress on state and municipal budgets that have been impacted by the disruptive Covid-19 virus. Russ Kamp spoke on this subject at an IFEBP webinar on April 13th.

We are thrilled that the American Rescue Plan Act (ARPA) was passed as part of the \$1.9 trillion stimulus package. This legislation has some of the elements of the Butch Lewis Act, but the greatest difference has to do with grants being given in this legislation to the struggling plans instead of loans. Importantly, any Special Financial Assistance received must be kept separate and managed conservatively to ensure that the promised benefits are actually paid through 2051.

Lastly, we have recently been retained by a corporate pension plan sponsor to use our cash flow matching skills to do a vertical cut of the plan's liabilities. We have historically used our cash flow matching capabilities to fund and match liabilities from the most current month as far out as the allocation permits. This provides 100% of the cash flow necessary to meet benefits and expenses. In this latest implementation, we are being asked to manage both cash flow and duration (about 12% of projected liabilities over 80 years). By using this approach, we can save our client an incredible 30%+ in funding cost savings on the future value of the plan's liabilities.

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% or more. 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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