



Ryan ALM
Asset/Liability Management

RYAN ALM QUARTERLY

Q3 2024

IN THIS ISSUE:

Pension Performance Monitor	1
Assets and Liabilities Through Time	2
2023 – The Year in Review	5
Providing Perspective	6
Latest Thinking	7

Pension Performance Monitor (Total Returns %)

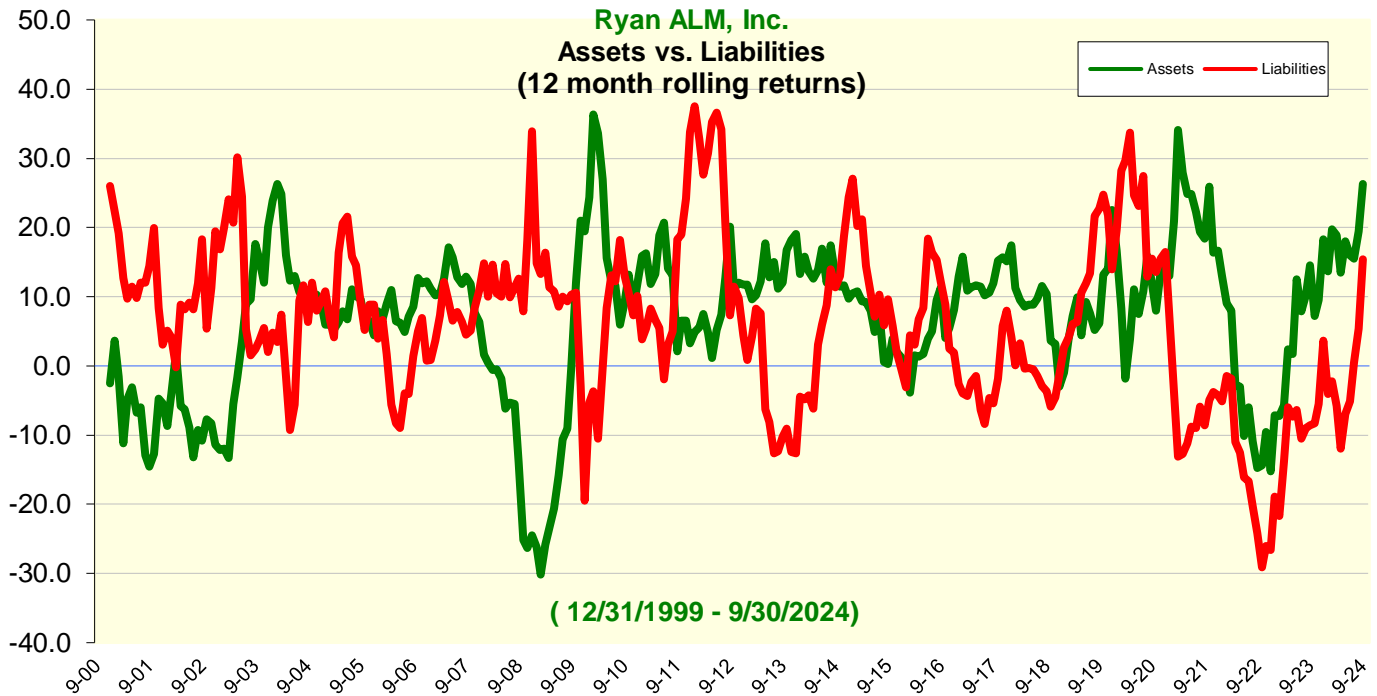
Pension Liabilities	Q3'24 (%)
Market (Treasury STRIPS)	2.7
ASC 715 (FAS 158)	4.6
PPA (MAP 21 = 3 Segments)	3.2
PPA (Spot Rates)	-3.3
GASB /ASOP (7.25% ROA)	5.6

Pension Assets	
Cash (Ryan Cash Index)	4.1
Bloomberg Barclay Aggregate	4.5
S&P 500	22.1
MSCI EAFE International	13.5
Asset Allocation Model ¹	15.2

Pension Assets Minus Liabilities	
Market (Treasury STRIPS)	12.5
ASC 715 (FAS 158)	10.6
PPA (MAP 21 = 3 Segments)	12.0
PPA (Spot Rates)	18.5
GASB/ASOP (7.50% ROA)	9.7

Based on the weights of the Ryan ALM Asset Allocation Model*, the difference in pension asset growth versus liability growth for the first three quarters of 2024 reveals a significantly positive comparison of pension assets minus pension liabilities no matter how pension liabilities are calculated. Corporate plans showed more robust funding gains (10.6%) versus their liability benchmarks (ASC 715), while Public and Multiemployer plans using the ROA as the discount rate had more modest, yet still robust, outperformance versus their liability growth rates (9.7%). Strong asset growth in equities, primarily in the US, continued into the third quarter, while a reversal in US interest rates from the beginning of 2024 fueled a recovery in the performance of bonds.

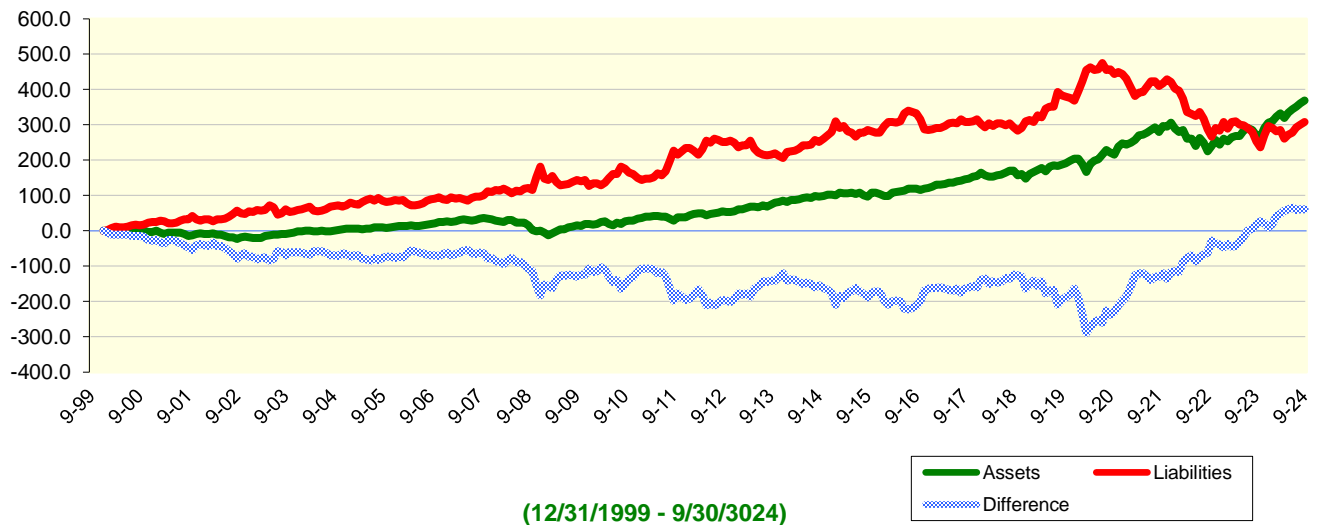
* Model weights are: 5% Ryan Cash, 30% Bloomberg Barclay Aggregate, 60% S&P 500, and 5% MSCI EAFE International



US equities as measured by the S&P 500, were up 22.1% year-to-date through 9/30/24. Continuing an incredible rally since the depths of 2022's Fed induced selloff. Most of the gain during the third quarter was attributable to a rally in large value stocks, and particularly the Utilities sector which rose an incredible 19.4%, as the S&P 500 Value index advanced 9.1%, while the S&P 500 growth component was up only 3.7%. However, large growth continues to lead on a YTD basis by 12.8% over large value. Not surprisingly, Information Technology and Consumer Services have both logged the most significant gains for the first nine months.

US interest rates have ridden a rollercoaster during 2024, rising sharply to begin 2024 only to see rates plummet during the last quarter, as market participants concluded that the Fed had achieved its goal in combating inflation. However, we at Ryan ALM remain skeptical that the US is on a verge of a recession or that inflation has been conquered. A fairly strong US labor market and continuing economic growth combine to create challenges for the US Fed, as they continue to monitor the progress made to date on inflation. The market certainly believes that the Fed will continue to cut rates this year, but those expectations may have to be modified as the FOMC evaluates future data releases prior to November's meeting.

Ryan ALM, Inc.
Assets vs. Liabilities
Cumulative returns starting 12/31/1999



Most pension funds enjoyed a funded ratio surplus in 1999, but pension asset growth had underperformed liability growth (based on the Ryan ALM Treasury STRIPS discount rate) fairly consistently for much of the next two decades. We are pleased to report that the funding deficit has been eliminated as a result of the Fed's tightening campaign, despite the recent Fed Fund's Rates cut of -0.5%, as rising interest rates reduce the present value of those future pension obligations. The cumulative difference is now 61.2% on a compound index basis starting at 100 on 12/31/99. The difference had been as much as -197 in 2020. Starting at a funded ratio of 100 on 12/31/99, the estimated funded ratio today would be 115.0%, which is based on the Ryan ALM liability calculations and hypothetical asset allocation. It is trending in the same direction to the estimated funded ratio provide by Milliman in the Milliman 100 Pension Funding Index (PFI) which stood at 102.8% at the end of August. Strong equity market returns during during the first 9 months have helped to overcome a slight decrease in US interest rates since the end of 2023. Public pension funded ratios have also improved and currently average 82% according to Milliman.

US interest rates are not high relative to history, but they do provide the plan sponsor community with the opportunity to reduce the risk within their plans by defeasing a portion of the liabilities such as the Retired Lives Liability (RLL). This is an opportunity that hasn't been available in decades as US rates plummeted to historic lows. We encourage you to act today before this opportunity fades.

Cumulative returns of assets versus liabilities (%)

	Assets	Liabilities	Difference	Cumulative Difference	Funded Ratio
2000	-2.5	26.0	-28.5	-28.5	77.4
2001	-5.4	3.1	-8.5	-37.6	71.0
2002	-11.4	19.5	-30.9	-73.4	52.7
2003	20.0	2.0	18.1	-60.1	62.0
2004	8.9	9.4	-0.4	-66.1	61.8
2005	4.4	8.9	-4.4	-76.8	59.2
2006	12.3	0.8	11.4	-64.6	66.0
2007	6.4	11.0	-4.6	-77.5	63.2
2008	-24.5	33.9	-58.4	-181.6	35.7
2009	15.7	-19.5	35.3	-106.9	52.9
2010	11.9	10.1	1.8	-115.7	53.8
2011	3.3	33.8	-30.5	-195.7	41.5
2012	11.8	4.5	7.3	-194.3	44.4
2013	19.0	-12.6	31.6	-120.7	60.5
2014	9.7	24.4	-14.6	-177.1	53.4
2015	1.2	-0.5	1.7	-172.8	54.3
2016	8.1	1.9	6.2	-163.4	57.6
2017	15.2	7.9	7.2	-160.3	60.9
2018	-3.0	-1.3	-1.7	-162.7	60.4
2019	22.8	13.9	8.9	-163.9	65.0
2020	14.4	16.5	-2.1	-197.1	63.8
2021	17.4	-4.2	21.6	-116.1	77.8
2022	-15.2	-26.6	11.4	-39.0	89.8
2023	18.3	3.7	14.6	9.9	102.5
Q3'24	15.2	2.7	12.5	61.2	115.0

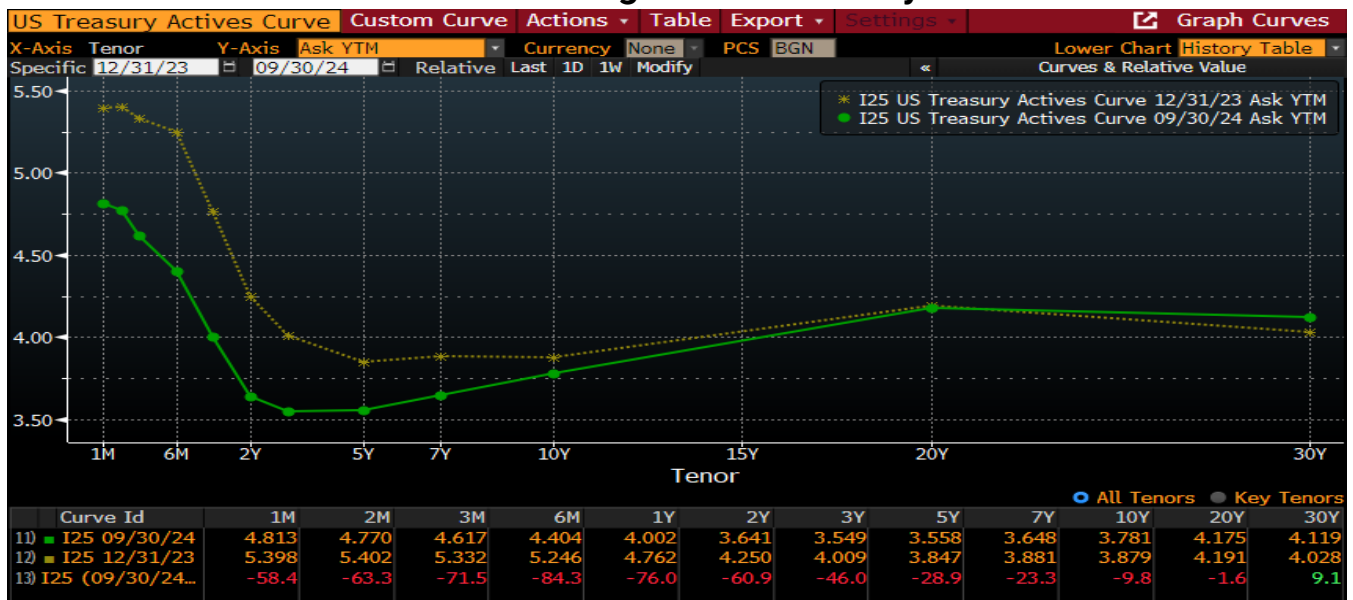
Source:
RyanALM, Inc.

ECONOMIC SNAPSHOT AS OF SEPTEMBER 30, 2024

	2023	Q3'24
U.S. GDP	2.6%*	2.5%*
US Debt	\$34.0 T	\$35.3 T
CPI - U	3.1%^	2.6%^
Unemployment Rate	3.7%	4.1%
30-Year Treasury Yield	4.08%	4.12%
10-Year Treasury Yield	3.94%	3.79%
2-Year Treasury Yield	4.33%	3.65%
3 Mo. T-Bills Yield	5.37%	4.57%
S&P 500	4,742.83	5,762.48
Nasdaq 100	14,765.94	18,184.17
R2000	2,012.80	2,229.97
Gold	2,075.20	2,659.40
Oil	\$71.31	\$68.30
Existing Single Family sales	3.41M**	3.48M**

*GDPNow forecast as of October 3, 2024, ^annual # through August 31, 2024, ** as of August 31, 2024

Year-to-date change in the Treasury Yield Curve



Sharing Perspective

Pension Conundrum: Liquidity Risk

Liquidity is a critical and necessary priority of a pension fund, since it must fund monthly benefits and expenses (B + E or grant payments) on time. Many plan sponsors use a “cash sweep” or a fixed cash allocation to provide such cash flow. Both strategies are not optimal for a pension plan.

Things to Ask Your LDI Manager

LDI is the acronym for Liability Driven Investment. It is better explained as Asset Liability Management which we promote at Ryan ALM. It has developed into two main strategies either to fund liabilities through cash flow matching or to immunize the interest rate sensitivity of liabilities through duration matching.

You Have an Obligation: Fund It!

I recently participated in a new program put on by the Florida Public Pension Trustees Association (FPPTA). They’ve introduced a higher-level program for trustees that really want to dive more deeply into pension issues. I’m thankful to have the opportunity to participate both as a speaker and a coach.

Defined Benefit Pension Plan: “Absolute Truths”

The four senior team members at Ryan ALM, Inc. have collectively more than 160 years of pension/investment experience. We’ve lived through an incredible array of markets during our tenures. We have also witnessed many attempts on the part of **Pension America** to try various strategies (schemes) to meet the promises that have been made to the pension plan participants.

How Comforting is +/-33.6%?

I very much enjoyed my two days attending the NCPERS conference. Not only did I get the opportunity to share some insights related to cash flow matching (CFM) and the application of this strategy for negative cash flow plans, but I also had the opportunity to listen to wonderful presentations related to a number of relevant topics.

Would You Call This Result A Success?

Let me start off by stating unambiguously that I’m a huge supporter of defined benefit (DB) plans. Despite many recent improvements in defined contribution (DC) plans, such as auto-enrollment, auto-escalation, etc., I believe that DC plans should not be anyone’s primary retirement vehicle...

Latest Thinking

We continue to be thrilled that the American Rescue Plan Act (ARPA) was passed as part of the \$1.9 trillion stimulus package. This legislation has many of the elements of the Butch Lewis Act which Ryan ALM's Ron Ryan was instrumental in providing the defeasance language. As a reminder, any Special Financial Assistance (SFA) received must be kept separate and managed conservatively to ensure that the funds received and earmarked to pay the promised benefits (through 2051) are actually available. The PBGC has approved the SFA applications for 92 multiemployer plans through September 30, 2024, totaling \$68.0 billion (including supplemental filings and interest) in government grants.

We were thrilled to be recently appointed as an asset manager using our cash flow matching (CFM) capability for a multiemployer plan. This particular fund has frozen since the mid-'90s. CFM is the perfect strategy in this case, as we can secure each forecasted benefit and expense through 2050. Please don't hesitate to reach out to us if you'd like to learn more about what we can do for DB pension plans.

We are very committed to educating plan sponsors and their advisors about the positive impact of rising interest rates and the impact those have on the ability to de-risk DB pensions through Cash Flow Matching (CFM). The US Federal Reserve's most recent action on Interest rates (-0.5% cut on 9/17) has reduced the Fed Fund's Rate to 4.75%-5.00%, but rates remain at attractive levels. The data (as of 9/9/24) below is for our newest client. The projected cost savings through defeasing the plan's liabilities is incredible. In this example, it is **30.1%** covering a period through 12/31/50 and limiting the universe to BBB+.

LBP Summary

	ASC 715	LBP Model	Cost Savings (\$ and %) *	
Future Value	\$132,554,225	\$132,554,225		
Present Value	\$94,221,475	\$92,681,739	\$39,872,486	30.08 %
YTM	4.19 %	4.65 %		
MDuration	6.56	6.39		
LBP Model Efficiency		102.13 %		
Total Assets		\$95,336,938		

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

About Ryan ALM, Inc.

Ryan ALM was founded by Ronald J. Ryan, CFA on June 15, 2004 (happy 20th anniversary to us!) as an Asset/Liability Management firm. The firm has built 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. In this higher interest rate environment, our portfolios are producing cost savings of >2%/year. Our LBP best represents the core portfolio (or liquidity bucket) of a pension plan or endowment/foundation.

FASB requires corporations and nonprofit organizations to price their liabilities at certain discount rates. Importantly, Ryan ALM provides these discount rates in conformity to ASC 842: Lease Accounting and ASC 715: Pensions. For more info: [Read here](#)

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



Ryan ALM

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