The Ryan ALM Pension Letter™
September 30, 2014
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Ronald Ryan, CEO, CFA

William F. Sharpe
Lifetime Achievement Award

Money Management Letter
Lifetime Achievement Award

Capital Link
Most Innovative ETF Award

IMN
ETF of the Year Award

Bernstein Fabozzi/Jacobs Levy
Research Paper of the Year Award

Index	Returns YTD 2014	Weights
Pension Liabilities:		
Market (Tsy STRIPS)	14.90%	100 %
ASC 715 (FAS 158)	13.39	
PPA (MAP 21 = 3 Segments)	5.22	
PPA (Spot Rates)	15.24	
GASB /ASOP (8% ROA)	5.92	
Pension Assets:		
Ryan Cash	0.12 %	5 %
Barclay (Lehman) Aggregate	4.10	30
S&P 500	8.33	60
MSCI EAFE Int'l	-0.81	5
Asset Allocation Model	**6.23 %**	**100 %**
Pension Assets – Liabilities:		
Market	-8.67%	
ASC 715 (FAS 158)	-7.16	
PPA (MAP 21 = 3 Segments)	1.01	
PPA (Spot Rates)	-9.01	
GASB/ASOP (8% ROA)	0.31	

Using the Asset Allocation above, the difference in pension asset growth vs. liabilities in 2014 was: **-8.67%** (market valuation STRIPS), **-7.16%** (ASC 715), **1.01%** (PPA 3 segment rates), **-9.01%** (PPA-Spot Rates) and **0.31%** (GASB/ ASOP). Such valuations show the significant difference in not using *market* valuations. Most pension funds enjoyed a funded ratio surplus in 1999 but **pension asset growth has *underperformed* liability growth since by an estimated -154.76%** on a compounded index basis starting at 100 on 12/31/99!

		Total Returns		(Market Values)						
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Assets	-2.50	-5.40	-11.41	20.04	8.92	4.43	12.25	6.82	-24.47	19.43
Liabilities	25.96	3.08	19.47	1.96	9.35	8.87	0.81	11.76	33.93	-19.52
Difference:										
Annual	-28.46	-8.48	-30.89	18.08	-0.43	-4.44	11.44	-4.94	-58.40	38.95
Cumulative		-37.60	-73.40	-60.08	-66.13	-76.75	-64.60	-77.50	-181.57	-106.94
	2010	**2011**	**2012**	**2013**	**2014**					
Assets	11.89	3.27	11.79	19.04	6.23%					
Liabilities	10.13	33.77	4.46	-12.59	14.90%					
Difference:										
Annual	1.76	-30.50	7.33	31.63	-8.67%					
Cumulative	-115.67	-195.73	-194.30	-120.74	-154.76					

Ryan ALM, Inc. - The Solutions Company
www.ryanalm.com

"The U.S. Pension Crisis" Book Wins IPPY Gold Award for Finance

My new book on The U.S. Pension Crisis was just honored with the top IPPY award for an independent publisher on finance. The IPPY awards were launched in 1996 as the first awards program exclusively for independents. This year's competition had 5,240 entries. If you are interested in purchasing, please email us at **Contact@RyanALM.com.**

2014… Poor Start for Pensions

2013 proved to be the second best year in pension history (since 1987) with assets outgrowing liabilities by 31.63% (Ryan ALM estimate) using market or economic valuations. 2014 is starting out as a correction year as assets underperformed liability growth by **-8.67%** (see 1ˢᵗ page). We estimate pension asset growth of about **6.23%** based on the asset allocation on the first page and liability growth of **14.90%** based on the Ryan Liability Benchmark Index (using Treasury STRIPS). The *Ryan ALM Pension Funded Ratio* stands at **55.91%** starting at 100.00 in 12/31/99 (see graphs on page 4).

President Signs Highway and Transportation Funding Act (HATFA)

On August 8, 2014 the President signed HATFA into law. This Act modifies the interest rates that had been set by the Moving Ahead for Progress in the 21ˢᵗ Century Act (MAP-21) such that the minimum required contributions will be less than under the current law. In 2012, MAP-21 was passed which reduced the minimum contribution by comparing the discount rates calculated under a 24-month moving average vs. a 25-year moving average. A corridor was then calculated at 80% to 120% of the 25-year moving average for 2014, 75% - 125% for 2015 and 70% to 130% thereafter. If the 24-month average is lower or higher than the corridor the discount rate used is adjusted to the minimum or maximum rate of the corridor. HATFA extends the time period for the reduction of the percentages so the minimum discount rate will not decrease as soon. HATFA uses 90% to 110% (2012-2017), 85% to 115% (2018), 80% to 120% (2019), 75% to 125% (2020), 70% to 130% (thereafter). The higher the discount rate… the lower the present value of liabilities which enhances the funded ratio thereby reducing contribution costs. As I wrote in my 2013 research paper "MAP-21: Friend or Foe" (see Research on our web site www.RyanALM.com), this legislation is a tax scam. Under MAP-21 and now HATFA, by lowering the pension discount rates corporations reduce their pension contribution which enhances EPS. The Federal government will get 35% of these enhanced profits thru taxes. In fact, they even estimate they will get over $9 billion in new tax revenues over the next 10 years. How this legislation is labeled as pension relief is a contradiction since corporate pensions will get less contributions to secure their plans.

ASC 715 (formerly FAS 158) Pension Discount Rates Available via Ryan ALM

Ryan ALM produces four pension discount rate curves in conformity with ASC 715 (FAS 87/106/158) by manufacturing AA corporate zero-coupon bond yield curves since FAS 158 became effective in 2006. Our discount rate yield curves are used and accepted by a top four accounting firm. If you have an interest in our ASC 715 data, contact us at… **Contact@RyanALM.com.**

Ryan ALM also creates **Custom Liability Indexes (CLI)** as the proper benchmark for liability driven objectives based on FASB, PPA, GASB and market discount rates. Our CLI is a *monthly index* report that calculates: Present Value, Term Structure, Growth Rates (Returns), Summary Statistics (YTW, MDuration, Average Price (Cost)) and Interest Rate Sensitivity.

Motorola Solutions, Inc. Agrees to Prudential Buy-Out Annuity

On September 25, Motorola announced it reached an agreement with Prudential under which Pru will assume responsibility for the monthly pension benefits for approximately 30,000 retirees. This will reduce Motorola Solutions' ongoing U.S. pension obligation by $4.2 billion. The company plans to contribute $1.1 billion in 2014 to its pension plans. This is the third largest pension annuity behind GM and Verizon. Such a transaction in essence removes the pension liability from the balance sheet.
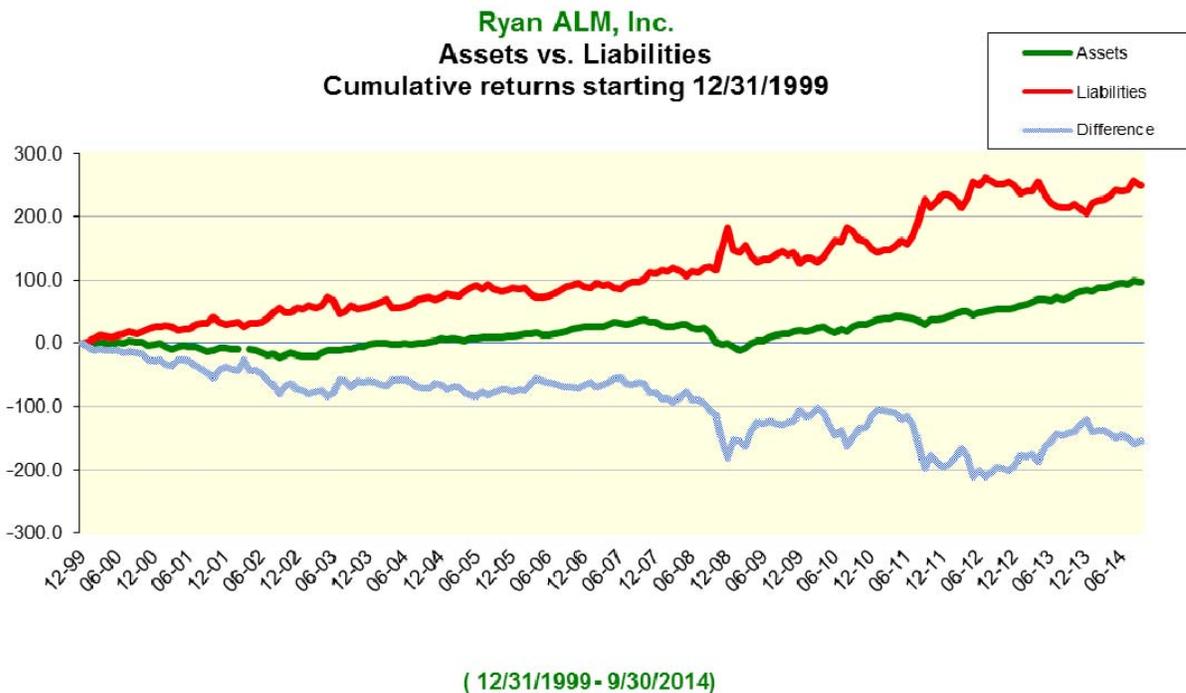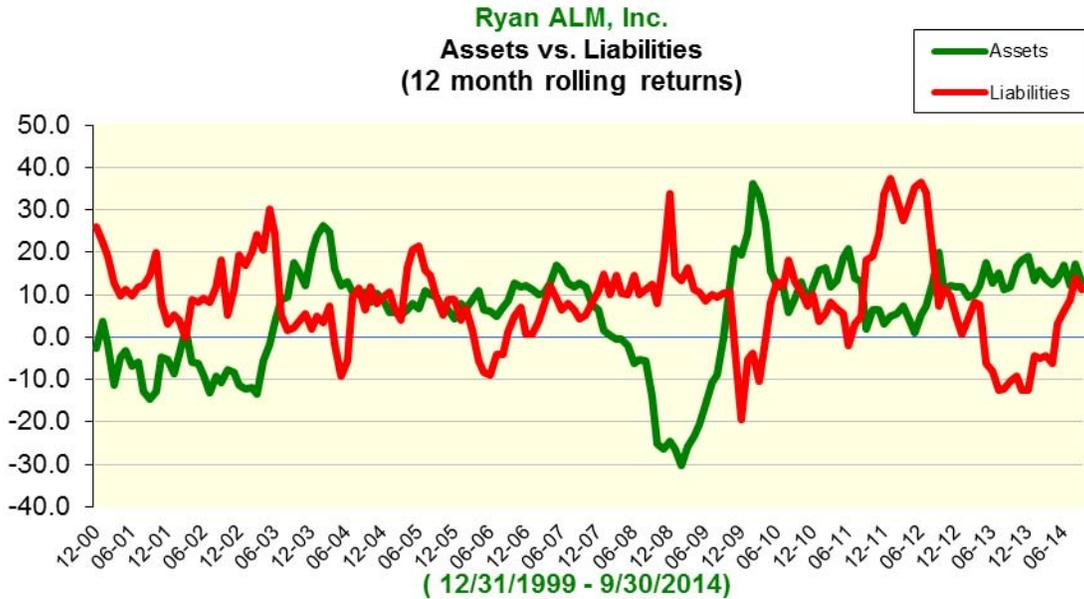
AIG Bailout… Was it Legal?

A six week trial started on September 29 wherein a federal judge will consider the U.S. government's rescue of American International Group (AIG) was legal. This trial will explore the limits of U.S. government power in responding to major financial crises. It is expected to revisit the New York Federal Reserve's decision to extend a bailout package to AIG. The AIG bailout preceded the auto and bank bailouts. Former Fed chairman Ben Bernanke and former Treasury Secretaries Tim Geithner and Henry Paulson will be called into testimony. The lawyer for AIG former chief executive, Hank Greenberg, is expected to argue that the government unlawfully sought to punish AIG shareholders with excessive harsh terms. Mr. Greenberg's lawyers have said in court papers that the bailout offer from the New York Fed to provide AIG an $86 billion loan in exchange for high interest rates and a nearly 80% equity stake in the company amounted to unconstitutional theft from AIG shareholders.

Argentina's Weird Default

S&P declared Argentina in default after the government missed a deadline for paying $539 million interest on $13 billion of its bonds. The reason why Argentina defaulted was that a U.S. judge ruled that the payment couldn't be distributed unless a group of hedge funds holding defaulted debt also got paid $1.5 billion owed to them. The court appointed mediator, Daniel Pollack, said that Argentina couldn't pay the hedge funds because it would trigger clauses requiring the country to offer similar terms to other bondholders. This is the second time in 13 years Argentina has defaulted on its debt and the eighth time in its history. In 2005 and 2010 Argentina offered holders of its 2001 defaulted bonds new "exchange bonds" at $0.35 on the dollar. About 93% of the old bondholders accepted the deal. The 7% that didn't were the hedge funds who thought that the *pari passu* clauses would offer them a better deal. Under the *parri passu* clauses borrowers (Argentina) have to treat all bondholders the same. That is the merits of this trial.

Ryan ALM Pension Scoreboard

The graphs below show asset vs. liability rolling 12 month and cumulative growth since 1999. Ryan ALM Benchmark Liability Index = **251.03%** growth while pension assets = **96.27%** growth for a difference of **–154.76% suggesting any pension Funded Ratio below 178.85% in 1999 has a deficit today on a *market weighted* basis. The Ryan ALM Pension Funded Ratio = 55.91%.**

Ryan ALM, Inc.
Assets vs. Liabilities
(12 month rolling returns)
(12/31/1999 - 9/30/2014)

Ryan ALM, Inc.
Assets vs. Liabilities
Cumulative returns starting 12/31/1999
(12/31/1999 - 9/30/2014)

The World of Ryan Indexes

Custom Liability Indexes … (Patent Pending)
The best way to price (discount rate) and understand the interest rate sensitivity of liabilities is the **Ryan Treasury STRIPS yield curve indexes** as a **LIABILITY INDEX BENCHMARK.** In March 1985, when STRIPS were born, the Ryan Financial Strategy Group (RFSG) created the **1st STRIPS Index.** Based upon these Ryan STRIPS indexes we created the **1st Liability Index** as the proper Liability Benchmark for liability driven objectives. The Ryan team has developed hundreds of Custom Liability Indexes (CLI). Similar to snowflakes, no two pension funds are alike with unique benefit payment schedules due to different labor forces, mortality and plan amendments. Until a CLI is installed as the benchmark, the asset side is in jeopardy of managing vs. the wrong objective (market indexes). **If you outperform generic market indexes, but lose to the CLI … the plan loses!**

Ryan Treasury Yield Curve Indexes (*Constant Maturity / Duration* series)
In March 1983, the Ryan Financial Strategy Group (RFSG) created the **1st Daily bond Indexes (the Ryan Index)** as a *Treasury Yield Curve constant maturity* index series for each *auction* maturity series (from Bills to Bonds). In March 1985, the day after Treasury STRIPS were born RFSG created the **1st Treasury STRIPS indexes** as a *Treasury Yield Curve constant duration* series of 1-30 year maturities (30 distinct constant duration indexes + composite)**.** The best way to measure interest rate risk is to use the Ryan Treasury Yield Curve Index series**.**

RAFI Fundamental Weighted High Yield Index Series + RAFI Investment Grade Index Series
(PowerShares ETFs = PHB + PFIG)
In January 2010, Research Affiliates announced the creation of a series of bond indexes based on the RAFI fundamental weights. These include a short, intermediate long and composite Investment grade series and a short and intermediate High Yield series. Ryan ALM was honored and chosen as the index designer and calculation agent. In August 2010 the RAFI 1-10 year High Yield Index was launched as a **PowerShares ETF (PHB)**. There is also a Canadian hedged version **(PFH_CN)**. In September 2011 the RAFI 1-10 year Investment Grade index was launched as a PowerShares ETF **(PFIG)**. For more info on these ETFs and index, please go to:
www.Powershares.com   (click on fixed income portfolios)

Ryan/Nasdaq 1-30 year Treasury Maturity Ladder (PowerShares ETF = PLW)
On October 11, 2007 PowerShares launched a fixed income ETF **(PLW)** based upon the Ryan/Nasdaq 1-30 year Treasury Maturity Ladder index. This index is an equal-weighted diversified portfolio of 30 distinct maturities. For more info on this ETF and index, please go to:
www.Powershares.com   (click on fixed income portfolios)

Ryan ESG Bond Index Series (Global version)
In 2009 Ryan ALM launched the 1st ESG Global corporate bond index series based upon the GSRA ESG ranking (G100 + G400 series) for the top ranked ESG Global companies. This index series includes a 1-30+ year index.

Ryan ASC 715 (formerly FAS 158) Spot Rate Yield Curve Index
In 2006, Ryan ALM designed the FAS 158 yield curve index that prices any private pension liabilities in conformity to FAS 158 standards.

Ryan Canadian Corporate Bond Index (Pro-Financial fund)
In 2012, Ryan ALM designed an investment grade index for Canadian corporate bonds. This index should help with the new IAS 19 discount rate accounting rules.

To view all Ryan Indexes data go to: www.RyanIndex.com
Ryan Index is a Registered Trademark of Ryan ALM, Inc.
In October 2005, Ron Ryan terminated his license agreement with Ryan Labs to distribute and calculate the Ryan Indexes and Ryan STRIPS Indexes. Ron Ryan and Ryan ALM have no affiliation with Ryan Labs. Any use of the formulas, methodologies and data of any of the Ryan Indexes without Ron Ryan's written permission is prohibited.

Given the Wrong Index … you will get the Wrong Risk/Reward!

Pension Solutions:
Custom Liability Index and Liability Beta Portfolio
_____(Patent Pending)_____

Ryan ALM offers a turnkey system of CLI + Liability Beta portfolio as a pension solution:

Custom Liability Index (Patent pending) - 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. 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. Ryan ALM is a leader in CLI as Ron Ryan was the inventor of the *first Liability Index* in 1991. In 2006, Ron won the *William F. Sharpe Index Lifetime Achievement Award*!

Liability Beta Portfolio (Patent Pending) – The value added in bonds is small as every performance ranking study proves (1st quartile vs. median difference). **The best value in bonds is 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 high quality 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**. This requires a Custom Liability Index in order to be executed.

The Ryan ALM Beta portfolio system will invest only 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 Credit Risk**
> **No Event Risk**
> **No Prepay Risk**

The Ryan ALM Beta portfolio is the lowest cost portfolio since we will always out yield liabilities by more than our low fee thereby guarantying each client **No *Net* Fee** to maturity (liability benefit payment dates). Moreover, the Beta portfolio is a matching liability portfolio that fully funds liabilities thereby reducing the cost and volatility of contributions.