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

The Ryan ALM Pension Letter

June 30, 2013

Index	Returns YTD 2013	Weights
Pension Liabilities:		
Market (Tsy STRIPS)	-7.80%	100 %
ASC 715 (FAS 158)	-9.66	
PPA (MAP 21 = 3 Segments)	3.32	
PPA (Spot Rates)	-2.30	
GASB / ASOP (8% ROA)	3.89	
Pension Assets:		
Ryan Cash	0.07 %	5 %
Barclay (Lehman) Aggregate	-2.45	30
S&P 500	13.84	60
MSCI EAFE Int'l	4.54	5
Asset Allocation Model	7.61 %	100 %
Pension Assets – Liabilities:		
Market	15.41%	
ASC 715 (FAS 158)	17.27	
PPA (MAP 21 = 3 Segments)	4.29	
PPA (Spot Rates)	9.91	
GASB / ASOP (8% ROA)	3.72	

Using the Asset Allocation above, the difference in pension asset growth vs. liabilities in 2013 was: **15.41%** (market valuation STRIPS), **17.27%** (ASC 715), **4.29%** (PPA – 3 segment rates), **9.91%** (PPA-Spot Rates) and **3.72%** (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 -155.24%** 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	-76.75	-64.60	-181.57	-106.94

	2010	2011	2012	2013
Assets	11.89	3.27	11.79	7.61
Liabilities	10.13	33.77	4.46	-7.80
Difference:				
Annual	1.76	-30.50	7.33	15.41
Cumulative	-115.67	-195.73	-194.30	-155.24

Wilshire Survey Shows 94% of Private Pensions Underfunded

The long secular trend of lower interest rates has caused much havoc with pension funded ratios… and in numerous cases has been fatal. The Wilshire annual survey of defined-benefit plans for S&P 500 companies showed a funding shortfall of $342.5 billion for 2012 vs. $282.3 billion in 2011 (a 21.3% increase). According to Wilshire pension assets increased by $113 billion in 2012 to a level of $1.22 trillion (9.9% return) while pension liabilities increased by $174 billion to a level of $1.56 trillion (12.2% growth rate) based on ASC 715 discount rates (GAAP accounting). The median discount rate was 4.16% in 2012 from 5.00% in 2011. The median funded ratio was 76.9% down from 78.1% in 2011. The median asset rate of return was 11.8% (same as posted on our first page of this Newsletter). Pension expense rose from $44.7 billion to $57.1 billion (a significant 27.7% increase) which increased contributions to $57.8 billion in 2012 from $54.4 billion in 2011 (6.25% increase).

Wilshire Survey Shows 73% Funded Ratio for State Retirement Systems

The Wilshire 2013 report is based on actuarial data for 134 retirement systems sponsored by the 50 states plus the District of Columbia as of June 30 (109 systems) or after (25 systems). The survey showed a drop in the funded ratio from 77% in 2011 to 73% in 2012. For the 109 June 30 reporting systems, pension assets were valued at $1.82 trillion and liabilities at $2.66 trillion for a reported deficit of $0.84 trillion versus a shortfall of $0.69 trillion in 2011. The aggregate funded ratio was 68.4% down from 73% in 2011. The Wilshire survey showed 95% of the plans reported a deficit. Note that these actuarial valuations are based on valuing liabilities at the ROA (@ 7.50%) instead of market interest rates (@4.0%). If marked to market, the typical public plan funded ratio would drop by about 25%.

Moody's Finds State Pensions are 48% Funded

Moody's, dissatisfied with the way states measure pension liabilities, released its own numbers on June 27 showing a funded ratio of 48% versus the 73% reported. This amounts to an extra $980 billion shortfall. Moody's said that its analysts decided that the funded ratio reported was not useful for issuing credit ratings. Moody's cited Illinois with the greatest burden in that its unfunded pension promises were three times more than the amount of revenue the state takes in every year through taxes and fees. By the same measure, Nebraska was the most solvent with a shortfall of just 7% of the state's annual revenue. When Moody's measured each state's ability to fund pension liabilities by its gross domestic product (versus tax revenues) Alaska surged to the top with a pension shortfall of more than 20% of its total output surpassing Illinois. But when Moody's added Puerto Rico to its rankings, it rose to the top of the list with a 59% shortfall of the personal income of its residents. Alaska was at 32% and Illinois at 24%. As I have reported for 30 years, until you mark to market both pension assets and liabilities it is hard to know the financial truth. Smoothing of assets tends to overvalue assets since 1999. Valuing liabilities at the ROA (@ 7.5%) is an erroneous valuation, if not a sin. It significantly understates pension liabilities by as much as 50%. As a result, the funded ratio reported by public pensions is greatly *overstated* which has led to inappropriate benefit and contribution decisions for decades. Similar to the recent IASB accounting ruling (IAS 19 effective January 1, 2013) we need to remove the ROA, smoothing and anything that distorts the financial truth. Once the financial truth is known then and only then can appropriate asset allocation, benefit and contribution decisions be made… they all link!

EU Spares Pension Funds from Tough Solvency Rules

The European Commission has decided not to impose tough new capital requirements on pension funds. Such a move could save defined-benefit programs hundreds of billions of euros. The Commission proposal to boost transparency and governance standards at pension funds, due in autumn 2013, will not cover the issue of solvency rules. The Commission had been considering forcing pension funds to hold more capital in reserve to make sure pensions can meet their payment obligations. The original proposal to add more capital where there were pension deficits was opposed by Belgium, Britain, Germany, Ireland, and the Netherlands. The proposal was estimated to cost U.K. employers £150 to £400 billion.

In Gold We Trust… States Push Bullion as Legal Tender

Concerns over the U.S. economy and Federal Reserve monetary policy, more than a dozen states has pushed for recognizing gold and silver as legal tender. Utah has already authorized bullion as currency in 2011. Similar bills are advancing in Kansas, South Carolina and Utah. There is a growing fear here that government fiscal policy and the Fed's monetary policy will lead to a major devaluation of the dollar. In Texas, lawmakers are considering a measure to establish the Texas Bullion Depository to store gold bars valued at about $1 billion and held in a New York bank warehouse. The gold is owned by the University of Texas Investment Management Co. (UTIMCO) which took delivery of 6,643 bars of the previous metal in 2011. The facility would also accept deposits from the public. It would also provide sovereign backing for deposits and make buying and storing gold easier.

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

Ryan ALM produces pension discount rates in conformity with ASC 715 (FAS 87/158) by manufacturing an AA corporate zero-coupon bond yield curve since FAS 158 became effective in 2006. We make our discount rate curves available to any corporate plan sponsor, consultant, accounting and actuarial firm usually by the third business day of each month. Our discount rate yield curve is monitored and accepted by a major accounting firm. If you have an interest in subscribing to our data, please contact us at… **RyanContact@RyanALM.com.** Moreover, Ryan ALM 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 *daily index* report that calculates: Present Value, Term Structure, Growth Rates (Returns), Summary Statistics (YTW, MDuration, Average Price (Cost)) and Interest Rate Sensitivity.

Judge Fitzwater Dismisses Employee Suit over Verizon Pension Buyout Annuity

Federal judge Sidney Fitzwater dismissed a suit by Verizon Communications Inc. management retirees who contested the recent decision by Verizon to purchase a group annuity contract from Prudential Insurance. At issue was did the transaction violate ERISA Section 404(a); whether the plan's summary plan description satisfied the requirement to disclose the circumstances that might result in a loss or reduction of benefits, and whether the transaction violated ERISA's non-discrimination provision. Judge Fitzwater ruled that "because the …class has not alleged that the (summary plan description) lacked any description that was required to include, the court dismisses the …claim." The judge also ruled that the annuity contract transaction was not a "fiduciary function" and that the court cannot "reasonably infer" that the $1billion premium payment to execute the deal was "unreasonable."

Public Pension Fund Watch:

Detroit – defaulted on a $39.7 million payment on debt issued to bolster its pensions that was due June 14. The city has $1.5 billion of such obligations. Fitch cut Detroit credit rating to D (Fitch's lowest credit rating). Detroit Police and Fire Retirement System (DFPRS) released its June 30, 2012 actuarial report claiming a 96.1% funded ratio. According to burypensions.wordpress.com the market value of assets was $701 million overstated based on what was in the fund over 7 years (smoothing). Liabilities were grossly understated by nearly 50%. As a result, the deficit may be closer to $4 billion instead of the $147 million shortfall that was reported.

Illinois – State Employees Retirement System (ISERS) has deficit of $96 billion. The Illinois Policy Institute expects taxpayer contributions to rise 164% by 2045. Taxpayers are already pumping 593% more into pension funds than just 15 years ago.

Jefferson County, AL – recent bankruptcy resolution has given bond investors a choice of losing 20% of their investments or 35% while retaining the right to receive additional payments from monoline insurers. The county also needs to raise $1.9 billion to refinance old bonds. It is proposing capital-appreciation bonds which delays interest payments for years in return for exorbitant higher rates.

Los Angeles – the funded status of its three pension plans would drop dramatically from 77% funded to 50% raising the deficit from $9.3 billion to over $23 billion.

Pennsylvania – combined state pension plans have estimated $41 billion deficit with new projections that the unfunded liabilities may reach $60 billion in the next few years.

San Francisco – their combined plans would fall from 88% to 69% funded with a deficit increasing from $2.4 billion to $5.3 billion.

TARP Watch

The latest update or "State of the Bailout" on TARP funds released by the Treasury shows:

Outflow = $605.6 billion
Inflows = $480.0 billion

Accounting for both TARP and the Fannie and Freddie bailout shows $606 billion of outflows with $364 billion returned. The Treasury earned a return of $116 billion on the funds returned. This still leaves a deficit outstanding of $126 billion as of May 29, 2013. The main source of this revenue are $22.8 billion in dividends and interest payments, $19 billion from sales of equity or other assets that the Treasury acquired (mostly stock in Citigroup) and $9.38 billion through stock warrants. The Treasury committed bailout funds to 925 recipients. So far, 468 bailouts have resulted in a profit of $4.3 billion with 237 investments still outstanding.

Federal Spending by the Numbers

The 2012 edition of the Heritage Foundation report on Federal spending is very informative. Here are some highlights of this detailed spending report:

1. Federal Spending = $3.6 trillion (fiscal year 2012)
2. Entitlements = 62% of govt. spending
3. Food stamps = spending tripled since 2002
4. Discretionary spending grew by 60% last 20 years
5. Entitlement spending grew by 110% last 20 years
6. In 1962 Defense spending = 49% of budget, 2012 = 18.7%
7. In 1962 Entitlement spending = 31% of budget, 2012 = 62%
8. Debt held by public = 73% of GDP, historical average = 37%
9. Debt will reach 90% of GDP by 2022 then over 200% by 2038
10. SS, Medicare and Medicaid will absorb all tax revenues by 2048
11. Since 2002, Medicare grew 68%, Medicaid 38%, Social Security 37%
12. Sequester cuts = Defense (49.5%), Non-Defense (35.1%), Mandatory (14.4%)

History of Federal Budget in $ Billions

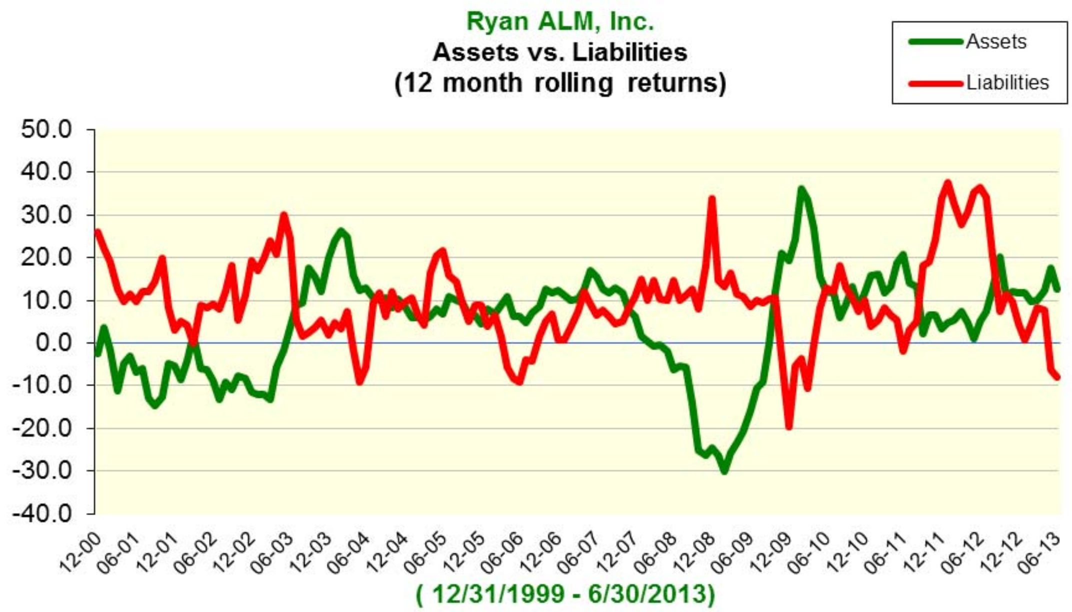
	---------------------- Spending	---------------------------				Surplus
Fiscal Yr	**Discretionary**	**Entitlement**	**Interest**	**Total**	**Revenue**	**Deficit**
1992	**803**	**876**	**300**	**2,079**	**1,642**	**- 437**
1996	**739**	**1,091**	**334**	**2,164**	**2,015**	**- 149**
2000	**799**	**1,236**	**290**	**2,325**	**2,632**	**- 307**
2004	**1,066**	**1,474**	**191**	**2,731**	**2,240**	**- 491**
2008	**1,205**	**1,694**	**269**	**3,168**	**2,681**	**- 487**
2012	**1,289**	**2,063**	**220**	**3,563**	**2,463**	**-1,128**

Chained CPI… A Bad Idea

Lawmakers are always looking for ways to reduce costs and increase tax revenues. With entitlements the largest cost item of our federal budget this is the first place to look for cost reduction strategies. In the President's 2014 budget, he proposes changing the measure of inflation used to calculate Social Security cost-of-living adjustments from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI) to the chained CPI beginning in 2015. This change would result in retirees getting smaller annual Social Security increases. Social Security beneficiaries would get hit with a 3.7% cut (by age 75), 6.5% cut (by age 85), 9.2% cut (by age 95) in Social Security payments over their lifetime. Veterans would have their disability benefits cut as well. The indigent elderly and disabled (the poorest of the poor) would have benefits cut too. The CPI estimates the annual change in the cost of living by calculating the adjustment in price consumers pay for a basket of goods and services in urban areas of the U.S. The chained CPI measures inflation differently in a way that takes into account the idea that people might change their spending patterns when prices for specific items rise. One example of the chained CPI logic is the price of gasoline. If a driver spends $80 per week on gas and prices rise 10%, the chained CPI assumes the consumer will find a way to use less gas. The Obama administration says the proposed switch to the chained CPI would reduce Social Security deficits by at least 16% to 20% or $230 billion over the next 10 years.

<u>Ryan ALM Pension Scoreboard</u>

The graphs below show asset vs. liability rolling 12 month and cumulative growth since 1999. Ryan ALM Benchmark Liability Index = % growth while pension assets =   % growth for a difference of **–155.24% suggesting any pension Funded Ratio below 192.95% in 1999 has a deficit today on a *market weighted* basis. The Ryan ALM Pension Funded Ratio = 51.83%.**



(12/31/1999 - 6/30/2013)

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 understand, 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 so no extra contributions are needed in this space reducing the volatility of contributions.