



Ryan ALM, inc.

Asset/Liability Management

The Solutions Company



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The Ryan Letter

March 2010

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Index	Returns YTD 2010	Estimated Weights
Liabilities :		
Market (Tsy STRIPS)	0.51 %	100 %
FAS 158 (AA Corporates)	-1.18	
PPA (3 Segment)	2.52	
PPA (Spot Rates)	-2.16	
GASB /ASOP (8% ROA)	1.97	
Assets :		
Ryan Cash	0.08 %	5 %
Lehman Aggregate	1.78	30
S&P 500	5.38	60
MSCI EAFE Int'l	0.94	5
Asset Allocation Model	3.88 %	100 %
Assets – Liabilities		
Market	3.37%	
FAS 158	5.06	
PPA (3 Segment)	1.36	
PPA (Spot Rates)	6.04	
GASB/ASOP (8% ROA)	1.91	

Using Asset Allocation above in 2010, pension asset growth difference vs. liabilities was: **3.37%** (market valuation STRIPS); **5.06%** (FAS 158); **1.36%** (PPA rules-AA Corporate rates) and **6.04%** (PPA-Spot Rates); **1.91%** (GASB/ ASOP). Such valuations show the significant difference in not using proper *market* valuations. Most pension funds enjoyed a funded ratio surplus in 1999 but **have underperformed liabilities by about -103.44% since 1999** on a compounded index basis starting at 100 on 12/31/99! (see **Pension Scoreboard**)

Total Returns											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Assets	-2.50	-5.40	-11.41	20.04	8.92	4.43	12.25	6.82	-24.47	19.43	3.88
Liabilities	25.96	3.08	19.47	1.96	9.35	8.87	0.81	11.76	33.93	-19.52	0.51
Difference: Annual	-28.46	-8.48	-30.89	18.08	-0.43	-4.44	11.44	-4.94	-58.40	38.95	3.37
Cumulative		-37.60	-73.40	-60.08	-66.13	-76.75	-64.60	-78.38	-181.57	-106.94	-103.44

Public Pension Deficits Top \$3 Trillion ?

According to Andrew Biggs, an economist for the American Enterprise Institute, the recently reported pension deficit of \$450 billion calculated by the Pew Charitable Trusts understates the true pension underfunding significantly. Andrew's research suggests the true economic number is greater than \$3 trillion. The problem here is the accounting methodology of GASB for discounting pension liabilities. GASB allows for the ROA to be used as the discount rate. Most Public Pensions have an ROA of around 8%. Andrew sees this ROA as unrealistic and way too high. I concur and have preached for decades of the ROA as the true villain of the pension crisis. The ROA rate is a forecast of returns... a very bad forecast. Returns are hardly static and never are always positive. The truth is that the discount rates used should be ***interest rates that you can buy to settle the liabilities (defeasance)***. If you cannot buy the discount rates used (ROA)... you should not use such rates as they are financial lies and lead to a misevaluation of liabilities and the Funded Ratio. If you use market rates for the Treasury STRIPS yield curve (which lotteries and most defeasance programs are required to use) you would get a yield curve of discount rates that would average about 4.50% today and... you can buy! If you multiply the yield difference between the Treasury STRIPS average discount rate and the ROA by the average duration of liabilities you get the PV\$ difference. So a 350 bps yield difference x 12-15 year average duration = 42% to 53% *undervaluation* of liabilities and a 30% to 35% *overvaluation* of the Funded Ratio. Most Public Pension funds were told that they were fully funded when they had 30% to 35% deficits. Unfortunately, they behaved accordingly by reducing Contributions and raising benefits at a time they could not afford to do either. This led to the Pension Crisis... Budget deficits and spiraling debts.

Recommended Reading on Pensions

Congratulations to the New York Times, WSJ and Barron's for effective reporting on pensions. "The \$2 Trillion Hole" written by Jonathan Laing and published by Barron's concurs with Andrew Biggs findings and should open a lot of eyes... and brains. The always alert and attentive to details reporting of Mary Walsh of the New York Times presented two recent articles named "State Debt Woes Grow Too Big to Camouflage" and "Public Pension Funds Are Adding Risk to Raise Returns" which are both very educational and frightening. And the column by Andrew Biggs published in the WSJ "Public Pension Deficits Are Worse Than You Think" is another mind opening revelation. Congratulations to all again for their insights and transparency.

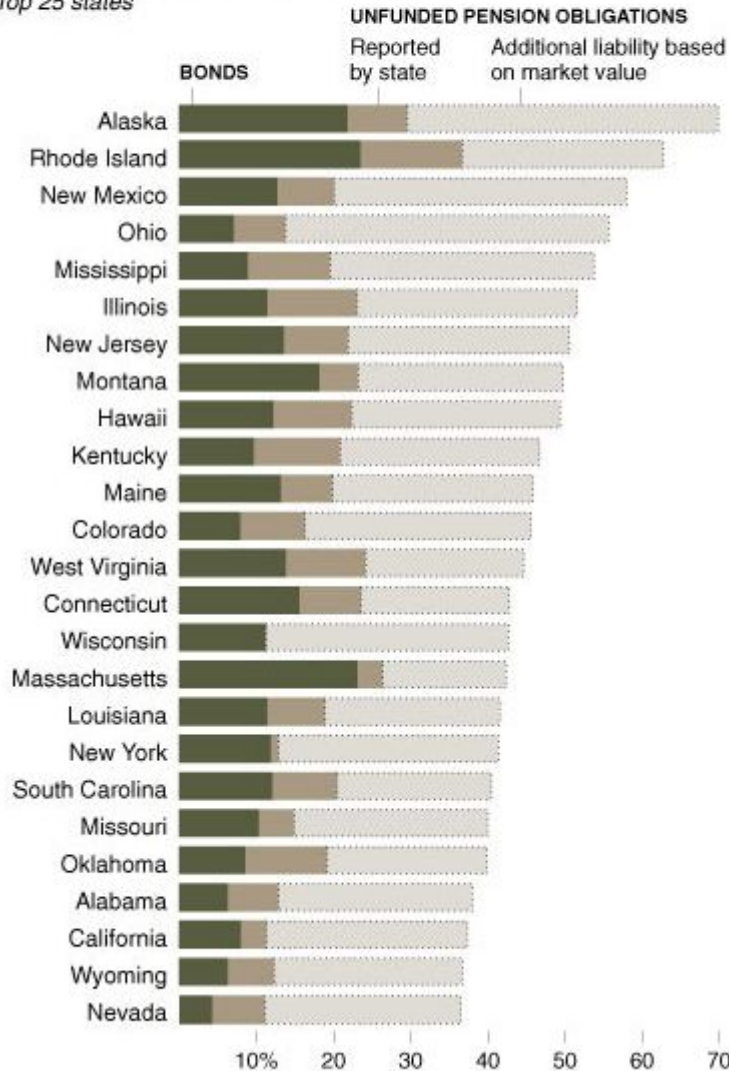
American Enterprise Institute Blogs: A Treasure Chest of Information

More kudos for AEI and Andrew Biggs on their thorough and relentless pursuit of analysis on the sorry state of our Public Pension system and their resulting Budget shortfalls and debts these pension deficits have created. Andrew Biggs article on the AEI blog "States Are Insolvent; Soon They May BE Illiquid" reveals the close parallel of many states to the Greece solvency issues. A chart produced by Andrew Biggs and AEI shows the relative size of State debts compared to their GDP. This is before each State's share of the rising federal debt. When combined the average state debt is 104% of GDP with 10 states above 128%... sounds like Greece! This chart (see below) was published by the NY Times in a Mary Walsh article.

Overloaded With Debts Unseen

While states' explicit debts – the value of their bonds outstanding – may look manageable, those amounts do not include shortfalls in their pension funds. Currently public pension funds are not required to disclose the market value of their pension obligations, though some say that is the more meaningful measure. States also share the burden of the national debt, which can further balloon a state's total debt load.

Debt as a share of state G.D.P.
 Top 25 states



Source: Andrew G. Biggs, American Enterprise Institute

Fed Ends Purchases of Mortgage-Backed Securities

The Federal Reserve announced on March 31, 2010 that it will discontinue its massive purchasing program which totaled \$1.25 trillion. The program started in January 2009. It was initially targeted at \$500 billion. Such massive purchases caused 30-year mortgage rates to fall from over 6% in late 2008 to below 5% by March 2009. The Fed program is also credited with slowing the decline in home prices. Many experts believe that this program was the single most important move to stabilize the economy and to prevent a debacle. Another factor in the housing recovery was the government's announcement last December that it would guarantee debts owed by FNMA and Freddie Mac, according to David Crowe, chief economist at the National Association of Home Builders.

New U.S. Business Taxes

In a recent report by Credit Suisse they listed potential new tax revenues as compiled by the Office of Management and Budget the President's 2011 Budget. Such tax revenues (\$ millions) are estimated over a period from 2011 thru 2020. However, some proposals seem unlikely to pass:

\$122,189	Reform U.S. international tax system
\$ 93,282	Reform treatment of financial institutions
\$ 59,085	Repeal LIFO accounting for inventories
\$ 49,358	Reduce tax gap and make reforms
\$ 38,819	Eliminate fossil fuel tax preference
\$ 23,987	Modify cellulosic biofuel producer credit
\$ 18,925	Reinstate Superfund taxes
\$ 14,413	Reform treatment of insurance products
\$ 14,196	Make unemployment insurance surtax permanent
<u>\$ 9,349</u>	Other
\$467,580	TOTAL Estimate

These proposals are on top of an estimated \$969 billion tax increase for upper-income taxpayers (above \$200,000 income). Should we mention higher State, City and local taxes too? Over the next 10 years such tax proposals would increase individual income taxes by 6.1% and 6.3% for corporate taxes. Given our weak economy, prolonged and significant tax increases on businesses do not seem like the correct medicine to cure our sick economic conditions. Tax incentives to do the right thing for our economy (i.e. investment tax credits, incentives to hire people, etc.) would be a wiser strategy.

House Reconciliation Act of 2010: Tax Penalties

An analysis of HR 4872 by the Heritage Foundation would force companies with more than 50 employees to pay a tax penalty of \$3,000 per worker if any worker qualifies for and accepts a health insurance premium subsidy. This tax penalty is on top of the \$2,000 per worker penalty for all workers beyond 30 that companies do not offer a qualified health plan or pay 60% of employee health premiums. As bizarre as it may sound, according to the Heritage Foundation, if Company A lays off an employee with a working spouse, this could generate a \$3,000 tax penalty for Company B unless they lay off the spouse. No wonder 17,000 new IRS agents are needed under this Act.

Tax Watch: Capital Gains Rate Increase

The health-care bill would apply a 3.8% Medicare tax on investment gains earned by upper-income households starting in 2013. Along with a partial expiration of 2003 tax cuts at year-end, rates on long-term capital gains and dividends will jump from 15% to 23.8%.

Recession Watch: Sales of New Homes

Sales of new homes in the U.S. fell to a record low in February. Sales declined -2.2% to an annual pace of 308,000 seasonally adjusted. This is the lowest rate since government began tracking such data starting in 1963 according to the Commerce Department. This was the fourth straight monthly drop. Sales for January were 315,000 seasonally adjusted.

U.S. National Debt Facts

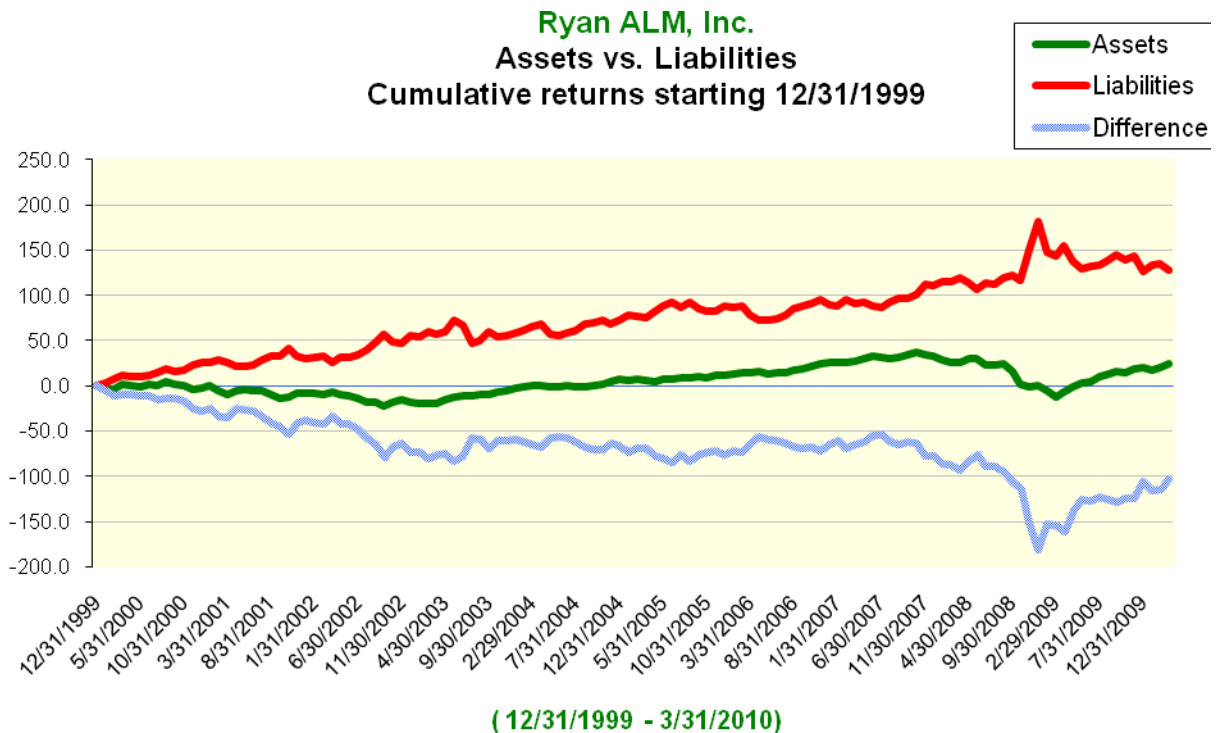
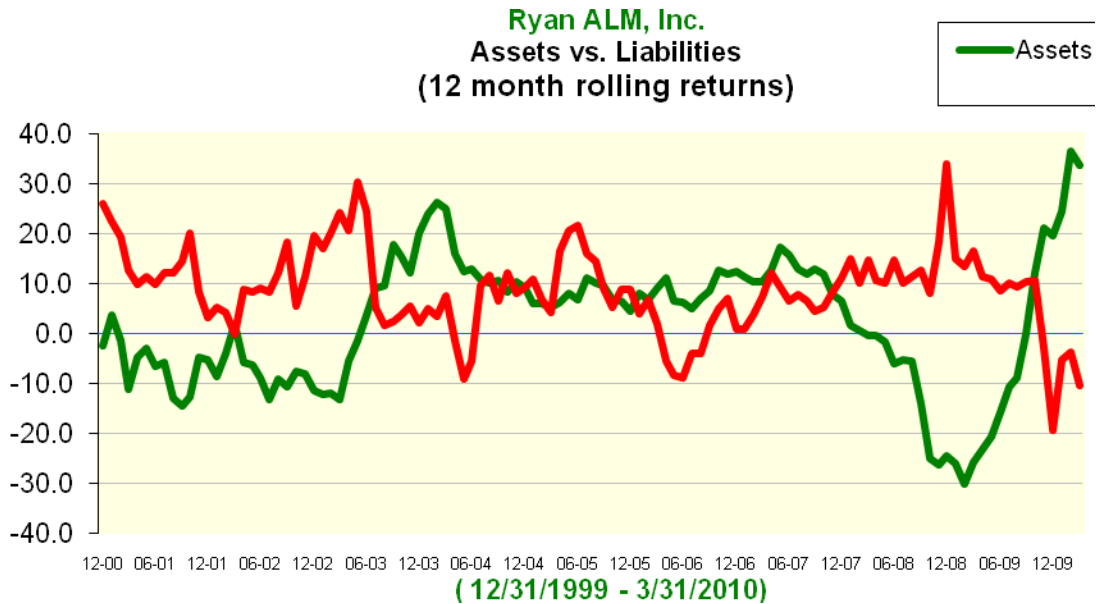
- 1. 1981 was the first time debt > \$1 trillion**
- 2. National Debt has not declined since Eisenhower administration**
- 3. Great Depression increased the debt by \$33 billion**
- 4. World War II increased the debt by \$222 billion**
- 5. Clinton “peace time” years increased the debt by \$1.2 trillion**
- 6. Bush “war time” years increased the debt by \$5.0 trillion**
- 7. Obama in 15 months increased the debt by \$2.0 trillion**
- 8. Current National Debt = \$12.685 trillion (Source: Treasury Direct)**

Japan Debt May be Downgraded?

Japan is trying to make up a \$78 billion budget shortfall. This may require them to issue more debt. Public debt is currently near 200% of GDP. Moody's and S&P have threatened to downgrade Japan's sovereign debt ...sounds like a Global trend.

Pension Scoreboard

The graphs below show asset vs. liability rolling 12 month and cumulative growth since 1999. The cumulative growth difference is **- 103.44%** suggesting any pension **Funded Ratio below 182.87 in 1999 has a deficit today!**



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, my team and I at the Ryan Financial Strategy Group (RFSG) created the **1st STRIPS Index**. Based upon these Ryan STRIPS indexes we created the **1st Liability Index in 1991** as the proper liability Benchmark for liability driven objectives. Since 1991, the Ryan team has developed hundreds of Custom Liability Indexes (CLI). Similar to snowflakes, no two pension funds are alike in that they each have unique benefit payment schedules due to different labor forces, mortality and plan amendments. Without a CLI it would be difficult, for assets to be managed vs. this liability objective. Until a CLI is installed as the benchmark, the asset side is in jeopardy of managing vs. the wrong objective (generic market indexes). **If you outperform generic market indexes, but lose to the CLI ... the plan loses !**

Ryan Treasury Indexes

In March 1983, my index team and I at the Ryan Financial Strategy Group (RFSG) created the **1st Daily bond Index ... the Ryan Index** as a *Treasury Yield Curve* index series for each auction maturity series (from Bills to Bonds). The best way to understand the interest rate behavior of bonds is to use the Ryan Treasury constant maturity series for each Treasury *auction* series with two composite indexes ... **Ryan Cash and Ryan Index**.

Ryan/Mergent 1-30 year Treasury Maturity Ladder Index (PowerShares ETF)

On October 11, 2007 PowerShares launched a fixed income ETF based upon the Ryan/Mergent 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](http://www.Powershares.com) (click on fixed income portfolios)

To view all Ryan Indexes data go to : www.RyanIndex.com

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Note: 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
Confucius*

Pension Solutions: Custom Liability Index and Liability Beta Portfolio

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

Custom Liability Index - 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.