Ryan ALM, inc.

Asset/Liability Management

The Solutions Company

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The Ryan Letter

September 30, 2011

Index	Returns YTD 2011	Estimated Weights
Liabilities :		
Market (Tsy STRIPS)	30.81 %	100 %
FAS 158 (AA Corporates)	16.50	
PPA (3 Segment)	11.53	
PPA (Spot Rates)	10.94	
GASB / ASOP (8% ROA)	6.06	
Assets :		
Ryan Cash	0.28 %	5 %
Lehman (Barclay) Aggregate	6.66	30
S&P 500	-8.68	60
MSCI EAFE Int'l	-14.59	5
Asset Allocation Model	-4.02 %	100 %
Assets – Liabilities		
Market	-34.83%	
FAS 158	-20.52	
PPA (3 Segment)	-15.55	
PPA (Spot Rates)	-14.96	
GASB / ASOP (8% ROA)	-10.08	

Using the Asset Allocation above, the difference in asset growth vs. liabilities in 2011 was: **-34.83%** (market valuation STRIPS),**-20.52%**(FAS 158), **-15.55%** (PPA rules-AA Corporate rates), **-14.96%** (PPA-Spot Rates) and **-10.08%** (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 **pension asset growth has underperformed liabilities by about -198.14% since 1999** on a compounded index basis starting at 100 on 12/31/99!

(see **Pension Scoreboard on page 6**)

Total Returns												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Assets	-2.50	-5.40	-11.41	20.04	8.92	4.43	12.25	6.82	-24.47	19.43	11.89	-4.02
Liabilities	25.96	3.08	19.47	1.96	9.35	8.87	0.81	11.76	33.93	-19.52	10.13	30.81
Difference:												
Annual	-28.46	-8.48	-30.89	18.08	-0.43	-4.44	11.44	-4.94	-58.40	38.95	1.76	-34.83
Cumulative		-37.60	-73.40	-60.08	-66.13	-76.75	-64.60	-78.38	-181.57	-106.94	-115.67	-198.14

2011 = 2nd Worst Pension Year Ever?

As calculated on the first page asset allocation exhibit, pension assets have not grown well this year. Most pension assets show negative growth. If pension liabilities were marked to market using the Treasury STRIPS yield curve as shown on the first page exhibit, most pension liabilities would have grown in present value by about 30% for the year (as measured by the Ryan Liability Benchmark using the Ryan Treasury STRIPS indexes from 1-year to 30-years *equally weighted*). This suggests that many pensions are having a very bad year. Since 1987 the worst pension years are 2008 **(-58.40%)** followed by 2011 **(-34.83%)** and 2002 **(-30.89%)**. The Fed stimulus plan to lower interest rates might help the economy some day but is killing pensions currently. Such poor asset relative performance will show up in higher contribution rates which most pensions (especially cities and states) cannot afford.

Best Performing Asset Class = Treasuries!

As I reported in several of my research papers over the last 30 years… **Yields are NOT Returns!** Indeed, bond yields are prices. Given the secular trend to lower interest rates (started in 1982) as rates go lower… bond prices go higher. Although Treasury yields were historically very low starting the year 2011 they went lower thanks to the Fed economic stimulus posture and the more recent FOMC position to buy long Treasuries. This led to a reduction in long Treasury rates of 50 bps to 75 bps in September alone. Amazingly, here are the total returns of the Ryan Treasury STRIPS indexes for September and YTD:

Ryan Index	Month	YTD
10-year STRIPS	3.94%	20.88%
15-year STRIPS	7.69	31.10
20-year STRIPS	12.98	40.98
25-year STRIPS	21.30	51.43

Largest Auctions Ever Issued

Given the enormous size and growth of our federal debt of the U.S., we are issuing Treasuries at a faster and larger auction process rate. Looking back just 10 years reveals the gigantic surge in the issuance of Treasuries. The average auction issue size has not only doubled (or tripled) in size but the frequency is now monthly plus we have the reopening of the 3-year and 7-year auction series:

	2011	2001
Treasury 2-year auction	$35 billion (monthly)	$17 billion (monthly)
Treasury 3-year auction	$32 billion (monthly)	Not Issued
Treasury 5-year auction	$35 billion (monthly)	$11 billion (quarterly)
Treasury 7-year auction	$29 billion (monthly)	Not Issued
Treasury 10-year auction	$21 billion (monthly)	$11 billion (quarterly)
Treasury 30-year auction	$13 billion (monthly)	$5 billion (semi-annual)

Fed to keep Interest Rates Low Thru Mid-2013

In response to the S&P downgrade of the U.S. credit rating on August 5, the Federal Reserve pledged at its August FOMC meeting to keep the Treasury benchmark interest rates at record low rates through mid-2013 to revive the flagging recovery. In September, the FOMC released its intentions to buy the 30-year Treasury benchmark issue as well as employ monetary tools to revive the economy and confidence among investors. The Fed offered a dimmer view of the economy stating that economic growth has been considerable slower than the committee expected. The Fed also expects a slower pace of recovery over coming quarters adding that downside risks to the economy have also increased.

U.S. Debt Hits 100% of GDP

After the Federal debt ceiling was lifted recently, U.S. debt surpassed 100% of GDP. Such a level has been the watermark for Moody's and S&P to downgrade any country's credit rating. When President Obama signed the debt-ceiling deal into law, federal debt rose $238 billion to a level of $14.58 trillion putting it over the $14.53 trillion in GDP. The last time federal debt topped GDP was in 1947 during world war II. The history of our debt as of the end of our fiscal years is a frightening escalation of government spending:

09/30/00	**$5,674,178,209,886**
09/30/01	**5,807,463,412,200**
09/30/02	**6,228,235,965,597**
09/30/03	**6,783,231,062,743**
09/30/04	**7,379,052,696,330**
09/30/05	**7,932,709,661,723**
09/30/06	**8,506,973,899,215**
09/30/07	**9,007,653,372,262**
09/30/08	**10,024,724,896,912**
09/30/09	**11,909,829,003,511**
09/30/10	**13,561,623,030,891**

GDP is a Lie?…*Caveat Emptor!*

According to Martin Hutchinson, Global Strategist for Money Morning, the Gross Domestic Product (GDP) is an inaccurate and misleading indicator. Moreover, he suggests it is a movement to push big government agenda. Keynesian economist Simon Kuznets designed the GDP indicator during the New Deal era in a report to Congress in 1934. But these Keynesian economists employed some chicanery to generate this statistic, says Hutchinson. GDP is supposed to be a measure of all goods and services produced in America. The private sector is measured by the price consumers pay for such goods and services. The government sector is measured by its cost. This means that GDP grows any time the government spends money. It doesn't matter if that government spending is actually put to productive use or not… GDP rises. There are numerous examples but let's take the jet-fighter project that costs billions and is plagued by huge cost overruns that lead to its cancellation. Those billions spent increased the GDP. Any government waste enhances the GDP calculation. Unfortunately, such foolery just substantiates the government claim that government spending stimulates economic growth. In the real world wasteful spending with no productivity adds nothing to economic welfare. So what is a better measure of America's growth? Simply take the GDP reported number and subtract Line 21 "Government Consumption Expenditures and Gross Investment". This gives a net number which is best labeled as Gross Private Product (GPP).

Greece, Portugal and Ireland Downgraded to Junk; Italy downgraded to A2

On February 6, Moody's downgraded Greece below investment grade; on May 9, S&P cut Greece's credit rating from BB- to B; on July 5, Moody's downgraded Portugal below investment grade; on July 12, Moody's downgraded Ireland below investment grade; on October 4, Moody's downgraded Italy to A2 with a negative outlook.. These actions were taken by Moody's based on the Euro Zone economic trends of growing federal debt, lack of austerity policies to reduce government spending and faltering economic growth. S&P downgraded Greece due to concerns that euro zone officials want to renegotiate Greece's debt by extending the maturities of the European Commission's portion of the $110 billion euro bailout. Does this look anything like the current American economic scenario?

Lloyd's of London Abandons European Banks!

In a flash alert from Money Morning, they report that without warning, Lloyd's, the world's oldest insurance market, is withdrawing its money from European banks. The reasoning is that Lloyd's feels that the banks are in danger of failing as Europe's debt crisis continues to intensify. Lloyd's did not specify what European governments they are targeting. Lloyd's finance director, Luke Savage, said: "If you worried the government itself might be at risk, then you're certainly worried the banks could be taken down with them." In addition to the government debt crisis threatening European banks, a huge credit crisis is spreading across the Continent. Spanish and Italian banks are rejecting massive number of loans and charging customers more as the sovereign debt crisis drives their borrowing costs higher.

Rating Downgrade of U.S.

Moody's warned the U.S. government in early June that its Aaa rating could be downgraded soon if there is no clear progress on raising the debt limit. Moody's Investor's Service has placed the government's rating under review due to the rising risk of a short default period on U.S. debt if Washington can't agree on raising the debt ceiling above the current $14.3 trillion level. S&P announced in April that it was putting the credit rating of the U.S. on the negative watch list. The main difference between these downgrade threats is that Moody's focuses on the debt ceiling fight in Washington while S&P does not. S&P seems more concerned about a credible plan to handle our ballooning debt load which is higher than the entire Euro zone and more than China plus Japan combined. Since 1989, S&P has lowered the ratings of 101 sovereign entities after placing them on their negative watch list. Usually such downgrade action happens after six months of a negative watch decision.

***Woody* (the Pension Pencil)… the Weapon of Mass Destruction in the U.S.**

I have blamed accounting rules and schemes as the major villain causing the pension crisis. When I testified before the ERISA committee on pensions in 2003, I brought in a five foot pencil (***Woody***) which I proclaimed as the weapon of mass destruction among U.S. pensions. I showed how the pension accounting pencil is used to enhance the EPS of corporations, enhance the Funded Ratio of pensions, reduce Contributions and reduce the size of pension liabilities. Instead of using market values, the pension accounting rules smooth assets over 2 years (PPA) and 5 years (GASB) while using *hypothetical* corporate bonds (PPA) and significantly higher than market rates (GASB = ROA) as the discount rates. In the last 10 years this has led to an *overvaluation* of assets and a large *undervaluation* of liabilities (as much as 40% to 60% using GASB) which together created a significantly *overvalued* Funded Ratio. Such erroneous valuations misled most pensions into the wrong Asset Allocation, Benefit and Contribution decisions. My conclusion and recommendation was: **To validate any discount rates used… it must be purchasable such that the pension plan could settle or defease the liabilities if it so chooses with the discount rates used!** It should be a yield curve of discount rates such that every liability benefit payment has a distinct discount rate valuation. This is identical to how the bond market functions where every maturity is a separate and distinct yield. If you cannot buy the discount rates then they are *hypothetical rates* or financial lies and should not be used as financial valuations. After Enron and World Com, financial America should make sure that **we never tolerate financial lies anymore**.

Ron Ryan Nominated for William F. Sharpe Research Paper of the Year

Ron Ryan research paper "Liability Index Fund – the Beta portfolio for LDI" published in the Journal of Index Investing in the fall 2010 was nominated for Research paper of the year. Award will be determined and presented at the IMN annual Superbowl event.

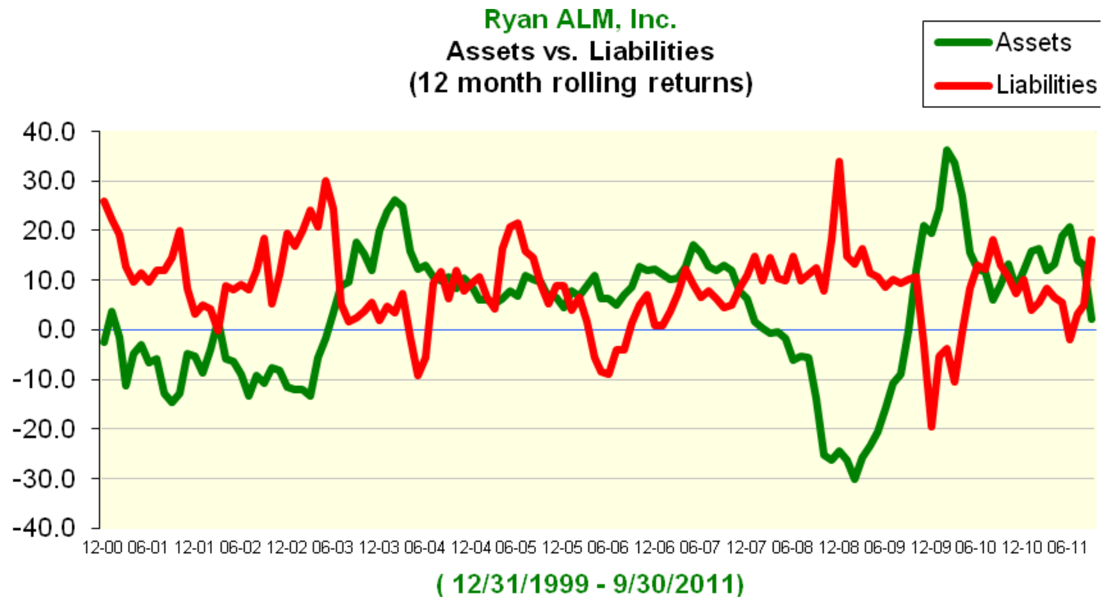
PoweShares High Yield ETF (PHB) nominated for most innovative ETF

The RAFI High Yield index that combines the RAFI fundamental weights with the Ryan index rules approach to bond indexes became the catalyst for a new breed bond ETF which PowerShares introduced in August 2010. This High Yield ETF (symbol PHB) is nominated for the ETF innovation of the year 2010 to be determined and presented at the IMN Superbowl event. Ryan ALM is the co-designer of the RAFI High Yield suite of indexes and is the calculation agent.

God Bless Steve Jobs who made our lives more efficient and fun.
Ronald J. Ryan, CFA

<u>Pension Scoreboard</u>

The graphs below show asset vs. liability rolling 12 month and cumulative growth since 1999. The cumulative growth difference is **–198.14% suggesting any pension Funded Ratio below 253.55% in 1999 has a deficit today!**



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**.** 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 maintenance. In August 2010 the RAFI High Yield Index was launched as a **PowerShares ETF (PHB)**. There is also a Canadian hedged version **(PFH_CN)**. In September 2011 the RAFI 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/Mergent 1-30 year Treasury Maturity Ladder (PowerShares ETF = PLW)

On October 11, 2007 PowerShares launched a fixed income ETF **(PLW)** 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 (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 FAS 158 Spot Rate Yield Curve Index

In 2008, Ryan ALM designed the FAS 158 yield curve index that prices any private pension liabilities in conformity to FAS 158 standards. In Nov. 1, 2008 Pricewaterhouse Coopers, LLP signed a subscription to our FAS 158 yield curve index and monitor our conformity to FAS standards.

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

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.