Ryan ALM, inc.

Asset/Liability Management

The Solutions Company

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The Ryan Letter

February 2008

Index	Returns YTD 2008	Estimated Weights
Liabilities :		
Market (Tsy STRIPS)	1.88 %	100 %
IRS (Corporates)	0.40	
ROA (8% constant rate)	1.33	
Assets :		
Ryan Cash	0.83 %	5 %
Lehman Aggregate	1.82	30
S&P 500	-9.05	60
MSCI EAFE Int'l	-7.90	5
Asset Allocation Model	-5.29 %	100 %
Assets – Liabilities		
Market	-7.17%	
IRS	-5.69	
ROA	-6.62	

Based on the Asset Allocation above, year to date 2008 pension assets **underperformed** liabilities by **-7.17%** using market valuations (i.e. STRIPS); lost by **-5.69%** under the IRS Contribution rules (PPA Corporate rates); and lost by **-6.62%** using the ASOP 27 methodology of a constant ROA (i.e. 8.00%). Such valuations show the significant difference in not using proper *market* valuations. Most pension funds enjoyed a funded ratio surplus in 1999. However, assets have underperformed liabilities **by about -88% since 1999** on a compounded index basis starting at 100 on 12/31/99!

(see Graphs and Index disclosures on pages 7 and 8)

Total Returns

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Assets	-2.50	-5.40	-11.41	20.04	8.92	4.43	12.25	6.82	- 5.29
Liabilities	25.96	3.08	19.47	1.96	9.35	8.87	0.81	11.76	1.88
Difference:									
Annual	-28.46	-8.48	-30.89	18.08	-0.43	-4.44	11.44	-4.94	-7.17
Cumulative		-37.60	-73.40	-60.08	-66.13	-76.75	-64.60	-78.38	-88.51

God Bless Pension America !

PBGC Announces New Investment Policy

The PBGC has adopted a new diversified investment policy according to PBGC Director Charles Millard. The strategy is designed to give the PBGC a fully funded status within 10 years. The PBGC currently has $55 billion to invest in the new policy. Under this strategy, the PBGC will allocate 45% to fixed income, 45% to diversified equity and 10% to alternative investments. The previous asset allocation was 28% to equities and the rest mainly bonds. The PBGC had an accumulated deficit of $14 billion as of year-end FY 2007 and a Funded Ratio of about 80%.

Professor Zvi Bodie and consultant John Ralfe recently wrote a white paper that was a rebuttal to the PBGC position on a greater equity position (see Research section on our web site … www.RyanALM.com/CompanyInfo/Research). They suggest that the PBGC already has a huge equity exposure by guaranteeing company pension plans. They promote the position that the benefits paid by the PBGC can only be matched with bonds. They believe that volatility analysis as a measure of equity risk ignores the severity of any shortfall. Although the probability that equities will earn less than the risk-free rate decreases with the time horizon, the extent of any possible shortfall increases. Equity risk should be measured as the cost of buying insurance via an equity put option, which increases over time. Adjusted for risk there is no equity "free lunch".

Edward Chancellor, writer for the Financial Times, wrote "The first rule of financial prudence is that assets and liabilities should be matched. The value of pension liabilities have the characteristics of a fixed-income debt. The sponsor of a defined benefit plan is obliged to pay out a (more or less known) sum at a certain date in the future. The present value of that liability can be discounted back to the present and matched by purchasing fixed-income securities. This is all standard finance theory. But those who run corporate pensions prefer to ignore these findings. Such pensions generally own large amounts of equities. In effect, they are playing a carry trade of their own going short bonds and long stocks. Perhaps it will take another (equity) bear market for pensions to see the light. In the meantime, corporate America remains over-exposed to equities in its pensions while the PBGC is following this same misguided path."

Ed Chancellor also reminded us of Fischer Black, the father of options theory, who argued against equities for pensions. By investing in stocks the corporate pension plan increases the leverage of the plan sponsor, boosting its value during a bull market but hurting the stock in a bear market. He argued the risk of a pension fund should be neutralized by selling stocks and investing the proceeds in bonds that match the pension liabilities. If the firm wanted to maintain the same degree of leverage it would be better off issuing bonds and buying back its own stock. The interest payment on the bonds are tax-deductible and the purchase of its stock would enhance earnings by the fact that the EPS would increase through a reduction in shares. Black concluded that every corporate pension fund should be entirely in fixed-income investments.

Treasury Yield Curve is Key Economic Indicator

The Treasury yield curve is certainly a key economic indicator and represents so much of how our financial markets work. The *intrinsic value* of any investment is best measured versus the risk-free rate(s) or the Treasury yield curve. If the investment underperforms the Treasury with the same volatility or time horizon (maturity) then the investment would be considered a *negative value added*. Most bonds are priced as a yield spread off of a similar duration Treasury as a measurement of relative value. Any liability driven objective (i.e. pensions, healthcare, lotteries, etc.) are best monitored as a portfolio of Treasury STRIPS that match or defease each and every liability payment (i.e. STRIPS yield curve). Our monetary policy usually functions by buying and selling Treasuries to adjust the economy in times of liquidity needs and inflationary trends. The Treasury yield curve in both auction issue form and STRIPS are two Ryan Index series designed in 1983 (auction yield curve) and 1985 (STRIPS yield curve) consisting of about 40 distinct maturity indexes. Such indexes can be viewed from our two web sites **www.RyanIndex.com** and **www.RyanALM.com**. Recently much has happened to the yields and shape of the Treasury yield curve in reaction to a mortgage credit crunch and economic recession trends :

Yield Watch on Ryan Treasury Yield Curve Indexes

Current yields (as of 02/29/08) are closing in on the lowest yields seen on the Treasury yield curve as measured by the Ryan Treasury auction maturity index series. Wasn't the recent mortgage bubble due to low interest rates? Wasn't the pension crisis due to low interest rates? Is it déjà vu over again?

	02/29/08	Lowest	Difference
1 year	1.764%	0.922%	0.842%
2 year	1.649	1.073	1.576
5 year	2.508	2.022	0.486
10 year	3.532	3.105	0.427
30 year	4.418	1.854	2.564

Yield Spreads on Ryan Treasury Yield Curve Indexes vs. 30-year Treasury

As the Fed has been accommodating the economy to resolve any liquidity crisis from the mortgage credit crunch plus help out a slowing economy they have lowered interest rates again. This has created a much more positive slope in the Treasury yield curve.

Yield Spread History vs. Ryan 30-year Treasury Index

vs 30-year	12/31/07	02/29/08	Change	High	Date	Average
3 month	108 bp	258 bp	150 bp	470 bp	05/13/04	229 bp
1 year	111 bp	265 bp	154 bp	439 bp	10/08/92	156 bp
2 year	139 bp	277 bp	138 bp	365 bp	10/05/92	91 bp
5 year	100 bp	191 bp	91 bp	226 bp	10/31/02	54 bp
10 year	42 bp	89 bp	47 bp	226 bp	10/06/92	22 bp

Government Benefits Paid and the CPI

According to the Bureau of Economic Analysis, Government benefits paid to people 65 and older increased 24% from 2000 to 2007 *after adjusting for inflation*. There was a significant increase in Medicare expenses of 55%. Average benefits paid were:

Program	2000 Avg. Benefit	2007 Avg. Benefit	% Increase
Social Security	$12,598	$ 13,184	5%
Medicare	$8,000	$12,419	55%
Medicaid	$ 1,473	$ 1,686	14%

Good thing Government benefits are not part of the CPI.

If Elected President …

Given that we are now in the stretch run of an election, I thought I would offer some ideas for the candidates. Hopefully, you find them entertaining and even useful. I would appreciate any critiques sent to **rryan@ryanalm.com** :

1. Reduce Taxes – If our Declaration of Independence is correct that all men are created equal then perhaps we should treat our citizens the same way. Robbing the rich to give to the poor may be a Robin Hood value but does not work in a capitalist system. We need to motivate the rich to live and work in America. A FLAT INCOME TAX would be a fair system which would eliminate much cost of preparing those arduous tax forms and generate as much revenue as the government gets today. We also need to reduce the Corporate income tax which is the second highest in the world to attract and keep corporations in America. We need to create an environment that motivates the most productive people and companies to live, build and work here. In this way, they will in turn hire more people, spend more in our economy. We should also make permanent the lower capital gains tax rates and eliminate double taxation of dividends to motivate economy activity.

2. Find and Buy Low Cost Manufacturing - America has steadily lost its manufacturing to the rest of the world due to our higher labor costs and taxes. We need to find a way to produce our goods cheaper where the production facilities are on our soil. It's time we become more self dependent, especially on any critical goods and services. As we see with oil, any dependence on foreign goods here can be harmful to our economy. Why not buy a less developed country to be a low cost provider where we send our intellectual property to teach a low cost labor force. We do not want them to come to America where they would have to be paid at least our minimum wage, move away from family and live a life style they are not used or perhaps want. Remember, most of America's land mass was purchased! Our key cities and environmental resources were founded mainly by purchasing the land (i.e. Manhattan, Louisiana Purchase, Alaska, etc.). I would think that Haiti is an ideal candidate. It is close to our shores with the third largest land mass in the Caribbean. I would think that we could buy this undeveloped country for a lot less than the Iraq war costs. I am sure that the Haitians would welcome to become a U.S. possession that would upgrade their way of life. I am sure that the politicians would also welcome it for a price that would be less costly than any war.

3. Bring back Investment Tax Credit - We are losing our manufacturing steadily to the rest of the world for many years now. We need incentives for corporations to do the right thing for America. Build plant and equipment here in America, hire more Americans! It worked before in the 1960s and 1970s … we need a strong corporate America.

4. Legalize National Lottery - There are about 38 states that have a state lottery. For many states, this is the second or third largest revenue for that state. We need to find ways to finance and support Social Security and Medicare without taxing our citizens. A National Lottery with revenue dedicated to SS and Medicare would be a big help.

5. Sell our Gold – Since we left the Gold standard many decades ago, there is no economic reason to hold this commodity. Given the fact that Gold is now at an all time high price ($821.50 per troy ounce as of 11/30/07) and our economy needs a stimulus (other than raising taxes) this might be a proper strategy and certainly good timing. As of September 2007, the U.S. owned 8,133.5 tonnes of Gold (Germany has 3,417.5, China = 600 and the UK = 310.3) . There are 32,551 troy ounces in each tonne. This would value our Gold reserves at $214,822,380,207. Such a new found wealth could shore up the Social Security and Medicare trust fund which is the next big financial crisis that all Americans will pay for in higher FICA taxes. Put the sale proceeds in a lock box and only use the interest income when you start to run SS deficits in future years. This way we would have an interest earning asset rather than the reverse situation which we have today (a cost center not a profit center).

6. Get rid of Electoral College - This antiquated system is in defiance of our Declaration of Independence which states that all men are created equal. Each American should get an equal vote in our elections. Anything less or more contradicts our heritage.

Public Pension and OPEB Watch

There seems to be an avalanche of recent Public Pension announcements concerning the growth of pension + OPEB deficits and the mismanagement of such funds. As I have preached since 1991, the accounting and actuarial rules (GASB and ASOP 27) governing Public Pension plans are the start of the pension crisis since they do not *mark to market* the liabilities (market rates @ 5.00%). Instead, they value the liabilities at the ROA rate (discount rate @ 8.00%). Such a discount rate methodology has *undervalued* public pension liabilities by 30 to 45% in the last 7 years. As a result, reported funded ratios are not accurate and need to be reduced accordingly. These inappropriate rules have led to inappropriate … benefit decisions, contribution decisions and asset allocation decisions. It all links! Here is an update on some municipalities:

Congress - The Government Accountability Office (G.A.O.) looked at 70 public retirement systems at the request of Senators Max Baucus (D – Montana) and Charles Grassley (R – Iowa). The G.A.O. noted that there was heated debate over the validity of the assumptions of public pension actuaries, especially those concerning the return on asset assumption (ROA). They also found that nearly 40% of these plans were less than 80% funded. Moreover, they found that about 50% of these plans were not paying their full annual contributions. The worst offender had been New Jersey where the state pension fund had been shortchanged since the early 1990s.

California - The city of Vallejo is near bankruptcy and could become insolvent as soon a April. It could become the first sizable city in California to file for Chapter 9, a rarely used protection for governmental jurisdictions facing tough times. Unlike personal and commercial bankruptcies, the city cannot liquidate its assets. The problem initially stems from pension costs mainly for the police and fire plans. Typically, California cities spend about 50 percent of their budgets on police and fire services. But in union-dominated Vallejo, that number is 80 percent.

Illinois - Evanston city council voted to raise property taxes by 7.02% to help fund the $140 police and fire pensions shortfall. City officials have blamed the desparate condition of the pension funds on faulty assumptions by former actuary Ted Windsor. Critics said he used an aggressive ROA, overestimated the pensioner's expected age of retirement and also underestimated their life expectancy.

Kentucky - Gov. Steve Beshar has proposed a strategy to shore up the $20 billion pension deficit facing the state. Future state employees would have to contribute more than current workers. In addition, the annual cost-of-living adjustment would be reduced to 1.5% rather than based on the inflation rate. If the shortfall is not addressed the pension funds face bankruptcy in 14 years. Since 2002, pension contribution rates for CERS (County Employees Retirement System) has increased by 121% and are rising.

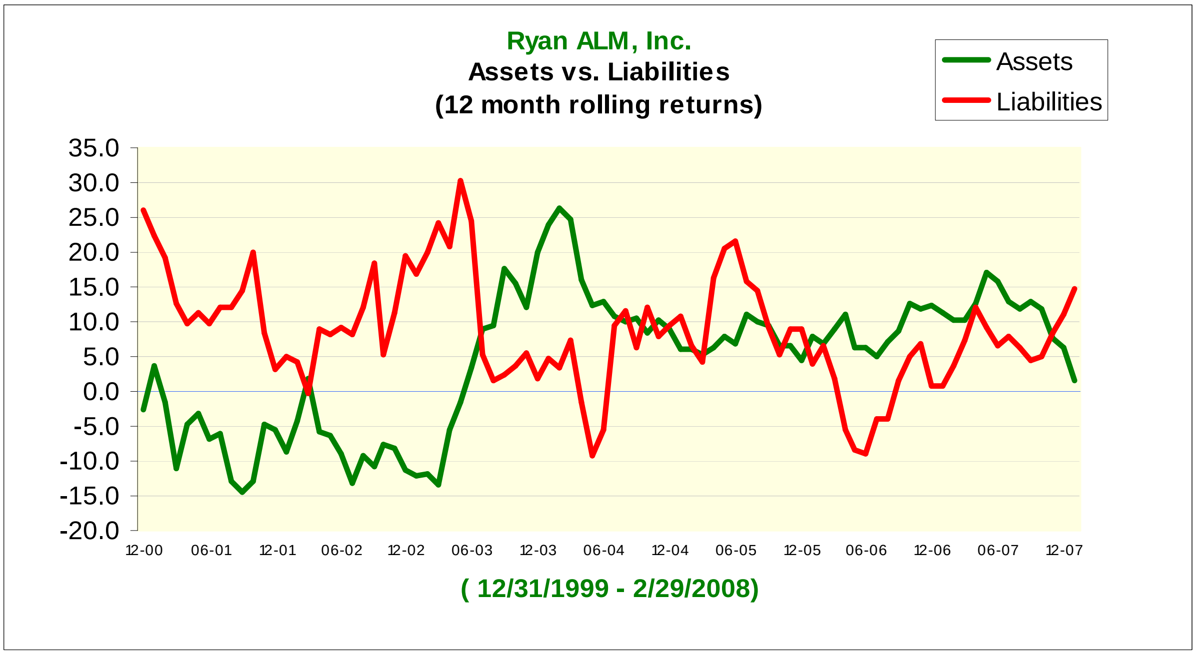
New Jersey - Governor Jon Corzine is facing a $113 billion pension shortfall. He has decided to raise the retirement age to 60 for new hires and require that employees contribute to health insurance premiums. He is also proposing to borrow $38 billion in bonds using the state's toll roads as collateral then pay back the debt by raising tolls by 50 percent every four years.

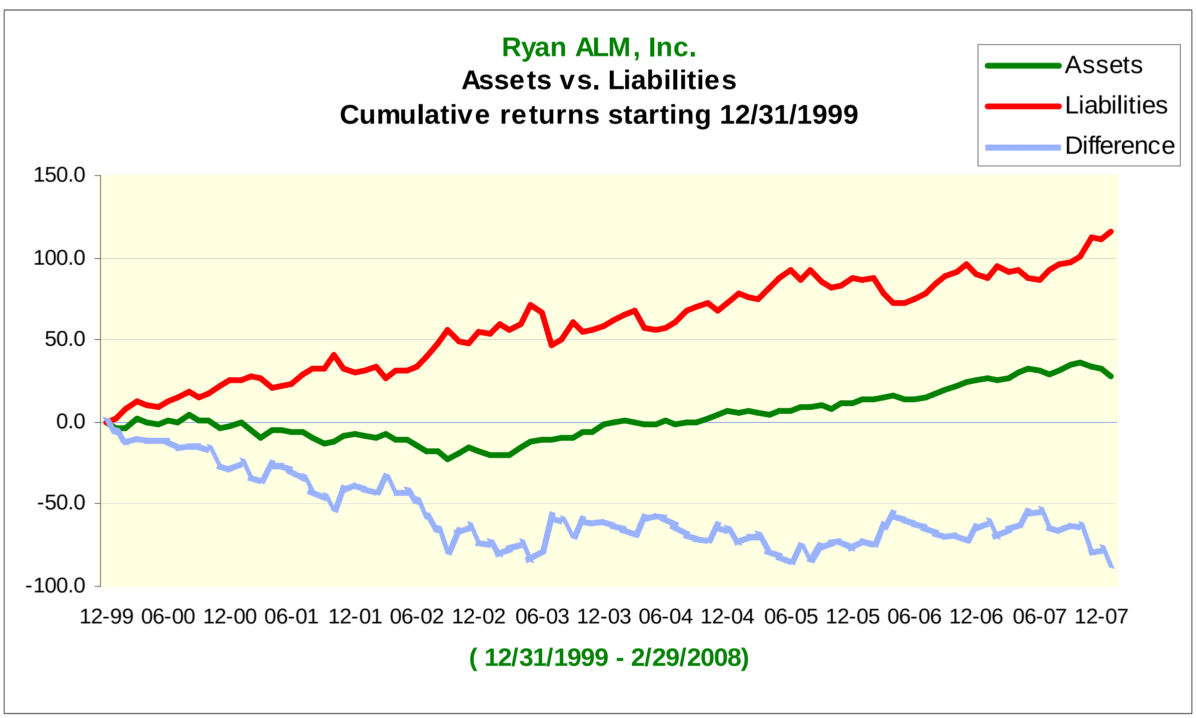
Pennsylvania – Philadelphia mayor Nutter has proposed to borrow $4.5 billion as a drastic step to solve the city's budget crisis due to an explosion of pension and health-care costs. In 2000, the city was paying $200 million for pension and healthcare benefits. In 2007, it cost $793 million. Philadelphia's pension obligation is only 52% funded with an unfunded liability at $3.9 billion (using actuarial valuations not market valuations). The mayor feels that they can not tax their way out of this dilemma since the wage tax is already the highest of any city in America.

Pension Scoreboard

Based on the Ryan generic Liability Index and a static Asset Allocation shown on page 1, the following graphs show asset growth versus liability growth for rolling 12 month periods and cumulative growth since 1999. The cumulative growth difference is **-88.51% suggesting any pension with a Funded Ratios below 170.15 in 1999 has a deficit today !**. As a Pension Crisis watchdog, we have designed the **Pension Monitor**. We believe that this is the most comprehensive site for pension articles in the world today. To view, please click on :

http://www.pensionmonitor.com/





Indexes

<u>Custom Liability Indexes</u>
The best way to price (discount rate) and understand the interest rate sensitivity of liabilities is the **Ryan Treasury STRIPS yield curve indexes** known as the **LIABILITY BENCHMARK or LIABILITY INDEX**. 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 (Pensions, Lotteries, NDT, Insurance Cos., etc.).

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 have unique benefit payment schedules due to different labor forces, different mortality, different plan amendments. **The true objective of a pension is to fund liabilities at the lowest cost to the plan with prudent risk**. Without a Custom Liability Index it would be difficult, if not impossible, for assets to be managed vs. this liability objective. Until a CLI is installed as a set of economic books, the asset side is in jeopardy of managing vs. the wrong objective (i.e. generic market indexes) **If you outperform generic market indexes, but lose to the CLI … the plan loses !**

<u>Ryan Indexes …Enhanced !</u>
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.**

The daily reports on these indices have been greatly expanded and enhanced to over 100 daily pages + many pages of research and methodology including :

Returns
Yield History
Yield Spreads
Percentage Spreads
To view all Ryan Indexes data go to : <u>www.RyanIndex.com</u>

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

Index Funds

Liability Index Funds

The best way to match assets to liabilities and reduce the volatility of the Funded Ratio is through a Liability Index Fund. Immunization was a common strategy to match liabilities but had a mathematical problem in that it matched the average duration of liabilities instead of the entire term structure of liabilities. Only a Liability Index Fund correctly matches and fully funds each liability payment. This requires a Custom Liability Index. Ron Ryan was the inventor of both the Custom Liability Index and Liability Index Fund (Liability Beta) concept.

Ameristock / Ryan Launch Five (5) New Bond ETFs

On Monday, July 2nd Ameristock and Ryan ALM launched five new bond ETFs based upon the Ryan Indexes. Here is the list of these innovative ETFs and ticker names:

Ameristock / Ryan 1 year Treasury (GKA)
Ameristock / Ryan 2 year Treasury (GKB)
Ameristock / Ryan 5 year Treasury (GKC)
Ameristock / Ryan 10 year Treasury (GKD)
Ameristock / Ryan 20 year Treasury (GKE)

These new ETFs are **constant maturity** index funds. They are the first such bond funds in the ETF market place today. The other bond ETFs are based on maturity range indexes (i.e. 7-10 years) rather than a precise spot on the Treasury yield curve. These maturity range indexes tend to have significant drifts in average coupon and duration as old issues pass thru this index composition. Such drifts can distort the implied or expected risk/reward behavior. Moreover, these indexes allow for callable bonds which trade to a call date and not a maturity date which create more skewness. Such drifts and skewness are corrected with a constant maturity index methodology.

For more info on these ETFs and the Ryan Indexes, please go to :

Ryan Indexes = www.RyanIndex.com
and
www.RyanALM.com
Ameristock / Ryan ETFs = www.Ameristock.com

Powershares Launches ETF based on Ryan/Mergent 1-30 year Maturity Ladder Indexes

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 (click on fixed income portfolios)