Ryan ALM, inc.

Asset/Liability Management

The Solutions Company

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The Ryan Letter

December 2006

Index	Returns YTD 2006	Estimated Weights
Liabilities :		
Market (Tsy STRIPS)	0.81 %	100 %
IRS (Corporates)	5.70	
ROA (8% constant rate)	8.00	
Assets :		
Ryan Cash	4.92 %	5 %
Lehman Aggregate	4.34	30
S&P 500	15.80	60
MSCI EAFE Int'l	26.86	5
Asset Allocation Model	12.25%	100 %
Assets – Liabilities		
Market	11.44%	
IRS	6.55	
ROA	4.25	

Based on the Asset Allocation above, 2006 was the best year for pensions since 2003. Assets outgrew Liability growth by **11.44%** and reduced pension deficits significantly if based on market value but much less so if liabilities are valued based on the IRS (PPA) and ASOP 27 rules. This demonstrates the **tremendous error in pricing liabilities at any discount rate except market rates**. Pension assets outgrew liabilities for the year by about **11.44%** using market valuations (i.e. STRIPS); **6.55%** under the IRS Contribution rules (PPA Corporate rates); and only **4.25%** using the ASOP 27 methodology of a constant ROA (i.e. 8.00%). Most pension funds enjoyed a funded ratio surplus in 1999. However, this **funded ratio has been reduced by about -65% since 1999** (see table below and **GRAPHS** at end).

Total Returns

	2000	2001	2002	2003	2004	2005	2006
Assets	- 2.50	- 5.40	-11.41	20.04	8.92	4.43	12.25
Liabilities	25.96	3.08	19.47	1.96	9.35	8.87	0.81
Difference	-28.46	- 8.48	-30.89	18.08	-0.43	-4.44	11.44
Cumulative		-37.60	-73.40	- 60.08	-66.13	-76.75	-64.60

God Bless Pension America !

William F. Sharpe Indexing Lifetime Achievement Award

I was recently honored at the Superbowl of Indexing Conference with the 2006 Indexing Lifetime Achievement Award. A sincere thanks to my index teams over the last 32 years of index design and to IMN for making it happen.

Pension Funded Ratio Improves

As itemized on page 1, most pensions should have enjoyed a significant improvement in their funded ratio as assets outgrew liabilities by an estimated **11.44%** based on market values (true **Liability Alpha vs.** generic Market Alpha). However, this much of an improvement may not be reported on any accounting or actuarial report to the Plan Sponsor since they will use a different methodology to value liabilities (Private Plans use a PPA corporate rate and Public Plans use the ROA as their discount rate). This year witnessed the worst growth in liabilities (at **0.81%**) since the year 1999 showed a negative growth of **-12.70%**. Unfortunately, most pensions have quite a large deficit to eradicate. The years 2000 thru 2002 saw most funded ratios fall by an estimated **-73.40%.** As the Society of Actuaries recommended in their 2004 Research titled "Principles Underlying Asset/Liability Management", it is critical that pension plans set up **economic books** that value liabilities at the market frequently and accurately or assets can not be managed effectively versus a liability objective. This is necessary since current accounting rules distort economic reality. Assets managed versus current valuations usually end up mismatching liabilities similar to the S&L crisis of the early 1980's. We believe that the best representation of pension economic books is a **Custom Liability Index**.

Retiree Healthcare (OPEB) … The Next Financial Tsunami ?

The cost of retiree health care will be a hot topic soon. Under GASB 45, Public Plans will now have to disclose the size of these enormous liabilities. New York has an estimated total liability of between $150 to $250 billion (note Federal Deficit = $250 billion). California has a total health care liability of between $40 to $70 billion. North Carolina has $23.5 billion in unfunded retiree health care which is three times what the state owes in ordinary debt. The Chicago Transit Authority (CTA) which has used its pension fund to pay for health care, is estimated to run out of funds for health care benefits by 2007 and pension benefits by 2012. GASB 45 requires health care disclosure on financial statements in fiscal 2007 for governments with annual revenues of $100 million plus.

Pension Watch … Delta

Delta Air Lines Inc., and the PBGC reached a settlement over key issues related to the termination of its pilot pension plan. Under the agreement, the PBGC would get an unsecured claim of $2.2 billion against the nation's third biggest carrier. Typically, unsecured creditors only recover a fraction of what they are owed. Delta's active pilots negotiated a $2.1 billion unsecured claim while the retired pilots negotiated $800 million in unsecured claims. Delta has already received court approval to terminate the pension plan, but it also needs the PBGC's nod. Other terms of the agreement include:

1. Delta agrees not to establish any new tax-qualified defined benefit plans for its pilots for a period of five years after the exit date.
2. Delta will reimburse PBGC for legal fees and expenses up to $7.5 million.
3. When Delta emerges from Chapter 11, the PBGC will be deemed to have waived its rights to restore the pilot plan in full or in part.

Pension Watch … Delphi

Auto parts supplier Delphi Corp. is at least $1.25 billion behind in required pension funding payments since it filed for bankruptcy, federal pension regulators estimate. The federal Pension Benefit Guaranty Corp. (PBGC), which insures private pension plans for millions of Americans, said in early December that Delphi's pension fund, covering about 75,000 people, may be underfunded by as much as $10.6 billion. Troy-based Delphi, the nation's largest auto parts supplier, filed for bankruptcy protection in October 2005. Since then, it has paid $234 million into its pension plan. Former parent General Motors Corp. has been trying to reach an agreement with Delphi and the supplier's creditors over the size of the automaker's obligation to its former parts unit and its workers.

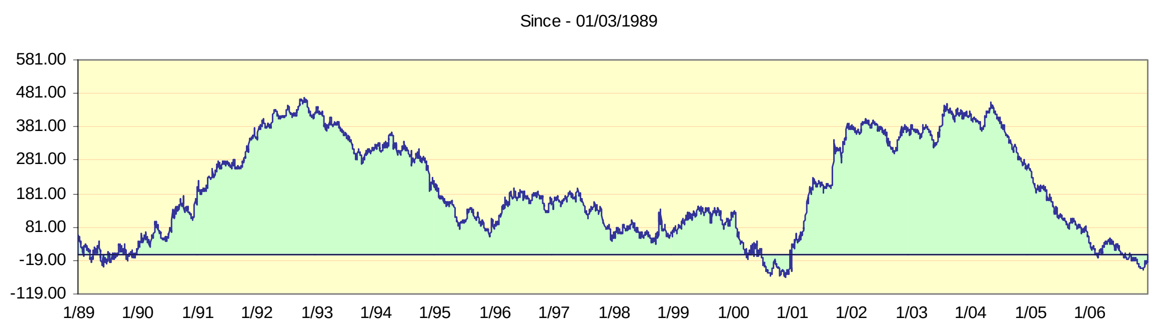
PBGC Raises Maximum Benefit

The federal agency that insures private pension plans for millions of Americans announced in December that the maximum annual benefit for plans taken over next year will be $49,500 for workers who wait until 65 to retire. The figure represents a 3.9 percent increase from $47,659, which was the 2006 maximum annual benefit for those who wait until 65 to retire. In 2005, the PBGC took over $6.6 billion in United Airlines' pension liabilities -- **the largest pension default since the PBGC was created** -- affecting 121,500 workers. The PBGC insures pensions for 44 million workers and retirees.

Yield Curve Most Inverse Since 2000

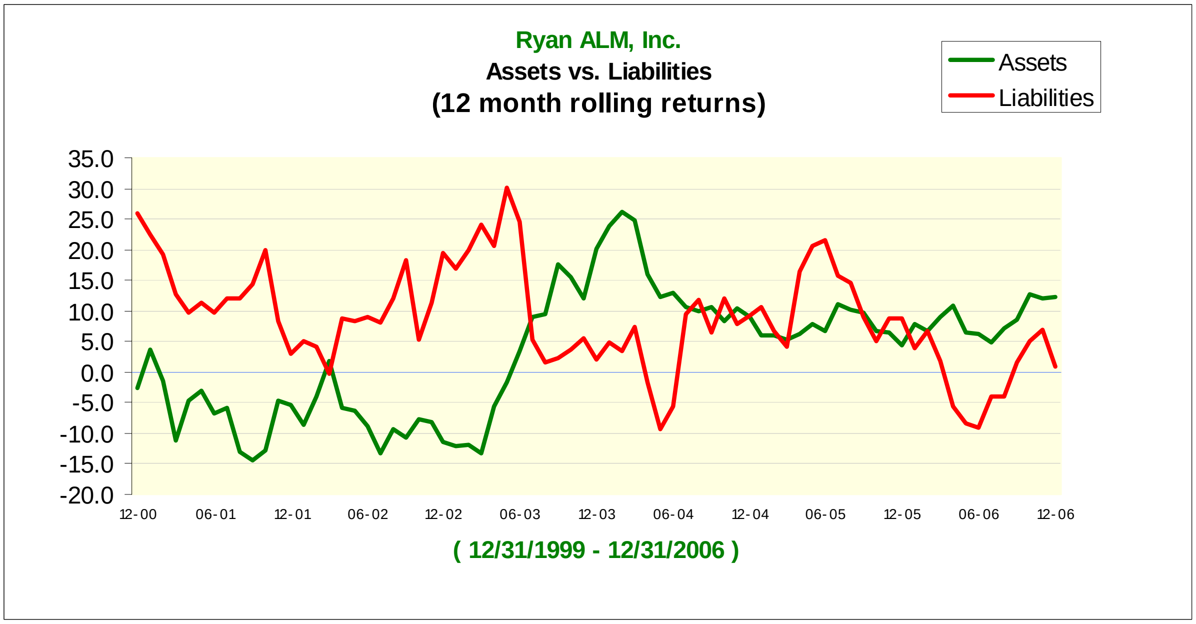
The interest rate story of the year was the shape of the Treasury Yield Curve. The slope on December 1, 2006 was the most inverse yield curve since 2000. Based on the Ryan Index, the yield spread between the Ryan 1-month T-Bill Index and the Ryan 30-year Treasury Index was at -68 bps. **This is the most inverse yield curve since the 1-year T-Bill was invented in July 2001!** The yield curve slope between the Ryan 3-month Index and 30-year Indexes was at -48 bps on 12/01/06, the most inverse yield curve since 11/24/00 at -69 bps. To see all Treasury yield curve maturities, go to **www.RyanIndex.com** or **www.RyanALM.com** :

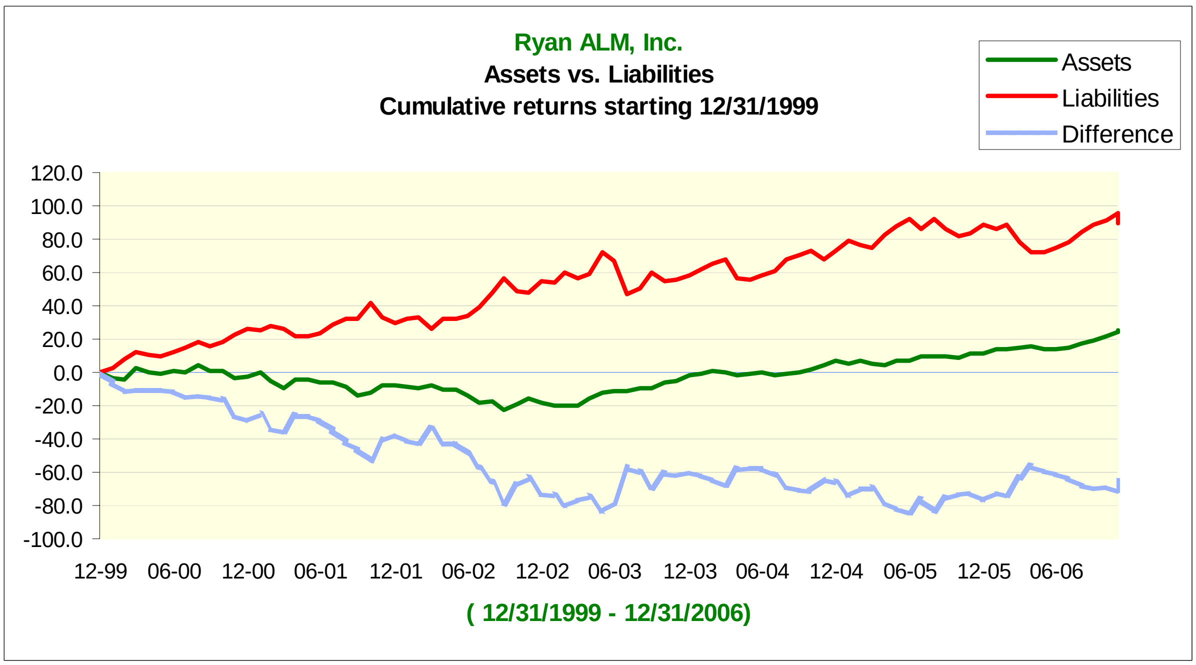
Yield Spreads (Ryan Treasury 30 year – Ryan Treasury 3 month Index)



Pension Scoreboard

Based on the Ryan generic Liability Index and a static Asset Allocation, as 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 **-64.60%**.





Custom Liability Indexes

In 1991, my current product development team and I designed the first Liability Index. Since then we have 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, etc.. **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(s) … namely, generic market indexes. **If you outperform generic market indexes, but lose to the CLI … the plan loses !**

Ryan Indexes …Enhanced !

In March 1983, my index team and I at the Ryan Financial Strategy Group (RFSG) created the **1st Daily bond Index … Ryan Index.** 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 130 daily pages + 10 pages of research and methodology including :

Yield History
Yield Spreads
Percentage Spreads
Returns

The best way to price (discount rate) and understand the interest rate sensitivity of **liabilities** is … the **Ryan Treasury STRIPS yield curve**. In March 1985, when STRIPS were born, my team and I at the Ryan Financial Strategy Group (RFSG) created the **1st STRIPS Index.**
To view all Ryan Indexes data go to : www.RyanIndex.com

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

Pension Monitor
the latest pension articles and news from around the world

In order to closely watch the ever evolving tragedy of the Pension Crisis, we have designed the **Pension Monitor**. This web based site is a chronology of press clippings and research reports on what's happening with pensions throughout the world. Currently, there are over 2,000 press articles going back to 2002 (click on Pension Archive). We believe that this is the most comprehensive site for pension articles in the world today. To view, please go to :

http://www.pensionmonitor.com/