Ryan ALM, inc.

Asset/Liability Management

The Solutions Company

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The Ryan Letter

December 2005

Index	Returns YTD 2005	Estimated Weights
Liabilities :		
Market (Treasury STRIPS)	8.87 %	100 %
Pension Act (Corporates)	11.27	
ROA (8% constant rate)	8.00	
Assets :		
Ryan Cash	3.09 %	5 %
Lehman Aggregate	2.43	30
S&P 500	4.89	60
MSCI EAFE Int'l	14.02	5
Asset Allocation Model	4.43 %	100 %
Assets – Liabilities		
Market	- 4.44 %	
Pension Bill	- 6.84	
ROA	-3.57	

December had high returns for Int'l Equities, long bonds and Liabilities. As a result, liabilities outpaced assets by about 2.30% for the month (2.85% vs. 0.55%). This widened the Asset/Liability funding gap (deficit) for the year 2005 to -4.44% using market valuations (i.e. STRIPS); to -6.84% under **the Pension Funding Equity Act of 2004 which ends 12/31/05 and reverts back to the 30-year Treasury**; and to -3.57% 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 -50% since 1999** (see table below).

Total Returns	2000	2001	2002	2003	2004	2005
Pension Assets	- 2.50	- 5.40	-11.41	20.04	8.92	4.43
Pension Liabilities	25.96	3.08	19.47	1.96	9.35	8.87
Difference	-28.46	- 8.48	-30.89	18.08	-0.43	-4.44
Cumulative		-34.53	-54.75	- 46.57	-46.80	-49.16

God Bless Pension America !

The Year 2005 in Review

The story of the year is the shape of the yield curve and its effect on Liabilities. At the start of the year, the slope of the Treasury yield curve (i.e. Liability yield curve) was quite positive sloping as judged by the Ryan Treasury and STRIPS Indexes. Interest rates rose on the short end (Bills) by about 160 to 216 basis points but the long end witnessed a decline in rates by 28 to 54 basis points. This caused a flattening to inverse yield curve to develop. This also meant a wide divergence in liability growth rates from short to long liabilities as the 1-year liabilities grew 2.22% to 18.80% on 25-year liabilities. What asset class grew 20% in 2005? …long STRIPS did. This conundrum, as Fed Chairman Greenspan calls it, led to a difficult Assets vs. Liability year :

	Yields			
Index	12/04	12/05	Change	Total Return
Ryan Treasury 1 Month	1.86%	4.02%	2.16%	2.98%
Ryan Treasury 2 Year	3.07	4.41	1.34	1.32
Ryan Treasury 30 Year	4.83	4.55	-0.28	8.82
SLOPE	2.97	0.53	-2.44	
Ryan STRIPS 1 Year	2.72	4.32	1.60	2.22
Ryan STRIPS 12 Year	4.72	4.63	-0.09	6.67
Ryan STRIPS 25 Year	5.13	4.59	-0.54	18.82
SLOPE	2.41	0.27	-2.14	

Note : Please go to **www.RyanALM.com** and click on **Ryan Indexes** for a complete history.

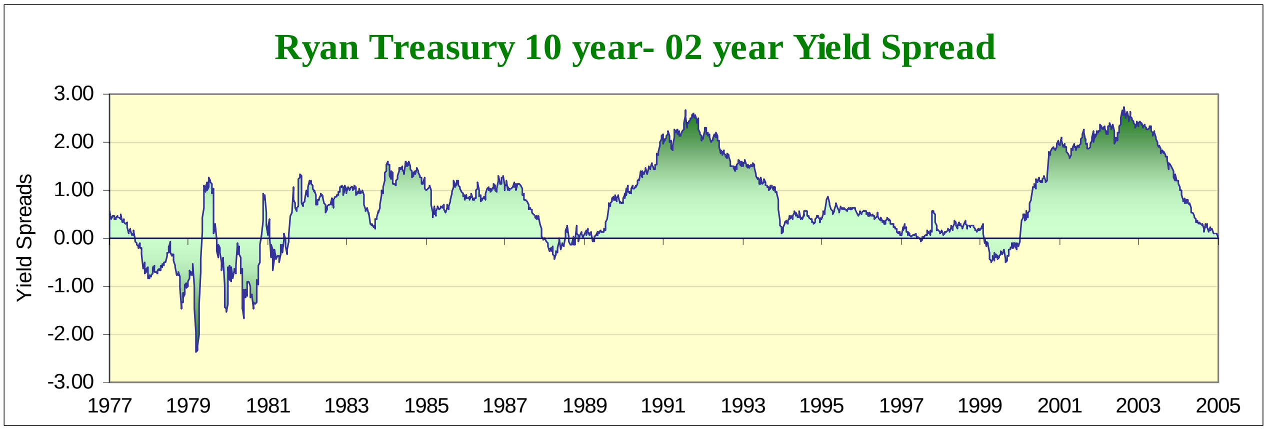
Inverse Yield Curve ?

On December 28, 2005 the yield spread from the 2-year to the 10-year Treasury went inverse. Such an occurrence has been infrequent and for short durations in the last 30 years except for the late 1970s and early 1980s. There have been only six inverse yield curve periods between 2-year Treasury notes vs. 30-year Treasury bonds. Based on the Ryan Treasury index series, here is a snapshot of these inverse yield curve moments for periods longer than one month :

Inverse Yield Curves (Treasury 2 to 10-year

Start Date	End Date	Duration (days)	Nadir Yield	Spread
08/17/1978	05/01/1980	593	03/20/1980	-253
09/11/1980	10/23/1981	407	05/21/1981	-176
01/18/1982	07/15/1982	178	02/17/1982	-75
12/09/1988	06/29/1989	202	03/29/1989	-44
05/26/1998	08/31/1998	97	06/26/1998	-6
02/02/2000	12/28/2000	329	04/07/2000	-51

The **Ryan Treasury Indexes** are the most **accurate** index data series since they start on trade date (Auction date) and not settlement date. The Ryan Indexes are the most **complete** historical index data series with data going back to the 1970s or the birth of each maturity auction. On October 7, 2005 I terminated my agreement with Ryan Labs to distribute my family of Ryan Indexes. For Ryan Index data go only to the following web sites :



Portable Alpha, Portable Alpha, Portable Alpha

I speak at many seminars plus read many research reports from the financial industry. It is obvious that Portable Alpha is certainly one of the biggest asset management trends in the world today. What amazes me is that most asset managers are selling and promoting key fundamentals underlying this strategy that are just dead wrong !

As I have preached for 14 years now, **the objective of a pension (and most institutions) is liability driven, namely to fund the pension liabilities at the lowest cost (i.e. Contributions) to the plan with prudent risks**. **If Alpha is the excess return above the objective then Alpha is the excess growth above Liability growth, not the excess return above a generic index. If you beat the S&P 500 and lose to liabilities … you LOSE !**

Alpha is where non-bonds assets should go in Asset Allocation since these assets (i.e. Equity, Real Estate, Alternative, etc.) will have low correlation to liabilities and higher growth potential given enough time to perform.They should never be used as the Beta portfolio. The opportunity to earn Alpha is, perhaps, the best in 40 years. Hopefully, the pension industry will soon realize that their objective and opponent is bond-like (Treasury zeroes) and will have low growth for many years. Mathematically, the yield to maturity (YTM) of the liability portfolio = growth rate to its benefit payment date(s). If liabilities are marked to market (required in Europe, coming soon to America) then liabilities have a yield of around 5% or less. If assets outgrow this rate to the benefit payment dates (average pension duration = 10 to 15 years), they earn Alpha and reduce the deficit accordingly (provided benefits are not increased).

Beta is the matching portfolio to the Liability objective and *not* a generic index objective which is the prevalent practice today. There is no generic index that behaves like any clients' pension liabilities. **Beta is best accomplished through a Liability Index Fund (LIF) that matches the term structure, modified duration and future value of liabilities.** The Beta portfolio is where investment grade bonds go. There is little or no Alpha in bonds versus liabilities, especially after fees (see Ryan ALM research on our web site). Indeed, LIF must hedge interest rate risk so it matches the growth rate behavior of the liabilities it is funding (high correlation). This could be any part of liabilities (i.e. short, intermediate, long, etc.). Beta requires a **Custom Liability Index (CLI)** to build a LIF portfolio to understand the size and risk/reward behavior it is funding and matching. As the Society of Actuaries (SOA) made clear in their white paper "Principles Underlying Asset/Liability Management", you need to create a set of economic books that accurately measure liability market valuation in order for ALM to be efficient. Hopefully, the pension industry practioners will soon realize that all Asset functions (Asset Allocation, Asset Management, Performance Measurement) require a CLI for the asset side to operate effectively and in harmony with their true objective.

Portable Alpha is the porting of excess Alpha returns to the Beta portfolio. Without a CLI, you can not measure Alpha nor excess returns. Without a CLI, you not create a Beta portfolio either. Once the Alpha portfolios create sufficient excess to fund and match another year of liabilities (or some determined goal) this excess should be ported over to the Beta portfolio. In time, the Beta portfolio grows as the Alpha portfolio wins and thereby reduces costs (Contributions) and risks as it matches the liability portfolio growth behavior.

Such an integrated system of **Custom Liability Index (CLI), Beta Portfolio = Liability Index Fund (LIF) and Alpha portfolio** is hard to find. That is what we have accomplished at **Ryan ALM** and the reason for our firm … **The Pension Solution Company**. Our **PALS** product **(Portable Alpha Liability System)** is a synergistic system of three products **(CLI + LIF + ALPHA)** all focused on the client's liability in order to achieve cost reductions, deficit removal and lower plan risks. For more info on PALS :

Call us at **888-Ryan ALM** or email me at **rryan@ryanalm.com**

<u>China and Interest Rates</u>

Yu Yongding, head of the Institute of World Economics and monetary policy committee member of the People's Bank of China, said recently that China must reduce accumulation of US dollar holdings than later reduce reserves. Yu warned Fed Chairman Bernanke to keep hiking rates because a US recession is necessary to rectify the dollar-reserve problem. China and Japan have both reduced their Treasury purchases in the 4th quarter.

<u>Pension Monitor</u>

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 1,288 press articles going back to 2002. We believe that this is the most comprehensive site for pension articles in the world today. To view, please go to :

<u>www.RyanALM.com/PensionMonitor</u> **<u>www.PensionMonitor.com</u>**

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

Pension Watch - GM

GM announced in November that will reduce its workforce by 30,000 and close 12 plants.

Pension Reform

The House passed Pension Reform legislation on December 15th. The final vote was 294-132. The House and Senate bills share key provisions, including increasing PBGC premiums from $19 to $30 per year per employee participant in the pension plan plus a termination premium of $1,250 per participant for three years for companies that emerge from bankruptcy with their pension plans terminated. One exception is their treatment of airlines where the Senate gives up to 20 years to cure while the House has no exemption. The House bill must be reconciled with the Senate bill that passed on Nov. 16 by a vote of 97-2. The White House wants tougher pension funding requirements to be added in the final bill or the President warns he will veto for the first time in his administration. The PBGC has seen the number of defined benefit plans drop from 95,000 in 1980 to less than 35,000 today. The maximum benefit the PBGC guarantees is $47,659.08 for 2006, up from $45,613.68 in 2005.

Mortality Tables – Another Pension Headache

The PBGC is updating the mortality assumptions used in valuing benefits for terminating plans. The current PBGC assumptions are based upon the 1983 Group Annuity Mortality (GAM). The new regulations will use the 1994 GAM tables. Guess what, they will show that people live longer … translation = more liability benefits than originally projected. The new rules apply to any plan terminated after January 1, 2006. What do you think the 2004 GAM tables will show ?

Healthcare Tsnumi

The next great retirement disaster is Healthcare. Medical liabilities have a much higher inflation rate than pensions. Unfortunately, most companies and public funds have little or no assets set aside for this enormous liability which is too often a pay-as-you-go benefit plan. Corporations don't like to fund medical liabilities since the assets here are taxed. The Government Accounting Standards Board (GASB) has established a new accounting rule to be phased in over three years whereby public pension plans must disclose their healthcare costs. The consulting firm Mercer estimates that the national total could be $1 trillion.

Inflation Watch

The inflation news was great (if you believe in the CPI) as the core rate of inflation grew by just 1.2% in the 3rd quarter, the slowest pace in two years. Crude oil topped out at $70.50/bbl in August and is now down to $61.04/bbl. However, for the year, 70% of the major commodity categories hit new highs in 2005 including : aluminum, copper, crude oil, lead, natural gas, palladium, propane, silver, sugar, zinc.

When the income tax rate was installed in 1913, the highest rate was 7%.
In order to be in the 7% bracket, you had to make $500,000 a year = $9.5 million today
FACT

Pension Ideas

I. Pension Problems :

Key pension problems itemized in www.RyanAlm.com/Research**/The PENSION CRISIS :**

1. **Discount Rate** = Wrong rate(s) creates wrong present values
2. **Smoothing** = Distorts / Overstates market values by about 29%
3. **ROA** = Dictates Asset Allocation and Discount Rate for Public Funds.

II. Pension Solutions !

Ryan ALM has a series of Pension Solutions research papers :

Pension Solution # 1 Custom Liability Index (CLI)
Pension Solution # 2 Portable Alpha Liability System (PALS)
Pension Solution # 3 Liability Index Fund (LIF)

III. Custom Liability Index (CLI)

Ryan ALM provides the Benchmark for ALM with accurate daily pricing **that best represents the present value of the projected benefit payment schedule.** Ryan ALM builds Custom Liability Indexes based on market rates or any discount the client wants.

IV. Beta + Alpha Portfolio

For pensions, **Beta is the portfolio that matches liabilities** not some generic market index. Without a CLI it would be difficult to match liabilities. **Beta is best as a Liability Index Fund**. This is where investment grade bonds should go since they have little or no Alpha vs. liabilities. **Alpha is the excess return above liability growth**. It is certainly not excess returns above a **generic** market index. If you outperform a market index but lose to liabilities, …**you LOST !** **Alpha is best as non-bonds portfolios that do not correlate to liabilities.**

V. Portable Alpha

Portable Alpha strategies should be liability driven since that is their true objective. Instead, most Alpha portfolios are given benchmarks different than liabilities and most Beta portfolios have poor correlation to pension liabilities (not matched). Ryan ALM designed our CORE product **"PALS"** as a Portable Alpha Liability Strategy where the Alpha portfolio is non-bonds (i.e. Equity, Real Estate, etc.) and the Beta portfolio is 100% bonds matched to liabilities. **Our Alpha portfolio mission is to cure the pension deficit by outperforming target liabilities** (**Alpha**) **over a time horizon equal to the liability payment dates b**ased on a Custom Liability Index. When our Alpha portfolio achieves the client goal (i.e. full funding) we **port over to the Beta portfolio to match liabilities and secure the victory !**

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