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Critique Of...

New Pension Bill

On April 10th, President Bush signed into law the Pension Funding Equity Act of 2004. This new bill was designed to provide Pension Relief in the form of a higher discount rate thereby lowering liabilities and contributions by more than \$80 billion over the next two years. Moreover, the airline and steel industries are allowed to defer 80% of their deficit reduction contributions in years 2004 and 2005 to future years representing \$1.6 billion in extra pension relief (Source : S&P Creditweek). Unfortunately, this legislation solved none of the key (accounting) problem areas and may have created new ones.

Discount Rate

Prior to this legislation, the IRS (1994 RPA/GATT legislation) required use of the 30-year Treasury as the key interest rate for pricing liabilities. Under this Act, the new discount rate will be based upon a blended composite of three corporate bond indexes. For the period January 1997 and ending August 2000, these three indexes apply:

#	Index Source	Description
1.	Citigroup High Grade Corporate Index	(AAA/AA, 10+ years)
2.	Merrill Lynch US Corporate	(AAA/AA, 10+ years)
3.	Merrill Lynch US Corporates	(A, 15+ years)

Beginning September 2000, the **Lehman US A Long Credit** replaces the Merrill Lynch A, 15+ year index. In essence, we have replaced one bond with over 400 bonds. There are several problems with this portfolio construction:

1. **Market weighted.** Each index is market weighted not equal weighted to create an average yield. This means that the yield of each bond has a different weight even if it has the same maturity or duration. Since the blended composite is equal weighted, why shouldn't each index be equal weighted too to avoid any weighting biases.
2. **Equal weighted.** The three indexes are equal weighted to create an average composite yield. So we have a blend of market weighted indexes into an equal weighted composite index. This seems to violate the index methodology rules...either market or equal weighted but not both. Moreover, this composite double and triple counts many securities that appear in more than one index.
3. **Prices.** Each index uses different price sources. Without a bond exchange or generally accepted closing price, there is a disparity in prices and yield on the same bonds on the same day. This is much more acute with Corporates than Treasury



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issues that are priced real time on broker screens and have large volume trades frequently. As a result, tracking error between these three indexes will be prevalent.

4. **Ratings.** FAS 87 paragraph 44 states that high-quality bonds should be used for discount rate pricing. This blended composite will be 33% A rated. Such a rating is usually not considered high-quality but investment grade. Government, AAA and AA by either Moody's or S&P is normally the definition rule for high-quality bonds. Even split rated bonds below AA are generally not allowed into this rule based composition.
5. **Callable Bonds.** Each index has 2% to 7% of its bond portfolio composition trading on a yield to call basis which is a violation of the objective (pricing liabilities off long rates).
6. **No Zeroes.** No zero-coupon bonds exist in any of the three indexes which reduce their longest duration bonds to about 16 years. This makes it difficult to price liabilities longer than 16 years from this source.
7. **Term Structure.** Each index has a uniquely different shape although average durations are similar. In conformity with FASB 87, paragraph 199 individual discount rates should be used weighted by the liability term structure (i.e. yield curve) not a single discount rate. As a result, we need a generally accepted yield curve as the discount rate methodology (multiple rates). One average yield with one average duration does not fit all pension liabilities.
8. **Purchaseability.** It is impossible to purchase this average index yield or index portfolio for most of the liability payment dates. There needs to be a rule that says ...**"if you can't buy it, you can't use it"**.
9. **Annualized Yields.** Annualized yields (APR) are used in quoting this discount rate methodology. Although not new, it is different than the traditional bond equivalent yield (BEY) quotes used for bonds. Currently, the APR results in a 7 to 9 basis point higher yield. Said differently, a 6.00% BEY is equal to a 6.09% APR. Should interest rates go up, this yield difference grows (i.e. 10% BEY = 10.25% APR). There needs to be more clarity here, perhaps an APR after the quoted yield.
10. **Weighted Average.** The Treasury and prominent practitioners promoted removal of the 4-year weighted average methodology to a 3-month or current market status. This new Act made no changes. As a result, this blended index rate will be based on the same formula as before... a 48-month weighted average with last 12 months = 40%, previous 12 months = 30%, next previous 12 months = 20%, and next previous 12 months = 10%. Currently, the weighted averages look like this:



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Annual Average (%)	48-month Weighted Average (%)
2004 (thru April) = 5.77	4 years ending 04/30/04 = 6.36
2003 (calendar) = 5.82	4 years ending 12/31/03 = 6.59
2002 (calendar) = 6.68	4 years ending 12/31/02 = 7.14
2001 (calendar) = 7.10	4 years ending 12/31/01 = 7.34

If rates stay at current levels, this blended corporate rate would calculate to 6.12% for the 4 years ending 12/31/04. The longest Treasury (5.375%, due 02/15/31) closed 05/31/04 at a 5.40% yield (5.47% APR). **If interest rates rise by +115 basis points by year end 2004, the long Treasury would outyield this blended corporate rate!**

Skewing this calculation to old rates only provides relief when interest rates are in a secular bull market. If we go into a prolonged bear market, the current rate for long Treasury will outyield this amalgamation of corporate bonds!

11. **Yield Curve.** Pension liabilities are like snowflakes... no two are alike. This Pension Act continues the improper procedure of pricing all liabilities at one single discount rate. This is regrettable. Horizontal yield curves don't exist in the bond market. Moreover, this action seems to violate FASB 87 paragraph 199 which says to be faithful to this rule use *individual discount rates*. FASB even gives examples to suggest you price each liability off the exact maturity/duration on the spot curve that matches the liability payment date.

12. **Zero-Coupon Bonds.** Only zero-coupon bonds connect present values to future values accurately. Only zero-coupon bonds have durations out to 30 years. Only Government zero-coupon bonds have a well defined yield curve. We should all be familiar with defeasance procedures where accountants allow removal of debt if defeased with Government zeroes. Indeed, almost all State Lotteries are required by law to only buy Government zeroes and thus we never hear of a lottery asset/liability deficit.

Moreover, as the SEC made clear in their letter of June 1993 to FASB, it is their belief that the guidance provided in **FASB 106 pgh. 186** should help private pension plans select the proper discount rate. **This paragraph says clearly that if you price your liabilities correctly, it would equal the current market value of a portfolio of high quality zero-coupon bonds whose maturities and amounts match the liability payment dates and amounts. The only high-quality zero-coupon bonds available today as a yield curve are ... Government securities.**



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Would you have surgery from a doctor who was given the wrong blood work and wrong x-rays? Of course not. Then why would you allow asset allocation surgery on your pension assets if you were given the wrong valuation for liabilities? Wrong duration? No yield curve shape? No liability portfolio? And very delinquent information?

Until we price liabilities "at the market" frequently as a yield curve using zero-coupon Treasury bonds (STRIPS), we will never get the proper market valuation of liabilities. We will never be able to match or defease liabilities without proper market valuation of all liabilities. Pension relief should come in the form of relaxing the minimum contributions rules not in financial lies on the balance sheet. We don't need an Enron approach to pricing pension liabilities. We need a rule that states ...

"If you can't buy it, you can't use it !"

In 1985 when STRIPS were initially introduced, Ron Ryan and his team created the **first daily STRIPS Index (Ryan STRIPS Indexes)**. **This index consists of one key STRIP for every annual duration spot on the STRIP yield curve. Such an index best represents the pricing methodology for pensions in conformity with FASB and common sense.** With such an index, assets can now understand the present value size, shape and risk/reward behavior of liabilities **daily**. Pension plans can now have the prudent ability and choice to either match liabilities or create surplus optimization based upon a real market portfolio of liabilities. If Confucius reviewed this dilemma today, he would most probably prophesize... **"Given the wrong index, you will get the wrong risk/reward"**. It is obvious that we are using the wrong indexes as the pricing for liabilities... and as the benchmark for assets.

Such information is readily available by Ryan ALM, Inc. daily. Please email Ron Ryan at RRYAN@RYANALM.com or call us at (917) 543-2875 for more information.