



The Long Corporate Cure for Pension Deficit Disorder – The Eye of the Storm?

Problem:

The so-called “perfect storm” for pension funds occurred during the 2000-2002 period, when a bear market in equities and a *simultaneous* decline in AA corporate bond yields combined to reduce plan assets and raise plan liabilities at the same time. Today, seven years later, pension plan funding ratios are in even worse shape than after 2002 – and they could be in still worse shape shortly. The reason is that, in contrast to the “perfect storm” period, AA corporate bond yields actually *rose* dramatically in 2008, thereby *reducing* plan liabilities and cushioning the effect of last year’s 40% decline in equity values. In short, pension plans today may be standing in the still eye of a much larger cyclonic weather system, waiting to be flattened yet again by the storm’s delayed second half, which will come when corporate bond yields retreat from their current historic highs and act to push up plan liabilities.

Solution:

One way to mitigate the effects of rising liabilities due to a falling discount rate is to invest heavily in the asset class or instrument whose yields are used to calculate those liabilities in the first place, and whose prices are set to rise as their yields decline. At this juncture in the capital markets and funding cycles, long corporate bonds appear to offer US pension plans a number of distinct advantages and opportunities. *First*, long corporates provide a fairly precise match with the duration of most pension liabilities, thereby reducing plan interest rate risk, balance sheet volatility, and the need for future cash contributions. *Second*, US pension plans have available to them a fully investable corporate bond benchmark that meets almost exactly their duration, credit, and contribution needs – provided this index is not unduly or unwisely constrained. *Third*, given the current credit market dislocation and historically high yields, long corporate bonds provide at least the potential for equity-like returns at a time when equities seem unlikely to provide them. *Fourth*, this broad market contagion and indiscriminate “tiering” by agency credit rating have resulted in unprecedented opportunities for skilled active managers to add value over their index benchmarks through fundamental research and careful issuer and security selection. *Finally*, and perhaps most importantly, given their special place in the pension calculus, long corporates offer partial vaccination against the negative effects of a declining discount rate – protection from the more serious second half of the storm. In short, now may be the perfect time to consider using long corporate bonds to immunize against pension deficit disorder.

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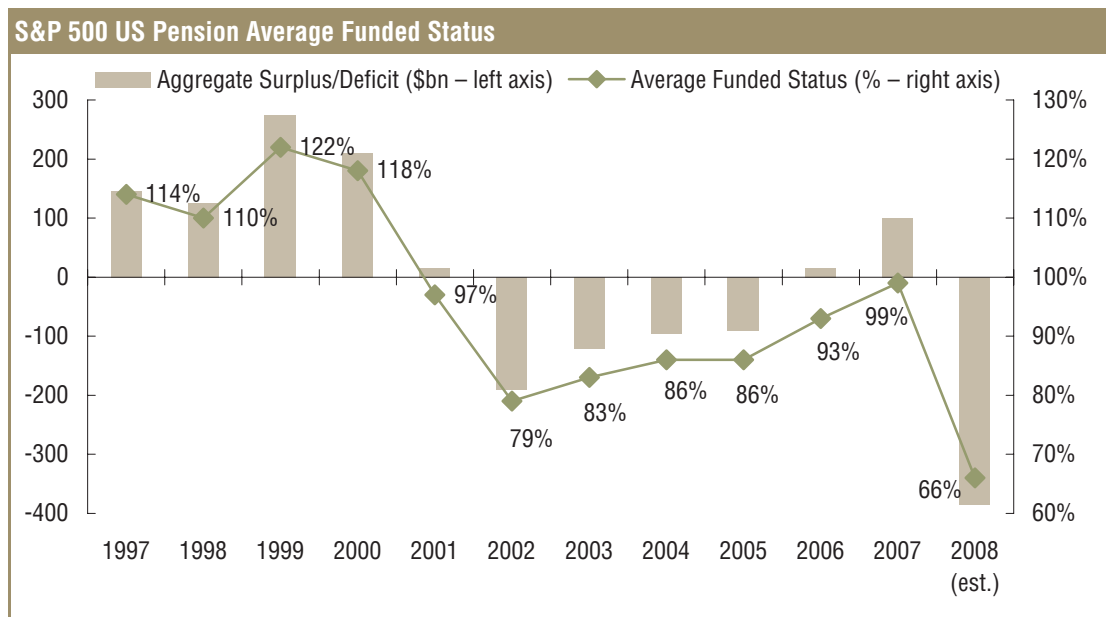
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The Long Corporate Cure for Pension Deficit Disorder – The Eye of the Storm?

US pension plans face a serious funding crisis following the worst capital market performance since the Great Depression. The math is not complicated. Pension plans had an average of 70% of their assets invested in equities; global equity markets declined more than 40% in 2008 alone; and all bonds but Treasuries failed to fulfill their diversification promise and contributed instead to negative returns. In the space of a single calendar year, S&P 500 companies saw their pension funding levels plunge by an average of 33% – from 99% at the end of 2007 to only 66% by the end of 2008. On January 1st, 2009, the aggregate US pension deficit stood at an estimated \$376 billion.



Source: Bank of America-Merrill Lynch Pension Database; Bloomberg, as published February 10, 2009

The last major deterioration in US pension funding levels – dubbed “the perfect storm” when it occurred some seven years ago – was much more gradual and less severe by comparison. Three years of weak US equity markets beginning in 2000 had taken plan funding levels down to 79% by the end of 2002, when the aggregate pension deficit stood at a then-unprecedented \$186 billion. Recovery required five years of strong equity markets, and it was not until the end of 2007 that plans finally regained their fully funded status. A scant twelve months later, funding ratios stand half again lower than in 2002, and the aggregate pension deficit is more than twice as large as after the perfect storm. Clearly, pension plans are in worse shape today – and not just because of reduced funding levels or the dollar size of their deficits, but because of much poorer prospects for a timely recovery in the global economy and capital markets.

Biting the Bullet

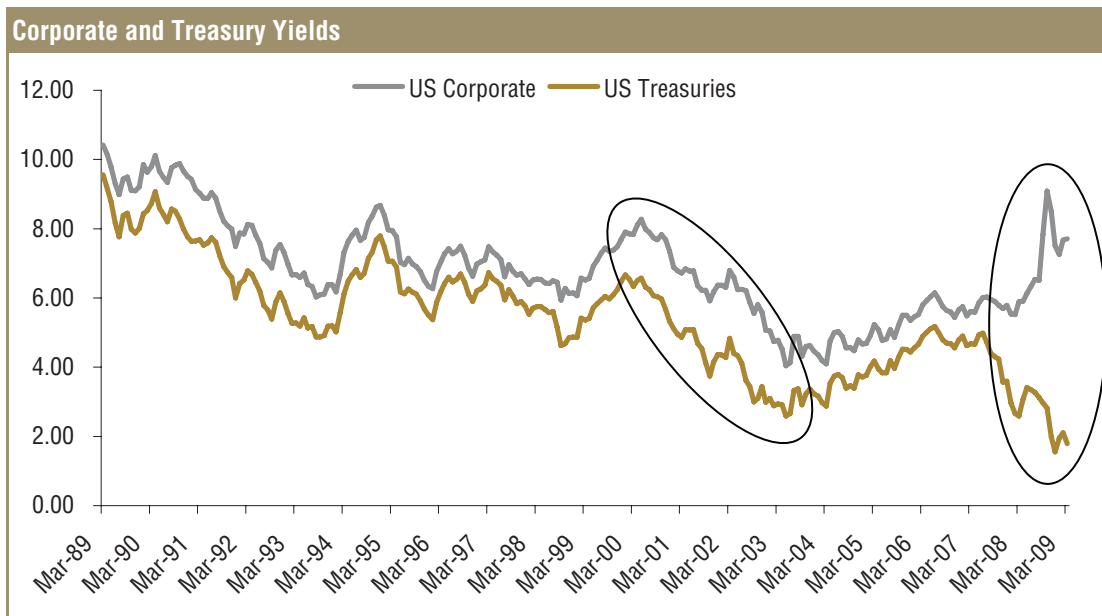
The Pension Protection Act (PPA) of 2006 requires only that plans show progress toward closing their funding gaps over a seven-year period. Some companies may file for relief in attempt to postpone their day of reckoning, but most now seem reconciled to the need to inject cash into their pension pools. Unfortunately, this decision coincides almost perfectly with a synchronized global recession that threatens to depress corporate profits and thus equity market returns for some time to come. Also, cash injections into pension funds reduce monies available for capital investment, which could further delay and dampen the sustained equity market recovery required to restore the asset side of pension balance sheets. Finally, the general unavailability of credit and decline in securitization and other forms of leverage reduce the number of creative strategies that offer high returns on either old or new cash.

The Long Corporate Cure

Storm Warning: Dangerous Shoals Ahead

As bad as things are, they could easily have been worse – and they may yet become so. To date, the crisis has had a cushion, the cloud a silver lining. Under both the PPA and FASB 87, the interest rate used to calculate plan liabilities, and thus the gap between assets and liabilities, is the yield on corporate bonds rated AA. The higher this discount rate, the lower the present value of plan liabilities and the higher a plan's funding level, or ratio of plan assets to liabilities. Conversely, the lower the discount rate, the higher the value of plan liabilities and the lower its funding ratio.

It is the behavior of this discount rate that distinguishes the current situation from the “perfect storm” of 2002 – and that makes today's pension crisis more ominous by comparison. During the 2000-2002 period, both Treasury and investment-grade corporate bond yields fell in sympathy with weak equity markets, and in tandem with each other, meaning that spreads widened only marginally. This sympathy in yields, seen in the left-hand oval on the graph below, is the reason that the 2002 period was dubbed “the perfect storm”: the simultaneous decline in equity values and corporate bond yields reduced plan assets *and* raised plan liabilities *at the same time* – a two-fisted knockout punch. The 2008 situation was very different and in some ways opposite, as a rising discount rate provided a silver lining in an otherwise darkened sky. As shown in the right-hand oval below, the same flight-to-quality that drove down both equity markets and Treasury yields in 2008 actually *drove up* the yields on investment-grade corporate bonds – in this instance to spreads over Treasuries some eight times (8x) higher than historic norms, and three times (3x) higher than any level seen previously. This historically high discount rate served to *reduce* pension plan liabilities, cushioned the effect of declining asset values, and prevented the 2008 funding gap from becoming even larger.



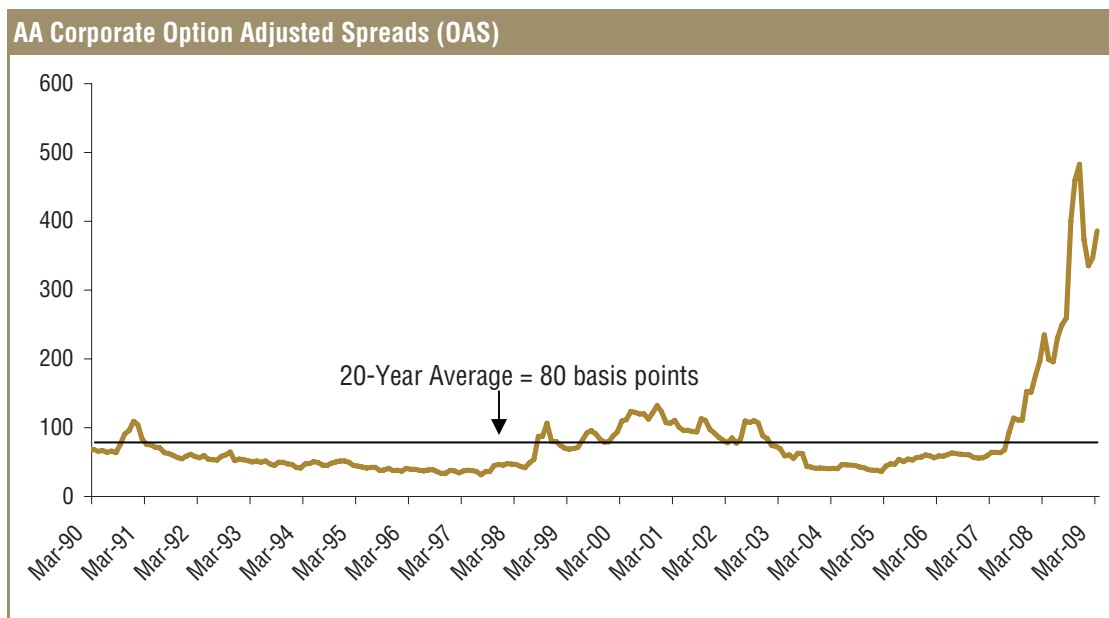
Source: Barclays Capital, as of March 31, 2009

Last year's blessing could prove a curse for years to come. What happens now, if corporate bond spreads retreat toward more normal levels while Treasury yields remain constant – particularly if (as most expect) declining corporate yields are not accompanied by any offsetting recovery in equity values? Even if pension plans are spared another major down-leg in the stock markets, falling corporate yields threaten further deterioration in their funding levels – perhaps at a more rapid rate than recently. As every financial analyst knows, changes in the discount rate remain the single most powerful factor in any valuation model.

The financial media have revived the metaphor of “the perfect storm” to describe the misfortunes befalling pension plans in 2008. In reality, 2008 seems less a single meteorological event than the first or falling-asset phase of a far larger and more powerful cyclonic system. Pension plans may be standing exposed in the still eye of this broader weather system, waiting to be walloped yet again by its second or rising-liability phase. And this second phase, still circling the horizon, could prove more damaging than the first.

The Stretched Spring

Given the current credit environment, AA corporate bond yields are almost certain to be the single most powerful driver of plan funding levels over the next few years. Their effect is likely to be negative, of course, since corporate spreads, even after a partial retracement, still stand near their highest levels since 1932, and thus seem far more likely to fall than to rise further or even remain high. At 543 bps on March 31st, 2009, corporate spreads are more than four-and-a-half times their ninety-year average of 116 bps, and nearly seven (7x) their average of the last twenty years.



Source: Barclays Capital, as of March 31, 2009

To plan sponsors, the above graph should appear like a stretched spring poised to snap back on the first signs of sustainable economic recovery. Sponsors should regard it warily, of course, since any “return to normalcy” is likely to wreak further havoc on US funding ratios. Recent sharp moves in both directions suggest just how quickly the damage can be done – even in the absence of any real signs of economic growth.

Three Scenarios: The Good, the Bad, and the Ugly

The precise damage that will be done by a return to normal corporate spreads depends, of course, on two other major variables as well: 1) the strength of any equity market recovery, which is driven largely by the economy and which drives the asset side of pension balance sheets; and 2) changes in the yields of underlying Treasuries, also driven by the economy and by attendant inflation expectations. The following exhibit examines a “typical” conservative US pension plan (60% US stocks and 40% US Aggregate bonds) and calculates the combined effects of these three variables on plan assets, liabilities, and funding ratios under different three-year economic and capital market scenarios. All three hypotheticals assume a return to normal corporate spread levels but different changes in both equity values and underlying Treasury yields.

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Scenario 1, Full Recovery, assumes that equities regain their October 2007 highs over the next three years, and that long Treasury yields rise to 5% on resumption of modest inflation. Scenario 2, Partial Recovery, assumes that equities recover only half of their losses since 2007, and that long Treasury yields rise only to 4% over this period. Scenario 3, which some have dubbed the Doomsday Scenario (but which seems at least as likely as Scenario 1), also assumes Treasury yields of 4% but no recovery at all in the equity markets. Note that only the optimistic Scenario 1 provides any appreciable improvement in pension plan funding ratios, and that the more likely Scenario 3 has funding ratios falling another 19% – and leaves pension plans less than half-funded three years down the road from today.

Scenario 1: Full Recovery			Scenario 2: Partial Recovery			Scenario 3: Continuing Crisis		
<ul style="list-style-type: none"> ➢ Stocks return to October 2007 highs ➢ Corporate spreads return to historical average ➢ Long Treasury yields rise to 5%; inflation at 2% 			<ul style="list-style-type: none"> ➢ Stocks return halfway to October 2007 highs ➢ Corporate spreads return to historical average ➢ Long Treasury yields remain near 4% 			<ul style="list-style-type: none"> ➢ Stocks remain flat for three years ➢ Corporate spreads return to historical average ➢ Long Treasury yields remain near 4% 		
3-Year Asset Returns	Weight	Return	3-Year Asset Returns	Weight	Return	3-Year Asset Returns	Weight	Return
Stocks	60%	110.8%	Stocks	60%	55.4%	Stocks	60%	0.0%
Aggregate Bonds	40%	14.5%	Aggregate Bonds	40%	18.6%	Aggregate Bonds	40%	18.6%
Total		72.3%	Total		40.7%	Total		7.4%
3-Year Liability Returns		33.8%	3-Year Liability Returns		48.2%	3-Year Liability Returns		48.2%
Funding Ratio	Feb '09	Feb '12	Funding Ratio	Feb '09	Feb '12	Funding Ratio	Feb '09	Feb '12
	67.7%	87.2%		67.7%	64.3%		67.7%	49.1%
Result			Result			Result		
<ul style="list-style-type: none"> ➢ Very strong asset performance stays ahead of liability growth but does not return to full funding ➢ Funded status improves 19% 			<ul style="list-style-type: none"> ➢ Above average asset returns do not keep up with liability growth ➢ Funded status declines 3% 			<ul style="list-style-type: none"> ➢ Neither stocks nor bonds keep up with liability growth ➢ Funded status declines 19% 		

Source: Standish, as of February 28, 2009. For details, see "Disclosures" on Page 12.¹

One reason for assigning higher probabilities to lower-yield Scenarios 2 and 3 is that the Treasury yield curve may remain anchored at the short end by stimulative Fed policy and at the long end by the prospect of continued Fed purchases of US Treasuries.

The Long Corporate Cure

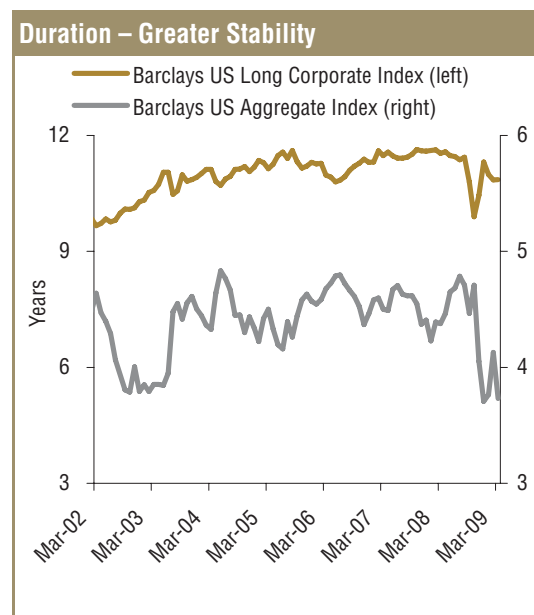
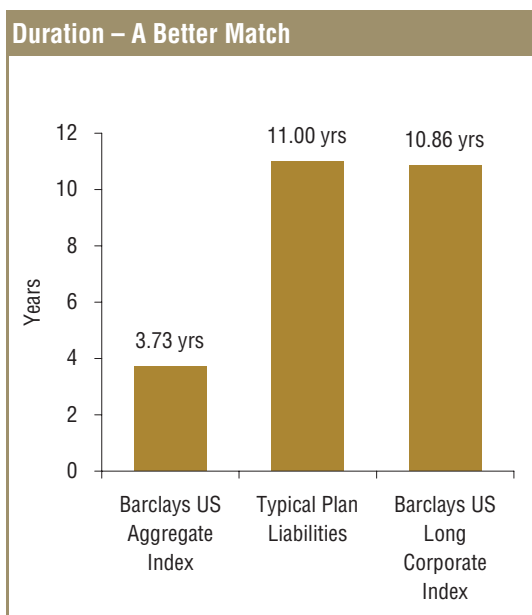
One way to mitigate the effects of rising liabilities due to a falling discount rate is to invest heavily in the asset class or instrument whose yields are used to calculate those liabilities in the first place, and whose prices are set to rise as their yields decline. At this juncture in the capital markets and funding cycles, long corporate bonds appear to offer US pension plans a number of distinct advantages and opportunities. *First*, long corporates provide a fairly precise match with the duration of most pension liabilities, thereby reducing plan interest rate risk, balance sheet volatility, and the need for future cash contributions. *Second*, US pension plans have available to them a fully investable corporate bond benchmark that meets almost exactly their duration, credit, and contribution needs – provided this index is not unduly or unwisely constrained. *Third*, given the current credit market dislocation and historically high yields, long corporate bonds provide at least the potential for equity-like returns at a time when equities seem unlikely to provide them. *Fourth*, this broad market contagion and indiscriminate “tiering” by agency credit rating have resulted in unprecedented opportunities for skilled active managers to add value over their index benchmarks through fundamental research and careful issuer and security selection. *Finally*, and perhaps most importantly, given their special place in the pension calculus, long corporates offer partial vaccination against the negative effects of a declining discount rate – in other words, protection from the more serious second half of the storm. In short, now may be the perfect time to consider using long corporate bonds to immunize against pension deficit disorder.

Wanted: A Better Match with Plan Liabilities

There are two principal reasons that the liabilities of US pension plans respond so poorly to declines in the discount rate, that is, to falling AA corporate bond yields. First, most pension plans invest very little of their plan assets in corporate bonds rated AA, or, for that matter, in corporate bonds of any credit rating. Second, the duration of most pension plans' bond portfolios, and thus of overall plan assets, is generally much shorter than the duration of their liabilities.

Of the 30 to 40% of their portfolios that pension plans allocate to bonds, the vast majority are benchmarked against the Barclays Capital US Aggregate Bond Index (formerly the Lehman Brothers US Aggregate).² Corporate bonds comprise only about 20% of this broad investment-grade benchmark, meaning that corporates constitute an even smaller portion of the typical plan's total assets – about 6% to 8%, to be precise (0.20 x 0.30 or 0.40). Moreover, the duration of the Barclays US Aggregate index tends to vacillate between 3.5 and 5.0 years, due largely to the unstable durations of the 40% of the index devoted to mortgage-backed securities. Meanwhile, the duration of the average pension plan's liabilities remains fairly constant at around eleven (11) years. Since duration is a measure of bond price sensitivity to changes in interest rates (the longer the more sensitive), declines in the pension discount rate (AA corporate yields) act to push up the value of plan liabilities far faster than any corresponding rise in portfolio bond prices can increase the value of plan assets. In other words, under conditions of falling AA yields, plan assets simply cannot keep pace with the increase in plan liabilities – due to the under-allocation to corporate bonds and to the mismatched durations of assets and liabilities.

Pension plans, therefore, can improve the “tracking” of their assets and liabilities in either or both of two ways: 1) by increasing their allocation to corporate bonds, and/or 2) by increasing the duration of their bond holdings and thus of overall plan portfolios. Better still, plan sponsors can do both simultaneously by making an allocation to long-duration corporate bonds, as represented below by the Barclays Capital US Long Corporate Bond Index.⁴ With a duration of eleven (11) years, this index provides a near-perfect match for the liabilities of the average US pension plan. In addition, its duration is much more stable than the duration of the more popular Barclays US Aggregate.



Source: Barclays Capital, as of March 31, 2009

The Long Corporate Cure

Because liabilities are valued as if they were 100% corporate bonds, plan sponsors always have the option of “locking in” their plans’ funded status by investing in a portfolio consisting 100% of corporate bonds. However, many plan sponsors are understandably reluctant to lock in the low funding levels to which their plans have been reduced by the recent bear market in equities. While investing 100% in bonds with a duration equal to plan liabilities provides near-perfect protection against further declines in AA corporate bond yields, this major step requires a certain comfort level with the greater volatility of longer-duration assets. It also means forgoing any improvement in plan funding levels that would result from future rallies in the equity or other asset markets. And, of course, any plan that locks in a funded status below 100% is effectively committing itself to future cash contributions equal to the shortfall. All this being said, pension plans seeking even partial immunization against rising liability values may do well to consider making an allocation to corporate bonds – or, at the very least, extending the durations of their bond portfolios. Long corporates, of course, do both at once.

Corporate vs. Credit: Choosing an Index Benchmark

In selecting a benchmark for long corporate bonds, it is important to distinguish between the aforementioned Barclays US Long Corporate and the similar Barclays US Long Credit index.³ While the former consists entirely of corporate bonds with maturities of ten years and longer, the latter allocates some 16% to so-called “non-corporate” credit. These are largely the debentures of sovereigns, supranational organizations, foreign agencies, and foreign local governments that, for whatever reason, have chosen to issue debt securities denominated in US dollars – hence their inclusion in the US index. Because these bonds enjoy the implicit backing of their local governments, they generally trade at lower yields, which reduce the yield of the Credit index by some 22 basis points below that of the Corporate. The table below highlights this key difference, as well as the chief reason for it.

Barclays US Long Corporate Index vs. US Long Credit Index		
	US Long Corporate Index	US Long Credit Index
Inception Date	1/1/1973	1/1/1973
Number of Issues	897	982
Market Value (millions)	\$497,983	\$587,985
Average Duration	10.86 years	10.81 years
Average Maturity	24.76 years	24.14 years
Average Quality	A-	A-
Yield to Maturity	8.01%	7.79%
Industry Weights		
Industrial	63.8%	54.1%
Utility	16.9%	14.3%
Financial Institutions	19.3%	16.3%
Non-Corporate	0.0%	15.3%
Sovereign	0.0%	7.6%
Supranationals	0.0%	0.9%
Foreign Agency	0.0%	1.0%
Foreign Local Government	0.0%	5.8%
Grand Total	100.0%	100.0%

Source: Barclays Capital, as of March 31, 2009

Plan sponsors and investment managers may occasionally choose the Credit over the Corporate index for either good or less-good reasons. On the one hand, the 15% allocation to non-corporates represents an in-benchmark sector that affords active managers a “refuge” during periods of flight-to-quality and

heightened corporate credit risk. On the other hand, these same managers may prefer the Credit index simply because they think that they can outperform it over time by underweighting these quasi-government securities and thus out-yielding the benchmark. At the end of the day, however, the chief reason to select the Corporate over the Credit index may be that the former simply suits better the primary purpose of the portfolio – which is to match (or at least to approximate) the yield and duration of the asset specifically used to value pension plan liabilities.

To Constrain or Not to Constrain

Some have thought to sharpen further the match with pension liabilities by constraining the US Long Corporate index, either to bonds with maturities of twenty (20) years or longer, or, more commonly, to bonds rated single A and higher. However reasonable and well-intentioned on the surface, these restrictions prove considerably less sound on closer examination – particularly given the importance of risk in building and managing corporate bond portfolios. The reason is loss of diversification.

Perhaps the most basic of all modern investment truths is that the efficiency or risk-adjusted performance of any portfolio improves with an increase in its opportunity set, that is, with an increase in the number of decision tools employed in its management. In its most common configuration, the Barclays Long Corporate index consists of all US investment-grade corporate bond issues with maturities of ten years and longer. As seen in column 1 below, the full index represents a total market capitalization of \$498 billion and contains some 897 issues from 311 individual issuers. However, if this benchmark is constrained to bonds with maturities of twenty years and longer (column 2), its market capitalization shrinks by nearly \$100 billion to only \$399 billion, and the number of issues and issuers to 662 and 267, respectively. Reducing the opportunity set by \$100 billion and by 235 issues may not be such a good idea considering the huge potential demand from pension funds compared to the relatively small size of the investable corporate bond universe. More than \$2.3 trillion in US pension portfolios stand to benefit from owning a portion of the market's roughly half-trillion dollars in long corporate bonds. If all plans decided to begin immunizing their liabilities in this way, demand for long corporates could outstrip supply by a factor of more than four-to-one.

Effects of Common Constraints on the Barclays US Long Corporate Index				
	1	2	3	4
	Full Index (+10 years)	+20 Years Only	A or Higher Only (no BBBs)	Both +20 Years and no BBBs
Market Value (\$ bn)	498.0	399.7	311.1	253.6
Issues	897	662	493	359
Issuers	311	267	158	131
Yield to Maturity	8.01%	7.99%	7.48%	7.47%
Credit Quality Composition				
AAA	0.8%	0.9%	1.2%	1.4%
AA	13.6%	13.9%	21.8%	22.0%
A	48.1%	48.7%	77.0%	76.6%
BBB	37.5%	36.5%	–	–
Industry Composition				
Financial	19.3%	20.2%	28.1%	29.4%
Industrial	63.8%	61.9%	57.8%	55.0%
Utility	16.9%	17.9%	14.1%	15.7%

Source: Barclays Capital and Standish, as of March 31, 2009

The Long Corporate Cure

Even greater loss of diversification results from the exclusion of securities rated below single A, which is to say bonds rated BBB. As seen in column 1 above, BBBs constitute 37.5% of the full Barclays Long Corporate index; hence their removal from this universe (column 3) reduces its market capitalization from \$498 billion to only \$311 billion. More problematic, the elimination of BBBs reduces the number of issuers by almost half, or by 49%. Because of the long-term secular decline in the credit ratings of US corporations, the number of issuers rated BBB now equals almost exactly the total number of issuers enjoying all higher credit ratings. Currently, some 153 issuers are rated BBB, while only 158 issuers enjoy ratings of either AAA, AA, or single A.

Excluding BBBs also reduces access to certain industries that offer attractive investment opportunities, particularly at this stage in the economic cycle. Railroads, supermarkets, and especially electric utilities are heavy issuers of bonds rated BBB. These companies typically possess plenty of hard assets as collateral, and they produce stable cashflows from recession-resistant businesses that generally allow them to outperform more cyclically sensitive companies during periods of slow economic growth. Yet, as of March 31st, 2009, BBB issues trade at yields-to-maturity 1.28% higher than issues rated single A, and 1.80% higher than issues rated AA. Their removal from the index thus reduces by 53 bps its yield-to-maturity – which, of course, is the bond world's proxy for prospective annualized return. Now hardly seems the time to limit investment in these kinds of companies.

Worse still, the removal of BBBs results in a substantial increase in the weight assigned to the troubled financial sector, where issuers must desperately seek to avoid BBB ratings for reasons of credibility and counterparty confidence. The BBB constraint raises the weight of financials in the index from 19% to 28%, and it does so at a time in the credit cycle when a AA bank probably represents more risk than a BBB utility. Finally (column 4), these two restrictions together – to maturities over 20 years and to ratings single A or higher – reduce the investable universe to levels that are neither practical from the standpoint of a portfolio manager nor prudent from the standpoint of a plan's other fiduciaries. Such restrictions seem particularly inadvisable at a time when demand for long corporate bonds could easily outstrip available supply. Sponsors who remain concerned about the extra credit risk of BBBs may want to consider reducing their equity allocations instead.

Potential for Equity-Like Returns

By far the most common argument advanced in favor of corporate bonds these days is the short-term or tactical one: Investment-grade corporates now trade at historically wide spreads and high yields-to-maturity that discount default rates nearly twice those seen during the Great Depression, and that therefore seem unlikely during the current credit cycle. To the extent that these default fears prove excessive, therefore, investors in corporate bonds stand to enjoy strong equity-like returns comprised of both coupon and considerable price appreciation. Interestingly, this popular argument both holds up under closer scrutiny and gains strength from the attraction of equity-like returns at a time when equities themselves seem unlikely to provide them. At the root of this optimism is the current depressed level of corporate bond prices, reflected in these historically high yields-to-maturity.

As of March 31st, 2009, the average dollar price of all bonds included in the Barclays US Long Corporate index was \$86.23, or around 86 cents on the dollar. This cycle has seen by far the lowest average bond prices in the 37-year history of this index, which dates back to January of 1973. Since bonds are issued at par and mature at par (or are called at a premium to par), these securities can be said to offer investors a potential 14% return from price appreciation alone. Of course, the eleven-year duration of the index means that its appreciation potential is actually much greater – eleven price points for every 100 bp decline in yields, to be precise. In addition, the bonds in the index pay an average annual coupon of 6.76%. Coupon payments

are a contractual obligation of the company and not something paid out, like stock dividends, at the discretion of directors and senior management. Taken together, this built-in appreciation potential and these contractual coupons account for the 8.01% yield-to-maturity of the index – which approximates the prospective annualized return available to investors in US long corporate bonds.

The unknown in all this, of course, is the effect of defaults and downgrades on prospective returns. According to Moody's, which maintains default data back to 1920, the worst 10-year annualized default rate for *all* corporate bonds – including both high-yield and investment-grade – was 3.5%. This occurred during the ten years of the Great Depression, ending officially in 1938. In 2008, by contrast, the capitalization-weighted default rate for global investment-grade corporate bonds was only 0.40%, attributable almost entirely to the collapse of Lehman Brothers and Washington Mutual. Major non-US banks that also collapsed last year were not included in this calculation; but even if they had been, they would still have raised the 2008 global investment-grade default rate to only 1.5%.

In fact, default rates for US investment-grade corporate bonds have historically been very low. According to Moody's, in the nearly forty years since 1970, the worst five-year *cumulative* default rate for US investment-grade corporates is only 2.4%; and the *average* five-year cumulative default rate over this full period is only 0.9%. One reason is that the Lehmans and Washington Mutuals of the world are rare exceptions to the general rule. Most investment-grade companies develop credit problems very gradually and are downgraded only in stages to below-investment-grade or high-yield status. The result is that any eventual default is ultimately charged against the universe of high-yield bonds, rather than against investment-grade corporates.

Downgrades to “fallen angel” status, however, have an effect on bond prices that must be factored into any attempt to forecast returns for investment-grade corporate bonds. One method of modeling this effect is simply to treat fallen angels as defaults with a high recovery rate or value. Recovery rates indicate how much of their original investment bondholders eventually regain after default, expressed as a percentage of par. While defaults and recoveries among investment-grade issuers have been too diverse and infrequent to produce any meaningful average, the more common fallen-angel downgrade generally causes bonds to trade at new prices somewhere around 80% of their prices before expected downgrade. Standish anticipates that approximately 4% of the current investment-grade universe will be downgraded to high-yield status over the next year.

Applying this methodology and these assumptions, it seems clear that investment-grade corporate bonds now trade at yield levels that discount defaults and downgrades in excess of any historical or likely future reality. In a March 2009 study, Deutsche Bank, using what it calls “average” recovery rates, concluded that US investment-grade corporate bond yields had priced in a five-year cumulative default rate of 40%. Even when it assumed a recovery rate of zero (highly unlikely, given historical experience), Deutsche Bank found that the present level of yields still implied a cumulative five-year default rate of 25%. Standish, treating fallen angels as defaults and assuming recovery rates of 35% and 70%, finds that as of March 31st, 2009 spreads discount five-year cumulative default rates of 8% and 16%, respectively.

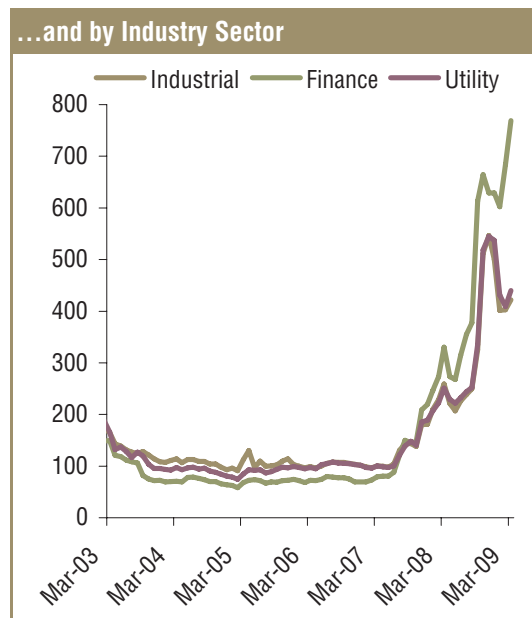
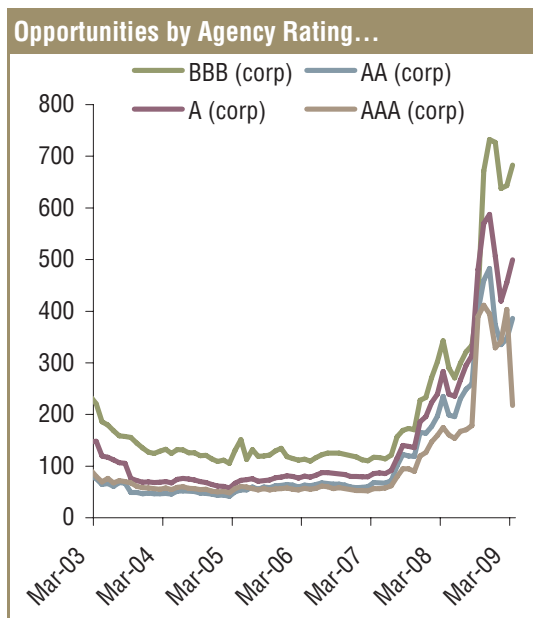
Consider again that 3.5% is the worst 10-year annualized default rate found by Moody's for *all* corporate bonds, and that this occurred during the ten years of the Great Depression. Consider, too, that 2.4% is Moody's worst five-year *cumulative* investment-grade default rate since 1970, and that 0.9% is the *average* cumulative five-year default rate over these forty years. By these standards, then, today's depressed prices and elevated yields make investment-grade corporate bonds look historically cheap. In any case, it does not seem at all unreasonable to expect that, over the next few years, US investment-grade long corporate bonds may provide investors with annualized returns in excess of their 8% yield-to-maturity.

The Long Corporate Cure

Unprecedented Opportunities for Active Management

The current credit market dislocation, besides raising the return potential of long corporate bonds, has also created huge value-adding opportunities for active managers with skills in areas like industry allocation, fundamental credit analysis, capital structure arbitrage, and plain old-fashioned bond-picking. Some of these opportunities have been suggested in earlier paragraphs. The current carnage in the financial sector, for example, represents perhaps the opportunity of a generation – and perhaps its greatest risk as well. Outsized returns await the manager who can distinguish the winners from the losers in this highly pressured sector – the manager who can separate the “thrivers” from the mere survivors, and both of these from banks that will ultimately be merged away, nationalized, or simply allowed to fail. In the meantime, and at the opposite end of the spectrum, many railroad, supermarket, and electric utility companies, despite their hard assets and recession-resistant cash-flows, have been punished along with other BBB credits in an environment where downgrades will likely exceed upgrades for some time. In the last nearly forty years, however, BBBs have exhibited more positive ratings migration than any other quality tier. Bond managers who can anticipate these upgrades – who can identify these so-called “diamonds in the rough” – are likely to outperform their corporate bond benchmarks in the years ahead.

The effect of the current credit crisis has been a broad market “contagion” that offers unprecedented opportunities for skilled managers to add return in excess of their corporate bond benchmarks. Nowhere are this contagion and these opportunities more evident than in the indiscriminate “tiering” along lines of agency credit rating and broad industry sector. At its most basic level, the job of the active corporate bond manager consists simply of determining where the rating agencies and other investors have got it wrong – that is, of identifying bonds that are either mis-rated by the agencies or mis-priced by the market, or both, as seems so often the case. This job has actually been made easier by the current market dislocation, which has also increased the incremental returns available to those who can do it well. Generally wider spreads and broader market tiering point to an increase in both opportunity and potential reward.



Source: Barclays Capital and Standish, as of March 31, 2009

Standish and US Long Corporate Bonds

As of March 31st, 2009, Standish managed a total of more than \$11 billion in US investment-grade corporate bonds, plus another \$2 billion in US high-yield corporates. The firm also currently advises more than \$24 billion in corporate assets through its Global Workout Solutions group.⁵ Of the \$11 billion under management in investment-grade corporates, more than \$3 billion is invested in corporate-only portfolios, and \$1.2 billion specifically in US long corporate mandates. This longstanding Standish strategy is currently the firm's fastest-growing. In the first quarter of 2009, Standish added four new clients with assets totaling more than \$600 million in long corporates.

Of special interest to both current and prospective clients has been a new commingled vehicle, a bank-maintained collective fund managed by the Standish investment team in their capacity as dual officers of Standish and The Bank of New York Mellon. This fund offers institutional investors broader diversification of corporate bonds than can be achieved in a separate-account portfolio, almost regardless of size. Actively managed against the full Barclays US Long Corporate index, this portfolio maintains a duration very near the index duration of eleven (11) years. Pension clients who desire a more precise duration match with plan liabilities can achieve this precision through what Standish calls informally its "hub and spoke" structure. The "hub" is simply the client's pro-rata share of the bank-maintained collective fund, comprised entirely of US long corporate bonds and representing the bulk of client assets. The more precise duration match is achieved through the "spoke," a smaller, single-client "overlay" portfolio consisting of futures, swaps, US Treasuries, or Treasury STRIPS, which Standish uses to maintain the client's specific duration target. To the client, the hub and spoke appear as a single integrated portfolio.

Conclusion

Whatever their return expectations or tendencies toward tactical investing, US pension plans today possess a number of sound strategic reasons for increasing their allocations to US long corporate bonds. These include: 1) exposure to an established US asset class that remains generally under-represented in US pension plan portfolios; 2) improved duration matches and tracking of assets with liabilities in ways that reduce plan interest rate risk, balance sheet volatility, and the need for future cash contributions; 3) availability of a fully investable long corporate bond index that meets almost exactly the duration, credit, and contribution needs of most US pension plans; 4) potential for equity-like price returns from a normally coupon-driven asset class, and at a time when equities themselves seem unlikely to provide such returns; 5) an environment that offers unprecedented opportunities for skilled managers to add value over and above their corporate bond benchmarks; and finally, and perhaps most importantly, 6) at least partial immunization against the damage likely to be done by a declining discount rate – in other words, protection against the second half of a new and potentially more devastating "perfect storm." Given the many strategic reasons for investing in US long corporate bonds, future returns anywhere near their 8% yield-to-maturity might properly be considered a bonus – or mere icing on the cake.

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The Long Corporate Cure

Author's Note: The author wishes to acknowledge contributions on the liability side from Andrew Wozniak, CFA, ASA, Director of the Standish Product Solutions Group, and on the asset-management side from Andrew Catalan, CFA, Director of Investment-Grade Credit Strategies and Senior Portfolio Manager of Standish's US Long Corporate bond portfolios.

Disclosures

¹ *The simulation shown on Page 4 of this paper makes and employs the following basic assumptions: a pension plan with assets invested 60% in the S&P 500 index and 40% in the Barclays Capital US Aggregate Bond Index, gross index returns (unmanaged indices include no deductions for management fees or transaction costs), re-investment of all dividends and coupons, a starting value for the S&P 500 of 735 on February 28, 2009, and a constant rate of recovery toward the October 2007 high of 1576 over the three-year period ending February 28, 2012. As noted in the text of the paper, all three scenarios assume a return to "normal" AA corporate spreads of 80 basis points (their average over the last twenty years) and underlying 30-year Treasury yields of 5%, 4%, and 4%, respectively. This simulation is intended for general illustrative purposes only and is not an attempt to forecast funding ratios for any particular pension plan or plans.*

² *Barclays Capital US Aggregate Bond Index is constructed to be broadly representative of the US investment-grade bond market. It therefore includes publicly issued, investment-grade, fixed-rate, dollar-denominated, non-convertible, US government, corporate, mortgage pass-through, and asset-backed securities with maturities of at least one year. All securities included in this and the other Barclays indices below must have at least \$250 million in par amount outstanding.*

³ *Barclays Capital US Long Credit Index is a credit subset of the Barclays US Aggregate index and represents publicly issued, investment-grade, fixed-rate, dollar-denominated, non-convertible, US corporate and non-corporate debt securities with maturities greater than 10 years.*

⁴ *Barclays Capital US Long Corporate Index is a corporate-only subset of the Barclays US Long Credit index and represents publicly issued, investment-grade, fixed-rate, dollar-denominated, non-convertible, US corporate debt securities with maturities greater than 10 years.*

The foregoing index licensors do not endorse, sponsor, sell or promote the investment strategies or products mentioned in this paper, and they make no representation regarding advisability of investing in the products or strategies described herein.

⁵ *Since its May 2008 launch, the Standish Global Workout Solutions Group has taken on a total of \$24 billion in discretionary and non-discretionary assets, based on net asset values at take-on.*



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