



## Two Different Worlds (We live in...)

Whether it's still a man's world (or ever was) is debatable, but I must admit I've been more than glad to be one no matter what the conclusion. About the only time I wished the tables were reversed was when I had to call Carla Mathews to ask her to the Junior Prom in 1961. After hanging up the phone, my eavesdropping older brother gave me the extreme compliment, "Well done," he said. It should have been – I'd rehearsed it 23 times and was drenched in sweat. Being a guy was for the birds, I thought. But that was it – until now that is. Recently I've come to understand that some of the things men do don't make too much sense. Of course, there's the obvious: we behave badly by starting most of the wars, committing most of the crimes, and not taking our wives out to dinner enough. But these foibles aside, and not being personally guilty of any of them, most critically the third, I'm finding it increasingly hard to defend my sex when it comes to our behavior on Sundays. Not going to church? Yeah, maybe, but I'm talking about what happens after morning services – I'm talkin' about NFL Foot-

ball! My gripe with the sport has little to do with the game itself, but more to do with the hold it has on most of us. Most women fail to understand this, because on Sundays, at least, we live in two different worlds. A guy, you see, just doesn't root for his team – he is his team. Doubt me? Check out a TV game at Lambeau Field and watch a Packer leap into a crowd of frenzied males after scoring a TD. Aside from the helmet and pads, the player and crowd are indistinguishable – they have melded into one. The psychological explanation for this of course germinates in the bowels of caveman history when it was our job to slay the dragon and protect the campfire. We still have those physical urges but no socially acceptable way to release them except vicariously on the playing field. Understandable if you're a guy I suppose, but the women fail to get the connection. Still it's sort of pathetic, guys, is it not? Other than Iraq, Afghanistan, and future countries unknown, there are no more dragons to slay and it seems like we should just sort of get over it and move on. I am not the San Francisco 49ers, even though

every year – no matter who the players – my ego ascends and plunges with their Sunday afternoon performance. We should get a life as they say and get in touch with our feminine side – talk more on the phone, do more shopping, try and decide which shampoo will make our coif seem more full-bodied and lustrous. Come to think of it, I think I'll stick to being a guy. We don't have to worry about bad hair days and besides – that Carla Mathews wasn't worth 23 rehearsals. She dumped me the day after the Prom.

This theme of two different sexes, two different perspectives, and two different worlds has its counterpart in the bond market believe it or not. Just the other day after a disastrous market for bond prices, I was walking rather jauntily towards the sandwich shop at the corner of our PIMCO office building. "You're acting pretty chipper for a guy that probably just lost a billion dollars for his clients," someone called out in passing. "Yeah, but I lost less than the market," I countered with more than a touch of pride. Hubris? Lack of concern? Well, maybe, but the stranger's comment reflected a world of absolute, while mine was grounded in a world of relative, returns. We were both looking at the day's market from two incongruent perspectives much like Newton and Einstein viewed the universe with different yet seemingly irrefutable

theories. We were both right. Granted I couldn't continue to lose a billion, day after day. But, content in the knowledge that the bond market would provide positive returns over "time," and that by beating the market on more days than most PIMCO would provide value added to its clients, I could justify that little snap in my step that some might consider to reflect indifference.

And so? Well to extend this *Outlook* beyond a Junior Prom phone call and a trip to the sandwich shop let me suggest that there is a Newtonian way to manage bonds and an Einsteinian way to manage bonds and that the choice of perspective, while completely at the discretion of the investor, will lead to differences in risk and long-term returns. To a considerable extent, this conundrum reflects a difference in what actuaries would call the "horizon premium." Since investors frequently attempt to match the duration of their bond portfolios with the estimated duration of their obligations, money managers/clients with short-term time horizons view long duration portfolios as risky due to their price volatility while managers/clients with long-term horizons view short duration portfolios as risky due to their reinvestment risk. This latter group, to the extent they choose to invest in bonds, would prefer to live in what I call "absolute duration" space while the former group would

occupy “index duration” space. It turns out that most bonds are actively managed in “index duration” space, with the Lehman Aggregate being a prime example of a U.S. domestic bogey, and a host of others serving as alternative U.S. and global benchmarks. That they may be too short of a duration to accurately reflect a pension fund’s liabilities is a valid concern, but not the subject of this *Outlook*. What I am positing at the moment are two different bond worlds, one in “Lehman index” space with relative short durations, and one in “absolute duration” space with extended and hypothetically infinite durations. My objective is to show you how the choice of one versus the other (and ultimately something in between) leads to some strangely different ways to run a railroad or manage a bond portfolio.

While Lehman index vs. absolute duration space management has implications for almost everything a bond manager does, whether it be the obvious choice of duration, or the less apparent areas of curve, sector (corporate vs. government, domestic vs. global),

and quality, let me focus on the yield curve to illustrate my point. I’ll begin with a rather startling observation. A 30-year Treasury bond, which today yields 5.0% or so when quoted in the Wall Street Journal, yields only 2.2% in Lehman index duration space. How so? How could a bond yield two different numbers in two different worlds? Well the seemingly impossible disparity is mandated by the limited horizon/duration of index space and accentuated by today’s extremely low short-term rates. Imagine trying to construct a portfolio using as many 30-year bonds as possible in index space using the approximate 4.2-year duration Lehman Aggregate as a bogey. Remember, what I’m trying to show here are the varying “yields” of different maturity bonds when a bond manager structures a portfolio with a constant duration. The fact is that this portfolio can hold only 30% bonds because of the 4.2-year duration limitation while the rest consists of short-term cash maturities which yield only 1%. Together the combination has a duration of 4.2 but “yields” only 2.2% as shown in Table 1 below.

**Table 1**

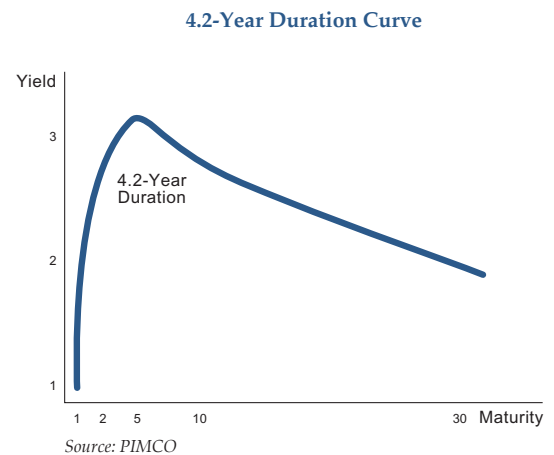
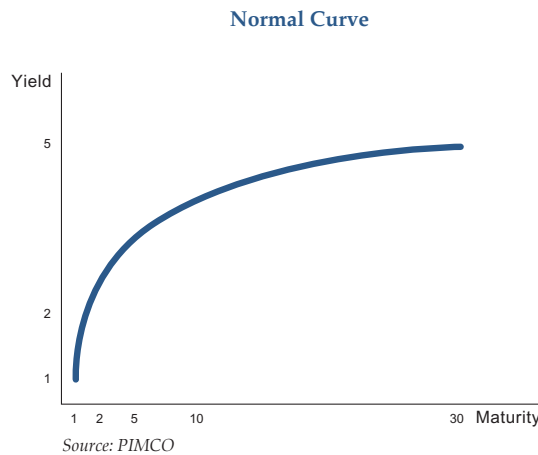
Bond	Duration	Yield	% Holding
30-Year Treasury	14	5.0	30
30-Day Commercial Paper	0	1.0	70
Portfolio Average	4.2	2.2	100

Source: PIMCO

This table and its averages haven't actually changed the yield of the 30-year Treasury bond. Uncle Sam is still on the hook for 5.0% come rain or shine. But a portfolio manager that chooses to buy one in Lehman index duration space must combine it with so many units of low yielding cash that its return as a portfolio holding over a 12-month period with no market movement will only be 2.2%. This observation holds for every 30-year bond held in the portfolio whether it be 1 or 5,000. Each one "yields" only 2.2% in Lehman index duration space. Using similar methodology, it can be shown that a 10-year Treasury "yields" 2.8% and a 5-year "yields" 3.2% – both without obvious additive returns from rolldown – in this very steeply sloped yield curve

world. Using the liberty of levering up shorter maturity portfolios to equal the 4.2 Lehman Aggregate index duration produces a "yield" curve in this index duration space that scarcely resembles the one almost all of us use everyday.\*

Now, stopping here would be informative but hardly complete. Up until now, this *Outlook* has shown disparities in yields for bonds held in Lehman index duration space vs. normal yield curve assumptions. Absolute duration space, however, and the higher yields they generate are becoming increasingly important to those that view reinvestment risk as more significant than price volatility risk, and concomitantly to many of the same managers/clients who "require" higher returns to hedge



\* For the incredulous reader that finds this hard to stomach, let me admit that because intermediate yields are more volatile than long term yields that the volatility-adjusted duration for say a 5-year Treasury is really higher than 4.5 years. Let me also acknowledge the inevitable argument of forward curves indicating the "return" of intermediates to be less than shown by its simple yield if rates move up and prices down as forecasted. In addition, the additive features of rolldown complicate the comparison in the other direction. Having said that, I still feel it instructive to provide a beginning snapshot of what different maturities "yield" in Lehman index and absolute duration space and then let the asset manager adjust from there. The fact is that forward curves are not necessarily accurate forecasters of future yields and that at least some of the higher yield volatility of intermediates vs. long-term bonds falls into the category of noise.

**Table 2**

Bond	Duration	Yield	% Holding	Total Duration	Total "Yield"
30-Year Treasury	14	5.00%	300	42 Years	13%
5-Year Note	4.5	3.00%	933	42 Years	19%

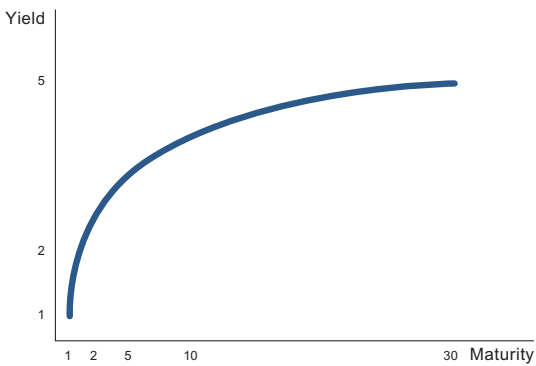
Source: PIMCO

liability discount rates of 8, 9 and 10% in their pension plans. This is partially the world of the hedge funds, as well as others that utilize bonds to produce such returns via long durations, levered or not. In this universe, the 1% short rate, which distorted the yield/return of a 30-year Treasury downward to 2.2% in Lehman index space, can be used to shoot its yield/return skyward in absolute duration space. With a borrowing rate of 1% and a true yield of 5.00%, a portfolio of 100% Treasury bonds levered 3 to 1 can produce a portfolio that yields/returns 13%, although its duration

would be a hefty 42 years as shown in Table 2 above.

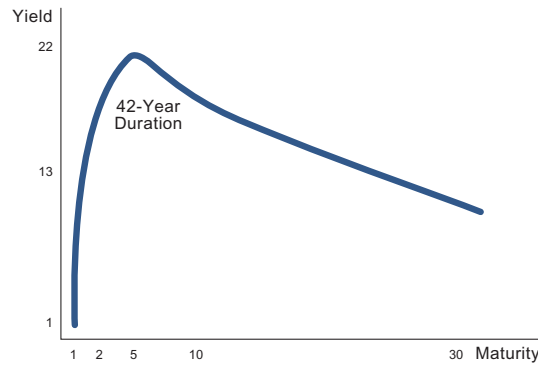
An equally illuminating observation however is that a levered portfolio of 5-year notes to equal that same duration of 42 years produces a yield/return of 19% given no price change (and with no positive contribution from roll-down). Holy Cow Batman, these bonds can outperform stocks! Adding other examples to the two previous ones produces a yield curve in absolute duration space with an identical shape but at much higher yield/return levels than in our previous example.

**Normal Curve**



Source: PIMCO

**42-Year Duration Curve**



Source: PIMCO

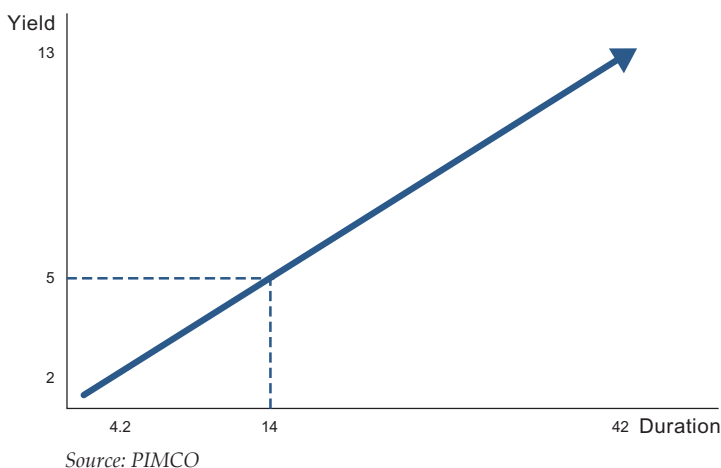
# Investment Outlook

For any maturity Treasury, these two new inverted U-shape curves can then be used to display a new yield “curve” in Lehman index, absolute duration, or even infinite duration space. Not surprisingly, in the chart below which tracks the 30-year Treasury, its stated yield (5.0) intersects the diagonal line at its actual duration of 14 years. These “yields” of course are not constant, and are subject to the variability of the short-term borrowing/investment rate. Should the Fed raise yields from the current 1%, a portfolio constructed on the basis of permanence or at least semi-permanence would perform perversely. Not only would its yield decline for all durations above 14, but its price loss would be magnified by the leveraged long durations.

What is a bond investor to make of all this? Why is it necessary to describe the different worlds of “Lehman Index”

and “absolute duration” space? Several conclusions come to mind. First of all, the double-digit returns from the “absolute duration” portfolios give you a peephole into the future of our finance based economy. For investors, corporations, and financial entities that believe they have a birthright to the high returns typical of the 90s, the amount of duration, leverage, and therefore risk required to attain it is considerable if not egregiously excessive. 42-year duration portfolios can provide returns of 13-20+% in this yield environment but a 50 basis point rise in rates across the curve erases them over a 12-month span and a 250 basis point rise wipes out all of their capital – gonzo, kaput, no money left in the bank. While our economy is undoubtedly not levered to a 42-year duration, it is levered. The banks are levered 10 parts assets to one part capital to begin with. The hedgies the same. Agencies even more. As their

30-Year Treasury Yield in Durational Space



asset durations move higher, the more susceptible we become as an economy to going kaput as well should interest rates rise. All the levered players mentioned above are making hay while the short borrowing rate is at 1%. Change that borrowing rate by much Alan Greenspan and you risk another bubble popping – this time the U.S. economy.

Secondly, for those of us who live in Lehman index space, the yields or returns of the intermediate part of the curve exceed that of the long end, despite what appears to be just the reverse. The negligible return of 1% cash produces portfolios with substantially diminished returns towards the long end of the curve. If 30-year bonds yield only 2.2% from a Lehman indexed portfolio context, they can only outperform intermediate Treasuries if yield spreads between 5- and 30-year maturities narrow by nearly 60 basis points per year. That, in turn, should only stand a decent chance of occurring if the extraordinary measures of the Bernanke deflationary fire extinguisher are put into play or the Fed raises short rates substantially. Neither of these two events is a strong possibility. Intermediate maturities are the more than odds on favorite for yield and return over the next few years, in Lehman indexed or (as the additional curves point out) in “absolute duration” space. If the reader concludes that

this is simply a complicated rationale for the “carry” trade now employed by banks and hedge funds, then so be it. One day this trade will be a money loser. As long as the Fed stays easy and real rates stay low, it should be a money maker.

Third, I would be remiss not to point out a question from a client at one of our recent PIMCO events. “What are we to do in this world of low indexed returns?” he asked. If PIMCO can only provide 4-5% from its style of unlevered investing and if the stock market (my assumption) does the same, how can we possibly meet our plan return assumptions, he implied. I replied that new PIMCO innovations such as our real return backed commodity index strategy and our own absolute return strategy, which attempts to maintain durations close to 0 as opposed to 42 years, are possibilities. Absent those, however, an investor or a fund attempting to produce double digit returns in a 4-5% return world does so at the expense of higher risk and leverage advantaged by today’s 1% borrowing yields. “Would PIMCO move in this direction?” Well, it’s one thing to extend durational bogies to 10+ years in order to match plan assets with liabilities – as a matter of fact, that’s a reasonable response that more than several clients have made in recent years. Peter Bernstein has long maintained that a

fund's true benchmark/index should be tied to its liabilities and not to the "market." But PIMCO as one giant hedge fund? No – not our style, not our risk preference, not our secular outcome forecast. Best to stick to our knitting with some innovations at the edges and our structural philosophy, which benefits portfolios in today's environment. How we and our clients can best prosper in this too levered finance based economy is to focus on intermediate maturities because they "yield" more under reasonable scenarios. This observation, combined with previously mentioned reflationary hedges involving TIPS and small amounts of emerging market bonds among other strategies, should be more than enough to make our world and your (the clients') world, one and the same for years to come.

William H. Gross  
Managing Director

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