Beware The Wu Wei of Passive Bond Investing

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by Peter Chiappinelli
of GMO

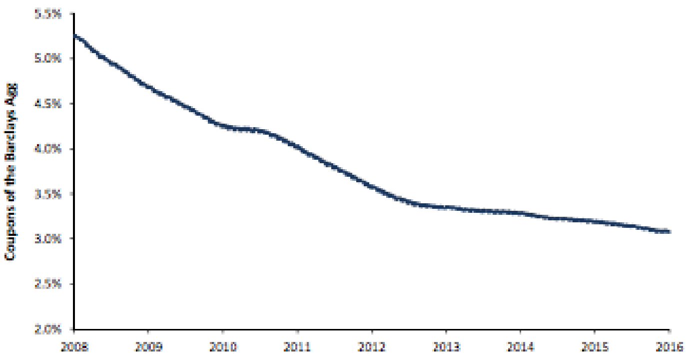
In Taoist philosophy, there is an important concept called wu wei, which translates loosely to "doing-by-not-doing." While Lao Tzu, the 6th century BC author of the Tao Te Ching and *founder* of Taoism, most assuredly was not writing about fixed income portfolios, the idea of "doing-by-not-doing" aptly applies to what we see happening in passive bond index space today. Many have extolled the virtues of a wu wei approach to investing, and 2016 was a banner year for flows into all sorts of passive strategies through index funds and ETFs. But we think this is no time for wu wei in bonds; in fact, passively getting exposure to the Bloomberg Barclays US Aggregate Bond Index (aka "the Agg") is downright dangerous today. The Agg --- prevalent in classic "60/40" institutional portfolios and defined contribution target date frameworks --- is aggressively taking on more risk at possibly the worst possible time. (Note: We have also written extensively, more generally, on the problems with indexing a bond portfolio*). There are three main reasons for our concern: the simple math of bond duration; the changing composition of the index; and the very logical financing behavior of corporate borrowers. Bond Math and Duration Without doing a rehash of intricate bond math,

Bond Math and Duration

Without doing a rehash of intricate bond math, duration is an important calculation of bond risk. Though it has many variants, at its root duration measures the sensitivity of a bond's price to a shift in yields. For example, a bond (or a bond portfolio) with a duration of five years means that for every 1% shift upwards in yields, there is a 5% drop in the price of the bond. Duration is measured in years because it is a function of the timing and magnitude of a bond's cash flows (coupons and principal repayment): the more distant the cash flows, the higher the sensitivity (i.e., higher risk) to a change in interest rates, all else held equal. The cleanest example of this is the 30-year zero-coupon bond, which pays a single massive cash flow 30 years down the road, and therefore this bond has a duration of exactly 30 years. There are no coupon payments along the way that would dampen its sensitivity to a change in yields. Generally speaking, the smaller the coupon, the higher the duration (and vice versa); the longer the maturity, the higher the duration (and vice versa). That's just how the math of bond risk works.

Unfortunately for investors in passive bond portfolios or ETFs tied to the Agg, bond math is making this "safer" bond portfolio much riskier than it was even a few years ago. It is now much more sensitive to a possible rise in bond yields (as we saw in November) due simply to a lower "cushion" of coupons. As shown in the chart below, coupons have dropped dramatically since the Financial Crisis of 2008 and the introduction of Quantitative Easing by the Fed. For many years leading up to 2008, the Agg happily paid its investors a healthy coupon of over 5%, but today it is a measly 3%, a number that is among some of the lowest ever recorded. This is problem number one.

Exhibit 1: Coupons Declining Dramatically

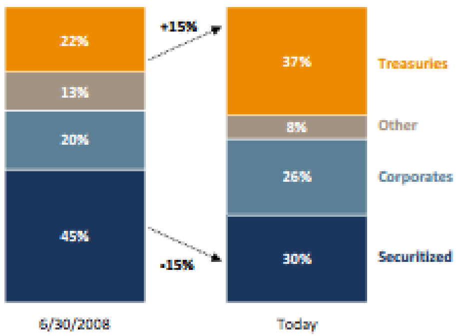


Source: Barclays

Changing Composition of the Agg

Problem number two is that the Agg has dramatically changed its stripes since the Financial Crisis. Eight years ago, the largest bond sector was securitized loans (e.g., ABS, MBS), and most of these types of securities have shorter maturities and duration. Today, longer-dated Treasuries are now the dominant sector of the Agg, while securitized bonds have dropped off significantly. This, again, has shifted both the maturity and duration of the Agg upward.

Exhibit 2: Massive Shift in Composition of the Agg
From Shorter-Dated Asset Backs to Longer-Dated Treasuries

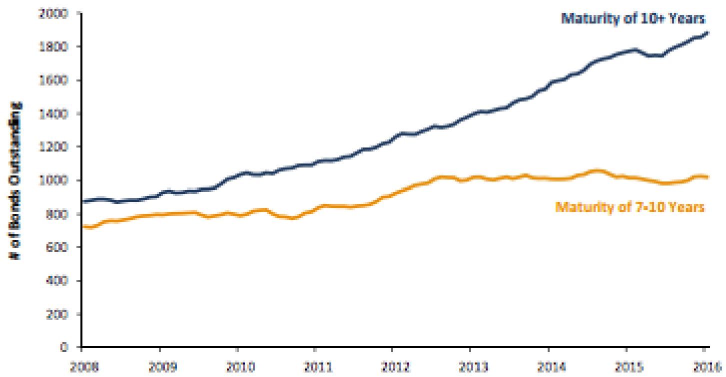


Source: Barclays

Corporate Financing Behavior

In June of 2016, Apple issued its first-ever 30-year bond…and it was NOT because Apple needed the cash! It was all about locking in unbelievably low financing costs for an extended period of time. Apple's CFO did what any reasonable, sane CFO would do in the face of historically low borrowing costs: Borrow as much as you can for as long as you can. It is logical to exploit a marketplace starving for yield. The problem, however, is that many, many CFOs are doing the same thing and this behavior is changing the composition of the Agg as more and more corporations shift their financing to longer-maturity bonds. The corporations are selling…and the Agg is buying! Or, rather, YOU are buying these longer-dated riskier bonds if you own a passive bond portfolio or ETF.

Exhibit 3: Corporations: Locking in Lower for Longer

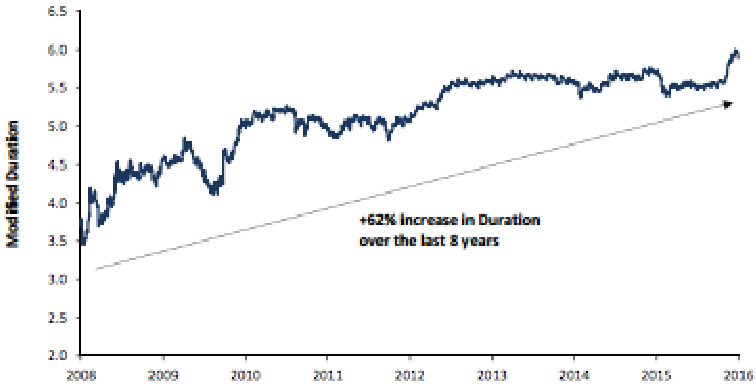


Source: Barclays US Credit Index

The Net-Net: More Risk at the Worst Possible Time

For the last eight years in particular, the yield on the 10-year US Treasury has been steadily decreasing. In July of 2016, just a few short months ago, it hit 1.37%, the lowest yield ever recorded in US history. While of course it was possible that rates could have gone lower, prudence dictated that this was a period to be reducing risk by either shortening duration or reducing bond exposure. What has the Agg been up to these last few years? Just the opposite. The chart below clearly shows this to be the case.

Exhibit 4: Duration of the Agg



Source: Barclays

The bond math of lower coupons, the changing composition of the Agg, and the issuance of longer-maturity bonds by corporate America all conspired to increase risk, at possibly the worst time. By any reasonable fiduciary standard, this was a time to be reducing duration, yet the Agg, and the passive bond portfolios and ETFs tied to it, have seen a 62% increase in duration over the past eight years.

Taoist teachings have been a meaningful source of comfort and peace for many through the centuries. But its key concept of wu wei, so warmly embraced today by hordes of investors in managing-by-not managing their classic 60/40 or passive target date portfolios, will in the near future, be a source of pain and unnecessary angst.

*For thoughtful commentary regarding indexing a bond portfolio, please see "Bond Benchmark Baloney," a GMO white paper by Bill Nemerever. This paper is available to registered users at www.gmo.com.

Peter Chiappinelli: Mr. Chiappinelli is a member of GMO's Asset Allocation team. Prior to joining GMO in 2010, he was an institutional portfolio manager on the asset allocation team at Pyramis Global Advisors, a subsidiary of Fidelity Investments. Previously, he was the director of institutional investment strategy and research at Putnam Investments. Mr. Chiappinelli earned his MBA from The Wharton School at the University of Pennsylvania and his B.A. from Carleton College. He is a CAIA charterholder, and was the founding President of the CAIA Boston chapter. He is a CFA charterholder.