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Bonds: Why Bother?

Written by Robert Arnott

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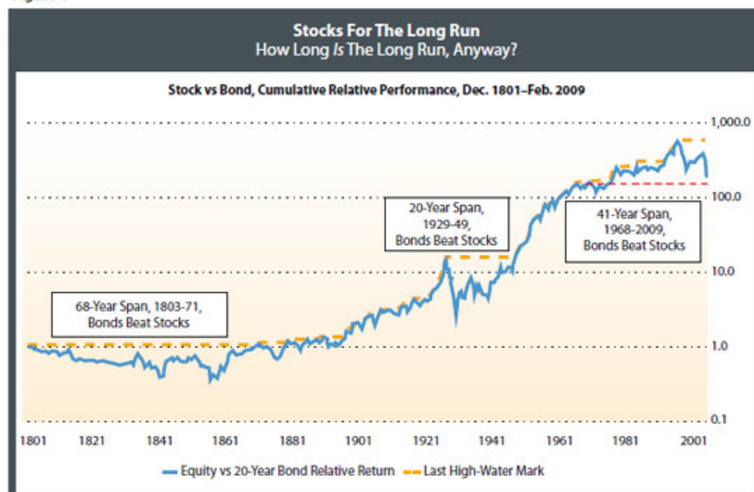
For four decades, from time to time, we hear this question: Why bother with bonds at all? Bond skeptics generally point out that stocks have beaten bonds by 5 percentage points a year for many decades, and that stock returns mean-revert, so that the true long-term investor enjoys that higher return with little additional risks in 20-year and longer annualized returns.

Recent events provide a powerful reminder that the risk premium is unreliable and that mean reversion cuts both ways; indeed, those 5 percent excess returns, earned in the auspicious circumstances of rising price-to-earnings ratios and rising bond yields, are a fast-fading memory, to which too many investors cling, in the face of starkly contradictory evidence. Most observers, whether bond skeptics or advocates, would be shocked to learn that the 40-year excess return for stocks, relative to holding and rolling ordinary 20-year Treasury bonds, is not even zero.

Zero "risk premium"1? For 40 years? Who would have thought this possible?

Most investors use bonds as part of their investment tool kit for two reasons: They ostensibly provide diversification, and they reduce our risk. They're typically not used in our quest for lofty returns. Most investors expect their stock holdings to outpace their bonds over any reasonably long span of time. Let's consider these two core beliefs of modern investing: the reliability of stocks as the higher-return asset class and the efficacy of bonds in portfolio diversification and in risk reduction. On careful inspection, we find many misconceptions in these core views of modern finance.

Also, the bond indexes themselves are generally seen as efficient portfolios, much the same as the stock indexes. We'll consider whether this view is sensible by examining the efficiency of the bond indexes themselves, and speculate on what all of this means for the future of bond index funds and ETFs.



The Death Of The Risk Premium?

It's now well-known that stocks have produced negative returns for just over a decade. Real returns for capitalization-weighted U.S. indexes, like the S&P 500 Index, are now negative over any span starting 1997 or later. People fret about our "lost decade" for stocks, with good reason, but they underestimate the carnage. Even this simple real return analysis ignores our opportunity cost. Starting any time we choose from 1979 through 2008, the investor in 20-year Treasuries (consistently rolling to the nearest 20-year bond and reinvesting income) beats the S&P 500 investor. In fact, from the end of February 1969 through February 2009, despite the grim bond collapse of the 1970s, our 20-year bond investors win by a nose. We're now looking at a lost 40 years!

Where's our birthright … our 5 percent equity risk premium? Aren't we entitled to a "win" with stocks, by about 5 percent per year, as long as our time horizon is at least 10 or 20 years? In early 2000, Ron Ryan and I wrote a paper entitled "The Death of the Risk Premium,"[2] which was ultimately published in early 2001. It was greeted with some derision at the time, and some anger as the excess returns for stocks soon swung sharply negative. Now, it finally gets some respect, arguably a bit late …

It's hard to imagine that bonds could ever have outpaced stocks for 40 years, but there is precedent. Figure 1 shows the wealth of a stock investor, relative to a bond investor. From 1802 to February 2009, the line rises nearly 150-fold.[3] This doesn't mean that the stock investor profited 150-fold over the past 200 years. Stocks actually did far better than that, giving us about 4 *million* times our money in 207 years. But bonds gave us 27,000 times our money over the same span. So, the investor holding a broad U.S. stock market portfolio was 150 times wealthier than an investor holding U.S. bonds over this 207-year span. So far, so good.

That 150-fold relative wealth works out to a 2.5-percentage-point-per-year advantage for the stock market investor, almost exactly matching the historical average ex ante expected risk premium that Peter Bernstein and I derived in 2002 in "What Risk Premium Is 'Normal'?" Those who expect a 5 percent risk premium from their stock market investments, relative to bonds, either haven't studied enough market history—a charitable interpretation—or have forgotten some basic arithmetic—a less charitable view.

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LATEST COMMENTS ON THIS FEATURE

25 Latest comments on this feature.

On Monday, 20 April 2009 Kim Arthur said:
Good piece. Figure 8 appears a bit misleading with the equal weight All Asset Class that is heavy fixed income (9 of 15 classes are fixed income). The time period is a secular bear and you would expect it to behave better than the 60/40 equity/fixed income.

On Tuesday, 21 April 2009 Rich said:
Informative and thought provoking article. Well written and documented.

On Wednesday, 22 April 2009 Bob Mann said:
Don't these points presume an "all in" preconception? I believe most investors are still adding funds into their portfolios. This tends to greatly shorten the 'recovery' time for when the markets dip. Still, a thought provoking article.

On Thursday, 23 April 2009 Garbs said:
How can you reinvest interest payments from Tbills? This assumption seems key to your argument, but I am unsure how it works in practice. So what exactly do you mean by reinvesting the income from bonds?

On Sunday, 26 April 2009 John Smith said:
First - this article is a sham for a marketing piece. Second, Rob, once again, provides a lot of data for a silly conclusion - if he looks at what he has demonstrated, he has basically made the pitch for an investor to not rebalance naively - read Woody Brock instead of this nonsense and you will learn more and save your portfolio from the fees that Rob seeks to earn.

On Wednesday, 29 April 2009 Randy Hill said:
Isn't this piece the greatest single call to move 100% into equities in history? Do you really think the equity premium has disappeared, or that current valuations presage a robust rebound in stock returns to restore the premium to it's rightful levels.

And while the author appears to factor in dividend payments in his general conclusion, he goes off the rails in page 2. He claims stock prices hit a 130 year low in 1932, but neglects to mention they were yielding over 10%, and he doesn't adjust for real dollars, i.e. the fact that the U.S. had suffered 3 years of massive deflation.

Then he triumphantly postulates an unlikely "what if" scenario assuming stocks decline substantially more. I have my own equally valuable scenario, "What if" the U.S. government is forced to repudiate it's debt after another $9 Trillion in deficits, what will T-Bills be worth then?

Stock price yields are in two components, dividends and capital gains. Management of a profitable enterprise can deliver those yields in a variety of ways, through reinvestment in the business to grow profits, paying out a portion in dividends, or increasing capital gains through stock repurchases. Over time stocks yield the returns of the underlying business profits, as long as management makes intelligent capital allocation choices. You can't ignore either component when valuing your equity holdings over any period.

And if the equity premium disappears, so does the stock market, there will be little to no reason to own stocks. You don't have to believe in efficient market dogma to see how silly it is to believe that will happen.

BTW, one of the greatest single times in history to buy stocks was 1932.

On Wednesday, 29 April 2009 Randy Hill said:
Upon further reflection, it appears the author is engaging in a bit of intellectual sleight of hand. Just as he ignores the massive levels of dividends paid to stock investors throughout the 1800s and early 1900s to make spurious points, he cleverly selects his endpoints.

The 20 year rate in 1979 was among the highest in history. It would go even higher for 4 years, but that doesn't matter because he doesn't use 1983 as an end point, he uses 2009, when the 20 year rate was lower than it had been for 50 years. That down slope from 9% to 3% obviously added greatly to bond yields. The question for the future is, do you think rates are going to fall further in the future? Because if they rise at all, the equity premium for those 40 years comes back with a vengeance.

And it's not like shareholders suffered greatly over those 40 years. The S&P was 100 in early 1979, now it's 870. While those capital

gains only offer a 5.5% yield, the stock investor also averaged close to 3% per year for a total return of 8.5%. Not shabby at all.

The author is writing during a period where interest rates hit historical rock bottoms, which temporarily juices bond returns. His point is that for a brief period of a year or two at most, bonds will have a glittering track record compared to equities. But history tells us that bond returns cannot be juiced any further, and that equities are priced for substantial future appreciation, and in a few years his article will become a dust covered curiousity.

On Wednesday, 29 April 2009 John Smith said:
Again - Be Dynamic in your asset allocation and do not listen to Rob or David Swensen (who suggests all retail investors should blindly rebalance - probably did his and their portfolios a whole lot of good last year)

On Friday, 01 May 2009 r said:
great display of historical data, but 2008/9 endpoints skew data and conclusions.

US govt bonds are bubble, and will show negative real returns for bond holders.

On Friday, 01 May 2009 Pierre Lemieux said:
Imagine if government bonds did not exist! Investors would buy productive, instead of harmful, financial claims.

On Saturday, 02 May 2009 Bill Donoghue said:
Fixed Income + Inflation and Rising Interest Rates = Near Certain Losses for Investors.

On Monday, 04 May 2009 Brian said:
I have to think after reading this, and thinking about current interest rates, that a move now from Stocks to Bonds will give that individual an excellent opportunity for the next big loss! Once we are past these tough times, interest rates will rise - they can't get much lower through a long period of time. That rise in interest rate will significantly damage current Bond principle, and those holding Bonds will lose lots of money if they attempt to sell them or lose buying power over time if they choose to keep them. This is referred to as being between a rock and a hard place. Buy stocks, and trust that the world will come back economically, just like it did from the Great Depression. That is actually the safer, more likely, higher probability bet!

On Monday, 04 May 2009 Terry Hairston said:
The only constant is change. The cost of liquidity, in order to be able to take advantage of extreme opportunities is a bargain.
The best inflation hedge over one's lifetime is his own earnings ability.
The best inflation hedge that can be bought and stored is gold.

On Monday, 04 May 2009 Bill Donoghue said:
In all humility, the highest risk-adjusted returns of any mutual fund or separate account over the past decade ended 3/31/09 earned a gross (before management fess) return of 8.12% with a standard deviation of 3.78%. It strived to invest in junk bond funds to enjoy the high yields, buy low, sell high and shift to money funds when junk bond fund total returns dipped. It had no down years. It out-performed, on a risk-adjusted basis,stock,bond and money market portfolios of all kinds, domestic and international.
This is not an ad; it is standard to compare to you careful considerations.
Source: Morningstar Pricipia Mutual Funds and Separate Accounts data bases.

At some point in the past few years, a panelist at the ICI Annual Membership Conference asked "Is it moral to sell bond funds when there is a risk of rising rates or inflation in the near future?" Apparently no one who planned to offer target maturity funds was listening. Of course, you can short bond ETFs if you wish.

On Tuesday, 05 May 2009 Peter Garcia said:
for your information

On Friday, 08 May 2009 russg said:
Can't find the slides from the "better off with bonds?" spin on this information - help?

On Monday, 11 May 2009 Stephen Scott said:
You write (p.1) that "the investor in 20-year Treasuries (consistently rolling to the nearest 20-year bond and reinvesting income) beats the S&P 500 investor". You don't specify that the S&P investor has reinvested dividends, as a fair comparison plainly requires. Is dividend reinvestment built into your model?

On Thursday, 14 May 2009 Jeff Villard said:
I would like to examine the dataset used to produce these results. Feel free to e-mail me at jeffvillard@quedebeton.com.

On Monday, 25 May 2009 Nikos Chloros said:
Oops! All the analysis seems to be based on price-only changes in S&P. Had divis been accounted for and reinvested (same way coupons are being treated), one would have found that the ex-post (i.e. observed) risk premium to be, less than 5% that Rob wants, but still a positive number close to 1.5%. Working with nominal (i.e. not adjusted for inflation) figures going back to 1979, we find that based on MSCI data for equities and those from the Fed and the Bundesbank for bonds, divis and coupons reinvested, US stocks returned 11.75% p.a. (17.73% std dev), while 10 year Treasuries 10.35% p.a. (14.34% std dev). In Europe, MSCI Europe managed 12.69% (20.55% std dev) while 10 year Bunds came in at 8.00% p.a. (8.77% std dev).

As for ex-ante (looking forward) returns and risk premia, look no further than the first sentence of Randy Hill above.

Nice try Rob. All data at your disposal, email me at nchloros@cnl.gr.

On Wednesday, 27 May 2009 Murray Coleman said:
No, Nikos ... that's not correct. Figure 1, the comparison of stocks with bonds, Arnott used cumulative total returns of stocks divided by the cumulative total return of bonds. In other words, both asset classes included their respective sources of income.
For the graphs of stock price levels, as clearly marked in the graphics themselves, only stock prices are included. So over the long spans where growth is flat, investors only pocketed dividends with no cap gains from growth ...

On Thursday, 28 May 2009 Nikos Chloros said:
As per your first comment, figure 1 seems to confirm that over the last 30-40 years, relative performance is on the side of equities: at no point has the blue line dipped below the dotted red line. Surely the legend in the box misidentifies the outperformer?

As for the choice of data employed in Rob's analysis, no one (in academia at least) uses the "bootstrapped" (chainlinking) method for building long term implied performance track records for bonds, for 2 reasons: (a) choice of start year makes a difference, (b) the movement in underlying interest rates have meaningless effects on bonds nearing maturity. It is for these 2 reasons, that practicioners use the implied term rate and use rolling 12-month intervals in order to produce meaningful results.

Have you by any chance taken a look at the data confirming the above analysis? I sent a copy of the spreadsheet to Paul Amery who I trust to be a colleague of yours at Index Universe.

On Thursday, 28 May 2009 Nikos Chloros said:
Murray, Figure 1 seems to strengthen the argument that in the last 30-40 years equities have outperformed: at no point does the blue line dip under the dotted red line. Surely the legend box misidentifies the outperformer?

Rob's data has an inherent problem: it uses actual bonds, bootstrapped/chainlinked together to produce the history. This has several pitfalls, the 2 most important being: a) choice of start year makes a difference, b) changes in underlying interest rates become meaningless for bonds nearing maturity. It is for that reason that most academics and practicioners use the implied yields on 0-coupons as the term rate and then compute rolling 12-month performance figures.

Have you taken a look at the data I sent to Paul Amery, a colleague of yours at Index Universe? There are several sources that can confirm the outcome.

On Thursday, 28 May 2009 Nikos Chloros said:
Murray, Figure 1 does indeed confirm that for the last 30-40 years equities have outperformed bonds: at no point in the recent past does the blue line dip below the dotted red line. Surely the legend box misidentifies the outperformer?

A second comment will address the appropriateness of Rob's data.

On Thursday, 28 May 2009 T. MINADEO said:
I am constantly confused as where to put my money. I have not ever met anyone that got rich owning stks. I do know lots of people rich from real estate and also some that lost everything. I am 63 yrs old just sold my business and retired. I shd have kept working cus thats the only sure great investment. All u people are nuts one says do this the next says no do this. I just worked hard saved in cds bot a little real estate very little stk thank god and it looks like i shd be ok. NOW IM NOT EXAGERATIG ALL THE GUYS MY AGE THAT WERE ALL IN THE STK MARKET CAN NOT RETIRE. ITS NOT THAT THEY LOST THE MONEY ITS THAT THEY ARE ALSO EMOTIONALLY BANKRUPT FEEL CHEATED AND SOME ARE DOING CALLS TO GET THE MONEY BACK. GETR A GOOD JOB OR BUSINESS SAVE BUY R/E THATS NOT LEVERAGED AND YOU OK. SCREW THE STOCK MARKET ITRS A BIG PONZI.

On Thursday, 28 May 2009 Jeff Villard said:
Just google Bill Donoghue's name if you want to know all about his "secrets." He sells them for $99/year. He is just another active manager among a million others. Why do you think he sells his advice for $99/year instead of keeping his secrets to himself and profiting from them?

As for Arnott, he is just another clever data manipulator. But don't take my word for it: go read all the pieces he has authored over the years in the Journal of Portfolio Management and see for yourself. Backtesting has never made anybody rich, however, except those like Arnott who play with Monopoly money to convince people with real money to invest in their schemes, and reap fees in the process for practicing financial magic.

Passive, well-diversified is the way to go for most investors. There are good, sound logical reasons for the method, and you can find them in any good library by checking out any book written by William Sharpe.

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