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The Death of Government Bonds has Been Greatly Exaggerated

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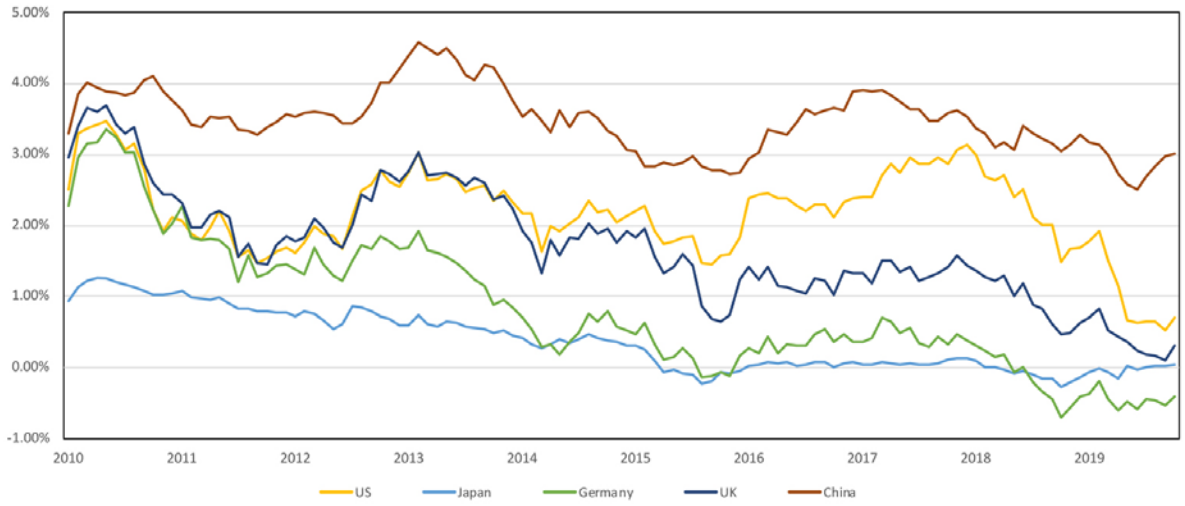
The global pandemic of 2020 has exacerbated many of the trends that have been evident for many years; the decline in interest rates towards zero, or below, across developed markets, increases in government debt/GDP ratios, and increases in central bank balance sheets (largely a result of purchases of government bonds). With the level of yield currently below 1% on the vast majority of developed market government debt, and with negative yields prevailing in a significant proportion of the market, investors are understandably considering whether government bonds still have the capacity to cushion a downturn in equity markets. Investors are asking if yields can fall further from these already low levels?

Chart 1. Ten-year bond yields in major markets



Source: Bloomberg (data from September 2010 to August 2020)

Whilst this question is fundamentally about the future, and so by definition, impossible to answer with absolute certainty, we need to start by considering the past. The foundation of many traditional investment strategies has been a combination of equities and bonds (i.e. the classic 60/40 asset allocation), and this has been predicated on the negative correlation between equities and government bonds (other fixed income assets may feature in the allocation but the key element of diversification comes from government debt).

Not only has the empirical evidence historically shown a consistent "structural" negative correlation between the two asset classes, there are solid economic and financial reasons why one would expect this relationship to hold. Equity markets will tend to suffer large declines in value when expectations of future profits drop sharply. This is likely to be a function of a significant drop in demand across the economy (or some other shock), leading to upward pressure on the unemployment rate, and downward pressure on inflation. The decline in actual and/or expected inflation is likely to negatively impact on bond yields and central banks are likely to loosen monetary policy in response, also putting downward pressure on real yields. Financial market dynamics are also likely to support such movements in asset prices as higher levels of economic uncertainty tend to result in higher demand for the safety and liquidity of government bonds.

In our opinion, this underlying logic continues to hold today. Firstly, a demand shock such as the global pandemic may be expected to lower inflation and inflation expectations, at least in the short to medium term. If nominal bond yields do not fall in such a scenario, then real yields would rise, inducing a pro-cyclical tightening of financial conditions. Such an outcome would be inconsistent with the objective of most central banks, thereby prompting monetary easing to support activity. Whilst one can

debate the merits of the recent rebound in US equity markets (consequently clouding the picture in this example), the COVID environment has created exactly this environment. Meaningful declines in non-US equity markets in response to the impact of the virus have been accompanied by meaningful declines in interest rates, thereby preserving that negative correlation.

Secondly, while there remains some debate about a "zero lower bound" for nominal interest rates, recent history suggests that this may not be the constraint that many had previously thought. Negative interest rates have been adopted as a policy tool in the likes of the Eurozone, Switzerland and Sweden (until recently), while other central banks, such as those in Australia and New Zealand are proactively considering and preparing for their use. In the absence of further declines in overnight policy interest rates, central banks have deployed an array of other policy measures to drive longer dated interest rates lower (e.g. quantitative easing). Despite the historically low and in some cases negative interest rates on offer, longer dated nominal interest rates across the globe still declined further in response to the negative COVID shock, suggesting bonds still provided the negative correlation when it was needed most. In other words, negative yielding bond yields, became more negative. This suggests that the underlying drivers of, and rationale, for lower nominal yields during a period of stress, still apply.

Investors also need to consider the impact of the low and negative yield environment on all asset classes, not just fixed income. The lowering of interest rates has supported all types of asset prices, including equity markets, through a lowering of the discount rate which pushes up the present value of future earnings. Potentially a diversifying asset may be of greater value in such an environment when asset prices may be heavily dependent upon the level of policy interest rates. In this context, investors may consider increasing the defensive characteristics of their fixed income allocation through a rotation of the sovereign bond allocation into longer duration debt. This could reduce the exposure to negative yields at the front-end of the yield curve and increase the price sensitivity of the portfolio to further yield declines, thus enhancing the negative correlation benefit. This greater "insurance" of course comes at the cost of potentially greater capital loss, relative to the status quo, if yields unexpectedly increase. Whilst we have a benign outlook for inflation in the near term, as the COVID induced negative demand shock, fall in the velocity of money and increase in pre-cautionary savings dominate, the longer-term picture is more clouded. Nonetheless, it may be reasonable to assume an extended period of lower interest over the foreseeable future as countries come to terms with the economic and policy consequences of the pandemic.

What does the Empirical Evidence Say?

Turning to the empirical analysis, we consider the past relationship between bonds and equities to understand whether it is changing as interest rates have approached zero. Firstly, if we look at the correlations between monthly returns of global equities[1] and returns on global bonds[2] in Table 1 below, it is apparent that global bond returns have maintained a negative correlation to equities over time.

Table 1: Historical Correlations

Correlation of monthly returns: MSCI ACWI v's Global bond markets						
	FTSE WGBI	US	Germany	Japan	UK	China
20yrs to Aug 2020	-0.28	-0.35	-0.35	-0.16	-0.25	n/a
5yrs to Aug 2020	-0.25	-0.44	-0.19	-0.11	-0.28	-0.21
3yrs to Aug 2020	-0.27	-0.50	-0.18	-0.06	-0.33	-0.31

Source: Bloomberg & Colchester Global Investors, data from August 2000 to August 2020

[1] MSCI ACWI Index

[2] FTSE World Government Bond Index (WGBI)

As correlations can, and do, vary over shorter time frames, we believe that it is prudent to consider such relationships over a minimum of three years. Even that may be too short a time frame to truly assess a fundamental relationship. There is always a danger of interpreting a spurious relationship – the rise in nearly all asset prices in the recent past as interest rates have fallen, may be one such example.

An examination of Table 1 suggests that the correlation of returns between the FTSE WGBI and global equities has not shifted materially in the past three years, compared with the past twenty years. Interestingly, in the case of the US market, the negative correlation appears to have increased over time, as it also has in both the UK and China. In contrast there has been a slight decline in the negative correlation with the Japanese and German markets. At a "push" this may lend some validity to the argument that the level of yields at the start of the period does influence how far they can decline – although in both cases the correlation reduction is only by around 0.10. We would be cautious attaching too high a significance to the characteristics of the Japanese market, as it is subject to a policy known as Yield Curve Control (YCC) whereby the Bank of Japan has explicitly committed to maintaining ten-year yields at "around zero". Whilst this policy is normally considered as a cap on yields, it also seems to act as something of a floor for Japanese bond yields, potentially reducing the effectiveness of the Japanese market as a diversifier of equity risk.

Turning to Europe, ten-year yields in the core of the Euro area have moved materially below those in Japan over recent years, and the prevalence of negative interest rates in Europe has not prevented the German market from maintaining a significant negative correlation to equities over the past three years. The German market produced a positive return in the first quarter of 2020 despite negative yields at the beginning of the period. The yield on the ten-year German bund for example fell from a high of -17bps in mid-January to a low of -85bps in March 2020. Whilst this some 70bp decline was around half that of the equivalent 120bp decline seen in the US ten-year yield over the same period, it commenced from negative territory (unlike the US ten year yield that fell from around +1.80%) and provided a solid quarterly return of +2.6% when equity markets fell by around 20% or more (see Table 3).

Whilst the downward trend in yields has captured the headlines, another huge shift in the global fixed income landscape has been the opening of the Chinese bond market to foreign investors. For this reason, we include the Chinese government bond market in this analysis. The Chinese market offers attractive diversification benefits relative to equities, and that negative correlation appears to have increased over time. The Chinese government bond market has increasingly become a viable destination for foreign investors and with ten-year yields currently over 3% the question of zero or negative yields impairing this characteristic appears rather moot at this point.

For most investors of course, correlation between bonds and equities is less about the statistical significance and more about the reality of downside protection in a period of falling equity markets. Notwithstanding concerns about the level of yields heading into the coronavirus shock, the negative relationship kicked in sharply in March as sovereign bonds appreciated in value while equity markets fell anywhere between 20% and 40%. In other words, when needed at a point of stress, sovereign bond went up when other asset classes went down.

A review of the recent past[3], suggests that this negative relationship has consistently kicked in when needed. Table 2 below details the behaviour of bond yields and returns in the major markets during periods of equity market distress (in this case defined as a rolling three-month return on the MSCI ACWI Index of less than -10%[4]). In all seven episodes since 2008, yields fell[5], and bond returns were positive, when equity markets fell by 10% or more. If we look at the most recent COVID shock, with the exception of Japan which is something of an outlier given the YCC policy, all the other major markets experienced a decline in yields and positive returns in the first quarter of 2020. As noted above, this includes Germany where yields were negative at the beginning of the period. These yield declines translated into positive absolute returns in the aggregate world

[3] Since the GFC began in September 2008.

[4] Where periods overlap the three-month period with the largest equity selloff is used.

[5] With three exceptions, Japan in Q1, 2020, when yields were essentially unchanged, and China in 2008 and 2011.

government bond index and the other major markets presented in Table 2. While there is some evidence to suggest that the level of "protection" is reduced as the starting point for yields declines, it is clear that sovereign bonds still provided negative correlation and positive returns when it was needed most.

Table 2: Equity Returns and Bond Yields in times of stress

	Rolling three-month returns		Change in ten-year yield				
	S&P 500	MSCI ACWI	US	Japan	Germany	UK	China
29/8/08	-8.39%	-12.93%	-0.25%	-0.34%	-0.23%	-0.51%	0.18%
28/11/08	-30.14%	-34.82%	-0.89%	-0.02%	-0.92%	-0.71%	-1.39%
30/6/10	-11.86%	-12.74%	-0.89%	-0.31%	-0.52%	-0.58%	-0.20%
30/9/11	-14.33%	-17.90%	-1.24%	-0.11%	-1.14%	-0.95%	0.01%
31/5/12	-4.05%	-10.23%	-0.41%	-0.14%	-0.62%	-0.58%	-0.18%
31/12/18	-13.97%	-13.08%	-0.38%	-0.13%	-0.23%	-0.30%	-0.32%
31/3/20	-20.00%	-21.74%	-1.25%	0.03%	-0.29%	-0.47%	-0.56%

Table 3: Equity and Bond Returns in times of stress

	Rolling three-month returns		Rolling three-month returns					
	S&P 500	MSCI ACWI	FTSE WGBI	US	Japan	Germany	UK	China
29/8/08	-8.39%	-12.93%	2.24%	2.51%	2.86%	1.85%	3.12%	1.17%
28/11/08	-30.14%	-34.82%	4.10%	5.96%	1.40%	6.90%	4.66%	6.90%
30/6/10	-11.86%	-12.74%	2.39%	4.61%	2.46%	3.97%	4.53%	1.52%
30/9/11	-14.33%	-17.90%	3.90%	6.43%	1.23%	7.40%	8.78%	0.46%
31/5/12	-4.05%	-10.23%	1.68%	2.12%	1.31%	4.25%	3.77%	2.19%
31/12/18	-13.97%	-13.08%	2.38%	2.52%	2.40%	2.35%	2.41%	2.70%
31/3/20	-20.00%	-21.74%	3.97%	8.08%	0.00%	2.57%	7.63%	2.92%

Sources: Bloomberg, FTSE, JP Morgan

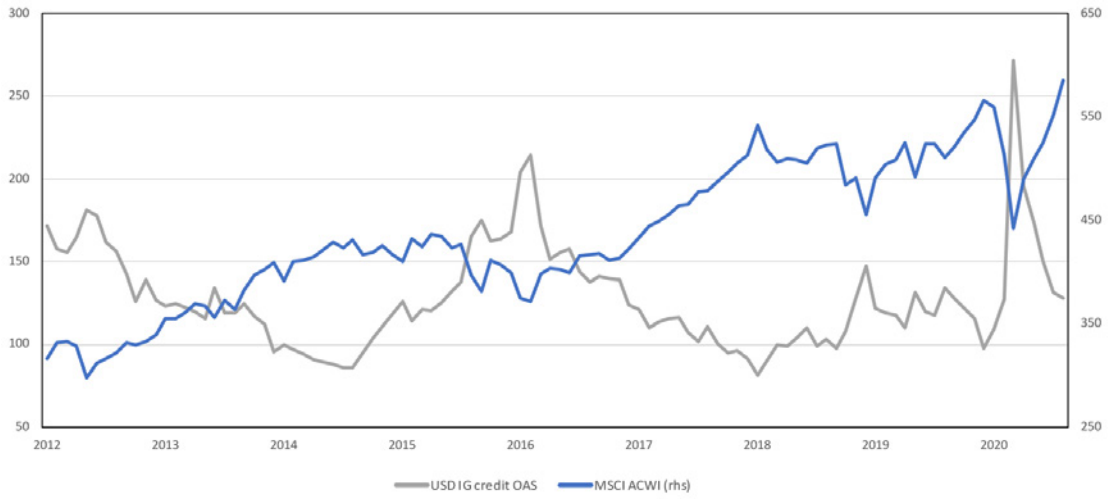
Bond market returns are in USD-hedged terms. Equity returns shown in USD unhedged terms.

Sovereign Bonds Remain the True Diversifier

Some bond investors have responded to the decline in yields by seeking more flexible or unconstrained bond funds that hint at the potential to outperform in all market environments. This approach offers the allure of positive returns and a negative correlation to risk assets (or protection). They typically utilise duration and sector rotation strategies to generate return. Paradoxically to avoid a capital loss in the event of a meaningful back up in yields these strategies would need to be uninvested in bond duration. In other words, not "own" the key duration characteristic that provides the negative correlation in the event of a negative shock or downward shift in interest rates. If there is a 100bps back-up in yields for example, it doesn't matter what type of bonds you own, all bonds will suffer a capital loss. In an effort to avoid such losses, these types of strategies may run a zero or negative duration position, thereby undermining one of the key fundamental reasons why bonds are typically held within a diversified asset portfolio.

Many of these funds are also structurally invested in credit. This diminishes the potential negative correlation of the exposure as there is a strong inverse relationship between credit spreads and equities (see Chart 2). This was again the case in the first quarter of 2020 as spreads widened when equity markets sold off.

Chart 2. Credit spreads move inversely with equities



Source: Bloomberg (data from January 2012 to August 2020)

Summary

An analysis of the behaviour of government bonds in recent years suggests that they continue to provide diversification benefits relative to equity markets. Although this may be constrained to some extent by the current level of yields in many major markets, it is supported by the emergence of the Chinese bond market, a larger market than the UK or German bond markets, and notably with meaningfully positive nominal yields.

Both the empirical evidence and the recent experience of the COVID induced shock in the first half of 2020, suggest that the optimal strategy to ensure - to the extent possible - that a bond strategy retains its ability to serve as diversifying anchor in a multi-asset portfolio is to make a dedicated allocation to sovereign debt. The intrinsic value of government debt as the "risk free asset" underpinned by the ability of a government to tax its citizens, and to "print money" in the case of the major developed markets, does mean that its characteristics are difficult to replicate using any other asset class.

As we look out over the coming years, the landscape for global bond markets has certainly changed on account of negative rates, and unprecedented expansion of central bank balance sheets. While we are not asset allocators, we believe that investors should look to diversify as much as possible, whether in terms of asset class, region or country as the future is inherently unpredictable. Nonetheless, government bonds remain the only asset class that offer the potential for a meaningful negative correlation to equities, and other so called "growth" assets, in a crisis. This has again been demonstrated this year, as the pandemic fuelled a sharp equity selloff in March. It is also apparent that there is no lower bound on bond yields, the decline in negatively yielding German yields to more deeply negative yields at a time of stress makes that abundantly clear.

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