

Investor Note

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Global sovereign investor insights | UBS Asset Management
January 2020

UBS Asset Management has a rich history of providing institutional solutions and advisory services to some of the largest and most prestigious sovereigns globally. This note provides an update on what we currently hear from this investor group as part of our trusted advisory relationships when it comes to the most pressing challenges in the current environment.

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Stock/bond correlation in the coming decade

The historic role of bonds as a cushion

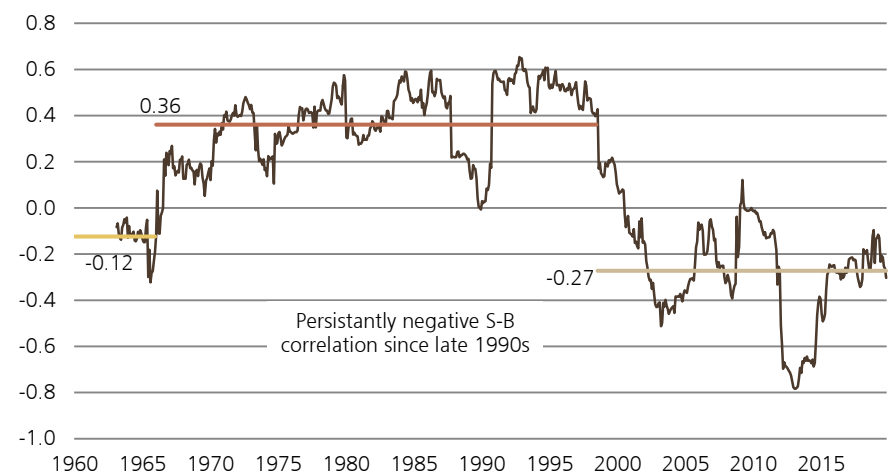
In our advisory work for sovereigns, in particular central banks, we frequently see institutions which strongly rely on a substantial pool of fixed income assets to cushion losses which might occur in their growing equity tranche during periods of stress. And indeed it seems to be an established fact that investors will clamor for high-quality (i.e. government) bonds for protection during times of stress but shed those government bonds in search of higher yields and growth assets in risk-on environments.

This negative correlation between stocks and bonds has been persistent in the capital markets since the late 1990s, and many industry professionals investing today have never experienced it any other way. However, looking back further, the US market had a long period of a positive stock-bond correlation (Exhibit 1). In fact, **since 1960, we can identify three regimes:**

- Jan 1960 to Dec 1965: low **negative** correlation (-0.12)
- Jan 1966 to Jun 1998: persistent **positive** correlation (0.36)
- July 1998 to Oct 2019: persistent **negative** correlation (-0.27)

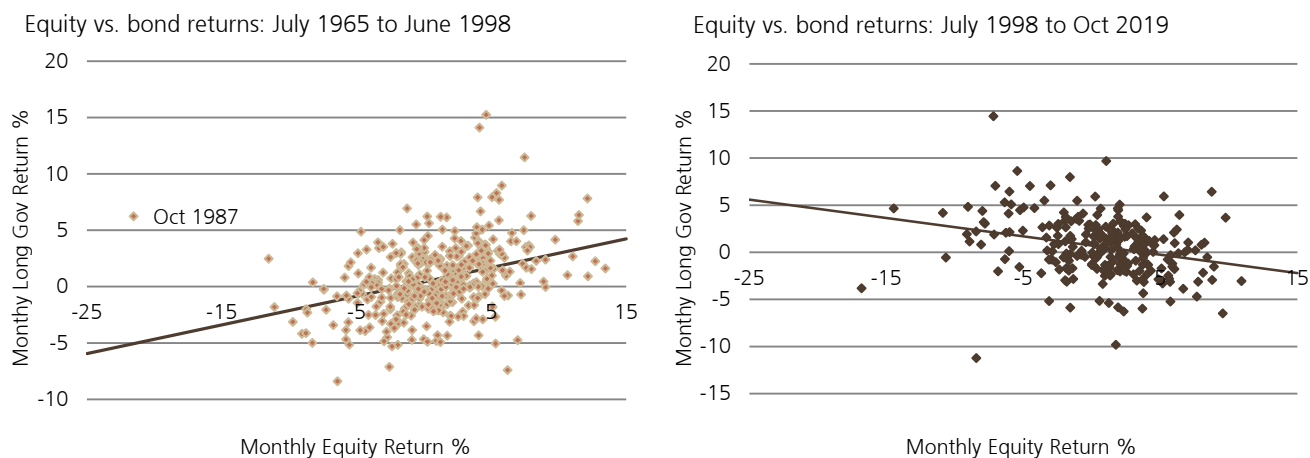
Exhibit 1: Stock/bond correlation: Negative and positive regimes

Rolling 36-month values: S&P 500 with SBBI long government bonds



Source: Morningstar Direct, UBS Asset Management. Data as of 30 September 2019.

Exhibit 2: Historic stock vs bond performance before and after June 1998



Source: Morningstar Direct, analysis by UBS Asset Management. Data as of October 2019.

But Exhibit 1 is based on a rolling 36-month correlation. How strong is this relationship when we look at individual months? Or put more simply, how helpful are government bonds really as part of a diversified portfolio in market downturns?

To answer that question, let's start by looking at some individual months, shown in two charts in Exhibit 2 above. The left-hand chart (July 1965 to June 1998) includes the dramatic crash of October 1987. The positive relationship between stocks and bonds is relatively strong (the coefficients are highly significant), but the R-squared is still quite low at 13%.

In the **second time period** shown on the right (July 1998 to October 2019), the relationship is **negative** and includes the Global Financial Crisis of 2008-2009. Here, we again see significant relationships, but the R-squared is also quite low. Although long government bonds were quite helpful from November 2007 through February 2009—the S&P returned -50.9% while long bonds returned 16.0%—in some months, the relationship broke down, in particular October 2008 and January 2009.

What safety have long bonds offered on a monthly basis in the past?

Exhibit 3 lists the worst 15 equity **months** since the 1960s. From this perspective, the rationale for bonds as a cushion appears somewhat weak. In less than half the months, long US government bonds earned a positive return. However, we do note that if we take out October 2008 and roll it into the entire GFC, in five of the six worst periods bonds provided

some protection. The one exception was the market disruption in November 1973, when markets were hit by the (inflationary) oil crisis. But if we broaden to **rolling three-month periods**, we see a higher proportion of safety offered by government bonds. However, these periods overlap, so we must be cautious about conclusions.

Exhibit 3: Stock vs. bond performance in worst-performing equity markets

15 Worst Equity Months			15 Worst Equity 3-Months		
Month	S&P 500	Long Gov	Month	S&P 500	Long Gov
Oct 1987	-21.5	6.2	Nov 2008	-29.6	11.3
Oct 2008	-16.8	-3.8	Nov 1987	-29.6	2.7
Aug 1998	-14.5	4.6	Sept 1974	-25.2	-0.2
Sept 1974	-11.5	2.5	Oct 2008	-23.1	-0.4
Nov 1973	-11.1	-1.8	Dec 1987	-22.5	8.4
Sept 2002	-10.9	4.2	Dec 2008	-21.9	20.7
Feb 2009	-10.6	-0.6	June 1962	-20.6	0.5
Mar 1980	-9.7	-3.1	Oct 1987	-20.4	0.6
Feb 2001	-9.1	1.9	June 1970	-18.0	-4.2
Aug 1990	-9.0	-4.2	Feb 2009	-17.3	-3.2
Dec 2018	-9.0	4.8	Sept 2002	-17.3	12.3
Sept 2008	-8.9	1.1	Aug 1974	-16.4	-2.2
April 1970	-8.7	-4.1	July 2002	-15.0	5.1
Oct 1978	-8.7	-2.0	Sept 2001	-14.7	6.7
Aug 1974	-8.6	-2.3	Jan 2009	-14.1	11.4

Source: Morningstar Direct, analysis by UBS Asset Management.

What safety have long bonds offered on a max drawdown basis in the past?

Finally, let's look at the six worst **drawdowns** for equities using monthly data. As shown in Exhibit 4, in the two worst drawdowns, November 2007 through February 2009, and August 2002 through September 2002, bonds offered **substantial protection**, earning significant double-digit returns.

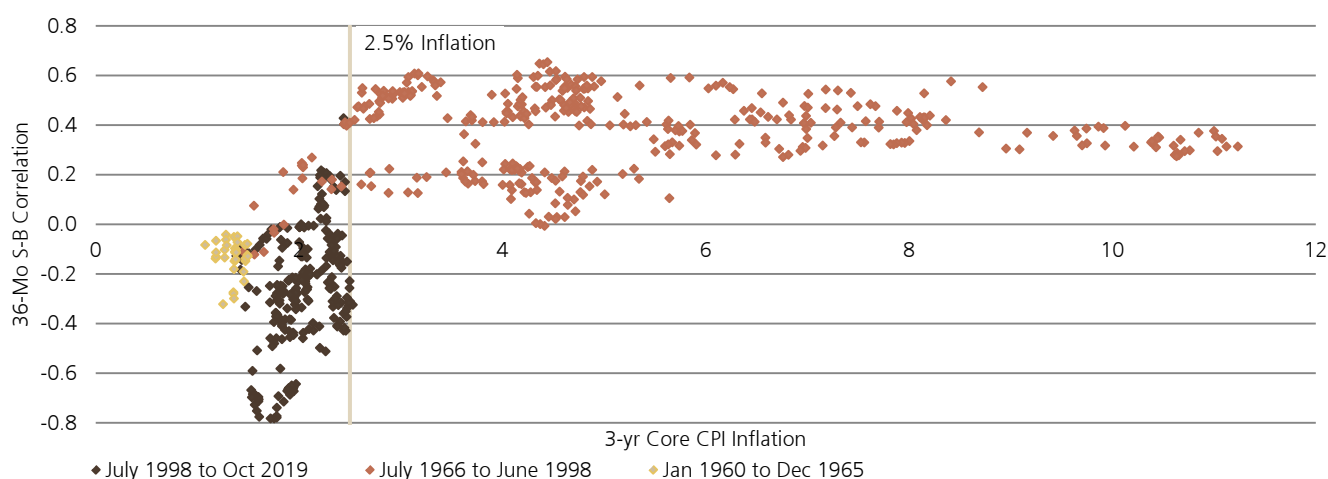
During two brief market drawdowns in 1987 and 1962, bonds offered small, but positive returns. In two equity drawdown periods, in 1972-1974 and 1968-1970, bonds declined, but not to the degree that equities did.

Exhibit 4: Equity vs. bond performance during six worst equity drawdowns

Period	Cumulative Returns	
	Equities	Long Bonds
Nov 2007 through Feb 2009	-50.9	16.0
Aug 2002 through Sept 2002	-44.7	28.5
Dec 1972 through Sept 1974	-42.6	-6.0
Sept 1987 through Nov 1987	-29.6	2.7
Dec 1968 through June 1970	-29.3	-8.0
Jan 1962 through June 1962	-22.3	4.0

Source: Morningstar Direct, analysis by UBS Asset Management.

Exhibit 5: US stock-bond correlation & inflation



Source: Morningstar Direct, analysis by UBS Asset Management.

What causes different correlation regimes?

Although there are lots of disputes about what causes the stock-bond correlation, it appears that **persistent inflation** is a key factor. Exhibit 5, a scatter chart of rolling 36-month core inflation versus 36-month correlations is striking for its differences across regimes.

All in all, **2.5% core inflation seems to be the threshold** of whether stocks and bonds cross over from negative/zero correlation to a positive correlation. With high inflation, stocks and bonds suffer and benefit together, as higher inflation hurts bonds as investors factor in higher interest rates, and equities suffer from pricing uncertainties and cost pressures. In low inflation environments, the discount rate for equities is more stable and it is earnings growth expectations that are at risk.

What does this mean for the next decade?

It turns out that on average, we can expect some benefit from bonds. However, they are in no way a perfect hedge and historically, there were enough cases where there was "no place to hide."

For the 2020s, with inflation expectations contained, **we expect a slightly negative stock-bond correlation to continue**. In fact, we don't expect interest rates to rise **unless economic growth and inflation rises enough for central banks to feel comfortable in returning to 'normal' monetary policy**. In a negative correlation regime, disciplined investors should expect some benefits in rebalancing between stocks and bonds.

However, the **big tail event** for investors may be that with the huge amounts of quantitative easing that have been applied across the globe, a move to a **higher inflation regime** eventually occurs. In this case, both stocks and bonds will be punished as the markets reprice expectations. As a consequence, we could expect a much steeper yield curve, with central banks simultaneously fighting higher inflation and sluggish growth (and rising government deficits), while investors demand an additional premium for the rising inflation risks.

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Americas

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