Anatomy of a bond market bubble

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Most developed market government bonds are displaying characteristics of a bubble market. Timing the end of this bond rally will be difficult but a number of hints are emerging for those watching closely.

From Silicon Valley to the South Sea, bubbles can swell anywhere. Today, it's arguably the turn of the developed world's artificially overheated government bond markets.

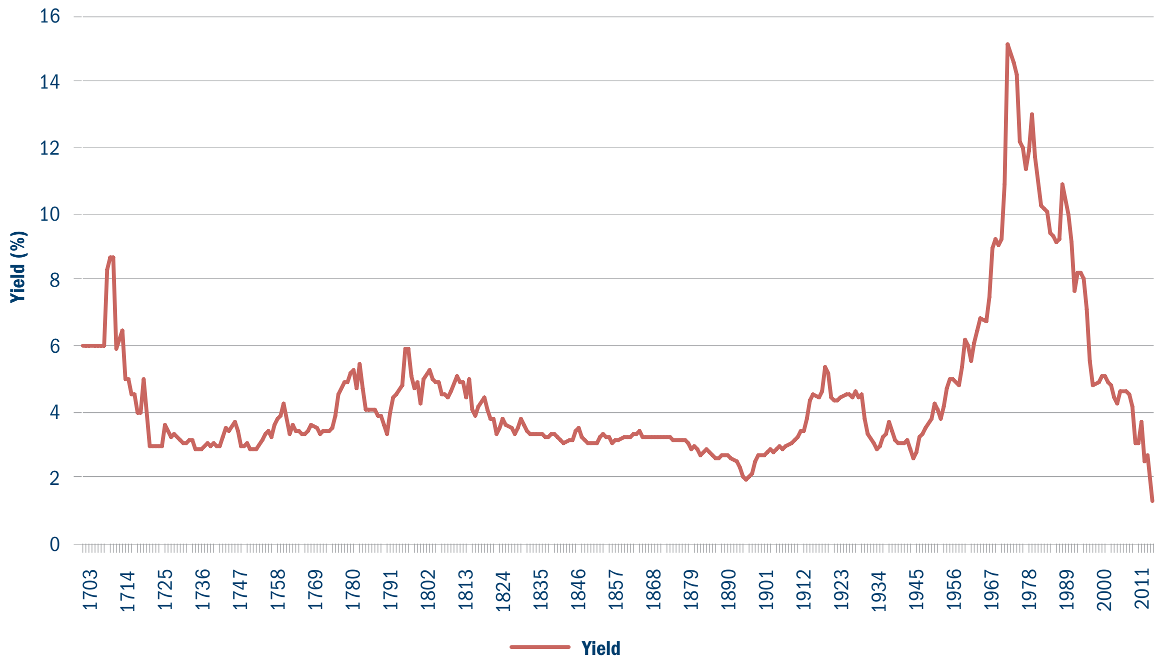
Negative bond yields appeared at first to be a short-term consequence of quantitative easing and low policy rates. They are now a common feature, with over $13 trillion plumbing sub-zero yields in the third quarter. Ten-year government bonds across Germany, Japan and the UK reached levels in Q3 of -0.19%, -0.30% and +0.52%, respectively. The US Treasury market has remained a relatively high yielder, witnessing a low of 1.35% in July. Valuations are at extremes, and yet the buying persists.

The trend is provoking fears that bond yields are entering bubble territory. Negative rates, after all, virtually guarantee that investors will earn a negative nominal return on their assets, often on bonds of up to ten years maturity.

Never before in history has the market been confronted with lofty valuations of this magnitude. Below is one example from the UK, where bonds yields are at their lowest levels since records began in the early 1700s. This pattern is remarkably similar across developed markets. History, it would appear, is being rewritten.

UK LONG-DATED GOVERNMENT BOND YIELDS (1703 – 2016)

TRADING AT THE BOTTOM OF A 300-YEAR RANGE

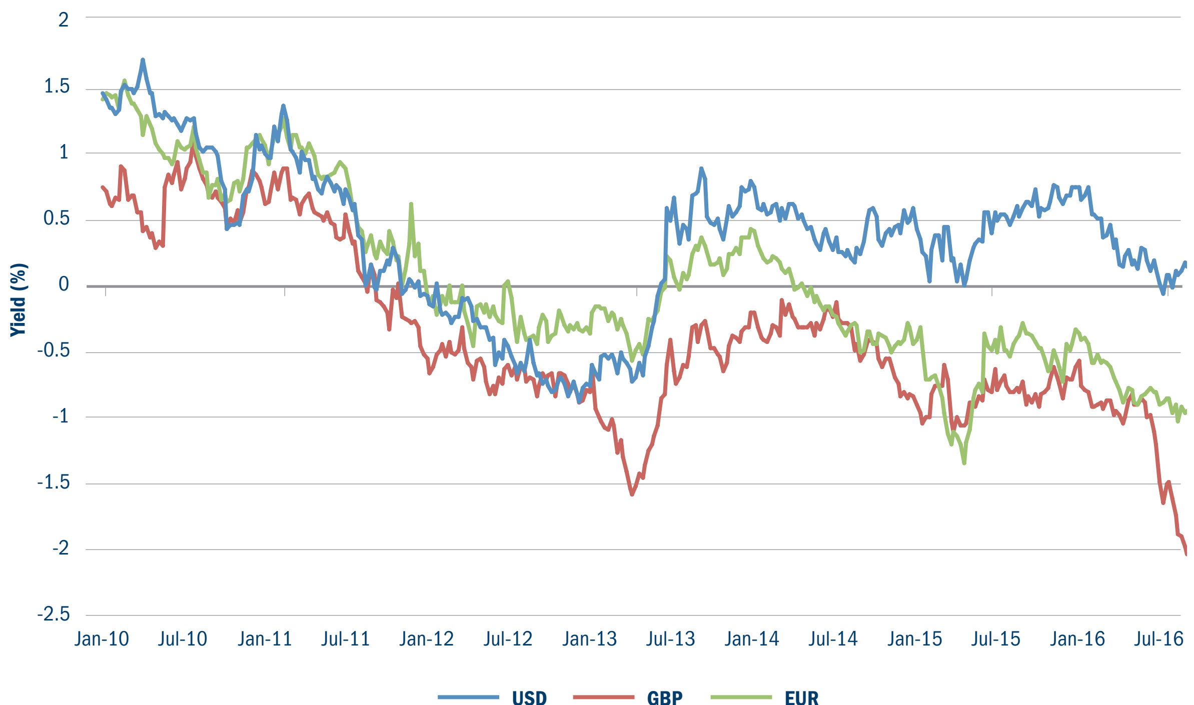


Source: Bank of England and Bloomberg 2016.

Alternate measures of valuation paint a similar picture. Some argue that bond yields should be low simply to reflect today's low inflation. Sadly, this explanation does not hold water. A measure of real interest rates shows that even after adjusting for the absence of price pressures, yields are still remarkably low.

YIELDS REFLECT TODAY'S LOW LEVELS OF INFLATION

10-YEAR REAL GOVERNMENT BOND YIELDS



Source: Bloomberg 2016.

Four elements of a bubble

Bubbles are not defined by valuation alone. There are a number of elements present in any bubble that go beyond deviations from a long-term norm. We examine four such elements that, to some degree, tend to be present in speculative market environments.

1. A sound rationale

Every bubble has a rational underpinning. Intuition and logic allows investors to embrace a particular market or trend, but their excitement ultimately spirals out of control.

The dotcom bubble of the late 1990s is an example of how a readily transparent story can go awry. Then, just as now, there was considerable confidence that technology was capable of revolutionising nearly every aspect of society. Many companies would be transformational and generate super-normal profits.

But investors became indiscriminate, failing to distinguish between value-adding firms (Cisco, Amazon) from the imposters (Pets.com). The underlying rationale never wavered, but rather gave investors the excuse to drastically overpay for all of these companies.

Interest rates are low today for a very simple reason - growth and inflation are low, and are likely to remain so. Global GDP and global inflation have a long history of correlating strongly with interest rates. The current cycle is no different and fits well with investor intuition that rates should be depressed. So far, so good, but this is far different than saying yields should be this low.

INTEREST RATES HAVE FOLLOWED INFLATION LOWER
US TREASURY 10-YEAR MATURITY BOND YIELDS VS. OECD INFLATION

Source: World Bank (OECD inflation), Bloomberg (US 10 year yield).

2. The "it's different this time" feature

Overvaluations are common in markets, but this is a nuisance that can be brushed aside if one believes that something transformational is unfolding. Valuations relative to history are irrelevant when history is being rewritten and investors become convinced that conditions are both exceptional and built to last. The housing bubble that led to the financial crisis in 2007-2008 was predicated on mortgage market innovations that made homes more affordable to more people than ever before.

Similarly, investors believe today's supportive bond market conditions will never end. Since the 2007-8 crisis, the developed world has experienced one of its longest ever periods of sluggish yet positive growth. Central banks have reacted aggressively, utilising untested policy tools such as quantitative easing to push interest rates into negative territory.

Is it different this time? Yes it is. For starters, policy rates are at or close to the zero bound in many markets, yet this has done nothing to elevate inflation and growth *expectations*. This has attracted many converts to the "secular stagnation" thesis. The premise is that if policymakers are bound by rates close to zero, they may not be able to engineer a rate low enough to spur demand, particularly if inflation and corresponding rates of return are insufficiently low. And if recessionary pressures build in the coming quarters, central bankers will have seen an entire cycle pass without ever having the ability to meaningfully hike rates.

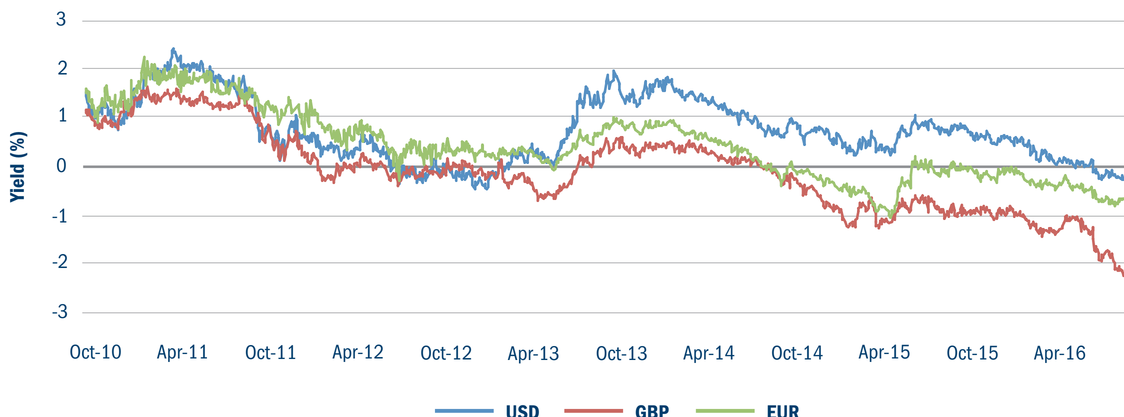
Unprecedented debt loads are another way in which "it's different this time". In theory, artificially low borrowing costs should engender explosive credit growth in the private sectors of an economy. Corporations and consumers should be eager to borrow at low rates and invest the proceeds into something productive. But corporations, beset by overcapacity and woeful productivity, are reluctant borrowers. Consumers, on the other hand, ended the last cycle with so much debt that they seem unwilling or unable to re-lever at any price. Policymakers simply have no choice but to keep debt servicing costs as affordable as possible.

The list of notable differences is a long one. Demographics are altering consumption patterns, globalisation has unleashed a wave of disinflation, productivity is languishing, and income inequality appears to be curtailing the propensity to consume for the masses.

Finally, the paradox of thrift appears alive and well. Low interest rates are meant to encourage people to spend, stimulating the demand side of faltering economies. Yet, seeing no improvement in their earning power, many consumers are responding by saving more, not less, to compensate for the paucity of investment returns. Monetary policy is largely exhausted, leaving central banks with limited scope to raise rates. It is perfectly understandable that bond markets have responded by pricing in a lack of growth and inflation over the short-term. But the market has done much more than this, assuming there will be no pressure over the long-term. The chart below shows the expected level of five year real yields five years from now. Inflation and bond yield expectations have collapsed globally. Fixed income investors have come to believe it's different this time, taking comfort from the perceived permanence of these factors.

MARKET EXPECTATIONS ARE FOR YIELDS TO REMAIN LOW

FIVE-YEAR REAL SWAP YIELDS, FIVE YEARS FORWARD



Source: World Bank (OECD inflation), Bloomberg (US 5 year yield).

3. The "visible hand"

The third common element behind bubble formation is the so-called "visible hand", a buying force that is both powerful and visible for all to see, invoking a high level of investor confidence that the trend is long-lasting. In today's fixed income bubble, central banks are that visible hand, and it shows up daily in the form of quantitative easing.

Central banks are price-insensitive buyers. They are purchasing billions of government bonds in their bid to stimulate global economies, artificially propelling prices higher and yields lower. The Bank of Japan, for example, is purchasing more than $700 billion of Japanese government bonds every year. Central bankers are the bull in the china shop, distorting prices and making other market participants wary of fighting the trend even at seemingly nonsensical prices. The highly public nature of this large-scale buying creates confidence that someone will be around tomorrow to buy at an even higher price, and also that any sell-off will be contained.

4. The "invisible hand"

Finally, there is an invisible hand often working to propel prices higher. These are the flows that are more difficult to spot and even more difficult to decipher, but seem to repeatedly come to the rescue of markets and foster investor complacency. Globalisation has greatly expanded the influence of international capital flows. Liquidity is global, and excess liquidity scours the globe in search of markets offering attractive returns. This has enabled regions with a surfeit of savings to export capital.

Other investors in this category include those that have little choice but to buy fixed income, even though doing so at today's paltry yields is a sure-fire way to lose money in nominal terms.

China and Japan have both had a significant downward influence on global rates. China's capital outflows have put immense pressure on global real rates and the so-called term premium - the yield advantage gained by extending maturity along the yield curve. A savings glut, slowing business investment, and worries over potential devaluation in the yuan have all provided the impetus to move money offshore. Likewise, as the Bank of Japan buys bonds from other holders, the proceeds received by sellers have found their way into higher yielding offshore markets, pushing global yields ever lower. The same can be said for the ECB.

Pension funds and insurance companies require assured income to meet the promises they have made to savers and policyholders. Many have liabilities exceeding the duration and maturity of their assets. Lower yields worsen this mismatch, creating an acute need for many of these players to add more duration as yields move lower. Other financial institutions, such as banks, are being forced through regulation to add more safe assets. Together, these powerful forces have exacerbated the pro-cyclical behaviour of other investors.

Toil and Trouble

Government bond market valuations are unattractive, and in many cases are among the most expensive levels in history. Markets long ago moved beyond simply pricing in a low-inflation, low-growth environment. They are now pricing in a *permanent* low-growth, low-inflation backdrop. Valuation, however, is only part of the story. The numerous indicators that typically portend a bubble environment are also all present, as summarised below. Meanwhile, the markets are calm, with little fear that risks are elevated, fostering the conditions that normally precede a reversal.

Elements of a bond bubble

Element	Role in creating a bubble mindset	How it's playing out today
A Sound Rationale	Provides the intuition needed for investors to jump on board	Slow growth & low inflation are entrenched and consistent with low rates
The "It's different this Time" feature	Comfort (permits rationalisation of valuations)	High debt loads & secular stagnation will lead to permanently low neutral policy rates
The Visible Hand	Confidence	Quantitative easing and aggressive central bank bond buying
The Invisible Hand	Complacency	Savings glut, global capital flows, demographics, pension and insurance buying

Limits to the decline in yields

How low can yields go? For years, investors in Europe and the US have been anticipating a rise in interest rates. It has never materialised, as we have instead witnessed a series of global deflationary shocks. We cannot rule out further declines in yields. Geopolitical uncertainty remains high. Central banks may boost bond buying and/or cut rates even further in a bid to boost growth prospects. Growing recessionary fears might delay lift-off. Yet, there are numerous indications that we have reached the end of the road.

First, short-term policy rates have largely moved to the lower bound. Although there may be scope for additional minimal rate cuts outside of the US, they will be largely cosmetic. Markets have rejected deeply negative rates and policymakers risk unintended consequences should they pursue this option. Negative interest rates undermine bank profitability and have a punitive impact on savers. If interest rates become even more negative, alternative safe-havens are likely to spring up. For small and medium transactions, investors could simply turn to holding cash, thereby slowing money velocity.

Long-term yields can be thought of as a combination of the forward path of short-term policy rates plus a "term premium" to compensate for additional risk of lending for a longer period. If rates are to fall meaningfully, it must come from one of these sources. If we rule out further declines in short-term policy rates, it eliminates one tailwind. The difference in this cycle is that the term premium has already become very compressed, effectively eliminating the other potential tailwind for bonds. It is this combination that tells us the rally is in its final stage unless a massive deflationary wave is imminent.

When will the bubble burst?

For investors, the million-dollar (trillion-dollar?) question focuses on when the bond bubble might burst. An old adage among economists states that one should attempt to forecast level, or forecast timing, but never both. Timing the end of a bubble is indeed dangerous. Overshoots are, by definition, part of the puzzle. The magnitude of overvaluation is therefore a poor indicator of an inflection point, as a combination of overvaluation and a catalyst is required. The catalyst often comes from an unanticipated source. Unfortunately, in today's unusual environment, traditional indicators offer few clues. GDP and inflation, both traditionally linked to bond yields, have become detached from markets because of today's exceptional conditions. Imbalances tend to show up in currency markets; if the dollar were to rapidly go up in value, this could be a warning sign.

Important changes in any one of the above "four elements" could deflate the bubble. But history tells us that it is highly unlikely for the catalyst to come from a change in the underlying rationale. Low growth and muted inflation are likely to persist. Macroeconomic volatility remains low. Subtle changes in GDP and inflation are unlikely to provide the catalyst, although history also tells us that this won't stop the markets from obsessing over every data release as though it will provide the critical clue. A catalyst is more likely to emerge from elsewhere. Policymakers may change the rules of the game. Central banks could accept that further rate cuts are unlikely to have the desired effect. Instead, policymakers could turn their attention to fiscal policy, ramping up infrastructure spending or offering tax incentives as a way to encourage demand. Perhaps the fiscal spending could even be financed via debt monetisation, a potential game-changer.

The most likely place to search for clues will be in the "visible" and "invisible" hand categories. Moreover, it is more likely than not that cues for the end of the bond rally will emanate from Asia. Japan is at the forefront of policy experimentation and is becoming desperate to boost inflation expectations. They might just be successful, either by forceful actions to achieve their inflation target or by formally adopting a price level target. Europe may do something similar.

If the Chinese economy were to recover, it might also prove another catalyst for the end of the bond rally. Chinese investment flows have materially suppressed global bond yields. A reacceleration in China would force foreign flows to rapidly recede, leaving government bonds without a key source of demand. Investors should keep a close eye on China's growth rate and the pace of capital outflows. In other regions, a less accommodative stance by either the ECB or the Bank of England would greatly exacerbate a sell-off.

Studying the anatomy of a bond bubble is challenging. A final important lesson of bubbles is that they tend to end badly, but also that they end quite differently, and very often through unexpected channels. Timing the exit is always difficult. It is important to recognise today, however, that irrespective of whether or not the bubble is about to burst, the good times are over. Government bond valuations are simply too stretched, and the likelihood of additional positive catalysts too small, to argue for sizable gains from this starting point.

In the meantime, products with low exposure to core developed market government bonds or low interest rate sensitivity should continue to do well. Products with an ability to aggressively allocate to different sectors, or with an emphasis on non-core government sectors such as credit, municipal bonds and emerging markets should prove to be the most resilient areas of the fixed income market, albeit with a heightened degree of volatility.

We are witnessing the end of a multi-decade rally, and the unresolved question is a simple one: must we wait for a long while for this bubble to burst, or is an abrupt end just around the corner? The answer is not entirely clear, but will likely come from unexpected places, and will be heavily influenced by policymakers.
Warning signs are looming.

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