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Bond Market Bubble?

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On Tuesday, January 18, the yield on fifty-year inflation-protected U.K. government bonds (what the British call "indexed-linked gilts") dropped to 0.38 percent, about one-seventh the historical average of just over 2.6 percent for such debt instruments. Just a few months earlier, that yield had been over 1 percent, still extraordinarily low by historical standards, and especially low in an economy that has experienced fifty-three consecutive quarters of positive growth. A yield drop from 1 percent to 0.38 percent on a fifty-year bond corresponds to a 30 percent rise in its price over a period of just three months. That is an annual return of over 100 percent, much higher than the 13 percent annual increase in U.S. house prices at midyear and the 20 to 30 percent gains seen in the stock market before the March 2000 crash. The asset bubble has spread to long-term government bonds, especially those with inflation protection. What is going on here?

First, the caveats: Real yields on gilts have since risen a bit, although only to a still virtually unprecedented low level of about one-half of 1 percent. Part of the recent surge downward in long-term real U.K. interest rates is due to technical causes, specifically a provision in British pension law that puts additional pressure on pension funds to substitute bonds for stocks.

Still, remarkably low real interest rates on long-term bonds, especially those with inflation protection, are a global phenomenon. The price that investors are willing to pay for long-term, riskless income streams has risen to unprecedented levels worldwide. More broadly, U.S. real ten-year yields are extraordinarily low by historical standards. Real yields on long-term bonds in Europe are even lower. These observations constitute the bond market "conundrum" referred to by Alan Greenspan and explained by incoming Federal Reserve chairman Ben Bernanke as the consequence of a global savings glut. Mervyn King, the governor (that is, the head) of the Bank of England, recently suggested that excess liquidity resulting from rapid growth in money and credit has driven a search for yield that has, in turn, pushed asset prices up and interest rates down.

It is time to push beyond the "global savings glut" argument and the closely related "excess global liquidity" argument to explain the extraordinarily low level of both real and nominal long-term interest rates. When a newspaper like the *Financial Times*—which has long decried the risks in terms of higher interest rates that will follow from large budget deficits—writes a headline about a "dangerous bond market bubble" tied to the appearance of extraordinarily low interest rates, clearly something is amiss. It is, after all, the frequently deplored budget deficits of governments in the United Kingdom, the United States, and elsewhere that measure the growth of government debt. Right now, the growth of demand for government debt, especially long-term debt with inflation protection such as that provided in U.K. gilts and U.S. Treasury inflation-protection securities (TIPS), far exceeds the growth of supply. Continued downward pressure on long-term interest rates (both real and nominal), highlighted by the meager 38 basis points offered on Britain's fifty-year indexed-linked gilts, is irrefutable evidence that the demand for sovereign debt issued by governments in the leading industrial countries is continuing to rise and is, in fact, outstripping

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the increase in supply tied to the much-bemoaned budget deficits in most of those countries.

Issue More Long-Term Bonds

Before looking in detail at some of the deeper causes that may be driving long-term interest rates lower (even as government budget deficits rise), it is important to point out that finance ministers have a great opportunity. The rapid growth in the demand for long-term inflation-protected government debt, rather than necessarily becoming a dangerous bond market bubble, suggests a way to ease governments' deficit-financing problems. The existing stock of government debt should be shifted more toward long-term issuance and any increases (budget deficits) should be financed more with issuance of new long-term debt. Furthermore, for reasons explained below, long-term debt should mature in fifty to one hundred years, not ten to thirty years, as is currently so popular.

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A glance at the yield curve of indexed-linked U.K. gilts clearly shows that the real yield on the longest maturity available—fifty years—is the lowest of all indexed-linked gilts. On the day when fifty-year inflation-protected gilts were yielding 38 basis points, three-year inflation-protected gilts were yielding about 150 basis points, and ten-year gilts were yielding over 100 basis points. Real yields on fifty-year inflation-indexed U.S. government liabilities, which do not even exist, would be lower than yields on ten-year TIPS, probably below 1.25 percent under current market conditions.

Interest rates on very long-term debt issued by governments tend to be the lowest of all maturities because the highly predictable long-term income stream is valuable to institutions like pension funds and insurance companies that face predictable long-term payments on life insurance policies and annuity contracts. Other things equal, interest rates tend to rise because of increasing risk premiums as debt maturities rise from one year to thirty years; beyond thirty years, however, the value of a lengthy, predictable income stream tends to overwhelm the risk premiums. The least expensive form of debt finance arises at maturities of fifty years or higher.

During the nineteenth century, British consuls (as perpetual liabilities of the British government were known) provided the least costly form of government finance. At that time, a government's debt-management problem largely involved borrowing to finance wars and overseas adventures, while today government finance is more focused on funding government pensions and social programs. Yet the factors driving down long-term yields, those on instruments of fifty years maturity or longer, still apply.

A substantial move toward government finance utilizing long-term inflation-indexed securities has another benefit beyond the lower cost of financing at such long maturities. Inflation indexing means that bond buyers are protected from higher inflation. Inflation indexing removes any incentive governments may have to try to reduce the real value of their liabilities by printing money and increasing inflation, because the inflation-indexing provision requires them to compensate bondholders for higher inflation. Elimination of inflation risk is another factor contributing to the extraordinarily low real returns now observed on fifty-year indexed gilts.

Imaginative treasury secretaries and finance ministers should take note of another opportunity offered by the extraordinarily low borrowing cost that can be obtained by issuing long-maturity inflation-indexed debt. Governments should consider a debt-financed investment in a transition to lower and more uniform marginal tax rates that many studies have shown would result in an increase in long-term growth rates of up to one half of 1 percent. For a $12 trillion economy like the United States, one half of 1 percent is $60 billion a year, measured in current dollars. The present value, again measured in current dollars, of $60 billion per year given a 2 percent real interest rate used as a discount rate, is $3 trillion. Therefore, even if a move to lower and more uniform marginal tax rates entailed transitional costs of several hundred billion dollars, it could still constitute a good investment for most governments.

Fundamental Causes

It remains important to develop a better understanding of the reasons behind the move to extraordinarily low real long-term interest rates over the past several years, even as the Federal Reserve has raised short-term real rates. Broadly speaking, it appears that the settings of monetary policy, in terms of interest rates and money growth, that are consistent with maintaining non-inflationary trend growth in the real economy are simultaneously consistent with ever-rising asset prices, including prices of government bonds. Underlying this phenomenon is a substantial increase in low-cost aggregate global supply of goods that arises from new utilization of a huge pool of low-cost labor in China and other Asian countries. The surge in the availability of low-cost labor has resulted in a massive increase in the capital stock in regions like China, where such labor is available. The rapid growth of Asian labor and capital has contributed to persistent increases in the global aggregate supply of internationally traded goods. With global aggregate supply rising rapidly, the setting of monetary policy that stabilizes inflation by sustaining global aggregate demand growth at a comparable pace also results in steady growth in demand for assets such as land, housing, and government bonds as vehicles for wealth storage. But demand growth in these areas exceeds that of supply. As a result, asset prices rise.

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The global savings glut arises, in part, from the sharp increase in the demand for wealth storage facilities attendant upon the rapid growth of incomes in Asia. On average, the Chinese are saving over 45 percent of income, not because of any natural propensity toward thrift, but rather because they are concerned about providing for themselves in retirement years. China's one-child policy is a massive demographic shock, which removes from the traditional Chinese family one of the major sources of security in old age—care and shelter offered by one's children. Beyond that, China's economy has developed far more rapidly than its provision of government pension and health care programs. One major consequence is that, as Chinese households earn more income, their concern about maintaining living standards during older age leads to a strong demand for a safe place to store assets. Unfortunately, China offers little to its citizens beyond its state-run banks. Those banks are famously insolvent due to heavy investment in state-owned enterprises, many of which are not economically viable. While China's financial system is changing, it does not yet provide its citizens with adequate wealth storage facilities.

China's savers are not permitted to invest abroad on any substantial scale. Meanwhile, China intervenes heavily to prevent appreciation of its currency, in an effort to maximize the growth of its traded-goods sector. That growth helps to continue to absorb the massive flow of inexpensive labor from China's agricultural sector into its rapidly growing industrial sector. The dollars acquired in the currency intervention efforts are invested abroad in U.S. government securities and, more recently, in agency securities and mortgage-backed securities. On the whole, China's large flow of savings contributes to the global savings glut but does not, by any means, account for all of it. Japanese households have also been heavy buyers of U.S. debt. All of this Asian demand for safe wealth storage facilities pushes down interest rates.

Another part of the global savings glut comes from the rapid increase in the fiscal surpluses of commodity exporters—especially oil exporters. As the price of oil has escalated (by 40 percent during 2005 alone), the funds available to oil exporters have grown rapidly. Naturally these exporters too must seek wealth storage facilities. They place a high premium on safety and liquidity, and the government securities markets of advanced industrial countries, especially the United States, offer a unique level of both. So, the rising commodity prices that are a byproduct of the rapid growth of relatively low-cost production in the countries of Asia and other emerging markets are also contributors to the global savings glut that, in turn, drives down interest rates on government debt. Such low interest rates tend to support and define the rise in asset prices in industrial countries.

It is difficult to escape the conclusion that monetary policy settings consistent with stable goods prices at trend growth in industrial countries imply what amounts to a global savings glut that drives up asset prices and drives down real interest rates. The fact that this mix also boosts commodity prices and, consequently, the investable funds available to commodity producers exacerbates the demand for income streams from wealth or wealth storage that results in lower long-term interest rates. That dynamic ultimately constitutes a necessary condition for the appearance of extraordinarily low real yields, such as the 38 basis points observed on U.K. indexed-linked gilts on January 18.

Another source of the rapidly rising demand for safe wealth-storage facilities arises from the rapid growth in wealth among the aging populations of industrial countries. U.S. baby boomers have begun to retire or approach retirement and, having seen U.S. real net worth rise by over $5 trillion during the last year alone, have boosted their bids for all classes of assets—especially those that offer reliable, inflation-protected income streams, or lightly taxed streams of services from real estate. With more and more affluent households seeking to purchase income streams from wealth, the price of the assets that supply those income streams has been bid up. That rates of return have been driven down is simply another way of describing the same phenomenon.

Limits to Asset Bubbles

How high can asset prices go and what are the effects on growth and inflation? These questions concern thoughtful central bankers like Mervyn King, who addressed them in an important speech delivered just two days before the date of the extraordinary drop to 38 basis points on fifty-year indexed U.K. gilts.[1] When monetary policy settings that are consistent with stable inflation in the real economy also imply asset price inflation that, in turn, leads to inflation of commodity prices, the eventual adjustment comes when those commodity prices push up inflation rates enough to force central banks to tighten policy further. What King and other central bankers worry about is that the time it takes for higher commodity prices to boost inflation to levels that require tighter monetary policy settings could be sufficient for asset price bubbles to develop. The 38 basis point yield on fifty-year indexed-linked gilts was a reminder that bubbles can emerge in all asset markets, including the markets for government debt, and that those bubbles are somewhat destabilizing insofar as they lower interest rates in a manner that further accommodates spending growth.

Central bankers are forced to ask themselves the question: should monetary policy respond to asset prices? The answer is tied to the impact or the expected impact of higher asset prices on inflation and its close cousin, expected inflation.

King puts the question elegantly, suggesting that the price of future goods—the inverse of real interest rates relative to the price of current goods—is very high right now and probably will revert to normal levels by virtue of either higher real interest rates or higher goods prices. If investment is boosted by very low real interest rates and, in turn, absorbs more available savings, the result will be to push up real interest rates, although current levels of global investment spending have not yet done so. Alternatively, if high asset prices drive up consumption and aggregate demand more rapidly, the adjustment may come in terms of higher prices of current goods, an outcome that central bankers worldwide wish to avoid because higher inflation means more unstable inflation and lower growth rates, as strongly evidenced by the experience during the 1970s.

The possibility that higher asset prices may drive up aggregate demand, and thereby boost inflation, leads King to warn that "monetary policy will, therefore, need to be alert to the information contained in a wide range of asset prices, to be forward looking in its aim of maintaining low and stable inflation, and to be ready to respond to changes in the signposts." King appears to suggest that asset price increases that may lead to higher inflation should result in tighter monetary policy. Central bankers therefore will be paying very close attention to measures of expected inflation. So far, most such measures are benign, despite rising prices of commodities such as oil and gold.

The same question of how central bankers ought to respond to possible asset bubbles and the threat that they imply about future inflation was recently addressed by another important central banker. On January 11, 2006, just five days before the speech by the leader of the Bank of England, Timothy F. Geithner, president of the Federal Reserve Bank of New York, also discussed the impact of asset prices on monetary policy, among other important factors. Significantly, Geithner notes that we do not know enough about how changes in wealth (changes in asset prices) affect the real economy to "use monetary policy responsibly or effectively to achieve specific objectives for asset values."

However, Geithner leaves the door open for a link between asset prices and monetary policy. While acknowledging that events in the 1930s in the United States or the 1990s in Japan offered a case for adjusting monetary policy in response to negative asset-price shocks, Geithner proceeds to note a conditional corollary, namely, that the case for adjusting monetary policy in response to negative asset price shocks, "does not mean that monetary policy should generally ignore the effects of increases (in asset prices) and only respond to observed declines in asset prices. The test should be the size and circumstances of the asset price moves and their impact on the forecast relative to the central bank's objectives, not the direction of the asset price move." In short, Geithner suggests that a tendency for central banks to respond more to falling asset prices than to rising asset prices—a tendency that some say has become more pronounced during the Greenspan era—should not preclude consideration of a more symmetric response—especially if rising asset prices threaten to boost inflation.

Whatever the outcome, it is clear that rising asset prices and falling real interest rates, together with rising commodity prices, have placed central bankers on an elevated state of alert. If they wait until higher asset prices boost inflation (or spill into core inflation in the case of the U.S. Federal Reserve), they may be forced to further tighten monetary policy at a time when asset bubbles turn out to have been highly inflated. The resulting disruption in financial markets could do severe harm to the real economy, something that central banks dearly wish to avoid. That is why central bankers are beginning to hint that if they become convinced that asset prices have reached a level that reliably portends higher inflation in the future, they may tighten monetary policy promptly in order to impede a larger bubble and/or higher future inflation. Of course, a further rise in actual core inflation would be strong evidence that such risks have become unacceptably high.

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Lessons for the Bernanke Fed?

A dilemma may be emerging for the U.S. Federal Reserve as 2006 unfolds. As markets have come to anticipate that the end of Fed tightening is near, asset prices have risen and risk premiums have been compressed further. Simultaneously, commodity prices, including the highly visible prices of gold and oil, have increased further with oil rising back above $68 per barrel on January 20 while gold rose to nearly $560 per ounce on the same day. Those prices are up 14 percent and 7.5 percent, respectively, since January 1.

Empirical evidence suggests that the oil price "spike" of last September, coupled with the firmness of energy prices in general since then, may soon begin to boost U.S. core inflation. Currently, the Consumer Price Index (CPI) core inflation rate is 2.2 percent on a year-over-year basis, while the core inflation rate of the Personal Consumption Expenditures (PCE) index is 1.8 percent. Were persistent readings above 2.5 percent for core CPI and above 2 percent for core PCE to emerge by April or May of this year, the new Federal Reserve chairman, Ben Bernanke, might find himself looking at the problem referred to by both King and Geithner whereby the rise in asset prices feeds through to higher inflation. That message will be especially compelling if, simultaneously, oil prices are at or above $70 a barrel and gold is above $600 an ounce. Both events are entirely possible in the current regime of extraordinarily low real and nominal interest rates and plentiful liquidity. A $70-per-barrel price of oil that persists for several months would erase last September's notion of an oil price "spike." It would reinforce the notion that energy prices are beginning to spill into the core inflation rate and call for the Fed to execute further increases in the federal funds rate.

This year a second stage of monetary tightening may emerge. The first stage is nearly complete at 4.5 or 4.75 percent on the Fed funds rate. If that level of interest rates continues to accommodate trend growth and rising asset prices with further persistent increases in commodity prices, then the musings of the *Financial Times* the day after Mervyn King delivered his message about the dangers of ever-rising asset prices may be particularly prescient. Its January 17 editorial entitled "Mervyn's Message" fretted: "Worryingly, markets appear to be assuming that—with the Fed approaching the end of its rate tightening cycle—the worst is already over. In reality, it has not even begun."

Notes

1. Mervyn King, (speech, Kent Messenger Group/Kent Business, Ashford, Kent, United Kingdom, January 16, 2006), available at http://www.bankofengland.co.uk/publications/speeches/2006/speech263.pdf.