The Unloved World Dollar Standard:
Greenspan-Bernanke Bubbles in the Global Economy

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I’m forever blowing bubbles,
Pretty bubbles in the air,
They fly so high, nearly reach the sky,
Then like my dreams they fade and die.
Old Cockney Folk Song

Abstract

The U.S. Federal Reserve’s monetary policy at the center of the world dollar standard has a first-order impact on global financial stability. However, except in moments of international crises, the Fed focuses inward on domestic American economic indicators and generally ignores collateral damage from its monetary policies in the rest of the world. But this makes the U.S. economy less stable. Currently, ultra-low interest rates on dollar assets ignite waves of hot money into Emerging Markets by carry traders that generate bubbles in international primary commodity prices and other assets. These bubbles burst when some accident at the center, such as a banking crisis, causes a reflux of the hot money. Ironically, these near-zero interest rates hold back investment in the American economy itself.

Key Words: Dollar standard, Exchange rates, Hot money flows, Emerging markets, Commodity price cycles

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2 This paper is written in an informal style without all the usual detailed academic attributions. My excuse that it is really a synopsis of the main theme of my recent book, The Unloved Dollar Standard: From Bretton Woods to the Rise of China, (Oxford University Press, 2013; Chinese translation, China Financial Publishing House, 2013). For a more extensive analysis with references, please consult the book itself.
Introduction

For better or for worse, the world economy is on a dollar standard—and has been since the end of World War II [McKinnon 2013, chs. 1 & 2]. From 1945 up to the late 1960s, this accident of history was for the better. The United States’ monetary policy remained stable, and its current account showed a moderate surplus—which was offset (financed) by outward private direct investment combined with official capital outflows. Most notable was the remarkably successful Marshall Plan, which, through stable dollar exchange rates within the European Payments Union of 1950, helped promote European economic integration and recovery from World War II. Less well recognized was the Dodge Line of dollar credit to Japan that, in 1949, anchored its war-torn financial system at 360 yen per dollar and undergirded extremely rapid noninflationary economic growth into the 1970s [McKinnon 2013, ch 3].

But beginning in August 1971, when the “Nixon Shock” of forced dollar devaluation, erratic U.S. monetary policies have caused major upheavals both in the center country itself and in its ever-changing periphery. Instead of behaving appropriately as the world’s de facto central bank, the U.S. Federal Reserve became a serial bubble blower by inducing flows of volatile “hot money” into economically important peripheral countries—mainly Western Europe and Japan in the 1970s and 1980s, but also in emerging markets (EM) in the new millennium.

When markets anticipate dollar devaluation, or when the Fed keeps its domestic interest rates too low relative to natural rates of interest prevailing elsewhere, hot money flows out of the U.S. Then no matter what its exchange rate regime, a peripheral central bank faces a dilemma: either allow its exchange rate to appreciate against the dollar and thus lose export competitiveness against its neighbors, or intervene to buy dollars with domestic base money and lose monetary control. A collective loss of monetary control in peripheral countries has led to international price inflation, often first manifested in a bubble in the dollar prices of primary commodities, before being embedded more deeply in their industrial systems. The U.S. itself is last in line with longer lags to receive the inflationary impulse—if ever—before the bubbles burst.

This dollar-led, hot-money syndrome explains much of the great world inflation of the 1970s [McKinnon 2013, ch 4] As early as 1970, markets began to anticipate what became known as the Nixon Shock of forced dollar devaluation in August 1971. In 1970—71, hot money flowed out of the U.S into the other industrial countries with convertible currencies. This forced central banks in Western Europe, Canada, and Japan to intervene massively, and sharply increase their holdings of official dollar exchange reserves—with concomitant large increases in their domestic monetary bases. Mainly outside of the United States itself, the “world” monetary supply exploded with inflation in commodity prices—particularly oil—shooting up in 1973—74.

After inflation was somewhat tamed in 1975 by a worldwide recession, in 1976 a similar sequence of events was unleashed by the incoming Carter government trying to talk down the
dollar—particularly against the yen—in the mistaken belief that this would reduce the U.S. trade deficit. Again hot money flowed out of the U.S. in 1977 into 1978 with a weakening (depreciating) dollar. In a crisis atmosphere, a consortium of foreign central banks intervened in October 1978 to buy dollars and put a floor under its foreign exchange value; and the Fed was forced to raise interest rates. But the damage had been done. With the sharp buildup of dollar foreign exchange reserves, the world money supply outside the United States again ratcheted upward, leading to a surge in commodity prices and generally high inflation in the industrial world from 1979 to 1980.

**Greenspan-Bernanke Bubbles: 2002—13**

With this background in mind, let us fast forward to 2002 and the Greenspan-Bernanke era of U.S. hot money outflows generating “bubbles” in the world economy [McKinnon 2013, chs 4 and 5]. Over-reacting to the collapse of the dotcom bubble in the U.S. stock market in 2001, Fed Chairman Alan Greenspan cut the interbank overnight lending rate to just 1 percent in 2002 (followed by LIBOR shown In figure 1) and kept it there into 2004. Again hot money flowed out of the United States, but this time the relevant periphery of the dollar standard was mainly emerging markets (EM) with convertible-currency countries with naturally higher interest rates reflecting their higher growth.

Figure 1

Each EM central bank was then faced with the now-familiar dilemma: either let its currency appreciate rapidly or intervene to buy dollars and lose monetary control. In practice, they did some of both. Figure 2 shows the remarkable buildup of foreign exchange reserves in EM of almost $6 trillion after 2002, with China accounting for about half the total. Then, not including China, figure 2A shows the widespread geographical buildup of official reserves in EM throughout Latin America, Europe, the Middle East, and developing Asia. The lower panel of Figure 2A (right hand side) then shows the rise in an index of EM exchange rates when hot money flows in (2006—07 and 2010) and then sharp fall when it flows out (2008, and 2012-13).

Figure 2

Figure 2A

Figure 3 shows the relatively higher inflation in EM compared to the U.S. despite the net appreciation of EM exchange rates against the dollar from 2002 to 2007 (figure 4). The collective loss of monetary control in EM, and ultra-low U.S. interest rates, created bubbles in asset markets. The best known was the huge bubble in US real estate prices—particularly home prices—that peaked in early 2007. But, as we shall see, concurrent bubbles in commodity and stock prices lasted into 2008 before bursting.

Figure 3
Figure 4

Hot money outflows from the center are typically financed by banks that lend to “carry traders”, i.e., speculators who borrow in low-interest-rate currencies (or so-called source currencies) to invest in currencies with higher interest rates and/or in those expected to appreciate (so called investment currencies). The outflow of hot money from source currencies may well cause the source currency to depreciate for some time. Figure 5 shows the steady depreciation of the dollar’s effective exchange from 2002 until early 2008. Insofar as carry traders were chartists who simply extrapolated the dollar’s depreciation while ignoring the risks involved, they saw a double incentive to move hot money out of the U.S. into those EM with higher interest rates and appreciating currencies.

Figure 5.

However, these “hot” money outflows can be interrupted by banking crises. When (international) banks are suddenly impaired: they cease lending for speculative purposes and even demand repayment of previous short-term loans. These sudden withdrawals of dollar credits can be particularly sharp because the dollar is viewed as the safe haven currency in time of crisis—even when the banking crisis originated in U.S.

The banking crisis from defaulting subprime mortgages, mainly associated with the bursting of the U.S. real estate bubble in 2007—08, led to a sharp reflux of hot money to the United States. Figure 2A shows the drop in the rate of accumulation of EM central bank reserves in 2008, and figure 4 shows the depreciation of EM exchange rates against the dollar. Figure 5 shows the sharp appreciation of the dollar’s effective exchange rate in 2008—very hard on carry traders who do not (cannot) hedge their foreign exchange risks.

But this is not the end of the Fed’s bubble blowing. Under Chairman Ben Bernanke, the Fed over-reacted again to the 2008 downturn by cutting the U.S. intra bank overnight lending rate to virtually zero in December 2008—and then, as figure 1 shows, keeping it there so as to depress LIBOR to the present writing (March 2014). By mid 2009, however, the U.S. sub-prime mortgage crisis seemed to be contained. The U.S. Treasury’s Troubled Asset Relief Program (TARP) massively recapitalized banks and other important American financial institutions. By 2013, TARP has been a success as the U.S. banks have paid back virtually all they had borrowed.

But the huge interest gap between the U.S. and EM remains. Figure 6 shows the average discount (bank lending) rates of the BRICS—an acronym for Brazil, Russia, India, China and South Africa—about 6 percent compared to near zero in the U.S. (and in the Euro Area and
Japan). Because the U.S. banking crisis had been ameliorated by mid-2009, bank lending to carry traders was no longer as constrained. No wonder the carry trade out of dollars and other source currencies into EM currencies started up again in 2009-11 with a depreciating effective exchange rate for the dollar (figure 5), and creating a new bubble in primary commodity prices.

Figure 6

This second bubble began bursting in mid 2011, at the height of the international banking crisis associated with the travails of the euro. A net withdrawal of bank loans prevented carry traders from sending hot money into EM. Figure 5 shows the second sharp appreciation of the dollar’s effective exchange rate in 2012 as money returned to the United States.

In these two great waves of hot money flows into emerging markets, the position of China compared to other BRICS was rather special. From 2002 to 2013, the yuan/dollar rate remained relatively stable with the RMB appreciating very slowly and smoothly (figure 4). This reflected the massive interventions of the People’s Bank of China (PBC) to buy dollars and peg the yuan dollar rate at the beginning of every trading day—while allowing at most a 1 percent movement during the day, with an average annual appreciation of only about 3 percent.

In late February 2014, the PBC surprised the market by allowing the RMB to depreciate against the dollar by 1.5 percent. Then, in mid-March 2014 to further deter carry traders by introducing more exchange risk into the system, the PBC government announced a somewhat wider band of ± 2 percent around the central rate prevailing at the beginning of each trading day. Whether these policy changes signal the end of predictable appreciation in the medium term—a one-way bet on which carry traders thrive—only time will tell. However, what does seem clear is that the yuan/dollar will still remain much more stable than the exchange rates of other BRICS.

In contrast, the other BRICS had massive appreciations followed by depreciations as the bubbles burst. In particular, the dollar price of Brazilian Real more than doubled from 2003 to 2007 (figure 4), and knocked the economy on its high growth trajectory. Contrary to conventional economic theory, a floating exchange rate does not insulate any national economy from monetary shocks in the form of a hot money inflow—and can further destabilize it.

The effects of both these bubbles and their eventual collapse is summarized in figure 7, “The Greenspan-Bernanke Bubble Economy”; it records America’s experience with bubbles in property values, stock prices, and the dollar prices of primary commodities, from 2002 to 2013.

Figure 7

The Arab Spring

The ebb and flow of hot money, and particularly its effects on the prices of primary commodities, where many EM and other developing countries are major producers, is certainly disconcerting for them. Primary products—particularly food grains and oils—are also key
components in the consumption baskets of most of these countries, the per capita incomes of which are much lower than in mature industrial economies. Indeed, the political survival of governments in many poorer countries often depends on keeping domestic food and energy prices down.

Starting in mid-2009, the second great hot-money bubble caused international prices of food grains to virtually double in 2010 (Figure 8). In December 2010, a poor Tunisian food vendor immolated himself, not being able to get food at controlled prices to satisfy his customers. This spectacle set off a food riot in Tunisia which brought down its government. Further, it set off contagious riots throughout North African and other poorer Arab countries that were not major oil producers. Collectively, these riots to throw out incumbent governments (usually corrupt) became known as the “Arab Spring”.

Figure 8

But the Arab Spring was misnamed. The semantics initially connoted a longing for democracy by long repressed populations to throw out corrupt, dictatorial governments and replace them with something better. What actually happened is better interpreted as a collective food riot—made all the more “contagious” by the countries involved all suffering sharp increases in food prices in the same time year, 2010. If the Arab uprisings had been mainly recognized as food riots, the response of the industrial countries could have been different. Instead of supporting political revolutions to “throw the rascals out”, they should have focused more on international monetary measures to dampen international cycles in primary commodity prices.

**Quantitative Easing in Financially Mature Market Economies**

Much of this paper concerns volatile hot money flows into emerging markets that cause bubbles in international asset prices—particularly in primary commodities. The root cause of this financial volatility was the ultra-low interest rates in mature industrial countries at the center of the global financial system relative to the naturally higher interest rates in emerging markets on the periphery.

But all industrial countries are not financially equal. Most of the world remains on what I call *The Unloved Dollar Standard* (McKinnon 2013). Thus the U.S. Federal Reserve Bank took the lead in pushing interest rates toward zero both at short term and, more recently, at long term through what is now commonly called quantitative easing (QE). The Fed cut its overnight intrabank lending rate to just 1 percent in 2002, and then to virtually zero in December 2008 (figure 1). In implementing QE since 2008, the Fed has bought huge quantities long-term financial instruments—mainly U.S. Treasury bonds. In 2013, the Fed was buying about $85 billion per month. From 2008 through 2012, the Fed had some apparent success with QE in driving long
rates down—the 10-year Treasury Bond reach 2 percent (figure 1). (But not subsequently as we shall see.)

Remarkably, central banks in the other mature industrial countries—the Bank of England (BOE), the European Central Bank (ECB), and the Bank of Japan (BOJ) as well as the Fed—also kept their short-term interest rates near zero, and since 2008 drastically expanded their balance sheets through some form of QE. Figure 9 shows that the BOE, since 2007, actually purchased more assets—measured as proportion of British GDP—relative to the massive asset purchases of the other three central banks. But despite (or because of?) these massive asset purchases, all four central banks more or less failed to stimulate their economies’ very sluggish recovery from the 2008 downturn through to 2013.

Figure 9:

In contrast, central banks in emerging markets on the “periphery” follow monetary policies more geared to stabilizing their dollar exchange rates because they were buffeted from the ebb and flow of hot money from the center—as we have seen. Since they are less mature financially and fiscally, they dare not risk major runs to develop for or against their domestic monies by, say, following a policy of keeping short-term interest rates near zero. Although pressed down by the weight of low interest rates in the center countries, they still have maintained substantially positive nominal interest rates and have eschewed massive monetary expansions in the form of quantitative easing.

In contrast, the mature industrial economies at the center can ignore the ebb and flow of hot money to the periphery. They are all following very similar monetary policies with similar short-term interest rates (near zero), and in further part because their greater financial maturity lets importers and exporters hedge their exchange risks more easily. In effect, they have more truly “floating” exchange rates than EM. Nevertheless, not withstanding floating exchange rates, the industrial economies have created a monetary trap for themselves from which escape is difficult.

The Near-Zero Interest Rate Trap in Industrial Economies through 2014

The conventional critique of the Federal Reserve’s policies of near-zero interest rates and massive monetary expansion is that they risk kindling excess aggregate demand and high inflation. Yet inflation worldwide remains low, and some major trading partners of the United States, such as Japan and now China, are worried about deflation. China’s producer price index fell 2.7 percent in June 2013, the 16th consecutive monthly decline.
Instead, I shall argue that extremely low short- and long-term interest rates so distort the financial system that they hold investment and the economy back. And modest increases in interest rates to more "normal" levels could lead to more investment without an inflation risk.

For an example of how near-zero short-term interest rates can inhibit private investment, consider a bank that accepts deposits and makes new loans of three-months' duration. The traditional spread between deposit and loan rates is about 3 to 3.5 percentage points. With this spread, banks can lend to small- and medium-size enterprises, the so-called SMEs—making loans that carry moderate risks and higher administrative costs per dollar lent. To increase the safety of its overall loan portfolio, the bank can also lend greater amounts to larger, more established corporate enterprises.

However, as short-term interest rates are compressed toward zero, larger corporate borrowers find it more advantageous to raise money by selling short-term commercial paper directly to other corporations, pension funds, and money-market mutual funds for less than the banks’ prime loan rate. This leaves smaller banks in particular with a riskier portfolio of loans to SMEs, and the need to raise more bank capital to support riskier liabilities—so they may instead shrink the size of their loan portfolios.

Also, smaller banks can't easily borrow funds from other banks to lend to companies when interest rates are near zero. These other banks aren't inclined to lend their excess reserves for a tiny yield, especially in the presence of even moderate counterparty risk. They will instead just hold excess reserves.

As interest rates fall, money-market mutual funds will buy highly rated commercial paper and other short-dated financial instruments. However, if short-term interest rates approach zero, these money funds fear "breaking the buck." Even a small negative random shock to the mutual fund's portfolio from a client failing to repay could jeopardize the fund's ability to cover interest payments to depositors. This means that depositors might only get 99 cents back on each dollar invested. Sponsors of these money-market mutual funds, often banks, are paranoid about the reputational costs of breaking the buck—so they may either close their money market mutual funds or limit new deposits.

Despite the difficulties in an ultra-low interest environment in getting short-term bank financing, can't larger, well-known corporations still get the investment funds they need by selling longer-term bonds? Indeed, in the surprisingly sluggish recovery of the of the mature industrial economies from the sharp down turn of 2008, direct finance —the sale of bonds and
stocks by large corporate enterprises—whose names are well recognized in the financial markets—has boomed. While bank credit for small and medium sized enterprises (SMEs) has languished. And in cyclical recoveries, rapid employment growth depends on SMEs.

But the boom in bond finance need not continue. The problem here is that as banks and other financial institutions get used to near-zero interest rates and accumulate bonds with low coupon rates for some years, they end up in a trap from which escape is difficult. And this trap has negative implications even for corporations that seek direct long-term financing.

The trap was revealed for all to see after Fed Chairman Ben Bernanke suggested, in congressional testimony on May 22, 2013, that the central bank might slow down, i.e., taper off, its huge purchases of long-term Treasury bonds and other long-term securities—purchases designed to keep long-term interest rates low.

Chairman Bernanke carefully hedged his statement. He said that certain preconditions of the economic recovery, notably a sharp fall in the unemployment rate to 6.5 percent, had to be met before tapering could begin. But markets ignored these caveats. Long-term interest rates rose from 1.5 percent to 2.5 percent in the U.S., and stock markets crashed around the world in the four days that followed.

A chastened—and trapped—Mr. Bernanke backtracked in a June 19, 2013 press conference and said that money will remain easy for the foreseeable future. But the low-interest trap matters for the efficiency of the long-term bond market. In March 2014, Janet Yellen, the new Chairman of the Federal Reserve Bank, began modest tapering by cutting back Fed Purchases of long–term bonds by $10 billion dollars from $85 billion. Again long-term interest rates and bond prices gyrated—with a further return of hot money from vulnerable emerging markets, such as India and Turkey, putting downward pressure on their currencies in the foreign exchanges.

What have central banks wrought? As Andrew Haldane, a top official at the Bank of England, declared on June 12, 2013 of his own institution. "Let's be clear. We've intentionally blown the biggest government bond bubble in history. We need to be vigilant to the consequences of that bubble deflating more quickly than [we] might otherwise have wanted".

By trying to stimulate aggregate demand and reduce unemployment, central banks have pushed interest rates down too much and inadvertently distorted the financial system in a way that constrains both short-term, and potentially long-term, business investment. The misnamed monetary stimuli are actually holding the economy back.
The Federal Reserve, the Bank of England, the Bank of Japan and European Central Bank all have used quantitative easing to force down their long-term interest rates. The result is that major industrial economies have all dramatically increased the market value of government and other long-term bonds held by their banks and other financial institutions. Now each central bank fears long-term rates rising to normal levels because their nation's commercial banks would suffer big capital losses—in short, they would “de-capitalize.”

But the potential turmoil in bond values also makes it more difficult for corporations seeking to raise long-term financing. In the face of greater interest rate volatility, bond-market dealers in the U.S. are currently paring their inventories because of the associated risks.

In 2009, when the Federal Reserve initiated quantitative easing, the prices of bonds and equities rose as long-term interest rates fell so as to buoy the economy—a short-lived honeymoon. Now in 2014, because of depressed market rates for some years so that coupon rates on long-term bonds have become very low, any significant increase in market interest rates would cause a larger slump in the capital values of these bonds. Even discussing the potential for exiting from the Fed’s quantitative-easing program creates high volatility in bond markets from expectation effects—a volatility that inhibits new bond offerings for domestic investment. Mr. Bernanke's tapering speech illustrates how that can happen: new bond and equity issues are put on hold.

**The Bursting of the Government Bond Bubble in 2014?**

The way out of this bond-bubble trap that central banks from the industrial countries set for themselves, is not clear and likely to be very messy financially.

The most straight forward approach is for the leading central banks—the Federal Reserve, the Bank of England, the Bank of Japan and the European Central Bank—to admit they were wrong in driving interest rates too low in the pursuit of a nonmonetary objective such as the level of unemployment. After all what Milton Friedman taught us in his famous 1967 AEA presidential address, “The Role of Monetary Policy”, the central bank cannot (should not) persistently target a nonmonetary objective—such as the rate of unemployment, which is determined by too many other factors.

The four central banks could begin slowly increasing short-term interest rates in a coordinated way to some common modest target level, such as 2 percent. Coordination is crucial to minimize disruptions in exchange rates. Then our gang of four they should phase out quantitative easing so that long-term interest rates once again become determined by markets.
The whole process should be transparent so that “markets” know the endpoints of this new policy.

If markets come to believe their governments will achieve close to a low, 2 percent, level for short rates into the indefinite future, this then will cap long rates as quantitative easing ends. Remember that market-determined long rates are just the mean of expected short rates plus a liquidity premium.

Alternatively, the bubbles in government bond prices in one or more of the industrial countries could burst of their own accord as central banks lose control. Long-term interest rates would rise more sharply and erratically. Besides disrupting the industrial economies themselves, more hot money would be pulled out of emerging markets forcing them to intervene to stabilize their dollar exchange rates. They would then have to draw down their official exchange reserves and thus sell some of their U.S. Treasury bonds. This would of course accentuate the upward pressure on long term U.S. interest rates. If there was a flight of hot money out of EM economies, their growth would slow further than that shown in Figure 10.

Figure 10

A flavor of this unfortunate scenario can seen by the upward, erratic movement in long-term interest rates on U.S. Treasury bonds in 2013 into 2014 (figure 1) as Fed Chairs Ben Bernanke and then Janet Yellen discuss possible tapering of quantitative easing in the United States. But only time will tell.
Figure 1: US Interest Rates

Source: FRED
Figure 2. Emerging Markets and China, Foreign Exchange Reserves (Billion USD)
Figure 2A Change of Reserves in Selected Emerging Countries

Source: Financial Times
Figure 3 Headline CPI: EM and US

Source: EIU, Author’s Calculation
Emerging Markets include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Russia, South Africa, South Korea, Taiwan, Thailand
Figure 4 BRICS Currencies, LCU (local currency unit)/USD, Jan-2002=100
Figure 5. US Real Effective Exchange Rate, Jan-2000=100

Source: Federal Reserve
Figure 6. GDP Weighted Discount Rate of BRICS and G3

Source: IMF, EIU
Figure 7: The Greenspan-Bernanke Bubble Economy 2002 to 2013 (2005 =100)

Source: Bloomberg
Figure 8 Food/Agriculture Product Price Indexes (2005=100)

Start of Arab Spring Dec 2010

Source: Bloomberg
Figure 9. Size of Central Bank Balance Sheet, % of GDP

Source: Bloomberg, OECD Stat
Figure 10. GDP growth: Developed vs. Developing World