The State of the Global Economy Part II

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The Global Financial Crises Since 2007 & the Aftermath

- The sub-prime mortgage loan crisis in the United States in 2007, the collapse of Lehman Brothers in the U. S. in September 2008, and the European sovereign debt crisis since late 2009, were caused in whole or in part and exacerbated by financial "over-engineering". These crises have also proven to be drags on the growth of the global economy.
- The global economy is still suffering from the negative effects of these global financial crises. While the Volcker Rule, designed to avoid a repetition of the financial crisis in the U.S., was embodied in the Dodd-Frank Wall Street Reform and Consumer Protection Act, the final regulations did not become effective until 1st April 2014 and financial institutions are not required to fully conform with the regulations until 21st July 2015.
- It remains to be seen whether these regulations are effective in preventing the next crisis as they have been considerably watered down through intensive lobbying by Wall Street.

The Global Financial Crises Since 2007 & the Aftermath

- One cause of the financial over-engineering that occurred is the desire for market liquidity. Another is the desire for risk diversification. These provide the motivation for the invention of all sorts of financial derivatives. However, the importance of liquidity is really over-rated. And instruments designed for the reduction of risk, such as "credit default swaps", turn out to increase the overall risk because of the moral hazard that they engender.
- In addition, the critical principle of risk diversification through maintaining independence (non-correlation) and separability is often overlooked. That was why when Lehman Brothers collapsed in September 2008, almost every financial institution was in trouble. When everyone shares the same risks, there is no risk diversification, and everyone will go down together.

The Global Financial Crises Since 2007: A Brief History of Quantitative Easing

- In order to save the U. S. financial system, the U.S. Federal Reserve Board undertook a series of "Quantitative Easing" measures, referred to as QE1, QE2 and QE3, purchasing U.S. Government and agency securities and mortgage-backed securities held by financial institutions.
- "Quantitative Easing I (QE1)" was initiated by the U.S. Federal Reserve Board on 25th November 2008, in the aftermath of the collapse of Lehman Brothers. At the time, the World economy was shell-shocked from the freezing up of the entire financial system. Financial institutions did not trust one another and credit had all but dried up.
- Quantitative easing, as opposed to just easing, implies that not only would short-term credit be easily available, as indicated by the extremely low federal funds interest rate for overnight money, but also that the Federal Reserve Board would try to bring down medium and long-term interest rates by purchasing U.S. Treasury and other securities of such maturities in large quantities on a regular basis.

The Global Financial Crises Since 2007: A Brief History of Quantitative Easing

- At the start of QE1, the U. S. Federal Reserve Board announced that it would purchase up to US$600 billion in U.S. agency mortgage-backed securities (MBS) and agency debt, mostly from U.S. financial institutions, in an attempt to restore liquidity to the financial system and shore up the financial balance sheets of the financial institutions. On 18th March 2009, the Federal Reserve Board expanded the programme by an additional US$1.05 trillion for the purchase of U.S. Treasury and agency securities.
- "QE1" was successful in rescuing the major financial institutions in the U.S. and preventing the U.S. financial system from collapsing.

The Global Financial Crises Since 2007: A Brief History of Quantitative Easing

- As the U.S. real economy did not seem to respond to QE1, QE2 was launched by the Federal Reserve Board on 3rd November 2010, when it began to purchase an additional US$600 billion of longer dated U.S. Treasury securities, at a rate of US$75 billion per month, with the objective of lowering the longer-term interest rates so as to stimulate real investment by U.S. firms. This programme was concluded in June 2011, followed by "Operation Twist" in September 2011.
- "Operation Twist" was a plan to purchase US$400 billion of bonds with maturities of 6 to 30 years and to sell the same quantity of bonds with maturities of less than 3 years, thereby lowering the longer-term interest rates without increasing the money supply. In June 2012, the Federal Reserve Board expanded "Operation Twist" by adding a further US$267 billion.

The Global Financial Crises Since 2007: A Brief History of Quantitative Easing

- A third round of quantitative easing (QE3) was launched by the Federal Reserve Board on 13th September 2012, committing to the purchase of US$40 billion of agency mortgage-backed securities (expanded to US$85 billion and to include U.S. Treasury securities in December 2012) per month until the labour market improves "substantially".
- In May 2013, Chairman Ben Bernanke of the Federal Reserve Board raised the possibility of "tapering" and eventually ending QE3 publicly for the first time (minutes of the Federal Open Market Committee (FOMC) meeting released on 22^{nd} May 2013). On 19th June 2013, Chairman Bernanke announced a plan for the "tapering" of the Federal Reserve Board's purchases of securities. This news was not well received by the stock market. On 18th September 2013, however, the Federal Reserve Board decided to hold off on the "tapering" plan.

The Global Financial Crises Since 2007: A Brief History of Quantitative Easing

- On 18th December, 2013, the FOMC finally decided to reduce monthly asset purchases by US$10 billion in January 2014. Thus began the actual “tapering”. On 29th January 29, 2014, a further reduction of US$10 billion was authorised.
- The new Chairman of the U.S. Federal Reserve Board, Dr. Janet Yellen, was sworn in on 3rd February 2014 and reaffirmed the tapering policy at the 19th March 2014 meeting of the FOMC.
- Subsequently an announcement was made that the bond purchase program will finally be terminated in October of 2014, marking the end of “Quantitative Easing”.

The Global Financial Crises Since 2007 & the Aftermath: The Objectives of the QEs

- QE1 was launched essentially to restore liquidity to the financial system and to take the mortgage-backed securities off the balance sheets of the major U.S. financial institutions so as to prevent a complete financial meltdown.
- QE2 and QE3 were meant to stimulate the real economy by lowering the real rate of interest so that more domestic investment would be forthcoming.
- QE2 and QE3 also had the effect of enabling the U.S. Dollar to devalue significantly with respect to almost all of the major currencies in the World, with the possible exception of the Euro. This has helped to increase U.S. exports and decrease U.S. imports, other things being equal.

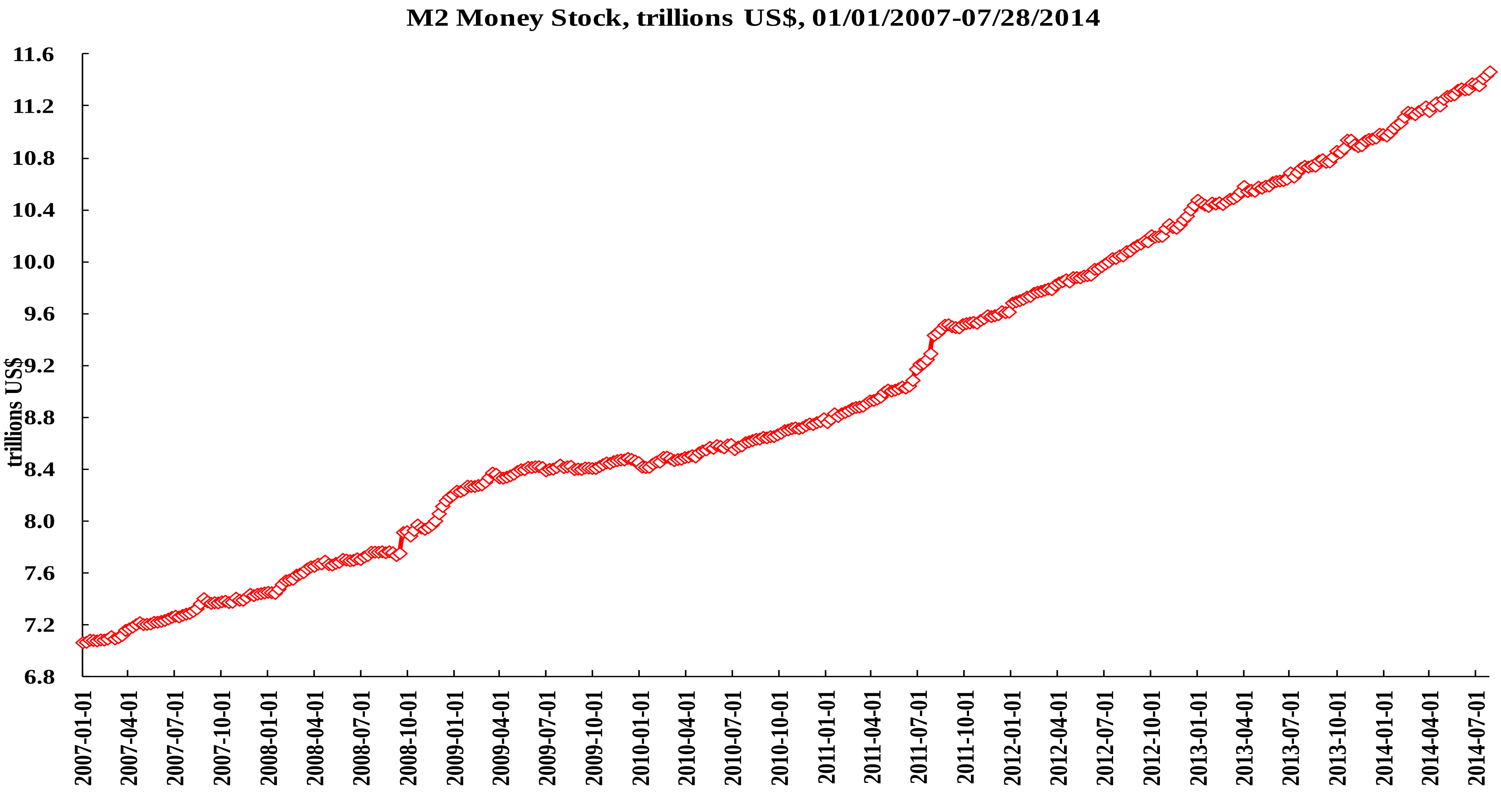
The Global Financial Crises Since 2007 & the Aftermath: The Objectives of the QEs

- The QEs can be viewed as a form of currency manipulation as given the already low domestic rates of interest in the U.S., the excess liquidity created by the QEs was bound to leave the U.S. en masse to seek higher yields elsewhere in the absence of U.S. capital control, thus driving up the exchange rates of the other currencies relative to the U.S. Dollar.
- As the U.S. is ideologically incapable of intervening directly in foreign exchange markets, the QEs are one of the very few feasible options for engineering a devaluation. "Jawboning" is another feasible, but probably less effective, option.

The Effects of Quantitative Easing: The U.S. Economy

- With QE1, the U.S. money supply was increased quickly and the short-term interest rate was also driven quickly to almost zero, and it has stayed there since.
- However the long-term interest rate remained relatively high until the introduction of "Operation Twist" under QE2.
- QE3 was quite effective in keeping the long-term interest rate low, until the possibility of "tapering" was introduced to the market in May 2013, which led to a jump in the long-term interest rate.
- Successive QEs have also led to large increases in the U.S. money supply (M2).

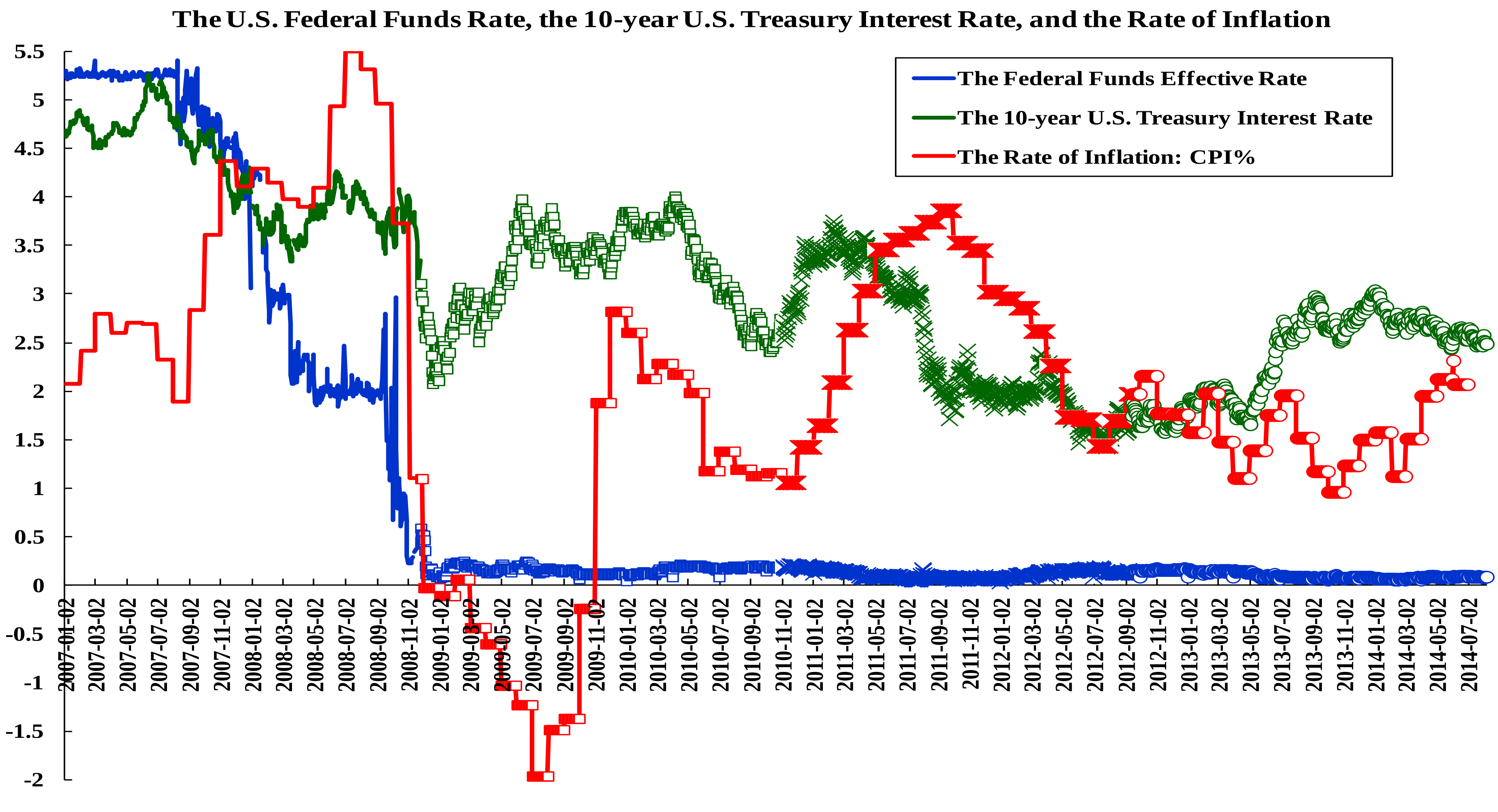
U.S. Money Supply (M2), trillions US$, 01/01/2007-07/28/2014



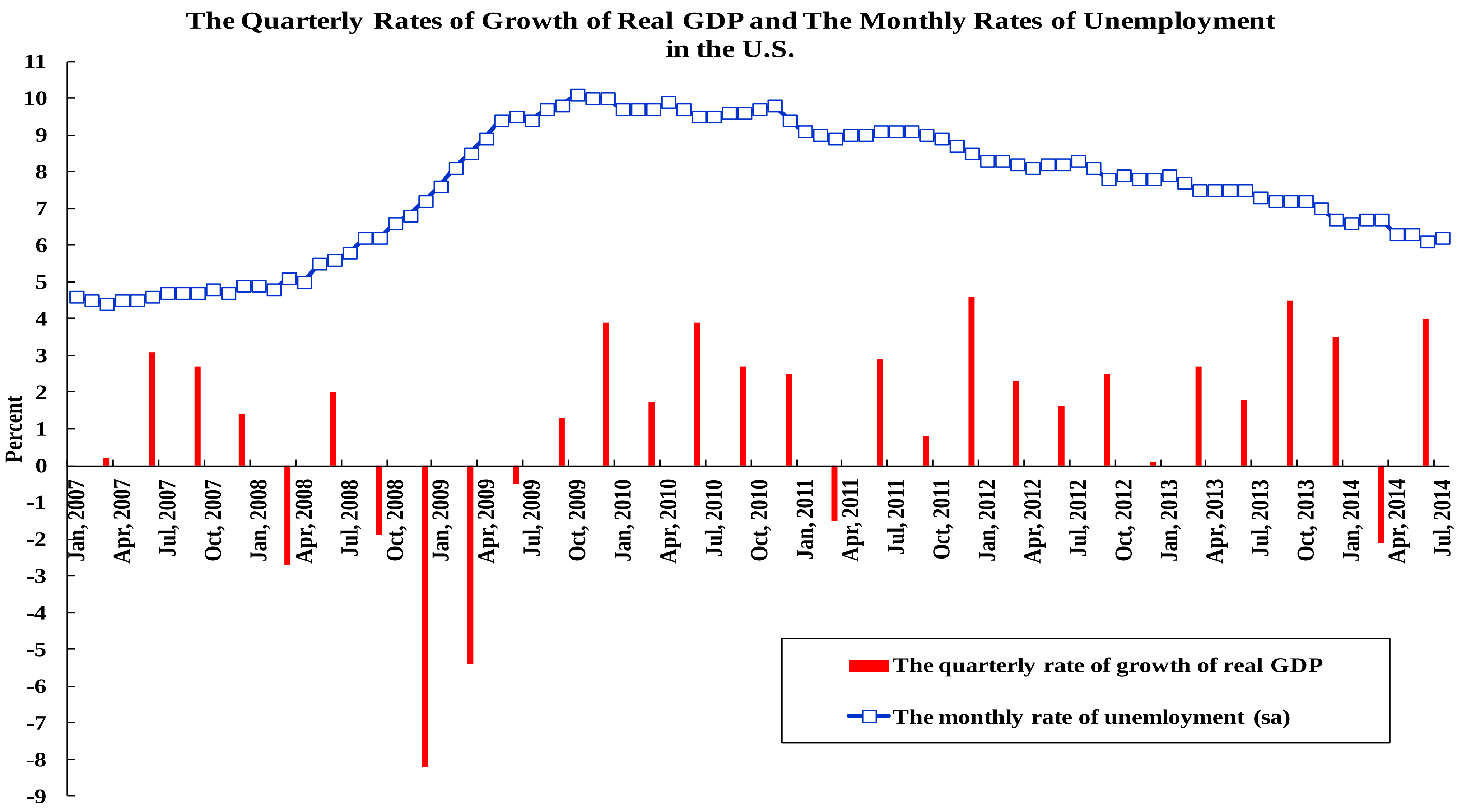
The Effects of Quantitative Easing: The U.S. Economy

- As is well known, one can pull on a string but not push on a string. Lowering the rate of interest to effectively zero and massive release of liquidity in the U.S. have not increased U.S. gross domestic investment significantly, casting serious doubt on the effectiveness of an easy monetary policy.
- In fact, the real rate of interest, the difference between the nominal rate of interest and the rate of inflation (measured by the consumer price index (CPI)), in the U.S. has been negative since November 2009 (see the following chart). The U.S. economy is in a classical "liquidity trap" situation.
- The U.S. unemployment rate came down very slowly and mostly due to disappointed job-seekers leaving the labour force, and the rate of growth of U.S. real GDP remained sluggish and tentative, especially relative to the experience of past economic recoveries.

U.S. Federal Funds Rate, the 10-year U.S. Treasury Rate, and the Rate of Inflation



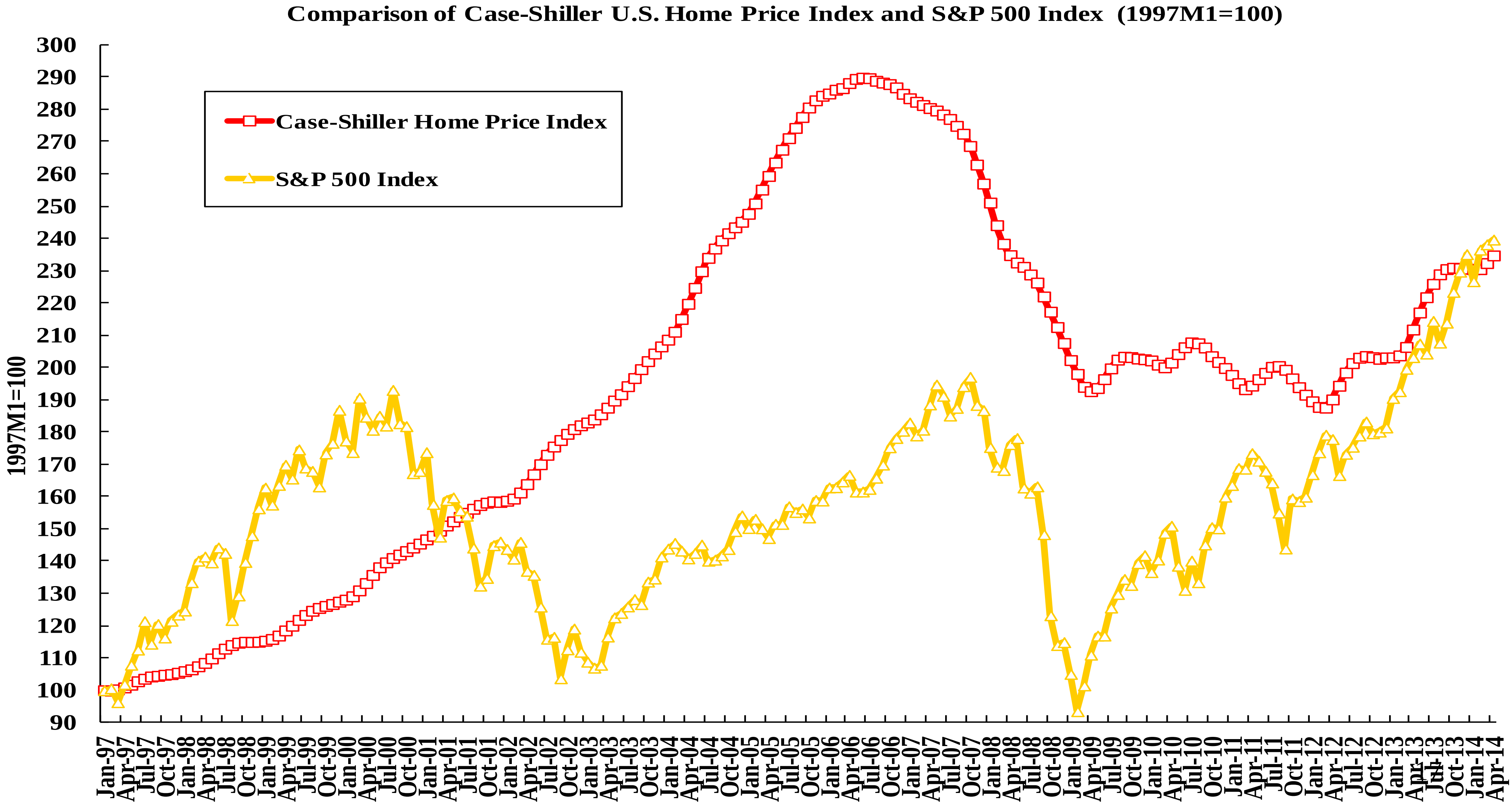
Seasonally-Adjusted Quarterly Rates of Growth of US Real GDP & Monthly US Unemployment Rates



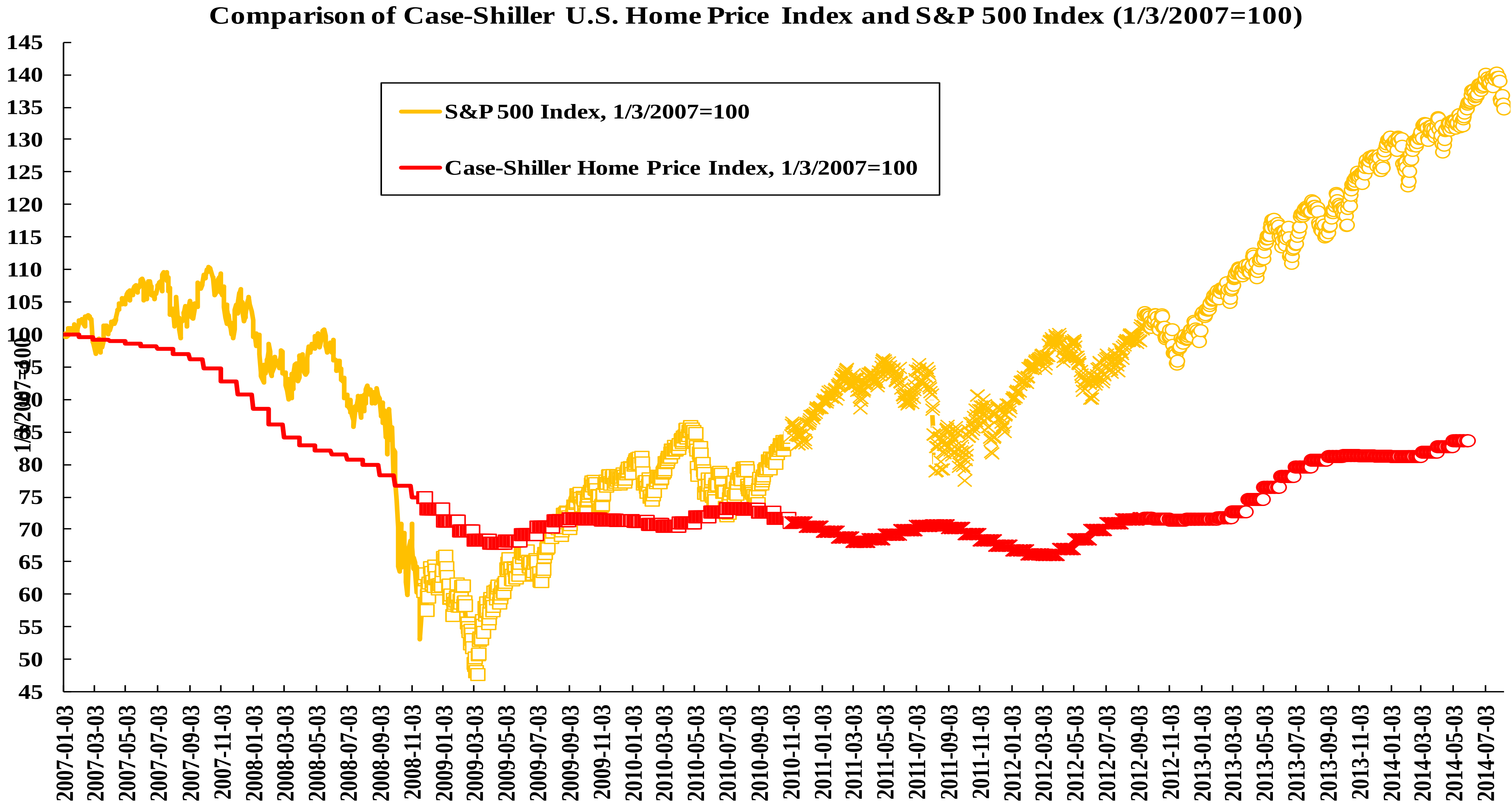
The Effects of Quantitative Easing: The U.S. Economy

- The ultra-low interest rates in the U.S. drove up the U.S. stock market as evidenced by the S&P 500 stock price index.
- However, it took the decline in the long-term interest rates to push the price of housing back up moderately, at a level still far short of its peak in 2006.

Case-Shiller U.S. Home Price Index and the S&P 500 Index (1997M1=100)



Comparison of Case-Shiller U.S. Home Price Index and S&P 500 Index (1/3/2007=100)



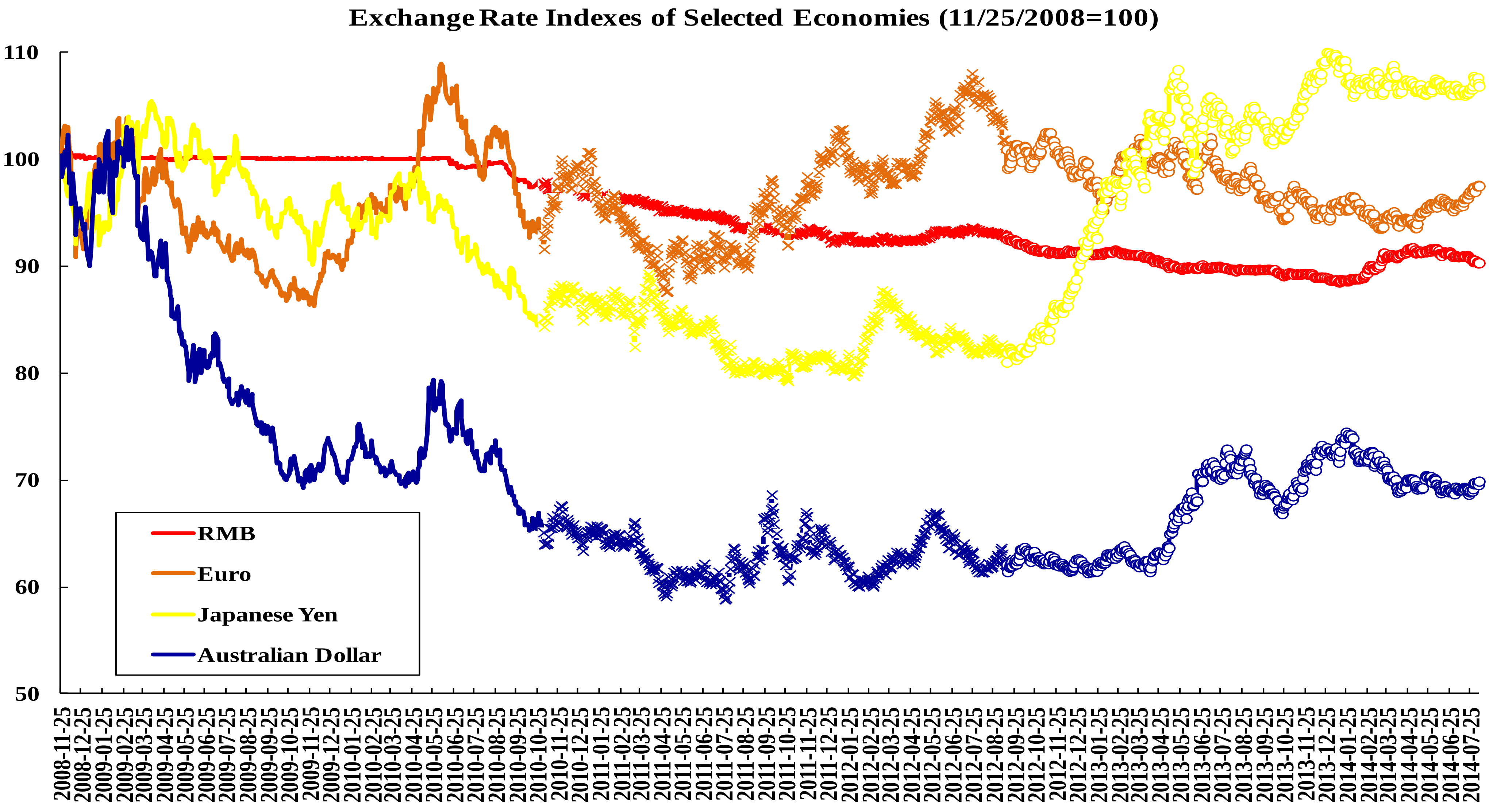
The Effects of Quantitative Easing: The World Economy

- The excess liquidity released through the QEs and the excessively low interest rates in the U.S. have led to a massive exodus of short-term capital from the U.S. to the rest of the World seeking higher yields.
- This massive liquidity drove up the exchange rates of most other currencies relative to the U.S. Dollar (thus effectively devaluing the U.S. Dollar), except for the Vietnamese Dong, and lowered interest rates almost everywhere, which in turn fueled a rise in asset prices (real estate and stock prices) worldwide. These trends were partially reversed with the public introduction of the possibility of "tapering" in late May 2013. The changes in the exchange rates of East Asian economies are presented in the following charts and tables.
- In some of the economies, such as Brazil, India, Indonesia and Turkey, the massive inflow of capital caused economic boomlets.

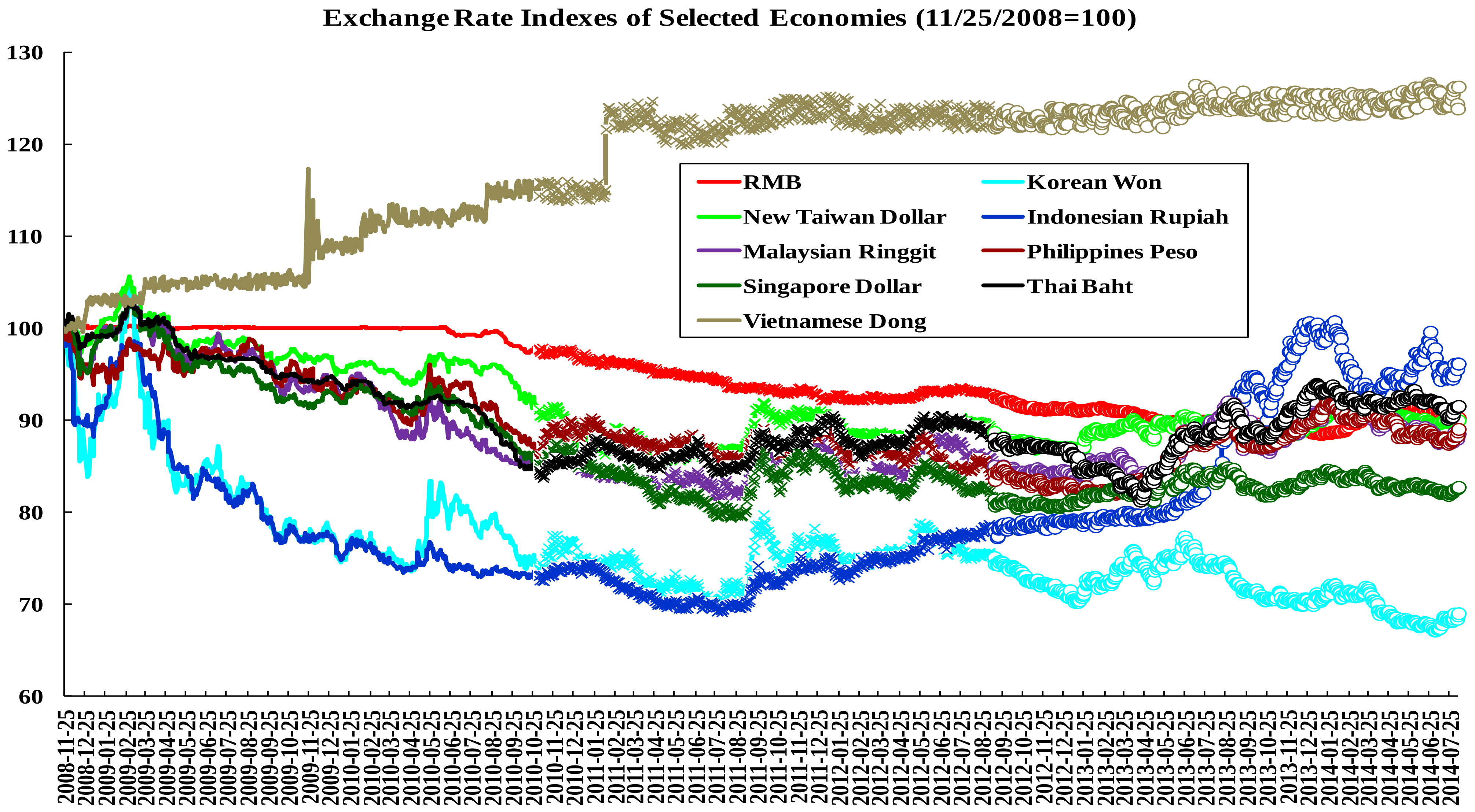
The Short-Term Economic Outlook: The U.S. Economy

- Japan, as part of its Abenomics initiatives, has countered with its own QE in December2012, and reversed the appreciation of the Japanese Yen vis-a-vis the U.S. Dollar.
- Moreover, in anticipation of the tapering and possible termination of the QEs, the exchange rates of many currencies have already begun to devalue with respect to the U.S. Dollar since May 2013.

Exchange Rate Indexes of Selected Economies (11/25/2008=100)



Exchange Rate Indexes of Selected Economies (11/25/2008=100)



The Exchange Rate Revaluation/Devaluation of Selected Economies (2008/11/25-2010/11/03)

The Exchange Rate Revaluation/Devaluation during QE1 11/25/2008-11/3/2010			
Currency	11/25/2008	11/3/2010	Revaluation/ Devaluation against US$
RMB	6.8245	6.6746	2.20%
Euro	0.76748	0.71357	7.02%
Japanese Yen	95.532	81.387	14.81%
Australian Dollar	1.54135	1.00368	34.88%
Korean Won	1501.72	1110.23	26.07%
New Taiwan Dollar	33.349	30.425	8.77%
Indonesian Rupiah	12209	8931	26.85%
Malaysian Ringgit	3.6207	3.0853	14.79%
Philippines Peso	49.409	42.475	14.03%
Singapore Dollar	1.5108	1.2889	14.69%
Thai Baht	35.205	29.787	15.39%
Vietnamese Dong	16957	19408	-14.45%
Indian Rupee	49.894	44.38	11.05%

The Exchange Rate Revaluation/Devaluation of Selected Economies (2010/11/03-2012/09/13)

The Exchange Rate Revaluation/Devaluation during QE2			
11/3/2010-9/13/2012			
Currency	11/3/2010	9/13/2012	Revaluation/ Devaluation against US$
RMB	6.6746	6.329	5.18%
Euro	0.71357	0.77454	-8.54%
Japanese Yen	81.387	77.404	4.89%
Australian Dollar	1.00368	0.95702	4.65%
Korean Won	1110.23	1128.8	-1.67%
New Taiwan Dollar	30.425	29.599	2.71%
Indonesian Rupiah	8931	9561.7	-7.06%
Malaysian Ringgit	3.0853	3.0805	0.16%
Philippines Peso	42.475	41.679	1.87%
Singapore Dollar	1.2889	1.2302	4.55%
Thai Baht	29.787	31.001	-4.08%
Vietnamese Dong	19408	20751	-6.92%
Indian Rupee	44.38	55.352	-24.72%

The Exchange Rate Revaluation/Devaluation of Selected Economies (2012/09/13-2013/05/22)

The Exchange Rate Revaluation/Devaluation			
9/13/2012-5/22/2013			
Currency	9/13/2012	5/22/2013	Revaluation/ Devaluation against US$
RMB	6.329	6.1323	3.11%
Euro	0.77454	0.77733	-0.36%
Japanese Yen	77.404	103.537	-33.76%
Australian Dollar	0.95702	1.03268	-7.91%
Korean Won	1128.8	1113.5	1.36%
New Taiwan Dollar	29.599	29.925	-1.10%
Indonesian Rupiah	9561.7	9748.1	-1.95%
Malaysian Ringgit	3.0805	3.0213	1.92%
Philippines Peso	41.679	41.283	0.95%
Singapore Dollar	1.2302	1.2665	-2.95%
Thai Baht	31.001	29.838	3.75%
Vietnamese Dong	20751	20666	0.41%
Indian Rupee	55.352	55.614	-0.47%

The Exchange Rate Revaluation/Devaluation of Selected Economies (2013/05/22-2014/02/03)

The Exchange Rate Revaluation/Devaluation			
5/22/2013-2/3/2014			
Currency	5/22/2013	2/3/2014	Revaluation/ Devaluation against US$
RMB	6.1323	6.0624	1.14%
Euro	0.77733	0.73948	4.87%
Japanese Yen	103.537	101.15	2.31%
Australian Dollar	1.03268	1.1395	-10.34%
Korean Won	1113.5	1084.8	2.58%
New Taiwan Dollar	29.925	30.337	-1.38%
Indonesian Rupiah	9748.1	12307	-26.25%
Malaysian Ringgit	3.0213	3.3462	-10.75%
Philippines Peso	41.283	45.412	-10.00%
Singapore Dollar	1.2665	1.2756	-0.72%
Thai Baht	29.838	32.915	-10.31%
Vietnamese Dong	20666	20898	-1.12%
Indian Rupee	55.614	62.576	-12.52%

The Exchange Rate Revaluation/Devaluation of Selected Economies (2014/02/03-2014/08/07)

The Exchange Rate Revaluation/Devaluation			
02/03/2014-08/07/2014			
Currency	02/03/2014	08/07/2014	Revaluation/ Devaluation against US$
RMB	6.0624	6.1637	-1.67%
Euro	0.73948	0.74839	-1.20%
Japanese Yen	101.15	102.07	-0.91%
Australian Dollar	1.1395	1.0773	5.46%
Korean Won	1084.8	1037.2	4.39%
New Taiwan Dollar	30.337	30.03	1.01%
Indonesian Rupiah	12307	11744	4.57%
Malaysian Ringgit	3.3462	3.2076	4.14%
Philippines Peso	45.412	44.023	3.06%
Singapore Dollar	1.2756	1.2509	1.94%
Thai Baht	32.915	32.247	2.03%
Vietnamese Dong	20898	21416	-2.48%
Indian Rupee	62.576	61.222	2.16%

The Exchange Rate Revaluation/Devaluation of Selected Economies (2008/11/25-2014/08/07)

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