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Quantitative Easing and Its Global Impacts

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Abstract

As one of the tools to stimulate the economic growth, quantitative easing (QE) has been used by some countries like Japan, the United States, etc. Whether it does good or bad to the economy is to be further discussed. The paper first provided an overview of QE that was initiated in the United States, then compared the theoretic anticipation and the practical operational outcomes of QE. Finally, the paper drew conclusions about the impacts of QE to the global economy.

Keywords

Great Recession, Mortgage Backed Securities, Quantitative Easing

1. Introduction

The "Great Recession" [1] refers to the significant economic downturn observed in the world markets from 2008 to 2009. The International Monetary Fund (IMF) concluded that the Great Recession was the worst global recession since World War II. The main reason that caused the Great Recession was associated with the U.S. sub-prime mortgage crisis.

During the Great Recession, housing prices in the U.S. fell more than 30% on average. Homeowners began to default on their mortgage payments and the value of mortgage backed securities (MBS) became worthless. The MBS were marketed around the world. Therefore, the collapse of MBS placed significant and negative impacts around the world. The S & P 500 index fell 57% from 1565 to 676. The real U.S. GDP declined 0.3% in 2008 and 2.8% in 2009, respectively. The U.S. unemployment rate reached 10% in 2009. The fourth largest investment bank, the Lehman Brothers declared bankruptcy in 2008 [1].

In response to the Great Recession, the U.S. Federal Reserved Bank initiated three phases of "Quantitative Easing" (QE) from November 2008 to October 2014. Each phase lasted about two years. Virtually, QE was a six-year effort to stimulate the economy via monetary policies by purchasing treasuries (long term government bonds) and agency securities issued by Ginnie Mae, Fannie Mae, Freddie Mac, or the Federal Home Loan Banks [2] [3]. As a result, the balance sheet of the Federal Reserve Bank increased from $800 billion in 2007 to $4.5 trillion in 2014, *i.e.* a net increase of $3.7 trillion due to three phases of QE which is equivalent to 22% of the U.S. GDP in 2013 or $11,705 per American. Moreover, the Federal Reserve Bank had 54% of its $4.5 trillion reserved funds in the U.S. treasury securities and 38% in the MBS [4] [5].

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The overall strategy of QE was to lower long-term interest rates and enhance market liquidity. Lowering long-term interest rates would be beneficial to those who want to buy homes, purchase cars, and finance investment project.

2. Expected and Market Outcomes

Theoretically, we expect that QE would create impacts on the following: enhance overall GDP, reduce unemployment rate and create inflation.

However, from **Table 1**, it seems that QE1 was not effective to enhance overall GDP, both QE1 and QE2 were not effective to reduce unemployment rate and that QE1, QE2, and QE3 did not create inflation immediately.

We wish that QE would lower the long-term interest rate, and it continued to decline under QE1, QE2, and QE3(see **Figure 1**).

Also, we hope that QE would heighten the stock market. As shown in **Figure 2**, the stock market was significantly heightened under QE1, QE2, and QE3. In 2013, the U.S. stock market was the best market for investors in the developed countries (see **Figure 2**). However, it is believed that the stock market was significantly over-valued in November 2014 as the total market cap was more than 125% of the GDP. A ratio of 115% was considered as "significantly over-valued." (see **Figure 3**). Also, Warren Buffet's market indicator, *i.e.* the total market capitalization ($27.86 trillion in October 2014)) of the New York Stock Exchange and the Nasdaq divided by the projected GNP ($17.76 trillion), was 157% in November 2014 [9]. Buffett explained: "If the percentage relationship falls to the 70% or 80% area, buying stocks is likely to work very well for you. If the ratio approaches 200%—as it did in 1999 and a part of 2000—you are playing with fire." [9]

We wish that QE would lower dollar value. However, the US dollar index tells us that the dollar value fluctuated under QE1, QE2, and QE3 with no specific trend (see **Figure 4**). The US Dollar Index (USDX) [12] is an index (or measure) of the value of the United States dollar relative to a basket of six foreign currencies—Euro (EUR), 57.6% weight, Japanese yen (JPY) 13.6% weight, Pound sterling (GBP), 11.9% weight, Canadian dollar (CAD), 9.1% weight, Swedish krona (SEK), 4.2% weight, and Swiss franc (CHF) 3.6% weight.

3. Implications and Conclusion

Quantitative Easing is virtually a monetary policy to fulfill macro-economic goals. However, historically, no government has ever implemented such a massive amount of QE and QE may potentially create inflation and currency value issues rather than solve economic issues of recession.

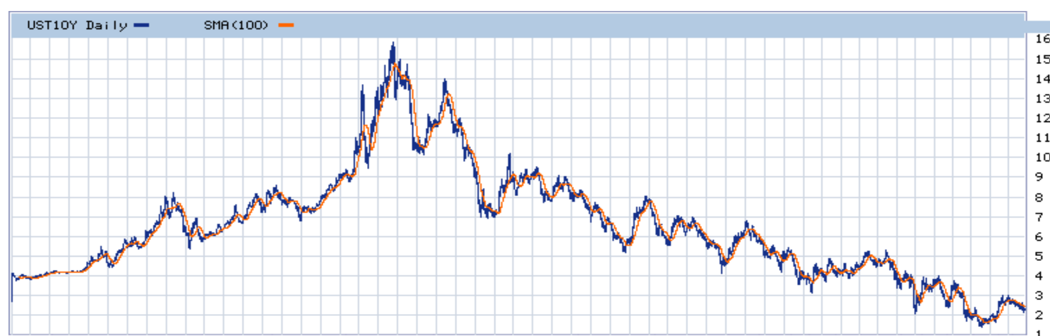

Figure 1. U.S. Treasure 10-year Yield, 1963-2014 [8].

Table 1. Market Outcomes of QE [6] [7].

	2007	2008	2009	2010	2011	2012	2013	2014
Real GDP Growth	1.8	−0.3	−2.8	2.5	1.8	2.8	1.9	1.7 (prelim)
Unemployment Rate	4.6	5.8	9.3	9.6	8.9	8.1	7.4	5.8 (10/2014)
Inflation	2.8	3.8	−0.4	1.6	3.2	2.1	1.5	1.8 (9/2014)

Figure 2. S & P 500 Index, 11/2004 to 11/2014 [10].

Figure 3. Total Market Cap and GDP [11].

Figure 4. Dollar Value Index, 2008-2014 [12].

Currently, the economy is deemed in a much better environment than the Great Recession period. The long term effect of QE is yet to be seen. In the short term, we have observed 1) unemployment rate is declining, 2)

inflation rate is under control, 3) interest rate is at its historical low, 4) stock market is at its historical high, 5) dollar is still the global currency and relatively stable, and 6) GDP is growing moderately. However, issues may arise quickly in the near future, such as 1) inflation potential- the increase of money supply implies inflation, 2) dollar value as a global currency—the increase of money supply will jeopardize the dollar value and hurt its status as a global currency, 3) income inequality especially for retired baby boomers—QE created an uneven benefits to the society, 4) investment behavior—QE penalized traditional money savers and gave advantages to equity investors, and 5) future monetary policies—the Federal Reserve Bank needs to have a strategy in selling its holdings of securities in the future.

The three phases of QE were the U.S. initiatives. As a result, some countries would be hurt either in the short-term or in the long-term. Many countries have a significant amount of reserves in dollar and most international trades are denominated in dollar. Potentially, their values would be diluted by the three phases of QE. It probably will take years to materialize these impacts.

In the global economy, we will deal with financial crisis constantly. In addition to the three phases of QE, the European Central Bank (ECB) and Bank of Japan also initiated their versions of economic stimulus plans. The un-coordinated QEs from various countries may destroy the status quo of equilibrium. Policy makers must consider what options we could have in case of another great recession is evolved.

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