Why Europe's quantitative monetary easing failed compared to the US

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Abstract

The purpose of this paper is compare the economic impacts of quantitative easing (QE) on macroeconomic performance and foreign exchange rates in Europe versus the same impacts in the US. The period covered was following the2008 stock market collapses. The design was to compare quantitatively the changes in national money supplies on economic recovery, including changes in the velocity of money, foreign exchange rates, price levels and real GDP. The major findings are that European monetary policy failed relative to the US in the period 2002-2008 and continued to fail from 2009 until mid-2014, when Europe began QE. An implicationis that globalization has made the world increasingly vulnerable to simultaneous global macroeconomic downturns. The global integration of monetary and financial markets has increased the correlation of major country stock indices from .4 to .8 from 1981-2012. The Trump boom in the US economy since the 2016 election has strengthened the US dollar, helping recoveries in Europe, Britain and Japan. Ironically, post 2013 QEs in Europe, Britain and Japan contributed to the election of Donald Trump by lowering the price of imports from those countries into the US. Other issues considered are the pernicious effects of deflation, US tech success reinforcing the strong dollar, beggar-thy-neighbor effects of the currency wars among the four countries, the $5 trillion US carry trade loans to emerging markets and whether the peaking US stock market is in a bubble.

1. Introduction

Quabtitative easing (QE), deflation and foreign exchange markets

Quantitative easing is large-scale asset purchases that reduce government bond rates at longer maturities. One study found that QE was effective in the US and prevented even larger declines in output and inflation (Martin and Costas, 2012).

The theoretical foundation of quantitative easing is the quantity theory of money equation popularized in the 1970s. The equation is MV=PQ where M is the stock of money; V is the velocity of money; P is a country's aggregate price level; and Q is real gross domestic product. Studies had shown that V was relatively constant historically so that if price levels were stable, then every percentage change in the quantity of money would generally be matched by an equal percentage change in real gross domestic product. From 1971 through 2006, there was strong evidence of this causal relationship, with growth in United States M2 preceding growth in US real gross domestic product. However, that empirical relationship broke down after 2008 because increases in US GP were accompanied by almost identical decreases in V, the velocity of money.

Historical studies showed the following effects of money supply growth. Increases in the ratio of the money supply to gross domestic product were accompanied by a depreciation of the country's foreign exchange rate. Thus there are two avenues by which money supply increases stimulate a domestic economy. The first is that greater liquidity in the economy increases bank lending which encourages economic growth and investment. The second effect is that monetary expansion depreciates a country's foreign exchange rate which makes its export goods cheaper

abroad and retards imports into the country because foreign goods become relatively more expensive. These are two of the basic effects motivating quantitative easing in the post-2008 world economy.

Not only was there a major world economic collapse following the 2008 crash, very long-term economic cycles such as Kondratieff pointed to a low point in the US economy between 2010 and 2020. Charts since 1945 based on the Standard and Poor's index mirror this economic prediction.Here are pernicious economic effects in periods of negative economic growth and deflation. In such periods, consumers observe prices falling and know they should postpone consumption until the following year. However, next year consumers see that their pessimistic predictions are confirmed and so they are likely to postpone consumption yet another year. This generates a destabilizingSpellman macroeconomics cycle of a continual downturn with falling spending. US inflation did decline in the period following 2013 with the same hope occurring in Europe after 2011. This generated policy concern in most of the major economies. Since quantitative easing lowers a country's foreign exchange rate, there was hope in policy circles that the foreign exchange market would be another stimulating force. There is about $5 trillion a day transacted on global foreign exchange markets. This compares to a US gross domestic product of approximately $18 trillion.

2. **Monetary, fiscal policy and waves of creative destruction made the US more successful than Europe**

The United States outmaneuvered Europe in its use of monetary policy for most of this century. Following the 2001 recession, from 2002 until 2008, monetary easing in the United States caused the trade weighted US dollar to fall by over 25%. This stimulated US exports and retarded imports, including from Europe. That plus fiscal expansion and spending for the Iraq war caused the United States economy in 2008 to be stronger than Europe's economy. Following a spike in the value of US dollar in 2009 caused partially by European panic over Greece and its own economic collapse, the dollar dropped from that the 2009 high steadily until nearly 2015. This post 2008 decline in the dollar stimulated the United States economy but held back growth in Europe.

From 2008 through 2015, the US money supply M2 increased from $8 trillion to over $12 trillion. The United States also has less fiscal constraints than a number of European countries. The US debt to GDP ratio is further below 100% then almost all of the largest European countries. In addition, the United States has a younger labor force with an average age of about 38 years old while major European countries are bunched between 40 and 42 years old. Germany is much older with an average age of 46 years.

As a result of more aggressive monetary and fiscal policy, the US had 8 quarters from 2009-III through 2013 III in which real GDP grew by at least 2.5% while Europe had only 2 quarters with growth that high. Similarly, the US had only one quarter of negative growth over that period while Europe had seven quarters of negative growth. Despite this success relative to Europe, the US recovery from the 2008 crash was slow relative to all its own post 1950 recessions. This is why it is called the Great Recession.

High-tech was another plus for the US economy. In 2006, only Microsoft was the only high tech firm in the largest five US firms on the US stock market. By 2016, Microsoft was joined by Apple, Alphabet (Google), Amazon and Facebook as the five firms with the highest stock market value in the United States. Thus, high tech in the US is generating waves of creative destruction among the very largest US firms.

3. The failure of european monetary policy 2002-2013

Europe was a monetary failure compared to the United States, as judged by the Euro-dollar exchange rate. An exchange rate is the price of two monies. The numerator in the dollar to euro exchange rate reflects the demand and supply for dollars in the United States. The euro in the denominator of the exchange rate reflects the demand and supply for Euros in Europe. And index of

the real euro rose from below 100 in 2000 to around 135 in 2008. The increasingly high euro made Europe's goods much less competitive outside of Europe. This strong euro is the mirror image of the US quantitative easing. Recall that the real euro captures both price levels and exchange rate effects relative to other currencies. The real euro dropped after 2008 from 135 to as low as 112 in 2011 and 2012. This should have generated observable export increases and import reductions. However, it rose again above 120 until early in 2014.

But in the period immediately after 2009, the European economy was in a shambles. By late 2012, only Germany had a real GDP that was above 2008 levels. In late 2012, the entire Euro area was 2.5% lower than 2008; France was 1% lower; Spain was 6% lower; and Italy was 7% lower.

Europe reversed its monetary policy started pushing the Euro down in the second quarter of 2014. Mario Draghi's European central bank quantitative easing began officially in January of 2015. The dollar value of the Euro fell from $1.40 around the second quarter of 2014 until $1.10 in late 2016.

4. The low interest rates caused by qe caused massive borrowing and a debacle in the emerging markets

One study showed that QEs in the United States reduced future interest rate yields through lowered expectations of future short term interest rates (Christensen and Rudebusch, 2012)
Extractive industries such as oil, copper and other raw materials are highly capital-intensive. As result, the phenomenon of near zero interest rates (ZIRP or zero interest rate policies) generated massive borrowing by emerging market countries. There was about $8 trillion in un-hedged carry trade borrowing post 2008. Of that, $5.7 trillion was borrowed in emerging markets and was US dollar denominated debt. The large expansion in extractive capacity funded by this heavy borrowing caused a glut of oil, copper and other raw materials. The expansion was also driven by Chinese driven high prices of oil and other extractive materials.

Oil prices got to $140 per barrel before the 2008 crash but plummeted to $45 in 2009. Partly on the strength of the Chinese industrial machine, oil prices rose again and stayed between $100 and $120 from 2011 until well into 2013. Copper prices were $3 dollars per pound in 2009 but rose to $4.50 in 2012. Then the Chinese growth miracle slowed as China had glutted advance countries with manufactured goods. As the Western economy slowed purchases from China, the Chinese demand for raw materials declined. Heavy fracking in the United States also increased the supply of global energy. As a result, oil prices plummeted to $60 by May 2015 and stayed around $40 a barrel thereafter.

The crisis for the emerging markets was that the prices of their raw materials were falling; sales to China of raw materials sales were down and be emerging markets were having to repay over $5 trillion in dollar-denominated debt. European quantitative easing of the Euro plus these massive repayments from the emerging markets both drove the dollar up.

The Third World was thus cursed by excess capacity, falling prices, and escalating dollar debt payments. In effect, the economic crash in the United States and Europe led to quantitative easing in both countries which drove down interest rates. The massive borrowing by the emerging markets created a financial and repayments crisis similar to the US and European subprime lending bubble.

Further evidence on the strength of the dollar was reflected in the Economist's Big Mac index of exchange rates. In 23 major non-US countries, the price of big Macs was 10% to 50% cheaper than the US. Only in two other major countries were Big Macs more expensive than in the US: Sweden and Switzerland.

While the strong dollar was bad news for the emerging markets, it was good news for the countries pushing their exchange rates down through quantitative easing. The strong dollar made it easy for those countries to export to the United States because it made their currency and their goods were cheaper. The strong dollar also reduced European imports from the United States because US prices in Euros were high. As result, the strong dollar post 2014 is now assisting the recovery of

Europe,(and to some extent Britain and Japan) although the magnitudes of these recoveries are small to date.

5. Is the us stock market in a bubble?

Robert Shiller showed that the US stock market in 2015 had a cyclically adjusted price-earnings ratio (CAPE with a trailing 10 years of earnings) at above 24 (Shiller, 2015). This is high but not nearly as high as 45 before the 2000 crash and 40 before the 1981 crash and 35 before the 1929 stock market crash. The simple S&P 500 price earnings ratio was 26 in February 2017, which is high but not alarming. The elevation of the index is driven by the expectation of Trump tax cuts, infrastructure spending and reduced government spending on social programs such as Obama care. However stock market pessimism lingers because of Trump's dysfunction and scandals involving possible Russian interference in the 2016 election.

Analytical evidence that stock market risk is nowhere near a bubble is VIX, the volatility index implicit in options on the S&P 500. The index in March of this year was around 11 compared to a value of 80 after 2008 stock market panic; between 45 and 50 in 2011 and over 40 in late 2015. We are thus now in a period of low economic uncertainty but high political uncertainty.

6. Conclusions

Following the 2001 recession, the United States was more expansive than Europe in its monetary from 2002-2008. As a result, the US economy was strong and did not decline as dramatically in 2008-2009. Thereafter, it recovered faster and maintained somewhat more quantitative easing then Europe until mid-2014. From mid-2014 on,Europe's monetary expansion was more rapid than the US. But it was too little too late and is still further behind in its recovery.

7. Limitations and directions for future research

This paper has not been attempted to separate the effects of QEs on domestic real output expansion due to increased domestic bank lending versus the QE effects on lowering the country's foreign exchange rate. The lower exchange rate stimulates exports and the resulting increased cost of foreign currency retards imports. This is a topic for future research.

8. References

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