CAMBRIDGE ASSOCIATES LLC

INVESTMENT PUBLICATIONS HIGHLIGHTS

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Investment Publications Highlights

Summarized by the Published Research Team

"QE2 – Apres Moi, le Deluge" by John Hussman, Hussman Funds, March 28, 2011

Many investors have not fully considered the impact that the unprecedented monetary stimulus has had on the market for risk assets and how reliant risk assets are on various stimulus measures. The effect of QE2, in contrast to its stated objectives, has not been to lower long-term interest rates or to expand credit. The true effect of QE2 has been an increase in the stock of money in the economy and encouragement of speculation in risk assets.

As the Federal Reserve begins to wind down its quantitative easing program, it is important to think about the implications for asset markets. Many investors have not fully considered the impact that the unprecedented monetary stimulus has had on the market for risk assets and how reliant risk assets are on various stimulus measures. The effect of QE2, in contrast to its stated objectives, has not been to lower long-term interest rates or to expand credit. Rather, by increasing the stock of non–interest bearing money in the economy and lowering the returns on cash and short-term bonds, it has made other risk assets seem attractive in comparison.

The Fed has also used rhetoric to help boost asset prices. Fed Chairman Ben Bernanke has publicly endorsed risk taking, first with a *Washington Post* op-ed and subsequently with a television interview in which he seemingly took credit for the rise in small-cap stock prices since quantitative easing began. The Fed believes that higher asset prices will translate into greater spending and consumption. However, so-called wealth effects—whereby people increase their consumption and spending because they feel more optimistic due to a boost in the value of their assets—are not long-term drivers of economic growth. People are more likely to consume given permanent increases in income than transitory impacts from increased asset prices.

An important concern for the markets and the economy is what happens when QE2 ends in June. Investors increased their risk appetite at the encouragement of the Fed chairman; it is yet to be determined how they will react as the second round of quantitative easing ends and cools speculative enthusiasm. Risk assets may suffer as the Fed phases out its role of backstopping risk assets. Some hope that the private sector will now take the reins from fiscal and monetary policy as the main driver of economic growth. While there has been some progress in economic growth over the last two years, it remains unclear if the economy can continue to grow without further stimulus.

However, recently economic data have begun to deteriorate. In addition, historically strong periods of employment growth have been associated with high real interest rates, which are indicative of strong credit growth and new investment demand. Low real interest rates encourage more capital investment and thus growth. What is really needed is an outward shift in demand—increased demand for investment at every level of interest rates. The U.S. economy's relatively poor performance over the last decade can be attributed to the Fed's attempt to make easy monetary policy a substitute for the real savings and investment that are needed for sustainable economic growth. As QE2 comes to an end, the benefits of speculation in financial markets are likely behind us. Whether the U.S.

economy will be able to grow without the Fed's help remains to be seen.

"Fearing Fear Itself" by Gerard Minack, Morgan Stanley, April 1, 2011

The Fed's second round of quantitative easing is set to end in June and many have attributed the rise in risk assets over the last 18 months to the Fed's accommodative polices. However, the true impact on risk assets from quantitative easing is not clear. The biggest thing to fear about the most recent round of quantitative easing ending is fear itself.

QE2 is set to end in June. Many attribute the rise in risk assets over the last year and a half to this unprecedented monetary stimulus. As the program gets set to wind down, there is fear in the markets that without continued quantitative easing the rally in risk assets may stutter. However, the true impact on risk assets from quantitative easing is not completely clear. The biggest thing to fear about QE2 ending is fear itself.

Over the last 18 months, the Fed's purchases of Agency mortgage-backed securities and Treasuries appear highly correlated with equity market and risk asset performance in general. Despite the high correlation, however, it is not clear at all that this performance is a result of QE2. An alternative view is that the driver of risk asset performance over the last 18 months has been and will continue to be investors' views on growth. For example, weekly jobless claims, a timely indicator of growth, have also been closely correlated with the S&P 500 Index's performance. This is not to say that U.S. fiscal and monetary policy has not impacted growth; it has been critical for markets. This is true both in terms of the response to the Lehman Brothers bankruptcy, as well as in terms of maintaining liquidity and allowing markets to function.

A different reason to be skeptical about claims that QE2 policies drive asset prices is that it is not easy even to isolate their impact on their targeted asset class. In fact, betting on a change in yields following announcement of Fed intentions has been a losing battle for three years. As the Fed sold Treasuries in late 2007, yields fell; as it bought in 2009, yields rose. This suggests that investors are more focused on macro data than Fed actions.

Looking at the mechanics of QE2, the Fed's purchases have increased its liabilities in the form of new money and additional reserves in the banking system. It is unclear what impact the accumulation of these excess reserves has had on equities, the dollar, or emerging markets, as despite higher reserves, bank credit is actually declining. QE2 is probably better thought of as a placebo: if investors thought it was good for risk assets then perhaps it was. With its end in sight, however, investors are better off focusing on the macro factors that influence asset classes than on Fed policy.

"Two-Bits, Four-Bits, Six-Bits, a Dollar" by Bill Gross, PIMCO, March 2011

The Fed has purchased roughly 70% of all Treasury issuance during its second round of quantitative easing. With the program ending in June, however, it is unclear who will fill the void left by the Fed's exit. Importantly, domestic demand may not be robust, especially given today's low yields. Ultimately, someone will buy the debt, but yields may need to rise much higher to entice buyers.

The Fed's quantitative easing programs have most likely lowered interest rates and boosted the prices of risk assets. However, critics question whether these actions will heal a damaged economy, or just paper over the symptoms.

The policy's economic success depends on three factors: (1) initial sovereign debt levels are relatively low; (2) the country runs independent monetary policy and is able to print its own currency; and (3) creditors believe future real growth will lead to lower deficit and debt levels. While the first and second factors above bode well for quantitative easing, the third factor is more problematic.

A successful handoff from public to private credit creation has yet to happen. Without this transition, the outlook for real growth and therefore the potential for a reversal in astronomical deficits and escalating debt levels remains cloudy. Higher interest rates would almost certainly further diminish the probability of this transition. With QE2 set to end in June, the withdrawal of nearly $1.5 trillion in annualized Treasury purchases may push rates much higher.

Most (60%) of the $9 trillion in publicly issued Treasury debt is held by foreign investors and the Fed, while private market investors (e.g., bond funds, insurance companies, and banks) are in the minority, at 40%. However, since the beginning of QE2, 70% of Treasury issuance has been purchased by the Fed, with the remaining balance absorbed by foreign investors. These data beg an important question: who will buy Treasuries when the Fed exits the market?

Foreign investors will likely continue to buy their usual annual allotment (approximately $500 billion), but demand from domestic players may be soft. Banks are beginning to make new loans instead of buying Treasury debt, and bond funds are not witnessing the huge inflows they saw in 2010. Ultimately, someone will buy the debt, but this may require higher yields.

Notably, the Fed believes that yields are directly linked to the outstanding quantity of longer-term assets in the hands of the public, as evidenced in a recent speech by Vice Chairman Janet Yellen. If that quantity jumped, as the removal of Fed purchases would imply, then the path of least resistance for yields appears to be higher.

Here, one can approximate the potential upward moves after a simple review of history. First, ten-year Treasury yields, while volatile, tend to follow nominal GDP growth. By this measure, yields are roughly 150 basis points (bps) too low. Second, *real* five-year Treasury yields have averaged 1.5% over the past 100 years. Today, they are *negative* 0.15%. Finally, the Fed funds policy rate for the past 40 years has been, on average, 75 bps less than nominal GDP growth. Currently, it rests 475 bps below this level.

Although one could argue that low rates are needed for the economy to heal, a policy rate of 25 bps for "an extended period" may not be enough to draw Treasury buyers into the market at today's historically low yields. Ultimately, yields may have to move higher, perhaps much higher, to attract enough buying interest.

"A Modest Impact on the Market from the End of QE2" by Dominic Wilson, Goldman Sachs, April 13, 2011

It is unlikely that the end of QE2 will have a significant impact on the market. As history has shown through QE1 and the U.K.'s stimulus, the "announced stock" of purchases provides the effect, while the impact from the culmination of asset purchases is negligible on both yields and asset classes.

Despite concern that the end of Treasury purchases will trigger a sharp tightening in U.S. financial conditions—prompting bond yields to rise, the U.S. dollar to strengthen, and equity markets to sell off—it is more likely that the

impact will be negligible. Contrasting the market reaction to the initial announcements with the effect of the Fed and the Bank of England terminating their previous asset purchasing endeavors, evidence suggests that what matters is the initial announcements of the stock of asset purchases. The termination of purchases has hardly any impact on bond yields. The largest daily declines in yields since 2005 were seen upon the official announcement of both the U.S. and U.K. programs, while yields were flat or even modestly lower when purchases actually ended.

Part of the motivation for large-scale asset purchases is that the increase in demand for government bonds from the central bank should push up bond prices and drive down yields. Indeed, evidence suggests that QE1 in the United States held down two- to ten-year yields by roughly 50 bps, while the U.K. program held down yields by roughly 80 bps to 120 bps. However, yields did not rise in response to the termination of each program; they were either flat or lower.

By lowering yields, previous quantitative easing experiments have encouraged investors to shift funds further along the risk spectrum. The announced stock of QE1 purchases eased financial conditions not only through lower long-term bond yields, but also via higher equity prices and a weaker dollar. U.S. equity markets rose by more than 2% on average in the two days following stock announcements, and by nearly 7.5% within the subsequent month. However, similar to bond yields, the end of quantitative easing had relatively little impact on other asset classes. There was no material impact on credit, foreign bonds, currencies, or the aforementioned equity markets, leaving it difficult to argue that the end of QE2 will be any different than the past.

The assumption that the initial shock of an announcement causes yields to change implies that the impact has been priced in by the time the purchases draw to a close. That is not saying that yields will not move at the end of QE2, but that QE2 is unlikely to be the culprit. Various other catalysts, such as rising commodity prices, increasing inflationary pressures, worsening fiscal issues, or even a changing perception of U.S. economic growth could all bring about yield shifts. Thus, the end of QE2 will have a modest impact on yields, but do not rule out other risks or the development of new catalysts. ■

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