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## The End of QEII: It's Time to Make the Donuts

In 1920 the Boston Post contacted Clarence Barron, the founder of Barron's, to investigate a man who claimed to be racking up remarkable gains for investors in an arbitrage involving the purchase and sale of postal-reply coupons. Charles Ponzi, the developer of the scheme, sought to convince investors that differentials in inflation rates between countries had created an opportunity for investors to purchase the postal-reply coupons on the cheap in one country and redeem them in the United States, an arbitrage that Ponzi said would enable investors to grow their money by several fold if they invested with him.

In fact, there were indeed differences between the prices of postal-reply coupons postage bought in foreign countries and their redemption value in the United States. But there were also substantial barriers preventing any actual arbitrage, including enormous logistical challenges having to redeem the coupons, which were of low denominational value. Ponzi nonetheless started and then perpetuated the scheme.

Barron sought to expose Ponzi's scheme, noting in articles that eventually brought the Post a Pulitzer Prize, that to support the investments Ponzi had supposedly made there would have to be 160 million postal-reply coupons in circulation. There were only 27,000 of them. These and other questions led an angry and suspicious crowd to gather outside of Ponzi's Securities Exchange Company, which was located in Boston on School Street.

Ponzi, who was famous for his deceptions, convinced many in the angry crowd to stay calm and leave their money with him, enticing them with little more than his charm, donuts and coffee. It wasn't the first time that investors would be misled by the potential for future profits and simple trappings, but donuts and coffee? Really? Is it this easy to get investors to part with their money? In many cases yes, unfortunately.

### **From Donuts to QEI and QEII: The New Profit Illusion**

Just as Charles Ponzi needed donuts to turn back a suspicious crowd of investors, the Fed needs "donuts" in order to fill the bellies of the literally millions of investors worldwide who worry about the alarmingly large U.S. budget deficit and the impact that the U.S. debt dilemma could have on their Treasury holdings. Investors are no doubt worried they may have bought into

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an unsustainable scheme: the creation of a scourge of debt so large that the Fed itself has had to purchase the debt to keep the game going.

All that the Fed has had to do thus far to keep the game going is press the “on” button to its virtual printing press, crediting the account of the U.S. Treasury. In the process, the Fed has kept the demand for U.S. Treasuries high, perhaps deceptively so, attracting with its redolence many classes of buyers, including households, banks, pension funds, insurance companies and foreign investors. Their collective buying has created what we believe to be a profit illusion with many investors mistakenly believing they can continuously reap profits from perpetually falling bond yields and rising bond prices, just as they have had opportunity to do over the past 30 years, amid the great secular bull market for Treasuries and the bond market more generally.

For many reasons, this “duration tailwind” for Treasuries can’t last, particularly because the United States has reached the Keynesian Endpoint, where the last balance sheet has been tapped. In addition, with inflation expectations rising in the context of low levels of initial jobless claims, and with Federal Reserve officials themselves expressing reluctance to go beyond Quantitative Easing (QE) II, the Fed’s Treasury buying is expected to end in June, leaving others to carry the Treasury’s heavy load.

The Federal Reserve’s colossal bond purchases therefore will likely, to the chagrin of millions of unsuspecting Treasury bond investors, be one of the markers for the latter stages of the bull market for Treasuries. For now, however, the Fed’s purchases have the sweet aroma of freshly baked jelly donuts and many a Treasury bond investor has been drawn to their savory, sugary, scrumptious taste.

What they should instead smell is the whiff of rotten eggs. But this is easily hidden with a nose pin, which the Fed through QEII places on the noses of each investor, with the goal of creating perpetual serendipitous moments that in the eyes of investors transform the rotten stench into something far more delectable. Ultimately, however, the stench of the

Federal Reserve’s bond purchases will seep into the nostrils of investors all around the world when it becomes glaringly obvious to them that the Fed can’t possibly continue as the Treasury’s main source of demand.

Treasury investors will also realize that not only has QE suppressed the rates they earn on their Treasury holdings, QE promotes financial and economic conditions that hurt Treasury bond holders, primarily because it boosts economic growth and inflation, resulting in confiscation of the skimpy Treasury yields they earn. Foreign investors have the added discomfort of a decline in the foreign-exchange value of the U.S. dollar. To top it off, Treasury investors face the potential for capital losses for having bought into the Fed’s scheme at prices inflated by QE, sort of like playing a game of hot potato and getting stuck with the potato when the Fed abruptly leaves the game.

### **House of Pain**

With QEI and QEII the Federal Reserve has in essence picked the pockets of Treasury bond investors throughout the world. To be sure, QE fattened the bellies of many Treasury investors, owing to substantial price gains.

The problem, however, is that the Fed essentially robbed Peter to pay Paul by pushing yields below inflation and by undermining the value of the U.S. dollar. Peter was the unsuspecting investor in Treasury securities drawn into the Fed’s scheme by the allure of ever-rising Treasury prices; Paul was everyone else invested in everything else.

The movement into this “everything else” that was prompted by QEI and QEII can be visualized by looking at concentric circles, with the riskiest assets at the perimeter of the circles. The migration toward the perimeter was encouraged through not only a decrease in term premia for longer-term bonds resulting from the Fed’s large-scale asset purchases, but also by the Fed’s zero interest rate policy, or ZIRP. It created a “house of pain,” an investment climate in the money market so punishing that it drove investors to seek refuge in other assets. No wonder \$1 trillion of money has flowed out of money market funds over the past 2 ½ years.

**Pushed to the Perimeter**

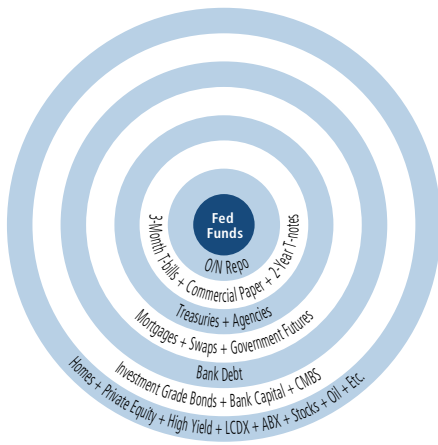
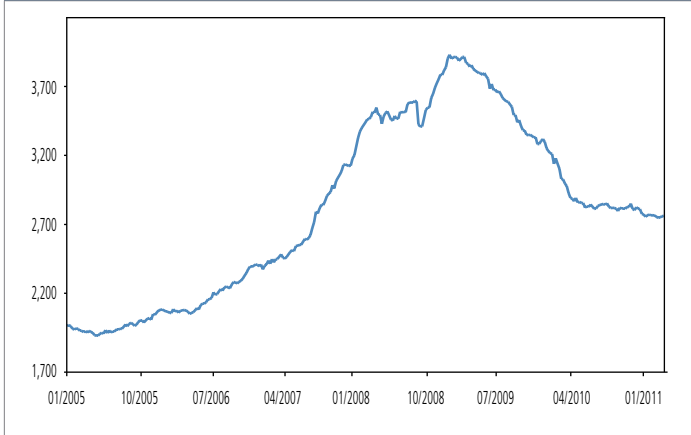


Figure 1

Source: PIMCO

**Money Market Funds Assets Outstanding (In Billions of Dollars)**



Source: Investment Company Institute, Bloomberg

Figure 2

**It’s Time to Make the Donuts**

QEI and QEII were necessary solutions at a time when the U.S. financial system was on the brink, but they are unsustainable means of funding the U.S. government. Ultimately, the U.S. must own up to its past sins and let the deleveraging process play itself out. It can’t pretend that previous levels of demand for goods and services can be restored simply by turning on the Fed’s printing press.

The United States instead must recognize that only by increasing investment in its people, its land, and its infrastructure, as well as promoting free trade, can it achieve economic growth rates fast enough to justify consumption levels previously supported by a wing and a prayer – by debt.

For the Federal Reserve and the U.S. Treasury, it is time to make the donuts. There is a crowd standing outside and, although there is no wrongdoing to make them as angry as the crowd that stood outside of Charles Ponzi’s office before he was busted, they are just as anxious, and it is going to take a lot of convincing to get them to show up at the next Treasury auction and the one after that, and the one after that, and....

**Across the Pond and Around the World**

Now, let’s turn to Ben Emons for a walk through the evolution of QE, its goals, its effects, and its upcoming end, before turning to other PIMCO colleagues for discussions on central banking in Europe and the emerging markets. Comments from PIMCO experts throughout the world are a regular feature of the Global Central Bank Focus.

**The Evolution and Ending of QEII**



**Ben Emons**

The Fed’s long-term securities asset purchases – dubbed “quantitative easing,” or QE, for short – link asset prices to the economy. The Fed engineered such a linkage via a sequence of signals that were

met with anticipation in the financial markets for an aggressive style of monetary easing.

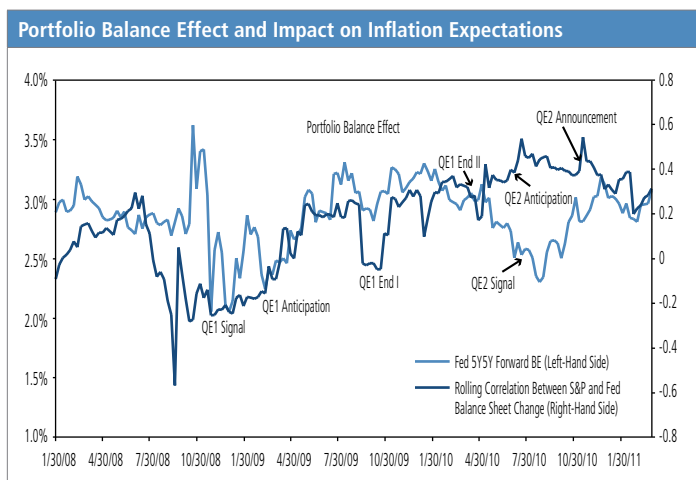
The sequence began in the fall of 2008 when the federal funds rate moved toward the zero bound, resulting in November 2008 in the announcement of the Fed’s first asset

purchase program consisting of agency securities and agency mortgage-backed securities. At the time, the purchase of Treasury securities was being evaluated for their potential benefits.

The Fed had two initial intentions for its asset purchases: to address distressed credit markets and to support the housing sector. Both goals were facilitated largely by liquidity support programs such as the Term Asset-Backed Securities Loan Facility. Anticipation of additional action grew when in December 2008 Fed Chairman Ben Bernanke made a stronger case for quantitative easing, driving Treasury yields sharply lower.

This occurred in a similar fashion with QEII when Bernanke in August 2010 spoke to the effectiveness of asset purchases at the Fed's annual summit in Jackson Hole. The intention of quantitative easing however was different from credit easing; it was a rebalancing effect. By signaling quantitative easing, investors' anticipation drove portfolio allocations into Treasuries.

When Treasury yields became very negative in real terms, it pushed investors into equities, corporate bonds and other assets that had positive real rates. The premise of this strategy was that portfolio assets are imperfect substitutes.



Source: MS research

Figure 3

By changing drastically the yield of 'risk-free' assets, a domino change occurred in other assets, which is the portfolio rebalancing effect. As a result, the expansion of the Fed's balance sheet became very positively correlated with returns on the S&P 500 index during QEI & QEII, as shown in Figure 3.

The true intention of QE therefore was to generate a self-feeding mechanism of expectations building on expectations in a way similar to the money multiplier. During QEI as well as QEII, the Fed succeeded with this strategy as the portfolio balance had a knock-on effect on its favorite gauge of inflation expectations, the 5-year/5-year forward break-even derived from Treasury inflation-indexed securities. This is a market-based measure where investors believe inflation will be in five years looking five years out.

The positive correlation between the change in the Fed's balance sheet and forward break-even inflation shows a direct connection with the rise in asset prices (Figure 3). Hence the Fed has created a transmission channel it can call upon if it wishes to utilize QE in the future. The success of this transmission hinges on several associated costs. There is the stock effect represented by assets on the balance sheet and a flow effect from the Fed's daily purchases. Fed research has shown that the impact on interest rates from the flow effect is relatively small (~3 basis points) mainly because operations are preannounced, but the stock effect can be larger when either announced (~70 basis points) or signaled (~30 bps). Other Fed research has estimated projected deficits (flow) and debt (stock) can be worth 25 basis points in terms of risk premium.

QEI saw essentially two ends when the Treasury and MBS programs finished respectively on 10/29/09 and 3/31/10. As Figure 4 shows, the premium in forward rates was then relatively small (10 to 25 basis points), and it consisted in part of premiums for liquidity, term to maturity, and future rates on top of expectations for QE's end. For the period ending when the Fed is scheduled to end QEII in June, there is only a small premium in the forwards, but through December 31, 2011 the premium is larger (40 to 70 basis points) partially because interest rate hike expectations have increased.

Treasury Forward Premium in Basis Points				
	Forward Premium QE1 end I	Forward Premium QE1 end II	Forward Premium QE2 end June	Forward Premium year-end
2Y	10	37	21	72
3Y	10	33	20	70
5Y	7	24	19	61
7Y	5	18	15	48
10Y	4	15	14	37
30Y	2	11	7	21

Source: MS research, Bloomberg

Figure 4

The cost associated with the end of QEII therefore appears to be mostly factored into forward rates and so the true exit cost lies in different areas. At the end of QEI, the Fed's 5YR/5YR forward inflation stood near 2.9%, but the European sovereign crisis dampened inflation worries and reversed those quickly. Today, however, fears of contagion stemming from Europe's debt dilemma have fallen, boosting the 5YR/5YR to about 3.1%, posing a challenge for the Fed to create a smooth exit from QEII.

Coinciding with the end of QEII is the debate on the federal debt limit. As QEII has kept the real Treasury rate persistently negative and thus supported the portfolio balance effect, the risk is that real rates suddenly turn sharply positive on inflation or debt concerns, thus feeding a negative effect from the link between asset prices and the economy. This is why the Fed is likely to finish QEII as planned with sufficient communication to provide as smooth an exit as possible.

## European Central Bank Focus



**Andrew Bosomworth**

### What Next?

Earlier this month the Governing Council of the European Central Bank (ECB) decided to raise the rate on the main refinancing operation (MRO) which provides the bulk of liquidity to the banking system, by 25 basis points to 1.25% having left it unchanged for almost

2.5 years. Investors seeking to comprehend why policy was tightened despite the dire state of public finances in Europe's periphery perhaps took comfort from ECB President Trichet's response to a question whether more rate hikes are in store: "We did not decide today that it would be the first of a series of interest rate increases." Phew.

Was that not a signal that Europe's already steep yield curve prices in too many hikes: 2% by the end of this year and 2.5% by end 2012? Indeed it likely does, but two things –

history and loan growth – suggest investors should draw little comfort from President Trichet's answer.

In December 2005, the ECB also raised the MRO rate by 25 basis points, back then to 2.25%, having left it unchanged at "historically low levels" for exactly 2.5 years. And in response to a similar question about whether there were more interest rate hikes to come, President Trichet said, "There is not an ex ante decision of the Governing Council at today's meeting to engage in a series of interest rate increases." Yet three months later the ECB hiked again, to 2.5%, and it continued doing so in regular two and three month intervals until reaching 4.25% in June 2007. Upshot: the ECB makes its mind up one step at a time and what is important is the medium-term direction of the economy. While history never repeats itself, a similar dynamic may be in store again.

To start with, growth in loans to the private sector is responding positively to the previous years' stimulating

monetary and fiscal policies. Within the recent 2.6% year-on-year growth in private sector loans, loans to non-financial corporations have finally stopped contracting, and lending for house purchases in the entire eurozone has picked up to 4%, a rate that masks a very heterogeneous pattern of credit creation across member states from contraction in Spain to boom in Slovenia.

More troubling for a central bank, however, measures of inflation expectations continue to rise. The European Commission's survey of consumers' price expectations over the next 12 months, for example, show they have risen

consecutively since autumn 2009 and are back at levels last seen in the heyday before Lehman Brothers defaulted.

A 1.25% policy rate thus appears consistent neither with the improving health of the eurozone economy nor with the firm anchoring of inflation expectations. And even if the ECB were to raise the rate to the level of next year's forwards at 2.5%, it is important to realize that even that rate is low by historical standards. Indeed, the policy rate in modern-day Germany and the eurozone has averaged 4.5% since 1875. So what's next? Another rate hike, I would presume.

## Emerging Markets Central Bank Focus



### Central Banks Get Prudent in Emerging Markets: Is It Enough?

Lupin Rahman

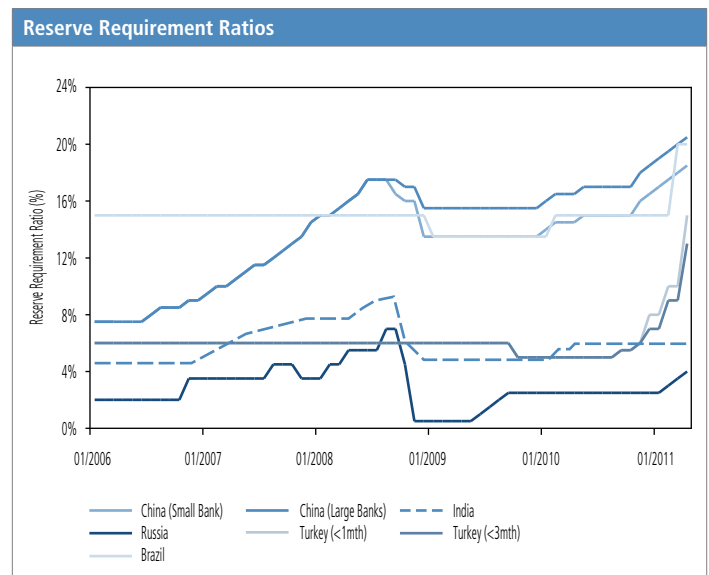
Brazil's recent increase in the tax on financial transactions related to foreign investments, the IOF tax (Imposto sobre Operações Financeiras), to limit short-term external borrowing and restrain consumer

credit highlights the increasing use of macroprudential measures across emerging markets as a key component of monetary policy (Figure 5). But how effective are such measures likely to be, and what are the risks?

Brazil may be the most visible example, but it is far from the only one. The People's Bank of China (PBOC) explicitly adopted the broader use of quantitative measures, with reserve requirement ratios (RRR) effectively replacing rate hikes as the main monetary tool. In the last six months, RRR have been hiked a cumulative 350 bps while the prime lending rate has been raised 75 bps.

In Korea's case, the focus of recent measures has been on affecting the composition of capital flows with the central bank (CB) imposing a bank levy on non-deposit foreign currency liabilities and imposing a leverage cap on banks' FX derivatives positions. Meanwhile in the most unorthodox

move so far, Turkey's CB hiked reserve requirements 800 bps for short-term deposits while *cutting* the policy rate by 75 bps to reduce incentives for short-term foreign portfolio flows.



Note: China RRR for Yuan deposits in small/medium/large banks; India cash reserve ratios, Russia RRR on foreign currency liabilities; Turkey RRR on demand deposits up to 1 month and 1-3 months; Brazil RRR on terms deposits.

Source: Morgan Stanley, Credit Suisse, and Haver Analytics.

Figure 5

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A cursory look at the recent measures implemented across emerging markets points to the broad scope and somewhat undefined nature of macroprudential policies. It is truly a case of incremental experimentation.

At their most basic, macroprudential measures are targeted/ rule-based techniques implemented to limit the buildup of financial risks and improve the resilience of the financial system to shocks. As such they may include capital controls or prudential regulations on selective flows (e.g. Brazil's tax on corporate foreign borrowing with less than two years maturity), reserve requirement ratios which target the ability of banks to extend credit, and taxes on specific credit sectors, e.g. auto loans or consumer credits. Broader definitions include all microprudential measures on financial institutions as well as broad measures to limit asset market bubbles, such as via strict lending rules for second mortgages.

Underlying this shift in CB policy focus has been the combination of accelerating capital inflows into emerging markets following the Fed's pursuit of QEII and a zero policy rate that results in rising interest rate differentials. These global factors have not only resulted in appreciation pressures on currencies, but they have also led to a rapid increase in *short-term* inflows into domestic equity and debt markets and concurrently encouraged a surge in *short-term* foreign exchange liabilities of the private sector.

Moreover, rising liquidity in the banking system is driving interbank rates lower, reducing the efficacy of policy rates in the monetary transmission mechanism. Emerging markets central bankers are understandably concerned about these phenomena particularly given the additional macroeconomic risks posed by rising inflationary pressures as commodity-price increases feed through and domestic output gaps close.

### **Will the Policies Work?**

The extent to which macroprudential measures are likely to be effective in limiting distortions as well as dampening inflation remains an open question.

There is some evidence suggesting that quantity-based measures can affect the composition of capital flows as well as broad credit conditions. Nevertheless, insofar as macroprudential policy frameworks are less developed and less tested than more orthodox interest-based policy frameworks, there is good reason for pragmatism in terms of what they can deliver. There is also the issue of the extent to which they can be circumvented given their (typically) narrower focus, and the ability and costs of regulation for supervisory authorities playing catch-up with the private sector.

The challenge for markets is therefore to assess the overall impact of these measures together with any spillover effects on monetary conditions, inflation and ultimately policy rates. Macroprudential measures are most likely to be effective in reducing systemic financial risks when they are undertaken alongside a traditional, rate-driven tightening cycle as opposed to being enacted *in place* of interest rate hikes. While this has been the case so far in some emerging markets – e.g. Brazil has hiked a cumulative +325 bps since 2010 as well as putting forward a 0.5% of GDP fiscal consolidation plan – this has not in others – e.g. Turkey.

The risks are many, led by the increasing challenges to emerging market central banks' credibility in fighting inflation and achieving stated inflation-targets. EM policymakers will have no choice but to be pragmatic, while also pointing fingers at others (in this case, the U.S.) for the source of their headaches. Meanwhile, investors will need to adapt, including positioning for rising one-year forward inflation expectations in emerging markets and local curve steepening.

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A "risk free" asset refers to an asset which has a certain future return. U.S. Treasuries are considered to be risk-free because they are backed by the U.S. government. All investments contain risk and may lose value.

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