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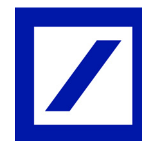

Global | Cross-Discipline | Special Report

Date
5 April 2013

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Quantitative Tightening and the Great Escape

The three trillion dollar question for investors in the coming 2-3 years is what will happen to the Fed's balance sheet, and what the impact of any Quantitative Tightening (QT) will be on the economy and financial markets. Recent history is not particularly illuminating – we all got so used to just looking at key short-term interest rates that we forgot almost completely about all of the older tools of the monetary policy trade. Things were a lot different in the nineteenth century though. Interestingly, three big US recessions and stock market crashes of the time (1857, 1873 and 1893) coincided with legislative changes that had elements of QT about them. That's the bad news – QT in the late nineteenth century meant trouble, both for the economy and the markets. However, the US was (just about) still an Emerging Market in those days – which is to say that some of the QT decisions were in response to exogenous factors. Indeed, when policy-makers did have the option, they weren't shy at calling a halt to QT if the economic going got tough. On balance, all this suggests that policy-makers can probably continue to call the shots on the pace of QT as opposed to having it forced on them by markets (fingers crossed with respect to inflation, though). But don't expect the Fed's balance sheet to come down quickly anytime soon. The relevant lesson for Europe is that the debate between debtors and creditors is still in its infancy and rather than die down anytime soon it is likely to get increasingly political (come to think of it, though, it's South versus North-East all over again).

A wobble or two in recent US economic data releases...

US economic data wobbled a bit in the past week or two, if you ask me. First it was the Conference Board's consumer confidence report for March, which fell by more than expected (actually, if you look more closely, you notice it's fallen in four of the past five months). Then new home sales for February fell more than expected, albeit after a very out-sized month-on-month jump in February. Next came initial claims, which have now risen for three consecutive weeks and are at their highest level this year. And then a slew of Purchasing Manager/ISM reports for March all showed a sharp slowdown, albeit all still above the 50-50 advance-decline line. And today the non-farm payrolls number for March came out at a disappointing 88,000 jobs created. Might the fiscal cliff be catching up on us (increase in payroll tax and all), I wondered? Maybe it is just a case of the data getting a bit ahead of itself in February and therefore in need of a correction in March. Maybe I'm being over-sensitive (wouldn't be the first time I've been accused of this – someone once told me I'd predicted six out of the last 2 US recessions).

...but the current $3 trillion question is the fate of the Fed's balance sheet

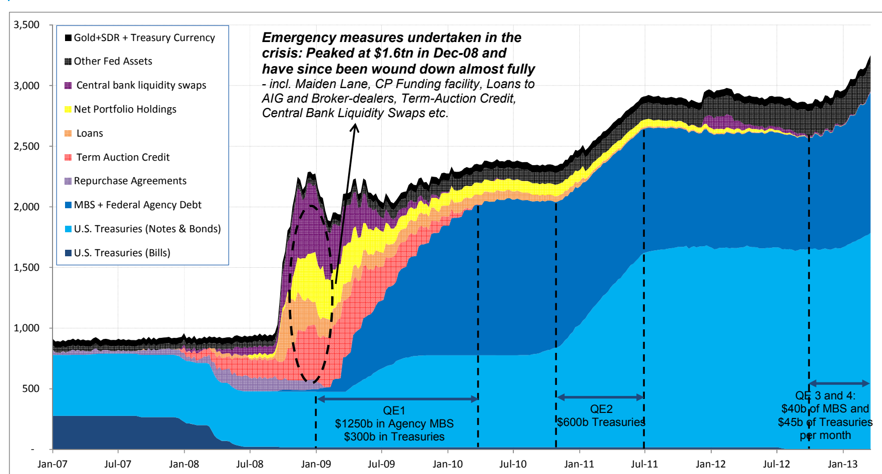
In any event, maybe I'd be missing the wood for the trees if I got too caught up on the week-to-week data branches. Because the bigger issue I wanted to think about this past week or so was this – what is the 2-3 year outlook for the Federal Reserve's $3 trillion balance sheet – how much, if at all, is it going to come down? And how much of the return outlook for the major asset classes depends on it? It's the new three trillion dollar question, if you will.

DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MICA(P) 072/04/2012.

Up 300% in the past five years, the Fed's balance sheet looks enormous in a historical context

No matter how you look at the data, the expansion of the Fed's balance sheet since the onset of the Global Financial Crisis stands out like a sore thumb. Looking at Figure 1, you might be forgiven for thinking that the Crisis only began in Q4'08, even though it is actually more than a year since the first sizeable seizure in LIBOR markets took place in August 2007 (in the first phase of the crisis, the Fed's interventions were confined to its more traditional domain as liquidity provider to the deposit-taking commercial banks). Things got more interesting in early 2008 with the Bear Stearns rescue, of course, but the charts don't really go off the scale until the wake of the Lehman and AIG failures in September when the Fed finally adopted its aggressive "Whatever it takes" approach and deployed an alphabet-soup of new support operations to breathe life back into the other liquidity-starved corners of the market, such as Commercial Paper, ABS and Money Market funds (can anyone remember what the CPFF, MMIFF, TALF and AMLF all stand for? Most of these programmes have been wound down now, by the way).

Figure 1: US Federal Reserve Balance Sheet Assets



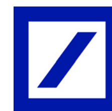
Source: US Federal Reserve, Deutsche Bank

Having rescued the markets, the Fed turned its focus to the economy

As the financial fires began to die down in mid-2009 (the stock market had troughed in March), the Fed turned its attention to the economy. But with the Fed funds target already at zero (where they had been since December 2008), providing further monetary policy impetus called for unconventional measures to lower the longer-term interest rates and credit-related spreads. And unconventional measures we got, with (to-date) four rounds of so-called Quantitative Easing (QE) and a new Operation Twist. By early 2013, most of the emergency liquidity-provision programmes had been wound down. But the Fed's balance sheet was still rising as longer-term Treasury Bonds and Agency MBS Securities were still being purchased under ongoing QE operations.

Quantitative Easing was quite a shock to economists…

All of this sudden balance sheet activity together with the new alphabet soup of new lending programmes came as quite a shock to most economists. We'd just got so used in the preceding decade to being spoon-fed the Fed funds target at 1415 EST/EDT on the final day of the FOMC meeting, and been so conditioned that it was the only monetary policy variable worth following, that we'd forgotten about all of the old nooks and crannies of monetary policy and central bank operations. After the fifteen quiet years of the Great Moderation, monetary policy had been reduced to short-term interest rates.



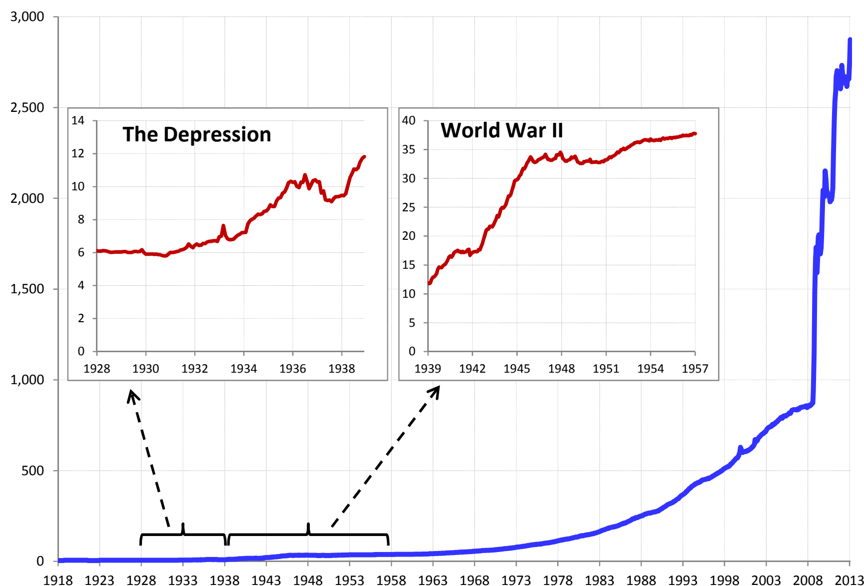
…and it did not come with a stellar reputation

And, of course, the Quantitative Easing we had heard of in recent years did not exactly fill us full of optimism. There was the Bank of Japan and its ongoing – but not entirely successful – efforts in the 1990s and 2000s to revive the Japanese economy with QE (we'll see in due course whether the latest and more bold effort is any more successful than its predecessors). It drew comparisons with the very high inflation countries and their money-printing – it's less clear-cut than I thought to separate the mechanics into their "bad" ones versus our "good" ones (one important difference is that "they" did end up printing a lot more physical money than "we" did). Meanwhile, Bundesbank President Weber and ECB Chief Economist Stark had both resigned from their posts during a period when there was a lively debate underway in European circles regarding the pros and cons of bond-buying by the ECB. In short, Quantitative Easing/Bond Buying/Money Printing had about as good a reputation as root-canal surgery.

Reversing QE seemed to be easier said than done, on first inspection…

In the early days of the Crisis (we didn't all realise they were early days at the time, of course), a commonly held belief among market participants and policy-makers was that the lion's share of the issues were related to liquidity as opposed to solvency (we've since learnt the hard way that this liquidity/solvency distinction is much harder to draw in practice than it sounds in theory). Assuming it was liquidity-related, then presumably what the Fed had giveth in terms of balance sheet expansion, it would at some point taketh away. But I couldn't help but think that the expansion in the Fed's balance sheet might be more permanent than most people thought, or at least take a lot longer to bring down. After all, as Figure 2 shows, there's never been a previous period in Fed history where its balance sheet has shrunk significantly, even after the Depression or after World War II.

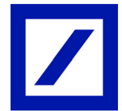
Figure 2: Adjusted Monetary Base of the US Federal Reserve ($b)



Source: St. Louis federal Reserve, Deutsche Bank

… yet doing nothing seems like taking a risk with medium-run inflation

At the same time, wasn't inflation "always and everywhere a monetary phenomenon", as Milton Friedman famously said? Not everyone still believes this whole-heartedly, of course – inflation has been a lot more worried about in recent years than seen in evidence. Harvard Professor Benjamin Friedman



recently said “if your model has an ‘M’ in it, it is a waste of students’ time”. And outgoing Bank of Japan Governor Shirakawa recently said that “the link between money and prices is well and truly broken”. But, if you were taking on Ben Bernanke’s job later this year, would you be willing to leave the Fed’s balance sheet above $3 trillion and risk it with future inflation? Arthur Burns is hardly remembered well for his role with respect to US inflation in the 1970s – pump-priming, sub-servience to the political leadership and all.

Never mind the size of the balance sheet – what about the MBS on it?

Talking about the not-so-great prior reputation of QE, try “Mortgages” for size. Because not only had the Fed’s balance sheet grown 300% since the Crisis began, but the biggest contributor to its growth was Mortgage-Backed Securities (MBS). And, let’s face it, inasmuch as MBS have been the talk of the town of the past five years, it hasn’t exactly all been for the right reasons. For example, I’m sure I’m not the only person to remember being assured in 2007 that even though there were some issues with respect to the “sub-prime” end of the US mortgage market, Alt-A and Prime mortgages were perfectly secure, only to find out soon enough that they weren’t. Even then US Treasury Secretary Hank Paulson didn’t exactly inspire confidence at the time, saying at the Press Conference at which it was announced that Fannie Mae and Freddie Mac were being put into “conservatorship”: “I attribute the need for today’s action primarily to the inherent conflict and flawed business model embedded in the GSE structure, and to the ongoing housing correction”.

I wondered - was there an analogy to be had between MBS and Silver?

To cut a long story short, I couldn’t help but wonder from my passing interest in economic and financial history whether this addition of MBS to the Fed’s balance sheet wasn’t in some way analogous to the role that silver played (or didn’t, importantly) in the late nineteenth century. And I also couldn’t help but wonder about what prior episodes of QE/QT – silver-inspired or otherwise – had done to the economy and financial markets.

Floating exchange rate regimes are the norm now, but it was metallic or bi-metallic standards that ruled in the 19th and early 20th century

Let me briefly explain about silver. Since the early 1970s, the major world currencies have been exchangeable merely against one another, and not into gold as in the prior Bretton Woods exchange rate system (which ruled the roost from the end of the Second World War until the early 1970s), as the US dollar was, or as all the major currencies were in the even earlier Gold Standard (rather coincidentally it is 80 years to the day that President Roosevelt passed Executive Order 6102, asking Americans to surrender their gold back to the US government). In fact, back in the nineteenth century, the value of the major currencies wasn’t just expressed solely in gold, but silver too, in some instances.

On the face of it, the 1890 Sherman Silver Purchase Act and its subsequent repeal in 1893 seemed relevant - and the bad news was that there was a market crash in 1893

A quick look at the books took me straight to the Sherman Silver Purchase Act of 1890, and its subsequent repeal in 1893. Under the Sherman Silver Purchase Act, the Treasury (remember there was no Fed at the time) was obligated to purchase 4.5 million ounces of silver per month (similarly in QE, the Fed buys pre-announced amounts of Treasuries and MBS). In 1893, the Act was repealed, and the silver purchase stopped. But hang on a minute. There also a big Stock Market Crash of 1893. And there was a recession, too. In fact, the 1890s was the most recession-prone decade of the last 150 years, with the economy in contraction not far off half the time (Figure 3 shows a version of this). On the face of it, this was worrying.

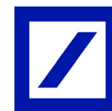
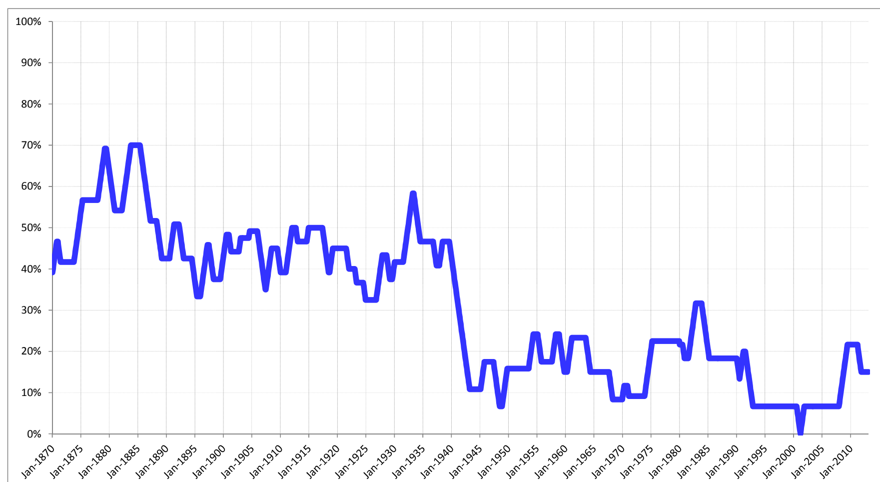


Figure 3: % of months the US economy was in recession (rolling 10 years)



Source: NBER, Deutsche Bank

There was also QT around the time of the 1873 Crash

The Sherman Silver Act and its repeal had certainly grabbed my attention. Was QT bad always this bad for the economy and for markets? It's the common sense answer, but was it also what the history showed? What else was out there? How about the "Panic of 1873" and the so-called "Long Depression" (the longest recession on the NBER's history books, actually). Well, also in the same year was the Coinage Act of 1873. And blow me down if this act didn't also de-monetise silver. So here again, QT equalled trouble.

Incredibly, 1857 another year where economic crisis coincided with a Coinage Act being passed

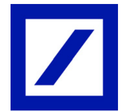
And if the aforementioned isn't coincidence enough for you, try 1857 for size. As in "the Panic of 1857", where business activity fell by more than 20% and the economy went into an 18-month recession. And also as in the 1857 Coinage Act (just in case you're wondering, there have been seven Coinage Acts over the years) which forbade the use of foreign silver coins (the Spanish Silver Dollar was particularly popular in the US at the time) as legal tender (gold coins too, in this case). QT equalled trouble, yet again.

The Greenback issue was another QT-like moment in US history

Silver wasn't the only cause of actual/potential QT in the nineteenth century. During the Civil War, paper currency greenbacks were issued to help pay for the War. A spirited debate then ensued regarding whether they should be retired as part of a post-War attempt to restore Gold Convertibility and the pre-War price level. In 1866, Congress passed the Contraction Act, which called for a reduction in the volume of greenbacks in circulation, but this action was fiercely resisted (and ultimately repealed in 1868) on account of the ongoing 1865-67 recession.

The comings and goings of Central Banks had economic consequences

Never mind silver or greenbacks as the potential cause of QT, and trouble. Because the whole concept of a Central Bank had its comings and goings in nineteenth century America (remember that the modern day Fed has only been with us for the past hundred years). Well, the First Bank of the United States lost its charter in 1811, just before the recession of 1812, it transpires. And the Second Bank of the United States lost its charter in 1836, although de facto a few years earlier (and yes, there was yet another Coinage Act this time of 1834, that played its part in it). And here we have a couple of downturns to choose from: two recessions (1833-34 and 1836-38); and a Depression (1839-43).



Of course, any reading of particular historical episodes is open to debate…

Each of these historical episodes above has its points of contention among historians, of course. And like any bad amateur historian, I'll admit to having done at least a bit of cherry-picking to make my point (come to think of it, bad amateur historians probably aren't conscious of their cherry-picking). Don't forget, for example, that the US was not the financial capital of the world in the nineteenth century that it is today. It was an emerging market, and therefore much more easily blown around by international forces beyond its control. In the 1873 episode, for example, the US was to a degree simply swept up as part of a bigger drive to demonetise silver in Europe following the end of the Franco-Prussian War. And in 1893, it was actually a Democratic President who repealed the Sherman Silver Act, but relatively simply on account of a gold-silver price imbalance as much as anything else. A collapse in the price of silver (part of which was related to the demonetisation of silver in India this time) led to an unsustainable mis-match between the official and market gold-silver ratio, leading to a massive and rapid drain of US gold reserves.

…but the picture was one of long-running and hard fought tension between hawks and doves…

We've written before about the surprisingly long time that it took the US to become an optimal currency area (by some accounts up to 150 years). One can legitimately debate individually the ins and outs of each of the above historical events. But, more or less, the struggle over expansionary versus restrictive policy was played out in the political sphere for the whole of the period in question – between Republicans and Democrats; between Congress and the President; between Debtors and Creditors; between the South and the North-East; between Gold-bugs and Silver-ites; between hard money and fiat currency.

…and policy Tightening *did* generally point to Trouble

It's been a market adage for as long as I've been in the City that you don't "fight the Fed". The above evidence, on the face of it, suggests a broader adage may be more appropriate, that "tightening means trouble", or at least that you shouldn't "fight the feds". Of course, how to judge the stance of policy over that whole long-term is easier said than done, because life wasn't always as simple-sounding as merely looking at the real Fed funds target rate and the slope of the yield curve: there hasn't even always been a Fed to look to for guidance, if you go back far enough. There may not always have been a US Central Bank, but there was plenty of Interventionism from the Congress and from the Executive with respect to economic policy making, and there was certainly at least a passing correlation between contractionary/expansionary policy acts on the one hand and the economy/stock-market on the other.

Back to 2013 – what does the past suggest about the Fed's current balance sheet predicament?

Over the long run, it's clear that the stance of policy and the state of the real economy are related. The size of the Fed's current balance sheet is in unchartered territory in nominal terms and equalled only once in its history during the Great Depression (never a happy parallel to draw) when looked at relative to the size of the US economy. These are sobering thoughts when it comes time to make any kind of prediction regarding where the Fed's balance sheet might go in the future, and what might happen to markets as we progress. In short, the first-order approximation of the past is that "tightening means trouble".

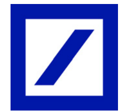
Despite the sobering long-run history, I think this time can be different in the US

This time, though, I think things can be different. Well, at least a bit different. To be a bit more precise, I don't believe we are staring at the "Great Crash of 2013" (or '14). There are two key reasons why. First, the US is at the centre of the current system, not at its periphery (as it was in the nineteenth century) – QT will be endogenously decided and regulated by US policy-makers, not exogenously imposed by foreigners. And, second, time is still on policy-makers' side. Unless something goes wrong with respect to inflation in the next two years, policy-makers probably have time on their side in terms of dealing with the balance sheet issue. I'm sure this means the Fed balance sheet will stay bigger and for longer than you might think, by the way – we're not even done with QE3/4 just yet and that is increasing the balance sheet size at the rate of $85bn a month.

By the way, this assumption that US inflation remains under control is key. It probably explains why policy-makers make so many references to inflation expectations being contained. Money aggregates (M1, M2 and the like), cost pressures, the output gap – none of the traditional inflation leading indicators are flashing trouble anytime soon. Then again, it's not like it's been business as usual for macro-economics in the past couple of years. Who knows – maybe Emerging Market inflation is more of a risk than most people think, and maybe their inflation could for once flow upwards to the Developed Markets.

And as for Europe, don't expect the debt debate to die down soon

Finally, to Europe, where another month of late night meetings, fraying tempers and supposedly bungled communications has passed by, this time with respect to Cyprus. We've written before about the long and tortuous and even crisis-ridden road that the US travelled from the formation of the Union in 1788 to the final completion of the optimal currency area, 150 years later. The economic debate in nineteenth century US saw the rise of new political movements like the Greenback Party and the People's Party (known as the Populists). Perhaps the recent success of political forces like the 5 star movement in Italy shouldn't come as a big surprise to us. Not for the first time in history, something of a geographic rift appears to be opening up between the South and the North-East. In the US, that rift lasted a long time, but the Union still survived despite its weaknesses.



Suggested further reading related to this piece

- Friedman, Milton (1989). The Crime of 1873. The Hoover Institution, Working Papers in Economics E-89-12
- Laughlin, J. Laurence (1898). The History of Bi-Metallism in the United States, Library of Economics and Liberty
- Reinhart, Carmen & Rogoff, Kenneth (2013), Shifting Mandates: The Federal Reserve's First Centennial. NBER Working Paper w18888
- Rockoff, Hugh (1990), 'The Wizard of Oz' as a Monetary Allegory. Journal of Political Economy, Vol. 98: 739-60

Recent Research pieces

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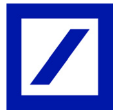

Appendix 1

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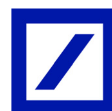

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