QE works: lessons from the US and UK

- The ECB looks set to buy sovereign bonds soon. But will it work? Logic and the experience of other countries suggest it will.
- The biggest economic impact of massive bond buying is through confidence. When firms, consumers and markets are worried that the central bank has run out of ammunition, an overwhelming show of force helps. Just the expectation of that force can be enough: look at how markets calmed after OMT.
- Partly priced in: One typical complaint is that QE cannot work because Eurozone yields and the exchange rate are already low. But that is the case in part because markets have priced in ECB bond buying. The ECB now needs to validate this.
- Solid evidence: The past few years have produced a treasure trove of evidence on asset purchases. It shows that central bank bond buying can aid confidence, depress yields and spreads, boost asset prices, and lift growth. The proof is in the pudding. Chart 1 shows that the UK and US have averaged 3% yoy nominal growth since embarking onQE. The Eurozone has managed 1.1% yoy.
- Could be less powerful for the Eurozone: The Eurozone is a more bank-based economy than the US, and QE does not seem to boost bank lending much. That, as well as distrust of the tool in core Europe, could cut the effectiveness of asset purchases in the Eurozone relative to the US and UK.
- But QE will still give a boost. The evidence suggests plenty of other ways in which QE can boost demand outside the bank lending channel. Japan’s failure with QE over a decade ago does not invalidate that. By buying the most cash-like bonds from those least likely to respond with only lukewarm commitment to positive inflation, Japan provides an example of how not to do QE. The real risk is not that QE fails to work, but rather that the ECB does not do enough of it in deference to the hawks. Still, along with the tax cut in the form of cheaper oil, the QE we expect should ensure Eurozone growth improves this year.
- QE is not the be-all and end-all. Low inflation can be dangerous because it cuts rate setters’ ability to stimulate demand. Central banks need to act when they miss their targets. But do not let that disguise the point that countries can do well without inflation (eg Switzerland). QE on its own can help correct only a near-term lack of demand. Even 25 years into its troubles, Japan cannot bring itself to enact the vital structural reforms needed to boost supply. As our Euro Plus Monitor shows, several Eurozone periphery countries have already reformed and are growing solidly.

![Chart 1: Aggressive policy works](image)

Index, 2006=100. Source: BEA, Eurostat, ONS

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 QE works

Either QE (Quantitative Easing) will cause hyperinflation or it is irrelevant. Those are some of the mistaken criticisms of QE. Put simply, central bank bond purchases of the type undertaken in the US and UK in recent years are just like normal monetary policy. The central bank does its job by influencing interest rates through asset purchases and sales of assets. The only difference is that QE influences long- rather than short-term rates. QE cuts borrowing costs and the exchange rate, boosts asset prices and raises confidence, all of which would help Eurozone growth recover.

In practice, the biggest impact of Eurozone QE would be to provide confidence to the economy. Unlike normal central bank nudges to the monetary tiller, rate setters turn to massive bond purchases only in extreme times. QE serves a much bigger aim then. When firms, consumers and markets are worried that the central bank has run out of ammunition, an overwhelming show of force helps. Just the expectation of possible force can be enough: look at how markets calmed after Mario Draghi announced he would do whatever it takes to hold the Eurozone together.

The fact that Eurozone bond yields are already low now would not prevent QE having an impact. Expectations of ECB sovereign bond purchases have already brought yields, spreads and the euro down. The ECB’s job is not necessarily about getting rates lower and spreads tighter from here. It is about validating the market moves we already have and thus facilitating the transmission of monetary policy to the real economy.

Remember that there was exactly the same hand-wringing over the potential for lower yields three months ago, six months ago and even a year ago, yet bund yields have kept falling. Importantly, it is not Germany that needs this extra stimulus particularly. Of course, the Eurozone as a whole needs inflation closer to the “just below 2% target”, which will require higher German inflation. But it is the erstwhile crisis countries that could benefit most from stimulus with still-very-high unemployment. And those countries have higher yields. Italy’s 10-year yield is 1.7%, down from 4% at the turn of 2014.

One of the fairer academic criticisms of asset purchases is that swapping cash for near cash instruments should not change very much, a criticism that becomes more powerful the lower yields are. That being said, as Ben Bernanke put it, “The problem with QE is it works in practice, but it doesn’t work in theory”. QE in the UK and the US has worked. Financial markets are not as perfect as the theory assumes. And what central banks can do with QE is convince the public that they will do whatever it takes to ensure the economy does not wither and inflation returns to the safe low positive values they target.

In fact, trying to judge QE’s effect only by plotting observed moves in any financial market price during previous QE episodes would be a big mistake because it ignores the all-important counterfactual: what would have happened had there been no QE? Indeed, if QE is successful, it may well have the counterintuitive effect of raising bond yields and the exchange rate, as markets price in a better economic future.

Finally before we turn to examining the evidence for the channels through which QE might work, we want to point out that bracketing QE as the start of a currency war is wrong. If QE does work mainly through confidence, which we expect, the resulting stimulus to Eurozone domestic spending will ultimately benefit the world. That stronger demand would mean the world had to contend with a low Euro for less time rather than more as a result of QE. The more successful Draghi is, the quicker the ECB can return to more normal monetary policy. The BoE and the Fed have stopped QE because it boosted demand and was keeping inflation positive. Those German savers complaining about low interest rates should celebrate QE, which should speed up the return of normality. The real disaster for German savers would come from a protracted economic stagnation.

**But the QE impact could be smaller in the Eurozone**

While we believe QE will have a positive impact on Eurozone growth, that does not mean it will have the same impact as elsewhere. That QE does not seem to boost bank lending much and the Eurozone is relatively bank-based could dent the impact of ECB sovereign bond purchases relative to elsewhere. Fixing any bank capital needs is likely to be more important for lending than QE. Of course, the lack of a bank lending boost would not dent the other ways in which QE could stimulate the economy. Part of the attractiveness of QE is that it goes around the banking system. Still, the impact should be more potent in the US where firms rely on banks less for funding.

There are also good reasons to try buying private sector assets too, which could help
stimulate new markets and give more bang for the ECB’s buck. That is why the ECB also buys ABS, covered bonds and, soon probably, corporate bonds. That is not something the BoE tried on any scale, which may have limited the boost in the UK.

The political constraints facing the ECB are much bigger than those elsewhere. Distrust of the tool in core-Europe could also blunt its effect. If a confidence boost is where QE can help, then the public needs to believe that the tool will work. Less than whole-hearted agreement at the ECB could undermine that to a degree.

That being said, QE should still have a positive effect. The ECB is very likely to miss its target of below but, close to, 2% by a wide margin. And it has tried a whole variety of other tools. It should use this one.

How does QE work?¹

Determining the effect of QE can be tricky, given the counterfactual problem. The US, Japan and the UK have engaged in quantitative easing, while countries around the world have engaged in differing amounts of austerity at different times. QE has also not been the only aggressive crisis response adopted in the US and UK. Various schemes to help banks, force them to hold more capital, and improve lending have also been tried at various times. The Euro-crisis also makes comparisons between QE and non-QE countries difficult. Still, the data do tell a story. We focus on the UK/Euro-area comparison, as that is where we know most. But at times we will refer to the US evidence too.

There are seven potential channels through which QE can work: confidence; liquidity; yields; the exchange rate; asset prices; portfolio rebalancing; bank lending. Liquidity is irrelevant now, as there is already plenty of it sloshing about. Ultimately, we need a more sophisticated empirical exercise as well as just charting to reach a conclusion. Fortunately, researchers have already published plenty of those exercises, which conclude that QE depresses yields, raises asset prices and boosts confidence resulting in stronger growth and higher inflation than would have been the case without it.

Confidence

Confidence is everything in the economy. In its absence, like after Lehman’s bankruptcy, economies contract rapidly almost regardless of what the central bank does. Central banks can feed that lack of confidence, if they seem unwilling or unable to do what is required. Returning confidence can be powerful.

Chart 2 shows Euro-area and UK economic confidence, from the European Commission, with BoE QE increases highlighted. The first bouts of UK QE did not seem to have an enormous effect, with UK confidence rising in line with the Eurozone. The US was also, at the time, busily firing a bazooka that made the UK’s efforts look like pea shooter.

The second bout of QE may have been more important, with UK confidence rising well above the Eurozone. The euro-crisis aftermath casts a shadow here, though, as does pausing UK fiscal austerity and a sharp fall in British inflation from an import price and VAT hike-induced late 2011 peak over 5%. Still, one could make the case that the Euro-crisis would not have been as vicious if the ECB had already engaged in QE (or had OMT in place) at that stage. Equivalently, one could say the UK would have been more badly affect by that crisis had the BoE not been buying bonds. Chart 3 makes the comparison clearer by plotting UK QE and the difference between UK and German economic confidence. There is at least circumstantial evidence that QE helped.

Yields

It bears repeating that analysing the government bond reaction to QE suffers from the counterfactual problem. Yields will respond in anticipation of any central bank announcement and then on whether the announcement was a positive or negative surprise. Moreover, while QE should, in principle, cut yields it should also, over time, boost growth and inflation expectations, meaning that it should ultimately speed the return to more normal monetary policy settings.

The impact of QE1 is hard to discern from relative bond yields (Chart 4), though both US and UK yields fell relative to Bunds from spring 2010, with the Fed busy finishing Q1 and starting on QE2. Interestingly, Treasury and Gilt yields rose relative to bunds from a trough in early 2012, despite UK and US bond buying as, increasingly, continued weakness in the Eurozone economy contrasted with relative strength in the Anglo-Saxon countries. US and UK yields may well have been lower now if the Fed and BoE had not done QE because growth would have been weaker and inflation lower. Aggressive monetary policy today can speed the return to more normal policy tomorrow. Yesterday, 10-year Treasury yields were 130bp above bund yields after being in rough parity at the start of 2012, just after Ben Bernanke launched QE3.

A better way of getting at the QE effect is to add up the shifts in bond yields around QE announcements, which should isolate the effect of the announcement from any subsequent news. For the UK, Joyce et al (2011) calculate that gilt yields fell a total of almost 100bp within a two-day window of the UK QE announcements during 2009 and early 2010. QE over that period totalled £200bn, equivalent to a bit more than €1trn of Eurozone QE. US evidence broadly matches the size of that effect (e.g. Kohn, 2009). Perhaps the most convincing evidence comes from Joyce et al’s (2011) chart plotting the size of surprise, relative to economists’ expectations, in BoE QE announcements with the two-day change in gilt yields (Chart 6). It speaks for itself.

Spreads between safe UK government bonds and riskier corporates fell over the year following the start of QE while equity and corporate bond issuance rose, possibly reflecting the Fed and BoE displacing investors from gilts. That ‘portfolio rebalancing’ effect is another relatively hidden, but possibly important, channel from QE. Joyce et al (2014) find evidence that QE caused institutional investors to switch some funds from gilts to corporate bonds. That shift did not seem to extend into equities though.

Chart 4: QE cut UK and US bond yields initially

Chart 5: QE helped UK and US recover faster

Source: Bloomberg.
Exchange rate

Sterling fell 4% across the 2009 and early 2010 announcements, and expected QE is one reason why the Euro has depreciated recently. That being said, both sterling and the dollar have risen relative to the Euro since 2009, and over the whole first QE period in the UK sterling actually appreciated 1% in trade weighted terms. The evidence presented here at least does not suggest the euro will depreciate dramatically further if the ECB does announce QE.

Equity and other asset prices

Though central bank largesse is widely credited with supporting equity prices since the financial crisis, the FTSE fell 3% over the six announcements during the UK’s first QE episode, although since January 2009, the FTSE 100 has risen nearly 60%, the S&P 500 has doubled and the Stoxx 600 is up about 80%. With many of the companies selling products internationally, what probably mattered most was that the world economy bottomed in 2009.

Bank lending

Despite QE, banks have been reluctant to lend more in the UK. Formal evidence (eg Butt et al, 2014) finds no evidence that QE boosted bank lending, though that may miss some difficult-to-isolate but potential important channels. This could be important for the euro-area, where bank lending is more important than in the US.

Again, and at the risk of sounding like a broken record, the counterfactual is important and difficult to isolate. To the extent that QE created a more favourable macroeconomic environment, and made it easier to issue equity and debt, it may have meant fewer banking sector problems than there otherwise would have been.

Inflation expectations

Missing its target by a wide margin means the ECB is raising tail risks. The tail risk is not that low inflation means economic stagnation is inevitable. Consumers are most unlikely to delay buying a television because it cost them less to fill up the car with petrol. Indeed, in the first instance, low inflation is a boon for consumers, leaving more discretionary income available for them to spend elsewhere. And countries have in the past grown strongly, even with low inflation (eg Switzerland). The tail risk is rather that if low inflation gets locked into the system while the central bank’s interest rate is already at its effective floor, then rate setters would find it harder to stimulate the economy if another nasty shock hits. If QE boosts inflation expectations, it can help cut a tail risk.

Financial markets expectations for inflation over the next five years have dropped sharply in the Eurozone. For the UK, inflation break-evens are faring better (Chart 8). Importantly, inflation expectations rebounded strongly in the UK after the drop in 2009, probably in part as a result of QE though obviously the rebound in actual inflation helped too.
Chart 8: Diverging inflation expectations

UK generic 5-year break-even. Source: Bloomberg.

Cutting through all the counterfactual problems

Though the evidence above suggests that QE had a noticeable positive effect on the US and UK, we can never know for sure what would have happened in the absence of one action or another. Joyce et al (2011) is by no means the last word, or the only word, on the more sophisticated tests of QE’s effect, but it is relatively representative. They present a range of models intended to isolate QE’s effect from all the other factors at play, and estimate that the first £200bn of UK QE boosted UK GDP by 1.5-2% and inflation by 0.75-1.5%. Reportedly, internal ECB estimates last year estimated that €1trn of QE would boost GDP by between 0.2% and 0.8%. However, Altavilla et al (2014), in an ECB working paper published last August, implied larger multipliers. They calculated that Draghi’s OMT announcement, by cutting 2-year Italian and Spanish government bond yields by 200bp (€1trn might cut bond yields by 100bp), boosted GDP by 1.5% and 2.0% in those countries, respectively. Still, all those estimates point to meaningful positive effects on the Eurozone economy from QE.

What would a good QE package look like?

Having trotted through the evidence, what conclusion would we draw for the ECB and markets. First, QE works. Second, a good package from the ECB would have the following features: surprisingly big; strongly supported among the ECB governing council (so that the ECB appears committed to its inflation target); acknowledging that any package could be ramped up if needed; purchases focused away from very-short-duration bonds and spread across the whole of the Eurozone, not just the triple-A rated countries.

QE may have more effect the less focused it is on government bond markets. Buying those bonds would allow the ECB to get serious scale in its purchases. But because those markets are huge and liquid, the ECB might get less bank for its buck than in smaller markets. While there is great glamour for sovereign bond purchases, it is worth remembering that Adam Posen (see Posen, 2012), argued that the BoE should be buying more private assets during its QE efforts. Of course, that followed huge sovereign bond purchases in the UK, so the situation was different. But that is nevertheless a reminder that buying sovereign bonds is not the only, or maybe even the best, way to do QE, which is why the ECB also buys ABS, covered bonds and soon probably corporate bonds.

As sovereign QE now seems partly priced in now anyway, some people may judge the policy to be dead on arrival when Eurozone government bond yields probably do not fall much on the official ECB announcement we expect (that is unless the ECB exceeds market expectations for the size of the programme, which might be tricky given internal resistance). That would be to completely miss the point. The ECB now has to validate market pricing, and, if it does so, QE could subsequently boost the economy.

There are good reasons why QE could be less potent in the Eurozone, making it a last resort. The relatively bank-based system and political differences from the US and UK, and relatively lower level of yields to start are high among these. But logic and evidence show that, if designed sensibly and delivered with commitment, QE should work. The ECB is undershooting its inflation target by a wide margin, there is no risk at all of inflation getting out of control, and the ECB has a tool at its disposal to try and fix the problem. It should use it.
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