



CPB Netherlands Bureau for Economic  
Policy Analysis

# Policy increases growth | *Return to normal not plain sailing*



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## Back to normal monetary policy

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## Summary

The question is no longer if, but when and how unconventional monetary policy will be phased out. The undoing of the unconventional policies will affect European economies, just as their build up stimulated the euro area economy. Empirical evidence shows that the unconventional monetary policy of the ECB in recent years has led to lower interest rates on long-term government bonds and higher equity prices in the euro area. There is also some evidence for positive effects on GDP and, to a lesser extent, on inflation. Unwinding these policies will probably lead to higher interest rates and lower growth and inflation. These effects will be greatest in countries with healthy banks, the countries that have also benefited most from the build-up.

The Netherlands has a good starting position for the removal of unconventional ECB policies. Dutch government finances are good and the banking system is healthy again. For pension funds and insurers, a higher interest rate will be beneficial anyway. For households and companies with high debts however, higher interest rates may be detrimental.

Strengthening the economy and improving public finances will help governments to cope with the phasing-out of unconventional monetary policy and be well prepared for potential new economic shocks. This applies especially to those countries that are relatively less well-prepared today. For these countries, there is a trade-off between prudent fiscal policy creating space to offset future economic set-backs and the effects on short-term economic growth. By strengthening the financial sector, these countries can still benefit from the loose monetary policy in the short term and, in the long run, will be better able to absorb economic shocks.

Even so, more risk sharing in EMU may be necessary to survive as a currency union. The euro crisis might start up again or the sustainability of government debt may again be doubted. Having said that, the chance of a new euro crisis has been diminished by improvements to the institutional design of Economic and Monetary Union that pressure from the financial crisis forced. For example, important steps have been taken in the formation of a banking union. However, more risk sharing could be achieved and one option would be through a higher EU budget, with more being paid for at the European level. Unfortunately, more risk sharing is not without problems: it can make it attractive for countries to take greater risks and it requires social and political support that may not exist.

# 1 Introduction

In recent years, the ECB has undertaken unconventional monetary policy on a large scale. The financial crisis caused a deep recession and inflation fell below target (and was even negative at times). Core inflation, which is often more informative of longer-term inflation developments has been stuck at around 1% per year. In response the policy rate was lowered rapidly towards zero. After running out of room to lower rates much further, the ECB introduced unconventional monetary policy, which operates through the central bank's balance sheet.<sup>1</sup> In the spring of 2017, the size of the balance sheet of the Eurosystem rose to nearly 40% of euro area GDP. The composition of the balance sheet has also changed considerably since the financial crisis.

Unconventional monetary policy had several goals. After the outbreak of the financial crisis the financial sector had an urgent need for liquidity. The ECB has made multiple LTRO programmes available for this purpose (see text box for explanatory notes to the various ECB programmes). OMT was announced in 2012 to prevent speculation concerning the continued existence of the euro and has become famous through ECB President Draghi's statement that he would do "whatever it takes" to save the euro. In the years that followed, core inflation remained low, but the conventional interest rate instrument could not be used to respond sufficiently. Bond purchase programmes had to help bring inflation back to the target of close to but just below 2% per year.

Partly under the influence of the loose monetary policy, by 2017 the euro area found itself in calmer waters. Economic growth is stable, inflation has risen (although core inflation is still only about 1% per year) and the spread of interest rates on government bonds of euro area countries is low. An important question is what the contribution ECB policy to this economic recovery has been.

Now is also time to think about tightening monetary policy and the consequences of doing so for the European economy and national governments. At some point, the ECB will want to shorten its balance sheet again and this policy brief asks when this will likely start and what economic effects can be expected? Will the effects differ per country and what are the risks for the monetary union? And what can national policy makers do to prepare for the unwinding of unconventional monetary policy?

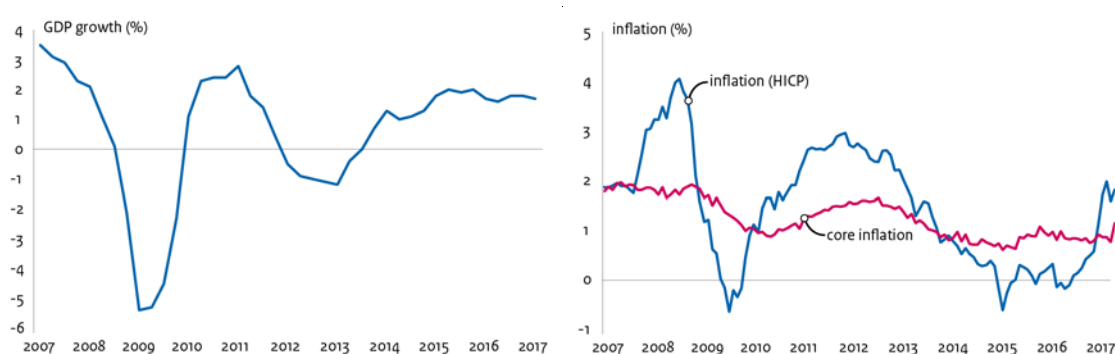
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<sup>1</sup> Another form of unconventional monetary policy is forward guidance: statements from the central bank on the expected development of the policy rate.

## 2 The effects of unconventional monetary policy on the European economy

The financial crisis and its aftermath have had major and long-term effects on economic growth and inflation in Europe (see Figure 2.1). In 2009, gross domestic product (GDP) fell by around 5%. Thereafter, the government finances of many countries worsened and government debt rose. In the years that followed the euro crisis emerged as market participants questioned the sustainability of government debt levels in some countries. At the same time, several euro area countries tried to reduce their budget deficits, which further slowed economic growth. 2012 and 2013 saw another recession in the euro area then, from 2014, economic growth recovered but core inflation fell to about 1% per year.

**Figure 2.1 Gross domestic product and inflation in the euro area, 2007-2017**



Source: Eurostat, ECB

The policy response to the crisis forced the ECB's monetary policy to play the leading role in stabilising the economy. By institutional design the euro area is a monetary union and not a full fiscal union. Therefore, a long-term fiscal impetus at the aggregate level to combat the crisis proved unfeasible. Addressing the issues with European banks at the European level suffered from this problem too.<sup>2</sup>

The ECB has used both conventional and unconventional policies in recent years (see Figure 2.2). From 2008, the financial sector had an urgent need for liquidity and the ECB has extended and enlarged several LTRO programmes in an attempt to provide it. In order to support the economy and maintain inflation after the financial crisis, the ECB's main instrument was initially used: the main refinancing rate. This was reduced to 1% in spring 2009, was increased slightly in 2011 before being lowered close to zero by the end of 2013. Thereafter there was little room for lowering this interest rate any further.

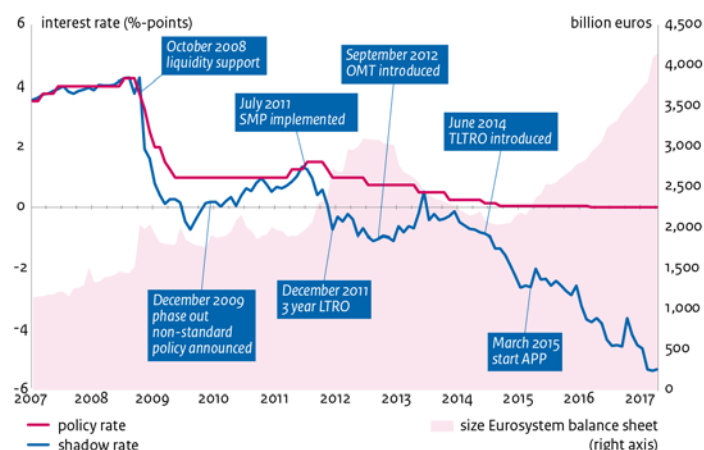
In the summer of 2012, ECB President Draghi promised to do everything within the ECB's mandate to save the euro ("whatever it takes"). That marked the introduction of the OMT programme to prevent speculation that some countries would be forced to leave the euro.

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<sup>2</sup> Recapitalisation of banks by national governments has been complicated by EU rules against state aid.

From 2015, the ECB began with quantitative easing (more formally known as the asset purchase programme or APP): the purchase of (long-term) government bonds, and eventually corporate bonds, to bring inflation back to the target of close to but just below 2% per year. The Eurosystem's balance sheet expanded from just over €1000 billion on the eve of the crisis to more than €4000 billion in spring 2017. This is equivalent to almost 40% of euro area GDP.

**Figure 2.2 Indicators of ECB policy**



Source: ECB, Wu and Xia (2016)

The ECB's policy has increased the size of its balance sheet and reduced policy interest rates, see Figure 2.2. The figure also shows some important unconventional monetary policy announcements. The policy rate fell sharply in 2008 and 2009 and then was gradually reduced further towards zero. At the same time, the ECB's balance sheet has increased in size, initially through liquidity support to banks and then through the various asset purchasing programmes. Also shown in the figure is an indicator of monetary policy called the shadow rate, which shows what the policy rate would have been if there was no lower bound. The estimated shadow rate is based on prices in the financial markets, which immediately adjust to new information (Wu and Xia, 2016). In normal times the shadow rate is very close to the policy rate, but unconventional monetary policy drives the shadow rate down relative to the policy rate. Figure 2.2 shows that the shadow interest rate for the euro area has fallen sharply since the start of the purchasing programmes and is now around five percentage points below the policy rate.

### **Unconventional monetary policy reaches the real economy through the banking system**

The direct effects of the ECB's unconventional policy tools mainly impact commercial banks. The refinancing programmes (LTRO and TLTRO, see text box) are loans to banks against all types of collateral, with the aim of improving banks' liquidity position and increasing bank lending. In the asset purchase programme (APP), the Eurosystem buys about €60 billion of bonds each month. The bonds are mainly government bonds but some corporate bonds are bought too. The higher demand for bonds increases their price, thus improving banks' balance sheets. It also provides more liquidity in the banking system and increases the incentive for banks to lend, especially when they make a negative return on deposits with the



Eurosystem. The purchase of bonds also removes risks from banks' balance sheets (and also from any other sellers).

### **The ECB's unconventional monetary policy programmes**

The ECB has implemented a number of unconventional monetary policy programmes; the most important are detailed below.

From 2009 the duration of LTROs (longer-term refinancing operations) have been extended and the allocation has been on a full allotment basis. Under these programmes commercial banks could obtain liquidity for longer periods of time by posting collateral with the ECB. The periods varied across the LTROs: the first were for three months to one year, whilst the last programme (December 2011) was for three years. Providing this liquidity expanded the ECB's balance sheet.

In 2010 the ECB stated the SMP (securities market programme). In this programme bonds of selected countries or private parties were bought in market segments under extreme stress, which had a detrimental effect on the efficacy of monetary policy. The purchases were sterilised so that the SMP didn't affect the size of the ECB's balance sheet.

In August 2012 the ECB announced the OMT (outright monetary transactions) programme. Countries that are under an EFSF or ESM support programme and meet the necessary criteria, the ECB will buy (in principle an unlimited amount) those countries' bonds whenever the market interest rate is too high. Any purchases under the OMT programme will be sterilised. Until now, the OMT programme has not been used. The OMT programme is aimed at removing the redenomination risks that reduce the effectiveness of the monetary transmission mechanism (exchange rate risk of government bonds were to be converted to another currency should a country leave the euro area).

In 2014 the TLTRO (targeted LTRO) programme was started. Just like the similarly named LTROs, the TLTRO programme is aimed at providing liquidity to banks. The programme is targeted because the amount that banks can borrow is related to how much credit banks extend to firms and households. The TLTROs also increase the size of the ECB's balance sheet.

In the APP (asset purchase programme) the Eurosystem buys various financial assets in order to increase inflation back towards the target. The most well-known element is the PSPP (public sector purchase programme) in which government debt is bought (also called quantitative easing). Bonds of a given country are held on the balance sheet of that country's central bank. The ECB buys bonds issued by European institutions. Up to and including spring 2017, about €1500 billion of bonds had been bought. Another significant component of the APP is the CSPP (corporate sector purchase programme) in which the ECB buys corporate debt. Not all corporate bonds are eligible: they must be rated BBB- or better, and cannot have been issued by a financial institution. In spring 2017, about €85 billion of corporate bonds had been bought.

The Eurosystem consists of the European Central Bank (ECB) and the national central banks of the member countries of the euro area. Policy is decided upon by the governing council of the ECB. The execution of policy and, more importantly, the risks associated with that policy are not always born by the ECB. Quantitative easing is the most important example of this: De Nederlandsche Bank buys Dutch government bonds and holds these on its own balance sheet. DNB and the Dutch government are therefore not directly exposed to the risks associated with the government bonds that the other national central banks buy. DNB is, however, a shareholder of the ECB and therefore shares the risks that the ECB holds on its balance sheet.

Unconventional policies can reach the real economy through a number of channels, of which we will mention the most important here.<sup>3</sup> The first is that QE is a signal that policy rates will remain low for an extended period of time and thus has a negative effect on long-term rates (signaling channel). The purchase programme drives up the bond prices, thus increasing the value of banks' existing portfolios. The purchase programme also lowers the required return

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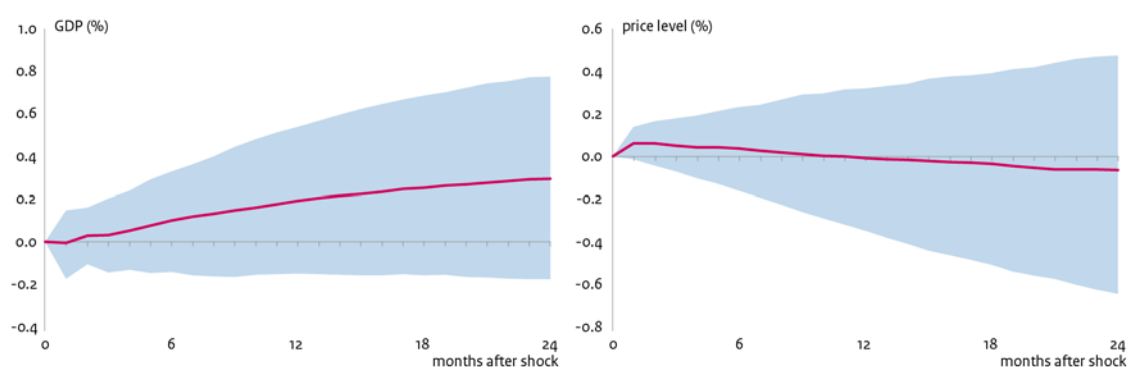
<sup>3</sup> See Andrade et al. (2016) for a review of the different transmission channels of quantitative easing.

on long-term bonds (portfolio rebalancing channel). Via a reduction of capital costs these two channels stimulate economic activity through additional lending, which leads to higher investment and consumption. The lower interest rate also reduces interest costs for governments and the resulting budgetary savings can be used for other expenses. Another channel is through a lower exchange rate: the cheaper euro increases exports to non-euro area countries. Finally, the purchases may affect the confidence and expectations of firms and consumers (confidence channel). Whilst these channels are theoretically important, it is less clear which channel has had the greatest impact in practice.

### Unconventional monetary policy has raised European economic growth

According to our analyses, unconventional policy may have increased euro area economic growth, but has probably not raised inflation. Figure 2.3 shows the effects on GDP and the price level of a temporary monetary expansion that reduces the shadow rate by 100 basis points. Production is about 0.3% higher after two years, whilst the effect on prices is negligible with only a slight initial increase followed by a very slight decline in inflation. An unexpected decline in the shadow rate by 300 basis points (the decrease since the announcement of quantitative easing, see Figure 2.2), has an effect on GDP of about 1%.

**Figure 2.3 Cumulative effects on GDP and the price level after a reduction of the shadow rate by 100 basis points**



Source: Elbourne, Ji and Duijndam (2017). The red line is the median estimate and the blue area indicates the 16th and 84th percentile, as is usual in this literature.

These effects on growth and inflation follow from an empirical analysis with a structural VAR model for the euro area. This model contains the shadow rate as an indicator of monetary policy and estimates the effects of the shadow rate on production, inflation, an interest rate spread, financial system stress and equity prices. Identification of unconventional monetary policy is based on unexpected changes in the shadow rate. The model is estimated with monthly data for the period 2009-2016.

Other studies confirm the view that unconventional monetary policy in the euro area has had a positive impact on output (Table 2.1). They also find effects on inflation, although those are smaller than the effects on output. In reality, the actual balance sheet expansion of the ECB has been significantly larger than the simulated impulses used in these studies. Furthermore, there are major differences between the estimated effects in the studies: a 1% larger Eurosystem balance sheet (about €20 billion) yields 0.02% to 0.15% more GDP (€2 billion to



€16 billion). Since the outbreak of the crisis, the size of the ECB's balance sheet has tripled. However, it is difficult to calculate an overall effect of the entire programmes because the identified shocks used in these studies are temporary and unexpected, and the shocks also overlap each other.

Studies that attempt to estimate the overall impact of unconventional policy find significant effects. The ECB estimates that the overall impact of their unconventional policies on GDP up to 2018 will total 1.5%. Furthermore, their estimates suggest that inflation was increased by half a percentage point in both 2016 and 2017 and prevented inflation becoming negative in 2015 (ECB, 2016). Andrade et al. (2016) use a DSGE model and find that the purchasing programme has increased inflation by 0.4 percentage points and GDP by 1.1%. Boeckx et al. (2017) believe that the three-year LTRO programmes have boosted GDP in the euro area by 1.2% and inflation by 1.3% in 2012. Although these estimates suggest that unconventional monetary policy has been successful in raising GDP, coordinated fiscal policy could have done so more directly.

**Table 2.1 Effects of temporary shocks on European output and inflation**

Paper	Period	Temporary shock	Effects	Comments
Gambacorta et al. (2014)	2008-2011	3% larger ECB balance	Production: 0.06% – 0.15% Prices: 0.06% – 0.11%	Euro part of panel of countries
Boeckx et al. (2017)	2007-2014	1.5% increase in ECB assets	Production and prices: 0.1%	
Burriel and Galesi (2016)	2007-2015	1% increase in ECB assets	Production 0.1% and prices 0.05%	Global VAR, multiple countries
Haldane et al. (2016)	2009-2015	1% increase in ECB assets	No significant effects, often with unexpected sign	Four different models
Wieladek and Garcia Pascual (2016)	2012-2016	1% increase in ECB assets	Production: 0.07% – 0.15% Prices: 0.05% – 0.1%	Like Haldane but different period
Damjanovic and Masten (2016)	1996-2013	100 bp drop in shadow rate	Production: 0.7% Prices: 0.2%	Crisis wasn't a structural break

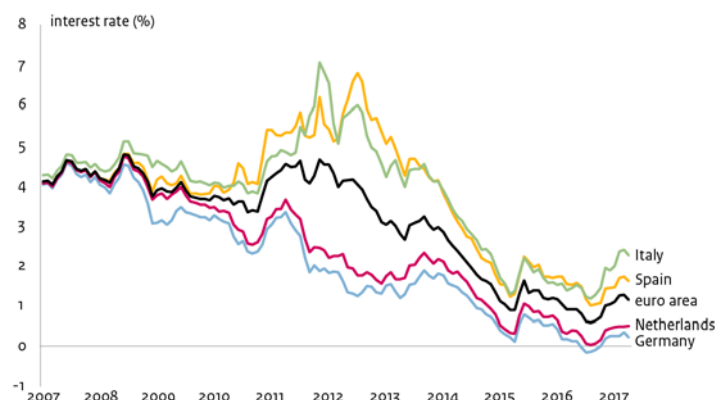
The effect of the “whatever it takes” announcement is much more difficult to quantify than the effects of temporary shocks. However, there is a broad consensus that this declaration has influenced expectations and had a major impact and possibly prevented further escalation of the euro crisis and a deflationary spiral. Altavilla et al. (2016) show that OMT's announcement lowered the interest rate on Italian and Spanish 2-year government bonds by 2%.

### **Unconventional monetary policy has lowered long-term interest rates**

In addition to the effects on inflation and growth, unconventional monetary policy also has direct effects on financial markets. Empirical studies for the euro area show that the purchasing programme has, by influencing risk premiums and expectations about future interest rates, led to lower interest rates and higher equity prices (Borio and Zabai, 2016). The biggest effect is seen when new policies are announced. Andrade et al. (2016) summarised 24 studies that estimate the effect of the announcement of new quantitative easing: for a 10% rise in the central bank's balance sheet, the median effect is to lower long-

term interest rates by 53 basis points. For the euro area, they find 43 basis points, with a range from 27 to 64 basis points.

**Figure 2.4 Long-term interest rates on government bonds**



Source: ECB

Having said this, monetary policy only explains a part of the observed interest rate declines. Interest rates on government bonds have fallen since 2012 and differences between countries have decreased (see figure 2.4). In particular, the long-term government bond rates of Italy and Spain are significantly lower than in 2012. The 20% of GDP asset purchase programme in the euro area accounts for about 1 percentage point of the interest rate decline. The rest of the decline in interest rates has other causes, which could be structural in nature and broader confidence effects of unconventional monetary policy. <sup>4</sup>

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<sup>4</sup> See Ciocytte et al. (2016) and CPB (2017b).

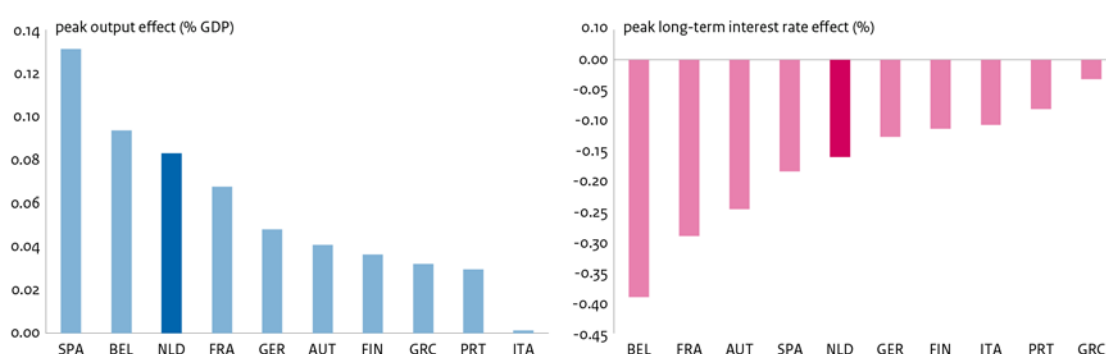
### 3 Banks are important for the transmission of ECB policies

#### Effects on GDP and government interest rates in European countries

The ECB targets policy at the euro area as a whole, not on specific countries. However, the results of policy may vary by country if the transmission channels in one country are stronger than in others. Figure 3.1 shows the maximum effect per country on gross domestic product (GDP) and the interest rate on 10-year government bonds in response to a reduction of the shadow rate by 100 basis points. This follows from an empirical analysis that estimates the effect of an unexpected change in the shadow rate (the identified shocks from the model in section 2) on GDP, prices and long-term interest rates in each Member State.

The effects on GDP are largest in Spain and relatively small for Portugal, Italy and Greece. The biggest effects on government interest rates are in Belgium, France and Austria: countries with relatively high government debt not participating in an ESFS or ESM programme. Greece and Portugal have the smallest responses.<sup>5</sup> This suggests that their rates are mainly influenced by the programmes under which they fall.

**Figure 3.1 Peak response of GDP (left) and long-term government bond yields (right) to a temporary 100 basis points decline in the shadow rate**



Source: Elbourne et al. (2017)

Countries with a healthier banking system seem to benefit more from unconventional monetary policy. This follows from comparing the peak responses with an indicator of the health of banks<sup>6</sup> (see Figure 3.2). In countries with high government debt, which is mainly owned by local banks, and in countries with weak banks, a monetary impulse leads to a relatively small GDP response. In normal times, banks pass financial market developments on to firms and households through the interest rate on credit. In the exceptional recent times this transmission channel works less well, especially for banks with weak finances. Other studies confirm that countries with healthy banks (high capital ratios) have

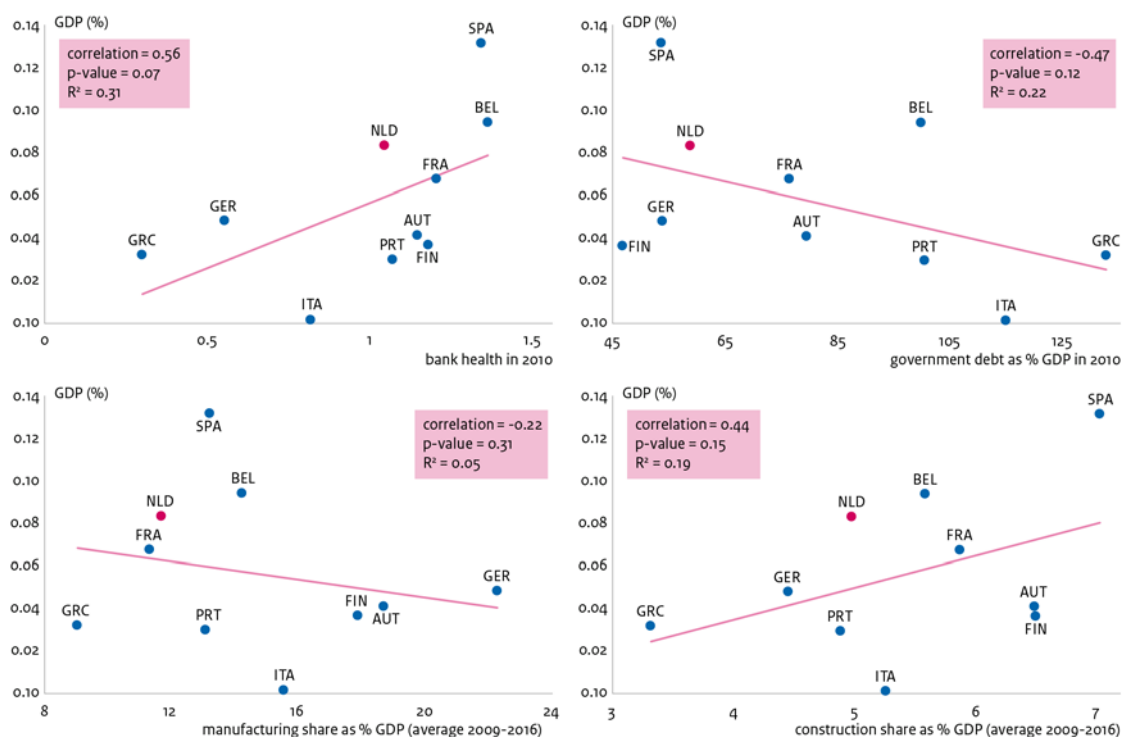
<sup>5</sup> Ireland is not shown because their results were not robust to simple specification changes.

<sup>6</sup> We have constructed an indicator of the health of banks in a country, which is the average of the share of problem loans, return on assets and return on equity.

experienced higher GDP effects of unconventional monetary policy than countries with weak banks (Boeckx et al., 2017, Burriel and Galesi, 2016 and Wieladek and Garcia Pascual, 2016).

Our results also suggest that there is a link between the importance of the construction sector and the GDP effects of unconventional monetary policy. This may be due to the size of banks' mortgage portfolios (see also Wieladek and Garcia Pascual, 2016). We do not find any connection between the output effects and the manufacturing share. That's a good signal that the transmission channel of unconventional policy is different because manufacturing is capital intensive and relies heavily on external financing – therefore, according to Georgiades (2015), the share of manufacturing in GDP is a good indicator of the strength of the standard interest rate channel.

**Figure 3.2 Correlation between GDP and economic variables**



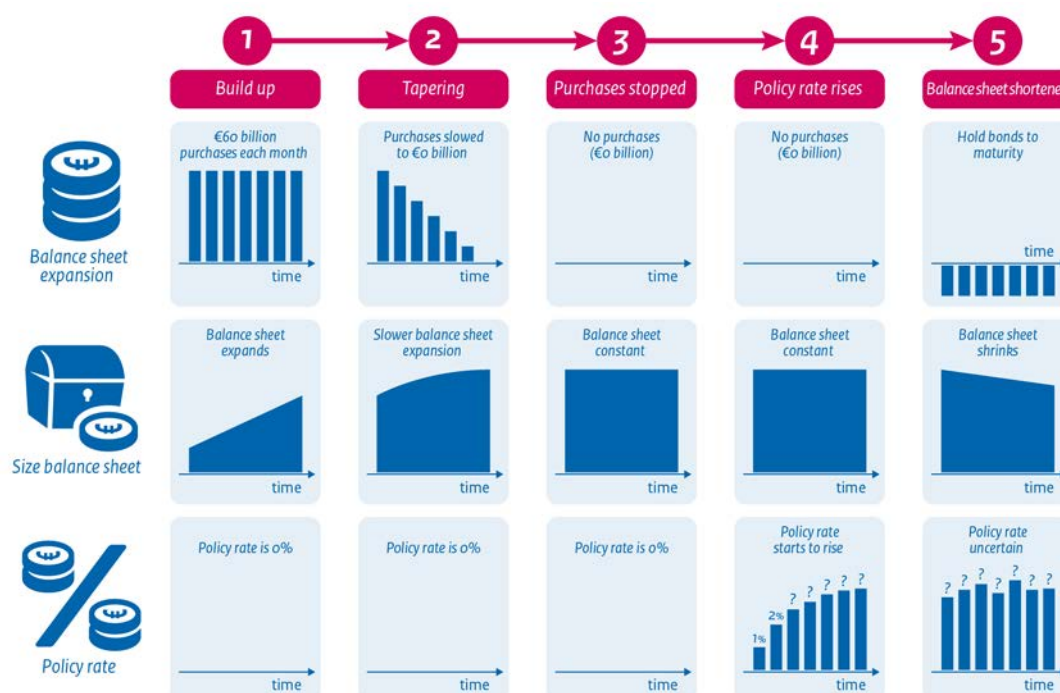
Source: Elbourne et al. (2017). Banking health is an indicator based on non-performing loans, return on assets and return on equity.

## 4 Back to normal monetary policy

### A possible withdrawal scenario

At some point, the ECB will want to shorten its balance sheet again, which will create more room for manoeuvre should any new adverse shocks occur.<sup>7</sup> As a result of current policy, there is a lot of liquidity in the financial system; too much for normal times. It is expected to take many years to phase out the ECB's unconventional monetary policy and the purchased bonds will remain on the ECB's balance sheet for several years. Exactly how and when the central bank will return to normal monetary policy is unknown. Below we outline a possible scenario, shown schematically in Figure 4.1.<sup>8</sup>

Figure 4.1 Schematic overview of different phases of quantitative easing



Sometime in the near future, the ECB will announce it is slowing or stopping the net purchase of assets. The current program runs until the end of 2017 (with monthly purchases worth €60 billion, where they were previously €80 billion), but can be extended or increased should inflation not reach the desired path. If inflation develops favourably, purchases can be slowed in 2018 (tapering) or completely stopped. Once net purchases have stopped, bonds that reach the end of their maturity will still be replaced. As a result, the size of the portfolio remains constant. The US Federal Reserve (Fed) stopped net purchases in October 2014, but has not yet begun to reduce its portfolio.

<sup>7</sup> The desirable size of the balance sheet is disputable. Greenwood et al. (2016) argue that a large central bank balance sheet may increase financial stability.

<sup>8</sup> This scenario is based on the ECB's previous communication of the ECB, [formal guidance](#) from the Fed and an estimate of the IMF (2013).

The ECB has already announced that policy rates will remain low until after the end of net bond purchases. How long it will take to raise policy rates is disputed and will depend on inflation.<sup>9</sup> If the ECB follows the Fed's example, the shortening of the Eurosystem's balance sheet will only start when the policy rate has risen. The US central bank has signalled that it will start shortening its balance sheet only when policy rates have been roughly normalised. In this scenario, the ECB holds the bonds until maturity, as has already done when ending previous purchase programmes (for example, SMP).<sup>10</sup> Doing so ensures policy predictability, which limits uncertainty for financial markets. The disadvantage is that the development of the bond portfolio will then be determined by the accidental pattern of remaining maturities and not by economic circumstances. The average remaining maturity of government bonds held by the ECB is currently about eight years. In comparison to the asset purchase programme, other components of unconventional monetary policy are easier to stop. The refinancing operations (LTRO) have a fixed term of up to three years and the TLTROs four. As such, these programmes have a built-in end.

The ECB's communication is listened to closely. Even in normal times, financial markets closely track signals about interest rate changes. Today, with exceptionally low policy rates and a very large bond portfolio, scrutiny of monetary policy is intense. Appointments of members of the Board of Directors may lead to movements of interest rates and exchange rates. The exit strategy of the European Central Bank has not yet been made as explicit as that of the Fed, which gives the ECB more flexibility, but also increases uncertainty in the financial markets. Greater transparency could remove uncertainty, but also reduces room to respond adequately to new economic developments.

#### **Effects during the withdrawal may be different from during the build-up**

The effectiveness of monetary policy can depend on the state of the economy and financial stress. Empirical studies find that the effects of monetary policy are smaller during recessions, but greater when there is stress in the financial system (reduced liquidity and increased interest rates).<sup>11</sup> The introduction of unconventional monetary policy occurred when there was both a recession and financial stress. Short-term interest rates were low and there were concerns about deflation, growth and the health of European banks.

The shortening of the ECB's balance sheet is likely to start in more favourable economic and financial circumstances than at their introduction. Furthermore, it will not start until inflation meets the ECB target again. Currently the Dutch banking sector is better capitalised than a few years ago, but many European banks, especially in Southern Europe, still have many problem loans on their balance sheets (CPB, 2017b).

The circumstances are thus different, but just like the build-up phase, the state of the economy and financial stress push the effectiveness of monetary policy in opposite directions. In favourable business cycle periods a given monetary tightening has larger

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<sup>9</sup> There seems to be a discussion in the governing council whether the ECB should increase the deposit rate first. The deposit rate is now -0.4%, so banks have to pay for excess reserves.

<sup>10</sup> It is also possible that the reduction of the balance sheet of the Eurosystem be made conditional on economic conditions. That is less transparent but gives flexibility.

<sup>11</sup> See e.g. Balke (2000), Fry-McKibbin and Zheng (2016) and Tenreyro and Thwaites (2016).



effects. In contrast, the European financial system is under less stress, which should lead to smaller effects. As such, we see no convincing reasons why the effects in the phasing out phase will be different from during their introduction.

Market expectations may make the phase-out differ from the build-up phase. However, it is difficult to say whether and how the role of expectations will differ between the two phases. Some elements of unconventional monetary policy came as a surprise (for example, the size of the purchasing programme and the OMT) and the programme was also adjusted several times. The announcement of the precise timing of the withdrawal phase will also contain surprises for the markets. After all, the normalisation of the bond portfolio will take years to complete, which makes it impossible to say how the business cycle and the financial situation will develop exactly over this time frame. Moreover, due to economic developments, the timing of the withdrawal may have to be unexpectedly adjusted.

### **Shortening the balance sheet also brings risks**

The reaction of financial markets to the phase-out is hard to predict. When the Fed unexpectedly said it was considering reducing bond purchases in 2013, a strong financial market reaction followed. On the other hand, it is fully expected that the Eurosystem will reduce its bond portfolio at some time, although uncertainty exists about when and how this will happen. Whenever it occurs, it will concern large amounts. At the end of the year, the Eurosystem will have nearly €2000 billion of government bonds on its balance sheet. When the asset purchase programmes were introduced, long-term rates were affected most; it is unknown if the reverse will be the case when the unconventional monetary policies are unwound.

The timing of the phasing out is important. If the ECB starts to reduce purchases or shorten the balance sheet too soon, this could stop the economic recovery. If the ECB waits too long, there is a risk of rising inflation and banks may seek riskier investments (search for yield), which puts financial stability at risk.

## 5 Policy during the withdrawal phase

The preceding sections show that the unconventional monetary policy of the ECB has led to lower yields on long-term government bonds and higher equity prices in the euro area. It also seems to have had positive effects on GDP and inflation. Furthermore, there is a broad consensus that the declaration of the ECB to do “whatever it takes” prevented a further escalation of the euro crisis. The cost of these policies is monetary conditions that are far from steady state (the long-term equilibrium). The policy rate is zero and will likely stay there for some time. Furthermore, the balance sheet of the Eurosystem has tripled since the outbreak of the financial crisis. The next challenge is to return to more normal conditions. This will have consequences for both the economy and the public finances of euro area countries.

### **Phasing out unconventional monetary policy has budgetary consequences**

At some point the ECB will shorten its balance sheet, which will give more room for manoeuvre should any new adverse shocks occur. Under current policies there is a lot of liquidity in the financial system, which is too much for normal times.

The withdrawal of unconventional policy will affect the euro area countries’ budget deficits negatively, just as the expansionary phase had a positive impact. The phasing out will dampen economic growth and therefore lower tax revenues. In addition, long-term government bond rates will increase. Finally, it is possible that central banks will pay less dividends because of any trading losses incurred on their bond portfolios.

If during the withdrawal phase the European economy slips back into recession, the ECB will be faced with a difficult decision. As long as the policy rate is still low, the bond buying programme will remain the main instrument for stimulating the economy. However a predictable shortening of the balance sheet prevents surprises for the financial markets, which benefit from transparency regarding the economic conditions in which the reduction of the bond portfolio will take place.

Therefore, the ECB may have to play a smaller role in combatting any new recession and fiscal policies of euro area countries will be even more important than in normal times. This is particularly true when the key policy rate is still low. Absorbing negative shocks can be done via automatic stabilisers or through active fiscal policy, but both require adequate budgetary room (Suyker, 2016).

### **National governments can prepare for the withdrawal phase**

Strengthening the economy and improving public finances will help governments deal with the withdrawal phase of unconventional monetary policy and to be well prepared for possible new economic shocks. This applies particularly to countries that are currently in a less auspicious position. Especially the level of public debt and the strength of banks vary by country, which may determine the impact of the withdrawal on each country. This means that governments must be prudent with the fiscal space created by the current favourable

economic growth. In addition, there is a trade-off between fiscal policy being able to counteract any negative effects of the withdrawal and the ability to stimulate short-term economic growth. By strengthening the banking sector countries can still take advantage of the growth boosting effects of loose monetary policy. Moreover they will also be in better long-term shape to deal with economic setbacks.

The Netherlands has a good starting position for the phasing out of the ECB's unconventional policy. The Dutch government's finances are in good shape, as is the banking system. Even so, when government interest rates rise it will affect the budget deficit, although the higher interest is only payable on newly issued bonds. The adverse effect on the economy for the Netherlands may be larger than the average euro area country (see Figure 3.1), but current economic growth appears robust. For pension funds and insurers, higher interest and discount rates will be beneficial on balance anyway (CPB, 2017a).<sup>12</sup> For households and firms with high debt levels higher interest rates will be detrimental.

### **Ending unconventional monetary policy requires a strong monetary union**

The euro crisis may yet come to life again and government debt sustainability problems may return. One reason why these problems may come back is higher interest rates – and the phasing out of unconventional monetary policy will contribute to higher rates. It is conceivable that a number of countries (banks and/or governments) run once again into financial difficulties and have to rely on other euro area countries for help. Especially in countries with high public debt, rate increases will have a significant effect on their budget deficits. Of those countries, Italy is also still struggling with a weak banking sector.

There is also a risk that long-term interest rates between countries will diverge again, possibly with speculation and capital flight as a result. This divergence can occur if financial markets in the withdrawal phase see reason to doubt the willingness of the ECB to support the euro at all costs, or to doubt the willingness and capacity of countries to adapt their economies and policy to the requirements of monetary union.

The chance of a new euro crisis has reduced because the institutional structure of the Economic and Monetary Union has been improved after pressure from the financial crisis. The European Stability Mechanism has been established, which is a fund to financially assist euro area countries with unmanageably high public debt, subject to their following reform programmes. If necessary, the ECB will purchase bonds through the OMT programme of countries that are in an ESM programme. That should prevent speculative attacks on sovereign debt. Finally, a start has been made on a banking union, which must ultimately break the interdependence between banks and governments. Whether this is enough, however, is unclear.

In the end it may turn out that more risk sharing is needed if EMU is to survive as a currency union.<sup>13</sup> It is unclear whether the currency union now has a true lender of last resort for

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<sup>12</sup> Only part of the decrease of the discount rate of pension funds is due to ECB-policy (CPB, 2017b).

<sup>13</sup> Van Beers et al. (2014) compare risk sharing in the euro area to the United States.

governments: will the ECB be willing and able to purchase unlimited bonds for a large euro area country under the OMT programme? This has never been tested. In addition, the banking union is as yet incomplete: there is no European deposit guarantee scheme and government bonds on banks' balance sheets have a zero risk weight. As a consequence the interdependence of banks and governments is still a potential source of problems. More risk sharing would be possible with a higher EU budget, where more items are funded at the European level or if European bonds were introduced.

Unfortunately, more risk-sharing is not without problems. One potential problem is moral hazard: when countries know that they will receive support if their debts become too high, it is possible that they issue more debt than they would have done without risk sharing. The cost of over-indebtedness is indeed decreased by risk sharing. Another problem is how to deal with past debts: a joint guarantee for currently outstanding debt implicitly means that countries with low government debt pay for countries with high public debt. However, limiting the guarantee to new debt only will reduce the usefulness of such a guarantee.

More risk sharing in Europe is also politically sensitive. The economic problems (moral hazard and past debt) may be addressable with the right institutional design. However, support for more cooperation in Europe seems to be decreasing, as evidenced by the increasing popularity of eurosceptic parties. If the political will to share more risk is missing, emergencies will yet again be left to the ECB to solve.

# Literature

Altavilla, C., D. Giannone and M. Lenza, 2016, The Financial And Macroeconomic Effects Of OMT Announcements, *International Journal of Central Banking*, vol. 12, no. 3, p. 29-57

Andrade, P., J. Breckenfelder, F. Fiore, P. Karadi and O. Tristani, 2016, The ECB's asset purchase program: an early assessment, ECB Working Paper No. 1956

Balke, NS, in 2000, Credit and Economic Activity: Credit Regimes and Nonlinear Propagation of Shocks, *Review of Economics and Statistics*, vol. 82, no. 2, p. 344-349.

Beers, N., M. Bijlsma and G. Black, 2014, Cross-Country Insurance Mechanisms in Currency Unions: An Empirical Assessment, CPB Background Document

Boeckx, J., and G. M. Dossche Peersman, 2017, Effectiveness and Transmission of the ECB's Balance Sheet Policies

Burriel, P., and A. Galesi, 2016 Uncovering The Heterogeneous Effects Of ECB Unconventional Monetary Policies Across Euro Area Countries Banco de España Working paper no. 1631

Ciocyte, O., S. Muns and Lever M., 2016, Determinants of long-term interest rates, CPB background document

CPB, 2017a, Effects of a minimum for the discount rate of pension funds, CPB Notes, January 30, 2017 (in Dutch)

CPB, 2017b, CPB Risk Report Financial Markets 2016, CPB Note, June 6, 2017 (in Dutch)

Damjanović, M., and I. Masten, 2016, Shadow short rate and monetary policy in the Euro area, *Empirica* , vol. 43, pg. 279-298.

ECB, 2016. The ECB's monetary policy response to disinflationary pressures, speech by Peter Praet, April 7, 2016.

Elbourne A., K. and S. Ji Duijndam, 2017. The effects of unconventional monetary policy in the euro area, CPB discussion paper (forthcoming)

Mckibbin-Fry, R., and J. Zheng, 2016, Effects of the US monetary policy shocks during financial crises-a threshold vector autoregression approach, *Applied Economics* , vol. 48, no. 59, pg. 5802-5823.

Gambacorta, L., B. Hofmann and G. Peersman, 2014, The Effectiveness of Unconventional Monetary Policy at the Zero Lower Bound: A Cross-Country Analysis, *Journal of Money, Credit and Banking* , vol 46, No. 4, p. 615-42.

Greenwood, R., SG Hanson and JC Stein, 2017, The Federal Reserve's Balance Sheet as a Financial Tool-Stability, Economic Symposium Conference Proceedings (Federal Reserve Bank of Kansas City)

Haldane, AG, M. Roberts Sklar, Wieladek T. and C. Young, in 2016, QE: the story so far, Bank of England Staff Working Paper No. 624.

Suyker, W., 2016, Options for fiscal policy, CPB Policy brief 2016/02. (in Dutch)

Tenreyro, S., G., and Thwaites, 2016 Pushing on a String: US Monetary Policy Is Less Powerful in Recessions. " *American Economic Journal: Macroeconomics* , vol 8, No. 4, pp 43-74....

Wieladek, T. and A. Garcia Pascual, 2016, The European Central Bank's QE: A New Hope, CESifo Working Paper No. 5946.

Wu, JC, and FD Xia, 2016, Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound, *Journal of Money, Credit, and Banking* , vol. 48, No. 2-3, pp 253-291.







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