IN-DEPTH ANALYSIS

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QT in the euro area

Supporting monetary policy scrutiny

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QT in the euro area

Abstract

The Eurosystem is now reducing its bond holdings. Provided this is carried out in a measured way, it should not have a big impact on financial conditions or cause financial instability. The reduction is the correct policy because of legal problems with the Eurosystem owning so many sovereign bonds and because it provides space to implement the Transmission Protection Instrument (TPI) effectively. On the costs of operating a large balance sheet, the ECB should re-introduce its tiering system for compensation of deposits.

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LIST OF ABBREVIATIONS

APP	Asset purchase programme
ECB	European Central Bank
ECJ	European Court of Justice
Fed	Federal Reserve
FOMC	Federal open market committee
GDP	Gross domestic product
LCR	Liquidity coverage ratio
OMT	Outright Monetary Transactions
PEPP	Pandemic emergency purchase programme
PSPP	Public sector purchase programme
QE	Quantitative easing
QT	Quantitative tightening
TFEU	Treaty on the Functioning of the European Union
TLTRO	Targeted longer-term refinancing operations
TPI	Transmission protection instrument

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EXECUTIVE SUMMARY

- **The ECB has announced that the Eurosystem is now reducing its bond holdings**. This process is starting with a EUR 15 billion per month runoff over the next few months.
- **The initial reduction in asset holdings is small**. It represents a decline of only 0.3% per month in the Eurosystem's bond holdings.
- **The Eurosystem's reduction in its bond portfolio is likely to be slower than the Fed's**. This is because euro area sovereign bond markets are less liquid and more prone to instability than the markets for US Treasuries and mortgage-backed securities.
- **Provided the runoff is done in a measured way, it should not have financial stability implications**. For the next few years, the Eurosystem is likely to both reduce its bond holdings and remain a purchaser as proceeds from some of the maturing bonds are re-invested.
- **A gradual runoff in bond holdings is also unlikely to have a large impact on financial conditions**. Bond purchases and sales are not very effective tools for influencing financial conditions. The original QE programmes had a relatively modest impact and a slow unwinding of these programmes will have a far more limited impact on financial conditions than the current policies of the ECB and other central banks to set higher policy rates.
- **The reduction in bond holdings is the right policy because of potential legal problems related to monetary financing stemming from the Eurosystem owning so many sovereign bonds.** A lower level of sovereign bond holdings will also provide space to implement the Transmission Protection Instrument (TPI) effectively should this prove necessary.
- **The gradual reduction in the size of its balance sheet means commercial banks will continue to have large amounts on deposit with the national central banks for some time.** This costs the public money because the Eurosystem is now paying positive interest on these deposits. This is not necessary for monetary policy purposes and the ECB should re-introduce its tiering system for compensation of deposits.
- **The ECB should consider a longer-term plan for the size of its balance sheet.** I recommend the continuation of the provision of longer-term loans to banks on a fixed-rate full allotment basis rather than a return to pre-2008 operational policies.

1. INTRODUCTION

At its 2 February meeting, the European Central Bank (ECB)'s Governing Council announced that it was also going to begin reducing the Eurosystem's holdings of securities under the asset purchase programme (APP) in addition to its ongoing programme of increases in policy rates. In starting this process of "quantitative tightening" (QT), the ECB is following the precedent set last year by the Federal Reserve (Fed), albeit its initial plans represent a smaller percentage reduction in its bond holdings than has been carried out by the Fed.

At first glance, the rationale for this decision is clear. Quantitative easing (QE) programmes were introduced as a monetary stimulus to help central banks increase inflation to be closer to their 2% target level. With high inflation having now become the key focus for central banks around the world, the original rationale for holding large amounts of securities has gone, so there is no surprise to see the policy being reversed. However, the issue of how to dispose of trillions of euros in sovereign bonds is not a simple one, particularly in the euro area given its history of sovereign bond market disruptions and long-running economic and legal questions about the appropriate role for the ECB in these markets.

This paper discusses a number of issues related to the ECB's quantitative tightening. The paper is organised as follows.

Section 2 discusses the general rationale for central banks sequencing their monetary policies by first raising policy rates and then subsequently selling assets. It concludes that the pace of QT in the euro area will likely be slow and its contribution to financial conditions in the current cycle of monetary tightening will be small.

Section 3 focuses on some issues specific to the euro area that the ECB needs to consider when implementing this policy, in particular, the potential influence on financial fragility in bond markets and the legal issues relating to monetary financing. It argues that a reduction in sovereign bond holds via the likely method of allowing the existing bonds in the portfolio to mature without replacement is probably unlikely to cause financial fragmentation problems over the next year.

Finally, Section 4 discusses two issues related to the ECB's balance sheet reduction. First, it addresses the fiscal implications of the ECB's current policies including its recent re-working of its targeted longer-term refining operations (TLTRO) programme and its policy of paying interest on commercial bank deposits. Second, it addresses some of the longer-term issues facing the ECB when considering the appropriate size of its balance sheet.

2. QUANTITATIVE TIGHTENING AND MONETARY POLICY

Here, I discuss some general issues about QE and QT, their role in the monetary policy toolkit and their influence on financial conditions. I also discuss the pattern of QT underway at the Federal Reserve since this may provide an indicator as to how this process may work in the euro area.

2.1. Sequencing and the impact of QE and QT

At first sight, it may seem as though programmes to acquire assets (usually known as quantitative easing, QE) and programmes to reduce asset holdings (known these days as quantitative tightening, QT) are symmetric policies to be used in a similar way in both good economic times and bad. Because central banks sequenced their easing policies by first cutting interest rates and then undertaking asset purchases, it may seem logical to sequence a tightening of policy by first reducing the asset holdings acquired via QE and then raising interest rates.

There are a number of reasons, however, why QE and QT do not operate symmetrically. Central banks turned to QE programmes when they believed they had pushed their traditional interest rate policies as far as they should go. Some central banks stopped cutting rates when they reached the zero lower bound. The ECB went further, introducing a negative interest rate on commercial bank deposits with the Eurosystem, with this negative interest rate becoming the key policy rate. Only after policy rates were cut to these extremely low levels did central banks introduce QE.

In contrast, when central banks are tightening policy, there is no restriction on the interest rate policy. They can raise rates as high as they want, even if they never introduced a QT programme. And there are a number of reasons why interest rate changes would be preferable to a QT programme.

Central bank interventions in bond markets need to be carefully calibrated. If a central bank were to purchase very large amounts of bonds over a short period of time, it would most likely produce substantial distortions in bond yields. For example, a large reduction in yields would change the incentive of bond issuers (be they sovereigns or corporates) to issue debt. It is for this reason that, as discussed below, in the *Weiss* judgement of 2018, the European Court of Justice carefully assessed the terms under which the APP could be considered consistent with the prohibition of monetary financing in the European Treaties.

Similarly, if a central bank accumulates a large amount of bonds, attempts to sell them all quickly would induce financial stability problems with bond prices probably having to decline rapidly as the central bank searches for people to sell its bonds to. Indeed, large-scale selling of bonds would likely cause greater financial stress than large-scale buying. For this reason, QE programmes accumulated bonds slowly over time and QT programmes will likely sell these bonds back to the private sector in an even slower and more measured way.

How will this influence financial conditions? The channels through which QE affected the economy are still a subject of active debate in academic and central banking circles. Bernanke (2020) cites the proximate goal of QE as being to reduce long-term interest rates via two key channels: A "portfolio balance" effect through which boosting demand for long-term bonds raises their prices and lowers yields, and a "signalling" effect by which asset purchases make forward guidance on keeping interest rates low more credible.

Bernanke famously joked, "*The problem with QE is it works in practice but it doesn't work in theory.*"[1] The theory he was referring to was the idea that efficient markets and arbitraging investors should see all assets priced purely according to their expected risk and return. In such models, there is no "demand curve" for sovereign bonds and purchases of bonds by a central bank should not have an impact on their yields.

The empirical evidence favours Bernanke's position that QE programmes have worked in practice to reduce bond yields but while efficient market theories of bond pricing may not be perfect, they are also not wildly wrong. The evidence suggests that enormous bond purchases by central banks have achieved relatively modest reductions in long-term yields. For example, Ihrig et al. (2018) concluded that the USD 3.5 trillion spent in the Federal Reserve's QE programmes prior to the pandemic reduced long-term interest rates by about one percentage point. Eser et al. (2019) suggest that the Eurosystem's pre-pandemic sovereign bond purchases had a similar effect.

More recently, Schnabel (2023) reported that the ECB staff estimated, "the [asset purchase programme] APP and the [pandemic emergency purchase programme] PEPP had jointly compressed the ten-year GDP-weighted risk premia of the four largest euro area countries by around 180 basis points by the end of 2020" and that revised market expectations "have reversed around 40 basis points of this peak impact since September 2021". The 180 basis point) figure strikes me as on the high side of the range of credible estimates of the impact of asset purchases, given the previous evidence cited above. But even accepting an estimate of 140 basis points as the starting point for QE's effects on long-term yields, a gradual unwinding of these purchases would still have a modest effect on monetary conditions over the next few years. For example, if the Eurosystem's holdings were unwound over five years, this would represent an incremental tightening of financial conditions of under 30 basis points per year.

So while QE programmes have attracted much attention, they are not the most effective or efficient way to implement monetary policy easing and gradually reversing these purchases is not likely to be an important tool for monetary policy when the central banks are seeking to tighten policy.

2.2. QT at the Fed and the ECB

The ECB's announcements[2, 3] about its plans for partial reinvestments did not provide much information about its medium or long-run strategy. They announced that they will no longer be reinvesting all principal payments from maturing securities from their APP securities and plan for this portfolio to decline by about EUR 15 billion per month until the end of June 2023, at which time they will take a decision on the pace of further reductions.

The Eurosystem's APP portfolio was EUR 3,253 billion at the end of January. In addition, its holdings of securities under the Pandemic Emergency Purchase Programme (PEPP) stood at EUR 1,680 billion. Figure 1 shows how the Eurosystem has accumulated these securities and, in recent years, how this has affected the total size of its balance sheet. Since the combined security holdings are almost EUR 5,000 billion, the initial reductions in security holdings represent a very small fraction of the total, about 0.3% per month. At that pace, it would take the Eurosystem 27 years to reduce its asset holdings to zero.

[1] See Harding, R. (2014). "US quantitative measures worked in defiance of theory", Financial Times. https://www.ft.com/content/3b164d2e-4f03-11e4-9c88-00144feab7de

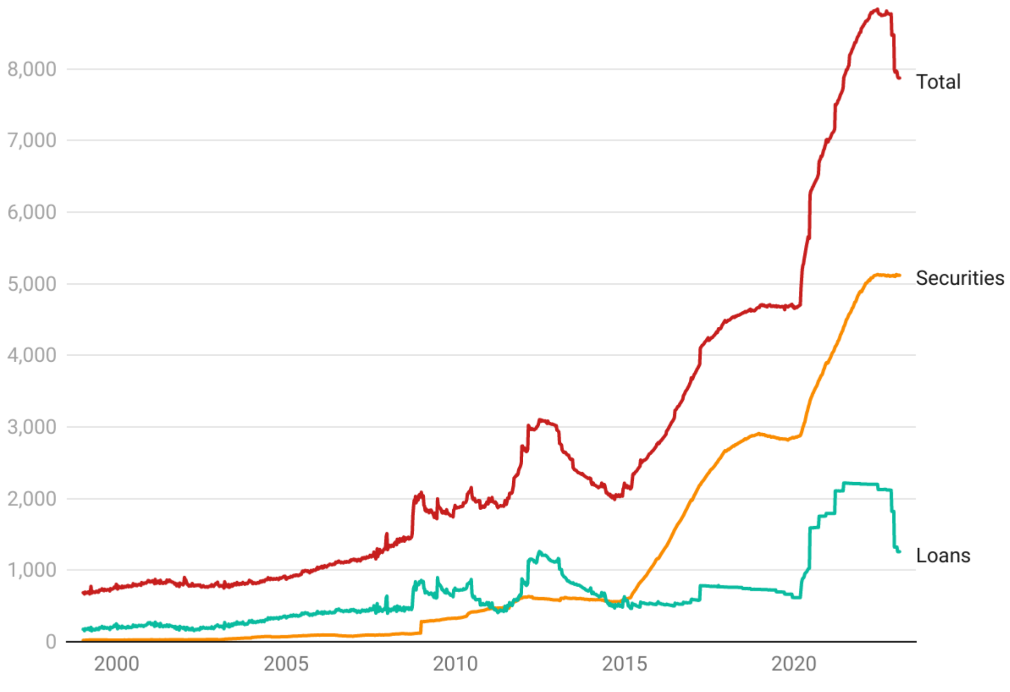
[2] See ECB's monetary policy decisions of 15 December 2022 https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp221215~f3461d7b6e.en.html

[3] See ECB's monetary policy decisions of 2 February 2023 https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230202~1a4ecbe398.en.html

To get a more realistic picture of where the Eurosystem's security holdings may be going, it may be helpful to look at the approach that has been taken by the Fed, which started reducing its bond holdings last spring. The Fed's security holdings peaked in April 2022 at USD 8,942 billion. They announced in May 2022 that they would reduce their bond holdings by USD 47.5 billion per month for the first three months and by USD 95 billion thereafter. So, the Fed's initial approach to QT was to start by selling a slightly higher percentage of its security holdings than the ECB has decided to do (0.5% a month rather than 0.3%) and to then move to reducing its security holdings by about 1% per month.

Figure 2 illustrates the reduction in the Fed's total assets over the past few months, illustrating its modest balance sheet runoff. At its current pace of balance sheet reduction, the Fed could end up getting rid of its full portfolio of securities acquired via QE in about 7 years. However, as we discuss further below, the Fed is unlikely to reduce its balance sheet back to its pre-QE size. Research by Federal Reserve Bank of Richmond economists Huberto Ennis and Tre' McMillan (2023) suggests that the Fed's reduction in security holdings will continue until about 2026. The Fed is not planning outright sales of its bonds but instead to run down its balance sheet in a passive manner as the bonds reach maturity. This suggests the Fed does not see QT as not a tool to respond to the short-term macroeconomic situation but rather as part of a longer-term plan of "balance sheet normalisation" consistent with the principle that the Fed's balance sheet should be no larger than is needed to efficiently implement monetary policy and maintain financial stability.

Figure 1: Total Eurosystem assets, security holdings and loans to Eurosystem banks (billions of euros)



Source: Author's calculations based on data from the ECB's Statistical Data Warehouse.

Figure 2: Total assets of the Federal Reserve

Source: Federal Reserve Bank of St. Louis

So what are the likely implications of the ECB's plans to cut the size of its asset holdings for its monetary policy stance? I suspect it will have a limited impact for a few reasons. First, I suspect the rundown in security holdings will be slow. As we will discuss below, the Eurosystem's interactions with sovereign bond markets are quite different from the Federal Reserve's and caution is required. My guess is that the ECB's slow initial start to its partial reinvestments of bonds is a sign that it will implement this runoff at a slower pace than the Fed, with the possibility of occasional pauses should there be financial stability concerns.

Second, the impact may be limited because the unwinding of QE is perhaps not as important as many believe it to be. It took lots of careful statistical work by academics and central bank economists to find an impact of QE programmes on long-term interest rates and on GDP, unemployment and inflation, and when they did so, the estimated results were modest. Indeed, the sceptically minded can consider the findings of Fabo et al. (2021) that the estimated effects of QE on the economy reported by central bank studies have been larger than those by academics and perhaps conclude that the evidence for these effects is weaker than often summarised.

Considering the limited impact of QE, I suspect it will be next to impossible to detect the impact of a slow and gradual QT process on financial markets or the economy over the next year in the context of there being a much bigger monetary policy tightening stemming from higher rates. Nor does QT need to play an important role in determining the stance of monetary policy. If the ECB views the impact of QT as being overly contractionary in the coming years, it can adjust its policy rates downwards to offset it. This is not to say the planned balance sheet contraction is a bad idea, just that it would be incorrect to view it as an important part of the monetary transmission mechanism in the coming years.

3. EURO-AREA-SPECIFIC CONSIDERATIONS

The ECB's plans to sell off sovereign bonds place it in a similar position to central banks such as the Federal Reserve and the Bank of England in terms of plans for their balance sheet. However, as a trans-national body, the Eurosystem is always a more complex entity and there are a number of specific issues that make its interactions with bond markets less straightforward. Here, I will discuss the potential concerns about financial stability due to QT and the legal issues relating to monetary financing.

3.1. Financial stability concerns

The most obvious concern about sovereign bond sales is that they could destabilise sovereign bond markets. It is widely acknowledged by ECB officials that without the ECB's willingness to play a stabilising role, there is the potential for euro area sovereign debt markets to engage in self-fulfilling spirals where concerns about the possibility of a debt default raise bond yields which then further reinforce concerns about debt sustainability.

In an important speech in 2020, ECB Executive Board member Isabel Schnabel outlined this exact scenario to justify the need for central bank involvement in stabilising the bond market:

> *"financial markets are neither always rational, nor efficient. They can be prone to panic and instability. Acute periods of market stress can drive a considerable wedge between a country's cost of borrowing, as justified by economic fundamentals, and actual financial conditions, giving rise to self-fulling price spirals.*
>
> *Such periods of turmoil – if left unaddressed – can quickly turn a liquidity crisis into a solvency crisis, giving rise to huge costs for society as a whole. Central banks are best placed to protect the public from such destabilising forces.*

The most famous intervention by the ECB was, of course, Mario Draghi's famous "whatever it takes" speech and the subsequent announcement of the Outright Monetary Transactions (OMT) programme. These actions were successful in reducing what the ECB has frequently termed "financial fragmentation" (for example, in the announcement of the PEPP) and in contributing to a dramatic reduction in the perceived risk of sovereign default and of countries exiting the euro. The improvements in financial conditions supported the euro area economy to recover from the recession and begin a long period of expansion.

In more recent years, the Eurosystem's sovereign bond purchases were not originally aimed at countering fragmentation and promoting financial stability. Rather, the APP was introduced as a monetary policy tool with the aim to lower long-term bond yields. However, it seems likely that the consistent presence of the Eurosystem as a purchaser in secondary sovereign bond markets boosted liquidity and reduced perceived risk on the part of market participants. These factors almost certainly contributed to lower yields.

The idea that a programme of steady bond purchases could help to avert financial fragility became part of the ECB's official policy during its response to the pandemic. The March 2020 announcement of the PEPP said its goals were "*to counter the serious risks to the monetary policy transmission mechanism and the outlook for the euro area posed by the outbreak and escalating diffusion of the coronavirus.*"[4] The December 2021 Governing Council meeting statement then announced that *"in the event of renewed market fragmentation related to the pandemic, PEPP reinvestments can be adjusted flexibly across time, asset classes and jurisdictions at any time"* making it clear that ECB was willing to target purchases to

[4] The announcement can be found here https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200318_1~3949d6f266.en.html

support national sovereign bond markets that were showing signs of fragility. Despite the introduction of the TPI last year, the ECB has been clear that varying its PEPP reinvestments is currently its main tool for countering financial fragmentation.

These considerations raise the question of whether the planned net reductions in sovereign bond holdings are going to cause financial stability problems. On balance, I think this is unlikely. One key reason is that, at least at first, the Eurosystem will be able to reduce its bond holdings gradually while still acquiring new bonds, so it will still be an active participant in secondary bond markets.

Table 1 shows the ECB's expectations for redemptions over the coming year in its APP portfolio, i.e. the amount of bonds that will mature and be retired. On average, there will be EUR 26 billion per month in redemptions. This means that, at its current pace of a EUR 15 billion reduction in bond holdings per month, the Eurosystem will still be making new bond purchases using some of the funds from APP redemptions. The ECB may decide, like the Fed, to step up the pace at which it cuts its bond holdings, but even if none of the APP redemptions were reinvested, the ECB has committed to reinvesting the proceeds of maturing assets from the PEPP until at least the end of 2024. This means there is room for the Eurosystem to gradually reduce its bond holdings over the next few years while still being active in the sovereign bond market, albeit making smaller purchases than for much of the past few years. The ECB will be hopeful that this approach does not result in financial dislocation in bond markets.

Of course, the fact that the original rationale for QE is no longer in place (combined with some Governing Council members opposing the asset purchase programmes all along) means there will be recommendations from some that the ECB could consider a more aggressive reduction in its bond holdings, via making outright sales as well as not reinvesting maturing assets. However, this would make the Eurosystem's QT more aggressive than is currently planned by the Fed. Given the additional complexities of euro area sovereign markets relative to the US Treasury market, it is unlikely that the ECB will consider this more aggressive approach.

An alternative source of instability in bond markets that may occur is that higher sovereign bond yields, due to the ECB's interest rate increases, cause markets to be concerned about debt sustainability in some euro area Member States. On balance, I think these concerns would not be warranted. Sovereign bond yields have risen over the past year but they are still at low levels by historical standards (see Figure 3). Governments have also locked in a lot of low yield funding and, if market expectations pan out, yields will likely fall again once the current period of high inflation is over and the ECB has adjusted its policy rates downwards.

Table 1: APP redemptions

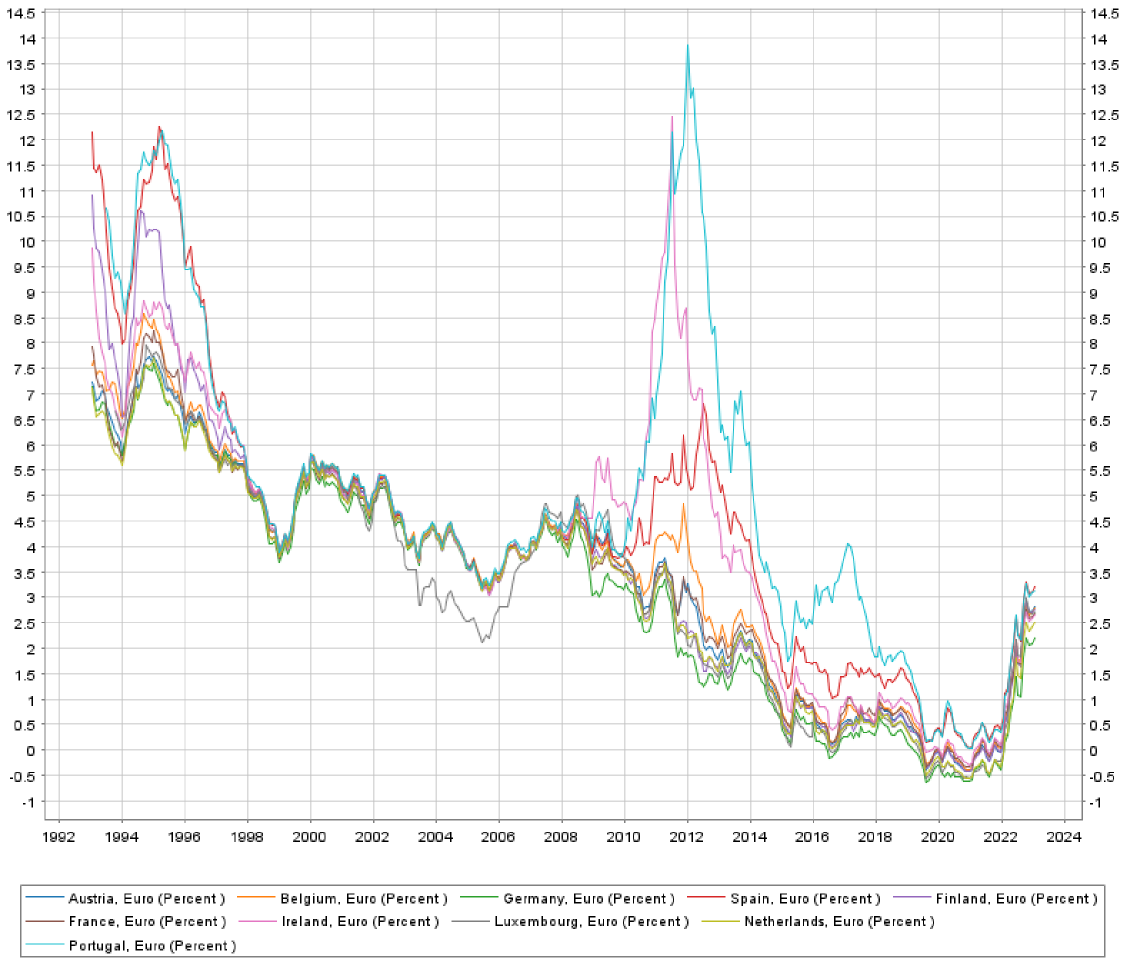
Expected monthly redemption amounts for the APP over a rolling 12-month horizon (in EUR millions)

EUR millions	ABSPP	CBPP3	CSPP	PSPP	APP
Jan 23*	**2,064**	**4,786**	**3,010**	**19,469**	**29,329**
Feb 23	*767*	*6,065*	*2,352*	*13,625*	*22,808*
Mar 23	*698*	*5,631*	*4,219*	*31,072*	*41,620*
Apr 23	*1,263*	*2,937*	*2,162*	*23,883*	*30,245*
May 23	*844*	*1,874*	*2,579*	*30,559*	*35,855*
Jun 23	*590*	*3,112*	*2,557*	*16,619*	*22,878*
Jul 23	*549*	*1,170*	*3,038*	*26,133*	*30,890*
Aug 23	*424*	*0*	*986*	*16,445*	*17,856*
Sep 23	*1,142*	*3,346*	*3,366*	*13,364*	*21,218*
Oct 23	*949*	*4,465*	*2,616*	*44,611*	*52,642*
Nov 23	*509*	*1,351*	*2,393*	*13,258*	*17,511*
Dec 23	*478*	*408*	*1,336*	*6,336*	*8,558*
Jan 24	*473*	*4,109*	*3,464*	*25,524*	*33,570*

*Actual redemption, based on month end data. ECB estimates in italics. Figures may not add up due to rounding. Figures are preliminary and may be subject to revision. Note: Realised redemptions may differ from estimated redemptions.

Source: European Central Bank. https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html

Figure 3: Long-term sovereign bond yields



Source: ECB Statistical Data Warehouse.

3.2. Monetary financing and the need for room to manoeuvre

While acknowledging the potential for reduced Eurosystem bond holdings to cause some instability in financial markets, there are good reasons for the Governing Council to commit firmly to this reduction over the next few years.

One reason, which I have discussed in several briefing papers in recent years and at length in Whelan (2022), is the concern that the ECB could be found to be in violation of Article 123 of the Treaty on the Functioning of the European Union (TFEU) on monetary financing[5]. The ECB has had to defend its unconventional policies in two cases brought before the European Court of Justice (ECJ). In both the 2015 "*Gauweiler*" case on the OMT programme and the 2018 "*Weiss* case" on the Public Sector Purchase Programme (PSPP), the court ruled that the ECB's actions were lawful.[6]

Some have interpreted these rulings as an indication that there were no constraints on sovereign bond holdings by the Eurosystem. However, the reality is more subtle. While Article 123 TFEU formally disallows only direct purchases of sovereign bonds from the government, the Court argued that the aim of the article was to encourage Member States to follow a sound budgetary policy. Consequently, any actions by the ECB that were to undermine this aim would be illegal.

So, for example, the *Weiss* judgement approvingly cited the ECB's requirement that bonds could only be purchased as part of PSPP if they had a sufficiently high credit rating as encouraging governments to maintain sound budgetary policies. The Court also stressed that the ECB's commitment to limit the fraction of debt it could purchase from each issuer maintained a primary role for financial markets in setting financing terms for sovereign debt funding. In addition, Paragraph 141 of the judgement stated:

> "*as a result of the purchase limits per issue and per issuer set out in Article 5(1) and (2) of that decision, in every case only a minority of the bonds issued by a Member State can be purchased by the ESCB under the PSPP, which means that that Member State has to rely chiefly on the markets to finance its budget deficit.*"

Since this judgement, the ECB has embarked on another major round of sovereign bond purchases, weakened its requirements on credit ratings and has argued that its issuer limits were a self-imposed requirement that it could choose not to follow. Unless the ECB sets a path to firmly reduce its sovereign bond holdings, it runs the risk that future cases could rule that the ECB's actions violate Article 123 TFEU.

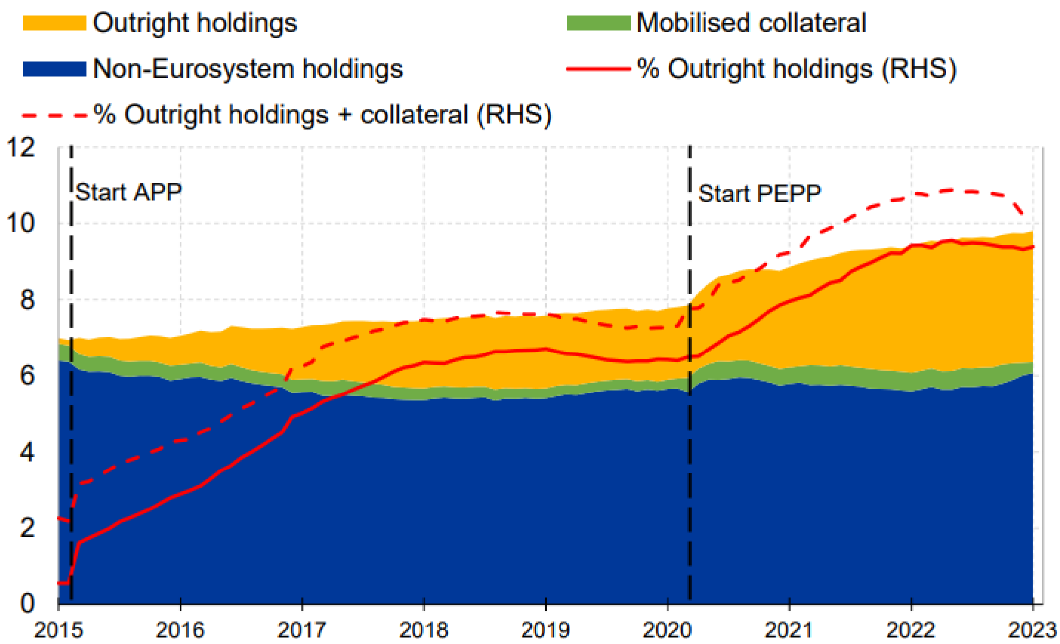
Another reason for the Eurosystem to get back to lower holdings of sovereign bonds is that it may be necessary for the ECB to have sufficient "firepower" available should it ever decide to implement the TPI. The ECJ's declaration that "*in every case only a minority of bonds can be purchased*" could be interpreted as placing an effective upper limit of just below 50% on the Eurosystem's ownership of sovereign debt. The higher the Eurosystem's bond holdings are at the time it implements a TPI intervention, the more likely it is that this 50% limit binds as a limit on the size of its potential intervention. And the more markets see the ECB as having a small rather than a big bazooka, the less likely the TPI intervention will be to succeed.

In her recent speech, Isabel Schnabel (2023) has shown that the Eurosystem's holdings in APP and PEPP currently account for about 35% of outstanding sovereign bonds (see Figure 4). These constraints could eventually have an impact on the potential space available to implement the TPI.

[5] See https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX%3A12008E123%3AEN%3AHTML

[6] Materials on the *Gauweiler* case are available at https://curia.europa.eu/juris/liste.jsf?num=C-62/14 and on the *Weiss* case at https://curia.europa.eu/juris/liste.jsf?language=en&num=C-493/17

Figure 4: Eurosystem holdings of sovereign bonds



Source: Schnabel (2023).

4. TWO RELATED ISSUES

Finally, I want to briefly address two other issues that are related to the ECB's plans to reduce the size of its balance sheet: The fiscal cost associated with higher interest rates when the Eurosystem has a large balance sheet and the longer-term plans for liquidity provision.

4.1. TLTRO and interest on deposit accounts

Prior to its announcement about running down its portfolio of bond holdings, the ECB had already implemented a much larger reduction in the size of its balance sheet due to repayments of the TLTRO-III loans that were issued during the crisis phase of the pandemic.

The ECB's concerns last year about the TLRTRO-III loans were understandable. Implemented at the height of the pandemic crisis, these loans effectively paid banks to borrow money from the Eurosystem. In the context of the ECB's move to tighten financial conditions, this subsidy to banks stood out as being inappropriate. In addition, while the lowest interest rate available to banks under TLTRO-III depended on proof that the funds were used to sustain lending, even banks that did not meet this threshold were able to borrow at 50 basis points below the main refinancing operations rate. With the ECB having raised the deposit rate, this meant that banks could just redeposit their TLTRO-III borrowings with their national central banks and make money from the gap between the new higher deposit rate and the borrowing rate on TLTRO-III funds. With these payments to banks costing the taxpayer money in the form of smaller remissions of profits from the Eurosystem, this policy had become a problem for the ECB.

For this reason, the ECB decided on October 2022 to "recalibrate" the TLTRO-III programme, changing the procedures from those that had been previously announced so that the interest rates fell in line with policy rates and opening new windows for early repayment of these loans for banks that no longer considered them profitable.[7]

While I understand the motivation for this decision, I consider it to be a mistake. The ECB has always been an organisation that prizes its credibility above all else. The ECB issuing legal guidelines on a policy and then unilaterally tearing them up later is not suitable for its credibility. Indeed, President Lagarde acknowledged that this decision could cause legal difficulties. In the October press conference, she said, "*taking in due consideration the risk of litigation, we believe that this is the best monetary policy decision that we can take in order to accelerate the transmission.*"[8]

Of course, it is understandable that at a time when the ECB is raising the cost of mortgages and other sources of finance for people all across Europe, a policy that was seen as a free lunch for banks could be unpopular. However, I do not believe this was the best way to address this issue.

The greater issue in relation to the ECB's relationship with banks is that it is now paying positive interest on the huge amounts of reserves that have accumulated in deposit accounts with national central banks due to the asset purchase programmes. While the payment of interest on deposit accounts has always been a part of the ECB's monetary policy, the current situation in which there are vast amounts of money on deposit with the national central banks being compensated at the policy rate, is unprecedented.

Perhaps surprisingly, there has been very little discussion of whether it is strictly necessary for the Eurosystem to be paying so much in interest to banks. I believe the evidence says that it is not

[7] The announcement is here https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr221027_1~c8005660b0.en.html

[8] ECB Press Conference, 27 October 2022 https://www.ecb.europa.eu/press/pressconf/2022/html/ecb.is221027~358a06a35f.en.html

necessary. During the period when the ECB had a negative deposit rate, it introduced a tiering system so that banks did not have to pay interest to their national central banks on all of their reserves but instead paid them on reserve holdings above a specific level. Following on from the Bank of Japan's experience with this approach, the ECB knew that the interest rate paid (or charged) on the marginal deposit would influence market rates even if other deposits had an interest rate of zero.

The same logic applies when the deposit rate is positive and, to my knowledge, no ECB official has explained why a tiering approach was appropriate when interest rates were negative but is now not appropriate when interest rates are positive.

Some argue that failing to pay interest on reserves amounts to a tax on the banking sector.[9] I do not think this is correct. Taxes are deducted from income or wealth and this policy would do neither of these things. Banks holding an asset that does not receive any compensation may reduce their profits but central banks have long adopted policies that either boost or reduce bank profits and these have never been labelled as fiscal policies.

Rather than argue that, by introducing tiering, the Eurosystem would be stepping into fiscal policy, I would describe this issue in a different way. Interest on reserves is a monetary policy tool. It was introduced to allow central banks to set specific levels of market interest rates and thus meet their inflation target goals. However, central banks are public bodies and there is no public policy case for central banks to spend public money if it does not actually help the central bank meet its specified objectives. Because compensating only reserves above a specific level works to allow central banks to meet their monetary policy objectives, there is no monetary policy rationale for compensating all reserves. In other words, the decision to pay interest on all reserves reduces the profits of the central bank and thus the dividends paid to government, could be seen as the ECB stepping into fiscal policy, rather than sticking to its monetary policy mandate.

4.2. The longer-run balance sheet

As the ECB begins its balance sheet reduction plan, there has been surprisingly little discussion about where the final destination is: How large a balance sheet does the ECB intend the Eurosystem to have five years from now and how does it intend to provide liquidity to the banking sector?

These issues have been widely discussed at the Federal Reserve. As the Fed began to unwind its first era of QE-related bond holdings in 2017, there was an active debate about whether it should return to the much smaller balance sheet it had prior to the global financial crisis or whether it should maintain a larger balance sheet. In January 2019, the Fed announced that it was going to pursue a policy of having an "amply supply of reserves" and would continue using the interest rate paid on reserves as its key monetary policy tool.[10]

It soon became clear that the Fed's decision to operate with a much larger balance sheet was a matter of necessity rather than choice. In September 2019, with commercial bank reserves held at the Fed standing at about USD1.4 trillion, evidence emerged that the banking system was running short on liquidity with tensions evident in other parts of the financial system, such as repo markets.[11] The much-larger demand for reserves held at the Fed by the United States banks reflects the changed regulatory system since the global financial crisis, most notably the Fed's implementation of the liquidity coverage ratio (LCR). The LCR requires banks to have a sufficient quantity of "high quality liquid assets" to survive

[9] See Tucker (2022) for an excellent discussion of the debate on paying interest on reserves.

[10] FOMC. (2019). "Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization", 30 January. https://www.federalreserve.gov/newsevents/pressreleases/monetary20190130c.htm

[11] See Copeland, Duffie and Yang (2022) for more details.

an extended period of deposit outflows. As Cecchetti and Schoenholtz (2019) note, the Fed's implementation of the LCR appears to place more weight on the amount of reserves held with the Federal Reserve System than on other high quality liquid assets such as Treasury bonds.

I was surprised that the ECB's 2021 monetary policy strategy review did not address these issues. However, Schnabel (2023) has confirmed that the ECB is "*analysing whether in the future we will operate under a floor or a corridor system. We hope to conclude this review by the end of the year.*"

Does the ECB plan to go back to its pre-2008 operational strategy of auctioning off limited amounts of liquidity at one-week horizons or is its current approach of providing long-term credit on a "fixed rate full allotment" basis going to continue? If it is the latter, then the European banking sector, rather than the Governing Council, will ultimately decide what the long-run size of the Eurosystem's balance sheet is going to be.

There have been some recommendations that the ECB should return to its previous operational framework. Former senior ECB official, Ignazio Angeloni argued recently that the ECB needs to go back to a "limited liquidity operating framework" which I take to mean a return to its pre-2008 operating procedures.[12]

I disagree. The Fed's experience provides a lot of useful information about this decision. Prior to taking their "ample reserves" decision, the Federal Open Market Committee (FOMC) received a series of briefings from staff. The minutes of the November 2018 FOMC meeting summarise the evidence well:

> *"The staff highlighted how changes in the determinants of reserve demand since the crisis could affect the tradeoffs between two types of operating regimes: (1) one in which aggregate excess reserves are sufficiently limited that money market interest rates are sensitive to small changes in the supply of reserves and (2) one in which aggregate excess reserves are sufficiently abundant that money market interest rates are not sensitive to small changes in reserve supply. In the former type of regime, the Federal Reserve actively adjusts reserve supply in order to keep its policy rate close to target. This technique worked well before the financial crisis, when reserve demand was fairly stable in the aggregate and largely influenced by payment needs and reserve requirements. However, with the increased use of reserves for precautionary liquidity purposes following the crisis, there was some uncertainty about whether banks' demand for reserves would now be sufficiently predictable for the Federal Reserve to be able to precisely target an interest rate in this way. In the latter type of regime, money market interest rates are not sensitive to small fluctuations in the demand for and supply of reserves, and the stance of monetary policy is instead transmitted from the Federal Reserve's administered rates to market rates—and approach that has been effective in controlling short-term interest rates in the United States since the financial crisis, as well as in other countries where central banks have used this approach."*

In other words, when it comes to liquidity provision to the banking sector, we are not in Kansas anymore: The old procedures would likely generate too much financial instability and for no great benefit. The ECB should plan to continue its fixed-rate full allotment procedures as well as the provision of liquidity over longer terms than were standard prior to 2008. If this means maintaining a much larger balance sheet than in the past, then so be it.

[12] Angeloni's article is available here https://www.omfif.org/2023/01/ample-liquidity-puts-the-ecbs-independence-at-risk/

REFERENCES

- Bernanke, B. (2020). "The New Tools of Monetary Policy," *American Economic Review*, Volume 110(4), pages 943-983. https://www.brookings.edu/wp-content/uploads/2019/12/Bernanke_ASSA_lecture.pdf
- Copeland, A., Duffie, D. and Yang, Y. (2022). "Reserves Were Not So Ample After All". Working paper. https://www.ecb.europa.eu/pub/conferences/shared/pdf/20221010_mon_pol_conf/Duffie_paper.pdf
- Cecchetti, S. and Schoenholtz, K. (2019). "The Brave New World of Monetary Policy Operations". https://www.moneyandbanking.com/commentary/2019/6/14/the-brave-new-world-of-monetary-policy-operations
- Ennis, H. and McMillan, T. (2023). "Fed Balance Sheet Normalization and the Minimum Level of Ample Reserves". Federal Reserve Bank of Richmond Economic Brief, No. 23-07. https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-07
- Eser, F., Lemke, W., Nyholm, K., Radde, S. and Vladu, A.L. (2019). "Tracing the impact of the ECB's asset purchase programme on the yield curve". ECB Working Paper number 2293. https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2293~41f7613883.en.pdf
- Fabo, B., Jančoková, M., Kempf, E. and Pástor, L. (2021). "Fifty shades of QE: comparing findings of central bankers and academics". ECB working paper No 2584. https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2584~004629c8e7.en.pdf
- Ihrig, J., Klee, E., Li, C. and Kachovec, J. (2018). "Expectations about the Federal Reserve's Balance Sheet and the Term Structure of Interest Rates." *International Journal of Central Banking*, Volume 14, pages 341–90. https://www.ijcb.org/journal/ijcb18q1a8.pdf
- Schnabel, I. (2020). "The shadow of fiscal dominance: Misconceptions, perceptions and perspectives". Speech at the Centre for European Reform and the Eurofi Financial Forum on "Is the current ECB monetary policy doing more harm than good and what are the alternatives?", 11 September. https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200911~ea32bd8bb3.en.html
- Schnabel, I. (2023). "Quantitative tightening: rationale and market impact". Speech at the Money Market Contact Group meeting, 2 March. https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230302~41273ad467.en.html
- Tucker, P. (2022). Quantitative easing, monetary policy implementation, and the public finances. IFS working paper. https://ifs.org.uk/publications/quantitative-easing-monetary-policy-implementation-and-public-finances
- Whelan, K. (2022). "The Past, Present and Future of Euro Area Monetary-Fiscal Interactions," *International Economics and Economic Policy*, Volume 19, pages 557–579. https://link.springer.com/article/10.1007/s10368-022-00531-y

The Eurosystem is now reducing its bond holdings. Provided this is carried out in a measured way, it should not have a big impact on financial conditions or cause financial instability. The reduction is the correct policy because of legal problems with the Eurosystem owning so many sovereign bonds and because it provides space to implement the Transmission Protection Instrument (TPI) effectively. On the costs of operating a large balance sheet, the ECB should re-introduce its tiering system for compensation of deposits.

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