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By* Nout Wellink

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Abstract

Europe embarked on the Economic and Monetary Union 25 years ago without sufficiently safeguarding some of the essential conditions that must be met to run a monetary union smoothly. The consequences of this omission came to light during the many and unprecedented crises that have shaped the European Central Bank. This article analyses and critically discusses the changing interpretation of the objective of price stability and the use of non-conventional policy instruments to realize this objective. Furthermore, the author analyses the problems with the monetary transmission within the eurozone and the framework for financial stability and supervision.

Keywords: Conventional and unconventional monetary policy, Economic and Monetary Union, European Central Bank, Bank supervision, Financial stability

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1. Introduction

The European Central Bank (ECB) started on June 1, 1998, as an independent central bank primarily focused on monetary stability, two crucial features borrowed from the successful model of the Bundesbank, a model based on its legal status on the one hand and hard-fought in the political arena on the other (Berger, 1997). Societies as well as economic and political relations evolve, as do central banks. The biggest changes take place during or after an economic or political crisis.

The ECB has faced several crises since its inception. The financial crisis of 2008 and in particular the European debt crisis have turned this young central bank into a somewhat hybrid institution: not only a monetary authority, but also a "co-decisive" partner of the European Commission (EC), a central bank with significant formal responsibilities in the area of financial stability, and a micro- and macroprudential supervisor.

Some of the new tasks are laid down in additional legislation, some not because it was assumed that they fell within the scope of the existing Treaty and Statutory provisions. There were regularly differences of opinion on the latter, and the ECB's room for maneuver was defined more precisely in legal proceedings. The issue that I address is to what extent, why, when, and how the ECB has changed over the last 25 years with respect to the inflation target, unconventional monetary policy tools, notably asset purchase programmes and forward guidance, the responsibility for micro and macro-prudential supervision as well as for financial stability. My focus is on some of the most important changes, recognizing that Presidents, voting behavior, organizational structure, quality and composition of staff, communication policy, size and composition of the Governing Council (GC), appointment procedures of council members, the relationship between the ECB and the national central banks (NCBs), etc., are an integral part of the process that has led to the current ECB.

The ECB has known very different Presidents (Wim Duisenberg, Jean-Claude Trichet, Draghi, and Christine Lagarde), each of whom has left their mark on this institution, in interaction with the widely varying challenges they faced. Eijffinger and Pieterse-Bloem (2022) distinguish three ECB policy regimes during the last 25 years: January 1999–July 2010; August 2010–December 2013; 2013–2021. I see the identified second regime as a kind of interim period in which the first steps were taken towards the third regime, characterized by a dominant leadership and the introduction of new, unconventional monetary policy instruments. The real pivot point for the ECB is Draghi's appointment in November 2011. Presidents do matter.

2. Price stability

Ensuring price stability is enshrined in the Treaty on the Functioning of the European Union (TFEU) and in the Statute of the ECB.(2) Sufficient clarity in the definition of price stability is crucial to the success of a central bank's monetary policy. Providing that clarity is, within the law, left to the central bankers.

2.1. How to define price stability?

In October 1998, the GC defined price stability "as a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2 %. Price stability is to be maintained over the medium term". An "increase" implies that falling prices are not

consistent with price stability. The medium term was understood to mean a term of 1–3 years. The word “maintained” in the definition comes from the Treaty but has now been replaced by “aiming for 2 % over the medium term” (ECB Economic Bulletin, 2021). Importantly, the GC had deliberately not set a specific inflation target within the bandwidth below 2 %.

The ECB officially targets headline inflation, like most central banks (Ehrmann et al., 2018) but naturally uses in its economic and monetary analyses headline and core inflation concepts. The difference between the two boils down to removing temporary factors. The experience of the ECB (and other central banks), for example in 2021, shows how hard it is to separate temporary from structural factors and if temporary factors have a long(er) lasting impact. Both inflation concepts are therefore closely monitored.

At its meeting in 1998, the GC was well aware that other central banks used different numerical values for price stability. A tolerance band of 0.5 % or 1 %-point on either side of 2 % was also not unusual. Hans Tietmeyer, President of the Bundesbank, in 1999 called these differences “small, but not negligible” (Tietmeyer et al., 1999) Differences in the target definition, which may seem small at first sight, can have major consequences for monetary policy in practice.

2.2. The first monetary strategy review; deflationary threats on the horizon?

In November 2002 Mervyn King and Ben Bernanke each gave a speech on deflation King, 2002, Bernanke 2002). However, both central bank governors saw no immediate deflationary threats. These speeches led to a discussion in the GC, initiated by Executive Board member and Chief Economist Otmar Issing, about the definition of price stability. In those years Issing was the intellectual conscience of the ECB, Padoa Schioppa the passionate European. Sometimes that clashed.

The ECB undertook an in-depth review of its monetary policy strategy (Issing et al., 2003). In its press release of May 8, 2003, the GC explicitly confirmed the 1998 definition, but added that, in the pursuit of price stability, it will aim to keep inflation rates “close to, but below 2 %” over the medium term. The GC felt that, by introducing these words for clarification, it could sufficiently address quality issues related to the measurement of inflation, while meeting the need for a margin against the risk of deflation. “Below 2 %” was “stolen” from the old definition, “close to” a gesture to those members of the GC who were in favor of a 2 % inflation target.[1,2]

Heated debates ensued over whether the ECB’s price stability objective was symmetrical or asymmetrical. The words “close to, but below 2 %” gave some the impression that the ECB would respond more forcefully to inflation above this target than below it. This could lead to a downward drift of inflation and inflationary expectations.

The symmetry discussion was (and still is) confusing. Tietmeyer’s view was that both a deflation in the sense of a sustained decline in the price level and a rate of monetary erosion of 2 % and more, are deemed to be harmful Tietmeyer et al., 1999. Draghi saw in 2016 asymmetry not in the mandate but in the tools used, due to the existence of the zero lower bound (Draghi,

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[1] Article 127 of the Treaty reads: “The primary objective of the European System of Central Banks (ESCB) shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 23 of the Treaty on European Union”.

[2] Bundesbank-president Hans Tietmeyer wrote in 2005 about the adjustment of the definition: “unter, aber nahe an 2%” sehe ich eher als eine weitergehende Klärung der Zielsetzung denn als eine Änderung der Strategie an” (Tietmeyer, 2005).

2016). An ECB staff article concluded that until mid-2014 monetary policy was asymmetric (more vigorously responding to overshooting the “close to, but below 2 %” target than to undershooting), and symmetric over the period 2014–2019. The article also concludes that, if after mid-2014 the (“old”) asymmetric pre-2014 policy response would have been followed, inflation and output would have been lower than its actual realization (Maih et al., 2021).

I have always found these kinds of studies confusing. The GC disliked undershooting of its “below, but close to 2 %” target as much as overshooting it but saw during the early days of the EMU a greater risk of inflation than of deflation. Just as the ECB concluded in 2021 that “the risk is more acute in the face of an increased prevalence and duration of lower bound periods compared with the conditions prevailing in 2003” (ECB Economic Bulletin, 2021).

2.3. A fundamental change in the definition of price stability?

Up to and including the ECB meeting in Vilnius on 6 June 2019, the words “below, but close to 2 % over the medium term” appeared in every press release. Then something unexpected happened. In the press release of the next meeting, in July 2019, these words were replaced by: “Accordingly, if the medium-term outlook continues to fall short of its aim, the Governing Council is determined to act, in line with its commitment to symmetry in the inflation aim”. In addition to not referring to a numerical inflation target, the words “a commitment to symmetry” appeared for the first time.

When asked by a journalist at the press conference whether we can “expect the ECB to rephrase, redefine its policy objective”, Draghi responded with: “No, there isn’t any change really […] the Governing Council reaffirmed its commitment to symmetry around the inflation aim, which in a sense is 1.9 - it’s close to, but below, 2 % […]. The symmetry means that basically there is no cap, or 2 % cap, and that inflation can deviate on both sides”. Draghi’s remarks caused great confusion and were seen by some as weakening the ECB’s commitment to price stability.

In my opinion, the July meeting saw a non-transparent change in one of the cornerstones of the ECB’s monetary strategy, “freilich ohne das von einem Ratbeschluss gedeckt zu sein” (Sinn, 2021). The formal confirmation took place with the strategy change in 2021. On October 4, 2019, several former central bankers, all concerned about the extremely accommodative policy stance being taken by the ECB, published at the initiative of Jürgen Stark a memorandum on its monetary policy (Memorandum, 2019). I was one of the signatories. According to this memorandum, the GC had de facto modified the 1998/2003 price stability definition by interpreting the “below, but close to 2 %”, as kind of a point target and had introduced an insufficiently specified symmetric approach. The former bandwidth for price stability had been replaced by a new one on both sides of 2 %. The extent to which this has had an impact on monetary policy thereafter is difficult to determine. But it is not unlikely that the GC’s adoption in 2019 of a symmetric approach around a point target had increased its risk appetite to exceed in the future the “close to, but below 2 %” limit, as inflation had been so low for so long.

2.4. The formal introduction of a new definition for price stability

On 8 July 2021, the ECB announced the results of its second strategy review and mentioned for the first time in a press release that the inflation target is 2 %, that positive and negative deviations are equally costly and therefore a symmetric approach will be followed. The ECB had

finally and formally established the new compass it wanted to sail on, but it remains difficult to see why this is a better compass than the previous one. Although the new price stability definition removes indeed "any possible ambiguity and resolutely conveys that two percent is not a ceiling", it also creates major new ambiguities and is short of specifics.

The GC did not indicate when actions ("especially forceful measures") would be needed in the event of an overshooting of the target and for how long and to what extent, after undershooting the 2 % target, the ECB would allow for such an overshoot. GC member Weidmann admitted that there could be temporary deviations from the target in both directions, but added in the same breath that the ECB's monetary policy is forward-looking and not dependent on targets that have not been met in the past. He was right, but this is not what "ordinary people" in Alan Blinder's definition of price stability Blinder, 1994) would call a "symmetric" approach. They would interpret "symmetric" as justifying a longer, less restrictive monetary policy during the recovery of the economy. This is, for example, the interpretation in a paper on the new strategy, prepared for the European Parliament, in which the ECB's "new" symmetric approach ("making up for "losses" at the ZLB") is called an optimal exit strategy (Benigno et al., 2021).

When inflation started to accelerate in the second half of 2021 and then exploded in 2022, all the ECB could say was that inflation would be brought back to its medium-term target of 2 % in a timely manner. No confusing theoretical subtleties and symmetry discussions anymore. However, there are already (and again) calls for an inflation target above 2 % (e.g. Blanchard et al., 2010, Blanchard 2023).

2.5. A step towards a multiple mandate?

The ECB is legally fully entitled to specify more precisely how it defines, in operational terms, the concept of price stability. Flexibility already existed under the old definition (a price increase >0 %, and below, but close to 2 %), but this flexibility has been brought to a "higher" level (around an inflation target of 2 %). The ECB sees that this new strategy allows for a smoother adjustment of macroeconomic imbalances in euro-area countries. According to its 2021 strategy review, balanced economic growth, full employment, and price stability are mutually consistent objectives (Lane, Paris 2022). This implicitly weakens - in case of a point target of 2 %, with an unspecified bandwidth, and in an uncertain economic environment with sometimes "tensions" between the theoretically mutually consistent objectives - the priority the ECB is obliged to give to price stability, based on the EMU founding fathers' strong conviction that this would contribute best to economic prosperity.

In my opinion, the ECB has taken an unclear step in its strategy review towards, in practice, a multiple mandate. The ECB could make its overriding priority for price stability more convincing by being more concrete about its medium-term orientation, and by specifying a (narrow) margin around the price stability target, whereby, of course, the upper end of this margin should not become the new inflation target.

When and to what extent support of the general economic policies in the Community would weaken the ECB's price stability mandate and infringe on the primary responsibility of national governments for those policies has been a (legal) bone of contention for the past 25 years, especially in Germany. The frequency with which Art. 127 is quoted has clearly increased over the years, partly under pressure from outsiders (politicians, press, analysts) who sometimes put other priorities, such as unemployment, climate and inequality, above price stability. Giving in too much to this pressure leads to mission creep. Mission creep is a gradual process. The

democratic legitimacy of the ECB as an independent monetary authority is based on its very narrow mandate. Extending that mandate runs the risk of jeopardizing independence through involvement in broader political and social debates. Climate change can have an impact on prices, but that does not make it part of the ECB's monetary policy objective, no matter how important the climate issue may be. Many other important developments outside the realm of central banks have an impact on prices but for which other authorities are responsible.

3. First steps towards non-conventional monetary policy: Addressing transmission problems

On 8 October 2008, just after the collapse of Lehman Brothers, the ECB responded to the unfolding financial crisis by cutting its key interest rates and announcing a bold series of non-standard measures. These measures were deemed necessary as developments in the money market threatened to undermine the monetary transmission mechanism. Unlimited central bank liquidity was ensured, while collateral requirements were relaxed at the same time. On 9 May 2009 the ECB initiated additional longer-term refinancing operations, extended the maturity of these operations and also announced euro-denominated covered bond purchases until June 2010. Where necessary, additional liquidity (ELA: Emergency Liquidity Assistance) was provided under the discretion of NCBs.

The ECB acted with its refinancing operations as lender of last resort (LOLR) to the banking system, thus resolving the system-wide liquidity shock. Uncertainty had led to a fall in the money multiplier and the broad money velocity. The purpose of the ECB was to "restore" the functioning of the Fisher Equation (Praet, 2016).

From the outset, the GC had regarded the non-standard measures as temporary in nature. They would be terminated respectively phased out when the situation had normalized. That normalization process took longer than expected. In 2010, tensions in financial markets flared up, prompting the ECB to re-introduce some non-standard measures and to announce the Securities Markets Programme (SMP) in May 2010, followed in September 2012 by the Outright Monetary Transactions (OMT) programme.

As a result of all these measures the composition of the Eurosystem's balance sheet changed and its size increased considerably, from around EUR 1 trillion in 2008 to EUR 2.5 trillion at the height of the European debt crisis, and ultimately to a peak in 2021 of EUR 8.5 trillion. The explosive development after 2014 was mainly caused by the ECB's assets purchase programmes.

3.1. The legal framework for asset purchases

According to its Statute (Art.18.1), the ECB is to operate in the financial markets and to conduct credit operations, whereby loans are granted based on adequate collateral. The ECB can therefore buy and sell financial assets, including bonds of public authorities. The Statute also authorizes the central bank to pursue intermediate objectives (Art. 12.1, Statute). Therefore, addressing monetary transmission problems falls within the competence of the ECB.

Purchases of government bonds – from here on I confine myself to these bonds - by the E(S)CB are subject to certain legal restrictions. They must be proportionate to the legitimate objectives of the ECB, must not lead to direct monetary financing of governments (Art. 21), must not undermine the "no bail-out clause" and must respect the principles of an open market economy. Most importantly, they must not jeopardize the ECB's overriding responsibility: to

maintain price stability (Art.2, Statute). If the above conditions are met, the ECB may support the general economic policies in the Union (Art. 119 TFEU). The interpretation of these restrictions has been the subject of many heated debates and legal battles.

3.2. The Securities Market Programme (SMP) and Outright Monetary Transactions (OMT) were created

The formal decision by the GC to establish the first securities market programme (SMP) was taken on Monday 10 May 2010 and was supported by an overwhelming majority. Irwin (2013) called it "a triumph of pragmatism over principle". Opposition came from Weber and Stark. I joined them. Under SMP, explicitly announced as temporary, the ECB and the euro area NCB's can conduct – according to their capital keys and under some other conditions – outright interventions in euro area debt securities markets. The scope of the interventions would be determined by the GC and the purchased bonds would be held to maturity. It was also decided to sterilise the impact of these interventions through specific operations to absorb the liquidity injected through the SMP to ensure that price stability remained the ECB's top priority. Important is that euro area Member State governments "will take all measures needed to meet (their) fiscal targets this year and the years ahead in line with excessive deficit procedures", and of the precise additional commitments made by some euro area governments. The ECB did not claim preferred creditor status under its asset purchase programmes and accepted the same treatment as private and other creditors, thus respecting the principles of a market economy.

The interventions under SPM remained limited and proportionate to the legitimate interest of the ECB. The highest amount held in the SMP portfolio was EUR 219,5 billion, a modest amount compared to the size of the asset purchases under subsequent asset purchase programmes. Almost 50 % consisted of Italian bonds. Overall, the ECB appeared to have fulfilled the legal conditions for making asset purchases.

The few lawsuits the SMP triggered were low profile. That was the calm before the storm. The SMP ended on September 6, 2012, and was replaced by the Outright Monetary Transactions (OMT) programme. With the introduction of this new instrument, a fundamental battle broke out over the legality of these two monetary policy tools.

By mid-2012, EMU was on the brink of collapse. To restore confidence and buy time for governments to further reduce their budget deficits and make structural adjustments to their economies, Draghi pledged on July 26, 2012 in London: "Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough" (Draghi, 2012). Draghi's statement was so successful because it effectively overruled the no bail-out clause.

The GC, concerned that monetary policy could be considered subordinate to fiscal policy, was more precise than Draghi, imposing strict conditions on its OMT decision of September 6, 2012. For carrying out OMTs strict and effective conditions were attached to an appropriate EFSF/ESM programme. The GC also decided that such a programme should include the possibility of EFSF/ESM primary market purchases and access to the bond markets of the programme countries. After heated discussions, it was decided to also involve the IMF ("for the design and monitoring of the programme(s)).

Draghi's "Whatever it takes"-statement was further "refined" by a more precise interpretation of the words "Within its mandate", to keep this statement within the proportionality requirement. The GC decided to consider OMTs to the extent justified from a monetary policy perspective and only as long as the program was fully adhered to. No ex-ante limits were set on the size of OMTs,

but the liquidity they generate would be absorbed ("sterilised") through targeted operations (ECB press release, 6 September 2012). Moreover, to comply with market principles, the ECB would accept the same (pari passu) treatment as private creditors or other creditors with respect to bonds issued by euro area countries through OMT. The GC had done its utmost to bring OMT within legal limits.

Despite the promise to operate within the mandate of the ECB, the wording of hard conditions and the promise to absorb the created liquidity, the open-ended character of Draghi's "Whatever it takes" statement and that no ex-ante limits seemed to be set convinced markets but scared many (especially in Germany), as also did his reference to the euro. This reference suggested that the ECB had entered the realm of economic policy. OMT has never been tested in practice. Draghi was so effective in his communication that it turned out not to be necessary to deploy this instrument, but that does not make the legal battles that have taken place around this tool any less relevant for future ECB policy.

Thousands of Germans - amongst them politicians, professors of law and economists - challenged OMT, claiming that the programme exceeded the ECB's mandate, infringed on fundamental rights of German citizens, and violated the prohibition of monetary financing (TFEU Art.123.1). The German Federal Constitutional Court (FCC) was asked for a ruling. It was a balancing act for the FCC: on the one hand the Court reserved its own judgment on the interpretation of the German Constitution (FCC, 2014), on the other hand it realized that the European Court of Justice (ECJ) is the highest Court for European Institutions. It therefore traditionally grants the ECJ a "right to a tolerance error".

The ECJ extensively addressed several important issues raised by the FCC (ECJ, 2015). First, 'on Draghi's "Whatever it takes" statement the ECJ was informed that an (undisclosed) limit had been set internally. Making that limit public was not an option, because it would undermine the effectiveness of OMT. Second, on whether the FCC was right to conclude that the ECB had entered "predominantly" economic policy territory" the ECJ is crystal clear. A monetary policy measure cannot be treated equivalent to an economic policy measure. And program conditionality as part of OMT does not mean that this instrument should be treated as the "functional equivalent" of an economic policy measure, merely because it can have indirect effects on the stability of the euro. Third, purchases of debt instruments directly from public authorities in the euro area are not allowed, but indirect purchases on secondary markets are not excluded if they are not used to circumvent the ban on direct purchases. Fourth, it is not the responsibility of a central bank to smooth "warranted" (justified) risk premiums. The purpose of OMT, according to Advocate General (AG) Cruz Villalón in the Gauweiler case, is not just to reduce costs "but rather to return them to levels that reflect the macro-economic reality of that State" (Cruz Villalón, 2015).

The AG's observation goes to the heart of the issue. Justified risk premiums must be accepted, unjustified ones must not. Unfortunately, systemic mispricing of sovereign debt risks is part of EMU's story (De Grauwe and Ji, 2012). Policymakers are self-evidently aware of that, but the extent to which risk premiums reflect macro-economic reality and how much is the result of unjustified (speculative) forces cannot be objectively determined. Upon activation of the OMT (or other anti-fragmentation programmes), the ECB will have to judge whether risk premiums are justified or not, thereby also taking into account that in a market economy uncertainty is part of the economic reality and must be reflected in risk premiums.

On June 21, 2016, the Second Senate of the FCC ruled on the above judgment of the ECJ, that the volume of the purchases should be mandatorily fixed from the outset and not exceed the

amount needed to restore the transmission mechanism but need not be made public. Furthermore, the limitation of the programme, which restricts it to what is necessary to restore the transmission mechanism, must be transparent. Only in exceptional cases purchased bonds can be held until maturity. All these conditions ultimately boil down to a narrowing of the scope of Draghi's "Whatever it Takes" statement and are relevant (although sometimes forgotten) for future cases. If the above conditions (and some others, which are not covered here) are not met, there is an ultra vires act and then the Federal Government and the Bundestag are obliged to intervene.

The views of the Supreme Court of Germany, as the guardian of the German Constitution, are binding on German citizens, including the government, parliament, and Bundesbank. While the FCC has no authority over the ECB, given Germany's importance to the monetary union, its views can make or break the system. Therefore, the ECB's legal department should take this Judgment seriously when advising the Governing Council on the legality of specific monetary policy instruments. My impression is that this has not been done sufficiently enough with regard to the Pandemic Emergence Purchase Programme (PEPP) and the in 2022 announced new anti-fragmentation tool, the Transmission Protection Instrument (TPI).

Until 2014 the whole discussion was about instruments, SMP and OMT, aimed at addressing temporary liquidity and monetary transmission problems. After these two programmes, up to and including the pandemic asset purchases programme (PEPP), the focus was on preventing deflation and, subsequently, on bringing the inflation rate to the ECB's goal of price stability, while at the same time addressing any transmission problem. A closer look at the monetary portfolio of the ECB shows that the explosive development of this portfolio cannot be separated from recurring problems with the monetary transmission mechanism. However, transmission problems in the eurozone turned out to be problems of a more permanent and structural nature than the transient and temporary disturbances in the financial markets that central banks had to deal with in the past and what Art.18.1, in my opinion, was intended for. Addressing recurring monetary transmission problems comes very close to (or sometimes is) conducting economic policies, bailing-out countries, and monetary financing budget deficits. The broadening of its scope has given the asset purchase programmes a different, more open-ended, and legally even more complex character.

4. The full transition to unconventional monetary policy: A road paved with legal battles

4.1. Deflationary threats

In 2014 deflationary risks reappeared on the radar screen of policymakers. Inflation was indeed extremely low in the years 2014–2016: in the US 0,6 %, 0,1 %, and 1,3 % respectively; in the eurozone 0,4 %, 0 %, and 02, %.

On May 8, 2014, Draghi told his audience at the press conference that, in view of these deflationary threats, there was unanimous agreement on the willingness to use, within the ECB's mandate, unconventional monetary policy tools. In June, several measures were announced: further cuts in the key ECB interest rates, (unconventional) targeted longer-term refinancing operations, a suspension of the SMP sterilization operations, and preparatory work on outright purchases of asset-backed securities.

On 4 September 2014, the GC decided to start purchasing non-financial private assets under the so-called asset-backed securities purchase programme (ABSPP), and euro-denominated covered bonds purchase programme (CBPP3). Unlike SMP and OMT, which were designed to

be neutral with respect to the money supply, these new programmes were designed not only to enhance the transmission of monetary policy, but also to facilitate credit provision, to ease borrowing conditions, and to contribute to returning inflation rates to levels closer to 2 %, consistent with the primary objective to maintain price stability. An obligation to sterilise did not fit in with that.

In the period September 2014-January 2015, the GC became even more concerned about the possibility of deflationary forces setting in. At its meeting on 22 January 2015, the decision (Decision 2015/774) was taken to launch an expanded asset purchase programme (APP), encompassing the already existing programmes but also public sector (i.e. Eurozone government bond) securities, to address downward risks to price stability.

The Quantative Easing (QE) that the ECB embarked on with all these programmes, and especially the APP, was a quantum leap in policy: asset purchase programmes were "promoted" from limited interventions to address temporary market frictions into a "broad" monetary policy tool for preventing a deflationary spiral and (somewhat later) achieving price stability. This "promotion", which had begun with the abolition of the sterilisation commitment, opened the door for potentially very large asset purchases. The ECB pushed the limits of its legal possibilities.

Mid-2017 Draghi declared victory over deflation: "The threat of deflation is gone, and reflationary forces are at play", but he added that inflation dynamics were not durable and self-sustaining (ECB press conference 9 March 2017). Therefore, monetary policy needed to be "persistent" (persistently accommodative). The fear of deflation did not disappear from the ECB's table after mid-2017 and gradually became, in my opinion, deeply engrained in the minds of (the majority of) the GC. It can safely be said that in the years 2017–2019 the ECB has further consolidated its monetary quantum leap. From solving rather unique problems at the ZLB, asset purchases became a (conventional) tool (to try) to bring inflation sustainably to the target value of "close to, but below 2 %. Andrew Haldane called this approach "QE for all seasons", rightly noticing that if QE were to grow in scale and permanence, the fiscal/monetary boundary would become blurred (Haldane, 2015).

4.2. Root causes of low inflation

The world went during the 1990 s and 2000 s through the largest-ever positive labor shock in history, accompanied by a global opening of markets. The effective labor supply had doubled over the past thirty years due to the rise of China, the return of Eastern Europe to the world trading system, and the increase in the participation rate of women (Goodhart and Pradhan, 2020). No wonder that wages, prices, and interest rates came under enormous pressure. No wonder the bargaining power of trade unions became very weak. By not taking these developments sufficiently into account and pursuing an ultra-loose monetary policy central bank had built a monetary pyre (Sinn, 2021).

The relation between base money and broad monetary aggregates is unstable and complex, especially in periods of uncertainty, and the same holds for broad money and spending. But being unstable and complex doesn't mean that there is no relation at all, only that it is uncertain under what circumstances the accumulated potential will have inflationary consequences. An exogenous shock, this time the corona crisis amplified by the Russian invasion of Ukraine, had triggered a complex series of unforeseen behavioral reactions and interactions, in a macro-economic environment characterized by multiple supply chain problems. The underestimation of

the importance of monetary aggregates was one of the reasons why inflation started to pick up so fast from mid-2021 in the US and Europe.

We are now in the midst of a confluence of regime changes: ageing populations, the long(er)-term consequences of the corona crisis, climate change, and more regional globalization at the expense of "global" globalization, the latter reinforced by geopolitical developments around Russia and China. All these developments imply an upward pressure on inflation and have consequences for the monetary policy to be pursued in the future.

4.3. Another legal battle, this time over the Public Sector Purchase Programme (PSPP)

Foreseeably, proceedings were again initiated, this time against asset purchases under PSPP (the Public Sector Asset purchase component of APP). On December 11, 2018, the ECJ issued its Judgment in response to a request from the FCC for a preliminary ruling (ECJ, 2018). According to this Judgment PSPP was in full compliance with the requirements of the Treaty.

The FCC took a different view, ruling that the PSPP Programme was partially unconstitutional and required the ECB to re-issue its decision with better justification and conduct a proportionality assessment within three months (FCC, 2020). This sparked much excitement among legal experts (Eleftheriades, 2020), who felt that the FCC was overstepping the limits of its judicial mandate under the German Constitution and EU law. In its ruling, the FCC instructed the government, and the German parliament to ensure that the German Constitution would be observed and to actively ensure that the ECB would carry out a proportionality test within three months in which all aspects, including all possible side-effects of monetary policy, are considered. After the ECB provided further clarification and the Minister of Finance and Parliament declared that the ECB's assessment met the requirements set out in the ruling of the FCC, the excitement of legal experts melted like snow in the sun.

I very much welcome the FCC's Judgment. Overall budgetary responsibility is part of Germany's constitutional identity and decisions with budgetary implications are taken in the Bundestag. By instructing the German Government and parliament to comply with the German Constitution and by requesting a proportionality test, the FCC was able to ensure that the ECB remained within its mandate. For following cases it is important whether the authorities will take the Court's instruction and thus their responsibilities sufficiently seriously. The financial losses that are now coming to light could become a very important point in upcoming proceedings.

4.4. The Pandemic Emergency Purchase Programme (PEPP)

When in February/March 2020 Europe was hit by the corona virus, the GC at its meeting of 12 March, decided on a comprehensive package of monetary policy measures including its new Pandemic Emergency Purchase Programme (PEPP) with an initial total envelope of EUR 750 billion. As the crisis deepened, this amount was eventually increased to EUR 1.850 billion. PEPP was called by Executive Board Member Yves Mersch the ECB's most far-reaching and exceptional monetary policy decision (Mersch, 2020).

The purpose of PEPP was twofold: to address serious risks to the monetary transmission mechanism, and to deal with the specific, extraordinary and acute economic crisis, which could jeopardize the objective of price stability. The PEPP decision explicitly states that this new programme required a high degree of flexibility in its design (over time, across asset classes and among jurisdictions), and moreover that its monetary objectives are not identical to

that of APP. PEPP, it was said, should be seen as a kind of add-on to APP, and did not have to be fully used if favorable financing conditions could be maintained with purchases under APP. PEPP was also expressly intended to be temporary and linked solely to the pandemic.

An (initial) evaluation of PEPP by the ECB concluded that this tool had been successful in effectively stabilizing markets under extremely difficult. As to its macro-economic impact, it was concluded that, on a conservative estimate, that the pandemic related measures supported growth by a cumulative 1.8 %-points and inflation by 1.2 %-points over the period 2020–2023. These growth and inflation estimates are based on a comparison with a counterfactual scenario in which the ECB did not ease its monetary policy stance (Böninghausen et al., 2022). I am quite skeptical of numerical model results of counterfactual scenarios in such extreme circumstances. I have also from the outset wondered how the ECB could ever get rid of its exploding monetary portfolio and whether other side effects, such as a reduction in the degrees of freedom with respect to its future monetary policy, as well as significant financial losses during a monetary tightening process, should also not have been considered more thoroughly. After all, a proportionality test, taking into account all possible side effects, was one of the requirements of the German Supreme Court in the PSPP case.

Compared to previous programmes, PEPP pushes further in several ways the boundaries set by the legal constraints on asset purchases. Grund (2020) concludes that the legality of the programme can be very well defended given the extraordinary economic circumstances and the Court's assessment of previous bond purchases programmes. Nor does PEPP, according to him, undermine incentives for sound fiscal policies because of the resetting of fiscal parameters (a relaxation) by the European Governments and the Commission.

PEPP was, unsurprisingly, legally challenged. A group led by Professor Markus Kerber, filed a lawsuit in March 2021. Some flexibility would be justified due to the extraordinary pandemic circumstances and the far-reaching measures taken by governments. The apologetic keyword is "pandemic related". But for various reasons, the outcome of legal procedures is not 100 % sure. A proportionate deviation from the issue(r) limits would be unlikely to render the PEPP unlawful. But questions may arise as to whether PEPP's implementation adequately meets the criteria set forth by the FCC in its 2020 Judgment on PSPP. In 2020, as a percentage of newly issued debt, the ECB purchased 95,5 % of euro area government debt and 117,1 % of Italian debt. In 2021, the ECB continued to buy bonds massively, predominantly under PEPP. Financial market participants (and governments) knew of course with almost 100 % certainty that they could resell government bonds (albeit not those newly issued bonds) to the ECB. Given the total size of the purchases (a quarter of the government debt is now on the balance sheet of the Eurosystem), it is difficult to maintain that no monetary financing of government deficits has taken place.

Net purchases under PEPP were halted at the end of March 2022, meaning that the GC considered the COVID-19 crisis over. It is hard to understand that at the same meeting the GC announced an extension of the PEPP reinvestment horizon from the end of 2022 to at least 2024. Ongoing reinvestments weaken the link with the pandemic as well as the transitory nature of PEPP. The extension of the initial date for ending reinvestments of PEPP from 2022 was undoubtedly a step towards decoupling PEPP from the pandemic. This decision does not appear to be in line with the spirit and the text of the GC's Pandemic Decision. So even if the German Court were to agree with PEPP as a monetary policy tool, it could still have major problems with the actual use of this instrument. Recently, Brooks and Marsh (2023) put forward a completely new argument to end PEPP reinvestments soon. These reinvestments blur the true costs of public debt in the euro area and, thereby, undermine the reliability of the debt sustainability analyses.

These analyses are a crucial part of the EU Committee's reform proposals for a new budgetary framework.

4.5. A new anti-fragmentation instrument

In late 2021 and the first half of 2022 it became increasingly clear that the ECB had underestimated underlying inflationary pressures, and that monetary policy would need to be tightened. Monetary transmission problems once again appeared. At the GC meeting of 21 July 2022, the ECB launched the Transmission Protection Instrument (TPI), to address these problems. The availability of this new instrument enabled in the GC's view a more rapid increase in policy rates (0,5 % instead of the expected 0,25 %). The new tool can be used to counter disorderly market dynamics that threaten the monetary transmission process, at least insofar as they are not the result of country-specific fundamentals.

A decisive criterion in previous court proceedings has been sound public finances and sound macro-economic policies. Strict conditionality, aimed at achieving this goal, was a condition sine qua non for the activation of OMT. The mere fact that it was considered necessary to develop a much more flexible and permanent anti-fragmentation instrument suggests that the ECB has given way to those who do not accept the strict conditions attached to OMT. In the same direction points that in TPI, when the GC decides on its activation, meeting certain criteria is an input and no longer a necessary condition. The TPI eligibility criteria are also not watertight (Buiter, 2022).

Moreover, the relation between TIP and PEPP raises serious questions. During the press conference at which TPI was launched, Lagarde said that flexible reinvestments of maturing purchases under PEPP remain the first line of defence to counter unjustified risks to the transmission mechanism, a remark echoed (among others) by the governor of Italy's central bank, Ignazio Visco, at an OMFIF meeting on 3 November 2022 (Williams and Pearce, 2022). The (weak) argument for this seems to be that insofar as high debts are at the root of the transmission problems, these debts are partly related to the pandemic. It is hard to take this argument seriously.

Several other issues regarding TIP are not resolved or perhaps resolved but not communicated transparently, as required by the FCC (Wellink, 2022). The press release is silent on the capital key as a benchmark for the asset purchases. This is in my opinion unacceptable for accountability and legal reasons. Not mentioning this benchmark raises questions about loss sharing. It has reportedly been decided that there will be no risk-sharing at all. If true, this will make this tool less effective in the eyes of market participants, as countries already in trouble would have to bear even more risks.

Lack of clarity also exists with respect to sterilisation. The press release on TPI makes it clear that the purchases will not have a persistent impact on the overall balance sheet of the Eurosystem. This formulation vaguely refers to sterilisation, but the use of the word persistent in practice leaves all options open in terms of timing, and deviates from the straightforward sterilisation promise under SMP and OMT.

The ECB will end purchases under TPI, either upon a sustained improvement in transmission or on an assessment that continued tensions are due to country specific fundamentals. The latter is a two-edged sword. Ending purchases because tensions are home-made, for example during a political crisis, is tantamount to blowing up the system. Therefore, safeguards should be built in, and therefore OMT is a better instrument to cope with fragmentation problems.

At some point, markets will test the ECB's tolerance for widening spreads. The ECB then must decide whether transmission problems are justified or not, and to what extent. This is a tough, almost impossible job. Moreover, the ECB would have to decide on whether they are still pandemic-related or whether OMT or TPI should be activated. Different criteria apply to each of the three anti-fragmentation instruments. Three instruments to choose from is too much of a good thing.

In my opinion, the ECB is with this new instrument, if applied (which has not been the case so far), entering a legal minefield and should be very concerned about its legality, just as it should be concerned about using PEPP to solve non-pandemic related problems.

5. Reinvestment policy, financial and accounting issues

5.1. The ECB's reinvestment policies

On 25 January 2018, the GC confirmed that maturing securities would be reinvested "for an extended period of time" after the end of the ECB's net asset purchases. According to Draghi this was set in stone. At the press conference 9 months later, in September 2018, a journalist rightly complained about the lack of information on the reinvestment policy. Draghi promised to come back to this topic at one of the next meetings but was very explicit that the capital key "remains our anchor in what we do on reinvestments, just to clear the slate from any doubt". In December of that year some further clarity was offered. The GC had unanimously decided to fully reinvest principal payments from maturing APP securities for an extended period of time beyond the date when it starts raising interest rates.

The ECB discontinued net asset purchases under the APP as of 1 July 2022 and raised its policy rates that same month. This marked the beginning of the so-called "extended period of time" for reinvestments under the APP portfolio. For PEPP securities (not existing in 2018) it was decided to extend full reinvestments until at least the end of 2024. Net asset purchases under this programme were discontinued at the end of March 2022.

As of March 1, 2023, the ECB stopped fully reinvesting the maturing securities purchased under APP. The run-down of the APP portfolio remains a slow process considering the ECB's monetary portfolio of almost EUR 5 trillion in March 2023 (EUR 3.2 trillion under APP and EUR 1.7 trillion under PEPP). The much later phase-out of PEPP is motivated by the ECB by the greater flexibility of this instrument. However, this ignores the fact that this flexibility was justified by the unpredictability of the corona crisis that is now behind us. It also ignores that PEPP was seen as a flexible add-on of APP, whereas in practice APP has become a kind of add-on to PEPP.

The ECB's reinvestment policy has always amazed me, although of course I understand that market conditions need to be closely monitored and considered. But it is hard to understand how fairly specific forward guidance could be given (for APP: "…extended period of time past…" respectively for PEPP: "…. until at least 2024") long before the start of a monetary tightening cycle, with the ECB not knowing at that time anything about the specifics of such a cycle and seemingly ignoring potential losses that could result from an inevitable future hike in key ECB interest rates. The earlier in the tightening cycle, the greater the likelihood of additional losses on reinvestments. Once the monetary tightening process has progressed, reinvestments will of course start to become profitable, but non-monetary considerations should never be a reason to continue with these reinvestments.

Not reinvesting maturing securities and/or selling securities means that government bonds move from the balance sheet of central banks to private investors, putting them at risk that interest rates may change over the life of bonds. This will push the term premium upwards and contribute to the tightening process. Admittedly, it may be more complex to assess the consequences of such a strategy than of an interest rate hike (particularly in the European context where fragmentation problems resurface time and again), but that is what the ECB could have realized earlier and certainly before its monetary portfolio "exploded".

Therefore, transparency is needed about how the ECB balances the monetary implications of a reduction of its securities portfolio against an increase in its key interest rates. Other considerations also need to be made transparent, including the possible financial consequences associated with the very slow run-down of the monetary asset portfolio.

5.2. Significant losses on monetary portfolios

On September 9, 2022, Governor Knot of De Nederlandsche Bank (DNB) wrote to the Dutch Minister of Finance that DNB expects cumulative losses in the coming years of the order of EUR 9 billion (or more). As a consequence of the increase in key ECB interest rates, no profit could be transferred in 2022 by DNB to the government for the first time in many decades.

Since 2015, DNB has gradually built up a special provision for losses on asset purchase programmes and had also slightly strengthened its capital and reserves (up to EUR 8.5 billion). Against this special provision of EUR 2.3 billion in 2022, there is a risk estimated at EUR 23.4 billion (Annual Report DNB 2022). This does not bode well for the future. The Dutch Minister of Finance has informed Parliament about the establishment of a Working Group to assess DNB's capital position (Kamerdossier 32013, 2023).

DNB is of course not the only central bank to record financial losses. The ECB recently published a loss for last year of EUR 1.6 billion and the Bundesbank had to post its first loss in more than 40 years. These losses were covered by the release of provisions. Other NCBs will follow, if not in 2022 then in later years. To what extent future losses can be covered by existing buffers is not clear, as the situation varies from country to country. "The disclosure of public risks is not harmonized across the Eurosystem's central banks, as the disclosure is affected by the different circumstances applicable to each central bank, such as the existence of private shareholders or public guarantees, the different approaches towards building up financial buffers against financial risks, and even the different disclosure traditions and cultures across central banks" (ECB, July 2015). After 25 years it is high time to address these issues.

Given the securities held by the Eurosystem for monetary policy purposes and the level of the renumerated excess reserves of banks, cumulative financial losses on the asset purchase programmes in the order of EUR 400–600 billion (for the system as a whole), would not surprise me.[3] These losses are the result of low yields on the assets purchased and the rising costs of financing them (interest paid on bank deposits with the central bank) and will eat into the capital and reserves of the Eurosystem, affecting remittances to governments and, in some cases, forcing governments to replenish the capital of their central bank. According to a recent IMF Working Paper (Belhocine et al., 2023) one should not worry too much about financial losses, because – although these losses are material – they will be temporary and recoupable (IMF Working Paper,

[3] Admittedly, without knowing the details of the monetary portfolios, my rough estimates are surrounded by great uncertainties. Losses could turn out smaller, depending on future interest rate developments, reinvestment policies, and the remuneration of unknown reserves that banks hold with the central banks.

2023). The calculations cover 10 years in which a return to the "steady state" takes place and central banks, of course, will generate profits again. The findings indicate two years of loss-making for the Eurosystem as a whole, five years for the Bundesbank, and zero annual losses for the Banca d'Italia. It will take much longer (until 2027) to recoup the consequences for the capital, reserves and general provisions of the Eurosystem as a whole. For some central banks full replenishment is reached earlier, for others (e.g. the Bundesbank) this may take much longer. For central banks, such as the Bundesbank, that have bought bonds from (their own) governments with a relatively high credit rating, the losses on monetary portfolios are relatively high.

In theory losses of central banks are nothing to fear, but in practice they can spark heated debates about the wisdom of central bank policies and ultimately their independence, in the eurozone not only because of the size of the losses but also because of the distribution among NCBs. The ECB can reduce the risks associated with such debates by being highly transparent about possible losses in a timely manner and clearly explaining that the purchases were necessary to fulfill its mandate (Bell et al., 2023).

Reducing the size of excess reserves (e.g. by increasing obligatory reserves) and/or reducing the remuneration on excess reserves could lower the financial losses but must of course be compatible with the ECB's monetary policy. Selling/not reinvesting its securities holdings is one option for the central bank to reduce excess reserves, converting these reserves into long-term bonds is another. Selling, of course, would immediately reveal losses.

The question arises of how to steer interest rates in the future – when excess reserves are expected to remain quite high and the demand for reserves is uncertain for various reasons towards levels consistent with the ECB's price stability mandate, while minimizing potential losses. (…The ECB aims to achieve its policy objectives with the lowest possible risk….”; "…. any financial loss incurred by a central bank is a loss of public funds…" (ECB, July, 29015). In a speech, Isabel Schnabel, Member of the Executive Board of the ECB, discusses challenges and solutions related to the existence of large reserves (Schnabel, 2023). She reiterated the GC's intention to decide on its future operational framework before the end of 2023. It is not clear why this should take so long.

5.3. The accounting veil.

Until recently potential losses on asset purchases have attracted limited attention, although central banks have resorted to instruments that are financially far more risky than any other. Ten years ago, the BIS already ("now that many central banks are operating far beyond traditional policy limits") produced a paper drawing attention to this (Archer and Moser-Boehm, 2013). Of the many aspects covered in this document, I focus on accounting issues.

ECB assets related to monetary policy operations are not measured at fair value (through profit and loss or equity) but recorded at amortized cost. They are held to maturity and not revalued. Thus, unrealized losses remain unrealized as long as the securities are not sold. However, a rise in interest rates affects the net income position of the ECB and NCBs negatively.

The idea behind this accounting is that a fair value approach could lead to significant fluctuations in profits/capital and potentially hamper monetary policy. However, this approach goes against what is required for transparency reasons from banks. Monetary assets that should be available for sale at any moment, are locked in until maturity. For good reasons, the FCC has decided that purchased bonds can only be held in exceptional circumstances until maturity and

that these bonds must be sold when continuing the interventions is no longer necessary (FCC, 2016). Kerber recently pointed out that this accounting methodology limits the ECB's monetary policy options (Kerber, 2023). However, it may be arguable to hold purchases under SMP and OMT until maturity (at amortized costs) because of the relatively small size and monetary neutrality because of the sterilisation commitment.

According to most central banks, their unique position would justify the amortized cost approach for all QE purchases. I am not convinced. The amortized cost approach and the resulting lack of transparency may have misled even the central bankers themselves. Treating the monetary portfolio as available for sale and thus on a fair value basis would perhaps have acted as a brake on the very large asset purchases and on the ECB's decision to make asset purchases part of its conventional monetary toolbox.

NCBs have been provisioning (insufficiently) for possible future losses related to QE for some years now, but certainly not on an adequate scale and it is striking how little attention, until recently and with exceptions, is paid by central banks to interest rate risk, as opposed to (relatively small) other risks. This is despite the commitment that "the Eurosystem aims to assure adequate protection of its balance sheet over the economic cycle" and the realization "that any financial loss incurred by a central bank is a loss of public funds" (ECB, July 2015). One would expect the ECB and NCBs to regularly conduct serious interest rate stress tests, as banks are required to do. If these tests have taken place, the question arises as to how serious they were and whether the results, for accountability reasons, should not have been published, as DNB has done in its 2022 Annual Report. Without such information it is difficult to determine whether purchases on such a large scale as in recent years are "proportionate to the legitimate interests" of the ECB.

Either way, a fundamental reflection on the asset purchases policy, including accounting aspects and communication, seems urgently needed. Too easily, in its strategy review of 2021, the ECB has included this instrument, to be used for broad monetary policy purposes, in its conventional monetary toolbox. I agree with Gros (2022) that "In hindsight, it is clear that central banks made a colossal mistake in continuing massive bond-buying programs over the last few years". Since private financial institutions followed suit by purchasing also high-priced government bonds at a huge scale. De Larosière - referring to banking problems in the US - cynically concluded that central banks "have thus delivered a masterclass in how to organize a financial crisis" (De Larosière, 2023).

6. Forward guidance as part of the non-conventional toolbox

Central banks have always given some kind of Forward Guidance (FG), but before the Financial Crisis in 2008 usually in a weak form. "Real" FG by the ECB started with rate forward guidance, but gradually expanded to other monetary policy instruments. The logic is that the use of all monetary instruments must be seen in relation to each other. This immediately raises questions about the sequence and to what extent mutually reinforcing effects can/will occur (Committee on the Global Financial System, 2019). FG is part of the central bank's broader communication strategy. A comprehensive overview of all related aspects, including the now very extensive literature, can be found in De Haan and Hoogduin (2022).

The first ECB FG in 2013 reads as follows: "The Governing Council expects the key ECB interest rates to remain at present or lower levels for an extended period of time. This expectation is based on the overall subdued outlook for inflation extending into the medium term [….] In the

period ahead we will monitor all incoming information…and assess any impact on the outlook for price stability". Draghi called the statement "an unprecedented step of giving forward guidance in a rather more specific way than the ECB has ever done in the past". It was indeed again a quantum leap, because until then the ECB never "pre-committed".

6.1. Forward guidance after the strategy review

The FG wording has changed since 2013 and broadened over time, but these changes were (not irrelevant) modifications around essentially the same messages. A more fundamental change took place following the introduction of the ECB's new monetary policy strategy in July 2021.

Philip Lane, Chief Economist of the ECB and member of the Executive Board explained in a blog its consequences (Lane, 2021). Based on two strategy innovations (the definition of price stability as a symmetric point target of 2 % and the commitment to take into account the implications of the ZLB) he concluded that under the prevailing circumstances, the FG language should be strengthened. And that is what happened as of the GC July 2021 meeting. This turned out to be a major policy mistake. The three explicit conditions that should be met before raising interest rates, were all aimed at preventing too early a monetary tightening, based on fears that inflation would remain too low. Lane's speech on the ECB's monetary policy roadmap (Lane, Berlin 2022). also emphasizes this.

As reasonable as these conditions may look on paper, in practice they are a successful recipe for being constantly behind the curve with interest rate hikes. Or, as De Haan and Hoogduin (2022) put it: "Forward guidance seems to have hindered rather than promoted an adequate response to the recent rapid increase in inflation". Reinforcing the language, being too explicit, entails dangers. GC members do not know the future either, at least not better than market participants. As Mervyn King said in an interview with Martin Wolf in the Financial Times (14 June 2013): "I suppose the thing I hadn't really appreciated was a key part of the work of Keynes. It was the idea that the future is unknowable". If a central bank's FG is too specific and outspoken, especially for somewhat longer periods, and reality behaves differently, such a central bank loses credibility. Credibility is about finding the right balance between the clarity of the message and the flexibility left to the central bank. That balance had been lost since the strategy review in 2021 and throughout the first half of 2022. At the beginning of November 2021, the President of the ECB firmly stated (repeating this message a month later) that a rate hike in 2022 was highly unlikely.

Until February 2022 (for 9 years in a row) the guidance on interest rates did not change. Interest rates were expected "… to remain at their present or lower levels until …." (Press release, 3 February 2022). This even though core and headline inflation in the euro area had been rising already strongly before the Russian invasion of Ukraine on 24 February 2022. According to an ECB paper on recent errors in the Eurosystem's inflation projections, some underestimation had started to occur in the first quarter of 2021. This underestimation gradually increased over the year and reached a size that was the largest since the projections began in 1998 (Chahad et al., 2022).

In the press release of March 10, 2022, the words "or lower" were finally removed, but surprisingly still contained: "remain at their present levels". In April 2022, the GC considered it increasingly likely that inflation will stabilize at the two percent target over the medium term. "Under this pathway, the degree of monetary stimulus […] can be normalized in a gradual fashion towards a more neutral setting" (Lane, Paris 2022). In the June meeting of the

Council, it was decided to maintain during the normalization process optionality, data dependence, gradualism, and flexibility. These assessments and criteria translated into the decision not to raise key ECB interest rates until a month and a half later. A sense of urgency was clearly missing.

It is hard to understand why the GC was so slow to respond to the rapidly rising prices. Governors apparently still viewed the upward pressure on prices as temporary and based their policies on the criteria of the 2021 strategy review. I think there was perhaps also another reason. Some GC members saw the two ECB rate hikes in 2011 as a major policy mistake, contributing to the European debt crisis in 2012. They had forgotten that it wasn't the ECB's two rate hikes that eventually triggered the full-fledged outbreak of the debt crisis in 2012, but the tedious, time-consuming and often controversial decision-making process at the national and European level regarding the rescue of troubled Euro countries.

Once bitten, twice shy. The ECB completely scrapped FG when it announced a rate increase in July 2022. President Lagarde: "…and therefore the combined forward guidance that existed for September is no longer applicable. From now on, we will take our monetary policy decisions on a data-dependent basis- we will operate month by month and step by step".

In my view, the ECB has gone from one extreme (a reinforced FG in July 2021) to –initially at least - an unclear other (in June 2022), by emphasizing in its communication also the importance of optionality and gradualism. These words were not very helpful in an environment of accelerating inflation. Fortunately, they already seem obsolete and are no longer mentioned. Without these additions and relying on Lagarde's precise wording, the ECB is back to square one, being the FG language used before 2013. In addition, it has taken seriously Mervyn King's reference to Keynes, as witnessed by a speech by President (Lagarde, 2023): "It would be foolish, in forming our expectations, to attach great weight to matters, which are very uncertain" (Keynes), and: "Uncertainty is an uncomfortable position. But certainty is an absurd one" (Voltaire). Hopefully the lessons learned will stick.

7. Micro-prudential supervision and financial stability: Major changes in the ECB's responsibilities

Since the establishment of the ECB in 1998, major changes have been enacted in the field of supervision and financial stability. A landmark was to entrust the ECB with micro- and macro prudential supervision from 2014 (ECB, 2014).

Coming from a country with traditionally monetary policy and prudential supervision under one roof (DNB), I am fully aware of the potential informational advantages and economies of scale of such a model. But there are also arguments against. That institution could become too powerful, especially if it has been given an independent status. Moreover, the involvement of central banks is not only a source of synergies but also of potential conflicts of interests between monetary policy and supervision. Moreover, policy failures regarding one of the two responsibilities can jeopardize the other.

Since in practice the political risks of supervisory failure are greater than those of monetary failure, some central bankers were highly skeptical of the "one-roof" model. The strong German views on this issue were based on the fear that monetary policy and central bank independence could be endangered by the responsibility for micro-prudential supervision. The Statute of the ECB should be seen as a compromise, but nevertheless strongly reflects the German views. According to this Statute, the E(S)CB shall contribute to "the smooth conduct of

policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system". In addition, the ECB "may perform specific tasks concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings". The words "competence" and "specific" must be seen in conjunction, meaning that "specific" indicates a limitation of the scope of the supervisory tasks that can be assigned to the ECB. The supervisory task is also not mentioned as one of the basic tasks of the ECB in Art. 127, 2 of TFEU. Smits (1997) provides insight into the course of the legal discussions on this.

7.1. A quantum leap for supervision

In October 2008 the EC President, José Manuel Barroso, asked Jacques de Larosière to chair a High-Level Group (HLG) to put forward proposals for "strengthening European supervisory arrangements covering all financial sectors, with the objective to establish a more efficient, integrated and sustainable European system of supervision". The HLG report, published on 25 February 2009 (de Larosière et al., 2009), contained many recommendations, including a greater role for the ECB in macroprudential oversight. The HLG rejected the idea of entrusting the ECB with micro-prudential supervision as conferring a micro-prudential task on the ECB would thwart its monetary responsibility and jeopardize its independence.

The EU took almost all the recommendations on board and decided on a complete overhaul of the supervisory architecture in Europe, including the establishment of a European banking supervisor ("a single supervisory mechanism (SSM)") and a single resolution mechanism (SRM). Contrary to the advice of the HLG, the ECB became the micro-prudential supervisor. Its supervisory role is based on a Council Regulation (of 15 October 2013) "conferring specific tasks on the European Central Bank concerning policies relating to prudential supervision of credit institutions". From a legal perspective the attribution of specific supervisory tasks to the ECB appears to be in line with the text of the ECB Statute. The "trick" is that the Council Resolution uses the word "specific" repeatedly, referring to the Treaty and the Statute of the ECB. But assigning specific tasks is different from entrusting more or less full supervisory responsibility to the ECB. Article 4 places all major prudential tools in the hands of the ECB, which has exclusive competence over all supervised institutions, small or large (Judgment of the General Court of 16 May 2016).

By basing the SSM on Art. 127(6) TFEU, the Union legislator has opted for a "broad" interpretation. Ter Kuile et al., (2015) seem to suggest that the legislator had a choice between a broad and narrow interpretation, but the text of the Statute is, in my opinion, crystal clear. The ECB took over all crucial responsibilities of the hitherto competent authorities.

7.2. Necessity knows no law

Necessity knows no law. The quantum leap in supervision in Europe can only be welcomed, as it was a major step in the right direction, and speed with respect to strengthening supervision was of the essence. But it is always good to reflect after a crisis on whether the right measures have been taken.

The Council Regulation seeks to avoid conflicts of interests as much as possible by requesting the ECB to "ensure that the operation of the Governing Council is completely differentiated as regards monetary and supervisory functions. Such differentiation shall include strictly separated

meetings and agendas". To minimize the risks of conflicts of interests, clear and precise organizational and procedural instructions are given to the monetary and supervisory staff of the ECB. There are all kinds of checks and balances built in, but in the end the GC is the ultimate decision-making body with regard to monetary policy and micro-prudential supervision. It is interesting to note that only a small number of the jurisdictions analyzed in a 2018 FSI report, appear to have assigned the monetary and supervisory responsibilities to different decision-making bodies within the same organization. The focus was more on exploiting synergies than on preventing conflicts of interest (Calvo et al., 2018).

The first evaluation of the new system was published in 2017 (Report Commission, 2017). The Commission was rightly very positive about the functioning of SSM, had not identified any major issues regarding the independence of the ECB, and considered the single supervisor a solid and reliable part of the banking union. The fundamental objections to the "under one roof" model (overly powerful organization, democratic legitimacy, conflict of interest, threat to independence) had been addressed as best as possible. Yet they have not completely disappeared. To mitigate remaining conflict of interest- and reputational risks, it would be good if the GC would cease to be the ultimate decision-making body on micro-prudential issues. Under normal circumstances this role does not cause any problems. Problems surface in real crises, but then it is too late and the damage done.

7.3. A greater focus on financial stability

Since the beginning of this millennium more and more central banks have come to the conclusion that financial stability is a core task and that price stability cannot be achieved without financial stability. It was a return to the days in which – to quote Tommaso Padoa-Schioppa, a prominent member of the Executive Board of the ECB – "the role of central banks in financial stability was part of their genetic code" (Padoa-Schioppa, 2002). According to the Treaty, the ECB must contribute, together with other authorities, to achieving financial stability (same wording as used with respect to micro-prudential supervision). Financial stability cannot take precedence over price stability (Mersch, 2018). In the same vein President Lagarde (Lagarde, 2023). This is easier said than done. Making a distinction between the price and financial stability objective is theoretically straightforward, but under financial (or other) stress conditions it remains in practice a major challenge.

Although financial stability is seen as a prerequisite for an effective monetary policy, there is no legal definition of financial stability in the Treaty or Statute. The ECB defined financial stability as a state in which the financial system can withstand shocks and unravel financial imbalances. In December 2004, the ECB began publishing financial stability reports, long before it got a legally more precisely defined role. Since 2014, the ECB has been obliged to closely cooperate with the European Securities and Markets Authority (ESMA), the European Systemic Risk Board (ESRB) and other authorities that are part of the European System of Financial Supervisors. None of these institutions have exclusive competence for financial stability. This also applies to the ECB, but it nevertheless plays a sort of overarching, steering role.

The ECB's relationship with the authority responsible for macroprudential supervision, the ESRB, is very close. The President of the ECB presides over this Board, which includes national central bank governors and the chairs of the ESAs as members. The Board of the ESRB is based at the ECB's offices in Frankfurt and the ECB provides the secretariat. It follows from the above that in practice the ECB is doing more than just contributing to the smooth functioning of the

competent authorities. It could be seen as a kind of competent authority itself, but - unlike in micro-prudential supervision – the GC is not the ultimate deciding body.

The ECB is fully aware of its prominent role regarding financial stability and has made this an integral part of its new analytical framework. The full integration of financial stability in the ECB's policy framework, as announced in the ECB's 2021 strategy review, remains an extremely complex and challenging task. Financial, monetary, and business cycles have different lengths. Monetary cycles are longer than business cycles. Also, there is no synchronized financial cycle across the euro area countries (Zsolt and Martins, 2021). That's why the ECB started with a two-pillar approach (economic and monetary analysis). Fully integrating the two pillars was seen as very problematic in the past, integrating three pillars into a general equilibrium framework will even be more complicated.

8. Concluding remarks

Europe embarked on the Economic and Monetary Union (EMU) without sufficiently safeguarding some of the essential conditions that must be to run a monetary union smoothly. The full consequences of this omission came to light during the unprecedented crises the ECB has faced since its inception. The singleness of the ECB's monetary policy was threatened by recurring problems in the transmission mechanism. The lack of harmonized supervision and with it of a supra-national supervisor, seriously hampered the solution of problems that had arisen in the banking sector and threatened financial stability. System risks did not appear sufficiently on the radar screen of policymakers due to underdeveloped macro-prudential policies and insufficient cooperation between the supervisors on the financial sector.

All these issues had to be addressed in a highly complex economic and institutional environment by a young central bank whose top priority is price stability. This priority is cast in Treaty stone and its precise definition is left to the Governing Council (GC). The original definition ("close to, but below 2 %) was maintained for about 20 years. At the core of the new definition is the message that 2 % is not a ceiling, that (temporary) deviations are allowed, and that the ECB is aiming at 2 % inflation over the medium term. A fierce symmetry discussion has been waged to weaken the price stability objective. Whether the formal change in 2021 in the definition is incremental or more fundamental depends entirely on the GC's uncertain future interpretation of its own new definition, in particular regarding the bandwidth around the inflation target and the timeframe ("medium term") within which price stability must be achieved. The pressure to weaken the inflation target will be great.

Mission creep threatens the priority the ECB should give to price stability. Mission creep is a step-by-step process, inspired by the best of intentions (climate, inequality, unemployment). Every step seems acceptable ("while maintaining price stability as its overriding priority"), but at the end of the journey one has arrived at the wrong address and undermined its independence. "A central bank in a democracy is not an all-purpose do-good agency" (Cochrane, 2020), but an institution with a deliberately very narrowly defined mandate. The more broadly this task is interpreted, the stronger the argument for ending independence.

When it comes to monetary policy the GC's view was the unusual external circumstances necessitated the use of non-conventional monetary policy instruments, including forward guidance (FG) and asset purchases.

FG has been part and parcel of the ECB's toolbox since 2013. There had been some (weak) forward guidance before. The use of strong FG, in uncertain circumstances, carries the risk of

losing the right balance between the clarity of the message and the necessary flexibility that should be left to the central bank. That balance was lost in the last months of 2021 and throughout the first half of 2022. From July 2022, the ECB completely changed tack and announced to make its monetary policy decisions "on a data-dependent basis- we will operate month by month and step by step". With this decision, the ECB is back to square one ("not pre-committing"; "relying on incoming data"). The lesson: be careful with FG. Credibility is easily lost, but hard to regain.

Asset purchases have been the ECB's most important non-conventional monetary policy instrument. The Eurosystem's asset purchases are subject to several Treaty conditions. These conditions have been legally tested time and again. I see them, in the politically and institutionally complex European environment, as part of the necessary checks and balances rather than unpleasant interference in the activities of the ECB.

The evolution of asset purchases shows that from initially addressing monetary transmission problems, they took on a much broader application after 2014. There has been endless debate about whether this is in accordance with the intent of the articles in the Treaty/Statute relating to the purchases of securities on the secondary market. I think the ECB has gone too far with QE, if not for legal reasons than for financial and monetary reasons. The huge financial losses that have now come to light raise serious questions about the size of the purchases deemed necessary, whether alternatives were not available, and whether the ECB has communicated with sufficient transparency about the coming losses.

QE is largely one-way (as the Japanese experience has shown). It is an inherently asymmetric instrument: buying assets is easier than selling them. Keeping these assets on the balance sheet until maturity (at amortized costs), which is the current policy, is to some extent an expression of this asymmetry. The accounting approach may have led both bankers and central banks to erroneous policies. Large-scale QE creates many undesirable side effects, amongst them serious distortions in many market segments and potentially huge financial losses for central banks. It should only be used – apart from dealing with short-lived temporary market disturbances in accordance with its traditional usage – in very exceptional circumstances, and then on a limited scale. Placing this instrument in a central bank's conventional toolbox to actively use it for broad monetary policy, is a recipe for trouble.

Triggered by the corona crisis, the ECB introduced in 2020/2021 a new instrument, PEPP. Initially this instrument was "sold" as a relatively modest, not necessarily fully utilized add-on to existing programmes. However, PEPP became stealthily the main component of the ECB's net purchases and reinvestment policy, not an add-on. In addition, PEPP became increasingly disconnected from the pandemic, which increased the legal vulnerability of this instrument.

Legally vulnerable seems also the new ant-fragmentation tool (TPI) that was approved by the GC in July 2022. In the euro area monetary transmission problems are a recurring phenomenon. But that is not enough argument to create a completely new anti-fragmentation tool. OMT is the appropriate (but by some governments disliked) instrument to address deep-seated problems. For incidental and temporary market disruptions a new instrument does not seem necessary. As with FG and PEPP, the decision-making with respect to TPI seems to have been a bit messy lately.

The same applies to monetary policy, at least in 2021 and the first half of 2022. In 2021 the ECB underestimated inflationary developments and the already built-up inflationary potential, with the serious consequence that its strategy review (published mid-year) was retrospective. This left the ECB behind other central banks when it became necessary to tighten monetary policy. The 2021 strategy came way too late and was outdated. The current strategy is said to be

thoroughly reviewed in 2025, but this should be brought forward. Learning in time from what went wrong in the past, is part of a healthy growth process.

Much progress has been made in several important areas over the past 25 years. In particular, the framework for financial stability and supervision has been significantly strengthened. However, the integration of financial stability into the monetary policy framework still leaves room for further improvement. More attention should especially be paid to the ECB's own role in the build-up of potential financial stability problems.

A huge leap forward has also been made in the field of supervision. The very careful way in which this task is organized, prevents as much as possible conflicts of interest with monetary policy. However, the question remains whether the role of the Governing Council as the ultimate decision-making body, also in the field of micro-prudential supervision, should not be reconsidered.

Like other central banks the ECB had to navigate – especially since the corona crisis - in thick fog and the fog is sometimes thicker in Europe than elsewhere. Weaknesses in the design of the EMU and unforeseen economic developments have led the ECB to make a disproportionate contribution to necessary adjustment processes. It cannot continue to do so without jeopardizing its own mandate and without violating the legal framework within it must operate. In addition to the completion of the banking union and the capital markets union, there is an urgent need to adjust prudential regulation with regard to investment in government bonds. These measures would reduce bank's home bias and make the financial system in general and the monetary union more resilient to shocks. However, the weakest point regarding the EMU remains insufficient control of public finances. At the start of EMU, 2 in 11 participants had a government debt of more than 100 %, in 2022 there were 7 in 20, including three large countries (Italy, France and Spain). Therefore, the vulnerability of the monetary union has increased. To avoid accidents in the future, the (coming) new EU Commission's budgetary rules must be strict enough and enforceable.

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