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20 years of EMU, 10 years in crisis mode: What might the future "new normal" of monetary policy look like?

Having contributed to the organization and the design of the OeNB's Economics Conference for more than 20 years, these more than 20 years in Central Banking and the Eurosystem coincide almost exactly with the first 20 years of the euro. This gives me a perfect background to review the developments over this period from a monetary policy perspective, complementing the previous stimulating presentation by Luiz de Mello which concentrated on real developments as well as important institutional features of European Economic and Monetary Union (EMU) over the last two decades.

The simplest EMU timeline ever: extended version

If one is asking for the simplest possible timeline of EMU since its (formal) start in 1999, here it is![1] There were the ten early years, which might be called "the golden years" in parallel to "The Great Moderation" (Bernanke, 2004), when macroeconomic policy objectives – from growth to inflation – were, with the benefit of hindsight, achieved to a remarkable extent globally. Most of these "golden years" – from 2003 on – were "Trichet years", with the European economy in very good shape, quite in contrary to a number of pessimistic predictions for the euro area, mainly coming from the USA (see for example Feldstein, 1992 and Krugman, 1993). Not surprisingly, Jean-Claude Trichet was very proud of this successful start and first decade of EMU and at the ECB press conferences and in his speeches he always mentioned to which extent the defined objective of the ECB's monetary policy – a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below, but close to, 2% over the medium term – was almost exactly reached since the start of Monetary Union.[2]

Contrary to this, the second part of the first 20 years was characterized (i) by the crisis first – most significantly attached to the bankruptcy of Lehman Brothers on September 15, 2008 – and the subsequent economic crash in 2009 and (ii) by the economic, financial and political crisis mode afterwards. From today's perspective, more than 10 years after Lehman, the fundamentally critical point is that the euro area was not able to leave the crisis mode (Corsetti et al., 2019).

There are two elements, which need to be added to this well-known picture from my point of view. The first one, the future, is covered by the title of this conference as well. It's the simply asked but difficult to answer question: "Where do we go?" But there is also a second very important but mostly overlooked element, which needs to be taken into account explicitly, the preparatory phase of EMU. What has happened in this phase under the regime of the European Monetary Institute (EMI)

[1] *See Bernanke (2015) and Hartmann and Smets (2018) for a much more detailed – and serious – account of the last 2 decades.*

[2] *See, for example, Jean-Claude Trichet: Two successes of the euro – the single monetary policy and European financial integration, speech by Jean-Claude Trichet, President of the European Central Bank, at the Conference on experience with and preparations for the euro, organised by the Oesterreichische Nationalbank and the Austrian Federal Economic Chamber together with the Austrian Federal Ministry of Finance and the European Commission, Linz, May 11, 2006.*

mainly during the years 1997 – 1998, well before 11 countries formally entered into Monetary Union with the beginning of 1999 is in fact of crucial importance even today to understand how monetary policy has reacted and to put many elements into context correctly. Many things had to be set and were prepared before the operational start of the single monetary policy, which turn out to be rather significant for what has happened over the last 10 years in the crisis mode and they will for sure be re-discussed intensively in the future again and again.

Obviously, the pending challenge of Eurosystem monetary policy at the moment is the prospective exit from the crisis mode, when and how to exit. Because this is a much too difficult and too sensitive topic for a simple economist, I will not touch upon this issue in my contribution but leave it, as it should be, to the Governing Council of the ECB and the Governors as well as to the related preparations by the ECB Executive Board. Therefore, in this short note, I will refrain from talking about monetary policy strategy, the mandate of the ECB and the definition of it's (primary) objective. The focus here will be on the future, on the long-term view, or in more simple words on the question "Where to exit?", based on the current state of monetary policy in the Eurosystem and how it has developed from its beginning until today. This is carried by the conviction, that we will achieve a situation which we then can call the "new normal"[3] of ECB monetary policy at some point in time.

By the way, what do we know about the attitude regarding the future of the European population? There was an interesting study published by Bertelsmann Stiftung (2018) which reveals that 67%, more than two thirds of the EU-28 population think that the past was a better place to live in, and in the age groups over 35 years more than 70% gave this answer. Given the level of overall welfare, the absence of big wars and the long-term improvement in many economic and non-economic indicators this is difficult to understand. One explanation given in the study is that nostalgia provides stability in moments of uncertainty and obviously there was a lot of uncertainty, change and innovation in many economic and social areas at high speed over the last decades. These challenges might have asked for too much adaptive capacity by the people.

Nevertheless, this illustrates that the Europeans seem to be more backward oriented like Stefan Zweig, who – for very good reasons – in 1942 wrote about "the golden age of security" before the First World War, in particular, also under the impression of the horrible circumstances of the Second World War. Eventually, this situation forced him to commit suicide in February 1942 in the Brazilian exile, having sent the manuscript of "Die Welt von Gestern" ("The World of Yesterday") to his publisher

[3] *Because there is no common definition of the term „new normal" at the moment and people might have quite different things in mind when talking about the „new normal", it will be used in quotation marks throughout this text.*

just the day before. In contrast, looking into the future, historical experience confirms what Yuval Harari has argued, that we don't know how the world will look like in 2050, but what we know for sure is that it will be completely different from the one we are used to today (or in the past).[4] It is essential to keep this basic approach in mind when the task is to tackle future issues, as successful historical episodes of "Restauration" are almost non-existent.

What follows in the subsequent three sections of this note is (i) a review on how monetary policy-making has changed compared to the "golden years" before the crisis, (ii) a short reminder on the importance of the preparatory phase, and (iii) a summary in eleven points what to expect from the future and what elements will be relevant in any forthcoming "new normal" of monetary policy.

Two decades which couldn't be more different

How has monetary policy making in the Eurosystem changed over time? It is interesting to note as a starting point, that all (major) central banks globally have reacted to the 2007/2008 world financial and economic crisis in a rather similar way – perhaps with one significant exception, the People's Bank of China. However, it is easy to demonstrate that framework conditions in China not only were markedly different but also the dynamics and the intensity of the crisis differed from the more advanced economies, which was also true for a significant number of developing countries and countries like Australia and Canada for example. Keeping this limitation in mind, all big central banks in the advanced economies have taken more or less the same measures to tackle the crisis in a surprisingly similar way, given the not negligible differences in starting conditions, institutional setups and historical traditions.

It is very relevant to consider that this common international pattern of monetary policy interventions has taken place in a significantly changed environment. At this point I'd like to mention only two important factors which shaped monetary policy making already before the onset of the crisis: structurally low inflation and a secular low interest rate environment. Together with other influences[5], e.g. financial market developments in particular, this has resulted in significant changes in monetary policy implementation and operation long before the introduction of unconventional measures as a consequence of the crisis. The Bank of Japan is the outstanding – even if extreme – example to illustrate that these fundamental changes in monetary policy were there long before and, in the Japanese case, stem from a (purely) national crisis in the early 1990s. However, if you study these changes in the conduct of monetary policy in more detail, you recognize that most of the heated public discussions on monetary policy issues in fact concentrate on operational or instrument related issues – like to buy or not to buy assets, especially government bonds.

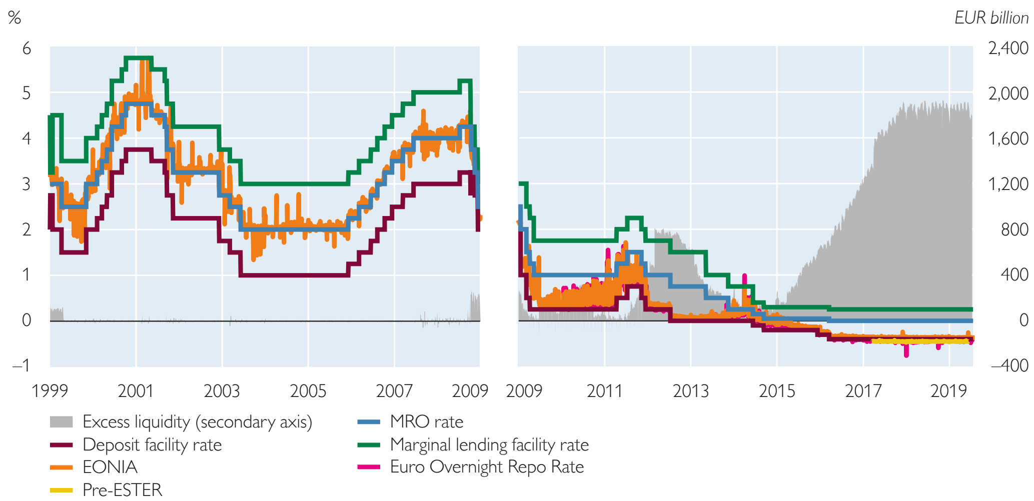
[4] *See Yuval Noah Harari (2018a) 21 Lessons for the 21st Century and, in particular, Harari (2018b) Change is the only constant.*

[5] *Of course, it is very difficult if not impossible to assess, which factors were (and are) the most important ones in this respect. Significantly lower potential growth, globalization of financial markets, increased financial instrument complexity, higher systemic and contagion risk and a new regulatory environment would also qualify as part of the relevant set of factors obviously.*

20 years of EMU illustrated in 4 pictures

Chart 1

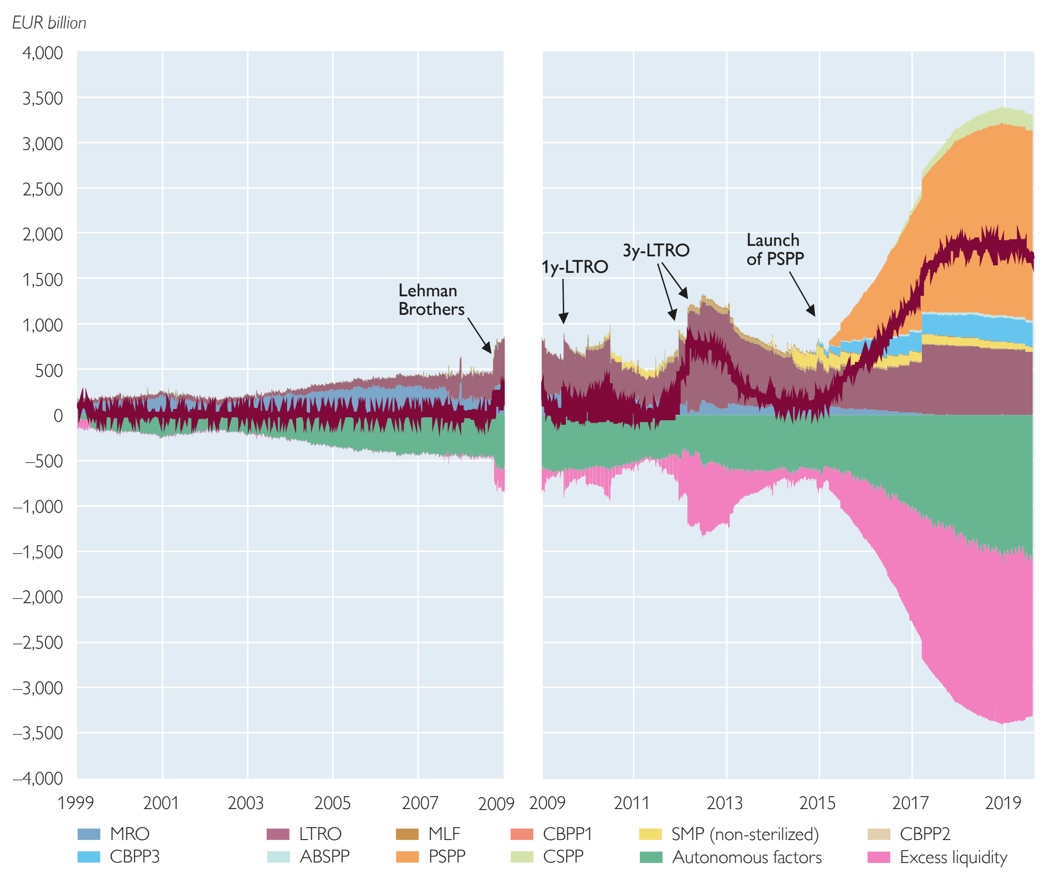
ECB policy rates



Source: ECB, Macrobond.

Chart 2

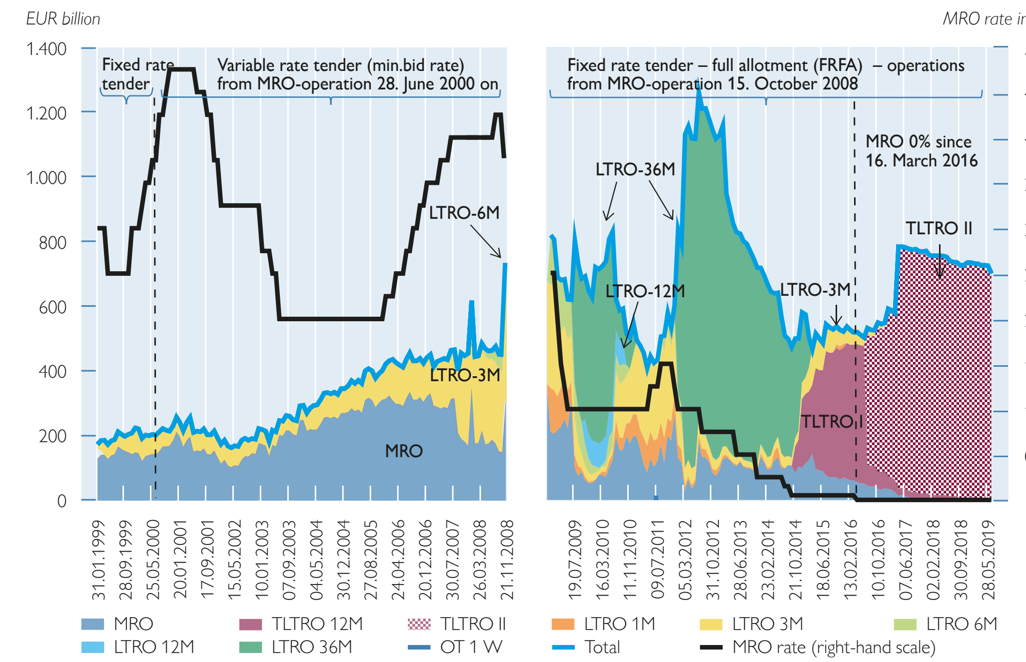
ECB overall liquidity provision



Source: ECB, OeNB.

Chart 3

Structural changes in ECB tender operations

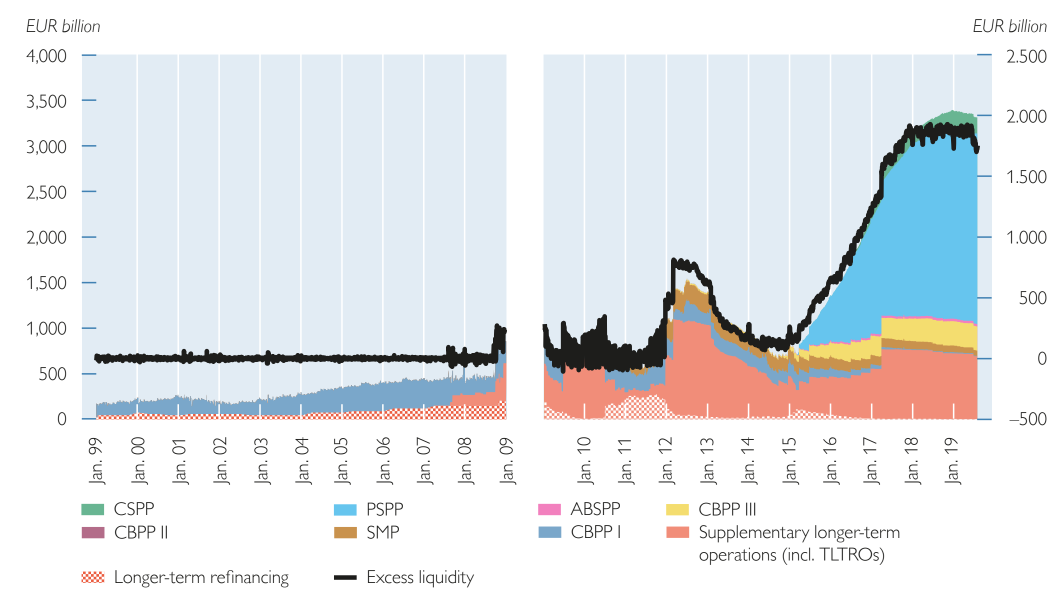


Source: OeNB.

Note: Data on 30 day-basis, incl. June 2019.

Chart 4

The (E)APP – Quantitative easing ECB style



Source: Deutsche Bundesbank, OeNB.

Note: Data on 30 day-basis, incl. June 2019.

Let's now undertake a short experiment on illustrating 20 years of EMU in four pictures only (see charts 1 to 4 for details). Directly comparing the roughly defined first ten years up to 2007 and the second ten years from the crisis onwards, it becomes immediately visible how different the world has become and in which particular way it has changed.

- Regarding ECB policy rates more or less textbook like small variations in key interest rates – almost exclusively the interest rate on the Main Refinancing Operations (MRO) – were standard before the crisis. In the course of the crisis policy rates were brought down in rapid speed and to previously unexpected low levels. Since then they are anchored even below the nominal zero lower bound (in case of the Deposit Facility Rate (DFR) at –0.4%). This has completely changed our understanding how the transmission process of interest rate policy works, and which transmission channels are active and – hopefully – effective.
- Regarding liquidity provision, the picture is very similar. From nowadays' perspective there was almost no liquidity provision by the ECB in the first ten years of Monetary Union. This was even true during the time of the Lehman Brothers collapse. No doubt, there were enormously difficult decisions to take, but in quantitative terms, compared to today's volume of liquidity provision, it was almost nothing.
- In parallel, lot's of structural changes took place in ECB liquidity provision and tender operations since the start of the Monetary Union. Main refinancing tender operations with a dominance of the weekly tender were the overriding instrument during the first ten years. Today almost all tender operations are targeted long-term tenders, no quantitatively important short-term tenders any more. This is to say the main refinancing operations have disappeared.
- Last but not least and perfectly known, in the second decade of the Monetary Union quantitative easing "European style" is still dominating the volume of liquidity provision in contrast to the period before the crisis, in particular since the start of the ECB's Asset Purchasing Program (APP) in 2015. In more detail many measures of different kind and of different characteristic were taken to address different intermediate objectives over this period.[6]

All in all, looking at these – extremely simplified – empirical illustrations it might come as a surprise even for monetary policy experts how fundamentally the monetary policy setup has changed over the first 20 years of EMU. Of course, all this happened in small steps and for very good reasons, but eventually the world looks very much different in almost all monetary policy dimensions now, which is of utmost relevance when thinking about any forthcoming "new normal" to be defined.

Determinants of monetary policy design: past and present

Looking back, it is useful and necessary to remember the important but largely forgotten role of the intense preparatory phase for the start of monetary policy in the newly established Monetary Union to come. This first took place to a large extent in the institutional setting of the European Monetary Institute (EMI) – established in 1994. Since June 1, 1998 EMI has been integrated in the institutional structure of the established ECB.

[6] *See Hammermann (2019) for a detailed stocktaking of the Eurosystem's asset purchase programmes; for the US Bernanke (2009) lists more than 25 different measures taken and specific programs introduced at the very beginning of the crisis only.*

During this preparatory phase, in essence from approximately early-1997 to the end of 1998, many concepts for the forthcoming single monetary policy had to be developed and agreed upon. To be able to start with monetary policy operations right at the beginning of 1999, all relevant and important preparations had to be made not only before the end of 1998 but early enough to leave time for the ECB, the National Central Banks operationally in charge as well as the counterparts, the so-called Monetary Financial Institutions (MFI's), to prepare technically for this operational start into a completely new world. This constituted a real challenge for all institutions and people involved, as very different national traditions of monetary policy making had to be merged into a new harmonized Eurosystem monetary policy setup.[7]

Against this historical background, it is important to recall that the ECB was – and still is – the youngest of the major central banks in the world. Therefore, the most modern monetary policy design of that time was given to this new institution – in terms of mandate, in terms of instruments, in terms of the operational setup, in terms of everything – and this was also reflected in the in-depth evaluation of its monetary policy strategy undertaken in 2003 (Issing, 2003). Where did these elements of modern design come from? Of course, everything in the academic literature at that time was taken into account and is reflected in the design of the ECB since the beginning (Hahn and Mooslechner, 2000; Mooslechner, 2000). Important factors in this respect are independence, a focus on the price stability mandate, short-term interest rate setting as the dominant instrument, market-oriented policy as a general understanding and many things more that were not really prevalent before in the "old normal" of central banking internationally. This approach was also mirrored in the principles of monetary policy operations, in particular (i) the orientation on market principles and (ii) the harmonization of instruments in the toolbox of the ECB.

In this respect, it is essential to remember that when these preparations were discussed not only the later participants of EMU were sitting at the table but also the representatives of i.e. the Bank of England, Sveriges Riksbank and Denmarks central bank negotiated until the end of the EMI period. Even if it was clear right from the beginning, that these countries would not join the euro area, their central banks were not only very active but had a big say in the discussions. In the Monetary Policy Sub-Committee[8], which was the one of the EMI committees to prepare the monetary policy strategy as well as the operational framework for the forthcoming Eurosystem single monetary policy (Stage 3 as it was called at that time), these central banks had an important influence on which instruments became part of the potential toolbox and how these instruments and their use were defined. This turned out to be especially important, because this influence came on top of the already different monetary policy traditions regarding the later 11 participants in the single monetary policy. Their approach was characterized by a different institutional history and a somewhat more pronounced orientation on US monetary policy standards.

[7] *See Scheller (2004) and James (2012) for a detailed account of these issues.*

[8] *Since November 1996, I had the privilege to participate in the meetings of the Monetary Policy Sub-Committee first and subsequently the Monetary Policy Committee of the ECB.*

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The set of policy instruments defined in 1998 as a blueprint for the start of Monetary Union indicates, how much "cultural compromise" was necessary to get to a sufficiently harmonized toolbox proposal. One example in this respect are outright transactions. These outright transactions became an agreed part of the ECB portfolio of instruments already at that time (see table 1 where outright purchases/sales are listed under fine-tuning operations as well as structural operations; ECB, 1998). They were not created or "invented" due to the crisis situation in 2008/2009 and also not at the time when the large-scale APP was introduced in 2015. Mainly because of the influence of the Bank of England[9] during the preparatory phase, who has a long historical tradition of using outright purchases as a standard tool of monetary policy and refinancing, they were included in the toolbox of policy instruments for the ECB right from the beginning.[10]

Outright transactions were by no means the only critical issue to compromise on. Similar challenges were decisions on the use of minimum reserves as well as the criteria for eligible collateral and the concrete auction model to be used in tender operations, to name only a few. However, from today's perspective and after all the hot discussions on the ECB's purchasing programs, outright transactions are of course the most prominent example to illustrate the importance of this initial phase for the conduct of the single monetary policy.

Table 1

ESCB monetary operations toolkit: EMI blueprint of 1998

Monetary policy operations	Types of transactions: Provision of liquidity	Types of transactions: Absorption of liquidity	Maturity	Frequency	Procedure
Open market operations					
Main refinancing operations	• Reverse transactions	–	• Two weeks	• Weekly	• Standard tenders
Longer-term refinancing operations	• Reverse transactions	–	• Three months	• Monthly	• Standard tenders
Fine-tuning operations	• Reverse transactions • Foreign exchange swaps	• Foreign exchange swaps • Collection of fixed-term deposits • Reverse transactions	• Non-standardised	• Non-regular	• Quick tenders • Bilateral procedures
	• Outright purchases	• Outright sales	–	• Non-regular	• Bilateral procedures
Structural operations	• Reverse transactions	• Issuance of debt certificates	• Standardised/ non-standardised	• Regular and non-regular	• Standard tenders
	• Outright purchases	• Outright sales	–	• Non-regular	• Bilateral procedures
Standing facilities					
The marginal lending facility	• Reverse transactions	–	• Overnight	• Access at the discretion of counterparties	
The deposit facility	–	• Deposits	• Overnight	• Access at the discretion of counterparties	

Source: ECB (1998).

[9] *To be fair, it needs to be mentioned that the Bank of England was by no means alone in its demand to include outright transactions but supported by a number of other central banks.*

[10] *Of course, the EMI had no final decision power to decide on these issues, but given the enormous time pressure on the ECB once established in the second half of 1998, it had to rely on these EMI preparations and proposals to a large extent. For illustration: The operational details regarding the minimum reserve system were published on July 8, 1998 already. The entire set of monetary policy instruments and procedures was revealed on September 18, 1998.*

11 factors that will probably shape any forthcoming "new normal"

Against the background of 20 years of single monetary policy and its at least two quite different episodes since the start of Monetary Union, what to expect for a future "new normal" of monetary policy in the euro area? Briefly, only three operational aspects are taken here as examples, for what would demand a much broader and deeper analytical discussion: These aspects will be (i) interest rate policy, (ii) liquidity provision and (iii) forward guidance.

Altogether, the following assessments and views need to be taken only with a clear "disclaimer"! Each and every point presented below would warrant a lecture of its own and a much deeper and encompassing discussion of its entire features.[11] Although I will try to be as factual as possible, bearing in mind that there are many different opinions and intentions on all these issues, there will be a broad range of different conclusions regarding the "desirable design" of any future "new normal".

1. It's obvious that in the aftermath of the crisis monetary policy has newly defined what was previously understood as the "zero lower bound" (ZLB). Even the simple nominal ZLB is no longer at zero, it's somewhere below and the whole ZLB issue (real ZLB, effective ZLB…) has become much more complex but also relevant for practical monetary policy making at the same time.
2. Interest rate policy cannot any longer be understood in the simple textbook sense of monetary policy. Even simple and everyday interest rate adjustments nowadays have to be seen against a much broader set of financial and economic interlinkages and prospective consequences.
3. The simple interest setting (and fine-tuning) mechanism of the past no longer applies, because the transmission process of monetary policy as well as its potential effectiveness have become much more complicated and difficult to understand. On the one hand, this much more complicated and diverse transmission processes can also be used by monetary policy to address its operational target(s); on the other hand, these diversities are based on unstable transmission regimes and volatile behavior of market participants, which are difficult to identify and to predict.
4. Absolutely unthinkable to many/most monetary policy makers before the crisis, interest rate policy now increasingly intends to steer the entire yield curve, the slope of the term-structure. In the previous mainstream view monetary policy restricted itself to steer the (very) short-term rate(s) only and the term-structure was seen to be the result of the subsequent market transactions only. This understanding has changed completely, not at least in the context of large asset purchase programs.
5. Monetary policy today is permanently acting in a structural liquidity surplus situation that has triggered a structural change from the previous liquidity shortage-based corridor system to a floor system. In the traditional corridor system the main refinancing rate was the (only) one key monetary policy rate to transmit the intended monetary policy signal, while in the

[11] *Ulrich Bindseil's impressive 2014 book gives some perception of the general complexity of the issues.*

now prevailing floor system the negative Deposit Facility Rate (DFR) steers the entire monetary policy transmission process through the interest rate channel.

6. The process and design of liquidity provision has fundamentally altered its characteristic from the "old normal", where the central bank was providing a limited amount of peak liquidity to a limited number of banks only. The subsequent distribution of liquidity was done via the money market(s) mechanism according to the liquidity demands of individual banks. Due to the crises and lasting, since then banks are now directly addressing the central bank permanently to get the liquidity they need and want, which as a consequence resulted in a very high demand for central bank liquidity. And one of the reasons for this structural change is that the unsecured money market in its role as an allocator of central bank liquidity has disappeared. There is still a lack of trust and much too much risk aversion in the market, therefore banks are still not willing to lend each other money in unsecured terms.
7. With respect to the developments mentioned above and, in particular, the introduction of non-conventional monetary policy measures, balance sheet size management has become a globally accepted new monetary policy instrument of its own and is used by the Fed, by the ECB and many other central banks now. Primarily introduced as an emergency crisis measure at the beginning, balance sheet size variation is recently discussed as a substitute for interest rate policies, compensating for the limited leeway central banks have in this respect in many countries (Federal Reserve, 2019b; Praet, 2018).
8. It is necessary to recall that from a historical perspective, the operational setup for liquidity provision, for example, by the Eurosystem, the Federal Reserve and the Swiss central bank was quite different. Central bank liquidity was provided from different sources: in the U.S. the bulk of liquidity provision came from what we in Europe call asset purchases now, mainly from purchasing treasuries; in Europe – with the main exception of the Bank of England – liquidity was created traditionally through repo-operations, whereas in the case of the Swiss National Bank capital inflows and FX-interventions are the dominant channels of liquidity creation. This has continuously changed in the course of the crisis and there is a tendency towards harmonization of operational traditions in central banks globally.
9. The markedly higher amount of liquidity provided by central banks today comes together with a significant longer maturity of central bank liquidity. In the case of the ECB, almost all liquidity provided is long-term, less than EUR 6 billion out of more than EUR 2,000 billion outstanding is what central banks usually did in their main refinancing operation and the weekly tender. Short-term liquidity supply and demand in the MRO has deteriorated to an almost unattractive instrument demanded only by few banks for very specific idiosyncratic reasons.
10. As a new monetary policy instrument "forward guidance" (FG) was added to the monetary policy toolbox in an explicit and systematic way. Of course, central banks have talked to the markets and to the public in the past also, but understanding this as a separate monetary policy instrument, thereby addressing different transmission channels has increasingly become relevant during the recent crisis mode phase. Talking to market participants and influencing their expectations, but also the expectation formation of economic agents in general, has developed into an equally important and accepted policy instrument, used rather frequently nowadays. Take the example of Mario Draghi's press conference on March 7, 2019. What he presented there was the whole portfolio of forward guidance: (i) Forward guidance on interest rates: how future interest rates, how the future policy path might develop; (ii) FG on ECB re-investment policy regarding the stock of APP purchases; (iii) FG on long-term financing operations like the newly started TLTRO III and (iv) FG on FRFA (Fixed Rate Full Allotment). In the light of this last point, when talking about today's monetary policy stance and what has changed during the crisis, it should be emphasized that since October 2008[12] – from shortly after the Lehman collapse and for more than 10 years now – the ECB has been conducting no tender operations in their classic form anymore. Every eligible bank gets as much liquidity as it demands, as long as it is able to provide enough collateral and complies with all the defined criteria of eligibility; completely different from the "old normal" we were used to and which is still represented in the textbooks.
11. Eleventh and last point. Forward guidance, how successful or how damaging can or will it be and will it stay? On the negative side, there is Ben Bernanke's famous taper tantrum episode, where in a few days only the long-term interest rate in the U.S. jumped by more than 100 basis points because of – expressed in a cautious manner – mistaken communication or a wrong perception of forward guidance lead to an unwanted and unfavorable outcome. A second interesting and more actual FG case is that the FOMC members – via their famous dot-chart – are still signaling that they may raise interest rates over the forthcoming years. At the same time, market expectations-based calculations show that market participants expect interest rates to fall significantly in the foreseeable future. This two US examples illustrate how challenging the task is to use FG efficiently to get the intended (market expectations) outcome.

It is interesting to note, that for the time being FG by the ECB has been successful in avoiding similar mistakes like these. And, on the clearly positive side, there is the

[12] *See ECB press release, Changes in tender procedure and in the standing facilities corridor; October 8, 2008.*

tremendously important "Whatever it takes" speech by Mario Draghi in London on July 26, 2012 (Draghi, 2012) dealing with the future role and profile of the OMT, which turned out to have become the most effective and indispensable example of FG, having probably saved the sheer existence of the euro at this decisive point in time.

Any future "new normal" will for certain be significantly different

Are there any conclusions to be drawn from this? At least I try to offer some personal conclusions, which are mainly in line with what Harari thinks how the

future will look like. Given all the fundamental changes in monetary policy orientation and implementation we have seen over the last decade, the future "new normal" of monetary policy will very likely look much different from the "old normal" from which the current crisis mode has developed. Overall, it is hard to imagine that all these instruments and measures employed during and in the aftermath of the crisis will simply disappear. It is nearly certain that in a forthcoming definition of a "new normal" all these instruments will be present (Praet, 2019). Of course, this does not automatically mean that they will be used in the same way and in the same intensity all the time. But they will be part of the standard monetary policy toolkit and they will be regularly used in the "new normal" if necessary and appropriate. The same applies for other significant elements of the crisis mode, for the balance sheet size, the steering mode of policy rates and forward guidance, to mention only a few of these newly introduced features.

Unfortunately, given latest developments, we seem to be far from the point of being able to define this "new normal" in a meaningful way yet and not at all to enter into it quickly. At the same time, this means that on any account these crises mode features of monetary policy will be in place for a considerable further period of time, which will increase their likelihood to stay. No doubt, from a general macroeconomic as well as economic policy perspective, this persistent need for policy stimulus more than a decade after monetary policy went into the crisis mode must be seen as a very unpleasant European crisis heritage.

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[13] As the literature on ECB monetary policy since the crisis is enormous, this represents a very restricted selection of sources of direct relevance for this paper only and leaves out many more other sources of a general nature.