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# Global liquidity and strategies of exit from unconventional monetary policies

Ansgar Belke

Macroeconomics, University of Duisburg-Essen, Essen, Germany

## ABSTRACT

We develop some main characteristics of a roadmap of how the European Central Bank (ECB) should further reduce the volume of its balance sheets and roll back credit easing in order to prevent inflation. The exit should be step-by-step rather than a one-off. Communicating about the exit strategy must be an integral part of the strategy. Price stability should take precedence in all decisions. Due to vagabonding global liquidity, there is a strong case for globally coordinating monetary exit strategies. Given non-surmountable practical problems of coordinating exit with asymmetric country interests, however, the ECB should go ahead – perhaps jointly with some Far Eastern economies. Coordination of monetary and fiscal exit would potentially undermine ECB independence and is also technically out of reach within the euro area.

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## 1. Introduction

Policymakers from the G-20 nations and their market-based critics are sometimes missing the point about ‘exit strategies’. The G-20 is right to announce that there should be no premature exits from macroeconomic stimulus and to reassure that monetary tightening will be technically manageable. Yet it is overlooking the more complex challenges that economic policy must confront as a result of the emergency measures undertaken since mid-2007 (see Eichengreen, 2009; Posen, 2009a). However, this article concludes that international policy coordination of monetary and fiscal exit might be desirable but is unfortunately not attainable.<sup>1</sup>

Some claim that the exit strategy needs a wider remit and greater international coordination. There are three dimensions to what potentially has to be done – monetary, fiscal, and financial. That is: monetary ease must return to normal interest rate policy (the main focus of this report), discretionary fiscal stimulus must shift to putting government budgets

**CONTACT** Ansgar Belke  [ansgar.belke@uni-due.de](mailto:ansgar.belke@uni-due.de)

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on a sustainable path and banks' guarantees and state-ownership stakes must be withdrawn (Borio & Disyatat, 2009; Posen, 2009a).

First, there is a *challenge of sequencing*, given the interaction among exit measures. Should fiscal or monetary tightening come first? Would withdrawal of current extraordinary liquidity and deposit guarantees accelerate or offset monetary tightening? Here, some already offer some guidance based on past experience. Credible commitments to medium-term fiscal consolidation should theoretically precede monetary tightening to pre-empt so-called 'Volcker-Reagan policy mismatches' which tend to drive up interest rates (Posen, 2009a).

Second, in principle there is a pressing *need for international coordination* of macro policies exits. Most governments and central banks will probably find their exit from the financial crisis in a timely and consistent way. But there is one specific co-ordination failure that is both extremely destructive but highly probable: a disconnected monetary and fiscal response between the US and Europe (Cottarelli & Viñals, 2009; Munchau, 2009).

Our objective of the research is to develop some main characteristics of a roadmap of how the ECB should further reduce the volume of money (money supply) and roll back credit easing in order to prevent inflation. The exit should be step-by-step rather than a one-off. Communicating about the exit strategy must be an integral part of the strategy. Price stability should take precedence in all decisions. Due to vagabonding global liquidity, there is a strong case for globally coordinating monetary exit strategies. Given non-surmountable practical problems of coordinating exit with asymmetric country interests, however, the ECB should go ahead – perhaps jointly with some Far Eastern economies. Coordination of monetary and fiscal exit would potentially undermine ECB independence and is also technically out of reach within the euro area. The research methodology used throughout the article is mainly game theory.

The article proceeds as follows. In section 2, strategies of exit from unconventional expansionary monetary policies are motivated. Section 3 deals with the coordination of exit strategies. Section 4 concludes.

## **2. Unorthodox monetary policy in the euro area – what has been done so far until end-of-year 2009?**

The ECB has lowered interest rates, reflecting rapid and deep cuts between the autumn of 2008 and the spring of 2009, and until December 2009 implemented *five 'non-standard' unorthodox monetary policy (UMP) measures* to enhance credit support, taking into account the major role played by banks in funding the euro area economy (Borio & Disyatat, 2009):

1. Full accommodation of banks' liquidity needs at fixed rates by switching the refi operations to *fixed rate tender with full allotments* (i.e., unlimited liquidity).
2. Expansion of the list of assets eligible as collateral by *extending the collateral pool* down to lower medium bond grade (BBB).
3. Lengthening of the maturities of the refinancing operations and offering supplementary *long-term refi operations* (LTROs) at three-, six- and 12-month maturities.
4. *Providing liquidity in foreign currencies*, notably the US dollar and sometimes the Swiss Franc (CHF), to address the need of euro area banks to fund their dollar assets.
5. Launching of a direct *covered bonds purchase programme* to support financial markets. *Purchasing covered bonds*.

These five measures have been followed by the Bazookas, i.e., the long-term refinancing operations (LTROs) at the amount of one billion EUR and the Outright Monetary Transactions (OMTs) announced in autumn 2012 – both have been good publicity and also highly controversially discussed (for details see Belke, 2012, 2013). These non-standard measures, referred to by the ECB as enhanced credit support, have been intended to boost liquidity in the financial system and support credit flows to the non-financial sector over and above the interest rate reductions. In other words: in addition to the interest rate decision, a range of unconventional measures will need to be unwound. In the following sections, we look at the exit from these measures. The interest rate issue has been frequently discussed elsewhere (see, for example, Bartsch, 2009a). Most of these studies concluded that the ECB would likely keep rates steady until mid-2010. Some unconventional measures may have been unwound earlier than that; others were likely to have remained in place for longer.

### 3. Monetary exit strategies

Monetary policy has brought interest rates down to nearly zero for all major currencies, including the euro. In addition, central bank efforts to rescue financial systems by giving banks easier access to central bank money has caused a rapid and significant expansion, and changes in the composition, of banks' balance sheets. *So far*, this policy of 'quantitative easing' and 'qualitative easing' has *not affected the broad money supply* and therefore *not resulted in inflationary pressures* (Borio & Disyatat, 2009; von Hagen, 2009). But, as banking systems recover and inflation expectations increase according to ever rising gold prices, etc. central banks must keep a keen eye on monetary developments to ensure that inflationary potential does not build up in the future (ECB Observer, various issues, von Hagen, 2009; von Hagen, Pisani-Ferry, & von Weizsaecker, 2009).

Why exit? If one takes into account that, at least in the long run, all inflation is a monetary phenomenon, the question of the exit strategy takes centre stage. There is a need for an exit strategy to avoid inflation (Buitert, 2009a; Cottarelli & Viñals, 2009; González-Páramo, 2009). Current policies, which have expanded the monetary base, are considered potentially inflationary, with the inflation risk arising from three sources: activity overstimulated by hyper-accommodative monetary policy, excess liquidity in the banking system, and the potential de-anchoring of inflation expectations (linked to the excess liquidity mentioned above). It is clear that any large-scale quantitative easing has to be reversed when the economy recovers and the demand for base money returns to levels that are not boosted by the extreme liquidity preference of a panic-stricken banking system. The central banks must withdraw in a timely manner the monetary stimulus injected into the system (Baudchon, 2009; Borio & Disyatat, 2009; Cottarelli & Viñals, 2009).

Indeed, should a significant improvement in the outlook for economic activity not be accompanied by an adequate adjustment in the policy stance and a reversal of quantitative easing, the current monetary stance may become excessively accommodative as soon as the income velocity of money is increasing again in the wake of less uncertainty, thereby giving rise to risks to price stability (Belke, 2009). If the reversibility, when needed, is not credible, longer-term inflationary expectations will rise and these inflation expectations, as well as possible inflation risk premia, can raise longer-term nominal and real interest rates. But because the stimulus was injected to a large degree using unconventional means, there

are fears the central banks lack the tools needed to undo their previous actions, at least in a timely manner (Buiters, 2009a; González-Páramo, 2009).

What is more, the long-term gains from non-conventional policies rely on the policy-makers' capability to pull off a *difficult balancing act*: to provide massive stimulus to the economy in the short-term, while keeping long-term private sector inflation expectations firmly anchored. The failure to preserve the anchoring of long-term inflation expectations would be, expressed in game-theoretic terms, self-defeating for non-conventional policies. In such a case, the beneficial effects on the economy of the latter policies could be neutralised by an array of adverse factors, including increased inflation risk premia, interest rate volatility and Ricardian effects on consumer spending (Cottarelli & Viñals, 2009; González-Páramo, 2009).

These risks and the innovative nature of the policies mean that central banks will have to make an extra effort in communications. *Communicating about the exit strategy must be an integral part of the exit strategy*. Monetary policy transparency and intelligibility are fundamental to the credibility of policy objectives. And central bank credibility is of the essence in anchoring expectations (regarding inflation or rates) (ECB, 2008). An exit strategy that is clearly identified and understood strengthens monetary policy effectiveness because it reassures that inflation and the entire yield curve will remain under control once growth resumes (Baudchon, 2009; ECB Observer, various issues). Closely connected with these issues is the concept of 'forward guidance' and transparency of central banks which is discussed in detail by Belke (2013a) in a very recent briefing paper for the Monetary Experts Panel of the European Parliament.

### 3.1. The need for an exit strategy

The fact that central bank officials are *discussing* exit strategies by no means implies that these banks are about to *implement* them. But for them to be effective, for instance the ECB needs to be transparent. Otherwise, investors may become fearful of inflation and concerned about the sustainability of public finances. This would no doubt push up long-term interest rates. For the same reasons, households might expect higher taxes in the future and raise the share of their income that they would rather save than spend. All these effects would, of course, jeopardise the gradual recovery and undermine the effectiveness of the policy stimulus (Belke & Verheyen, 2014; Stark, 2009).

Recently, some central banks, including the Fed and the ECB, have been *communicating* about the exit strategies from their unconventional programmes. It is clear that the articulation of an exit strategy has been forced upon central banks by market participants. The reason is *uncertainty* regarding the effects of unconventional policy on the economy. Faced with uncertainty, market participants naturally look for guidance about the future path of monetary policy. The concern is driven mainly by *uncertainty about future inflation*. Such a concern is not unreasonable, given the massive interventions by monetary authorities that led to a *sharp rise in their balance sheets* (Tesfaselassie, 2009).

Compare, for instance, the excess reserves of around \$800 billion that commercial banks had with the Fed already on 1 December, 2009, with the standard pre-crisis level of merely \$10 billion. With an eye on safeguarding price stability, the inflationary impact of excess reserves which is already in the pipeline should be taken into account by central banks, since it may be incorporated by expected inflation and, thus, will also affect long-run inflation

and diminish central bank credibility. Any credible strategy of exiting from unconventional monetary policies has to be conveyed to the public and interpreted by it as *a roadmap for tightening monetary policies* as soon as this will be justified for economic reasons. Both central banks and the private sector have to be clear about the endgame once the economic environment returns to normal. One must see the strategy as *specifying the tools that central banks may use when it is time to tighten monetary policy* (Tesfaselassie, 2009).

But there are more than inflation fears without monetary exit. The experience of the past decade has led many economists to conclude that protracted accommodative monetary conditions, especially when they become widespread at the global level, may make access to credit in international financial systems too easy. Easy credit availability can in turn depress interest rates across the maturity spectrum and lead to severely *distorted financial asset prices* as agents engage in increasingly speculative behaviour. Thus, preventing the monetary policy stance from becoming excessively accommodative is important not only to directly preserve price stability, but also *to avoid the emergence of financial imbalances* that may – if they prevail for too long – eventually give rise to episodes of macroeconomic instability (Belke & Verheyen, 2014).

While there is no doubt that the return to normality of our economies will need to be accompanied by a normalisation of monetary conditions, the key question is what we mean by ‘normal’ in the post-crisis environment. Indeed, there is significant empirical evidence showing that financial crises tend to have large and long-standing costs in terms of output and employment and tend to be followed by persistent declines in asset prices (Reinhart & Rogoff, 2009). In the specific case of the current crisis, there are increasing concerns that its cost in terms of lost financial, physical and human capital all over the world may prove very substantial. As a result, the crisis may end up having a protracted impact on the rate of potential growth of a number of economies, including the euro area (González-Páramo, 2009).

Therefore, in the post-crisis world, we may operate in an environment in which the dynamic properties of our economies are persistently affected, so that returning to ‘normality’, as we knew it before, will take a long time. As a side effect, the statistical regularities underlying the estimates of models and indicators (e.g. the output gap and the interest rate gap) often used for policy analysis may not be as stable as in the past (Belke, 2009). The ECB has traditionally been reluctant to rely exclusively on models and summary indicators of the monetary policy stance, so it is usually not concerned about the reliability of any specific indicator. Yet, it shares the more general concern that in the future decisions will be taken in an environment characterised by high uncertainty and reduced reliability of the monetary policymaker’s conventional information set (González-Páramo, 2009).

Faced with increased uncertainty, central banks are at their best when they clearly commit to a well-defined goal and pursue it consistently and independently. The ECB strategy includes a specific quantitative definition of price stability: annual inflation of below, but close to, 2% in the Harmonised Index of Consumer Prices over the medium term. This definition sets a clear benchmark against which decisions must be made (ECB Observer, various issues).

Thus, in a period of increased uncertainty it is crucial for the ECB to set its interest rate instrument at any point in time *at the level which is appropriate to ensure the achievement of its primary objective*. The assessment of the risks to medium-term price stability based on a comprehensive and robust set of indicators will prove essential in guiding monetary

policy decisions in the future. In this respect, the ECB's choice of a full-information approach resting on *two complementary pillars* (an economic analysis and a monetary analysis), with its advantages in terms of robustness is likely to prove very beneficial in providing insurance against increased model and paradigm uncertainty (ECB Observer, various issues, González-Páramo, 2009).

In fact, the ECB is walking 'a tightrope in reining in excess liquidity and in removing monetary policy stimulus' (see already Bartsch, 2009). Remember that the last ECB tightening cycle in 2005 initially led to an outcry amongst European politicians and international organisations claiming – at that time – that the ECB's move was premature. Yet, the ECB strictly followed its broad-based analysis of the outlook for price stability and their cross-checking against monetary developments which indicated the need to tighten. With the benefit of hindsight, it can be stated that the ECB was correct (ECB Observer, various issues from 2005 on). Today, however, macroeconomic uncertainty, financial market dislocations and foreign exchange repercussions render the exit an even more finely calibrated decision. History shows that even *small monetary policy decisions can have a big market impact*. Bartsch(2009), for instance, refers to the fall of 1987, when a small 10 basis points (bp) hike in the Bundesbank's repo rate caused a transatlantic policy spat. The latter caused markets to doubt the political commitment to the Louvre Accord which aimed to stabilise the US-dollar. Concerns about support for the USD sent the US equity market which already was wobbly in the wake of a hike in capital gains taxes into a tailspin (Bartsch, 2009). Parallels with today's situation are striking.

Turning now to the monetary policy implementation framework, one should recall that prior to the escalation of the financial crisis in September 2008, the operational framework worked quite well. Thereafter, many exceptional measures were taken to support the availability of liquidity and the recovery of the euro area economy. Looking ahead, as conditions in the financial markets normalise further, not all these liquidity measures will be needed to the same extent as during the crisis. Therefore, one should envisage a situation in which the main operational features that were in place prior to the crisis are restored, while of course also bearing in mind the lessons learned from the crisis (Cottarelli & Viñals, 2009; González-Páramo, 2009).

In particular, the ECB seeks to revert to a situation in which *the one-week main refinancing operation* (MRO) is the *main tool for steering money market rates* and in which the ECB acts as 'rate-taker' in the longer-term money market (Stark, 2009). In addition, under normal circumstances, central banks do not provide liquidity in foreign currency. Finally, the use of using self-originated paper as central bank collateral should be considered as an anomaly under normal market conditions (González-Páramo, 2009).

### **3.2. (How) Should the ECB further reduce the volume of money (money supply) and roll back credit easing in order to prevent inflation?**

At the ECB and its Watchers conference (2009) and on several other occasions at that time, ECB President Jean-Claude Trichet and ECB Executive Board Member Juergen Stark outlined how the ECB might approach the different dimensions of its policy exit. Essentially, they conveyed the clear impression that the ECB's *interest rate decision* will be based merely on the bank's assessment of the risks to price stability. Meanwhile, *decisions on enhanced credit support* will be taken with a view to financial stability and market functioning. Analytically,

it clearly makes sense to *separate* these two issues and to fight one goal with only one instrument. Practically, both issues are likely to be *intertwined* though. The ECB is correct in stressing that *price stability takes precedence in all decisions*. Should non-standard measures pose a threat to price stability, they will be unwound ‘promptly and unequivocally’ according to its statute. As long as they do not, however, they can be *unwound gradually* as markets continue to normalise. But if market dislocations continued to impair the transmission mechanism, these measures could also well be left in place for longer. According to different issues of our ECB Observer report (see <http://www.ecb-observer.com>) this should serve as a clear and satisfying assignment.

Of course, due to uncertain time lags in the effects of monetary policy, the timing of any intervention to exit is crucial but hard to know in advance because the intervention will represent a turning point in the monetary policy stance. Any signal given by central banks about the timing of an exit strategy would *increase yields on long-term bonds* via *the term structure*. The fear is that such a preannouncement could drive up interest rates prematurely, derailing the by now significant but still fragile recovery (Tesfaselassie, 2009). Moreover, it has some implications for the sustainability of fiscal policy and for the coordination of monetary and fiscal exit (see section 3.2).

### 3.2.1. *General sequencing of measures*

If one wants to derive some general principles of sequencing of monetary exit steps, Bini Smaghi (2009) is very instructive and well-taken as a starting point. Hence, this section outlines his principles of sequential and conditional monetary exits in the necessary detail.

Starting with the problem of the *adequate sequence* of exit events, it should be taken into account that any reversal of an environment of extremely low interest rates and ample liquidity which aimed at favouring borrowers and penalising lenders changes the incentive structure over the medium term. But the majority of the unconventional measures are employed and tailored to rekindle lending and to give incentives to savers to hold riskier long-term assets. Thus, these measures are the more effective, the more the commercial banks prove to be ready to *return to their main task of lending to the private sector rather than deposit their excess reserves with the central bank* (Bini Smaghi, 2009; Belke, 2010).

Evidently, a policy rate hike would weaken the commercial banks’ inclination to become active anew in funding private households and firms. This is especially valid if it is the deposit rate which is elevated. Similarly, expectations of increasing interest rates tend to divert private savers from purchasing long-term assets, since an increasingly restrictive monetary policy inevitably implies a capital loss for those who bought these assets. *Raising policy rates* or the expectation of such increases, when confidence is not fully restored, could therefore be *counterproductive* (Bini Smaghi, 2009).

What, then, are the implications for the sequencing of unwinding conventional and unconventional policy measures? In sum, it implies that non-standard measures that are mainly implemented to let money markets function in an orderly manner again, supplementary LTROs or an extended portfolio of eligible collateral, must be reversed *before interest rates will be raised again* (Bini Smaghi, 2009). There are several reasons behind such a conclusion.

Firstly, *raising interest rates in the prevailing scenario in which unconventional monetary policy measures still appear to be paramount* would put sustained money market recovery under unnecessary risk. If the required and available amounts of short-term funding were



the central concern of market participants, rate hikes may amplify these fears and could well cause additional counterproductive upward pressure on overnight rates (Bini Smaghi, 2009).

Secondly, *mixed signals* on the de facto monetary policy stance may emerge by injecting extra liquidity to the money markets by means of non-standard policy measures and simultaneously reverting monetary policy to a tightening stance. (Bini Smaghi, 2009).

Thirdly, *it may prove rather difficult for the central bank to steer market rates in a way which is consistent with its monetary policy target, since the non-standard policy measures such as the unlimited provision of liquidity are still activated*. For instance, a fixed rate tender with full allotment usually causes a large daily liquidity surplus within the banking sector that must be absorbed by extra fine-tuning operations in the final term of the reserve maintenance period to circumvent a significant drop of the overnight interest rate. This, in turn, leads to additional volatility in the markets as well as large interest rate fluctuations that are undesirable from the point of view of an effective signalling of the monetary policy stance (Bini Smaghi, 2009).

Fourth, *the pass-through of rising policy rates would be negatively affected if money markets still need non-standard monetary policy measures*. Any monetary tightening would not be orderly transmitted again if trust among market participants is not restored and money markets have not started to operate normally again (Bini Smaghi, 2009).

Finally, *inflationary pressures that would necessitate a tightening stance of monetary policy probably materialise only when the commercial banks restart their normal lending activity*, because otherwise there would be no recovery of the economy. Thus, non-standard policy measures must have been reversed in a bank-dominated system such as the euro area before interest rates should be increased (Bini Smaghi, 2009).

These arguments may *not apply* to measures employed to revive the credit flow in specific market segments as, for instance, corporate bond purchases. But at the same time these measures stimulate investment and thus aggregate demand and create inflationary pressures in the medium run, if money markets and lending by banks function or not (Bini Smaghi, 2009).

Of course, the depth of the corporate bond market determines the significance of this channel. If policymakers reacted to these inflationary pressures by raising interest rates pre-emptively while money markets were still weak, the consequences for the banking channel of intermediation could be severe – for the reasons just given. If, however, markets were to function properly again, there would be no reason to postpone the unwinding of ‘credit easing’ policies to a date longer than needed. Taken together, this reasoning suggests that *purchases of privately issued securities should be unwound before or at the same time as interest rates are raised back to normal levels* (Bini Smaghi, 2009).

It is important to note that most of the ECB’s non-standard measures have a sell-by date at which the liquidity will be withdrawn again, unless the bank decides to prolong the programme (Bartsch, 2009). According to its former board member Juergen Stark (2009) and also Jose Manuel González-Páramo (2009), the ECB aims to re-establish a situation where the one-week MRO is the main tool for steering money market rates and where the ECB acts as a ‘rate-taker’ in the term-funding money again. The latter would imply switching back to partial allotment or even variable rate tenders.

However, *the specific steps will depend on the state of the money market*. The criterion for phasing out the respective operations should be the ECB’s assessment of the financial situation and, specifically, how funding risk evolves, without compromising its price stability

mandate. The latter implies that the criterion for how and when to withdraw the monetary policy stimulus in terms of the key ECB interest rates must be a thorough assessment of risks to price stability. Based on its economic and monetary analyses, the ECB should continue to monitor very closely all developments over the period ahead. It should ensure that the measures taken are unwound in a timely fashion and the liquidity provided is absorbed in order to counter effectively any threat to price stability (Stark, 2009 and various issues of the ECB Observer, <http://www.ecb-observer.com>). *Two different scenarios* should be considered in this context.

The first scenario is one where the *problems in the money markets disappear before any upside risks to price stability emerge*. In this case, unconventional measures should be unwound before policy rates are raised. The withdrawal would likely impact money market rates, many of which are below the refi rate at the moment (Belke, 2010).

The second scenario is one where *upside risks to price stability emerge while the problems in the money market persist and bank funding is still constrained* (Belke, 2010). This could happen if inflation expectations became unhooked, for instance. In this case, the ECB should keep enhanced credit support in place, i.e. it should maintain the structure and size of its balance sheet and raise its policy rates. Supplying unlimited liquidity to the banking system would likely leave money market rates below the refinancing rate. In this context, the key question is whether the funding constraints result from dysfunctional markets overall or from specific situations at individual institutions. If the issue was intrinsic to individual institutions, targeted measures outside monetary policy – such as government guarantees, recapitalisations or asset swaps – would seem more appropriate (Bartsch, 2009). Let us now finally present some remarks on the *detailed sequencing of measures*.

With regard to the sequencing of the withdrawal of non-standard liquidity measures, there is less flexibility and more path-dependence than one might think and it is useful to distinguish again between the main different types of measures (Borio & Disyatat, 2009; González-Páramo, 2009). Especially with respect to the Securities Market Programme (SMP) and the announcement of OMTs exit will be very demanding due to the huge degree of path-dependence in the application of these measures. This is much less so for the so-called Bazookas (LTROs) because they will run out automatically (Belke, 2012, 2013). In the meantime, some early reflections on specific details have been presented by Bartsch (2009), Baudchon (2009), Belke (2009b) and González-Páramo (2009).

### **3.2.2. The bottom line – towards a final roadmap for the ECB's policy exit**

In order to create or, at least, contribute to a common understanding of their exit strategies, central banks must explain what kind of conventional and unconventional policy tools they dispose of and in what way they want to make use of them. In the first place, central bankers should clarify that they will start tightening monetary policy when the recovery is solid, financial markets are back to normal and credit risk spreads a narrow to a comfortable level and the risk of inflation over the medium term is rising. If this is the case, there are no economic limits to employing open market operations (the main tool of conventional monetary policy) to move up the official interest rate target and thus the costs of borrowing. Central banks can enact outright sales of (or reverse repurchase agreements on) government bonds, because the latter usually are the most liquid and safe financial assets. Basically, central banks can also intensify their open market operations by means of a hike of the official rate on banks' reserves held at the central bank with the aim to absorb any excess

liquidity prevailing in the banking sector. By this, excess credit creation and, in the end, also inflation could be prevented at a sufficiently early stage. It is worth mentioning here that rising official and market interest rates will be a central ingredient of any reduction of central banks' balance sheets. Moreover, a reserve rate increase will lead to further effects beyond banks reserves. For instance, these could – as is the case also for the Fed, which may explain the current delay in the Fed's exit – reveal realised losses on the central bank balance sheets. This point seems to be ignored in some public policy discussions (Baudchon, 2009; Hall & Woodward, 2009; Tesfaselassie, 2009).

To a certain extent, the current calls for a strategy of exit from unconventional monetary policies remind us of the earlier debate on whether central banks should announce projections of future interest rate (Goodhart, 2009). In ordinary ('normal') times, central banks usually base their rate setting decisions on projections of the output gap and of the inflation rate. The policy stance is then mirrored by the so-called Taylor rule, which indicates how the interest rate setting should be geared towards the output gap and inflation.<sup>2</sup>

The genuine complexity of monetary policy decision-making by central bank committees constitutes the main drawback of publishing central banks' interest rate projections. Naturally, the prevailing extraordinary conditions due to the financial crisis imply that beyond the output gap and inflation, targeting financial stability will also be important in conducting monetary policy in the future. This means even more challenges central bank committee members are confronted with when having to agree on a common view of the future stance of the economy and the exact course of action needed. It thus appears *counterproductive* for a central bank to pinpoint the *specifics of the envisaged exit strategy*, i.e., the timing of future unconventional policy interventions by central banks. Instead, the main focus should be on *'remaining alert to the risks posed by inflation and taking appropriate actions when necessary, including rolling back part of the various support programmes'* (Baudchon, 2009; Tesfaselassie, 2009).

### **3.3. Should the exits be a one-off or step-by-step?**

#### **3.3.1. When to exit from current policies? The principle of timelines**

When to begin monetary tightening, and where to begin (with conventional and/or nonconventional measures) is a *far more challenging question than how to do it*. If you want greater precision than 'as early as possible', one should not put a date but talk about the *conditions that need to be in place to trigger an exit*. In the following, this contribution tries to set out the terms of the debate and reviews the variety of exit conditions proposed in the academic and political literature. However, we do not recommend a specific sequence of dates. In this section, we feel legitimised to follow the proposals by Baudchon (2009) which serve best to underline the necessity of timeliness of the monetary exit measures.

He argues:

(b)because the nonstandard credit easing policies were implemented only after standard monetary easing was close to reaching its limits, the natural order of events would be to completely end the nonstandard policies before moving back up the chain and hiking rates. Credit easing came in as a replacement for rate cuts; so undoing the credit easing could be a substitute for raising rates. (Baudchon, 2009)

However, the natural sequence described by Bauchon could be turned on its head since the high level of excess reserves does principally not exclude 'conventional' monetary tightening.

Balance sheets do not have to be compressed to levels which prevailed before the crisis in order to initiate the first rate hikes (especially because the contraction process will take time):

Still, rate hikes would be hard to justify unless accompanied by a significant reduction in excess reserves. There is an obvious reason for this. In the US, for instance, many of the credit easing measures are based on the conviction that market conditions are ‘unusual and exigent’; this judgment is implicit in maintaining the measures in place, and is fundamentally inconsistent with circumstances warranting an increase in the Fed funds rate. (Baudchon, 2009)

The initial step towards the tightening of monetary conditions, according to Baudchon’s view, consists of simply stopping monetary policy easing. According to the usual monetary policy cycle, the second step is to fix the optimal time to start the tightening cycle, and to determine the speed at which the tightening cycle should be passed. These days, the challenge is moving between tightening too early or too fast (which would, of course, endanger a fragile recovery), and tightening too late with an eye on keeping inflation under control. If the recovery is strong and robust, the central banks may thus find exit easier (Baudchon, 2009).

Any assessment of how monetary and financial conditions will be affected through an actively conducted withdrawal of liquidity entails higher uncertainty than for an ordinary rate hike in ‘normal’ times. Asymmetric market responses become a possibility, as markets may tighten more than they eased before. This clearly demonstrates the *need for communication* about what the plans are for the course and timing of policies to make the market ‘noise’ surrounding the decision (see introduction) as small as possible. Starting to drain liquidity may, however, serve as an important *robustness check of the recovery’s capacity to sustain less accommodative monetary policy*, while keeping inflation fears under control. For this purpose, it would have to be implemented *gradually* (Baudchon, 2009).

Raising interest rates is where the *question of speed* really comes into play. Central banks have to choose among four possible strategies: *gradual tightening, either early or late; or aggressive tightening, either early or late*. If we follow Mishkin’s arguments, an aggressive approach goes without saying (Mishkin, 2009). That would have the benefit of following the logic of a *symmetric reaction* to an especially aggressive but necessary action to withstand the financial crisis and prevent a deflation spiral. Theoretically, monetary policy conducted by a central bank committed to price stability, i.e., to the absence of inflation as well as deflation, should be *symmetric* when rates rise and fall anyway. But the de facto handling of this issue differs: central banks are often more aggressive in lowering official rates than in raising them (Belke & Rees, 2014).

According to Trichet (2009), the *preparations for exit* are important. The Governing Council has to ensure that the measures taken are quickly unwound, and the liquidity provided is absorbed, once the macroeconomic environment improves. In the same way as operations with shorter maturity, also LTROs (the so-called ‘Bazookas’) are meant to provide liquidity over a fixed time horizon and mature in a completely predictable manner. By contrast, the *cutback of outright purchases* which is inherent in the envisaged exit by the US-Fed usually *necessitates additional decisions*, whether to keep the securities to maturity on its balance sheets, and, if this is not the case, fixing the exact date when to sell. The route taken by the Eurosystem avoids such decisions, since it – except the covered bonds programme – relies largely on built-in mechanisms for the reabsorption of liquidity (Trichet, 2009).

### 3.3.2. *At what speed? The principle of gradualism*

How quickly should policymakers reverse their policies? On the one hand, withdrawing liquidity in such large quantities will trigger a substantial contractionary monetary policy shock. The large size of many easing programmes will make it difficult to sell assets without a significant market impact. *If it happens too quickly or abruptly, policymakers risk choking off the economic recovery or imposing heavy capital losses on lenders.* For instance, in the corporate bond or commercial paper market, even small sales of securities by the central bank could cause spreads to widen considerably and to sharply tighten credit conditions for firms (Bini Smaghi, 2009).

On the other hand, with policy rates at record low levels and additional liquidity-providing measures adopted in so many countries, the possibility of inflation emerging with a lag cannot be swept away. Sticking to exceptional policy measures for a too long time may amplify upside risks to price stability and *sow the seeds for future financial market imbalances* in financial markets (Belke & Rees, 2014, Belke and Verheyen, 2014, Bini Smaghi, 2009).

Getting the timing right in withdrawing additional liquidity is paramount to safeguarding a recovery without excessive inflation. The less the non-conventional operations are reversible, the bigger the risk of falling behind the curve is when the macroeconomic and financial environment is improving (Bini Smaghi, 2009, p.11).

Further comments of the former ECB Board Member Lorenzo Bini-Smaghi are worth to be mentioned in this context:

Indeed, to a large extent the *speed* of unwinding of unconventional measures would depend on their *degree of reversibility*. As already noted, some of the unwinding would happen automatically as central bank programmes become increasingly unattractive as financial conditions normalise. For instance, many lending facilities provide liquidity at a premium over the main policy rate or with a high haircut applied to the required collateral, making interbank lending the more attractive option once normal lending activity among market participants is restored. As a result, the central bank's balance sheet would decline automatically as demand for its funds decreases. (Bini Smaghi, 2009, p.11)

And:

(n)ote that the ECB's current liquidity-providing operations imply an 'endogenous' exit strategy as banks would automatically seek less credit from the ECB when tensions in financial markets ease. The speed of the reversibility would therefore largely depend on the speed of the resurgence of the financial system. In the euro area, the revitalisation of money markets is key to the ECB's exit strategy and any future interest rate decision should therefore avoid a further disruption of money markets. In this context, bringing the main policy rate too close to zero would risk hampering the functioning of the money markets as it would reduce the incentives for interbank lending. This, in turn, could blur the important signals coming otherwise from the resurgence of interbank lending and the associated positive effect on the ECB's balance sheet. (Bini Smaghi, 2009, p. 11)

Obviously, the speed of tightening would also depend on the *maturity of the assets* bought by central banks within the framework of their easing programmes (see section 1.5). Differences in the maturity of assets will ensure that a tightening of the very accommodative monetary policy stance would be *realised gradually*. This in turn contributes to *circumvent any abrupt credit tightening* during the recovery. At the same time, measures centred on assets that are longer-term in nature and less liquid could pose challenges to the future unwinding of these measures (see section 1.5). If market conditions cleared quicker than expected, the growing average maturity of the central bank's portfolio would render it more intricate for financial

markets to move normal functioning and would, in addition, pose upward inflation risks in the medium run (Bini Smaghi, 2009).

González-Páramo (2009) rightly states in this context: ‘Regardless of the specific modalities adopted for the exit strategy, key principles of “how” to phase out existing measures should in any case be *timeliness* and *gradualism*’. In his interpretation, this implies that monetary policy should be normalised and the non-standard measures withdrawn parallel with the *gradual improvement in economic and financial conditions*.

Right now the scarcest resource we have is confidence in the future. That is why in the present, very demanding, circumstances:

all necessary steps should be taken to strengthen confidence at all levels. This calls for bold yet solidly anchored responses. We must maintain the appropriate balance between the need to take immediate action commensurate with the gravity of today’s situation, and the equally undeniable obligation to return to a path that is sound and sustainable in the medium and long term. (Trichet, 2009, p. 17)

### 3.3.3. *When? Exiting too early vs too late*

It has to be *warned against a common and unfortunate view suggesting that it is currently too early, or even by all means inopportune, to envisage appropriate exit strategies*. Such a view is plainly wrong because one should not mix up the availability of a credible exit strategy – which can be activated at the right moment – with the decision to actually embark on that strategy:

In terms of political economy, such kind of confusion often explains people’s fierce opposition to the mere existence of exit strategies. Moreover, the very existence and the visibility of a credible exit strategy will foster confidence today and will therefore contribute to the re-activation of the economy here and now. (González-Páramo, 2009; Trichet, 2009, p. 18)

In discussing *when* to exit from non-conventional monetary policy, we should clearly distinguish between the official interest rate instrument prevailing in normal times and the different non-standard liquidity measures:

For the stance of monetary policy, the answer to this question is simple – at least in theory. Given the institutional policy of the ECB, the obvious point in time to tighten the policy stance is when, based on the analysis of the outlook for economic activity and inflation, there is evidence of emerging upside risks to price stability. At that stage, the interest rate should be increased at the pace necessary to ensure price stability in the medium term. However, identifying the right moment in time to start a tightening phase is difficult already under normal conditions and even more so when the assessment of risks is, as in the current environment, surrounded by heightened uncertainty. (González-Páramo, 2009)

Getting the exact turning point right when the balance of inflationary risks shifts to the worse could well be complicated beyond pure technical reasons by the ‘noise’ imposed by ‘public utterances and pressures’ intending to impact the decision of the central bank. In section 1.1, the article already mentioned the difficult environment the ECB faced in 2005 when, after leaving the central policy rate unchanged at 2% for two and a half years, it decided to start tightening the policy stance. With hindsight, the ECB’s decision served to anchor long-term inflation expectations.

A previous record of ‘getting turning points right’ is not a sufficient condition for success in the current context. With an eye on the exceptionally high uncertainty, the exit from the non-conventional policy measures must originate from an assessment of *a broader set*

*of indicators than usual.* However, even then it cannot exclude the risk of exiting from the non-conventional measures too soon or too late. Both scenarios embody specific dangers (González-Páramo, 2009).

### **3.3.4. Risk of exiting prematurely**

If a central bank starts its exit too early, it risks, probably due to sunk costs, not to be able (or willing) to reverse its direction if economic conditions worsen again (hysteresis in monetary policy based on irreversibilities, see Belke & Göcke, 2009):

Historical evidence shows that the removal of unconventional monetary policy measures regularly contains elements of irreversibility. This is because the effectiveness of non-conventional policy depends to a large extent on how long the policy is expected to stay in place. For instance, if an exceptional measure to increase liquidity supply to the banking sector is expected to be short-lived, banks are unlikely to extend additional credit to the private sector. (González-Páramo, 2009)

More generally, any (suspicion of a) lack of commitment to its non-conventional policies bears the danger of being self-defeating. For instance, the fact that the Bank of Japan felt quite uncomfortable with this policies – despite the announcement that the zero rate policy started in 1999 would be maintained until deflation was over – and thus raised the call rate by 25 basis point in August 2000 led to an unnecessary and painful prolongation of Japanese deflation (Eggertsson & Woodford, 2003).

However, a further twist has to be considered here:

the difficult thing is that a credible commitment has also to be realistic. If not significant deflation manifests itself in expectations, the public may not believe that public authorities are seriously committed to pursuing non-conventional measures when these measures are of such a large magnitude as to appear untenable for the balance sheet of the central bank or for the sustainability of public finances. (González-Páramo, 2009)

### **3.3.5. Risking an exit which comes too late**

Central banks tend to lose credibility with respect to their low inflation commitment if their exit from unconventional expansionary policies comes too late. Looking at the historical experience during the 1970s and the early 1980s, it becomes obvious that, once the private sector inflation expectations have been destabilised, as a rule, it becomes very difficult and costly (in terms of output and job losses) to bring them back under control (see also different issues of our ECB Observer, <http://www.ecb-observer.com>). On the contrary, a credible commitment to an explicit inflation target contributes to anchor inflation expectations at the desired level of inflation. This anchor in turn helps in arriving at price stability, a big support of central bankers (González-Páramo, 2009).

Surveys among market participants typically reveal that merely small minorities of respondents are currently concerned about the impact of excess liquidity on future inflation in the eurozone. Along with profound evidence that long-run inflation expectations remain well-anchored at levels coinciding with price stability, this piece of evidence underscores that market participants are confident that the ECB will be able to revert its non-conventional policy measures at the appropriate point in time and at the right pace (González-Páramo, 2009).

González-Páramo consistently adds:

When assessing whether or not the non-conventional liquidity measures have achieved their objectives, one should be aware that such measures have been introduced for systemic purposes and not to address problems at individual institutions, which fall within the sphere of competence of national governments. Therefore, concerns about the costs or difficulties faced by individual institutions, once the exceptional provision of liquidity is discontinued, should not act as a constraint on the timely implementation of an exit strategy from UMP. (2009)

### **3.4. What exit strategies for public interventions in banks can be envisaged? How can competition be ensured?**

In general, it would be unwise to undertake the necessary monetary policy (and fiscal) exit without first addressing the remaining problems of the financial sector (von Hagen et al., 2009). This view is corroborated by the International Monetary Fund:

(g)overnments planning to withdraw financial-market support should first exit programmes that guarantee bank liabilities and coordinate their moves with other countries to keep a level playing field. Bank-debt guarantees are potentially costly for public finances as governments assume credit risk. Governments may need to hold assets bought to help banks improve their balance sheets for some time, as their goal should be to generate the highest possible return. Once financial stability has been established, priority should be given to exiting from those that have a significant distortionary impact on financial markets or involve considerable contingent liabilities for the government. Based on these criteria, it would be reasonable to unwind government guarantee on bank debt earlier than disposing of impaired assets acquired by the public sector. (2009), p. 148

In answering the above questions, it appears to be advisable to follow a persuasive proposal developed by Snower (2008). According to Snower the main problem in the financial sector is the potential insolvency of systemically relevant financial institutions has become the main challenge. In the same way as central banks take the function of a ‘lender of last resort’ in case of illiquidity, governments should act as ‘buyer of last resort’ in case of *insolvency*, i.e., when willing private buyers are absent. The bailed-out institutions in turn need to accept tougher supervision and regulation.<sup>3</sup>

In the wake of their purchases of shares in distressed financial institutions, the governments must characterise through which reliable channel they will move this equity back to the private sector. This is all the more necessary with an eye on the indisputable fact that governments are not necessarily better in running banks than bankers themselves, especially if the latter are regulated appropriately. What is more, there would be negative effects on financial markets if the – at least partly conducted – nationalisation of banks does not have a limited time horizon (Snower, 2008).

As soon as the rescued financial institution has sufficient strength to operate on its own again, one potential exit strategy for the government consists of surrendering *the acquired equity to a trust company* (Snower, 2008). This is the Snower proposal which has been cited frequently in the past and which contains the following elements:

(t)he trust company has the task of selling the shares within a given period (e.g., ten years) with the sole objective of maximising the profit and, thereby, minimising the taxpayers’ burden. Thus far, this has not happened. And also those who are holding shares or bonds of the financial institutions or companies which were bailed-out have to be included in loss-sharing. Note that shareholders automatically take part in the latter through equity dilution. Bondholders could be forced to accept a conversion of their bonds into shares, i.e. a debt-to-equity swap. (Snower, 2008).



What is more:

... financial regulation of internationally operating banks will have to be improved according to the experiences made during the financial crisis. For instance, international regulators could also increase capital requirements (thus reducing the risk of future insolvency) once the economic situation has improved. They can increase transparency by moving derivatives trades such as that in CDSs onto a centralised exchange to be cleared, as is done for futures and options. At the local level, individual countries or states could increase the (so far lax) requirements on the origination of loans, particularly subprime residential mortgages. However, caution is also needed when it comes to political decision-making. Policymakers need to be careful to focus on creditworthiness in deciding on public loan allocations or new regulations, not on benefits to specific political constituencies. (Snower, 2008)

While the Snower approach is quite persuasive, one should not forget to mention a recent example of a more conventional and cautionary approach which is presented by Levy and Panetta (2009). The latter draws upon the fact that, in December 2009, government guarantees on the issuance of bank bonds closed to new issuance in many EU countries. The authors argue that the guarantees were effective and should have been extended into 2010, despite improved market conditions and bank profitability. However, while proceeding that way, governments should have purged the schemes from any distortionary effects and followed a careful exit strategy.

#### **4. Coordination of exit strategies**

It is not self-evident that the phase-out should be coordinated, as the current economic situation differs in the different OECD countries (Bini Smaghi, 2009a). However, the argument that the exit strategies for phasing out the support to the banking sector should be coordinated appears to be on much safer grounds. This is because otherwise competition in the banking sector could be distorted in the case of some countries retaining their fiscal policy stimulus measures while others do not.<sup>4</sup> For example, banks will be subsidised to some extent in those countries where bank support programmes are retained, in contrast to countries where such programmes are phased out (see section 1.4).

Hence, the issue of the timing and the coordination of the monetary exit strategies on the global level, but also with regard to the interaction between monetary and fiscal exits, should be carefully assessed. For instance, de Grauwe (2009) underlines that there can be little doubt that the spill-over effects on monetary policies are large. The degree of financial integration is such that actions by the major central banks are felt everywhere, which is shown by the success of high cooperation between central banks during the crisis. Is there a case to be made for (globally) coordinating monetary exit strategies? Should there be coordination between the monetary and fiscal exit strategies?

##### **4.1. (Global) coordination of monetary exit strategies**

The standard argument in favour of coordination of the monetary policies designed for exit runs as follows. On the monetary side, economies that tighten first may find their currencies appreciating and, in so doing, draw capital away from countries not yet strongly recovering. In turn, that may induce currency interventions to offset the spillovers, which could contribute to economic conflict. Given current trade politics, we do not need any more of that. Globally well-anchored inflation expectations have enabled aggressive policy easing and

helped stave off deflation – yet they are well anchored in part because every major country is on-board; any significant divergences in inflation goals would erode that to everyone's detriment. But the way back from expansionary fiscal policies will be infinitely slower – not a matter of weeks, as it was in 2008 when the stimulus programmes were being put in place, but a matter of years. When the horizon lengthens, spillovers among countries become less important. Hence, fiscal policy in turn has the smallest international spillovers, and should receive the least attention (Giavazzi, 2009; Posen, 2009).

#### ***4.1.1. Global liquidity, uncertainty and the coordination of exit strategies***

In order to assess the deeper relevance of this argument it makes sense to have a closer look at studies on global liquidity. For instance, Belke and Rees (2014) analyse the importance of global shocks for the global economy and national policymakers. More specifically, they investigate whether monetary policy has become less effective in the wake of financial globalisation. They also examine whether there is increasing uncertainty for central banks due to globalisation-driven changes in the national economic structure. A FAVAR framework is applied to derive structural shocks on a worldwide level and their impact on other global and also national variables. The authors estimate their macro model using quarterly data from Q1 1984 to Q4 2007 for the G7 countries plus the euro area. According to their results, global liquidity shocks are a driving force of the global economy and various national economies. However, some other shocks originating from house prices, GDP, technology and long-term interest rates play a role at the global level as well. These results prove to be robust across different specifications. Structural break tests indicate that global liquidity shocks have recently become more important as a determinant for house prices. In general, global variables have become more powerful over time in driving national variables.

More important in our context, Belke and Rees (2014) have investigated whether there is increasing uncertainty for monetary policy in the wake of globalisation and whether central banks have become less effective in influencing national liquidity conditions. In brief, our answer to both questions is a clear 'yes'. First, global liquidity conveys additional information about monetary conditions not summarised by national money and short-term interest rates. Second, global liquidity restricts national monetary policy in its ability to influence nominal and real variables, caused by, for example, the effect of global liquidity on short-term interest rates. As a consequence, the influence of central banks on domestic money supply is weakening. Third, national monetary policy is faced with an increasing degree of uncertainty and might feel forced to act according to the so-called Brainard conservatism principle (Brainard, 1967). Fourth, the old question of optimal monetary policy among interdependent economies powerfully reappears on the surface. In the following, we elaborate a bit more on the third and the fourth policy conclusion.

Our third policy conclusion is that national monetary policy is faced with an increasing degree of uncertainty. Needless to say, monetary policy always operates in an environment of uncertainty. Sometimes, for instance, it is not unambiguously clear for central banks how to interpret new incoming macroeconomic data (as is now the case with respect to the sustainability of the worldwide recovery). Moreover, there are uncertainties about the concise monetary transmission mechanism. However, our empirical results indicate that the fog of uncertainty has indeed increasingly become denser due to structural changes in the transmission process between global and national variables. Among other common forces, this also seems to be true for global liquidity, which has an increasingly stronger

effect on monetary aggregates in some but not all countries. This ‘Knightian uncertainty’ or model uncertainty may have significant implications for the behaviour of central banks. [Posen \(2009\)](#) puts it like this: ‘The unconventional monetary policy measures have indeed served the pursuit of price stability as intended, although with more uncertainty about their size of impact than central banks would prefer’.

According to the Brainard conservatism principle, uncertainties about major model parameters can change the incentives facing central bankers, thereby leading them to use their policy instruments less vigorously. The reason is that uncertainties about the elasticity between global and national money are amplified in the economy the more monetary policy reacts to this relation. Since the Brainard conservatism introduces a motive for caution in optimal central bank behaviour, financial globalisation and its corresponding structural changes may be important reasons for central banks not fighting against strong rises in monetary and credit aggregates in the last few years.

Our fourth policy conclusion concerns the question of the *optimal design of monetary policy among interdependent economies*. Should open ‘spillover-driven’ economies adopt rules designed to fit specific features of more open and more closed economies? This is old wine in new bottles and is closely related to the popular debates about inward-looking versus outward-looking monetary policy and commitment versus discretion, respectively.

The Chicago School saw a flexible exchange rate as a way of insulating domestic developments from foreign economic disturbances, including foreign monetary policy. There is no need, they argued, for central banks to coordinate their monetary policies. All that is needed is flexible exchange rates. Does the existence of global liquidity mean that we need coordination or even a world central bank? International coordination might be needed to keep global liquidity shocks as low as possible, since structural changes between global and national liquidity cannot be influenced by central banks. One reason is that monetary competition between central banks might cause a free-rider problem in the absence of any coordination. If a national central bank, let’s say the Fed, is inclined to conduct a lax monetary policy, liquidity spillovers occur and foreign central banks have to bear parts of the burden. Another reason is that there may be multiplier effects that occur when several countries all turn their monetary policy in the same direction.

The crucial issue is not only how to deliver a coordinated exit from unorthodox expansionary monetary policies but even more so how best to prevent further excessive, synchronised shifts in the world money stock. Policy coordination in this context would eventually bring greater predictability, but at *the risk of all countries simultaneously choosing the wrong set of policies*. *International policy coordination would merely elevate to the global level the shortcomings that are now apparent at the domestic level*. This is especially valid in times of high uncertainty about whether and when the world economy has substantially recovered from the crisis in which it might generally be better to have independent national monetary policies that are not coordinated (or at least not correlated) worldwide, because this leads to risk diversification: the variance of a sum of shocks is lower the lower the covariance among the individual components ([Belke & Gros, 2009](#), with an application to fiscal policy).

#### **4.1.2. Coordinating exit with asymmetric country interests – the ECB should go ahead**

Note that the US should be part of any meaningful coordination of monetary exit, especially with an eye on its large share at vagabonding global liquidity having its origin to large parts in US monetary policy in strong implicit – though not always explicit – alliance with

dollar-pegged China. Otherwise, worldwide coordination would be out of the reach because the euro area with its medium-term target of price stability and some Asian regions with a new bubble emanating both have a stake in starting monetary exit in the not too far away future and would permanently become the receiving country of carry trades. The latter would undermine the effectiveness of their efforts to exit and would eventually force them to impose capital controls.

However, up to now the Fed did not announce any concrete steps with respect to its exit from UMP. So what does the relevant exit coordination game look like? Since European inflation expectations remain firmly anchored, while US inflation expectations are not, serious disturbances in international capital flows will be quite likely if the ECB credibly announces and starts with its exit *unilaterally*. Global investors will be in a position to switch out of dollar into euro assets, driving the dollar-euro bilateral exchange rate to unseen highs. It is not the time to give a prediction of the appreciation potential of the euro here. But one would reckon it is sizeable once the solvency crisis within the euro area will be overcome. The reason is that the US fiscal position and the Fed which is – according to Roubinis RGE Monitor, nearly bankrupt by now, deserves much more scepticism than that of the PIGS (Portugal, Italy, Ireland, Greece and Spain) countries in the medium- to long-run as measured by nearly all indicators (Munchau, 2009). The crisis in the US bond markets would produce further financial strains. Germany's current account surpluses, which we have worried about for years, will miraculously disappear, and may even turn into a deficit. The US would run a massive trade surplus. The days of the dollar as the global reserve currency of choice would be numbered, and the euro will, at least temporarily, take over (Belke, 2009a; Belke, Goecke, & Guenther, 2009).

In the same vein, China's chief banking regulator has said already in 2009 that the US Federal Reserve's weak monetary policy is fueling speculative investments in stock and property markets and endangering the global economic recovery (Financial Times, 2009). Mingkang, at that time China's chief bank regulator, believes the combination of a weak dollar and the Fed's low interest rates are facilitating a 'huge carry trade' that is distorting global asset prices.<sup>5</sup> China, which is the largest US creditor by virtue of its massive Treasury bond holdings, has also previously focused its criticism on US fiscal policy, arguing that Washington's rising debt burden is undermining the dollar. Liu's remarks came at time when China's own monetary policy was also attracting scrutiny, following the massive credit expansion seen so far at that time. Qin Xiao, chairman of China Merchants Bank, said in 2009 that Beijing urgently needed to tighten monetary policy to avoid stock and property market bubbles.

However, there may be more reliable allies for the ECB in the Far East because nothing prevents emerging Asia's central banks from acting and to exit from very expansionary monetary policies. US monetary conditions are clearly not appropriate for their circumstances. Their economies are growing robustly. (They have been the ones with bubble trouble until Ben Bernanke characterised how the Fed's exit would look like if it will be enacted). They can and should tighten now. Yes, doing so will create problems. In particular, tightening while the Fed remains on hold will mean that emerging Asian currencies will appreciate against the dollar. This will be uncomfortable for a set of economies accustomed to export-led growth and to the security of dollar pegs. But if the price of those dollar pegs is an asset bubble that sets the stage for a disruptive crash – one that does serious damage to banks and corporations with significant exposures to the property market – then that price is no

longer worth paying (Eichengreen, 2009). The danger posed by Asia's financial bubbles is real. But it is important to take the right steps to combat it. This is appropriately a task for emerging market central banks, but via the global liquidity link and carry trades also for the Fed and the ECB.

Moreover, increased financial integration diminishes the gains from policy coordination. Economic conditions overseas become more important for governments. This should dampen their incentives to enact beggar-thy-neighbour policies even when they abstain from coordination (Belke et al., 2002). Hence, it would currently be clearly desirable if, this time, a clear price stability orientation of the ECB would also induce the Fed to enact a timely exit from its strongly expansionary macro policies (for instance, because the US are not willing to give up the status of the dollar as a world reserve currency faced with increasing mistrust of Russia and other countries in the dollar). Such a kind of a monetary policy somersault would take significant pressure from European exports and wages since the very low US money market rates are generally considered to be the main reason for the decline of the dollar. This would correspond with a return of the world to more monetary stability and growth, while preserving the status quo regarding the world reserve currency. Anyway, and also with an eye on the huge amounts of liquidity vagabonding around the globe, a coordination of the exit and not of a non-exit from UMP on both sides of the Atlantic is highly indicated. The alternative would be that the doubts about the stability of the dollar would increase even more (Belke, 2009a).

#### **4.2. Coordination between the monetary and fiscal exit strategies?**

It should be clearly acknowledged that a necessary condition for central banks to be able to do their job of delivering price stability is the sustainability and credibility of public finances. According to the institutional set-up of European Monetary Union, this requires full (though it is not at all realistic, since sanctions are not credible) compliance by national governments with the rules of the Stability and Growth Pact, a fundamental component of the policy framework for area-wide macroeconomic stability (González-Páramo, 2009).

The fiscal costs of the crisis – stemming from discretionary stimulus measures, the use of automatic stabilisers and measures in support of the financial sector – are likely to be considerable. These costs, together with the expected adverse fiscal impact of population ageing, pose considerable risks to future fiscal sustainability. In the aftermath of the crisis, many countries may not be able to rely on sustained GDP growth to smoothly reduce their debt burdens. This means that ambitious plans for structural fiscal consolidation need to be developed and communicated in order to guarantee the public's trust in the sustainability of public finances. Together with the direct impact of monetary exit strategies via the yield curve on public debt consolidation and other feedback mechanisms this appears to underline the need of coordination of monetary and fiscal exit.

The issue then is one of *sequencing*. Should central banks start thinking about rescinding their exceptional monetary accommodation, or should governments start cutting deficits (Giavazzi, 2009)? Taking into account various fiscal theories of the price level and inflation, the ECB was totally right in explicitly linking fiscal retrenchment and its exit from the recent extraordinary monetary accommodation. The more delayed the fiscal exit, *ceteris paribus*, the more the monetary policy exit might have to be brought forward. Indeed, given the level of the debt accumulated in most advanced economies, any delay in the fiscal exit is

likely to have an effect on inflation expectations, and may even dis-anchor them. This is a risk that the ECB's monetary policy cannot take, as it would undermine its overall strategy. In other words, *fiscal responsibility on behalf of eurozone governments would help avoid a premature exit from unconventional measures by the ECB.*

#### **4.2.1. The valuable option to delay exit**

Both governments and central banks have good arguments for the delay of an exit. The balance sheets of financial institutions are far from being fully repaired and some argue that this should be done first before any fiscal or even monetary exit is envisaged (Giavazzi, 2009; von Hagen et al., 2009). Moreover, banks, flush with cash but still unwilling to lend, are taking advantage of the yield curve to borrow short and lend long, especially to governments. An abrupt increase in long-term rates risks turning these carry trades sour (see section 1.5). On the other hand, we do not know to what extent the recovery that seems to have started is simply the result of the stimulus programmes starting to kick in (Belke, 2009). A couple of fiscal multiplier analyses tell us that the effects are smaller than and in parts pro-cyclical. This makes governments understandably reluctant to cut spending or raise taxes. This 'option value of waiting' might even apply to monetary policy.

#### **4.2.2. The Giavazzi chicken game**

In the classic game of chicken, one possibility is that neither player yields to the other, resulting in the worst outcome for both. In the case at hand, this would entail an increase in long-term interest rates resulting from a combination of fear of persistent deficits creating large debts, fear of inflation from persistent monetary accommodation, or simply from the anticipation that central banks will move first and rather early (Giavazzi, 2009). This is a sure way to kill the by now rather fragile recovery. Is there any way out?

The answer usually is an *irrevocable commitment by governments to cut spending in the future*. Such an *ideal case* commitment would stabilise expectations and allow central banks to wait longer before they remove their monetary accommodation. At the same time, it would avoid the demand risks that an immediate removal of the fiscal stimulus would impose. Although such commitment may be difficult to achieve, there are arguably means of making spending reversals credible *ex ante* (see the German 'Schuldenbremse' which was even written into the constitution).

Hence, the monetary and fiscal authorities are confronted with the choice of who will act first. Should unconventional monetary policy be rolled back first, or should fiscal policy begin? Without a credible fiscal exit strategy in place, long-term rates are emanating to increase very soon, since financial markets are beginning to anticipate the response of central banks to the lack of action on the fiscal front. The increase in long rates would depress consumption and investment and prevent internal rebalancing. A *clear commitment to future spending cuts* is a smart way to allow central banks to maintain an accommodative policy for longer (Giavazzi, 2009).

But by their nature and proven by the current experience, fiscal policies lack a similarly strong built-in mechanism when it comes to the unwinding of stimulus (Belke, 2009). Hence, discretionary policies need to be invoked to engineer an exit from the current degree of fiscal expansion. A return to sound, sustainable public finances, thus strengthening overall macroeconomic stability, must be ensured. Euro area governments should *prepare*

and communicate ambitious and realistic fiscal exit and consolidation strategies within the framework of the Stability and Growth Pact (see Trichet, 2009).

#### **4.2.3. On the theoretical benefits of coordination among monetary and fiscal policy**

It is important that there is plenty of scope for beneficial coordination of monetary policy with fiscal policy. Basically, any interest rate increase implies a heavier debt servicing burden for the governments (Tesfaselassie, 2009). From a fiscal policy point of view, it should be noted that although the exit from monetary measures will be uniform across the euro area, it is likely to have asymmetric fiscal impacts given the current substantial heterogeneity of fiscal positions. A potential increase in market interest rates will have a much stronger impact on highly indebted countries, in particular those with outstanding government bonds with short maturities (Stark, 2009). The need for fiscal flexibility under a single monetary policy places a clear premium on timely and credible fiscal consolidation in all euro area member countries, and the workings of this mechanism should not be undermined.

Likewise, if central banks for instance would start raising the interest rates they pay on banks' reserves, then reserves will compete with government bonds as investment vehicles. This could drive up government borrowing costs and create tensions with fiscal policy. A possible resolution is to have a clearly defined path for fiscal sustainability and let monetary policy focus on fighting inflationary pressures in the economy. This can happen with the full support of governments. They need to understand that the massive fiscal stimulus packages and private sector bailouts cannot continue indefinitely. *Fiscal authorities should devise their own exit strategies* in a way that contributes to the effectiveness of monetary policy in supporting sustainable growth and price stability (Tesfaselassie, 2009).

Taking these interactions as a starting point, for instance, von Hagen et al. (2009) propose that an excellent ad hoc reinforced consultation mechanism should be set up at European level for a small number of years, renewable once in order to ensure the necessary coordination of the exit between member states and central banks. According to their concept, budgetary consolidation should come *before* monetary tightening, mainly because fiscal policy is the costlier and less nimble stimulus instrument. Besides, delaying consolidation or leaving its pace and duration hanging in the air would involve a non-trivial risk of adverse bond market reaction.

Finally, successful budgetary consolidation will reduce inflationary pressures, thereby allowing central banks to sustain a supportive monetary policy stance for longer and tighten monetary policy only when inflationary potential arises. This sequencing, rather than monetary tightening first and budgetary consolidation second, should be a priority goal in the design of exit strategies (von Hagen et al., 2009).

If budgetary policy is given precedence, the implication is that, consistent with central banks' mandates, monetary policy should remain geared to price stability and would normalise once justified by expected price developments. In this process of normalisation, central banks should continue with their past attitude of focusing on second round effects of increases in world market prices of raw materials and agricultural products if and when they arise as the global economy starts to pick up again (von Hagen et al., 2009).

#### **4.2.4. Failure of implementing credible commitments of fiscal consolidation – does waiting with monetary exit really make sense?**

However, studies with a global view on asset price developments clearly show that global excess liquidity impacts first on prices of raw materials and other commodities (Belke & Rees, 2014). Their results indicate throughout that commodity prices might well serve as indicators of future inflationary pressures on goods markets. Why then wait for second round effects, faced with the ECB's medium term strategy? What is more, if governments still diligently emit bonds and commercial banks off-load newly emitted bonds at the ECB for refinancing purposes (100% of the debt is refinanced with central bank money!), this further fuels global liquidity. A vicious circle would emerge without monetary policy exiting from expansionary policies. Moreover, it cannot be excluded that the substantial increases in public debt may give rise to pressures on the ECB to provide easier lending terms, which would nonetheless be self-defeating and ultimately lead to inflation. Consequently, as economies recover from the crisis, it is essential that the capacity of central banks to control inflation will be fully preserved (Cottarelli & Viñals, 2009). Hence, in the current scenario, we will almost certainly not be able to make the case that we will see fiscal policy exiting first because, in theory, there is no lack of a suitable credible commitment (such as increasing the retirement age) but de facto no credible commitment of fiscal policy in sight.

The same critique principally applies to studies asking a couple of years ago what kind of additional co-operation (co-ordination) was necessary and feasible to cope with the new institutional set-up under EMU. Starting from the episode of the repo rate cut by the ECB in early 1999, for instance, Belke (2002) asked what would have happened under a business as usual scenario. In this case, the pre-Maastricht pattern of fiscal policy would have quickly led to grave problems. A promising alternative monetary-fiscal policy mix in the first half of 1999 consisted of a restrictive fiscal policy and a monetary policy which had – within the bounds of price stability – some leeway to act counter-cyclically. However, this also more or less boils down to a 'if there really is a credible commitment of fiscal policy' strategy and in absence of any such commitment unfortunately is not more than a toothless tiger.

Hence, one should feel legitimised to ask: what if fiscal policy cannot credible commit itself due to, for instance, political business cycle considerations? Should we wait with monetary exit in this case? Here, the clear answer is No. What is more, the institutional framework of the euro area leaves no room for any explicit coordination between the single monetary policy of the ECB and the national fiscal policies. The Treaty sets up a clear allocation of responsibilities between monetary policy and national fiscal policies, with a view to ensuring a smooth functioning of monetary union. The institutional framework grants to the Eurosystem full independence from political influence and interference and assigns to the ECB the primary objective of maintaining price stability. At the same time, fiscal authorities are responsible for safeguarding the sustainability of public finances (Belke & Potrafke, 2012; Stark, 2009).

This does not mean that there should be no interactions. The ECB Governing Council has always been involved in a constructive and open exchange of information on the current economic situation and structural reforms with other bodies and institutions at the European level. Moreover, the outlook for fiscal policy plays a key role in the ECB's projections for economic activity and our assessment of risks to price stability. In the same way, because the ECB's policy decisions must exclusively be based on its assessment of risks to price stability, its responses can be rather safely predicted by fiscal authorities (Belke et al.,



2002). The channels for the exchange of information between fiscal and monetary authorities are also well developed. But there cannot and should not be any pre-commitment to a particular course of monetary policy action. This would *undermine the ECB's independence and therefore violate its mandate* (Belke & Potrafke, 2012; Belke et al., 2002). But there are additional problems which hamper an explicit coordination in the euro area.

#### 4.2.5. *With whom to cooperate?*

A clear focus on preserving price stability becomes even more adequate if one takes into account that successful fiscal policy coordination as a condition *sine qua non* for monetary-fiscal policy coordination is not at all realistic within the euro area. Seen on the whole, one is likely to find a consensus on the broad principle that a coordinated approach to fiscal exit strategies is desirable. It will, however, be difficult to implement this principle in practice (de Grauwe, 2009). The reason is that different euro area countries face quite different economic conditions (*'unanimity of fiscal policy interests'*) and that there is no unified fiscal body (*'economic government'*) with which to coordinate macro policies, i.e. *no single fiscal counterpart to back up the ECB*.

Generally, one should distinguish two types of countries today. The first group consists of the 'Anglo-Saxon' countries (the US, the UK, Ireland and Spain) which have experienced strong growth over the decade preceding the crisis. The latter was based on a consumption and real estate boom made possible by unorthodox finance. Households and financial institutions in these countries have been supported by a massive increase of government debts and deficits and now have to unwind their unsustainable debt levels. A second group of countries did not experience exactly the same kind of debt accumulation of households. It consists of mainly the continental European countries except Spain. In these countries, there is no need for households to reduce their debt levels. Only the financial institutions are faced by the problem of excessive debt accumulation. Consequently, their budget deficits are on average only half of the deficits prevailing in the first group of countries (de Grauwe, 2009).

The 'Anglo-Saxon' countries are likely to hit the problem of unsustainable budget debts and deficits sooner than the continental European countries – look at the current US example. They will be pressured to exit first, but they are also the countries that can least afford to do so – at least from a Keynesian point of view. An early fiscal policy exit strategy by these countries would – from a Keynesian perspective – set in motion any deflationary debt dynamics in a more intense way than in the continental European countries. These differences are likely to *make a coordinated approach to fiscal exit strategies very difficult if not improbable* (Frankel & Rockett, 1988).

Hence, unfortunately, the only realistic though only second best scenario in the euro area will be monetary tightening first and budgetary consolidation, if second at all. Since macroeconomic uncertainty has fallen significantly since Lehman's there is no large option value of waiting with a credible announcement of monetary exit any more (Belke, 2009).

## 5. Conclusion

Over recent years our economies have undergone a period of severe financial crisis and major disruptions to economic activity. While the full cost of the crisis has yet to be assessed, the magnitude of output and job losses experienced so far is considerable. In order to contain the impact of the crisis on the real economy and preserve price stability, central banks

have aggressively cut policy interest rates and introduced a number of exceptional liquidity measures (González-Páramo, 2009).

Although the financial crisis is not yet over, one has to carefully and thoughtfully develop the strategy that will govern the progressive exit from the set of non-standard measures currently in place. This should not be seen as a none-too-subtle signalling device about imminent policy actions, but rather as a demonstration of the ECB's commitment to engineering a smooth and orderly departure from the current extraordinary and unprecedented policy. Indeed, developing, communicating and eventually implementing in a timely manner a well-designed exit strategy is essential to preserve the contributions from the non-conventional policies to the maintenance of macroeconomic and financial stability (González-Páramo, 2009).

The exit from these exceptional monetary measures will require technical skill, especially in view of the well-known difficulties in bringing up the interbank rate exactly to a target rate, such as the main refinancing rate. But the real challenge is the macroeconomic impact of such an exit which, if any, will be in a disinflationary direction by driving down asset prices and driving up interest rates as the economy recovers. The unconventional monetary policy measures have indeed served the pursuit of price stability as intended, although with more uncertainty about their size of impact than central banks would prefer (Posen, 2009).

What is more, expressed in terms of political economy, it would be a good idea to combine the exit strategies with *structural reforms* to boost the growth potential which has been severely damaged during the financial crisis (ECB Observer, various issues). In this case, economic growth will tend to be higher and resistance to monetary exit will be lower because in case of lower growth it is more difficult to persuade the electorate of the necessity of interest rate increases (although monetary exit will be more pressingly needed in this case to fight expected inflation).

The general picture emerging from this report is one of serious *flaws of our fiat money standard* according to which governments still diligently emit bonds and commercial banks off-load newly emitted bonds at the ECB for refinancing purposes (100% of the debt is refinanced with central bank money!). Along with an increasing precautionary demand, this pattern explains the often mentioned liquidity 'surplus'. Frankly speaking and exaggerating only a little, the following view of the UMP and the envisaged exit from it emerges: as soon as excess liquidity will be mopped up again on an international scale, the interest rate will increase. *Some banks will then go bankrupt – anyway, they are like that already now, but then it becomes visible to everyone.*

Moreover, the sovereign debt scare in the euro area is not over for the same reason and the preceding argument might apply not only to banks *but also to governments.*

This article's added value is the discussion of retarding moments of any scenario of exit from unconventional monetary policies which will become relevant earlier (in the US) or later (in the euro area). However, one of the limits of the study may be that its main parts have been written already at the change of the year 2009 into 2010. But, not unsurprisingly, not much has changed in the following four and a half years. The euro area is, as are the US and Japan, stuck in its unconventional monetary policies. As for future research directions, we identify a deeper analysis of global liquidity spillovers via Global Vector-Autoregression (VAR) Models (Pesaran, Schuermann, & Vanessa Smith, 2009).

## Notes

1. This contribution expands on Belke (2009b) which has also been published in a working paper version by Belke (2010).
2. See Belke and Klose (2013).
3. See, for instance, <http://www.global-economic-symposium.org/knowledgebase/the-global-polity/exit-strategies-from-the-financial-crisis/proposals/exit-strategies-from-the-financial-crisis-solutions>.
4. See, for instance, [http://www.riksbank.se/Upload/Dokument\\_riksbank/Kat\\_publicerat/Rutor\\_IR/MPR\\_2009\\_OCT\\_article3.pdf](http://www.riksbank.se/Upload/Dokument_riksbank/Kat_publicerat/Rutor_IR/MPR_2009_OCT_article3.pdf).
5. See <http://www.ft.com/intl/cms/s/0/85f1fac2-d1dc-11de-a0f0-00144feabdc0.html#axzz3mY1ZiB56>.

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