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Monetary Policy in Practice

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It's a great pleasure and a honor to be back at the University of Chicago, after so many years.

I arrived in Chicago in the Fall of 1980. I knew from the start I would not go into academic life at the end of my studies. My aspiration was to get into policy-making.

I joined the Bank of Italy in 1983, and worked at the Research Department where I started my research project for my dissertation, which I finished in 1988.

My years at Chicago have represented the pillars of my professional life, in particular in central banking. Monetary policy was obviously thought mainly in theoretical terms. There weren't many references to central banking, nor to institutional aspects underlying the conduct of monetary policy in the real world. This was for me to discover later.

However, I still remember a few words that Bob Lucas dedicated to the real world in his course on Money, speaking about the task of central banks.

“Monetary policy is not so complicated after all. What a Central bank should do is to avoid making big mistakes”.

I thought about these words several times, especially when using my voting rights as a member of the ECB Governing Council between 2005 and 2011.

Avoiding big mistakes should certainly be priority. But what is a big mistake, ex ante?

For a long time I thought that big mistakes could be made by moving interest rates at the wrong time, in particular with respect to rate increases. What kind of error can be made in raising rates?

I would distinguish two types.

Type 1 error would be made when inflation is on the rise but the central bank fails to predict it, delaying the reaction. The consequence of such a mistake is to act late, letting inflationary pressures rise and thus having to increase interest rates more quickly to catch up. The process of catching up might create a shock to the financial system, leading to potential losses. An example of such delayed action is 1994 in the US, which created financial turmoil.

Type 2 error is that the expectation of rising inflation is not correct, and the central bank increases rates on the basis of a wrong forecast. In that case the central bank engineers an excessively restrictive monetary policy, which may delay the recovery or produce a double dip recession. The central bank may ultimately have to reverse its course and cut rates after having raised them, which may undermine its credibility.

The experience shows that type 1 error is very difficult to identify, even ex post. It can be compensated through prompt action and an appropriate communication policy. The second type of error tends to be more evident, because of the reversal in the direction of interest rates. It is also more difficult to justify, even when it turns out that it is not a mistake after all, at least ex ante.

Let me give some examples, based on my personal experience. In my 6 ½ years of policy maker I went through 3 key decisions to raise rates, in December 2005, in July 2008 and in March 2011.

The first time I thought we could be making a big mistake was at the end of 2005, a few months after I had joined the ECB, as the economy was showing signs of recovery. The recovery was still fragile though. The IMF, the OECD and most academics and commentators were very critical with the ECB's intentions to raise rates in such an environment. Politicians had raised their voices to warn the ECB against such a move. Several indicators were nevertheless pointing to the risks of inflationary pressures rising progressively.

Monetary and credit aggregates were growing at double digit rates. Inflation expectations, imbedded in long term interest rates were on the rise. Inflation itself was rising, although mainly as a result of food and energy prices. Core inflation was stable and this was used as an argument by those opposing the rate hike as a sign that inflationary pressures were temporary.

Markets were actually not expecting the ECB to raise rates, which had been kept unchanged for over 2 years. They started reacting only after the ECB signaled that inflationary pressures were on the upside and that it might react.

Overall, the decision to raise rates at the end of 2005 proved right. This was recognized also by the critics, after a few months. In fact, with the benefit of hindsight one could even say that rates should have been raised at a faster pace, given the very low starting level. This is especially true in the case of the US. For the euro area, it should be kept in mind that part of the tightening of monetary conditions had in fact started earlier, as the exchange rate of the euro was appreciating against the other major currencies, thus contributing to more restrictive conditions.

The second episode goes back to the Summer of 2008. The financial turmoil had started one year earlier, in August of 2007, and led the ECB to interrupt the cycle of interest rate increases started in 2005. In spite of the turmoil, economic conditions were still strong in the euro area and inflation was on the rise and above target throughout the first half of 2008. Wage demands were increasing. Inflation expectations, imbedded in long term rates were rising sharply. Commodity prices were reaching record highs, in particular oil.

The ECB decided to raise rates by 25 basis points.

I asked myself at the time whether this would not be a type 2 error.

With the benefit of hindsight it might look like one, given that the ECB had to cut rates a few months later, in October.

In fact, to identify a policy mistake, one should consider what would have happened without such a move.

In practice, the interest rate increase decided in June 2008, and implemented in July, was not the first of a series, but probably the last, or one but last, as rates were already at 4%. The economy was in a bubble, with commodity prices rising and inflation expectations picking up.

Not raising interest rates would have led to a further increase in inflation expectations. This is clear from a close examination of the data in June/July 2008. After the announcement long term rates stabilized and inflation expectations came back.

Unchanged rates would have probably contributed to further fuel the rise in commodities' prices. In other words, the bubble would have continued for some time, and probably further grown, before bursting. It could not be excluded that the burst of the bubble would have been even greater had interest rates remained unchanged.

This raises the whole issue of what monetary policy should do in the building up of a bubble, and whether it should react.

If the central bank tightens monetary policy with a view to contain the bubble, the last rate increase before the bubble burst will inevitably be considered ex-post as a being a type 2 error, since after the bubble burst interest rates are always cut.

If the central bank does not raise rates while the bubble builds up, it may not be making a type 2 error but a type 1 error.

An important aspect to consider, when analyzing individual decisions, and whether they can be considered as mistakes, is the impact over the medium term credibility of the central bank, measured in particular in terms of inflation expectations.

The anchoring of inflation expectations may require that the central bank, especially a young central bank like the ECB, may have to err towards making type 2 errors rather than type 1, in order to build up its reputation. That's what you would expect from a conservative central bank, after all.

Overall, it's difficult to assess whether the July 2008 decision was an error, and to what extent it contributed to strengthen the anchoring of inflation expectations in the euro area.

The evidence shows nevertheless that inflation expectations are much more anchored in the euro area than in the US or UK. This proved quite useful, in particular towards the end of 2008 and 2009, in the middle of the crisis, when the cut in interest rates decided by the ECB in the face of the sharp economic slowdown did not affect inflation expectations, contrarily to the US and UK where inflation expectation collapsed. Inflation expectations never approached the range of deflation in the euro area. This allowed monetary policy to be more effective, and to reduce the real level of interest rates.

The third episode of interest rate increase was in 2011. The economy was recovering, at a pace which was gradually strengthening. Inflation was steadily above 2% and rising. Monetary aggregates were showing signs of picking up. Given the ongoing deleveraging process, money and credit developments were in any case given less attention. Inflationary expectations were starting to rise. Some adjustment in interest rates was deemed appropriate. As growth and inflation were picking up, maintaining interest rates unchanged was equivalent to inducing an even more accommodating monetary policy.

Together with higher interest rates, the ECB started to unwind some the non-standard policy measures, such as the Securities Market Programme and

With the benefit of hindsight, the two rate increases, by 25 bp each, could be regarded as a type 2 error, i.e. too early an exit from monetary accommodation. The same assessment should apply to the exit from the non-standard measures.

Indeed the euro area financial crisis worsened in the course of the Spring and reached new highs in the Summer of 2011. The inability of the ECB to anticipate these developments, and stick to raising rates, could be considered as a policy mistake. The rate reductions in November and December 2011 should be a confirmation of such an assessment.

The judgment depends on the factors which led to the renewed financial instability in the euro area. One hypothesis is that the largest responsibility lies with the Governments of the euro area which were not able to solve the problems and calm the markets. In fact, starting from the delays in Portugal to request financial assistance to the failure to organize a market friendly debt restructuring in Greece, most of the Government decisions which were taken systematically too late and under the pressure of the markets. This contributed to fuel more tensions rather than appease them.

One should ask what the central bank should have done in the face of the unexpected inability of Governments to deal with the financial situation. Should it have ignored the signs of economic recovery and delayed action until the Governments solved the financial issues? Or should it have maintained its monetary policy aimed at the underlying economic fundamentals, in the assumption – and expectation - that the Governments would ultimately get their act together?

The question is particularly relevant for the second rate increase, in June, as the prospects of debt restructuring in Greece were mounting and instability was rising again. The ECB could have paused, given the risk that political authorities would have not been able to calm the markets. Indeed, in spite of the initial reactions, the June European Council left many issues unresolved, which triggered risk aversion and a wave of selling in particular of Spanish and Italian bonds.

With the benefit of hindsight, the mistakes which have been made or could have been made by raising or not raising interest rate look rather benign. Raising or not raising interest rates by 25 basis points, or cutting them by the same amount, does not really change underlying economic and financial conditions. Even if a mistaken was made, it was compensated, or would have been compensated after a short while. What happened in the euro area over the last two and a half years can hardly be ascribed to standard monetary policy decisions.

I am sure that the potential mistakes I have described do not correspond to what Bob Lucas had in mind when he mentioned the need to avoid big mistakes.

Big mistakes can be made when the action, or non-action, of the central bank can really change the underlying economic conditions and produce major effects, in one direction or another. However, the outcome of a central bank decision, which determines ex-post whether it was a mistake or not, does not depend exclusively on the decision itself. It depends, to a large extent, also on the reaction of other economic agents, in particular Governments.

The reaction may be unpredictable. It depends on the incentives of the other agents and on the institutional framework which underlines the interaction with the central bank. In fact, these incentives and institutional framework itself, may not be fully independent of the action of the central bank. In other words, it

is a repeated game, with players maximizing a utility function which may lead to very different outcomes, some of them being time inconsistent.

This issue applies not only to the euro area. It is very relevant also for the US.

Let me actually start with the US and discuss the most recent decision by the Federal reserve to implement QE3.

The decision to implement QE3 will turn out not to be a mistake under two conditions. The first concerns the assessment of the underlying economic situation in the US, in particular concerning the size of the output gap and the pace of potential growth (and whether it has been affected by the recession), the nature of unemployment and the ability of monetary policy to influence it. In other words, QE3 would prove to be the right decision if the output gap is indeed as large as many economists think in the US, if unemployment is mainly of a cyclical nature and if the strategy of keeping interest rates low for a long time, while inflation expectations tend to rise, will ultimately stimulate investment and thus strengthen the recovery.

The second condition is that the fiscal cliff is resolved in such a way to contain the deficit over time and thus generate some downward pressure on economic activity. A restrictive fiscal policy over the next few years would justify an expansionary monetary policy, in order to compensate for the effects of the fiscal restriction.

Under the two conditions I just mentioned, it can be considered that the advantages which can be obtained by QE3 outweigh the risks, including the possible misallocation of resources and price distortions which will result from the increased liquidity and the inflated central bank's balance sheet.

However, by implementing QE3, and specifying that the objective is ultimately to reduce the rate of unemployment, the Fed is changing the incentive of the

other actors. It has de facto become “the only game in town”. It has taken away the incentive from the fiscal authorities to start implementing the kind of fiscal adjustment which would be consistent with a sustainable debt profile in the US and would justify QE3. The low level of interest paid on the debt is actually used by some as a justification for further expanding fiscal policy. QE3 might actually have taken away from the Administration and Congress the incentive to adopt other measures which could be effective in reducing the high level of long term unemployment.

This perverse reaction may be temporary, and depend on the results of the elections. But there are no doubts that the stronger is the impulse provided by monetary policy, the weaker is the incentive for the other political actors to pay the short term political cost of doing their part of the adjustment.

In fact, if the real obstacle to sustainable economic recovery turns out not to be the high level of real interest rate – or should I say the insufficiently negative level of the real interest rate – but rather the uncertainty about taxation on households and firms, which is bound to prevail as long as there is no credible medium term fiscal adjustment plan, and if QE3 delays the adoption of such a plan, one could conclude that QE3 is in fact adding to uncertainty and ultimately produces a negative impact on medium term growth potential in the US.

In sum, monetary policy can be time inconsistent, because it creates perverse incentives in the other policy actors. This is linked to moral hazard.

Monetary policy can only help to gain time, for the other actors to implement the adjustment. But if the other economic actors do not use the time appropriately, or take the central bank action as an excuse for delaying their own decisions, the adjustment does not take place. The central bank becomes more and more drawn into the field of other policies, in particular fiscal policy. Instead of providing a bridge for other policies to be implemented, it substitutes

for other policies. By providing lower than expected interest rates for a prolonged period of time, the central bank is implicitly taxing bondholders and subsidizing debtors. This is a redistributive task which should be in the competence of the political authorities, not the central bank. Furthermore, such a policy may over time leads to a new crisis.

Such a policy would turn out to be a big mistake. We have seen this type of mistake been made in the past in several European countries, before the euro, or in the US in the second half of the Seventies and maybe also in the past decade.

The question is whether the central bank has an alternative, and what the alternative is.

The alternative cannot be not to act, or to act in the expectation that the other policy actor will in any case behave in a perverse way. In the specific case of the US, if the Fed acted in the assumption that the fiscal adjustment would never take place, leading to continued high budget deficits and increasing debt over the coming years, it would have to tighten monetary policy, to avoid excessive accommodation. Such a tightening would however make the fiscal adjustment more difficult to implement, and more painful on the economy. The fiscal authorities might even be induced to further postpone the adjustment, until the markets put enough pressure to make it unavoidable. This is ultimately the worse scenario, as both monetary and fiscal policy become excessively tight and the adjustment are very painful.

This is clearly shown by the recent experience in Europe. The question is how far away the US are from getting into the same perverse loop, by implementing a monetary policy which creates the wrong incentives for the fiscal authorities.

The alternative might be a contingent policy, in which monetary policy stance is made conditional on the fiscal stance. This is not easy, because such a contract

puts the central bank on the same level as the fiscal authorities, without necessarily having the same kind of political legitimacy.

I will come back to the issue later.

Let me move first to the euro area and examine the dilemma in that context, which is probably more complicated than the US one.

The euro area was created with the intention to achieve a full separation between the monetary and fiscal authorities. This is certainly a good objective, in good times. At times of crisis, however, such a drastic separation may create problems. The reason is that when markets do not function efficiently, as it is the case in times of crises, liquidity problems, if left unresolved, may become solvency problems. Without a central bank it is very difficult to address liquidity crises and prevent them from turning into systemic crises. The separation between the fiscal and the monetary authorities has de facto deprived the euro area from an institution in charge of dealing with liquidity crises in the sovereign debt market. As a result, illiquid sovereigns may end up becoming insolvent, with major disruption for economic conditions and contagion effects to the whole euro area.

In fact, assessing the solvency of sovereign states is one of the most difficult issues – contrarily to what many economists and commentators think – because it depends not only on economic considerations, as is the case for a company, but also on political issues, i.e. the willingness to pay creditors. The willingness to pay does not depend only on the economic cost of paying, but also on the alternative, which is often forgotten by analysts.

With full separation between monetary and fiscal authority, as is the case in the euro area, the inflation risk is replaced by a credit risk, which is much more difficult to assess by financial markets and entails discontinuities which can lead

to multiple equilibria. The reason is the self-fulfilling nature of financial crises, whereby a higher risk premium leads to higher debt, because of the negative impact on the economy and on the budget, which in turns increases the risk premium, and so on.

When such a negative spiral starts, traditional monetary policy cannot provide the appropriate degree of accommodation to counteract the effects of the fiscal retrenchment. Fiscal adjustment may then become self-defeating and lead to a default. The default leads to a recession and possibly prolonged deflation. Under these circumstances, the central bank cannot achieve its primary objective of price stability.

If the central bank intervenes to stop the self-fulfilling perverse dynamics and prevents the bad equilibrium from occurring, it risks financing the Government and takes away the incentive for the latter to intervene and implement the required fiscal adjustment. Over time this leads to inflation and unwarranted redistribution of income between debtors and creditors – which in Europe corresponds to a transfer from fiscally responsible to fiscally irresponsible countries.

Both concerns are right. However, both extreme attitudes, if implemented by the Central bank, would entail big – huge – mistakes.

This has been the debate in the ECB, and outside the ECB over the recent years, since the crisis erupted.

I am providing – of course – an extreme simplification of the policy dilemma. The viewpoints may diverge also on the basis of several other issues, which are quite relevant for the conduct of monetary policy. One of these issues is the efficiency of markets, and the ability to price assets on the basis of underlying fundamentals.

The view that the Central bank should abstain at all costs from entering the field of non- conventional policies, and try to influence the markets – including the Government bond market – is based on the belief that markets tend to be always right and rapidly adjust to underlying conditions. According to this view, the only way for a country to avoid getting into an unsustainable equilibrium is to rapidly adopt the right fiscal adjustment, which would enable it to immediately regain market access. Only if the central bank refrains from intervening does the undisciplined fiscal authorities have a sufficient incentive to do what it takes to put the house in order.

The opposite view is that markets may get into self-fulfilling dynamics which may lead to financial instability that can only be avoided by central bank intervention.

Although the latter view might be shared by a large majority in the ECB, the problem remains of avoiding that the central bank starts building bridges to nowhere.

The problem is not theoretical. It was concretely experienced several times by the ECB over the last two years. Let me give a couple of examples.

In May 2010, the ECB intervened only after the Heads of State and Government of the euro area agreed, at the last hour, to implement the EFSF, which would represent a safety net for countries loosing access to financial markets at sustainable interest rates. However, after the first few weeks in which the action led to market stabilization, the practical implementation of the EFSF took many months, requiring parliamentary ratification in all countries. The countries experiencing difficulties, like Ireland and Portugal, delayed the request for assistance, because of the political stigma attached to it. National supervisors lost time in the process of stress testing their banks and providing for adequate

re-capitalization plans. All this lead to a reversal of market sentiment and a frustration of the ECB's action.

In the Summer of 2011, the ECB intervened in the Government bond market of Italy and Spain, which had reached unsustainable levels, in exchange for commitments to implement tough fiscal adjustment programs and structural reforms. After the central bank intervention, however, the reform effort vanished and the tensions arose again.

What is the solution for the ECB to avoid extreme mistakes?

The solution has been to condition the provision of liquidity to a clear implementation of policies aimed at ensuring solvency. The conditionality is defined through the adoption of an IMF/EU adjustment program, with MoU and monitoring. If the country is compliant, the ECB will intervene, potentially for unlimited amounts, to avoid the so-called convertibility risk – ensuring that the country benefits from the single monetary policy and thus of comparable monetary conditions. If the country is not compliant, the ECB would stop its intervention.

Does this solve all problems?

Unfortunately not. What are the risks? Let me underline a few.

First, as in the past countries might delay the application to the IMF/EU programs, for stigma reasons, especially if market conditions are favorable. They may apply only under the pressure of the markets, which puts the ECB in the position of intervening in the worse conditions.

Second, countries may get off track in the implementation of their adjustment program. This will question the ability of the ECB to discontinue its actions, potentially letting uncertainty arise again.

Third, the other Governments may be led to tolerate a less than rigorous implementation of a country's adjustment program, with the aim of inducing the ECB to continue its action and counter potential instability. This would lead the ECB to de facto monetize the debt of that country.

To avoid all these risks, the ECB has to form a view on the sustainability of the public finances of all member countries, the need for adjustment program and their implementation. This provides the ECB with a very special role, which some may consider quasi-political. What is the legitimacy for the ECB to perform such a role? How can it perform such a task in an independent manner.

Here is where the statute and mandate of the central bank become important.

The central bank cannot perform the functions that I just mentioned unless it is fully independent and has a very clear mandate, against which its actions can be assessed and monitored. This means that the central bank should have a priority in terms of objectives, that can justify its decisions. This priority can only be price stability.

If the central bank has a multiplicity of objectives, not only price stability but also economic growth and employment, it can always justify its actions – and be criticized – because it has reached at least one of the objective, even if at the expense of another one. Furthermore, if there are trade-offs, what is the democratic legitimacy for the central bank to choose the optimal combination of objectives.

Having a clear mandate – implementing the single monetary policy of the euro area – and a single objective – price stability – provides the central bank with the legitimacy and at the same time the ability to interact with the government authorities to put clear conditions to its actions.

To conclude, at times of crises like the ones we are going through central banks can make big mistakes, that future generations may pay. Mistakes are not avoided by ignoring the crisis or acting as if the crisis was not there and problems are solved by themselves. They are not avoided neither when the central bank tries to solve all problems, even those for which it does not have the primary responsibility. Mistakes are avoided through an appropriate institutional and contractual framework in which policy decisions are made contingent on the actions of the other policy actors, in a way which creates the appropriate incentives. This may have an impact on the institutional balance underlying the structure of policy making in our democracies.

Difficult decisions may be required. But they are unavoidable if we want to avoid that the solution to this crisis creates the seeds for the next one.

Thank you for your attention.