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Highlights in this issue:

- The policy mix in Poland has been suboptimal for most of the time since 1999
- This may be in part the reflection of strategic interactions between fiscal and monetary policy
- Improving the policy mix requires a credible commitment to fiscal discipline and greater predictability of fiscal plans

Poland's policy mix: fiscal or monetary leadership?

By Nathalie Darnaut and Paul Kutos***

Summary

The way in which monetary and fiscal policy interact has an impact on the policy mix. A standard finding in the economic literature on strategic interactions between the fiscal and monetary authorities is that lack of cooperation can lead to a suboptimal policy mix. This is in particular the outcome of a Stackelberg game between the two policy-makers, with the government as the leader and the monetary authority as the follower – which appears to be a realistic description of the current institutional arrangements in Poland.

This Country Focus examines whether these theoretical considerations are relevant to developments in fiscal and monetary policy in Poland since 1999. The suboptimal policy mix that characterises much of the period under review can be interpreted in part as the outcome of non-cooperative behaviour as predicted by the leader-follower model. Clearly, lack of fiscal consolidation and persistent uncertainties about fiscal policy have weighed heavily on monetary policy decisions. However, shifts in the monetary stance also reflect the National Bank of Poland's reaction to changing economic conditions from which its response to changes in fiscal policy alone is difficult to disentangle.

Poland's recent experience suggests that a credible commitment to fiscal discipline and greater predictability of fiscal plans would help improve the policy mix.

The policy mix issue: a brief discussion

Before discussing Poland's experience with respect to the policy mix, it is useful to look at the theoretical literature on the topic and ask what makes a policy mix optimal. The paper then examines whether the issues raised by the literature on strategic interactions between fiscal and monetary policy can provide some insight into recent developments in Poland's policy mix.

The question of the policy mix was first addressed in Mundell's work on the "assignment problem". In a Keynesian model with imperfect capital mobility, Mundell (1962) shows that a policy-maker with two instruments (monetary and fiscal policy) in a fixed exchange-rate regime can attain two targets (internal and external balance), but only with an appropriate "policy mix": each policy instrument should be assigned to the target on which it has the greatest relative effect.

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However, there are strong interactions between the two policies so that, in practice, it is necessary to consider the consequences of policy changes in one area for policy in the other in order to determine the optimal policy mix. Both policies interact via their effects on output and inflation. Thus, the issue of the policy mix emerges in policy debates when fiscal and monetary policies are considered to be pulling the economy in opposite directions. For example, in the US in the 1980s, the effects of a tight monetary policy aimed at fighting inflation were partially offset by an expansionary fiscal policy, and vice versa. The classical arguments against such a divergent policy mix centre around the crowding-out effects of government borrowing. Tobin (1986) underlines that, in the long run, such a monetary-fiscal mix could lead to a vicious circle in which government debt grows faster than GDP indefinitely. Hence, it is important to achieve a balanced policy mix, i.e. one that ensures that the impulse emanating from one policy is consistent with that from the other.

The policy mix matters because of the interactions between fiscal and monetary policy

Some models emphasise that both policies interact through the government's intertemporal budget constraint. The idea here is that the requirement that the government remains solvent over its lifetime can impose severe constraints on monetary policy. Sargent and Wallace (1981) show that, in the long run, the rate of money growth is governed by fiscal policy, since persistent deficits will ultimately force the monetary authority to monetise debt. Alternatively, the government's solvency condition could be satisfied through an increase in the price level, and thus a reduction in the real value of government debt. The "Fiscal Theory of the Price Level" developed by Woodford (2001) and others shows that fiscal policy affects inflation rates in a non-Ricardian regime, i.e. if the government does not satisfy its intertemporal budget constraint. In such a case, the price level "jumps" to re-establish fiscal solvency.

Some models stress the risk of "fiscal dominance" over monetary policy

An inefficient policy mix may reflect cooperation problems between policy-makers when fiscal and monetary policy are in the hands of two independent authorities. A large literature examines the strategic interactions between the fiscal and monetary authorities in the framework of game theory (for a review of the literature, see Buti, 2003). In these models, lack of cooperation may stem from three causes: (i) the fiscal and monetary authorities have different output and inflation targets, (ii) they assign different weights to those targets, or (iii) they might adhere to different economic theories (and, therefore, have different views of the effects of fiscal and monetary policy on the economy). Non-cooperative games are likely to lead to suboptimal outcomes characterised by high fiscal deficits and tight money (Blinder, 1982 and Nordhaus, 1994), or higher deficits and higher real interest rates than those associated with cooperative solutions (Bennet and Loayza, 2000). Dixit and Lambertini (2001) obtain a similar result, with lower output and higher inflation than optimal as the non-cooperative outcome[1].

A suboptimal policy mix may be due to a lack of cooperation between the authorities

A framework to analyse the relationship between the fiscal and monetary authorities in Poland

Clearly, the institutional framework for policy-making has important implications for the policy mix[2]. As in many countries, fiscal and monetary policies in Poland are in the hands of two independent authorities. Major legislative steps were taken in 1997 to make the National Bank of Poland (NBP) more independent and responsible for price stability. Monetary policy is formulated by the Monetary Policy Council, an independent body of ten members. Since 1999, the NBP has been operating a direct inflation targeting regime, combined with a free float of the zloty since April 2000. On the fiscal policy side, the government is constrained by a set of fiscal rules laid down in the Constitution and the Public Finance Act which are designed to prevent public debt rising above 60% of GDP. The government must take specific steps when the public debt breaches the thresholds of 50%, 55% and 60% of GDP. Moreover, the government is now subject to the provisions of the Stability and Growth Pact, including the requirement to avoid excessive government deficits.

The macroeconomic framework in Poland…

To place the discussion on Poland's policy mix in context, consider the framework proposed in the seminal contribution by Blinder (1982). Blinder examines the possible policy outcomes from different monetary-fiscal arrangements ranging from perfect coordination to complete lack of coordination in a game-theoretic setting. One of his models, the leader-follower model, seems particularly relevant to analyse the relationship between the fiscal and monetary authorities in Poland. Under this

…can be represented by a leader-follower model…

…with fiscal, or sometimes monetary, leadership

model, one policy-maker (the leader) takes a decision first and then the second policy-maker (the follower) decides what to do in the light of that decision. This model appears to be a realistic description of the current policy-making arrangements in Poland. The government can downplay the inflationary consequences of its policy decisions: it sets the deficit and then the central bank needs to consider how the fiscal stance will affect inflation (and the exchange rate), and thus its decisions on interest rates. However, there may be cases, such as that of an exogenous inflationary shock, where the central bank takes the lead by initiating a tightening of monetary policy.

The outcome of the Stackelberg game is suboptimal

Blinder assumes that the two authorities are engaged in a Stackelberg game. When choosing its strategy, the leader takes into account the reaction function of the follower. The follower thus influences the leader's decision and paradoxically has the upper hand in the game, although it is subject to some constraints imposed on it by the leader's prior decision. Blinder shows that the outcome of this game will be suboptimal, with tight money and an expansionary fiscal policy even when both authorities would have preferred easy money with tight fiscal policy. Similarly, Bennet and Loayza (2000) present a leader-follower model where the fiscal and monetary authorities have different preferences regarding inflation and output. They find that, in the presence of a negative supply shock, the Stackelberg game results in higher deficits and higher real interest rates than those obtained when either authority controls both policy instruments. The predictions of the leader-follower model appear to fit broadly with the experience of the policy mix in Poland in recent years.

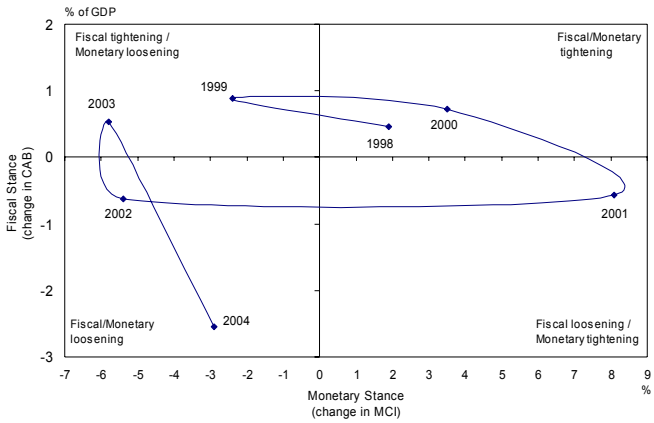
Fiscal-monetary interactions 1999-2004: three episodes

Mid-1999 – mid-2000: Monetary tightening against the background of fiscal slippages

Inflationary pressures together with fiscal slippages trigger a monetary policy reversal

The economic situation in Poland in 1999 was shaped by the shock of the Russian crisis, which had severely hit export performance from autumn 1998 onwards. Monetary policy had eased during 1998 – but real interest rates were still relatively high – while fiscal policy had tightened moderately. Disinflation had proceeded well, with CPI inflation falling to 8½% by December 1998, down from more than 13% a year earlier. While the economy started to recover in the course of 1999, the emerging growth pattern was unbalanced and raised concerns about sustainability. Domestic demand was growing strongly, fuelled *inter alia* by high credit growth, and inflationary risks were heightened by a continued nominal depreciation of the zloty. At the same time, fiscal policy tightening did not materialise as planned[3]. This was in part due to teething problems with the implementation of pension reform.

Chart 1: Poland – the fiscal and monetary stance



Source: Commission services

The NBP reacted to the worsening outlook for price stability, and in particular the deteriorating fiscal picture, by starting to hike interest rates in September 1999. The end-year inflation target was significantly overshot, with CPI inflation coming in at 9.8% in December. Following its float in April 2000, the zloty appreciated

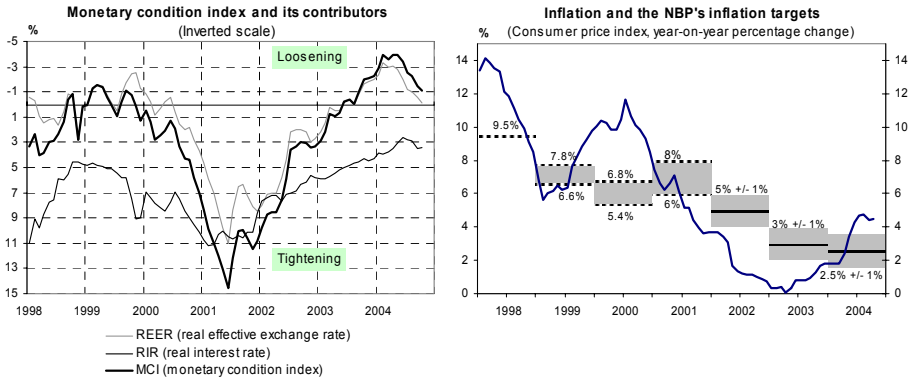
significantly, affecting competitiveness but also dampening inflationary impulses. This also triggered a tightening of overall monetary conditions (up to mid-2000, real depreciation had largely compensated for an increase in real interest rates). Fiscal policy was expected to tighten significantly in 2000 in order to contain overheating, but budgetary slippages (due to both cyclical and structural factors) hampered this process. In particular, the costs associated with the four major reforms launched in 1999 (pension reform, health care, education and fiscal devolution) continued to weigh heavily on the central government budget. Against this background, the NBP continued its tightening cycle until August 2000, bringing the key policy rate back up to a level of 19% (i.e. by a total of 600 basis points).

Simultaneous loosening of fiscal and monetary policies between 2001 and mid-2003

Monetary easing remains gradual as fiscal discipline loosens

Clear signs of cooling became apparent by the second half of 2000, as the effects of monetary tightening started to feed through. Inflation came in at 8½% in December 2000, still well above the NBP's target but lower than for most of the year. The full effects of policy tightening played out in the course of 2001 and 2002, exacerbated by weak external conditions. Growth slowed to an anaemic pace of 1-1½% annually. Both fiscal and monetary policies switched to an expansive stance. The general government deficit rose sharply in both 2001 and 2002, reaching some 3¾% and 5% of GDP respectively. This was partly a result of the operation of automatic stabilisers, but also of a discretionary impulse, which led to increasing concerns about fiscal sustainability. In response to the deteriorating budgetary situation, the government announced its intention to introduce for the subsequent years an expenditure rule (the so-called Belka rule), according to which the rise in central government spending would be limited to the projected increase in the CPI plus 1%.

Chart 2: Poland – developments in monetary conditions and inflation



Source: Commission services

In view of fiscal concerns, the central bank opted for a measured pace of monetary easing, lowering the reference rate gradually but significantly down to a level of 5.25% by June 2003. Real interest rates decreased only slowly and remained relatively high, while a continuous real depreciation of the zloty contributed to easier monetary conditions. The NBP's cautious stance, prompted by fiscal concerns, led to severe conflicts with parts of the political spectrum in the course of 2002. Meanwhile, the disinflation process resumed strongly, supported by favourable supply factors and subdued demand pressures. By the end of 2002, CPI inflation had receded to 0.8%, undershooting the NBP's target for the second year in a row.

Since June 2003: Central bank vigilance as fiscal concerns persist

Fiscal uncertainties put pressure on the zloty and bond yields, preventing stronger monetary easing

Reflecting a shift in inflationary risks, the central bank halted the easing cycle in June 2003. Growth recovered steadily during 2003, mainly on the back of strong export growth. The fiscal imbalance moderated somewhat compared with 2002, but at 4% of GDP the general government deficit was still running at a high level[4]. The Belka rule, which the authorities had envisaged applying to the 2003 budget, was finally abandoned, as was the fiscal reform plan approved by the government in March (Kolodko plan). Also, plans to transfer part of the revaluation reserve of the NBP to the state budget exacerbated tensions between the government and the central bank. Increased fiscal and political uncertainties led to a reversal of the bond

yield convergence that had taken place since 2001. Inflation remained subdued for most of the year, slightly undershooting the NBP's target of 3±1%.

Outlook: Monetary policy geared towards maintaining price stability, while prospects for fiscal consolidation improve

Since the beginning of 2004, the NBP has followed a continuous inflation target of 2.5±1%, reflecting a re-orientation from disinflation to maintaining a low-inflation environment. Fiscal concerns increased in early 2004 in view of the considerable loosening of fiscal policy. Inflation rose towards mid-year to some 4½%, mainly due to temporary factors. To prevent second-round effects and given continued fiscal uncertainty, the NBP started to tighten policy again with a series of interest rate hikes of a cumulative 125 basis points in mid-2004. While fiscal concerns remain present, recent developments may have eased risks to the inflation outlook stemming from the fiscal side (transmitted primarily via the risk premium and the exchange rate). The deficit outcome in 2004 could be lower than the initial target of 5.7% of GDP thanks to stronger-than-expected growth. And most importantly, a large number of the measures outlined in the government's fiscal reform package (Hausner plan) have been adopted in the course of 2004.

Conclusion

The suboptimal stance of the policy mix in Poland may be in part interpreted as the outcome of non-cooperative interactions

The relationship between the fiscal and monetary authorities in Poland in recent years appears to be broadly consistent with a leader-follower model. The fiscal authority (the government) can be viewed as the leader most of the time. The NBP responds to fiscal developments in setting its policy in line with inflation targeting. As the follower, it ultimately determines the macro policy stance. However, the outcome of the fiscal-monetary policy interactions is less clear-cut than the "tight money/loose fiscal policy" outcome predicted by the literature. This is perhaps not surprising, as the Polish economy has been and continues to be exposed to a variety of shocks and is undergoing fundamental structural changes, while complex factors influence the pace of disinflation (adjustments in administrative prices, economic restructuring and external shocks, food prices and accession to the EU). In light of this and the broader uncertainty that characterises the context in which economic policy is set, it appears that the fiscal authority has been too timid to reduce the deficit, which has had an impact on the stance of monetary policy. As a result, the policy mix has resulted in "higher deficits and higher real interest rates" than those obtained under cooperative solutions. For instance, while both fiscal and monetary policy eased during 2001-2002, the pace of monetary easing was more hesitant than it could have been with a tight fiscal policy.

Improving the policy mix requires a credible commitment to fiscal discipline…

The resulting policy mix has arguably been suboptimal for much of the period under review. Greater fiscal discipline would have allowed for lower real interest rates, including through a reduction in the country risk premium, thereby supporting domestic demand. In particular, investment activity has been hit hard by high interest rates, which points to the crowding-out effects emphasised by the literature. The game-theoretic approach applied here suggests that a credible commitment to fiscal discipline would help improve the interactions between the fiscal and monetary authorities, and hence the policy mix. In this regard, despite some recent improvement, a succession of failed attempts to introduce fiscal reforms has undermined the credibility of the fiscal authorities. The constraints placed on fiscal policy under the EMU's policy framework will be instrumental in building policy credibility.

… and greater predictability of each authority's policy intentions

Monetary policy in Poland has operated under conditions of high uncertainty, as testified by repeated slippages from announced fiscal plans. Statistical uncertainties have added a further complication (for example in the 1999-2000 episode, where current ESA95 data show a fiscal contraction rather than the neutral stance suggested by the cash deficit at the time). Greater predictability of the fiscal path would have supported the central bank in setting its reaction function and thus could have allowed a smoother path for monetary policy. Here again, improving the interactions between both authorities requires stability and clarity in fiscal plans as well as a better understanding of each authority's policy priorities and intentions.

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1 Dixit and Lambertini (2001) also show that the advantage of monetary commitment would be destroyed by discretionary fiscal policy action. This suggests that either commitment by both authorities or increased cooperation between them would solve the problem.

2 The degree of flexibility of the economy matters for the policy mix as well. A low NAIRU gives more room to the authorities to support output growth while maintaining a non-inflationary environment.

3 ESA95 data point to strong fiscal tightening in 1999/2000, while the cash deficit – which matters for the domestic policy debate – shows a broadly neutral stance. For the purposes of this note, the key point is that fiscal slippages led to a deviation from the announced tightening path in both 1999 and 2000.

4 While revised ESA95 data show a moderate fiscal tightening, the previous series had indicated an expansion. It is easy to see that such divergences do not help the central bank to develop a meaningful "reaction function".

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