

# **MONETARY – FISCAL POLICY INTERACTIONS IN THE EURO AREA**

**Haris MUMINOVIC<sup>1</sup>**

[haris.muminovic@ibu.edu.mk](mailto:haris.muminovic@ibu.edu.mk)

## **Abstract**

The last review of the ECB's monetary policy strategy in 2003 followed a period of mostly upside risks to price stability. The experience of the 2008 financial crisis has focused renewed attention on how monetary and fiscal policy should best interact, especially in an environment of structurally low interest rates and persistent downside risks to price stability. This debate was further intensified by the economic impact of the coronavirus (COVID-19) pandemic. In the eurozone, the unique architecture of a monetary union consisting of sovereign member states, with heterogeneity and weaknesses between countries in the overall share construction, poses important challenges. Against this background, this report reviews the interactions of monetary-fiscal policy in the eurozone from the perspective of monetary policy and with a focus on consequences for price stability and maintaining the independence and credibility of the central bank. The paper presents a conceptual framework for thinking about monetary-fiscal political interactions, thus setting the stage for a discussion specifically about the Eurozone aspects and challenges. Specifically, it looks at its main ingredients of consensus before the global financial crisis for monetary-fiscal political interactions and refers to significant new insights and refinements which have gained importance since 2003. In doing so, the paper distinguishes between general conceptual aspects – ie. those aspects that relate to the environment characterized by a single central bank and a single fiscal authority and those aspects relating to an environment characterized by a single central bank and many fiscal authorities (multi-country monetary union).

Key words: Monetary Policy, Fiscal Policy, Monetary Union.

## **Pre-global financial crisis consensus on monetary and fiscal policy**

Monetary policy and fiscal policy interact in many ways. A central bank's interest rate policy influences – via arbitrage in financial markets – interest rates on public debt of all maturities. Government spending, taxation and budget balance affect economic activity and the price level. Inflation has fiscal implications. The central bank's balance sheet is part of the public sector's balance sheet. Both the central bank and the fiscal authority supply assets (by issuing currency, reserves and government bonds) that provide liquidity services to firms and households.

By the end of the last century, a broad agreement emerged in favour of central bank independence with a medium-term price stability objective for the central bank. According to this view, an independent central bank would achieve price stability over the medium term by setting short-term interest rates. Fiscal policy would provide automatic business cycle stabilisers (such as unemployment benefits), fulfil other social efficiency and equity objectives, and keep public debt stable. There would be little role for discretionary, countercyclical fiscal policy. There remains a consensus that this model of monetary-fiscal policy interactions is a useful benchmark when recessionary disturbances are at most moderate, nominal interest rates are sufficiently far away from their lower bound, and financial markets function smoothly.

This view tended to emphasise the possibility of upside risks to price stability. Policymakers and legislators, while recognising the multifaceted nature of policy interactions, were primarily concerned with ruling out

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<sup>1</sup> Haris Muminovic is an assistant professor at the International Balkan University, Faculty of Law, Department of Legal Studies.

a scenario of “fiscal dominance” in which excessive budget deficits would put pressure on the central bank to engage in inflationary policy.

The global financial crisis of 2008 and the subsequent period of low interest rates have prompted a rethinking of how monetary and fiscal policy interact. New insights have emerged, while some existing ideas have received more emphasis than they did in the past. The result is a more nuanced view, summarised below which, among other things, recognises the possibility of persistent downside risks to price stability in a more symmetric way, in addition to the upside risks.

### **The relevance of the lower bound on nominal interest rates**

The lower bound on nominal interest rates may constrain the ability of monetary policy to achieve price stability. When policy rates are at or near their lower bound, the central bank can impinge on long-term interest rates and the availability of credit in the economy via forward guidance and asset purchase or lending programmes. While such unconventional monetary policy affects economic activity and the price level, its effects may be limited if long-term rates are near zero and financial markets are functioning smoothly to begin with. Medium and long-term inflation expectations may then fall persistently. The economy may settle into a “low inflation trap” or a “liquidity trap” in which short and long rates are near the lower bound and inflation is below levels consistent with price stability. Output and employment outcomes can then be expected to deteriorate, because monetary policy will have little room to respond to recessionary shocks when they occur.

How frequently the economy finds itself near the lower bound is critically dependent on the natural rate of interest. The natural rate of interest is mainly affected by structural factors, which are generally outside the control of the central bank. It is defined as the hypothetical real interest rate that would prevail in the absence of nominal rigidities (sticky prices and wages) in the economy. In benchmark models, in which the central bank sets the policy rate so that the actual real rate equals the natural rate, the outcome is price stability and balanced growth (output equal to potential output). When the natural rate is negative, however, the required policy rate could turn out to be below the effective lower bound (i.e. infeasible). Setting the policy rate equal to the effective lower bound (ELB) would then produce inflation below levels consistent with price stability and a negative output gap (output below potential output). Even if the natural rate is positive in the medium term (but close to zero), it can fall significantly below zero after a contractionary disturbance.

The evidence suggests that the natural rate has been trending downwards and may remain low in the foreseeable future. Although it has always been associated with considerable uncertainty, a typical estimate of the natural rate was as high as 3- 4% per annum 20 years ago, and has since fallen to zero or below. The natural rate varies over time because of changes in the economy’s potential growth rate, the propensity to save (driven, among other factors, by demography, wealth inequality and precautionary saving behaviour), fiscal policy, and the liquidity or safety premia associated with public sector liabilities. Some of the sources of the fluctuations in the natural rate may be very persistent.

### **Fiscal policy as a macroeconomic stabilisation tool near the lower bound**

Fiscal policy, in conjunction with monetary policy, can have a more significant impact on the economy precisely when the effectiveness of monetary policy alone may be constrained by the lower bound. A rise in government consumption or investment, a consumption tax cut or an increase in government transfers are likely to have larger multiplier effects near the lower bound than further away from it. Such fiscal interventions may be expected to raise aggregate demand, output and inflation to some extent, under any circumstances. In “normal times”, away from the lower bound and with an output gap near zero, monetary policy is likely to (at least eventually) respond to an increase in expected inflation caused by a fiscal expansion by raising policy rates more than one-for-one. Real interest rates will then rise, crowding out private consumption and investment. By contrast, an increase in expected inflation with unchanged policy rates at the lower bound reduces real rates.

Thus, at the lower bound a fiscal expansion crowds in private consumption and investment, which raises

its multiplier effect on aggregate demand and output. ,

How a fiscal policy intervention affects the economy also depends on (expectations regarding) future fiscal policy. When investors, firms and households see budget deficits, they form expectations regarding future fiscal policy. They might ask themselves whether the rise in public sector liabilities is permanent or whether it will be reversed (backed) by future tax increases and spending cuts. In the former case the effects of a given current deficit on aggregate demand may be greater than they would be in the latter. In particular, an increase in public sector liabilities that is not backed by future primary budget surpluses could help the economy escape from a low-inflation trap.

The heterogeneity of households and firms is generally significant in the design of fiscal policy interventions and may be important for the monetary-fiscal policy mix. Fiscal policymakers are able, in principle, to design policies that target a specific subset of households or firms. As an example, macroeconomic models with heterogeneous agents suggest that the effects on aggregate demand of a budgetary transfer policy are likely to be greater if the transfer targets households that have a high marginal propensity to consume. Households seeking to smooth consumption but which have a low level of savings and are unable to borrow typically spend a larger share of any increase in their disposable income – they have a higher marginal propensity to consume – than wealthy households which have ample savings and are able to borrow. Agent heterogeneity may also affect the design of the monetary-fiscal policy mix. Different combinations of monetary and fiscal policy measures (for instance, asset purchases by the central bank versus a targeted budgetary transfer policy) may achieve similar growth and inflation outcomes, while being associated with stronger or weaker additional effects on risk taking in financial markets, wealth, income and consumption inequality, the natural rate of interest, and other variables.

Because of agent heterogeneity, fiscal policy may be more effective than monetary policy after certain types of disturbance (such as the COVID-19 pandemic). A pandemic is different from a typical demand or supply-type business cycle shock, primarily because this kind of public health disturbance only leads to a contraction in economic activity in some sectors of the economy, while other sectors can, in principle, continue more or less unaffected. In this scenario the most effective economic policy may be a social insurance or transfer policy, with the central bank providing support, rather than a general monetary or fiscal stimulus. More traditional monetary (and fiscal) policy measures may be necessary after the pandemic has subsided, depending on the extent to which private expenditure has failed to recover on its own.

Fiscal policy may also provide tools for avoiding a “secular stagnation”. When the long-run natural rate is low, the lower bound constraint on monetary policy is likely to bind frequently – not only in the face of sizeable adverse shocks. The level of the (long-run) natural rate is affected by fiscal policy, among other things. Models of secular stagnation suggest that a permanent increase in government debt, redistributive policies, and a temporary increase in government purchases, may succeed in raising the long-run natural rate enough to ensure that for the economy a binding lower bound is the exception rather than the rule. Automatic stabilisers and progressive taxation may reduce the precautionary demand for safe assets, thus raising the natural rate and providing more space for monetary policy.

### **Monetary-fiscal policy interactions with large public debt**

The dynamics of public debt depend, among other things, on interest rates and the economy’s growth rate. If the interest rate on public debt is, and continues to be, lower than the economy’s growth rate ( $r < g_0$ ) the government must, at least at some point, run primary surpluses, to stabilise the debt-to-GDP ratio. The required primary surpluses are larger, the higher the stock of debt accumulated by the government. Furthermore, interest rates and growth rates are endogenous variables that respond to fiscal policy. In particular, the sign of the inequality may switch (from  $r < g_0$ ) precisely because the stock of public debt is growing (the interest rates on public debt may then be expected to rise).

When public debt is large, a self-fulfilling crisis may result. Investors may coordinate their expectations on the anticipation of a restructuring or default, demanding higher yields on government bonds. In the face of rising debt service costs the government may restructure or default on its debt obligations, validating the

expectations. To prevent the economy from falling into this undesirable equilibrium, the central bank may act as a backstop by standing ready to purchase government bonds. Financial institutions may be subject to similar self-fulfilling runs, and runs on financial institutions and the fiscal authority may occur in parallel, each precipitating the other (a “doom loop”).

What adjustment is socially optimal in response to (large) increases in public debt? Since taxes are distortionary, smoothing tax rates over time and countercyclicality of inflation are beneficial from a fiscal perspective. The tax smoothing principle calls for reducing public debt slowly, and needs to be weighed against the desire to decrease debt faster as a precaution against possible future adverse shocks. Government policies that stimulate long-term growth are helpful, because faster growth implies larger primary surpluses for given tax rates. Higher inflation reduces the required primary surpluses, and in some cases higher inflation may be consistent with medium-term price stability (if higher inflation is temporary or if inflation is below levels consistent with price stability to begin with).

### **Large central bank balance sheets**

Balance sheet losses may, in some circumstances, affect the central bank’s ability to achieve price stability. The value of the central bank’s assets may fluctuate due to interest rate, credit and exchange rate or other relative price risk. Through an intertemporal budget relation, the value of assets net of liabilities plus the present value of seigniorage must be equal to the present value of dividend payments to owners (taxpayers). It follows that a fall in the value of assets must be matched by some combination of an increase in seigniorage and a decrease in dividends, in expected present value terms. An increase in seigniorage may be inconsistent with price stability.

To explore how the balance sheet, price stability and fiscal policy interact, it may be helpful to consider three stylised scenarios. In each case, let us assume there is an unanticipated decrease in the value of assets held by the central bank and consider what happens subsequently. In the first case, the present value of dividends falls while seigniorage remains unchanged, and there are no consequences for price stability. In the second case, the present value of dividends turns negative (a transfer from taxpayers to the central bank) and, once again, there are no consequences for price stability – the literature refers to this case as “fiscal support” for the central bank. Finally, in the third case, seigniorage rises beyond a level consistent with price stability, with fiscal support unavailable (and the present value of dividends equal to zero). In general, the likelihood of the central bank incurring a large loss rises with the stock of assets that are subject to risk. Furthermore, it is uncertain what amount of seigniorage will be consistent with price stability in the future.

### **Conclusion**

The economic literature has identified two main forces that can make it impossible for the central bank to achieve its objectives. First, under a regime traditionally referred to as fiscal dominance, if government debt is on an unsustainable path, the monetary authority can depart from its primary objective (i.e. maintaining price stability) in order to avoid a sovereign default. As discussed, the solvency of the consolidated public sector imposes restrictions on fiscal and monetary policies – monetary dominance is necessary to ensure central bank independence.

Some of the literature refers to a similar economic mechanism using different terminology, underlining the need for fiscal backing or fiscal requirements for price stability. Second, focusing more narrowly on balance sheet aspects, without fiscal support the central bank may fail to achieve its objectives, even if the solvency of the consolidated public sector is not at risk, because of financial losses and a subsequent lack of fiscal transfers. This box examines the second economic force, discussing some mechanisms that may be used to safeguard the central bank’s independence in conducting monetary policy, both in the case of a single economy and in the case of a monetary union.

Without fiscal support the central bank may fail to implement its desired policy, as the fiscal and monetary authorities need to satisfy different budget constraints. The central bank’s intertemporal budget constraint, when conventionally interpreted, states that the present value of future dividends is equal to the current

central bank's net equity (assets minus interest-bearing liabilities) plus the present value of future seigniorage revenues.

Hence, from an intertemporal perspective, risks to central bank policy solvency may arise if the present value of future seigniorage revenues is perceived to be lower than the current stock of interest-bearing liabilities net of the central bank's assets. The theoretical literature has often focused on this extreme version of intertemporal insolvency, which seems unlikely to occur in the short term (at least in most advanced economies). However, this calls for an economic assessment of the central bank's financial buffers, although this kind of assessment is not disclosed in standard accounting statements and is not consensual, in particular with regard to the expected level of future seigniorage revenues. From a purely accounting perspective, it is not uncommon for central banks to post negative profits and there are examples of central banks with negative net equity positions, which may raise credibility concerns, even if they might still qualify as solvent from an intertemporal perspective.

The literature has also proposed some alternative, more restrictive, definitions of central bank insolvency, which help bridge the gap between the economic and the accounting perspectives. Period insolvency assumes an extreme lack of fiscal support in which the fiscal authority refuses to compensate the central bank for any negative profit, even via future retained earnings, which means that the central bank becomes insolvent as soon as it posts a negative profit. Rules insolvency is an intermediate case that relies on the central bank staying committed to the dividend distribution rule foreseen in its relationship with the Treasury.

It is equivalent to period insolvency if the rule implies that dividends can never be negative and cannot be used to offset previous losses. It is equivalent to intertemporal insolvency if the rule makes it possible to build a deferred account of accumulated losses – to be offset by future profits – up to the level of the central bank's net equity plus the present value of future seigniorage revenues.

Independently of the definition of insolvency used, there may be instances in which the central bank requires the fiscal support of the fiscal authority. If this occurs and there is no mechanism for recapitalising the central bank, the bank may lose credibility and may be unable to fulfil its mandate. In the more extreme cases, agents may be reluctant to continue holding the central bank's reserves, leading to high inflation (and possibly currency depreciation), and the central bank will have no instruments it can deploy to counteract this loss in confidence.

Fiscal support mechanisms have not been made explicit in most advanced economies and may be difficult to guarantee in practice. One concrete way to implement fiscal support could be to set up a rule that transfers any central bank profits – including negative profits – to the fiscal authority. The closest example of this is probably the recent reformulation of Bank of England's capital framework. In June 2018, the Treasury agreed to establish a corridor system for the loss-absorbing capital of the Bank, whereby the latter would receive a capital injection from the former if capital dropped below a certain threshold. Such a rule is rarely observed in other countries, and central bank recapitalisations can be politically costly. As the central bank's profits are usually positive and tend to grow large, the fiscal authority may be tempted to commit to a certain level of public expenditure and may therefore not be willing to accept a large reduction in the central bank's dividends – much less accept the imposition of a fiscal transfer (negative dividend).

## References

- Ait-Sahalia, Y., Andritzky, J., Jobst, A., Nowak, S. and Tamirisa, N. (2012), "Market response to policy initiatives during the global financial crisis", *Journal of International Economics*, Vol. 87, Issue 1, pp. 162-177.
- Albertazzi, U., Cimadomo, J. and Maffei-Faccioli, N. (2021), "Foreign banks and the doom loop", Working Paper Series, No 2540, ECB.
- Alesina, A. and Barro, R. (2002), "Currency Unions", *Quarterly Journal of Economics*, Vol. 117, Issue 2, pp. 409-436.

Baqae, D. and Farhi, E. (2020), "Supply and Demand in Disaggregated Keynesian Economies with an Application to the COVID-19 crisis", NBER Working Paper, No 27152.

Barro, R. (1979), "On the Determination of the Public Debt", *Journal of Political Economy*, Vol. 87, Issue 5, pp. 940-971.

Barro, R. (2020), "r Minus g", NBER Working Paper, No 28002.

Centre for Economic Policy Research (2015), "A New Start for the Eurozone: Dealing with Debt", *Monitoring the Eurozone*, No 1.

Centre for Economic Policy Research (2018), "Reconciling Risk Sharing With Market Discipline: a Constructive Approach to Euro Area Reform", *CEPR Policy Insight*, No 91.

Challe, E., Lopez, J. and Mengus, E. (2019), "Institutional quality and capital inflows: Theory and evidence", *Journal of International Money and Finance*, Vol. 96, Issue C, pp. 168-191.

Deutsche Bundesbank (2017): "The Natural Rate of Interest," *Monthly Report*, October, pp. 27-42.

Diamond, D. and Dybvig, P. (1983), "Bank Runs, Deposit Insurance, and Liquidity", *Journal of Political Economy*, Vol. 91, Issue 3, pp. 401-419.

European Central Bank (2020a), "Automatic fiscal stabilisers in the euro area and the COVID-19 crisis", *Economic Bulletin*, Issue 6.

European Central Bank (2020b), *Convergence Report*.

Farhi, E. and Tirole, J. (2018), "Deadly Embrace: Sovereign and Financial Balance Sheets Doom Loops", *The Review of Economic Studies*, Vol. 85, Issue 3, pp. 1781-1823.

Lane, P. (2012), "The European Sovereign Debt Crisis", *Journal of Economic Perspectives*, Vol. 26, No 3, pp. 49-67.

Larch, M. and Santacrose, S. (2020), *Numerical compliance with EU fiscal rules: The compliance database of the Secretariat of the European Fiscal Board*.

Pisani-Ferry, J. and Zettelmeyer, J. (2018), "Could the 7+7 report's proposals destabilise the euro? A response to Guido Tabellini", *VoxEU*.

Rachel, L. and Summers, L. (2019), "On Secular Stagnation in the Industrialized World", *Brookings Papers on Economic Activity*