

Monetary Policy and Macprudential Policy: Different and Separate*

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How should monetary policy and macroprudential policy be conducted? Should they have the same or separate goals? Should they be coordinated or conducted separately? Should they be conducted by the same or different authorities? In order to answer these questions, it is necessary to specify how different economic policies in general, and monetary and macroprudential policies in particular, can be distinguished, how appropriate goals and policy instruments for each economic policy can be determined, and how responsibility for achieving the goals and control of the appropriate instruments should be assigned to authorities and decision-making bodies.

How can different economic policies be distinguished?

In general, when we discuss different economic policies, we distinguish them according to their goals, their instruments, and the authorities that control the instruments and are responsible for achieving the goals. For instance, without going into details, it is obvious that monetary policy and fiscal policy are different economic policies, with different goals, instruments, and responsible authorities. Furthermore, it is obvious that there is considerable interaction between the policies. For instance, fiscal policy has effects on inflation and employment, and these effects have to be taken into account in the conduct of monetary policy. Also, monetary policy has effects on government expenditures and revenues, and these have to be taken into account in the conduct of fiscal policy. In spite of this interaction, normally monetary policy and fiscal policy

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are conducted separately, with each policy taking the conduct and effects of the other policy into account, in a situation best described in game-theory terms as a so-called Nash equilibrium, where each authority chooses its instruments independently to achieve its goals, taking into account the conduct of policy by the other authority, rather than a cooperative situation when the two authorities jointly choose their instruments to achieve joint goals. Given this, an interesting and relevant question is whether the relation between monetary policy and macroprudential policy is similar to or different from the well-established and well-understood relation between monetary policy and fiscal policy.

How can monetary policy and macroprudential policy distinguished?

For *monetary policy*, under flexible inflation targeting, there are two goals, price stability and real stability, more precisely to stabilize inflation around the inflation target and resource utilization around its long-run sustainable rate.¹ Under the Federal Reserve's dual mandate, the two goals are price stability and maximum employment, that is, to stabilize inflation around the Federal Reserve's inflation target and employment around its maximum long-run sustainable rate.

In normal times, the instruments of monetary policy are the policy rate and communication. The latter includes publishing forecasts of the target variables, such as inflation and unemployment, and possible forward guidance, such as publishing a policy-rate path, a forecast for the policy rate. In crisis times, the set of instruments is larger and includes balance-sheet policies, such as asset purchases (quantitative easing), fixed-rate lending at longer maturities,² and foreign-exchange interventions and exchange-rate floors. The authority controlling the instruments and responsible for achieving the goals is the central bank.

For *macro-prudential policy*, the goal is *financial stability*. The definition of financial stability is not as clear and obvious as the definition of price stability and maximum employment. A relevant

¹ The long-run sustainable rate or level of resource utilization can be measured as the maximum sustainable employment level, the minimum sustainable unemployment rate, or the potential output level.

² Fixed-rate lending can be classified as monetary policy, because it can be seen as primarily a commitment to the keeping the current policy rate fixed at least until the maturity of the loan. Variable-rate lending can be seen as primarily liquidity support (credit easing) and lending of last resort. During crisis times, classifying central-bank actions is sometimes not obvious. The same central-bank action may have aspects of fiscal, monetary, or financial-stability policy. In such cases, my preference is to classify actions according to their main purpose.

definition of financial stability is that *the financial system can fulfill its three main functions (transforming saving into financing, providing risk management, and transmitting payments) with sufficient resilience to disturbances that threaten these functions*. The crucial part of the definition is *sufficient resilience*. In the future there will unavoidably be disturbances and shocks to the financial system, very likely from unexpected directions and of unexpected kinds. The crucial thing is then that there is sufficient resilience to disturbances, so as to limit the probability and severity of financial crises.³

The instruments of macroprudential policy are supervision, regulation, and communication, including capital and liquidity requirements, loan-to-value (LTV) caps, financial-stability reports (including stress tests of banks, other financial institutions, and households), and so on.⁴

The authority or authorities controlling the macroprudential instruments and being responsible for achieving and maintaining financial stability vary across countries and may include the financial supervisory authority, the central bank, the ministry of finance, and other regulatory and supervisory agencies.

Clearly, from the above perspective, monetary policy and macroprudential policy are quite different and distinct policies. But how closely related are they? Should they really have different goals?

³ Regulation has benefits to the extents that it remedies negative effects of externalities but it may also have costs in terms of less efficient resource allocation, less competition, and so on. A tradeoff between stability and efficiency is easy to see in in many situations. Regulation may also have income and wealth distribution effects, including intergenerational effects. To handle this, macroprudential policy may have a secondary goal. The Bank of England’s Financial Policy Committee “has a secondary objective to support the economic policy of the government,” (Bank of England 2015). I am not discussing the role of such a secondary objective further in this draft.

⁴ The instruments of micro- and macroprudential policy overlap, and the boundary between them is not clear. Therefore, one could discuss a broader “financial policy” that includes both micro- and macroprudential policy and has the goal of financial stability (with microprudential policy’s focus on the stability of individual financial institutions seen as a part of a policy for stability of the financial system). In this draft, I continue to use the expression “macroprudential policy,” although I might as well have used “financial policy” (or “financial-stability policy,” as I have done in previous work). See IMF (2013) for an extensive discussion of the goals and scope of macroprudential policy and its relation to microprudential policy and to crisis management and resolution policies.

Should monetary policy have a third goal, financial stability?

In particular, should monetary policy have a third goal, not only price stability and real stability but also financial stability? I am convinced that the answer to that question is no. Monetary policy should not have financial stability as a goal. The reason is that monetary policy cannot achieve financial stability.⁵

An important principle is that economic policies should only have goals that they can achieve.⁶ Monetary policy should only have goals that monetary policy can achieve. So what can monetary policy achieve?

Monetary policy can stabilize inflation around a given inflation target and resource utilization around its estimated long-run sustainable rate. Because the inflation rate over the longer run is primarily determined by monetary policy, it is possible to select a fixed target for the inflation rate and for the monetary policy to achieve an average inflation rate over a longer period at or close to the target. (FOMC 2015)

In contrast, the long-run sustainable rate of resource utilization (measured by, for instance, potential output or the minimum long-run sustainable unemployment rate) is largely determined not by monetary policy but by non-monetary factors that affect the structure and working of the economy. These factors may change over time and may not be directly observable and

⁵ The answer to the related question “Should *central banks* have a financial-stability goal?” depends on whether or not the central bank has control of any macroprudential instruments. If it has, the goal for the use of those should be financial stability. Then the question remains if the central bank’s *monetary policy* should have financial stability as an additional goal. If the central bank lacks macroprudential instruments, as is the case for the Riksbank, the question is really only whether monetary policy should have financial stability as an additional goal.

⁶ Obviously that principle should apply to all public policies, not only economic policies. Furthermore, for economic policies the ultimate goal for overall economic policy can be said to be to and safeguard and improve the welfare of the citizens. This ultimate goal is normally expressed in terms of a few more specific goals that contribute to the welfare of the citizens, for instance, efficient resource allocation, high and stable growth, full and stable employment, price stability, a fair distribution of living standards, regional balance, and a good environment. Each economic policy could have all these goals. But it is better to give each economic policy a specific goal that it can achieve and that contributes to the ultimate goals. This way policy can be more effective, and accountability for achieving each specific goal can be more directly assigned.

measurable. This means that it is not appropriate to set a fixed monetary-policy target for the long-run rate of resource utilization. Instead the long-run rate of resource utilization must be estimated, and such estimates are necessarily uncertain and subject to revision.

Thus, monetary policy cannot increase the long-run sustainable rate of resource utilization; for that, structural policies must be used. Generally, monetary policy cannot solve structural problems.

It follows that price stability and real stability in the above sense are suitable goals for monetary policy.⁷ But what about financial stability? Can monetary policy achieve financial stability?

If there is one thing we should have learned from the Global Financial Crisis, it is that price stability does not imply financial stability. Monetary policy can achieve price stability, but it cannot achieve financial stability. There is no way monetary policy can systematically affect and thereby achieve sufficient resilience of the financial system; for instance, there is obviously no way monetary policy can ensure that there are sufficient capital and liquidity buffers in the financial system. Furthermore, as further discussed below, existing theoretical and empirical evidence suggests that “leaning against the wind”, promoted by BIS (2014) and implying the conduct of a somewhat tighter policy than justified by stabilizing inflation around the inflation target and resource utilization around its long-run sustainable rate, is an ineffective and even counterproductive way of promoting financial stability. The policy rate simply has too small and uncertain an effect on the probability and/or severity of a financial crisis to match the substantial costs of tighter policy.

Stein (2013) has put forward the arguably strongest theoretical argument in favor of leaning against the wind for financial stability purposes: “...while monetary policy may not be quite the right tool for the job, it has one important advantage relative to supervision and regulation – namely that it gets in all of the cracks [of the financial system].” But to this I would add that, given existing empirical estimates, a modest policy-rate increase would barely cover the bottom of those cracks. To fill the cracks, the policy-rate would have to be increased so much that it would kill the economy.

⁷ It goes without saying that fiscal instability and/or financial instability can make it difficult or prevent monetary policy from achieving its goals.

Furthermore, macroprudential policy cannot achieve price stability. Macroprudential policy (together with microprudential policy) can in principle achieve financial stability, but macroprudential policy cannot stabilize inflation around the inflation target and employment around its estimated maximum sustainable level. Thus, both policies are needed to achieve both the monetary policy goals of price stability and real stability and the macroprudential goal of financial stability.

Still, there is interaction between the two policies. Macroprudential policy affects financial markets, spreads between different interest rates, and lending by banks. Via LTV caps it affects household borrowing, housing demand, housing prices, and construction. This way it indirectly affects inflation and resource utilization. Monetary policy affects interest rates, output and employment, profits, credit losses and assets prices. This way it affects debt service, balance sheets, and leverage. This way it indirectly, but not systematically, affects financial stability.⁸ Thus, there is interaction between the two policies, as there is interaction between fiscal policy and monetary policy. The interaction between monetary and macroprudential policies is a reason for each policy being conducted under full information about the conduct and effects of the other policy, but, as further discussed below, it is not an argument for sharing goals or for being explicitly coordinated. As with monetary and fiscal policies, considerable interaction is not a reason for having the same goals or for conducting them in a coordinated way.

As far as I can see, if there are financial-stability problems, in order to ensure financial stability there is simply no choice but to use other policies than monetary policy, primary macro-and microprudential policy (or other policies appropriate for the precise problem at hand). If the existing macroprudential policy is insufficient or ineffective, there is no choice but to develop and apply a better macroprudential policy.

⁸ Furthermore, as emphasized by Bernanke (2015), the neutral/natural/equilibrium interest rate is determined by structural factors, not monetary policy. Monetary policy can only let the policy rate deviate somewhat above or below the neutral rate, this way conduction contractionary or expansionary policy, respectively. The effect of monetary policy should therefore be the effect of only the gap between the actual policy rate and the neutral rate, not the effect of the whole policy rate.

Should monetary and macroprudential policies be conducted separately or coordinated?

Thus, monetary policy and macroprudential policy are different policies. This is also the case when the same institution, the central bank, is in charge of both policies. Thus, the question of whether they should be conducted separately or coordinated is relevant also if the central bank is in charge of both policies. In that case, the question is whether or not there should be separate decision-making bodies within the bank for the two policies, with separate goals and separate instruments.

My view is that, in normal times, it is best to conduct monetary policy and macroprudential policy independently, with each policy taking the conduct and effects of the other policy into account in order to best achieve its goals. As noted above, this is similar to how monetary and fiscal policies are conducted. In game-theory terms, it corresponds to a non-cooperative Nash equilibrium rather than a cooperative equilibrium.

This is best for two reasons: First, in spite of the interaction between the policies, there is no doubt that monetary policy is much more effective than macroprudential policy in stabilizing inflation around the inflation target and employment around its maximum sustainable rate, whereas macroprudential policy is much more effective than monetary policy in achieving financial stability. Second, it clarifies the accountability of the decision-making body or responsible for each policy.⁹

In *crisis* times rather than normal times, that is, when there is *crisis management* rather than *crisis prevention*, things are very different. Then full cooperation and coordinated policies by all the relevant authorities is warranted. These authorities may include the financial supervisory authority(ies), the central bank, the ministry of finance, the bank-resolution authority, and so on.

Should monetary and macroprudential policies be conducted by the same authority or by different authorities?

As said above, my view is that monetary policy and macroprudential policy are quite different economic policies and are best conducted separately. This means that they should have separate

⁹ Bean (2014) provides a thorough discussion of why and how monetary policy and financial-stability policy can achieve a good outcome by each policy focusing on its goals.

decision-making bodies, each with their separate goals and separate instruments, and each accountable for achieving the goals.

The efficiency of and accountability for macroprudential policy is enhanced if one authority controls all macroprudential instruments. Splitting instruments across several authorities makes it difficult to hold authorities accountable, and the different authorities may apply the different instruments at cross purposes or at least inefficiently.¹⁰

There are at least two clean models that are likely to work well. One model is that of Bank of England, which has the responsibility for both monetary and macroprudential policy. There are two decision-making bodies, the MPC in charge of monetary policy and the FPC in charge of macroprudential policy. Each committee has its goals and its instruments, and each is accountable for achieving its goals. Furthermore, each policy is conducted in an open and transparent way, and there is overlap of members in the two committees. This makes each committee fully informed about the policy of the other committee.

Another is the Swedish framework. In August 2013, the Swedish government announced a new strengthened framework for financial stability in Sweden and clarified the roles and responsibilities of the different authorities. Finansinspektionen, the Swedish FSA, was assigned the main responsibility for financial stability and received control of all macroprudential instruments, including the countercyclical capital buffer.¹¹ The Riksbank thus has no macroprudential instruments for crisis prevention (except communication), only lending of last resort for crisis management.

This assignment of goals and instruments enhances efficiency and accountability by assigning all the macroprudential instruments in one authority. Because the FSA already had control of all the microprudential instruments, it also puts both micro- and macroprudential instruments in one institution. In general, the boundary between micro- and macroprudential instruments can be somewhat unclear, and macroprudential policy is arguably much closer to microprudential policy than to monetary policy. Furthermore, in a financial sector similar to that in Sweden, where four

¹⁰ Since the boundary between micro- and macroprudential policies are not clear, there is also both an efficiency and an accountability argument for the same authority controlling both macro- and microprudential instruments.

¹¹ However, the government has been slow in giving the FSA the legal authority necessary for control of all the macroprudential instruments.

major banks in a cozy oligopoly dominate the financial sector, microprudential policy has macroprudential consequences and the distinction between micro- and macroprudential policy is even less clear. Altogether, there are thus arguably some additional efficiency and accountability gains in putting micro- and macroprudential policy together. Because the FSA is an authority under the government, the government has the ultimate responsibility and accountability for financial stability, including any intergenerational and other distributional consequences and tradeoffs.¹²

Monetary and macroprudential policies in Sweden are conducted in a very transparent and open way, making it easy to for the Riksbank and the FSA to be fully informed about the conduct and effects of the other authority's policy. Furthermore, the government has created a new Financial Stability Council, with the minister of financial markets from the Ministry of Finance as chair and the director generals of the FSA and the Swedish National Debt Office (which is the national bank resolution authority in Sweden) and the governor of the Riksbank as members. The Financial Stability Council meets regularly and is a forum for exchange of information and discussion of financial-stability issues, including reports commissioned by the Council from workgroups formed by staff of the authorities represented in the Council. The Council has no decision power; this power rests with the authorities represented in the Council. The Council creates a forum where the authorities can exchange information about their respective views and policies relating to financial stability. In a crisis, the Council will lead and coordinate the crisis management.

In practice, history and political-economy aspects to a large extent explain the particular institutional arrangements in each country, for instance in the U.S. There, macroprudential instruments, regulation, and supervision are split across several authorities with different mandates. This together with vested interests and extensive lobbying by the financial industry and related political influence over the authorities make effective macroprudential regulation quite difficult.¹³

What if monetary policy would pose a threat to financial stability?

There could on rare occasions arise unforeseen situations when monetary policy might pose a threat to financial stability even when it fulfills the monetary policy goals. In principle, the

¹² In Sweden, the Riksbank is an authority under the Swedish Parliament, not under the government.

¹³ [References to be added.]

macroprudential authority should be able to contain such threats with its available instruments. But how should a situation be handled when such a threat cannot easily be contained?

The August 2013 forward guidance by the Bank of England's MPC provides an example how to handle such a situation (Bank of England 2013). At the time, the MPC agreed its intention not to raise the policy rate until the unemployment rate had fallen to a threshold of 7 per cent, subject to three 'knockouts' not being breached. The third knockout is the FPC judging that the stance of monetary policy poses a significant threat to financial stability that cannot be contained by the range of mitigating policy actions available to the FPC, the Financial Conduct Authority, and the Prudential Regulation Authority in a way consistent with their goals.

Thus, according to this example, the macroprudential authority should warn the monetary policy authority if monetary policy poses a threat to financial stability that the financial-stability authority could not contain with its available policy instruments. Then the monetary policy authority may choose to adjust monetary policy, either tightening (leaning against the wind) or loosening (leaning with the wind), depending on the situation. This clarifies the responsibility of each authority and makes it possible to hold them accountable. Effectively, the MPC is put in a "comply or explain" position. Because the final decision of adjusting monetary policy is left with the monetary-policy authority, its independence to conduct monetary policy is maintained.

In particular, it should be the macroprudential authority, not the monetary-policy authority, that decides if monetary policy poses a threat to financial stability that it cannot contain with its available instruments. The principle should be that the authority in charge of the goal decides if its goal is threatened in such a way that assistance is needed, not the other authority. The monetary-policy authority should not be the one to decide whether its policy poses a threat to the goal of the macroprudential authority.

Had such a principle been applied in Sweden in 2010 and the FSA had been the authority to judge whether monetary policy posed a threat to financial stability that could not be contained by FSA's available instruments, the much discussed aggressive leaning of the wind undertaken by the Riksbank in 2010-2011 would most likely not have occurred. This leads naturally to a discussion of whether monetary policy should ever lean against the wind in an attempt to promote financial stability.

Should monetary policy ever “lean against the wind”?

In the ongoing discussion about monetary policy and financial policy, there has been considerable focus on the particular issue of whether monetary policy should lean against the wind (of asset prices and credit booms), more precisely raise policy rates somewhat higher than justified by stabilizing inflation around the inflation target and resource utilization around its long-run sustainable rate, in order to promote financial stability. Such a policy has been strongly advocated by the BIS, for instance in BIS (2014).

The recent experience in Sweden provides a dramatic example. In June 2010, the forecast for inflation and unemployment by the Riksbank for Sweden and by the FOMC for the U.S. looked very similar. The inflation forecast was below 2 percent and the unemployment forecast was far above each central bank’s estimate of a long-run sustainable rate (Svensson 2011). With reference to that situation and those forecasts in June 2010, Bernanke (2010) concluded that “Given the Committee’s objectives, there would appear--all else being equal--to be a case for further action,” meaning a case for further easing of monetary policy. Indeed, the FOMC at the time continued to keep the policy rate close to zero and started preparing QE2.

In contrast, in spite of the similar forecasts, the majority of the Riksbank’s executive board did not continue to keep the policy rate close to zero and did not prepare any QE but raised the policy rate rapidly from 0.25 percent in July 2010 to 2 percent in July 2011, citing concerns about housing prices and household debt.¹⁴ As a consequence, unemployment stayed up at around 8 percent and inflation fell. CPI inflation has been around zero or even negative since the end of 2012. By July 2014, the Riksbank had been forced to reduce the policy rate back to 0.25 percent, with unemployment still at around 8 percent and inflation at zero. It also apparently abandoned any attempt to use the policy rate to influence housing prices and household debt. By February 2015, it had lowered the policy rate to minus 0.10 percent and announced the beginning of a QE program. By July 2015 the policy rate had been reduced to minus 0.35 percent, with unemployment a bit lower but inflation slightly negative.

¹⁴ As a deputy governor and member of the Riksbank’s executive board at the time, I dissented against every single rate increase, for reasons explained in in Svensson (2010) and in more detail in the Riksbank’s attributed minutes from the policy meetings, for instance, the June/July meeting 2010, Sveriges Riksbank (2010) (available in English at www.larseosvensson.se or www.riksbank.se).

The dramatic tightening 2010-2011 was done without any supporting analysis of the efficacy of the policy rate as an instrument to contain the growth in household debt and housing prices, in particular any explicit cost-benefit analysis. The available empirical work at the time indicated very high costs in terms of output and unemployment and small effects on debt and housing prices.¹⁵ Furthermore, there was no work indicating that the level of housing prices and household debt posed any risks that the FSA could not manage with its LTV cap of 85 percent for new mortgages that the FSA introduced in the fall of 2010. Also, the FSA could assess risks with considerable precision in its excellent mortgage market report, which among other things included stress tests on new mortgage takers using individual data collected from the banks.¹⁶

This experience has certainly stimulated my own interest in cost-benefit analysis of leaning against the wind. In Svensson (2015a), I use a simple way of measuring costs and benefits in terms of expected future unemployment. Raising the policy rate has a cost by increasing the future unemployment rate. The policy rate has a possible benefit by lowering the probability and/or severity of a future crisis and thereby reducing the expected future unemployment rate somewhat. Using estimates from Sveriges Riksbank (2014), Schularick and Taylor (2012), and Flodén (2014) I show that, measured this way, the benefit is less than 1 percent of the cost. The reason is that the effect of the policy rate on the probability and severity of a crisis is too small for the benefit to be economically significant.

Furthermore, I noted that leaning against the wind seem to have an inherent flaw, because it may imply running inflation below previous inflation expectations and restricting the growth of nominal incomes. Thereby it increases the real debt burden and reduces the agents' debt-service capacity. In this way, it may reduce financial stability and indeed be counterproductive.

In Svensson (2015a), the marginal cost and benefit of increasing the policy rate is assessed more thoroughly using a quadratic loss function. For existing empirical estimates, the discounted sum of future expected marginal costs of increasing the policy rate is much larger than the discounted sum of future expected marginal benefits. Furthermore, somewhat surprisingly, a less effective macroprudential policy, to the extent that it increases the probability, severity, or duration of a

¹⁵ See, for instance, Assenmacher-Wesche and Gerlach (2010), Bean, Paustian, Penalver and Taylor (2010), Dokko, Doyle, Kiley, Kim, Sherlund, Sim and Van den Heuvel (2009), and (using Swedish data and done by Riksbank staff members) Claussen, Jonsson, and Lagerwall (2011).

¹⁶ The 2010 report is only available in Swedish; from 2011 the mortgage market report is available also in English. The most recent is Finansinspektionen (2015).

crisis, increases the marginal costs more than it increases the marginal benefits, making the case against leaning against the wind even stronger. The reason for this result is that leaning against the wind has possible benefits in the form of a reduction in the probability and/or severity of a crisis. It has a cost in terms of a weaker economy with lower inflation and higher unemployment, if no crisis occurs. However, it also has a cost *if* a crisis occurs, because the cost of a crisis is larger if the economy initially is weaker. With an increased probability, severity, or duration of a crisis because of less effective macroprudential policy, for existing empirical estimates this cost of a crisis increases more than the benefits, making the costs of leaning against the wind exceed the benefits even more. Thus, the common argument that leaning against the wind might be justified if macroprudential policy is less effective seems to be wrong.

A recent IMF staff paper (IMF 2015) presents a thorough analysis and survey of the pros and cons of leaning against the wind and finds that except in the most exceptional circumstances, costs outweigh benefits. It concludes that, “[b]ased on current knowledge, the case for leaning against the wind is limited, as in most circumstances costs outweigh benefits.” Former Federal Reserve Board Chair Bernanke and Federal Reserve Bank Presidents Evans and Williams have previously reached similar conclusions.¹⁷

The main policy conclusion from this work is that any leaning against the wind should only be undertaken if supported by a thorough cost-benefit analysis. Given the available evidence, the burden of proof should be on those advocating leaning against the wind. I would be very surprised to see a convincing cost-benefit analysis supporting leaning against the wind.

¹⁷ Bernanke (2015): “As academics (and former academics) like to say, more research on this issue is needed. But the early returns don't favor the idea that central banks should significantly change their rate-setting policies to mitigate risks to financial stability.”

Evans (2014): “Indeed, any decision to instead rely on more-restrictive interest rate policies to achieve financial stability at the expense of poorer macroeconomic outcomes must pass a cost–benefit test. And such a test would have to clearly illustrate that the adverse economic outcomes from more-restrictive interest rate policies would be better and more acceptable to society than the outcomes that can be achieved by using enhanced supervisory tools alone to address financial stability risks. I have yet to see this argued convincingly.”

Williams (2015): “[M]onetary policy is poorly suited for dealing with financial stability concerns, even as a last resort.”

Conclusions

We should not ask too much from monetary policy. Monetary policy can really at best just stabilize inflation around a given inflation target and resource utilization around its estimated long-run sustainable rate and this way keep average inflation on target and average resource utilization equal to the its long-run sustainable rate. In particular, monetary policy cannot achieve financial stability; a separate macroprudential policy is needed for that.

Monetary policy and macroprudential policy are different policies, with different goals, different suitable instruments, and in many countries different responsible authorities. Still there may be considerable interaction between the policies. In this regard, the relation between monetary and macroprudential policies is similar to that between monetary and fiscal policies. Furthermore, given that monetary policy is much more effective in achieving price stability and real stability, and macroprudential policy is much more effective in achieving financial stability, the two policies should normally be conducted independently, but with each policy full informed about and taking into account the conduct of the other. This means that they should be conducted by separate decision-making bodies, also when the central bank is in charge of both. This allows each decision-making body to be held accountable for achieving its goals. Also in this regard, monetary and macroprudential policies are similar to monetary and fiscal policies.

One cannot exclude that, on rare occasions, monetary policy might pose a threat to financial stability that cannot be contained by the instruments of the macroprudential authority. The authority judging whether such a situation has occurred should be the macroprudential authority. That authority should then warn the monetary policy authority about the threat, after which the monetary policy authority may decide whether or not to adjust monetary policy. This clarifies the responsibility and makes it possible to hold each authority accountable. It also respects the independence of monetary policy.

At the current state of knowledge, there is little or no theoretical and empirical support for monetary policy leaning against the wind for financial-stability purposes, that is, being somewhat tighter than justified by the monetary policy goals alone. The estimated costs are much larger than possible benefits. Leaning against the wind indeed has an inherent flaw, because it may imply running inflation below expectations and restricting the growth of nominal incomes. Thereby it increases the real debt burden, reduces the agents' debt-service capacity, and may reduce financial stability and therefore be counterproductive. In any case, any leaning against the wind is

justified only if supported by a thorough cost-benefit analysis. The burden of proof should be on the advocates of leaning against the wind.

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