Chapter 12

Policy Mix Case Discussion

Solikin M. Juhro, Reza Anglingkusumo, Arlyana Abubakar, Sahminan, Ferry Syarifuddin, Alexander Lubis, and Tarsidin

Abstract The policy mix exercise starts with each group choosing one policy mix combination from many possibilities, in the case of “no feedback loop” and in the case of “with a feedback loop”. In making the choice, the group should consider economic growth, inflation or financial pressure index. The group presentation and interaction focused on the conceptual question, analysis of baseline policy chosen, and the policy mix exercise.

Keywords Policy mix · Case study · Policy simulation

Introduction

During the case discussion, each group will address one question only. The following task after that is for each group to make a baseline policy exercise. Each group will have to make an exercise regarding the baseline scenario, which is no policy change from the policy in the last year. Looking at the baseline policy exercise, the green colored area is the policy with no change compared with last year’s policy and its outcome. Assuming that in 2013 there is a shock in the form of capital outflows. If we do nothing, namely that there is no policy change, the result will be like this. You can explain about the conditions in 2012 and 2013. You can get the data from the various files we have given to you. You can also find in the suggested reading about the time condition data in order to answer Question 2, which is the baseline exercise. There are two kinds of explanation. This is without the feedback loop and this is with the feedback loop. Without means instant. Right after we enter 2013, in just one or two months, the result will be like this. Then there will be the response from the investors, namely withdrawing their investments through capital outflows. Therefore, this is the scenario with the feedback loop. Just make an analysis exercise like that. One or two pages would be enough.

S. M. Juhro (✉) · R. Anglingkusumo · A. Abubakar · Sahminan · F. Syarifuddin · A. Lubis · Tarsidin
Bank Indonesia, Jakarta, Indonesia

Please have a look at page 6. This is the policy mix exercise. The policy mix exercise means that you have to choose one policy mix combination. Therefore, there will be many combinations and you have to make a combination of that. You have to choose which one is better, considering economic growth, inflation or financial pressure index. You must choose the policy focus and then make an analysis. Please make two analyses: one without a feedback loop, which means instant, just one or two months, and one with a feedback loop for the long-term of more than three months. We will provide the Excel files in the Google Drive. Please look at the first sheet only. Please do not make any changes to the latter sheets because if you input any data in their letter sheets, it will break the file and you will have to copy new files. To do the third question, which is the policy exercise, have a look at this combination. You may only change the policy variables. The result will automatically change. Sheets 2, 3, 4 and 5 are there to show that this is a complicated process but the result is actually very simple. The results will update automatically. We have made it very simple for you.

We will help you in order to make it easier because we provide several options. This is to answer Question 2 of the baseline policy exercise. On the next page, we make some combinations. In the case without a feedback loop, you may choose one option, for instance, the first option is high policy rate with high FX intervention. The second option is high policy rate with low FX intervention. In the case with a feedback loop, there are some other options/combinations between monetary policy and macroprudential policy. You may consider economic growth, inflation, the current account deficit and financial pressure index; which one is better according to you? I would like to remind you that there is no correct answer and no wrong answer. In other words, everything is right based on your analysis and argument to explain about the option you have chosen. We have limited time.

Please remember, there are only three questions to answer. First, the conceptual question, which has no bearing on the second and third questions. Second, analysis of baseline policy. Third, the policy mix exercise. Please choose one option in the case of no feedback loop and one option in the case of with a feedback loop. After a 15-min presentation, we will provide an opportunity for the other groups to ask questions. Due to time limitations, however, if Group 1 has presented, for example, the first opportunity to ask questions will be given to Group 2. After Group 2 has presented, the first opportunity to ask questions will be given to Group 3 and so on. If we still have time, the other groups may also ask questions. After Group 1 has presented, Group 2 will *have* to ask questions so please prepare some questions. Please do not forget to wear your nametag at all times.

Please open the Excel file: worksheet of policy exercise 2019a. Please make a 'save as' copy so if anything goes wrong, you still have the original. Please begin discussing and answering the questions. There are three questions: A, B and C. A is the conceptual question and has no relation to questions B and C. Question B is the baseline exercise and question C is the policy mix exercise.

Finally, we have reached the concluding part of today's session. I am very sure you enjoyed number crunching and playing around with the Excel file. Did you have fun? I hope that you noticed one thing from today's exercise, namely that

policy formulation involves weighing the trade-offs between various policy options. This is due to a scarcity of resources. In fact, economics is a science of scarcity. As a policymaker, you have to find an optimal solution to maximize welfare, which, in this case, is low inflation–high-growth, within the resource constraints. I wonder whether any of the groups introduced positive productivity shocks in their presentation. If positive productivity shocks were introduced, you have changed the parameters of the constraints and increased potential growth, which solves many issues. That is okay because we have been dealing with cyclical issues not structural issues. Let us see what you have come to propose as the optimal solutions. Today will consist of two sessions. The first session will include three group presentations, with the final three groups giving their presentations in the second session. You will have 15 minutes to present your optimal policy solutions, followed by a five-minute Q&A session with comments from your peers.

Group 1

Good afternoon, ladies and gentlemen. We are from Group 1 and would like to propose several policies to overcome the problems in the Indonesian economy in 2013. To start our presentation, allow me to introduce the members of this group. We have representatives from Bangko Sentral ng Pilipinas, Bank Indonesia and BNM. We will take turns presenting our case. First, we will address how far monetary and fiscal stability are interconnected. I would like to first explain about monetary policy transmission. Monetary policy transmission will function after the policymakers examine their monetary policy response and instruments and affect the expectations of the economic agents regarding macroeconomic indicators, such as inflation and financial conditions. Monetary policy will also affect the resilience and efficiency of the financial system, consisting of financial intermediaries and financial markets. At the same time, however, financial conditions are also affected by the expectations of economic agents. Furthermore, the financial system will react to the expectations of monetary policy, as reflected by the interest rate, exchange rate, lending, balance sheet asset prices as well as money. At the same time, it will also directly influence the aggregate conditions of the economic agents, as reflected in terms of aggregate demand and supply. This will also affect the savings and investment behavior of households and the corporate sector as well as employment, wages and price setting. Aggregate supply and demand may also be affected directly by the expectations of the economic agents as well, ultimately influencing other aggregate outcomes, such as economic growth and employment. My colleague will explain further the connection with financial stability.

Participant:

Just to continue the discussion of the linkages between monetary and financial stability. We all know that monetary policy actions influence risk perception and risk-taking in the financial system, such as banks. That could be reflected, for example,

in risk-taking activities through lending or on the balance sheet, whether they are focusing on credit of the securities portfolio and so on. Based on this premise, we can say that in supporting monetary policy, there must be a stable financial system that would support that. That is when the financial stability framework comes in. That involves two-way directions which banks to each other and to other sectors, so it requires a holistic view of the system. That is when macroprudential policies come in. This is basically more on systemic risk management. This slide just tells us the linkages between financial stability and monetary stability.

Participant:

I would like to focus on assessing global economic developments and the impact on our national economy. Then we will move on to the policy we have suggested. In 2012, world economic growth moderated to around 3% and uncertainty in the global economy increased. Commodity prices also decreased. Despite the global economic slowdown, the Indonesian economy in 2012 maintained robust growth at 6.26%. Inflation was 4.3%, which is within the target corridor. We were aware that the uncertainty would continue throughout the year so my colleague will explain our projections of economic conditions in 2013.

Participant:

We are now in January 2013 and our outlook for the rest of the year is global economic moderation to 3% from 3.09% in 2012. We expect global interest rates to remain low given the ongoing QE measures in advanced economies. On the domestic side, given weaker global demand, we expect our domestic GDP growth to also moderate but still anchored by domestic demand. Our current account deficit is going to widen, given lower exports and higher imports. As a result, the rupiah will depreciate, and inflation will trend higher. Next, we will show our policy deliberations and what we decided was the most optimal policy mix. A word of caution, however, given the time constraints, instead of coming with all the potential options, we have just followed whatever was given in the Excel spreadsheet. We have just chosen between the two, without coming up with more combinations. Neither did we come up with any additional shocks, we just followed whatever was given. Likewise, for potential output.

Participant:

Based on the outlook at the beginning of 2013, we have the problem of combining several policies to optimize GDP growth, inflation, current account deficit and the financial pressure index. We have three options: (i) no policy (dark blue column); (ii) 25 bps hike in policy rate (orange column); and (iii) 50 bps hike in policy rate and FX intervention (light blue column). Based on the simulation, we concluded that taking no policy measures would produce very high GDP growth yet a spike in inflation to 6.72%, which is beyond our target. On the other hand, the current account deficit would also narrow but the financial pressure index would increase. Based on these considerations, we proposed option three, namely a 50 bps increase in the policy rate along with FX intervention.

Participant:

Following the announcement in May by the US to taper their QE measures, we saw that global economic growth would continue to moderate more than expected and interest rates would increase given the scaling down. As a result, our domestic economy would be impacted. Based on this set of factors, we have another set of policy measures. Given the time constraints, I will just quickly go through our set of policy measures. In terms of monetary policy, we realize that option 2 is the best, namely a 75 bps hike in the BI Rate. If we have a policy mix, however, we would go with the second option, which is to increase the BI Rate by 100 bps and increase the LTV ratio by 12.5%.

Participant:

In conclusion, we know that by comparing the policy options with only monetary policy and the orange one is the policy mix of monetary and macroprudential policy, the output is better if we do a policy mix. In terms of GDP growth, we saw that if only monetary policy, we would get 5.09% but if we combine with macroprudential policy, we can maintain GDP growth of more than 5.15%. In terms of inflation, we can control the rate within the inflation target at 6.41%. Regarding the current account deficit, we think that 3.29% of GDP is still manageable in Indonesia. We have also effectively maintained the financial pressure index within the target. We felt this was the best option considering the prevailing global and domestic economic dynamics.

Interaction

Group 2: The policy mix you chose included tightening policy by 100 bps and increasing the LTV ratio by 12.5%. Sorry, I thought you were tightening the monetary policy but also tightening macroprudential policy but you are loosening macroprudential policy. My mistake, sorry.

Participant: I just wanted to ask you how to communicate to the public this kind of stance? You have given a mixed signal to the public whether you are tightening or loosening so how would you communicate that to the public?

Group 1: In our communication, the central bank maintains a balance of conditions. Our main target is balance in the macroeconomy and financial sector. Consequently, we have tightened monetary aspects but loosened the financial system.

By increasing the policy rate by 100 basis points, we would also like to maintain the interest rate differential between rupiah and US dollars, which would help reduce the external issues.

Instructor: Do you expect capital inflows to continue in 2013 or tighter liquidity conditions in the global economy?

Group 1: Given the new data points we got, namely that the US announced its plans to taper QE, there is a definite tightening of financial conditions going forward so we would expect a sharp reversal and even worse conditions moving forward, especially if other central banks in advanced economies follow suit. That is why we chose to increase our policy rate.

Just to add some information, the capital account balance was positive in 2012. Depreciation was mostly caused by the current account deficit, so we were not worried about the inflows.

Group 2

Instructor:

We answered Question 2. I would like to talk a little bit about the drama we had trying to answer this question. It was difficult to come to a conclusion with the answers because our colleague from BSP saw that there was no difference before and after the GFC.

Participant:

I thought it was already a given that monetary policy and financial stability should go together because under the Bangko Sentral ng Pilipinas (BSP), we monitor the banks and undertake monetary policy.

Instructor:

According to her, it is supposed to be the same because monetary policy and microprudential policy are in the same institution. I have explained to her that the situation is different in Indonesia, which she accepts. The question we answered was “how do you compare the linkages between monetary and financial stability in the pre-and post-global financial crisis periods?” The short answer is that it is different and the long answer will be explained by our colleague from Bangko Sentral ng Pilipinas (BSP).

Participant:

Back then, there were fewer linkages and a lack of coordination between supervisors and monetary policymakers. If the crisis happened because of exchange rate factors, tight monetary policy has the potential to stabilize exchange rates and the financial sector. In the event of a banking crisis, however, the opposite occurs, namely that a tight monetary policy stance will reduce the probability of a reversal due to a currency mismatch at domestic banks and the discretionary powers of the central bank in terms of supplying liquidity in a crisis.

During the global financial crisis, Borio and Zhu (2008) put forward the existence of the risk-taking channel, while Altunbas et al. (2009) found evidence that unusually

low interest rates over an extended period cause an increase in the banks' risk-taking behavior. That is what happened before in Indonesia. There was a rise in risk-taking behavior amongst banks. Such risk-taking behavior will eventually drive up demand for new loans and asset prices. The GFC provided a key lesson that the financial sector plays a crucial role in macroeconomic stability because of its behavior that triggers excessive pro-cyclicality, which is not just the result of interactions between the business cycle and financial cycle but also affected by the risk-taking cycle, characterized by over-optimism during economic booms and over-pessimism in times of economic bust.

Before the crisis, there was a lack of coordination among supervisors and policy-makers but post crisis, Bank Indonesia addressed several measures, such as liquidity in the financial system, raising the reserve requirement from 5 to 8%, effective in 2010, and increasing the frequency of auctions from monthly to weekly. This is because there was a need to strengthen the macroprudential regulatory framework. This limited risk-taking behavior among banks.

Conclusion. Dynamics during financial crises have shown that monetary policy needs to be further directed towards anticipating macroeconomic instability risk stemming from the financial system. This implies that healthy macroeconomic management should also consider financial system stability as the foundation to realize a sustainable macroeconomic environment. Quoting Juhro (2014) "*There is no macroeconomic stability without financial stability.*" Without the two policies working together, there would be instability.

Participant:

I would like to share the baseline policy exercise. The conditions are the same as Group 1 so I will not repeat it again here. We will go straight to the scenario. If Bank Indonesia holds the benchmark interest rate at 5.75%, it would increase financial indicators, such as credit from 18.01 to 18.86%, with the stock price index increasing from 4119 to 5025 and bond yield decreasing 5.85–5.45. Notwithstanding, it would not be the correct decision to maintain a constant BI Rate at 5.75% because inflation is so high, which would also increase from 4.3% in 2012 to 6.72%, exceeding the central bank's inflation target of $5.5\% \pm 1\%$. We propose increasing the BI Rate by 25 basis points to 6% per Scenario 1. Inflation would therefore decrease to 6.12%. Nevertheless, there is a trade-off with lower GDP and a wider current account deficit. We tried several scenarios using different monetary instruments, such as foreign exchange intervention, to optimize the inflation rate and GDP growth. Under Scenario 2, we see that inflation will be better than Scenario 1 but there is still a trade-off with GDP growth and the current account deficit. By increasing the intervention, we would lower the financial pressure index. In terms of the no feedback loop and no shock scenario, we propose Scenario 2, using a combination of interest rates and foreign market intervention. Under Scenario 4, we want to show that we can only use foreign intervention so we did not increase the interest rate. This would achieve the inflation target at a rate of 6.49%, which is within the target range. According to this scenario, we have better GDP growth and narrower current account deficit. Combining the instruments is better than using a single instrument.

Participant:

For the baseline exercise 2b: with feedback loop and with a shock, we found that as a small open economy, Indonesia is vulnerable to global/external developments. Immediately after the US announced a potential future scaling back of quantitative easing measures, Indonesia experienced sharp reversals of capital inflows (feedback loop). Compared to conditions without a feedback loop, some indicators deteriorated, including exchange rate depreciation due to capital outflows (selling domestic assets), CPI inflation through imported inflation and, most dangerously, risk perception in the financial markets (financial pressure index and macro risk perception). Therefore, the magnitude of the policy response required would be higher compared to when there was no feedback loop.

As we can see from the table, with no monetary policy, CPI inflation will increase to 8.12%, which is above the central bank's inflation target of $5.5\% \pm 1\%$. In order to maintain the target, therefore, the central bank should increase its policy rate by at least 75 basis points to 6.5%, which is higher than the first baseline (6.0%), but that would reduce GDP growth from 6.03 to 5.15%. Therefore, the central bank needs to implement another policy, namely forex intervention (selling US dollars) to optimise the inflation rate and GDP growth. By only increasing the BI Rate to 6.25%, inflation would again exceed the target at 6.84%. Increasing the BI Rate to 6.75% would lower GDP growth to 4.86%, which is very low compared to the readings in 2011 and 2012 at 6.49% and 6.26% respectively. According to Scenarios 2 and 3, forex intervention by selling US dollars would provide greater flexibility for us to increase the policy rate to 6.25% while maintaining higher GDP growth at 5.19%.

Participant:

Concerning the policy mix, a policy rate of 5.75% in 2013 would push inflation beyond the target corridor and the current account deficit beyond 3% of GDP. We tried various policy mixes. The first option was to raise the policy rate to 6.25% with USD2 billion worth of forex intervention, which would result in on-target but higher inflation and a larger current account deficit. We can see that the financial pressure index 104.75. Another option was to loosen the LTV ratio combined with the same amount of forex intervention. This produced a worse result for inflation and the current account deficit. After the simulation, we increased the policy rate to 6.75% and loosened the reserve requirement from 11.50 to 10.50%. We also adjusted the LTV ratio and the intervention. We found that the optimal solution in 2013 would produce an inflation rate of 6.37% but GDP would still fall below 6% and the current account deficit would be 3.37% of GDP. We also see that the financial pressure index is within the target. We had to choose this solution because our trade-off was that we had to maintain low and stable inflation to ensure financial stability but for GDP growth and the current account deficit we had a strategy to communicate with the government to introduce fiscal stimuli and perhaps restrict consumer imports. The

central bank would simultaneously need to communicate with the public regarding the current conditions and what needs to be done about our future policy path. That would ensure that all stakeholders could accept the policies.

Interaction

Group 3: You recommended applying consumer import restrictions. What kind of consumer goods would you restrict? As we know, Indonesia depends on imported goods, such as raw materials and consumer goods. If we restricted consumer imports, I would be afraid of the spillover effect in the trade sector, which is one of the main contributors to GDP growth in Indonesia.

Group 2: We proposed consumer import restrictions because when we raised the policy rate, the bigger current account deficit with exchange rate appreciation, would lead Indonesia to import more and more goods. Therefore, we would only need to restrict imports of consumer goods, not raw materials and capital goods.

We did not come up with any specific product to restrict but the intention was to reduce the current account deficit induced by a stronger currency.

Participant: You recommend restricting imports but is that within Bank Indonesia's mandate?

Group 2: We would do that in close coordination with the government. We could make a recommendation to the government.

Instructor: As part of your strategy, you recommended implementing fiscal stimuli. I would like a comment from our colleague at the fiscal policy office on how to explain the strategy. Given the conditions at that time, the fiscal deficit was around 2.8%.

Group 2: We consider a deficit of below 3.0% to be manageable and sustainable. According to the regulations, we are not allowed to exceed 3%. Rather than restricting imports of certain goods, previous experience has shown that higher taxes for luxury goods help to reduce imports.

Instructor: One of the weaknesses of our Excel-based simulation models is a lack of fiscal policy explicitly in the model. Actually, there would be a feedback loop from fiscal stimulus. Next year, we will have to include fiscal policy into the model.

Group 3

Participant:

The first test for our group from the conceptual question was No. 3 about the sources of pressure or shocks on the economy that could affect the linkages between monetary and financial stability. Here, we already indicate some internal and external shocks. At that time, in 2013, the Federal Reserve planned to hike its federal funds rate. We were concerned that the FFR hike would trigger capital outflows. To maintain capital in our economic system, the central bank should increase the BI Rate, which would feed through to higher lending rates and potentially higher non-performing loans in the banking sector. That was the first external shock that we indicated at the time.

Participant:

The second external shock that we discussed in our group was a global economic slowdown. Global economic moderation could reduce international commodity prices. Consequently, exports would also decline, thus increasing the current account deficit. Furthermore, this could lead to rupiah depreciation and increase the risk of private sector debt, for example companies in the agricultural and mining sectors.

Participant:

Thank you for coming to our press conference. In terms of the internal shocks, we discussed one potential internal shock that could happen in the Indonesian economy. The economic structure of Indonesia still depends on domestic markets and government spending, especially in every province of Indonesia. Before provincial budgets have been approved, we see muted local economic activity. If budget realisation by the central government and local administrations is slow, it would create a shortage of liquidity in the market. The problems would go to the banks due to lower repayment capacity. If the cost of funds in the banking industry from securing loans from other banks in the money market increases due to higher interest rates, because higher interbank rates pass through to consumer loan rates, there are two possibilities. First, credit risk will be higher for outstanding loans disbursed by the banking industry due to higher lending rates. Second, demand for new loans would decrease due to a higher lending rate. Consequently, businesses may be reluctant to expand after the interest rate hike. This would undermine investment in Indonesia and GDP growth due to a business slowdown. That is why internal shocks could be a problem for the Indonesian economy if government spending decelerates.

Instructor:

To further emphasize what participant mentioned as potential sources of pressure to the Indonesian economy, namely capital outflows, in the bottom chart you can see that the composition of funds flowing in are mostly short-term placements in bonds. If you look at the top chart, you can see that most of those bond holders are foreign nationals. This validates our concern about the potential for a sudden reversal when the FFR increases.

This takes us to baseline exercise 1. We mentioned the possibility of capital outflows. At the same time, we have an issue of high inflation at 6.72% if no policy actions are taken. In this light, under the no feedback loop scenario, it would be better if the BI Rate increased to 6.25% from 5.75%, accompanied by forex intervention totaling USD3 billion. This would maintain inflation within the target range of 6.22% at the cost of slower GDP growth yet still above 5%, solid credit growth and a wider capital account deficit yet still manageable at around 3% of GDP. This would also lead to a healthier financial pressure index. We feel that this would be the best policy choice moving forward under the no feedback loop model.

Participant:

According to baseline exercise 2, we need a larger policy response under the feedback loop scenario to achieve a similar outcome. For this scenario, we think the best move is to only increase the BI Rate to 6.5%. This would maintain inflation within the target range and GDP growth above 5%, which we think is good enough. The current account deficit is slightly larger than 3% of GDP and FDI is also within the range. Therefore, we think this would be the best policy response.

Participant:

In terms of the policy mix, after a long discussion we came to the conclusion that it would be better to increase the BI Rate to 7.25% and conduct forex intervention to the tune of USD5 billion. Of course, this monetary policy would not be enough to maintain the economy, so we also loosened the LTV ratio to 82.5%. Inflation would thus remain on target at 6.44% with GDP growth in excess of 5%. Nevertheless, the current account deficit widened slightly beyond 3%. Furthermore, FDI would remain in a suitable range to sustain investor trust with adequate foreign exchange reserve assets for intervention efforts.

Interaction

Group 4: The source of pressure is correct and the end result is right but the linkages are not correct because whenever there are liquidity shortages, the central bank is always there to prop up the liquidity. Although lower government spending may result in lower investment and lower GDP, it does not occur through the credit market channel.

Group 3: We assume here without any policy intervention from the authorities first.

Participant: You said that rupiah depreciation would lead to the risk of increasing private sector debt. Do you know roughly by how much in US dollars private sector debt would increase? I do not have any idea how many FX loans there are in Indonesia.

- Group 3:* We do not have the data on hand but from recollection it was not as low as people might think it should be, but I do not have the actual data on hand.
- Instructor:* Actually, you can see the figures in the presentation by Nathan of the IMF.
- Participant:* You have explained the channel which external shocks are transmitted through the credit market. What is your view of the exchange rate channel? Is there any transmission? Capital outflows can also affect exchange rate volatility. Could you explain to us your view on that transmission?
- Group 3:* I think capital outflows would result in a shortage of US dollars if demand for US dollars in Indonesia remains high. On the other hand, however, we do not have a stock of US dollars in the event of a capital outflow. It is an issue of supply and demand. When demand remains but supply decreases, the rupiah will depreciate. There are not enough US dollars in the market but we still need US dollars to pay for imports and repay debt. This may lead to rupiah depreciation. That is the mechanism.
- Group 1:* I think the FX reserves are not only to cover intervention measures but also to cover short-term liabilities and import payments as well.
- Instructor:* USD5 billion in forex intervention is actually very bold.
- Group 1:* Is it applicable to raise the LTV ratio to 82.5% rather than a whole number in terms of implementation?
- Group 3:* If you look at the marginal increase, it is 10%, so from 72.5 to 82.5%. With the constraints given to us, where we had to hit a maximum of 6.5% inflation and GDP growth of 6%, which we were unable to achieve, we opted to push for stability rather than growth. In order to do so, one of our policy responses was to loosen the LTV ratio since we had already tightened monetary policy.
- Participant:* This was one of the discussions that made us almost miss lunch. Yes, 82.5% is a weird number but like Doni just explained, as the central bank, our main target is price stability by increasing the BI Rate. To maintain dynamic economic activity, however, we chose a policy mix that incorporated tighter monetary policy with looser macroprudential policy by increasing the LTV ratio. We are pro-stability and pro-growth.
- Group 3:* The main reason we put 82.5% is because the default was 72.5% so we assumed it was possible to use something like that.

Group 4

Participant:

Good afternoon ladies and gentlemen, we are from Group 4 as advisers to the governor. I would like to allow our honorable Governor to clearly communicate Bank Indonesia's policy response to current conditions. Mr. Governor the floor is yours.

Participant:

Before I begin, we have a follow-up question from our governor regarding the conceptual question that I would like to answer. *What are the policy strategies for mitigating the risk of macroeconomic imbalances, internal and external, amidst high global economic uncertainty during periods of capital inflow and outflow?*

In general, we should use the policy mix strategy. We combine monetary policy and macroprudential policy. In addition, we also want to pursue exchange rate intervention to manage the volatility and some agreements with other counterparts, such as bilateral swap agreements and also promoting the use of local currency. There are two episodes, which I would like to discuss separately. First, the period of capital outflow. During this period, I think we should increase the policy rate such that the interest rate differential is sufficient to attract foreign investors. However, higher interest rates will have a negative impact on economic growth, so we will loosen the macroprudential policy measures by increasing the LTV ratio, lowering the reserve requirements and increasing the LDR in order to stimulate the economy. Furthermore, to manage exchange rate volatility, we need to intervene in the domestic exchange rate market using the central bank's reserve assets. I also recommend bilateral currency swap agreements with other central banks in foreign currencies and to promote the use of local currency.

Second, during the period of capital inflow, we recommend the opposite. To limit foreign investors, we should maintain the policy rate. In a situation where economic growth and inflation are low, we could reduce the policy rate, however. To mitigate the negative impact on financial stability, we will tighten the macroprudential measures. Exchange rate appreciation has a negative impact on exports, therefore we would need to coordinate with the fiscal authority to stimulate export growth. In addition, we also need to accumulate reserve assets as a buffer for future adverse episodes.

Baseline Scenario: No Feedback Loop—No Shocks (2)

It is the correct decision for Bank Indonesia to maintain the BI Rate constant at 5.75% *if* we also tighten macroprudential measures. On one hand, we want to contain the capital inflow which could have a negative impact on economic sustainability yet, on the other hand, we want to stimulate economic growth.

Since our mandate is to achieve the inflation target of $5.5\% \pm 1\%$, we assumed that an interest rate of 5.75% would be sufficient to control inflation. Therefore, we will not propose a new policy recommendation. The effectiveness of interest rate policy is constrained by the persistence of capital inflows due to potential exchange rate appreciation that could widen the current account deficit (trade channel). Capital inflow persistence will also increase credit growth that could overheat the economy and create inflationary pressures (financial channel). Consequently, we should consider other intervention measures to deal with the exchange rate appreciation and also macroprudential policy to deal with the effect of capital inflows to the financial sector.

Baseline Exercise 1: No Feedback Loop—No Shocks (3)

Next, we were unable to achieve the desired targets only using interest rate policy and intervention. Instead, a policy mix approach is required. In order to have sustainable economic growth, we have to maintain monetary and financial stability. Based on the baseline exercise, if we increased the policy rate it would endanger financial stability by amplifying capital inflow. Therefore, macroprudential measures should be used to manage financial stability.

Baseline Exercise 2: Feedback Loop—Shocks (1)

An increase in the global interest rate would lower global economic growth and also reduce the international commodity price index. This would impact Indonesia's national economy through the export sector. In this case, a higher global interest rate shock would contribute to capital outflows from emerging markets (financial channel). It would also undermine global growth and compress global demand, leading to lower international commodity prices. Decreasing commodity prices would have a huge impact on the Indonesian economy because most Indonesian exports are raw materials/commodities, including coal, crude palm oil (CPO), rubber, nickel and so on.

It would not be enough to maintain a constant policy rate at 5.75% because policy intervention itself is not enough to contain the capital outflows. We propose increasing the interest rate to limit the capital outflows that could harm the rupiah and reducing the inflation rate to achieve the desired target.

Policy rate effectiveness is constrained by potential capital outflows and a potential decline in commodity prices because capital outflows can trigger exchange rate depreciation and, thus, inflationary pressures. Furthermore, lower commodity prices would contribute to flatter economic growth.

Policy Mix Exercise—No Feedback Loop (Near Term)

We can effectively accomplish the desired targets through a mix of monetary and macroprudential policies. We suggest increasing the policy rate and loosening macroprudential policy through the following measures:

(i) increasing the interest rate by 50 bps; (ii) lowering the reserve requirement by 50 bps; and (iii) setting the LTV ratio to 85%.

Based on the model, those measures would achieve the following outcomes:

- 6.15% inflation (within the target);
- 5.86% economic growth (slightly below target but okay);
- 3.2% CAD (slightly above target); and
- FPI of 110 (within the target).

Policy Mix Exercise—Feedback Loop (Long Term)

We can accomplish some of the desired targets through a mix of monetary and macroprudential policies. We suggest increasing the policy rate and loosening macroprudential policy through the following measures:

(i) increasing the interest rate by 100 bps; (ii) lowering the reserve requirement by 50 bps; and (iii) setting the LTV ratio to 85%.

Based on the model, those measures would achieve the following outcomes:

- 6.49% inflation (within the target);
- 5.2% economic growth (slightly below target but okay);
- 3.29% CAD (slightly higher); and
- FPI of 107 (within the target).

Policy Mix Exercise

There is a trade-off in achieving the policy objectives. On one hand, we want to promote sustainable growth but, on the other hand, we want to achieve price stability (inflation target) and financial stability. We need to coordinate with the fiscal authority to stimulate export growth and the Indonesian Financial Services Authority (OJK) to ensure the compliance of related policies. We also need to clearly communicate the central bank's policy stance to the public to align public expectations with the central bank's policies.

Interaction

Instructor: You are proposing a hike in the interest rate so much so that the interest rate differential becomes so high that it will attract foreign investors. This means that you are targeting your interest rate for capital flows but your core mandate is price stability. First, you must secure price stability, while simultaneously considering growth. Just loosening the macroprudential policy would not be able to boost credit or the economy because the cost of credit will go up once you have increased the policy rate by so much. These are still normal conditions with no shocks. You are assuming that macroprudential policy instruments have already been applied and you want to loosen them. That is my observation.

Participant: You are absolutely right. The main target is to keep inflation within the target range. We achieved that. Otherwise, there are some conditions next to the main target given by the board of governors, such as a stable current account deficit at 3% of GDP. So far, nobody has achieved that. High GDP growth is another target. As a developing economy, Indonesia is developing very well from my point of view but growth exceeding 5% would be very welcome. That is why we set our targets like we did, with all the goals in mind.

Participant: You have tightened monetary policy by increasing the interest rate and reserve requirements. On the other hand, however, you have loosened macroprudential policy by increasing the LTV ratio. Such policy measures, in my view, would encourage the banks to switch focus from SMEs towards the property sector because the property sector is becoming more attractive in terms of lending activity compared with the other sectors. This could make the risks on the macroprudential side higher than before. What is your opinion about this?

Instructor: The perspective of the bank to choose the specific sector in this case, meaning housing loans, depends on the risk appetite of the banks. There is a slightly different procedure if you want to disburse loans to specific sectors, especially housing loans and for SMEs. Special expertise is required to disburse loans to those sectors. Therefore, we tried to loosen macroprudential policy here through an LTV ratio of 85% in order to provide a signal to the public that we are not only doing monetary policy, but we are also concerned about macroprudential policy, which can have a positive impact on economic growth.

- Group 4:* If we set the LTV ratio to 85%, it would perhaps encourage the banks to give more loans to construction because it moves more quickly than other sectors. We are also observing economic conditions, consumer conditions and financial conditions when applying the LTV ratio. In the near term, loans disbursed to the construction sector would be relatively stable.
- Participant:* In summary, the best way for us is to increase the interest rate by 50 bps to attract capital, while decreasing the reserve requirement in order for the banks to provide credit to the real economy. The LTV ratio will increase demand for credit. The reason we chose these three scenarios was basically to meet our targets. That was our main objective. If this was transferred more to the property side, we could revise our decision.

Group 5

Participant:

We had an intense discussion and we learned a lot. Determining the most effective policy mix is a difficult decision due to the numerous trade-offs. If we wanted to tackle inflation, for example, it would cause an economic slowdown or higher unemployment. This is a challenge.

Participant:

What are the implications of monetary and financial system stability linkages on the central bank mandate?

The central bank's conflict (trade-off) is between targeting monetary stability and financial system stability itself. Strengthening the monetary and financial system stability framework requires appropriate monetary and macroprudential policy integration. In order to strengthen the framework of monetary and financial system stability, the central bank must be more flexible and creative in responding to emerging uncertainties within the economy and to think beyond public perception.

We know that there are monetary policy tools at Bank Indonesia, for example reserve requirements. On the other side, there is also financial system stability, for which Bank Indonesia mainly applies loan-to-value ratios or reserve requirements and sometimes they use buffers. This should be based on soundness and communication, as we have studied over the past few days. For the central bank, we know that during the period in question there was high inflation and capital inflows. As a team, we decided that the exchange rate should be more flexible coupled with dual intervention between the national currency and US dollar. Nevertheless, in this case the LTV and RR-linked financing-to-deposit ratio (FDR) are more appropriate.

Baseline Exercise 1: No Feedback Loop—No Shocks

During the period from 2010 to 2012, GDP was declining. In terms of inflation, the rate decreases at the beginning of the period before experiencing a slight increase by around 13%. The current account surplus is declining before experiencing a deficit due to a decline in exports and imports and sliding international commodity prices. Broad money (M2) and Net Foreign Assets are increasing. There is an increase in credit growth, lower bond yields and stock prices are rising. In addition, the Financial Pressure Index (FPI) is also in decline. The global economy is moderating.

Assuming there is no change in the interest rate (5.75%), the potential impact would be rising inflation, reaching 6.72% (exceeding the target). On the other hand, GDP would also decrease to 6.03%. We therefore propose to take no action, presuming there are no shocks.

Proposed Policy Actions

1. Option 1: Increase the policy rate to 6.25% (BI Rate + FX intervention):
 - CPI index will increase moderately to 6.22% (within target);
 - GDP will decline to 5.78% from 6.26% in 2012;
 - Current account deficit will increase to 3.12% from 2.78% in 2012.
2. Option 2: Increase the policy rate to 6% (BI Rate + FX intervention):
 - CPI index will increase moderately to 6.8% (not within the target);
 - GDP will decline to 6.06% from 6.26% in 2012;
 - Current account deficit will increase to 3.06% from 2.78% in 2012.

Conclusion. We propose Option 1 because we want to focus primarily on price stability. Maintaining inflation within the target corridor, however, would have a moderate impact on growth and the current account deficit. This option is the least costly because any increase in the policy rate (BI Rate + FX intervention) beyond 6.25% would result in high inflation, breaching the core mandate.

Question 4: In order to control the excess liquidity in the financial market due to capital inflows, we propose that BI adopts dual intervention policy through FX intervention and selling bonds to absorb the excess liquidity. Assuming high credit growth, we propose tightening the LTV ratio and countercyclical provisioning.

Proposed Policy Actions:

- Policy rule
- Reserve requirements
- Loan to value
- FX intervention.

Baseline Exercise 2—With Feedback Loop and Shocks

We chose the worst-case scenario. Given the global interest rate increase of 0.5% and global economic growth decline of 0.5%, the potential impact will be as follows:

- GDP rate: 5.42% (initially 5.47%)
- CPI: 7.62% (initially 7.34%)
- CAD: −3.07% (initially −3.13%)
- FPI: 109 points (initially 107.67 points).

In order to tackle the external shocks, we would increase the policy rate 50 bps to 6.75% (initially 6.25% without shocks). As a result, CPI would decrease to 6.22%, GDP would increase to 5.78%, the current account deficit would be −3.12% and the FPI would decrease to a level of 105.96.

The team also thought about the optimal policy mix to ensure stability as our main goal. We just increased the policy rate due to inflation as our main target. We maintained the reserve requirements because we had no conflict between the two systems. We can see that there is financial stability and monetary policy are going along the same path. Therefore, we just increased the LTV ratio from 72.5 to 87%. This is our fixed policy, which we thought was the best choice. From the table, we can see that GDP is 5.21% and inflation is less than 6.5% but we were unable to reduce the current account deficit to less than 3%. Our most important recommendation at this level is to have good internal and external communication. In addition, fiscal policy would also have to support this path. This policy mix yields better outcomes in terms of the least cost.

Interaction

Instructor: Thank you for your presentation. I would like to ask about the impact of these macroprudential tools. Which macroprudential tool do you think is most effective in terms of GDP growth: LTV ratio or reserve requirement ratio?

RBI: LTV.

Instructor: That also affects CPI inflation. What is the combination of macroprudential variables? Do you have any opinion?

Participant: The main idea here is that we tried to find the best policy mix solution in this area. We have maintained GDP growth. The largest impact was on CPI and GDP, more than the current account deficit. It was harder to adjust to our last target (CAD).

Participant: From the slide, I see you have an optimal solution because CPI inflation is within target and GDP is not too low. GDP in Indonesia is lower than inflation so how would you communicate to the public what has happened and what to do next? I am afraid that GDP is lower than inflation in 2013 in this case.

Participant: At this stage, we are not moving to the expansionary policy, we have maintained a contractionary policy. The policy is trying to constrict rather than expand because our main target is inflation. We do not want to make our inflation higher, which would affect price stability in the country. The goal to which the committee has agreed is price stability, so we tried to make contractionary policies. This may restrain GDP growth but inflation is the primary target. The policy mix always yields to better outcomes in terms of the least cost.

RBI: Just to add that securing price stability is a necessary condition for securing sustainable growth in the medium term. Therefore, price stability should always come first.

Participant: Addressing the last question about lower GDP than CPI inflation, the main objective of the central bank is to maintain price stability. Therefore, although GDP is lower, I do not think this is a problem because the main objective is price stability. The mandate of Bank Indonesia is price stability, but the central bank also strives to maintain the value of the rupiah and contribute to economic growth. For the central bank, in addition to maintaining price stability, it must also think about economic growth.

Participant: Regarding my own point of view, as far as I am concerned during the global financial crisis era, Indonesia was one of the least unstable countries in the region compared with other ASEAN nations. Indonesia performed well in terms of GDP despite moderation compared to many other countries, excluding India and China. Despite decreasing GDP growth slightly, during that period if we tackle the inflation rate, it should be okay. In my point of view, 5% GDP growth is quite reasonable during that period.

Instructor: These are my kind of central bankers. They are hawkish. Policy mix yields in better outcomes in terms of least costs.

RBI: An adviser from the Bank of England visited RBI and, in his talk, he was saying that his job was not to advise his boss but to defend what he is doing. Sultan is our governor and we are here just to defend him.

Group 6

Participant:

What we have learned from the workshop is that policy implementation is very complicated and debatable. To achieve the goal, we must stick to the principles and policymaking mandate. We had the same questions as Group 1 but we will answer in a different way.

How Close Are Monetary Stability and Financial Stability?

Regarding the relationship between monetary stability and financial stability, there are two hypotheses that mention the relationship between monetary stability and financial stability:

- Monetary Stability $\Rightarrow$ Price Stability
- Financial Stability $\Rightarrow$ Sound banking system, stable asset prices and efficient interest-rate transmission.

According to the conventional definition for the first hypothesis, monetary stability supports financial stability. There is no trade-off between monetary stability and financial stability. According to the proponents, monetary stability is a sufficient condition for financial stability. Monetary stability is affected by (1) economic growth; and (2) employment, which both determine inflation according to the Phillips curve rule. Then, inflation affects asset prices and deteriorates the banking system's health, so it affects financial stability.

According to the second 'New Environment' hypothesis, there is a trade-off between monetary stability and financial stability through the central bank's actions, which could determine investor behavior. Successful inflation control by the central bank leads to overly optimistic perceptions. Therefore, asset and credit market activity exceeds potential (overheating). In the short-term, the empirical evidence shows that disinflation leads to lower nominal interest rates and moral hazard, high-risk lending, low inflation and asset price bubbles.

Participant:

To keep our mandate, namely low inflation, we had to increase the policy rate by 25 bps from 5.75 to 6.00%. The higher rate would squeeze broad money and lower GDP growth to 5.74%. There is a trade-off. As an impact of lower GDP growth, the current account deficit would increase slightly to 3.14% of GDP. Furthermore, the FPI would decrease to a level of 107.5. Consequently, CPI inflation would decrease to 6.12%, which is within the target.

Baseline Policy with No Feedback Loop and No Shocks

Participant:

I would like to offer another alternative, not only raising the BI Rate but also using FX intervention. The second alternative is to raise the BI Rate by 50 basis points to 6.25%, accompanied by FX intervention to the tune of USD3000 million. The result is quite similar to the first alternative. GDP growth would increase slightly to 5.78% but CPI inflation would also increase to 6.22%. Both indicators are still within their respective targets. The current account deficit would increase to 3.12% of GDP, which is slightly lower than the first alternative. Those are the two alternatives we would like to propose for the baseline policy with no shocks and no feedback loop.

Baseline Policy with Feedback Loop and Shocks

Participant:

We know that after the announcement of the US Federal Reserve Chairman, Ben Bernanke, it could lead to an increase in the global interest rate. From the impact of global interest rates and global growth shocks, world economic growth is expected to decline from 3 to 2.5% and the LIBOR rate increase from 0.3 to 0.8%. Under these conditions, a policy was made to increase the BI Rate to 6.5%. With this policy, inflation would decline to 6.49% from 8.41% previously, with GDP growth at 5.03%, a current account deficit of 3.22% and the FPI level of 104.28.

Participant:

Continuing to the second alternative with the same scenario as Lukman, to maintain inflation at a maximum of 6.5%, we would increase the BI Rate to 6.75% with FX intervention totaling USD2000 million. Inflation would remain under control, even lower than the first alternative, at 6.42%. There would be a trade-off with lower GDP growth from 5.97 to 5.05% and a large current account deficit from 3.03 to 3.23%. We think that this is the best policy response.

Participant:

I will talk about our policy mix recommendation with the feedback loop. We propose a combination of the following instruments, namely to tighten the policy rate and ease the macroprudential policy tools as follows:

- BI Rate hike: +100 bps
- RR Ratio: +150 bps
- LTV Ratio: +750 bps
- No FX intervention.

That combination would lead to GDP growth of 5.3%, inflation of 6.65%, a current account deficit of 3.2% and an FPI of 108.53. We are still a long way from the GDP growth target but we were able to achieve the inflation target. Furthermore, the financial pressure index is also within the target range. When we used only the short-term interest rate, we were not able to achieve multiple targets. Multiple targets require multiple instruments. Therefore, we eased the macroprudential tools. We need to keep in mind that there is a trade-off between using different instruments. Macroprudential instruments also influence inflation, so when deciding upon an optimal policy mix, the policy trade-offs must be considered. We did not offer any FX intervention in order to be consistent with monetary policy tightening. Under global financial tightening, it would not be a good recommendation to sell reserve assets. To decrease the current account deficit, it would be better to depreciate the domestic currency but to do so, the central bank would need to buy FX dollars. Nevertheless, this would also confuse the monetary policy communication because while you are tightening your domestic currency it is hard to buy FX dollars to depreciate the currency. That is why we did not offer any foreign currency intervention in our policy mix.

Interaction

- Group 1:* Thank you for the nice presentation. When you apply the policy mix recommendation, what is the reasoning behind letting inflation exceed the target range? What is the reason you push GDP growth?
- Instructor:* We added more weight to GDP growth in order to increase growth but inflation is still very close to the target corridor. If we did not ease the macroprudential parts, GDP growth would be very low. There was a trade-off so we decrease the weight of the price stability objective. We push GDP growth because there would be capital outflows. At that time, there were tighter global liquidity conditions due to the Taper Tantrum, which would also undermine GDP growth. Credit growth would be negatively affected by the capital inflows so for that reason, to support credit growth and GDP growth, we implemented these measures.
- Group 2:* You tighten the policy rate to 6.75% but according to this scenario you buy dollars and sell rupiah to the market. I think such measures would make the BI Rate not run effectively because it will decrease your call to reduce inflation. Could you give an explanation? The policies contradict one another.

- Participant:* We have already run the simulations and when we manipulate the BI Rate and the FX intervention, there is a trade-off between GDP growth, the CAD and inflation. Therefore, I feel that this is the optimal response when we get the maximum target at 6.42%. If we increase the BI Rate beyond 6.75% and reduce FX intervention, it would breach the maximum target of 6.5%.
- Participant:* We had two alternatives. First, to increase the BI Rate to 6.75% without intervention but if the situation deteriorated, we wanted to raise again the BI Rate to 6.75% with FX intervention. This is a solution to solve the problem of a higher global interest rate and declining global growth.
- Instructor:* I am curious why you chose not to intervene.
- Participant:* There are two ways to intervene, namely to buy or sell US dollars. If you buy dollars, your currency will depreciate and negatively affect price stability (inflation) through pass through. If you sell dollars, it would decrease foreign exchange reserves and under tighter global financial conditions it would also be negative for your position. For those reasons, we did not offer any FX intervention.

Instructor:

We have finally reached the conclusion of our four-day international workshop. From the presentations, we are quite happy because the message has been well delivered that policies involve trade-offs. Juggling these trade-offs is the day-to-day business of central banks. I hope you have gained knowledge and insights from this four-day workshop but most importantly, you have gained friends from all over the world. There is a Persian saying '1000 friends are not enough; one enemy is too many'. We all need more friends. For our colleagues from other domestic institutions, including the Fiscal Policy Office, MOF and Deposit Insurance Corporation (LPS), thank you very much for your participation. Please tell your colleagues good stories about this program and hopefully next year we can invite more of your colleagues. To our colleagues from other central banks, I would like to express sincere appreciation from Bank Indonesia for coming all the way from your respective countries to Jakarta.

On behalf of Bank Indonesia, thank you.

References

- Altunbas, Y., Gambacorta, L. & Marques-Ibanez, D., 2009. *An Empirical Assessment of the Risk Taking Channel*. Basel, BIS-ECB.
- Borio, C. & Zhu, H., 2008. Capital Regulation, Risk Taking, and Monetary Policy: A Missing Link in the Transmission Mechanism. *BIS Working Paper*, Volume 268.
- Juhro, S. M., 2014. The Linkages Between Monetary and Financial Stability: Policy Perspectives and Case Study. *BI Occasional Paper*.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits any noncommercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if you modified the licensed material. You do not have permission under this license to share adapted material derived from this chapter or parts of it.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.