

1 | *The Goals of Economic and Monetary Policy*

Economic policy refers to the actions of the state in defining its objectives and using appropriate instruments to achieve them. The objectives of government in this regard are high long-run economic growth, equitable distribution of income and wealth, and stable prices and output. Macroeconomic policies, represented by monetary and fiscal policies, are just those intended to stabilise prices and output. This chapter begins by examining historically how these policy objectives have been addressed by the Korean government and, against this backdrop, looks at the goals of macroeconomic policy, especially monetary policy, in Korea.

1.1 The Evolving Goals of Economic Policy in the Korean Economy

As Figure 1.1 shows, economic policy in general pursues three objectives: (1) high long-term economic growth, (2) equitable distribution of income and wealth, and (3) stable prices and output. They are also the primary concerns listed in Adam Smith's *The Wealth of Nations*, Karl Marx's *Capital*, and John Maynard Keynes' *General Theory*, which John Kenneth Galbraith regarded as the three most important books in the history of economics (Galbraith, 1991: p. 227).

Since the launch of industrialisation in 1960, the Korean government has undergone three distinct phases with different priorities on these objectives. The first phase was the period from 1960 to 1979, under the military government of President Park Chung-Hee, during which the government's primary economic objective was to achieve higher economic growth. The second phase was the period from 1980 to 1997, during which the government's policy priority shifted to the objective of economic stabilisation. The third phase, from 1998 to the present day, began when Korea was hit by the 1997 Asian currency crisis. During this phase, the redistribution of income and wealth has

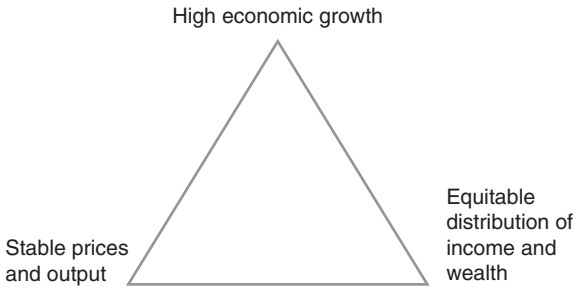


Figure 1.1 The three objectives of economic policy

started to gain importance over other objectives. These three phases are examined in the following three sections.

1.1.1 Growth Period 1960–1979

In order to attain the objective of higher economic growth, the Korean government has consistently intervened in the economy over the last sixty years. The government's actions covered not only trade, industry, competition, and technical policies but also wide-ranging institutional reforms in the quest for efficient resource allocation and in order to cope with market failure. All these actions on the part of the government, which could be described as structural policy today, affected the supply side of the economy, increased its productivity, and ensured its long-term sustainable growth.

Government intervention was particularly notable during the period from 1961 to 1979. Prioritising the enhancement of the long-term economic growth rate over all other goals, the government put two important policies in place. First, the Korean government adopted trade liberalisation policies. Adam Smith had stated, more than 200 years before, that international trade would increase the long-term growth rate of the economy by expanding markets and deepening the division of labour (Smith, 1776). Notwithstanding this, Korea had, for a long time, been obsessed by the then dominant ideology of 'the self-reliant economy', which led to the protection of the domestic economy against the intrusion of foreign economies, thereby opposing and rejecting the liberalisation of trade. The government of the day broke with this ideology and substituted the prevailing 'domestic market first

principle' with the 'export-first principle'. Against this backdrop, the government joined the GATT in 1967, which resulted in Korea benefiting enormously from the MFN clause, and the tariff concessions from all GATT member countries. Trade liberalisation was a huge success, as Korea saw its export share increase from 7 per cent of GDP in 1965 to 28 per cent in 1980. Exports have since become the leading engine of economic growth in the country. Trade liberalisation led to financial liberalisation and the entry of Korea into the OECD in 1996. Furthermore, since the 2000s, these liberalisation policies have led Korea to conclude numerous bilateral and multilateral FTAs, including the Korea–EU and the Korea–US FTAs. This has helped Korea to mitigate the impact of the 2008 global financial crisis, as it enabled its exports to continue to grow. As Figure 1.2 shows, exports reached around 45 per cent of GDP in 2010.

Secondly, along with trade liberalisation, the government pushed for the rapid industrialisation of the country, in order to transform the country from a very poor agricultural country suffering from extreme poverty into a modern industrial state. Notably, the government aggressively drove an industrial policy which targeted the HCI. Figure 1.2 shows that the share of fixed investment as a percentage of GDP increased from a mere 15 per cent in 1965 to 32 per cent in 1980, peaking at 37 per cent in 1995. Although the exact costs and benefits of

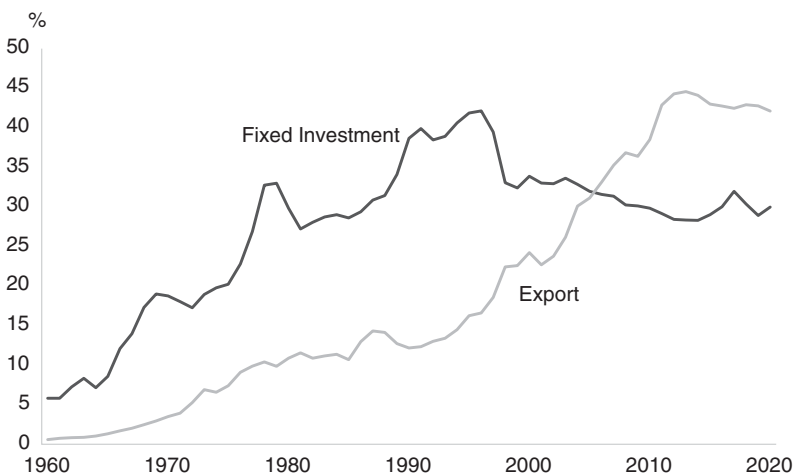


Figure 1.2 The share of exports and investments

Source: ECOS, BoK.

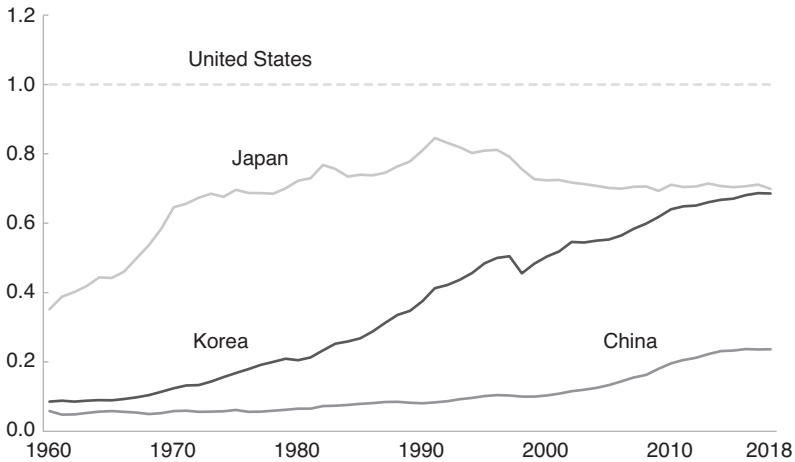


Figure 1.3 Growth in per capita GDP (PPP base and US per capita income = 1)
Source: Madison Project database 2020.

this industrial policy have not been clearly assessed, the policy has generally been considered to have been successful in transforming Korea into an industrial power. As a result, the Korean economy recorded spectacular long-term economic growth throughout this period. After the eruption of the Asian currency crisis in 1997, however, the massive financial and corporate sector restructuring demanded by the IMF made such industrial policy a legacy of the past. About half of the thirty largest Korean business groups went bankrupt or entered restructuring programmes, bringing about a substantial drop in fixed investment. Currently, the share of fixed investment is around 30 per cent of GDP. Nonetheless, the Korean economy continued to grow rapidly following the 1997 Asian currency crisis and has succeeded in catching up with the advanced economies, in particular, Japan. The current per capita income of Korea is around 70 per cent of the corresponding US income (see Figure 1.3).

1.1.2 *Stabilisation Period 1980–1997*

Unlike growth policy that is a supply-side policy intended to increase the long-term growth rate of the economy, stabilisation policy is a demand management policy through which it is intended to reduce economic fluctuations. All government actions which consist of

keeping the inflation rate low and stable, as well as the short-term fluctuations in output and employment small, are elements of macro-economic stabilisation policy (Taylor, 1995). Furthermore, policies to ensure financial stability and to prevent financial crises can be included in this category.

In Korea, as in other countries, the importance of economic stabilisation was highlighted by the emergence of high inflation during the 1970s, when Korea was hit by two oil price shocks. Nonetheless, stabilisation was not a priority under the government of President Park, who did not want to sacrifice growth in favour of economic stabilisation. As a result, Korea suffered continuing budget deficits, high inflation, and increasing current account deficits. The main reasons for this are as follows:

First, an increase in government spending was required to maintain political unity and social cohesion. Against this backdrop, the Korean government subsidised farmers' incomes by setting a minimum price for rice, the main staple in Korea. Given the meagre budgetary provisions for this task, the budget deficit relating to the purchase and management of rice was largely financed by the Bank of Korea (BoK). The money supply created by monetary financing soared, accounting for 37 per cent of the total increase in money supply during the period 1976–1978.

Second, financial markets were under strong pressure to serve the policy drive for the HCIs, and to provide low interest credit (policy loans) to the targeted industries and companies. The share of policy loans rose to approximately 50 per cent of total commercial bank loans by the end of the 1970s. Thus, monetary policy worked as a simple tool for providing what was called 'growth money'. Clearly, the BoK had no independent competence. The decision-making power in respect of monetary policy was in the hands of the minister of finance. Furthermore, the stabilisation of prices was not handled by the BoK but depended on direct price controls administered by the Economic Planning Board, which subsequently became the Ministry of Economy and Finance through its merger with the Ministry of Finance in 1994.

Third, the balance of payments deteriorated because the excessive investment realised in the corporate sector, particularly in HCIs, outweighed the aggregate savings of Korean households. The rise

in the investment–savings gap and the resulting current account deficit had to be financed by foreign savings. Foreign debt soared, reaching 48 per cent of GDP in 1979, which drove the Korean economy to the edge of bankruptcy (Nam, 1984).

As a result, the Korean government launched the first important stabilisation policy in 1979, titled ‘Comprehensive Economic Stabilisation Programme’ (CESP), although its full implementation had to be postponed until a change in government leadership had taken place in 1980. It marked a paradigm shift in economic policies because it challenged the then dominant economic framework of the Korean government, which was based upon the drive for the HCIs and the government-led economic development strategy. Furthermore, unlike an ordinary stabilisation programme, consisting of stabilising inflation by implementing fiscal austerity and tight monetary policy, the CESP included much broader objectives, such as making the Korean economy freer and more market friendly through the promotion of market mechanisms, and more open through the enhancement of competition (Cho and Kang, 2013). Inflation dropped substantially, but growth did not, which showed that these two objectives could be compatible. Since the implementation of the CESP, the inflation rate has, to a substantial degree, been contained. Figure 1.4 summarises the performance of the CESP.

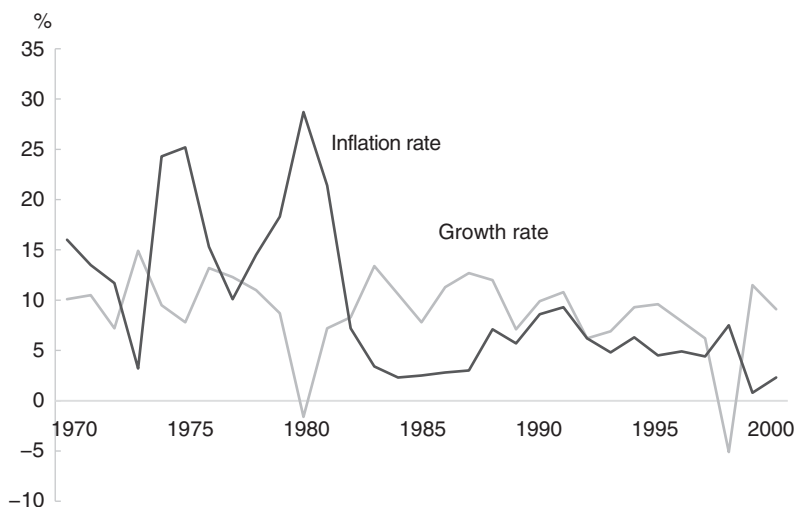


Figure 1.4 Growth and inflation

Source: ECOS, BoK.

1.1.3 *The Redistribution Period from 1998 to the Present Day*

Redistribution policies for the equitable allocation of income and wealth are without doubt some of the oldest economic policies carried out by any government. In Korea, the equitable distribution of income and wealth had been a crucial national objective since the establishment of the government in 1948 because Korea (South) had to compete with Communist North Korea regarding the superiority of their respective political and economic systems. To this end, government intervention for the attainment of the objective of income and wealth redistribution is clearly laid down in the Korean Constitution. In particular, the first Korean Constitution established in 1948 prescribed a 'mixed economy',¹ specifying income equity as a priority goal over other economic objectives. Praised as an 'East Asian miracle' by the World Bank (1993), the Korean economy had succeeded in combining high and rapid economic growth with an improvement in the distribution of income and the emergence of a middle class. Thus, the Korean government had little reason to emphasise the objective of equitable distribution of income and wealth. The continuation of economic growth was enough.

The currency crisis that erupted in 1997 was a landmark event for the Korean economy because the equitable distribution of income started to deteriorate for the first time since its take-off in 1960. Korean companies had been notorious for their high-gearing ratios, reflecting strong fixed investment demands relative to their international competitors. In particular, big Korean companies, known as '*Chaebols*', were highly criticised for over-investment and often relentless investment, as these investments were regarded as having triggered the currency crisis in Korea in 1997. The occurrence of the crisis changed this behaviour, leading to a massive restructuring of Korean companies and a huge reduction in their fixed investments, which was accompanied by the large-scale shedding of employment and a severe weakening of job-creation capacity. In particular, the massive restructuring of the corporate and financial sectors that ensued in the aftermath of the currency crisis allowed easy lay-offs in Korea, which led to a huge loss of employment and jobs. This drop in fixed investment was the principal cause of the deterioration

¹ The advent of communism in the Soviet Union, along with its central planning features, attracted the interest of many intellectuals all over the world, leading many countries to move towards a 'mixed economy' (Tanzi, 1997). Korea was no exception.

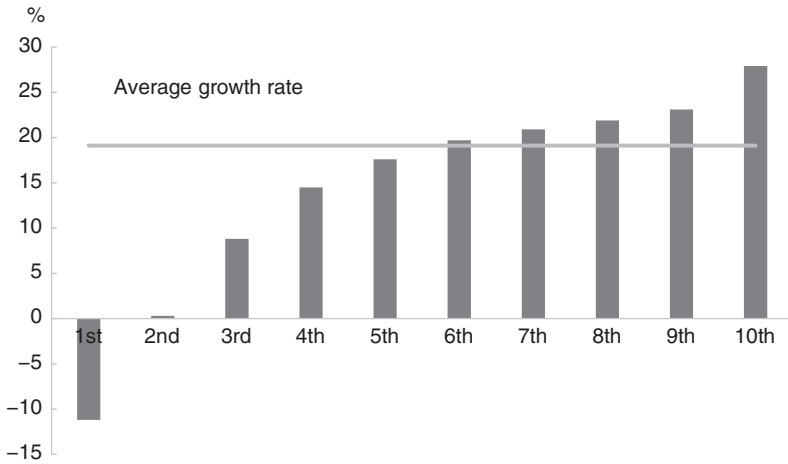


Figure 1.5 Growth rates in real household income by income brackets during the period 1997–2016

Source: Statistic of Korea.

in income distribution in Korea. The consequence of this was not just the increase in the inequality of income distribution, but also the increasing polarisation of Korean society. For an urban household unit comprising more than two people, for example, the first bracket (the bottom 10 per cent of the income bracket) saw its income in 2016 decrease by 11 per cent compared to 1997, while the tenth bracket (the top 10 per cent of the income bracket) increased its income by 27 per cent (see Figure 1.5).

As a consequence, in setting its policy priorities, the Korean government had to take the increasing inequality in income distribution into consideration, by strengthening the social safety net and expanding its expenditure on social protection and security. Against this backdrop, the current government has launched a so-called income-led growth policy, which has led to a spectacular rise in both the minimum wage and social spending, a rapid reduction in working hours, and the strengthening of job protection.

It is, however, notable that this policy has created a trade-off with the objective of economic growth and stabilisation. The ‘income-led growth’ policy pushed for by the current Korean government, contrary to its supposed complementarity with economic growth and the redistribution of income, has led to a significant decline in fixed investment, thereby damaging the growth potential of the Korean economy.

Furthermore, as the policy has not been managed properly, it has hurt macroeconomic stability.

1.2 Tools of Macroeconomic Stabilisation

Macroeconomic policy is a stabilisation policy intended to manage aggregate demand and thereby to react counter-cyclically to shocks that can affect output, employment, or prices. Monetary and fiscal policies are the two pillars of macroeconomic policy. As discussed earlier, a fully fledged macroeconomic policy was made possible in Korea only after the Comprehensive Economic Stabilisation Programme in 1980.

1.2.1 Fiscal Policy

Fiscal policy stems from the government's fiscal management, through which it collects taxes and makes all the necessary expenditures. But it was only after the establishment of the modern nation state that fiscal policy could be established as an instrument for counter-cyclical stabilisation policies.

In Korea, however, fiscal policy was rarely used for the goal of counter-cyclical stabilisation (see Box 1.1). The Korean government has prioritised fiscal consolidation and sound fiscal principles ever since it implemented fiscal reforms in the early 1980s, which helped to transform a Korean economy with chronic fiscal deficits into an economy with fiscal surpluses. Most fiscal expenditure was just for the long-term economic and development projects, while the fiscal deficit was always regarded as being harmful to the long-term competitiveness of the Korean economy.² As a result, fiscal policy was not flexible enough to address short-term economic fluctuations. Counter-cyclical fiscal policy, however, gained prominence in the aftermath of the 1997 currency crisis. Given its weak social safety net, the Korean government had to increase its social expenditure in order to mitigate the impact of the recession by supporting aggregate consumption. Since then, the Korean government has used fiscal policy more counter-cyclically. Fiscal balance went into deficit in the early 2000s and 2008 (see Figure 1.6).

² Korean government officials were more Classical economists than Keynesian in this respect.

Box 1.1 Co-ordination of Fiscal and Monetary Policies in Korea

Has the Korean government's fiscal policy been sufficiently counter-cyclical? Since 2013, the annual growth rate of the Korean economy has been moving around 3 per cent, which was clearly unsatisfactory to the Korean government, because it saw growth rates of more than 4 per cent as normal. Raising concerns about a possible recession, and with public opinion in its favour, the Korean government continued to put pressure on the BoK, which was responsible for monetary policy, to respond by adopting expansionary monetary policies in tandem with the government with its expansionary fiscal policies. But was the government's fiscal policy sufficiently expansionary over this period?

The government, which tends to put more emphasis on stimulating the economy than the BoK, has argued that its fiscal policy stance was always expansionary. But the evidence suggests otherwise.

In order to assess correctly whether the fiscal policy was expansionary or not, first of all, it is important to look at the receipts side and the expenditure side of the national budget. As shown in Figure B1.1, government revenue has begun to increase sharply above expenditure since 2014. Fiscal revenue is in excess of fiscal spending, indicating that the fiscal stance of the Korean government has been contractionary, rather than expansionary, with the resulting increase in fiscal surpluses.

Against the backdrop of declining economic growth, income taxes, in particular, have surged. The Korean government attempted to boost consumption by increasing household income, which, however, to the contrary, ended up constraining household consumption, due to high income tax rate. Figure B1.1 shows that the share of income tax relative to GDP increased from slightly higher than 3 per cent in 2013 to nearly 4.5 per cent in 2018.

Second, a supplementary budget has been drawn up annually since 2015. However, the supplementary budget, which the government puts forward to the Korean National Assembly as the basis for its expansionary policy programme, has broken with its past norms. In the past, the supplementary budget tended to be financed by additional borrowing, as tax revenue was insufficient, most frequently due to recession. Thus, historically, the

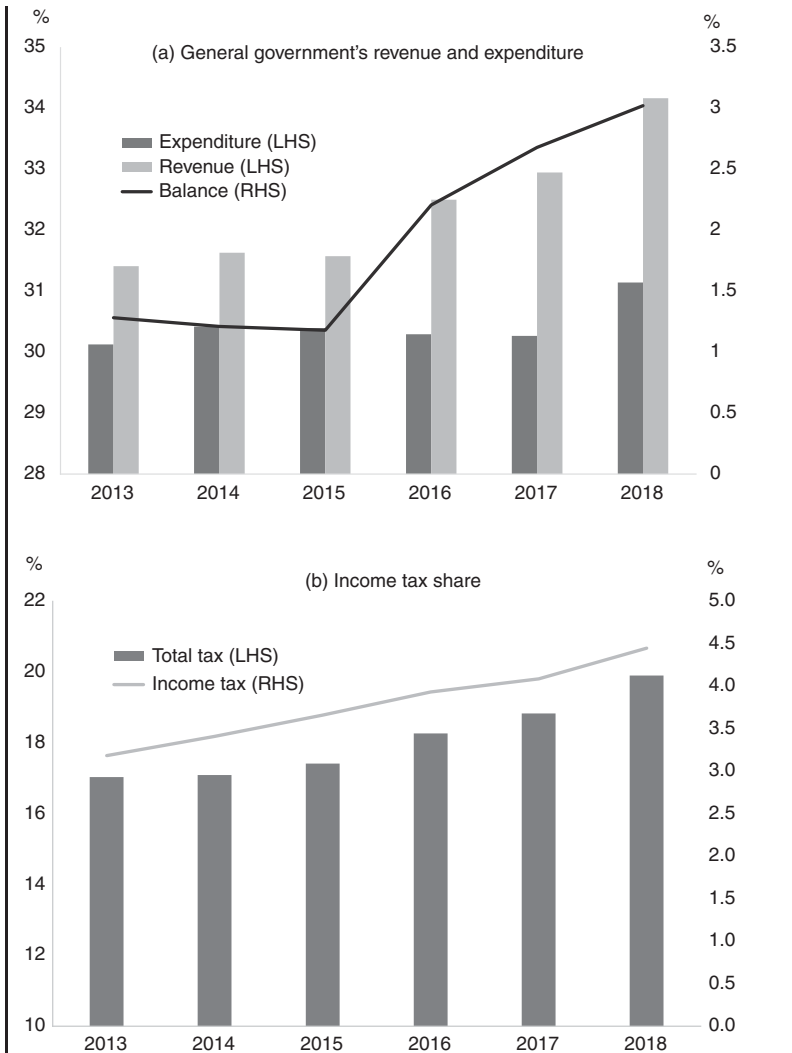


Figure B1.1 General government's revenue and expenditure and income tax share

Source: BoK and Ministry of Economy and Finance.

supplementary budget programme was counter-cyclical. Since 2015, however, it has become more pro-cyclical. The Korean government increased its fiscal spending simply because it had already collected a huge amount of additional tax revenue, which

would again suggest that the Korean economy was already in recovery. The extra spending was undertaken to reduce the possibility of increasing fiscal surpluses. Thus, the passing of supplementary budgets is no longer indicative that the government is pre-emptively responding to the economic recession by undertaking expansionary fiscal policies.

Third, the government has repeatedly increased its fiscal spending in the first half of the year, frequently accompanied by a decrease in the second half. While this measure may have helped to increase the economic growth rate for a particular year, it was inevitably offset by a drop in the growth rate for the subsequent year. Thus, this measure, too, which was frequently promoted as a stimulus policy by the Korean government, proved, at best, to be neutral in its overall effect.

It would, therefore, be incorrect to state that the fiscal policy stance of the Korean government was expansionary. On the contrary, it was contractionary. The officials of the Ministry of Economy and Finance, technocrats like the staff of the BoK, probably knew that the Korean economy had recovered since 2013, but they were also well aware that, unless they insisted that they were carrying out expansionary policies, they, too, would be subjected to political interference from the Korean National Assembly. In order to adhere to the long-term fiscal discipline, they may have just resorted to telling the little white lie that their fiscal policy was expansionary.

1.2.2 Monetary Policy

The widespread use of credit and fiat money has led to the managed currency system and the emergence of monetary policy conducted by central banks.³ Historically, the central bank was the sole issuer of

³ Under a pure gold standard system, for example, monetary policy would be nothing other than the maintenance of convertibility. The central bank would have no policy discretion at all to cope with price or employment instability. This is why J. M. Keynes advocated for the abolition of the gold standard in favour of a managed currency system (Keynes, 1923: p. 65).

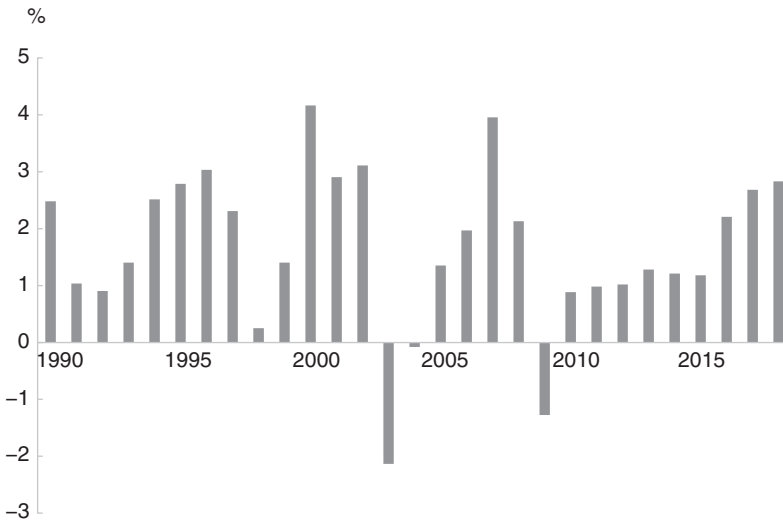


Figure 1.6 Fiscal balance (general government balance as percentage of GDP)
Source: ECOS, BoK.

banknotes, which enabled it to determine the supply of money or the interest rates, and thereby influenced prices and output. Currently, it is the BoK that is responsible for monetary policy in Korea. However, it has not conducted an independent monetary policy, as the government would not be willing to abandon its controlling power over the Korean economy. Until the 1990s, therefore, the goal of the BoK was just to follow and support government policy, rather than to pursue independent stabilisation policies. However, independent monetary policy has been made possible through two developments:

First, fiscal discipline played a very positive role in the implementation of an independent monetary policy, allowing the BoK to be freed from the obligation of supporting the government by monetisation. Fiscal discipline, however, ended up hindering the development of financial markets, particularly the government bond market. The Korean government had little need to issue bonds, which would have rendered the Korean economy more bank-dependent. Only with the increase in the supply of Korean government bonds that

were issued to finance the cost of financial restructuring in the aftermath of the 1997 currency crisis did financial markets start to develop.

Second, due to strong government control of financial sectors in order to support economic growth, interest rates remained heavily regulated for a long time and financial market development was repressed. With Korea joining the OECD in 1996, however, serious financial liberalisation was pursued. Based upon the Four Stage Liberalisation Plan that proposed gradual liberalisation, by moving from long-term to short-term interest rates, from securities market rates to bank interest rates, and from large-sum to small-sum instruments, all the interest rates were completely liberalised in 1997. Furthermore, the opening of capital markets was achieved, leading to foreign direct investment in the Korean stock and bond markets. It is worth noting that it helped the BoK to shift the instrument of monetary policy from monetary aggregates to interest rates. Currently, the BoK implements its monetary policy by steering short-term interest rates.

Amid the currency crisis that devastated the Korean economy in 1997, the government, under the tutelage of the IMF, had to revise the Bank of Korea Act, thereby allowing the BoK to implement an independent monetary policy. In the light of this, the objective of the BoK changed to the implementation of its sole mandate, that of price stability.

After the 2008 global financial crisis, central banks around the world developed various unconventional monetary instruments and tools as nominal interest rates moved closer to the effective zero lower bound. Here, macro-prudential policy was newly added to the objectives of central banks. Against this backdrop, the Bank of Korea Act was again revised. The BoK, whose role had heretofore been limited to price stability, came to extend its role to financial stability.

1.3 The Goals of Monetary Policy

Figure 1.7 shows that the objectives of monetary policy are to ensure three types of stability: price, output (employment), and financial stability. In the case of the BoK, all these objectives are considered important. Although the stabilisation of output was not specified as explicitly as price and financial stability in the Bank of Korea Act, the BoK aims to attain price stability, reduce economic fluctuations, and prevent financial crises.

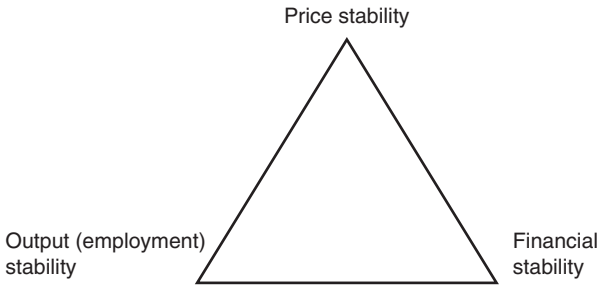


Figure 1.7 Three pillars of monetary policy goals

1.3.1 Price Stability

For every country, price stability is the most important goal of central banks. In Korea, immediately after the 1997 currency crisis, which led to the sixth revision of the Bank of Korea Act, price stability became the sole important goal of the BoK. Prior to this, the goal of the BoK was both to achieve the monetary value of Korean currency, and to maintain a sound financial system and improve its efficiency. But through this revision, the second goal was deleted, and price stability remained the only goal. Furthermore, the BoK introduced, as its framework for achieving the goal of price stability, a strategy of inflation targeting, which had first been introduced in New Zealand in 1990. Inflation targeting is the monetary policy framework or strategy of focusing on inflation itself as the ultimate goal of central banks, aiming to achieve its goal over the mid-term horizon. Currently, the inflation target adopted by the BoK is 2 per cent in the consumer price index. If the actual inflation rate deviates too much above or below this target, then the BoK is expected to take all the necessary actions to reduce the inflation gap.

After the global financial crisis in 2008, however, there was increasing criticism that, despite the sluggish nature of the economic recovery, the BoK adhered strictly to its sole mandate of price stability, neglecting the employment and output stability goal.⁴ Against this backdrop, some members of the National Assembly even submitted a proposal

⁴ It is quite interesting to compare the experience of the BoK with the BoJ. In Korea, the BoK was attacked by politicians for being only concerned with the inflation goal, and not output and employment, whereas, in Japan, politicians were eager

to amend the Bank of Korea Act again, adding the goal of output and employment stability to the goal of price stability, and thus imposing multiple goals on the BoK. However, this attempted change was never realised. One of the proponents' main arguments that the BoK was concerned only with price stability proved to be groundless. The price stability goal specified in the Bank of Korea Act implies that the BoK should, first and foremost, be responsible for price stability, but this does not necessarily mean that it cannot have other goals, such as output and employment stability. Indeed, given that the inflation rates in most countries at the time were below target, central banks also focused on dealing with employment and output stability, even under an inflation targeting system. Inflation targeting everywhere was flexible targeting.

In the case of the BoK, output stability had always been a crucial goal, even though it was not explicitly specified in the Bank of Korea Act. As a matter of fact, there was not a single member of the MPB who overlooked the importance of output stability in the whole history of the BoK. The examination of the minutes of the MPB, made public from 1997 onwards, makes it clear that output stability has always been a primary concern, one which prevailed even over price stability.

Thus, although the BoK has de jure a single goal, it has de facto multiple mandates. The question of whether the BoK should have single or multiple mandates is no longer meaningful. If the BoK has multiple goals, however, it should be careful about achieving goals other than price stability, because these goals can be incompatible with maintaining price stability.

1.3.2 Output and Employment Stability

When inflation remains subdued, inflation targeting is, in practice, inoperative. Instead of price stability, output stability becomes the primary goal. Thus, the focus of monetary policy shifts to reducing the fluctuations in output and employment. But how, then, can output stability be measured?

to introduce inflation targeting as a tool to boost the Japanese economy (see Shirakawa, 2018).

In general, fluctuations in output are represented by the movement of the GDP, unemployment rates, and real interest rates. The MPB assesses how far each of these variables deviates from their targets, such as potential GDP, the natural rate of unemployment, and the natural interest rate, and attempts to reduce these deviations as much as possible through changes in the interest rate or in the quantity of money. Theoretically, determining monetary policy direction should not be affected by the selection of *any* of these variables because they all move in the same direction, although, in practice, they often move *against* each other in opposite directions. Each member of the MPB should, therefore, choose a reference variable that can help capture the business cycle or economic fluctuation as correctly as possible. Currently, the members of the MPB focus their attention on the GDP movement, while variables such as the unemployment rate or the real interest rate are used mainly as supplementary variables to cross-check the output movement.

a) Output Gap

The performance of the Korean economy has been measured by the GDP growth rate. The labour market was not flexible, and, as a consequence, the unemployment rate and other labour market data failed to reflect the underlying economic fluctuations correctly. For the BoK, therefore, the underlying movement of the Korean economy is captured by the extent of the output gap, as emphasised in its Statement on Monetary Policy Decisions. This is the reason why the BoK targets the output gap, although employment stability is more relevant as the goal of the macro-stabilisation policy (Svensson, 2013).

As the Korean economy slows down amid falling inflation rates from 2013, however, there has been a resurgence of the claims that the BoK neglected output stability by adhering excessively to price stability. But this claim is due, among other things, to a misunderstanding of the BoK's mission for output stability. In so far as the GDP movement is concerned, it is important to note that the decline in the growth rate of the Korean economy is derived from the drop in the long-term economic growth rate as well as the increase in the short-term output gap. Basically, the goal of monetary policy is to reduce the output gap, steering the actual growth rate around the potential growth rate, but not to increase the growth rate without any boundaries. If the actual growth rate is too far below or above the potential growth rate, it can

jeopardise price stability, creating deflation or inflation, which justifies monetary policy intervention. But monetary policy has little to do with the drop in the potential growth rate, which should be addressed more by the government's structural policy than by the central bank's monetary policy.

To understand output stability in more detail, let us decompose the GDP movement into two parts, the cyclical and trend component, as follows.

$$y_t = (y_t - y_f) + y_f \quad (1)$$

where y_t and y_f are, respectively, the logarithms of y_t , the GDP at time t , and y_f , the potential GDP.

Differentiating both sides of the equation yields:

$$\Delta y_t = \Delta(y_t - y_f) + \Delta y_f \quad (2)$$

Here, $\Delta(y_t - y_f)$ refers to the change in GDP gap because $\Delta(y_t - y_f) = \Delta((Y_t - Y_f)/Y_t)$. Thus, GDP growth rate at a given period t , Δy_t , is the sum of the change in GDP gap and the potential growth rate Δy_f . In general, monetary policy is a short-term counter-cyclical policy to reduce the output gap, while it rarely affects the potential growth rate, which can be addressed more by long-term economic policies, such as structural policy. Thus, as former Chairman of Federal Reserve Board Ben Bernanke stated:

Monetary policy cannot do much about long-run growth. All we can try to do is to try to smooth out periods where the economy is depressed because of lack of demand. (Bernanke, 2012: p. 27)

To be sure, monetary policy is not necessarily limited to affecting the short-term business cycle. It may, to a certain extent, affect the potential growth rate in the case of sustained recession or under-investment. For example, Summers (2014) developed the 'secular stagnation' hypothesis that economic growth would fall in the long run due to so-called hysteresis effect if a short-term recession remained sustained. Inversely, a decline in potential growth could lead to a recession (Gordon, 2015).

The recent lacklustre performance of the Korean economy was not due to an insufficiently accommodative monetary policy, as was claimed by the critics of the BoK. It originated, to a large extent, from

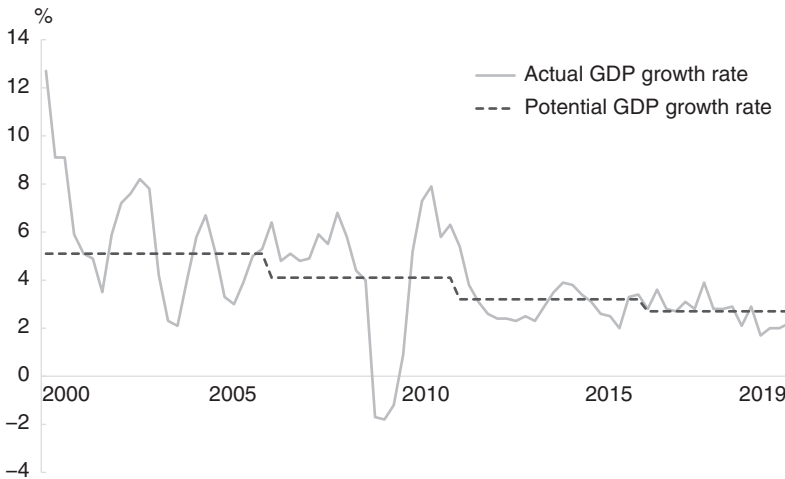


Figure 1.8 Actual and potential GDP growth rate in Korea

Source: ECOS, BoK.

a fall in the potential GDP growth rate, not from the widening GDP gap. Notwithstanding this, the BoK had been regarded as being responsible for the lower growth rate itself, and the MPB had been under severe pressure to adopt an excessively expansionary monetary policy. As Figure 1.8 shows, this was indeed the case for the mid-2010s, when the actual GDP growth rate was not below the potential GDP growth rate. For example, the Korean economy recorded a 3.2 per cent growth rate in 2013 and 2014, which was the midpoint of the estimated range of the potential GDP growth rate of 3.0 to 3.4 per cent. Many of the Korean public thought that this GDP growth rate was still disappointing and insisted on further stimulus, but they failed to recognise that a substantial drop had occurred in the potential GDP growth rate, and therefore monetary policy would not be an appropriate recipe. Furthermore, given that the amplitude of economic fluctuations had been significantly weakened, there was little reason to justify an active monetary policy response.

If the potential GDP growth rate is variable and uncertain in the short term, it is then important for the BoK to estimate it accurately and to know how much the change in GDP is coming from the changes in the potential GDP and GDP gap. But this is not an easy task. There are different ways to measure potential GDP, and often there are quite

substantial differences between the thus measured potential GDPs. If this difficulty is considered, targeting the GDP for monetary policy-making can be only a second-best option that arises from the fact that the unemployment rate is not sufficiently sensitive to economic fluctuations in Korea.

Against this background, the BoK decided to publish its potential GDP estimates from 2016 onwards. A priori, there is no way of telling whether the estimates are really accurate or not. But the publication of the estimates can serve to announce the target growth rate or range that the BoK is required to attain. Given the target growth rate or range, the Korean public will clearly understand that the action of the BoK is to reduce the GDP gap, not to increase the growth rate at any cost.

b) Unemployment Gap

The unemployment rate is clearly one of the most widely used target indicators that steer monetary policy in many central banks. The advantage of relying on the unemployment gap is that it can help clarify whether the action of the central bank is to bring the actual unemployment rate to what is called the full employment rate of unemployment or the natural rate of unemployment.⁵ Assuming that u_t is the current unemployment rate and u_f the natural unemployment rate, we can decompose u_t as follows:

$$u_t = (u_t - u_f) + u_f \quad (3)$$

Note that the stabilisation of employment is to minimise the fluctuation of the actual unemployment rate around the natural rate of unemployment. Thus, as in the case of the GDP target, the mission of the BoK is to reduce the unemployment gap ($u_t - u_f$), not the natural rate of unemployment, u_f , itself. In practice, however, the distinction between the reduction of the actual unemployment rate and unemployment gap is not meaningful. The reason is that the natural rate of unemployment is not very variable and is immune to wide measurement errors, at least in the short run, although it can be changed by structural policy, such as labour market reforms in the long run. Because u_f remains constant in the short run, the short-run change in

⁵ This refers to the minimum unemployment rate that can be achieved without causing an inflation rate increase. Or, according to Mishkin, it is not zero unemployment but the employment rate in which the demand for labour is equal to the supply of labour. Mishkin (2011, p. 318)

the actual unemployment rate thus corresponds entirely to the change in the employment gap as shown:

$$\Delta u_t = \Delta(u_t - u_f) \quad (4)$$

It should be noted that the stabilisation based upon the unemployment gap is equal to the stabilisation based upon the GDP gap if the labour market is flexible enough and Okun's law holds.⁶ Given the high degree of labour market rigidity in Korea, however, the unemployment rate or other labour market indicators are not sufficiently sensitive to the movement of the underlying economic fluctuations, and they are rarely affected by monetary policy. Lay-offs have rarely been implemented in Korea, and the institutional and regulatory changes that are currently taking place in Korea tend to strengthen, rather than ease, such rigidity. This is the main reason why the BoK favours the GDP target, despite the fact that labour market developments are always very important concerns that catch the attention of the members of the MPB.

Figure 1.9 shows that, while the natural rate of unemployment in Korea was relatively constant between 3 and 3.5 per cent, the actual unemployment rate also varied little, staying within the narrow band of 3 to 4 per cent over the last twenty years.

c) Interest Rate Gap

Currently, the central banks of all the major economies have interest-oriented monetary policy frameworks. As a result, the natural (or neutral) interest rate is an important concept to predict the stance of monetary policy. The natural interest rate, first defined by the Swedish economist Knut Wicksell, is the interest rate that will prevent cumulative inflation or deflation. More conveniently, it is the interest rate that will prevail at full employment output or potential output while keeping inflation constant. Therefore, if the real interest rate, defined as the interest rate that deducts inflation expectations from the nominal interest rate, matches exactly the natural interest rate, prices will be stable. In contrast, if the real interest rate is higher or lower than the natural interest rate, then deflation or inflation is expected, which will lead the BoK to lower or raise the interest rate. In this regard, there have been several attempts to estimate the (time-varying) natural interest rate in

⁶ For instance, Okun's law linking unemployment gap to output gap can be described by the equation $(y_t - y_f) = c(u_t - u_f)$ where c is constant.

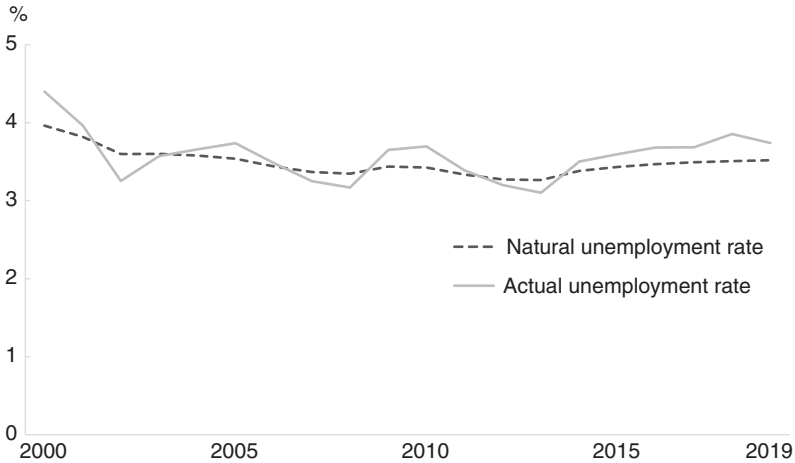


Figure 1.9 Actual and natural unemployment rates in Korea

Source: OECD.

Korea (IMF, 2019, and Cho, 2020, as the most recent study). Figure 1.10 illustrates the movement of the natural interest rates estimated by Cho (2020).⁷

The interest rate gap can be a useful guide for determining what monetary policy stance to adopt. In practice, however, it is not so beneficial because of an associated measurement problem. For instance, Figure 1.10 shows that the monetary policy stance in Korea has almost always been accommodative since the year 2000. It may be close to the truth (Hofmann et al., 2012⁸) but, more importantly, it suggests the possibility of mis-estimations being made. There are, indeed, substantial uncertainties and errors in measuring the natural interest rate, which will critically weaken its use compared to the use of the GDP gap. Given

⁷ Using the methodology that Holston et al. (2017) developed for the estimation of the US natural interest rate, Cho calculates two sets of natural rate interest in Korea. The first set uses exactly the same Korean data as the US data, while the second set replaces the policy interest in the United States with the market interest rate in Korea. The latter reflects more closely the Korean economic situation and is reproduced here. See Cho (2020) in more detail.

⁸ They show that policy rates have been below the benchmark rate implied by the Taylor rule since the early 2000s in both the advanced and the emerging market economies. This finding that monetary policy has been systematically accommodative globally is termed the ‘Global Great Deviation’ (Hofmann et al., 2012).

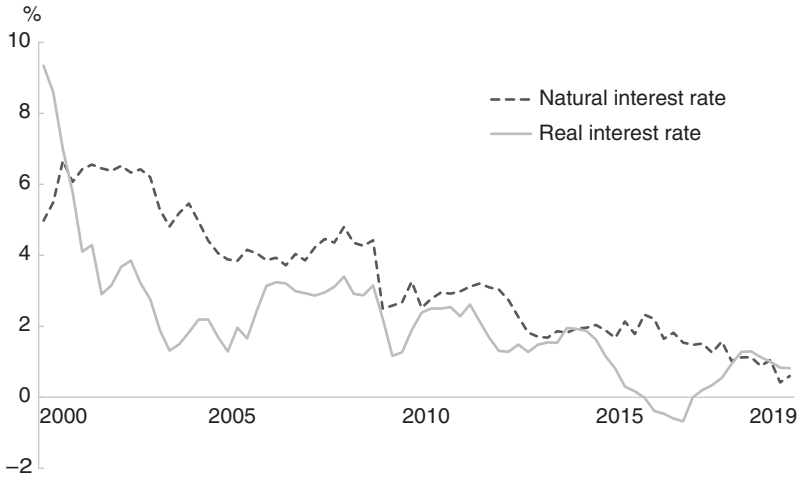


Figure 1.10 Real and natural interest rates in Korea
 Source: Cho (2020).

the theoretical one-to-one correspondence between the potential GDP and the natural interest rate, a monetary policy scheme based upon the interest gap is much the same as that based upon the GDP gap, and there is no particular reason to favour the utilisation of the interest gap.

Nonetheless, there was an internal demand for estimating the natural interest rate, because it helps the BoK to derive the Taylor equation and to trace the rule-based benchmark interest rate path reflecting the price and GDP gaps of the Korean economy. Concretely, the Taylor equation which the BoK used was as follows:

$$r_t = r^* + 1.8(\pi_t - \pi^*) + 0.4(y_t - y^*) \tag{5}$$

where r_t and r^* represent, respectively, the current real interest rate and natural (or neutral) interest rate, π_t and π^* the current and target inflation rates, and y_t and y^* the current and potential GDP in logarithms.

However, the reliance on this rule for the determination of monetary policy was never popular in Korea, and the usefulness of the Taylor equation has been constantly questioned. First, given that the information used by the BoK was never made public regarding the natural interest rate, let alone the GDP and price gaps and the parameter values, it seems ironic that the BoK staff had too much discretion in

calculating the benchmark interest rate in Korea. The Taylor rule was hardly an appropriate rule for the MPB members.⁹ Second, interest rates dropped to near zero levels in the aftermath of the 2008 global financial crisis, which made the existing equation no longer relevant, either in Korea or in the United States (Bernanke, 2015b; Yellen, 2017). The Taylor equation has thus been completely in disuse since 2015.

1.3.3 Financial Stability

Once a financial crisis occurs, central banks or the national governments incur huge costs as the lender of last resort to provide liquidity and financial assistance to financial institutions in distress. In terms of monetary policy perspective, however, the biggest cost from a financial crisis is the drop in output and the increase in unemployment incurred by the national economy. Indeed, it turned out that most of the recessions in OECD countries were accompanied by financial crises (see ECB, 2012: pp. 81–82).

Figure 1.11 estimates the size of the short- and long-term GDP losses that the 2008 global financial crisis caused to the Korean economy.

In the short term, financial crises reduce economic growth while not necessarily affecting potential output. When Korea was hit by the global financial crisis in 2008, real GDP fell below potential GDP from the fourth quarter 2008 until the fourth quarter 2009. The short-term output loss measured by the GDP differences during this period is estimated to reach around 3 per cent of peak GDP in 2007, which is already of a non-negligible magnitude. More serious, however, is the medium- or long-term loss caused by the drop in potential GDP, as emphasised by the IMF (2009a). If, as in Figure 1.11, we assume, for instance, that the pre-crisis trend growth rate recommences four years after the crisis,¹⁰ then the long-term output loss, measured by the sum of all the GDP losses accumulated over the four years following the crisis, is estimated to be around 25 per cent of the 2007 GDP.

Given this huge cost, the need to stem financial crises has drawn attention to the new pillar of economic stabilisation policy. Central banks

⁹ Unlike the original Taylor equation, the Taylor equation estimated by the BoK staff allocated a much higher value to the price gap than to the GDP gap, which could provoke the criticism that the BoK staff were too biased towards price stability. But this equation was rarely consulted by the MPB members.

¹⁰ This assumption is made by Leaven and Valencia (2008).

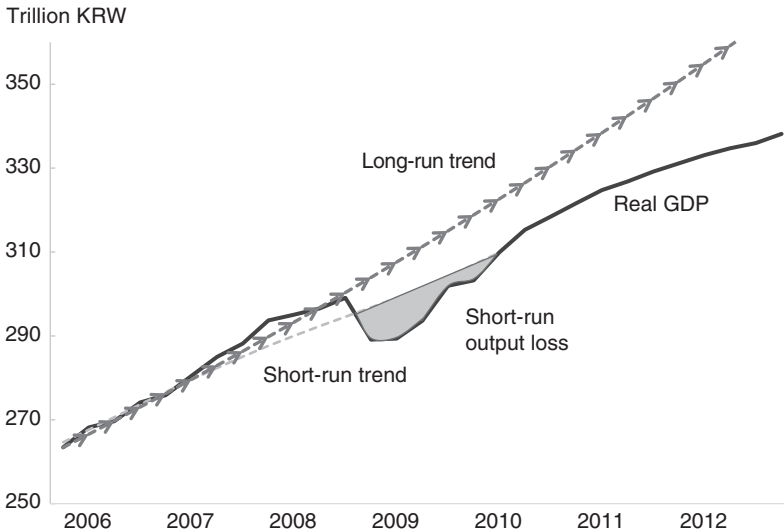


Figure 1.11 Short- and long-term loss of output during the 2008 global financial crisis

Note: The pre-crisis long-term growth rate is calculated as the average of the annual seven-year growth rates three years prior to the 2008 crisis, based upon the IMF (2009a). The estimated growth rate is 4.9 per cent per annum, which is equivalent to around 1.2 per cent on a quarterly basis.

Source: OECD and BoK.

should carry out their monetary and financial policies more counter-cyclically in order to promote the stability of their financial systems as well as targeting output and price stability in the medium- and long-term perspective. A central bank's price and output stability is not separable from financial stability. This is because, among other things, the transmission of the monetary policy conducted by the central bank will always have to be spread through the financial markets, and therefore central banks should always be very careful about maintaining the financial system stable and financial institutions resilient. If the financial system fails to function properly, the transmission channel of monetary policy will not work, harming the effectiveness of monetary policy.

Against this backdrop, the BoK came to revise its Bank of Korea Act once again in December 2011, by taking financial stability as another mandate. Article 1 of the revised Act stipulates that the BoK should

consider financial stability when carrying out monetary and credit policies as follows:

Article 1 (purpose) (1) This Act aims to contribute to the sound development of the national economy by establishing the Bank of Korea and promoting price stability through the establishment and execution of efficient monetary and credit policies. (2) The Bank of Korea shall pay attention to financial stability in carrying out monetary and credit policies. (Bank of Korea, 2018)

Furthermore, in Article 96 (Report of the National Assembly, etc.), the BoK is required to submit Financial Stability Reports that assess the stability of Korea's financial system to the National Assembly twice a year.

Is this extension of the BoK's mandate always desirable? This may not be the case. According to Tinbergen's rule, the more diverse the BoK's goals are, the more tools and instruments are needed. Thus, if the BoK is not equipped with the additional policy tools which correspond to its additional goals, it will have only a limited capacity in fulfilling these goals. The evidence so far suggests that monetary policy alone has been less effective in ensuring financial stability in Korea (IMF, 2019). Furthermore, if there are multiple goals, the BoK's responsibility is also likely to be diluted. This is because the policy goals are likely to conflict with each other, which could make it difficult for the BoK to be held accountable. For example, monetary policy of low interest rates, which is intended to ensure the stability of employment and output, can endanger financial stability, and, inversely, monetary policy of raising interest rates too prematurely to contain financial risks can end up damaging the stability of output and employment. These possible incompatibilities between its different goals can blur the responsibility of the BoK.