ECONOMIC POLICY GROUP REPORT

SNS FÖRLAG

Anders Vredin (chairman)
Martin Flodén
Anna Larsson
Morten O. Ravn

2012

SIMPLE RULES DIFFICULT TIMES

IS STABILIZATION POLICY IN NEED OF CHANGE?

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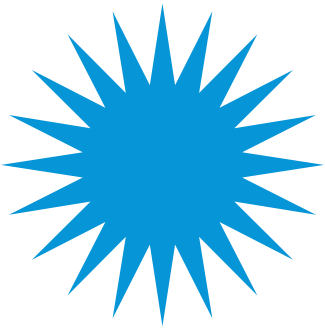
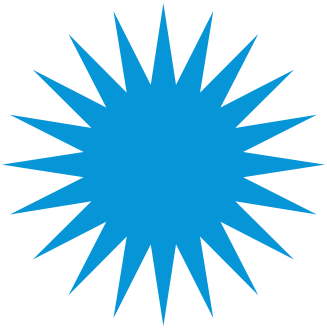
SNS – Centre for Business and Policy Studies – is an independent network of leading decision makers from the private and public sectors who share a commitment to social and economic development in Sweden. Its aim is to improve the basis for rational decisions on major social and economic issues, by promoting social science research and stimulating public debate.

SNS Economic Policy Group Report 2012
Simple rules, difficult times – is stabilization policy in need of change?
Anders Vredin, Martin Flodén, Anna Larsson and Morten O. Ravn

The Swedish title: *Konjunkturrådets rapport 2012*
Enkla regler, svåra tider – behöver stabiliseringspolitiken förändras?

Translated by Christina Lönnblad





Preface

The financial crisis in Europe and the US in the last few years was preceded by a fairly long period with an apparently good economic development. There was a relatively high and stable growth as compared to previous experience. A better stabilization policy was considered to have contributed to this. But due to the latest experience, the design of fiscal and monetary policy have come to be increasingly questioned, both before and after the crisis. To avoid a return to the macroeconomic problems characterizing the 1970's and the 1980's, considerable reforms will be needed both in the US and Europe.

The current situation in Sweden is very different as compared to twenty years ago. In connection with the crisis at the beginning of the 1990's, a large number of changes in the economic policy were implemented that have contributed to Sweden having been relatively mildly affected by the latest crisis. In particular, new fiscal policy rules were introduced. These rules have created a better balance between public expenditure and revenue and lower government debt. This is an important reason why Sweden is today in a better position than many other European countries. The fact that the Riksbank was given greater independence and the mandate of focusing on monetary policy in order to achieve low and stable inflation has also contributed to an increased confidence in Swedish economic policy.

Yet, fiscal and monetary policy in Sweden have also been subject to criticism. Both the government and the Riksbank have been criticized for not taking low capacity utilization and high unemployment into account. During the latest crisis, it has also become obvious that the stabilization policy framework must be supplemented with new rules for the surveillance of the financial markets.

When new rules for economic policy are to be designed – in Sweden as well as in the euro area and the US – the decision makers need to find a balance between credibility and flexibility. How are simple and clear

rules for economic policy to be designed so that the policy does not create problems in the form of constant budget deficits, unemployment and high inflation? And how is it possible to, at the same time, maintain enough flexibility to be able to counteract various kinds of shocks within such regulatory frameworks? There are reasons for a thorough discussion of this also in Sweden. It is against this background that we have chosen to give the 2012 SNS Economic Policy Group Report the theme »Simple Rules, Difficult Times – Is stabilization policy in need of change»?

We would like to thank research assistant Rickard Hammarberg for all his help with the work on the report. The work of the SNS Economic Policy Group has also been facilitated by constructive criticism and comments from Harry Flam, Andreas Westermark, Nils Gottfries, Anne-Marie Pålsson and Lars Frisell. SNS asked them to carefully read one chapter each and they all participated in a half-day discussion of the whole report. Naturally, they are not to be blamed for any remaining errors in the report. The authors of the book are entirely responsible for the analyses, conclusions and proposals that are presented. SNS as an organization does not have any views on these either. The mandate of SNS is to initiate and present research-based analyses of important questions in society.

Thanks also to Gabriella Stjärnborg at SNS Förlag who has dealt with the production of the report and Jan Wallander and Tom Hedelius' Research Foundations which have made the work on the Economic Policy Group Report possible thanks to their financial support.

Stockholm December 2011

ANDERS VREDIN

Chairman of the SNS Economic Policy Group 2012 and

CEO of SNS 2010–2011

1 2 3 4 5

The economic crisis in Sweden and the surrounding world

In the fall of 2011, there has been great uncertainty about in what direction the world economic trend, in particular in Europe, is heading. There has been uncertainty about how to deal with government debt crises in Greece and other countries. There has been uncertainty about the state of the banking sector and about what measures that are needed to deal with the problems of the banks. And there has been uncertainty about how the responsibility for dealing with the problems is to be allocated, both when it comes to the allocation of responsibility *within* different countries (among governments, central banks, financial supervisory authorities and other authorities) and the allocation of responsibility *between* countries. This uncertainty has, in itself, had negative effects on economic activity since households and firms postpone their decisions on new expenditure when they do not know what economic policy changes there will be.

The economic crisis in Europe and the US in the last few years was preceded by a long period with an apparently good economic development. In Sweden and many other countries, the second half of the 1990's and the beginning of the twenty-first century were characterized by low and stable inflation in a historical perspective. Inflation had been stabilized without any apparent negative effect on economic growth. On the contrary, growth was relatively high and stable as compared to previous experience. In the international economic-policy debate, one

had started to call the favorable, relatively stable period from the 1990's and onwards *The Great Moderation*. This period constitutes a sharp contrast to the deep business cycle downturn that hit the world economy in the 1930's and which is generally called *The Great Depression*. The overall positive trend during *The Great Moderation* has been ascribed to a number of different factors, not the least an increase in competition due to deregulations within countries and a higher mobility of goods, services, labor and capital between countries in connection with the general globalization. A better stabilization policy is also considered to have contributed to this, in particular to increasingly independent central banks having succeeded in making inflation lower and more stable than in the 1970's and 1980's. A possible interpretation is also that from the mid 1980's and onwards, one has just been *luckier* than before in the sense that the economy has been hit by fewer serious shocks.

Great moderation followed by financial crisis

The latest economic crisis in the US and Europe was triggered by problems on the financial markets that became obvious in 2007 and 2008. The latest crisis is now generally called the *The Great Recession*.[1] At the beginning of the crisis, the focus in both policy and the debate was on how the urgent problems on the financial markets were to be dealt with and on designing fiscal and monetary policy in order to reduce the decline in economic activity. The work at creating conditions for a better surveillance and better regulations of the financial markets has been continuously intensified. But the design of fiscal and monetary policy, both before and after the crisis, has also been questioned to an increasingly larger extent.

The design of fiscal and monetary policy has been questioned

The dramatic events in the last few years have led to a questioning of whether *The Great Moderation* really was the result of a well-designed stabilization policy. Now the future of the euro is being questioned and thus the entire EU project, largely as a result of shortcomings in the fiscal policy of many euro countries. What restrictions the common monetary policy entail for the fiscal policy of the member countries is far from apparent, but the need for changes in the fiscal policy regula-

1. This expression has become the general term for the recession that hit large parts of the world economy in 2008; it seems to have been used for the first time in Wall Street Journal on April 8 2010.

tory frameworks is obvious. The design of fiscal and monetary policy in the US has also been strongly questioned, even if the problems in the US have fallen into the background in the fall of 2011 due to the development in Europe. Considerable reforms will be needed in both the US and Europe to create conditions for long-term sustainable government finances, increase macroeconomic stability and lower the risks for future crises.

Changes in the fiscal policy regulatory frameworks are needed

In retrospect, it is obvious that imbalances in the world economy had been building up for a longer period of time and that it is not only the functioning of the financial markets that lies behind the crisis and that needs to be improved. The financial crisis revealed more long-term structural problems, in particular as concerns fiscal policy. But the central bank policies have also been questioned. Were they too passive in their surveillance of the financial markets before the crisis? And how are they now to weigh measures for improving financial stability against measures to stabilize inflation, in particular, but possibly also real economic activity? Low interest rates and other measures might be needed to mitigate the fall in economic activity and create financial stability in the short run, but do, at the same time, entail risks for high inflation, financial instability and new crises in the longer run.

Low interest rates can lead to risks in the long run

The situation in Sweden is very different now than during the crisis at the beginning of the 1990's. In connection with the crisis that Sweden then underwent, there was a number of economic policy changes that have contributed to Sweden having being hit relatively mildly by the latest crisis. New fiscal policy rules were introduced which have created a better balance between public expenditure and revenue and less public debt. The Riksbank obtained larger independence and the mandate to focus its monetary policy on achieving low and stable inflation. Yet, the fiscal and monetary policies have also been subject to criticism in Sweden in the last few years. Both the government and the Riksbank have been criticized for not taking the low capacity utilization and the high unemployment sufficiently into account. How the responsibility for financial stability is to be allocated between different authorities has, in the wake of the crisis, been subject to intensive debate and several studies. Apparently, the fiscal policy and monetary policy reforms

Risks for financial instability also in Sweden

have not insured us against the risk that financial instability is building up in Sweden. Have the fiscal policy regulatory framework and the inflation target of the Riksbank put too tight a straightjacket on stabilization policy in Sweden? Or have these particular rules of the game put Sweden's economy in better shape than that of many other countries?

There is reason for a thorough discussion of both fiscal and monetary policy also in Sweden. It should deal with the design of the stabilization policy framework, whether the government and the Riksbank have followed the rules to a sufficient extent or have made reasonable deviations from them and whether the experience from the last few years gives any reason for changes in the framework. It is against this background that we have chosen the theme of the 2012 report from SNS Economic Policy Group to be »Simple Rules, Difficult Times – Is stabilization policy in need of change?«.

In this chapter, we will start our discussion by comparing the economic development in Sweden with that in the surrounding world. We identify a number of points where further discussion of the economic policy framework is particularly motivated. The chapter concludes with a summary of the contents of the rest of the report and the most important conclusions.

Deep business cycle downturn and high unemployment

Notwithstanding if there is a business cycle upturn or downturn, there is normally an increase in production every year. At the peak of a business cycle upturn, economic growth has usually already begun to fall, to be lower than usual during the downturn phase, before there is a recovery with an increasing production growth. Normally, the production level does not fall, it is rather about higher or lower *growth.* The latest crisis has been unusual in the sense that there has actually been a fall in production in the US and Europe, not only lower growth. How deep the downturn should be considered to have been and how much recovery that has taken place so far depends on what is considered to be a normal growth rate. For many years, there has been a swifter econom-

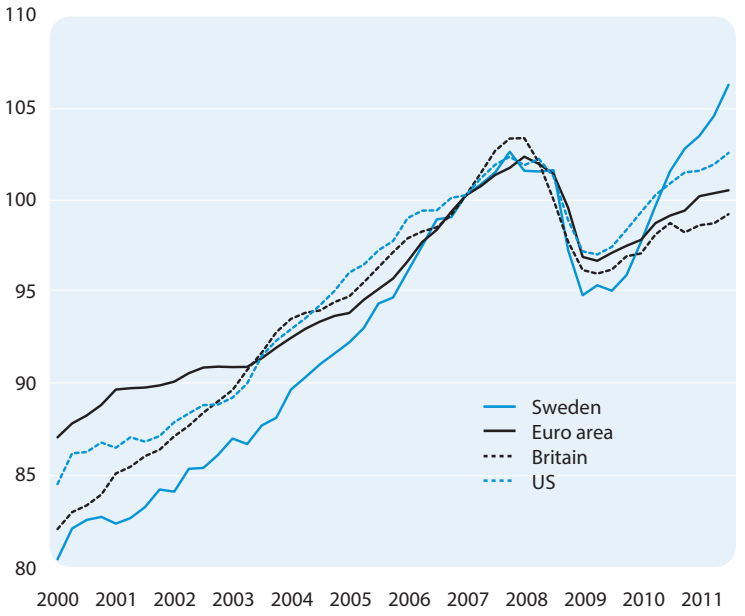


Figure 1.1 Strong economic growth in Sweden.

Note: Seasonally and calendar adjusted GDP. Index 100 = 2007quarter1 volumes and fixed exchange rates, base year 2005.
Source: Eurostat.

ic growth rate in the US than in Europe, both due to swifter population growth and stronger growth in production per employed individual.

Figure 1.1, which shows economic growth in terms of the trend of the gross national product (GDP) since the year 2000, constitutes a good starting point for a discussion of these questions. Up until 2007, Sweden had a stronger growth than both the US and the euro area. The business cycle downturn in the world economy in 2008 and 2009 hit Sweden hard due to its great export dependence. In return, the export dependence also led to a swifter recovery in 2010. Thus, Sweden, like the US, reached about the same production level as before the outbreak of the crisis. The recovery has been considerably weaker in the euro area and Britain.

Sweden was hit hard by the economic downturn

Swifter recovery in Sweden

An interesting question – which does, however, not have any given answer – is how large the production loss due to the financial crisis and the business cycle downturn in its wake has been. One way of illustrating this is to compare the actual level of GDP to a hypothetical level that would have been reached if economic growth from 2007 and onwards had been the same as average growth in 2000–2006. Such comparisons are made in Figures 1.2a–c. For each country, we have thus estimated a GDP trend based on the trend in 2000–2006, extended this trend to the following years and then measured the difference between the actual GDP level and the trend level. We can see that Sweden's GDP level in 2009 was about 10 percent below the trend and that the gap in 2011 has been about 7 percent. There has been a similar development in

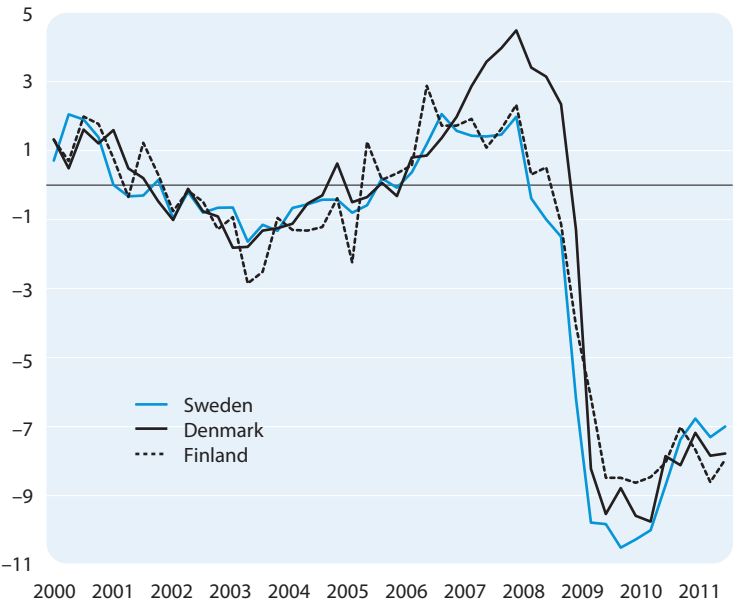


Figure 1.2a Production far below the trend.

Note: Seasonally and calendar adjusted GDP (volume and fixed exchange rates, base year = 2005). Deviation in percent from the trend, estimated on the period 2000quarter1-2006quarter4.
Source: Eurostat.

Denmark and Finland. When we compare Sweden to the US, the impression is almost the same as in Figure 1.1. The downturn was stronger in Sweden, but the recovery has, in return, been somewhat swifter and in 2011, the gap in relation to the trend was of approximately the same size in Sweden as in the US. The downturn in Britain was as about as large as in Sweden, but the recovery was considerably weaker. The gap increased in relation to the trend in Britain in 2010.

Large differences in the euro area

There are large differences between the countries in the euro area when it comes to the effects of the crisis on production. Figure 1.1 showed that production in the euro area as a whole fell less in 2008–2009 than in Sweden, but that the recovery has also been slower. Figure 1.2b shows that for Germany, the crisis meant a downturn to approximately a production level on trend and that there has then been a swift recovery. Also in France has there been a modest downturn in relation to its trend and the deviation from the trend was a great deal smaller than in Sweden at the beginning of 2011. Production in Ireland and Greece is considerably further below the trend than what it is the case in other countries, including Sweden (see Figure 1.2c).

The pictures of the deviation of GDP from the trend as a measure of the economic trend should be taken with a large pinch of salt since trends can be measured in different ways. But the figures still show that Sweden has not in all respects succeeded considerably better than other countries during the latest economic crisis.

Long-term low unemployment

The unemployment data in Figures 1.3a–c provide more or less the same picture as the GDP trend. There has been an improvement in 2010 and 2011, but unemployment is still high. Sweden and Finland entered the crisis with higher unemployment than Denmark and the US, countries that did, however, have a stronger increase in unemployment during the crisis. Unemployment was higher in Germany than in Sweden before the crisis, but it is now lower. During the crisis, the labor market has become approximately as much weaker in Sweden as in Britain, but unemployment was somewhat lower in Britain at the outset. As long as we do not compare Sweden to real centers of crisis such as Ireland, Greece and Spain, the unemployment trend in Sweden has been normal as compared to other countries.

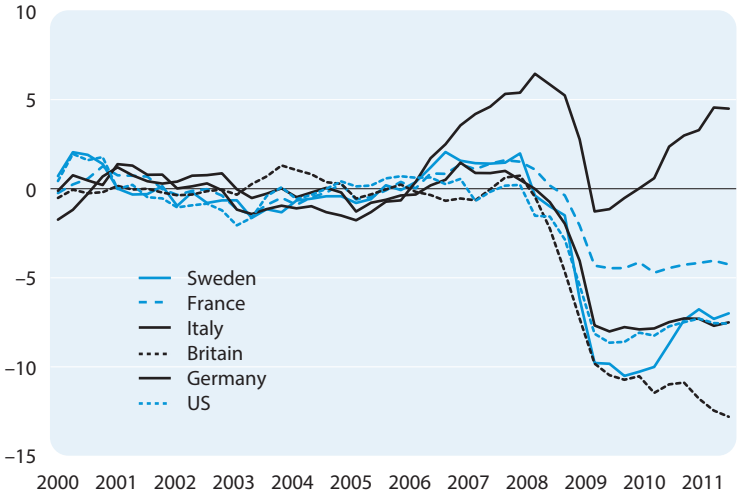


Figure 1.2b Production far below the trend.

Note: As in figure 1.2a.
Source: As in figure 1.2.a.

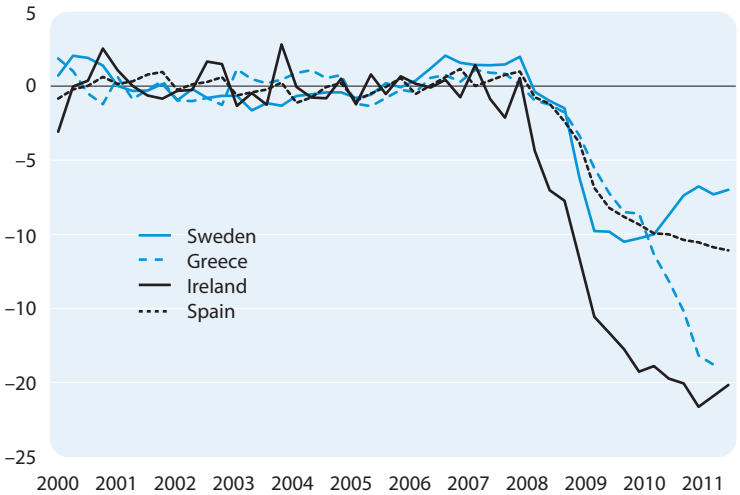


Figure 1.2c Production far below the trend.

Note: As in figure 1.2a.
Source: As in figure 1.2a. 2011quarter2 is missing for Greece.

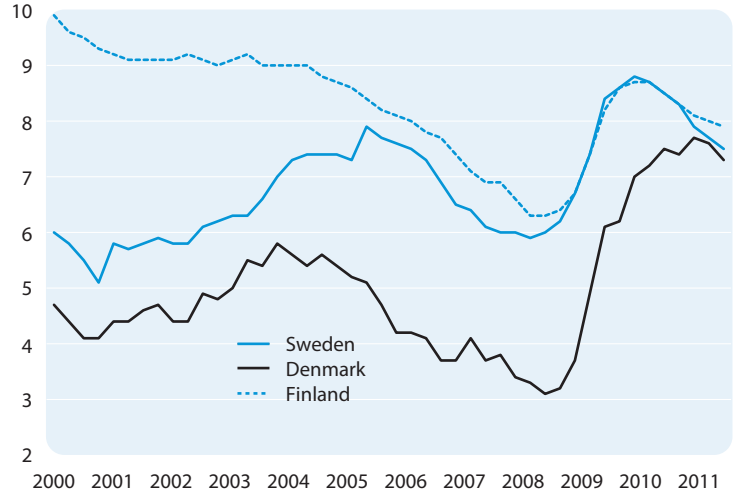


Figure 1.3a High unemployment.

Note: Unemployment level, percent of the total labor force. Seasonally adjusted figures.
Source: Eurostat.

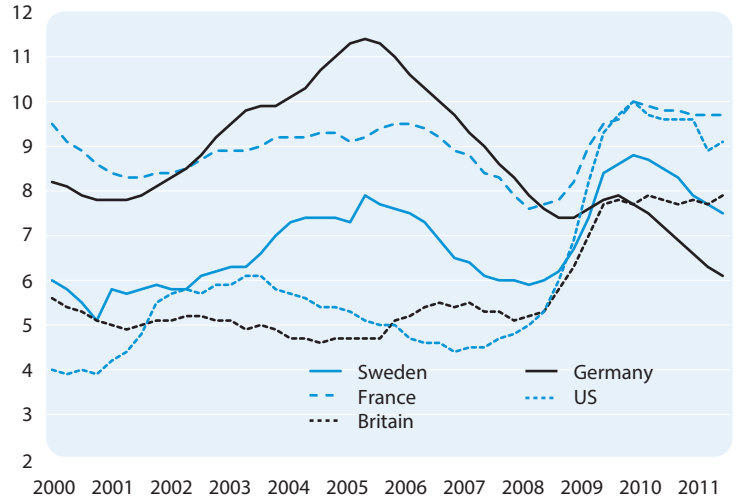


Figure 1.3b High unemployment.

Note: As in figure 1.3a.
Source: As in figure 1.3a.

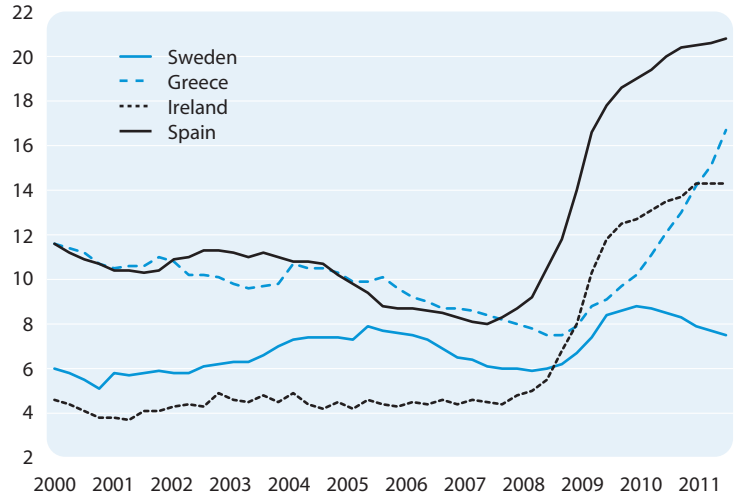


Figure 1.3c High unemployment.

Note: As in figure 1.3a.
Source: As in figure 1.3a.

Better balance in the public finances in Sweden

There is, however, one area where the trend in Sweden has been considerably better than in most other countries: the public finances. In the last few years, other countries have shown a deficit in their public finances and an increase in their public debt, which resembles the situation in Sweden during the crisis at the beginning of the 1990's.

Figure 1.4 shows public debt in relation to GDP, the so-called debt ratio. In Sweden, there was an increase in the debt ratio during the crisis at the beginning of the 1990's which was about as large as the increase in the US and Britain in later years, while there was no increase in public debt at all in Sweden during the latest crisis. It is well-known that there are large differences between countries in the euro area. In both Italy and Germany, public debt has been increasing for a longer period of time, but the Italian debt ratio is at a much higher level. There have been strong increases in public debt in Greece and Italy. Before the crisis, Ireland had a lower debt than Sweden, but its debt ratio now

amounts to about 100 percent of GDP. The level of the public debt ratio before the crisis was higher in the euro area as a whole than in the US, Britain and Sweden, for example. When it comes to the level of public debt, the Swedish trend has thus been remarkably better than that in other countries during the latest crisis.

A large public debt creates different kinds of problems. First, the government must pay interest on the debt, which means that a large share of the tax revenue cannot be used for other important purposes such as public consumption and investments and various kinds of household transfers. Second, a large public debt limits the possibilities of dealing with negative shocks to the economy. The government must

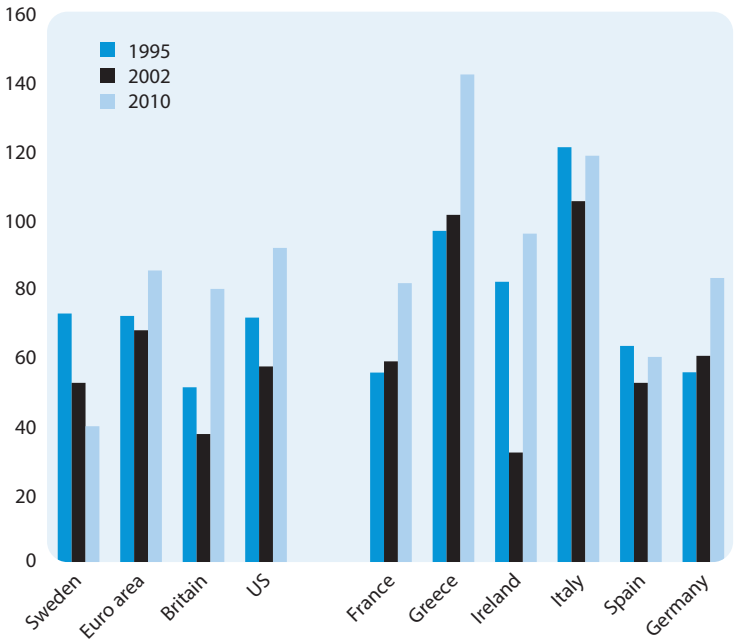


Figure 1.4 Low public debt in Sweden.

Note: Consolidated gross debt in the public sector, percent of GDP.
Source: European Commission.

High public debt creates problems

have a surplus between tax revenue and government expenditure that covers the interest rate expenditures to avoid further growth of the debt level. This puts strains on economic policy in a business cycle downturn, when one would prefer to be able to allow a certain deficit in the government finances. Third, which is an obvious problem for several European countries today, the interest that the government must pay on its loans tends to increase with growing public debt.[2]

Figures 1.5a–d provide a background to the trend of public debt. The figures show public revenue, in particular tax revenue, and public expenditure as a share of GDP, as well as the differences between revenue and expenditure, i.e. the budget deficit.[3] In Sweden, public expenditure soared during the crisis in the 1990's, but there was no increase in the tax revenue, it rather fell which resulted in a large budget deficit. Since the crisis in the 1990's, both taxes and public expenditure have grown more slowly than the economy as a whole. The budget deficit was the largest in 1993 and in the twenty-first century, there has mainly been a budget surplus.

Overall, there are striking similarities in the trend in the euro area, the US and Britain as a whole. In the twenty-first century, public expenditure has grown more quickly than GDP, while the tax revenue has largely remained unchanged in Britain and the euro area. In the US, the tax revenue has even fallen in relation to GDP. There has also been an almost *permanent* gap between public expenditure and public revenue. That the public finances were in balance around the turn of the millennium (before the so-called IT crash) more seems to have been the

2. When the debt becomes sufficiently large and there are suspicions that the borrowing government might have problems in paying its debts, lenders begin to ask for risk premia and accordingly, higher interest rates for lending money to that country. The higher interest rates might lead to an economic downturn in the economy and to lower GDP growth which leads to a further increase in the debt ratio. This kind of »snow-ball effects« can lead to a very swift growth in the debt ratio once it has reached a certain level.

3. Figures 1.5a–d show revenue and expenditure for the consolidated public sector (general government). Accordingly, a budget deficit here means the financial savings of the consolidated public sector, which affect the financial net position of that sector. In contrast, public debt in figure 1.4 is the financial *gross* debt of the consolidated public sector.

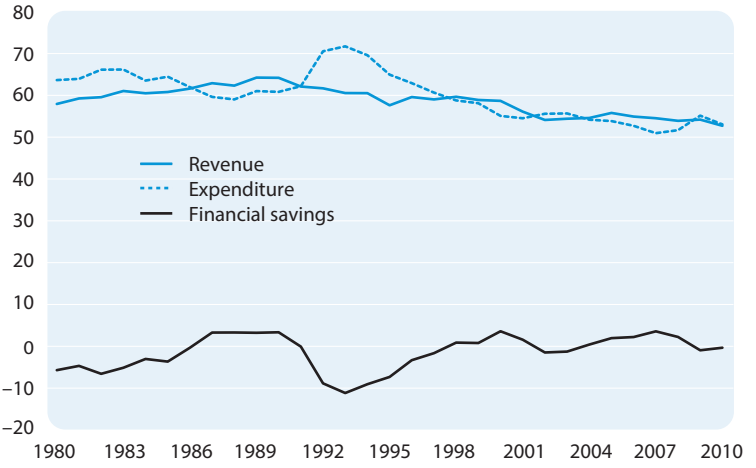


Figure 1.5a Sweden: Public sector revenue, expenditure and financial savings.

Note: Consolidated public sector revenue, expenditure and financial savings; in percent of GDP.
Source: OECD Economic Outlook 89.

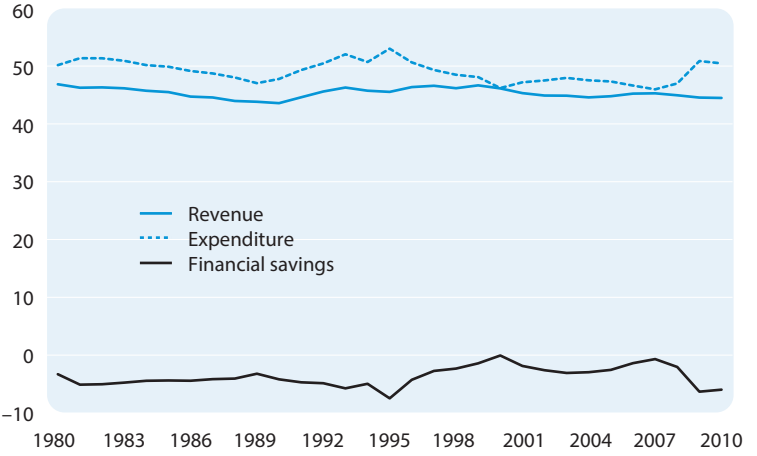


Figure 1.5b Euro area: Public sector revenue, expenditure and financial savings.

Note: As in Figure 1.5a. The euro area is here represented by EA15, which includes all euro countries in the OCED. Accordingly, Cyprus and Malta are excluded.
Source: As in Figure 1.5.a.

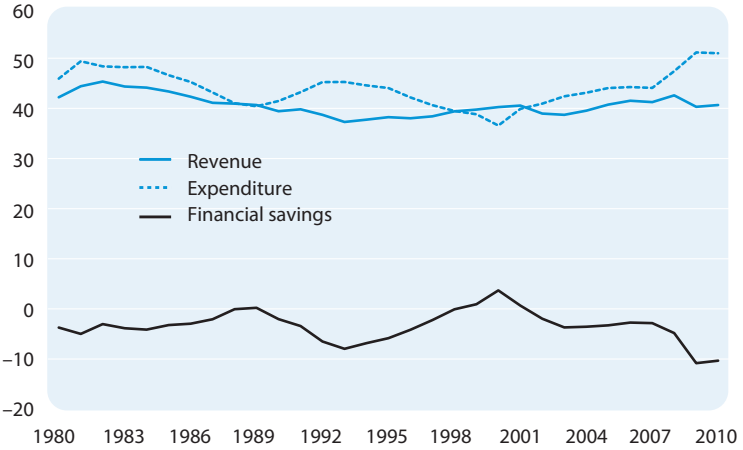


Figure 1.5c Britain: Public sector revenue, expenditure and financial savings.

Note: As in Figure 1.5.a.
Source: As in Figure 1.5.a.

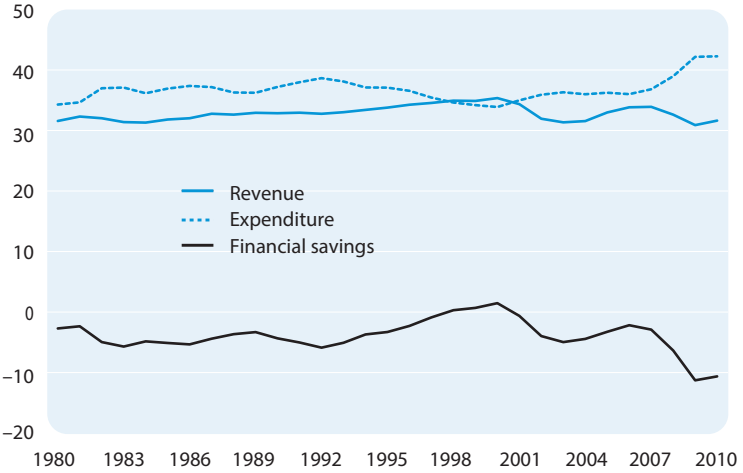


Figure 1.5d US: Public sector revenue, expenditure and financial savings.

Note: As in Figure 1.5.a.
Source: As in Figure 1.5.a.

exception that confirms the rule. The importance of economic growth should also be emphasized. The US has not had a better balance in its public finances than the euro area but thanks to higher economic growth, it has, until the latest crisis, been possible to keep the US debt ratio at a relatively lower level than the debt ratio in the euro area.

Permanent gap between public expenditure and revenue in the US, the euro area and Britain

The importance of fiscal policy rules

Against this background, it can be concluded that the problems with the public finances in the US, the euro area and Britain are of a *long-term* nature – even if they have become worse during the current crisis. The fiscal policy measures that need to be taken are thus not only about deciding on »packages« of necessary tax increases and decreases in expenditure. It is even more important to create new frameworks for fiscal policy so that a long history of constant deficits can turn into a future of surpluses or, at least, a balance in public expenditure. Sweden implemented a number of reforms in the fiscal policy regulatory framework after the crisis at the beginning of the 1990's. The government budget deficit was, of course, the reason for the reforms, but another driving force was that politicians were made aware of deficiencies in the government budget process (see Molander, 2001).

At the end of the 1980's and the beginning of the 1990's, there was an intensive discussion among both researchers and politicians about the importance of rules (norms) for economic policy. It was, for example, observed that inflation was normally relatively low in countries where the central bank had a relatively large degree of independence in relation to the political system.[4] In a corresponding way, estimates were made of the degree of tightness in the government budget process and the results were compared to the degree of balance in the public finances. It was then shown that the Swedish budget process could be characterized as one of the less strict: stricter than in Italy, but less strict than in Greece. This observation and the urgent need to master the

4. See Riksbanksutredningen (SOU 1993:20) for a summary of the literature and the arguments.

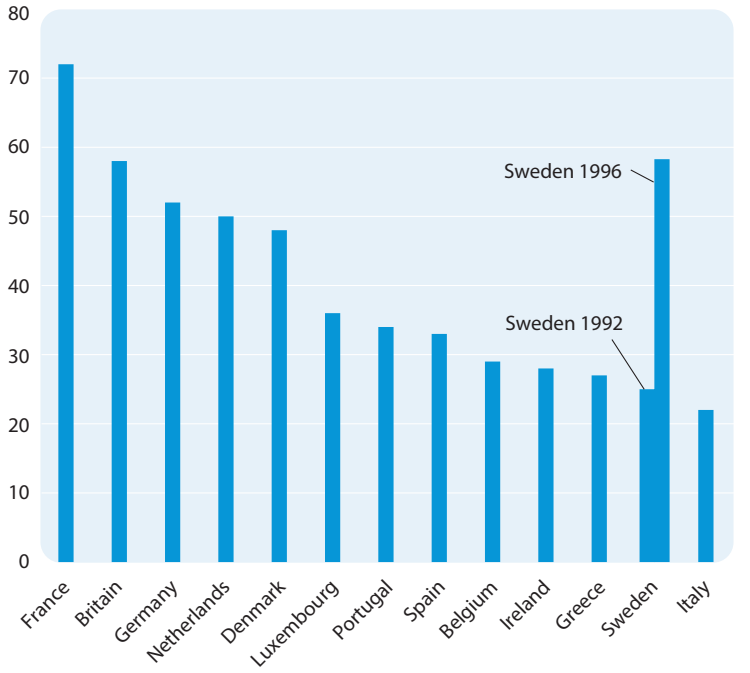


Figure 1.6 Tighter budget process than in Sweden.

Note: Index of the tightness in the government budget process.
Source: Molander 2001.

budget deficit led to reforms due to which Sweden was a few years later instead among those countries with the tightest budget processes – see Figure 1.6.

Reforms created a tighter budget process in Sweden

In summary, the current Swedish fiscal policy regulatory framework consists of a top down perspective in the budget process, a government budget surplus target, an expenditure ceiling, a requirement for municipal balance, the European budget rules and the Swedish Fiscal Policy Council. Even if there is agreement that the fiscal policy regulatory framework has created sound public finances which facilitated the crisis management in the last few years, critical voices have been raised against the design of several of the rules. The government budget surplus target, which stipulates that public sector financial savings be

1 percent of GDP over a business cycle, has, for example, been criticized for including financial savings rather than total savings, which has been considered to create weak investment incentives.[5] Besides the fact that the government budget surplus target gives rise to large public savings, private savings are also large. As shown in Chapter 3, investments in infrastructure and real estate in Sweden are, at the same time, low from both an international and a historical perspective. Accordingly, Sweden has a large current account surplus and thus, contributes to the global imbalances. We will return to the relationship between savings and investments in Chapter 3 of this report.

The government budget surplus target has been criticized

Low inflation before and during the crisis

Sweden did not only reform its fiscal policy after the crisis in the 1990's. There was also a change in the monetary policy framework. The failed ambition to keep the value of the Swedish krona fixed to an average of various European currencies was abandoned. Instead, the value of the Swedish krona was allowed to float freely in November 1992 and since then, monetary policy has been controlled by an inflation target. The position of the Riksbank in relation to the government and parliament did, at the same time, become gradually more independent. This trend is described in more detail in Chapter 5.

A picture of the change in the monetary policy regime is given in Figure 1.7, which shows inflation in Sweden, the euro area, Britain and the US. In the 1970's and 1980's, inflation was at an annual 5–10 percent, sometimes even higher, but has been stabilized at around 0–5 percent per year since the beginning of the 1990's. Low and stable inflation has become an important objective for economic policy and the central banks have obtained an increased independence in their work at reaching this objective. In these respects, there are considerable similarities among monetary policy in Sweden, the US, the euro area and Britain.

Low and stable inflation are important objectives

But there are also important differences. Sveriges Riksbank and Bank of England have explicit inflation targets, which is not the case

5. See, for example, Bäckström (2007) and Lindbeck (2008).

for the Federal Reserve in the US. How important this difference is in practice is an open question, not the least since it is not entirely obvious how an inflation target should be more exactly defined. Also in Sweden, where the official objective is expressed in terms of the consumer price index (CPI), the monetary policy decisions are affected by the development of other kinds of measures of inflation. The central banks in all countries also carefully watch different measures of so-called *core inflation*.

The instructions of the Federal Reserve do not only include that inflation should be kept low and stable; monetary policy should also be

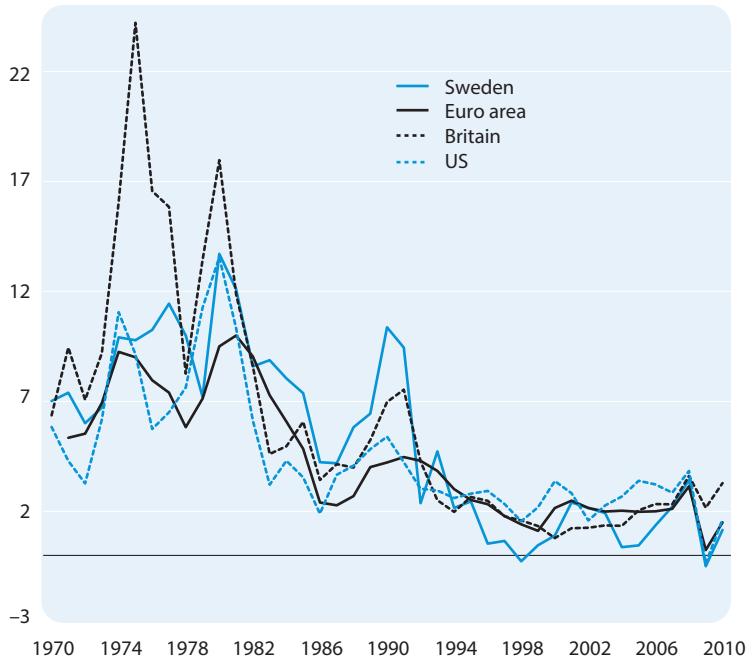


Figure 1.7 Lower inflation.

Note: Change in percent of CPI as compared to the previous year: The Euro area excluding Malta and Cyprus.
Source: OECD; Weighted average for the euro area.

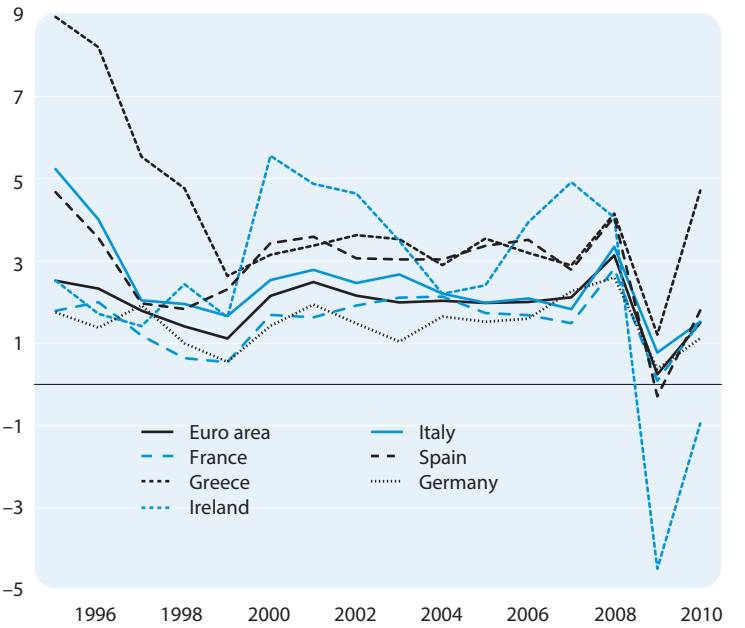


Figure 1.8 Inflation in the euro area.

Note: As in figure 1.7.
Source: As in figure 1.7.

pursued with the objective of obtaining high growth and employment. There is no corresponding wording in the Sveriges Riksbank Act.

An important difference between Sweden and Britain, on the one hand, and the US and the euro area, on the other hand, is that the monetary policies of Sweden and Britain are designed for considerably smaller »currency areas«. Even if the common monetary policy in the euro area has succeeded in stabilizing inflation at a low level for the area as a whole, it has not been able to prevent differences in the inflation rate between the different countries in the currency union; see Figure 1.8. The inflation rate in the euro area as a whole has been close to the ECB inflation target which stipulates that yearly inflation should be »close to but below 2 percent«, but this hides relatively large differences

Differences in the inflation rate in the euro area

in the inflation rate between countries. In Germany, just like in Sweden, average inflation has been somewhat below 2 percent, while for example Greece, Spain and Ireland have had an inflation rate above 3 percent for long periods of time.

Certain differences in the inflation rate between different countries in the euro area and, for that matter, states in the US and regions in Sweden, must be accepted. Different regions grow at different rates and certain differences in the inflation rate are in all likelihood unavoidable. At the same time, there are good reasons to believe that the differences in inflation between the euro countries are not only the result of completely natural market mechanisms. Deficiencies in other economic policies than monetary policy – such as fiscal policy – have also played a certain role.

One kind of criticism that has been directed against the monetary policy of the Riksbank is that, on average, it has been too tight.[6] Among other things, this argument builds on the observation that, on average, inflation has been lower than the 2 percent that have been stipulated within the framework of the inflation target since it was introduced in 1993. This appears clearly in Figure 1.7. In this figure, we also see that since the mid 1990's, inflation has, on average, been lower in Sweden than in the US, the euro area and Britain. A great deal of the criticism against the low inflation builds on the idea that the tight monetary policy has had negative effects on unemployment. In Figures 1.3a–c, we do, in fact, see that unemployment in Sweden was higher than in the US before the latest crisis, but that it has then risen more swiftly in the US. We also see that the euro area, which similarly to the US has had a higher inflation than Sweden, has not generally had lower unemployment. Ireland has had lower unemployment than Sweden, but has had a stronger increase in unemployment during the latest crisis. The same applies for Denmark. Both Germany and Greece had higher unemployment than Sweden 2000–2007. Then, unemployment in Germany has fallen below the level of Sweden, but there has been a strong increase in unemployment in Greece. Accordingly, these figures

Criticism against low inflation in Sweden

6. See, for example, Assarsson (2011).

do not provide any support for the view that there is any simple relationship that would mean that lower inflation is always connected to higher unemployment. The fact that there is no such relationship – a so-called Phillips curve – which is stable over time was an important lesson from the development in the 1960's and 1970's. The lesson was also that economy policy does not face any choice between unemployment and inflation, other than possibly in the short run. We will return to the question of how the inflation target should be designed and whether Swedish monetary policy has taken unemployment (or some other measure of the real-economic activity) sufficiently into account in Chapter 5.

No simple relationship between inflation and unemployment

Low interest rates, high housing prices

A completely different kind of criticism against monetary policy, both in Sweden and in other countries, was that it was too expansionary before the latest economic crisis and kindled a »bubble« with strong credit growth, strongly increasing housing prices, an increased level of debt and an increased sensitivity to shocks on the financial markets. Figure 1.9 shows the trend for short-term (three-month) interest rates and supports the picture that the interest rate level was generally very low already before the latest crisis. The fall in the interest rates as compared to the 1970's and the 1980's partly reflects the fact that inflation changed into a lower gear. It is completely natural that the interest rates are high when inflation is high and low when inflation is low. The question that has arisen is whether the central banks have put too much focus on inflation stability (that is, on avoiding deflation) and thus have not taken into account other imbalances that have been building up due to the low interest rate level.

An illustration of what might be a symptom of growing imbalances is given in Figures 1.10a–b which show the trend in housing prices. Real housing prices were doubled in Sweden 1997–2007. This trend is frightening, since there was a swift (but not as swift) increase in housing prices in Sweden also before the crisis in the 1990's. Reinhart and Rogoff (2010) have shown that there is a clear historical pattern in that

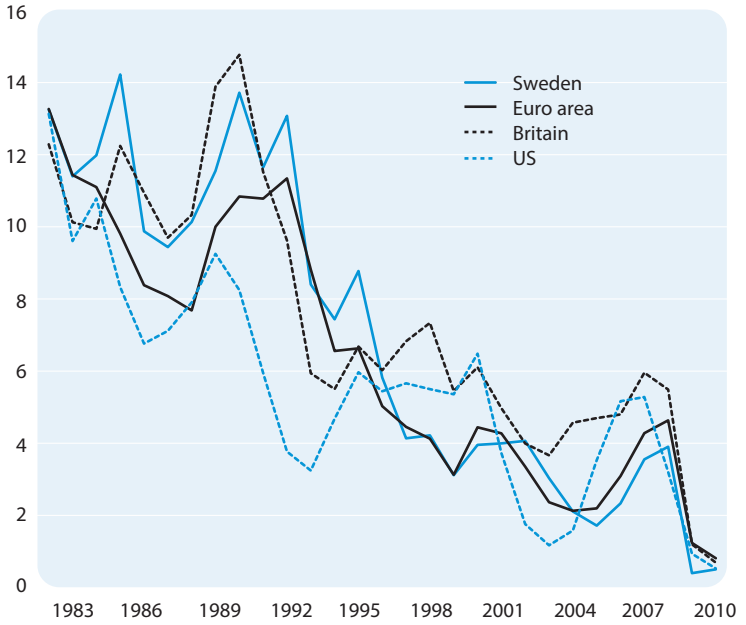


Figure 1.9 Low interest rates.

Note: Data on short-term interest rates, interest rate on the money market, alternatively interest rate on treasury bills. Euro area excluding Malta and Cyprus.
Source: OECD Economic Outlook 89.

financial crises are often preceded by rapid increases in housing prices. In Britain and Ireland, there was an even stronger increase in housing prices than in Sweden between 1997 and 2007. Sweden is an outlier in the sense that housing prices have not fallen during the latest crisis, they have rather continued to rise.

Financial crises are often preceded by rapid increases in housing prices

There are many different factors that affect housing prices, such as, for example, general economic growth, taxes and subsidies, regulations and population growth. Housing prices are, of course, also affected by the supply and price of credits, an area where the central bank has a very large influence. In Chapter 5, we will discuss whether monetary policy should, in principle, take the trend on the credit markets and different signs of risks for instability on the financial markets into special account, besides those effects that might go via inflation.

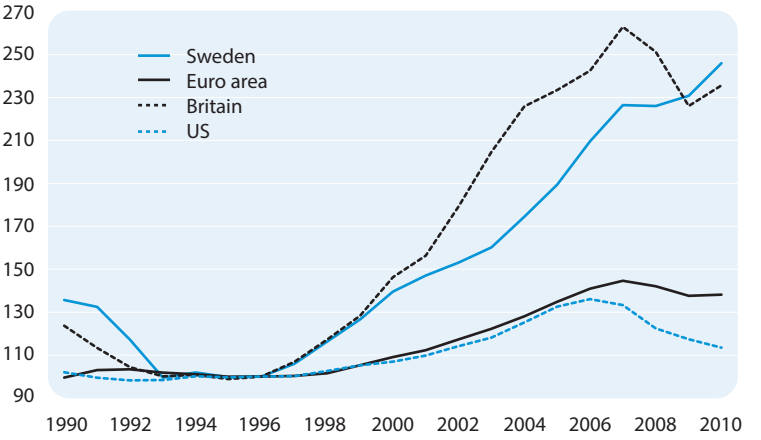


Figure 1.10a High housing prices.

Note: Housing price index deflated by CPI, 1996=100.
Source: BIS.

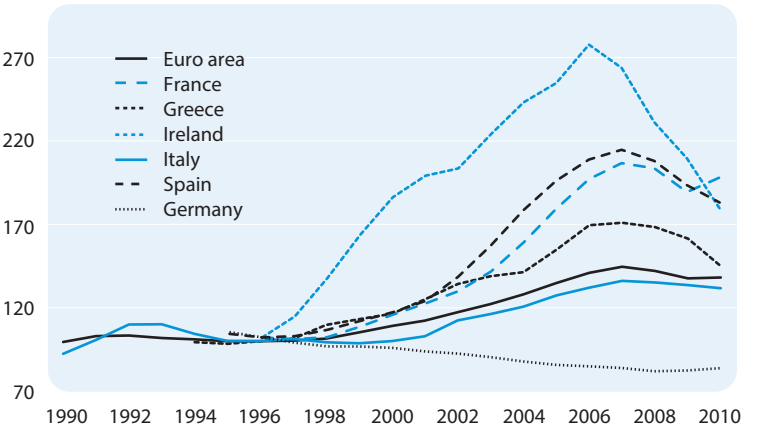


Figure 1.10b Housing prices in the euro area.

Note: As in Figure 1.10a.
Source: As in Figure 1.10a.

In summary, we find that independent central banks have been targeting, and succeeded in, maintaining a low and stable inflation since the beginning of the 1990's. But this has not been sufficient to prevent an economic crisis. Whether monetary policy did in any way contribute to the emergence of the crisis is an open question. The difference between Sweden and other countries is larger when it comes to the fiscal policy regulatory framework and the degree of balance in the public finances than when it comes to the regulatory framework of monetary policy and inflation. This indicates that Sweden faces the same challenges as other countries in the monetary policy area, while Sweden's need to reform the fiscal policy regulatory framework is smaller than in other countries.

Larger differences in fiscal policy than in monetary policy between Sweden and other countries

Summary of the report

In this chapter, we have found that, as compared to other countries, the macroeconomic trend in Sweden was not remarkably good during the initial years of the economic crisis if considering common indicators such as GDP growth, unemployment and inflation. GDP growth has, indeed, been relatively high in 2010–2011, but this should be seen against the background of the fall in GDP 2008–2009 being unusually large and that unemployment is still high. However, ever since the crisis at the beginning of the 1990's, Sweden has succeeded in maintaining a considerably better balance between public expenditure and tax revenue than other countries. In contrast to many other countries, public debt has been relatively stable during the crisis and the budget is close to being balanced. Other countries are now forced to tighten their fiscal policy, while in Sweden, there is still scope for stimulating the economy by lowering the taxes or increasing public expenditure if needed. The Riksbank also has a certain scope for stimulating the economy since inflation is lower than in many other countries and there seems to be no serious threat to the inflation target in the next few years.

Sweden has scope to stimulate the economy

This relatively favorable situation still raises some questions about how stabilization policy should be designed. Do the surpluses in the finances mean that government fiscal policy has been too tight? Could

the effects on economic activity in Sweden of the crisis in the surrounding world have been mitigated by a more active fiscal policy? Has the fiscal policy regulatory framework had a stabilizing effect on Sweden's economy or does it put too tight a straightjacket on government policy? Or has, in contrast, higher savings in the public sector than what is normally the case been required in order to create a buffer and a scope of action for dealing with an even worse economic crisis? Has the Riksbank done its best to stabilize the economy, or does the low inflation indicate that the interest rate should have been lower? Or should the interest rate, on the contrary, rather have been higher to put a brake on the level of debt in the private sector and thus make Sweden's economy less sensitive to new shocks to the world economy and to the credit markets? In that case, does this mean that the mandate of the Riksbank to maintain price stability must be supplemented with other instructions and new tools?

Many of the questions that we deal with are urgent but also complicated. We are thus forced to leave several of the questions unanswered but hope, by presenting arguments for and against different proposals and solutions, to encourage a debate and future research.

The message of the 2012 report from SNS Economic Policy Group, *Simple Rules, Difficult Times – Is stabilization policy in need of change?*, can be summarized in the following way:

- Carefully designed *economic-policy rules and institutions* decrease the risks for a bad economic policy and are favorable for the long-run economic trend. But even if rules are good in theory, it is far from obvious how they should be formulated and implemented in practice. Simple rules are clear and easy to evaluate. At the same time, they might lead to a worse policy than more complicated and sophisticated rules. Theoretical and empirical research indicates that it is desirable to follow simple rules for fiscal and monetary policy when there are regular business cycle fluctuations. However, there might be reason to deviate from the rules when the economy is subject to extreme shocks.

Simple rules have advantages and disadvantages

- An important lesson from the crisis, in particular from the experience in other countries, is that *financial stability* is a necessary con-

dition for the credibility of the rules for fiscal and monetary policy. The government budget can be weakened quickly if there is a threat to financial stability, and it can also be necessary to disregard the inflation target in extreme situations.

Financial stability is a necessary condition for a credible fiscal and monetary policy

The current frameworks for fiscal and monetary policy are not sufficient to ensure financial stability – this requires new rules which clarify both which authority that has the main responsibility for surveilling financial stability and what tools it has at its disposal.

¶ The trend in the last few years does not justify a change in the attitude to the *design of monetary policy*, but it does justify a clarification of the mandate of the Riksbank.

- The responsibilities and the authority of the Riksbank in dealing with financial stability must be clarified. The main responsibility for the macroeconomic surveillance of the financial markets can be entirely assigned to the Riksbank, be split between the Riksbank and other authorities or be located entirely outside the Riksbank. At present, the Economic Policy Group does not find it to be evident which solution should be advocated but considers there to be much in favor of a solution where the Riksbank is given the overall responsibility.

There is a great deal in favor of giving the Riksbank the overall responsibility for macroeconomic surveillance

- Since it can be claimed that financial stability is a condition for price stability, we consider that the objective of financial stability in the Sveriges Riksbank Act should possibly be superior to the objective of price stability. The close relationship between financial stability and price stability is one of the reasons why it becomes natural to give the responsibility for macroeconomic surveillance to the Riksbank.
- We do not consider there to exist any sufficiently strong arguments to motivate that the current price stability objective of the Riksbank be supplemented with an explicit objective for unemployment or capacity utilization.
- We do not considered there to exist any sufficiently convincing arguments that an increase in the level of the inflation target would lead to any stabilization policy gains or lower unemployment. It cannot be excluded that increasing the inflation target

would jeopardize the credibility of the Riksbank price stability objective. Since the possible gains of such an increase are connected with considerable uncertainty, we consider that the 2 percent inflation target should remain unchanged.

¶ *Fiscal policy* is more complicated than monetary policy and involves a larger set of policy considerations. Fiscal policy can thus not be delegated in the same way as monetary policy, and it is not possible to define as clear objectives for fiscal policy either. An independent fiscal policy council that analyzes whether the policy that is being pursued is compatible with the stipulated objectives is thus an important part of the fiscal policy regulatory framework. The assessment of the Economic Policy Group is that there is a well-functioning fiscal policy regulatory framework. There are, however, a number of points where changes can be discussed.

Increasing the inflation target could also jeopardize the credibility

- The fiscal policy regulatory framework requires long-term planning for the size of public expenditure but not its composition. There is a risk that the political process increases public consumption and transfers at the cost of long-term investments. We propose that the government presents a plan for public investments in the next few years in connection with the expenditure ceiling being set for three years onwards. This plan can be considered to be a floor for investment expenditure within the framework of the expenditure ceiling.

A public expenditure ceiling should be supplemented with an investment floor

- Due to the requirement for municipal balance, there is a risk that fiscal policy becomes procyclical at the municipal level so that an expansionary fiscal policy at the central level runs the risk of being counteracted by a contractionary fiscal policy at the local level. Thus, there might be reason to either soften the requirement for municipal balance or introduce an automatic adjustment of governments transfers subsidies to the municipalities that is related to the state of the business cycle.
- The mandate of the Swedish Fiscal Policy Council should apply to a limited area focusing on whether the public finances are run with a sufficiently long planning horizon, are sustainable in the long run and are well-adjusted to the business cycle. A fol-

The Swedish Fiscal Policy Council should study public investments in detail

low-up of the plans for public investments should be included in the detailed study of the fiscal policy pursued by the council.

¶ Experience from the latest economic crisis indicates that Swedish monetary and fiscal policy have largely been well-designed. If the economic crisis in the surrounding world were to become worse and lead to a deeper business cycle downturn in Sweden, there would be scope – also with the current regulatory framework– for the government to allow larger deficits in the public finances and for the Riksbank to accept higher inflation.

Scope for allowing larger deficits and inflation

The remainder of the report is organized as follows.

In *Chapter 2,* we discuss the pros and cons of stabilization policy rules and what lessons can be learnt from economy theory and from history when it comes to the credibility of economic policy. Stabilization policy rules are needed, but *»the devil is in the details«*. The latest crisis has illustrated that rules that reduce the risks for financial instability are necessary for fiscal and monetary policy rules to be sustainable and credible.

In *Chapter* 3, we discuss the trend for savings and investments in Sweden. The trend for these variables is of importance for how the design of fiscal and monetary policy is to be considered in Sweden. We show that there has been an increase in the level of household debt in relation to disposable income in the last few decades, but that there has still been an increase in household net wealth in relation to household income, since there has also been an increase in household assets. The low interest rate level has probably contributed to the growing household debt while increasing asset prices and extensive savings in occupational pensions have probably contributed to the growing assets. We also show that Swedish investments in real estate and infrastructure are low in an international and historical comparison. However, it is difficult to determine if investments are *too* low. That investments in housing have been relatively low in Sweden indicates that housing prices in Sweden have largely been affected by limitations on the supply side. This means that the risk for a »loan-driven housing bubble« might possibly be smaller in Sweden than in other countries where the demand side has been of great importance. This is of importance for both fiscal

and monetary policy.

In *Chapter 4*, we discuss Swedish fiscal policy. A decomposition of Swedish government debt shows that the consolidation of the public finances after the crisis in the 1990's has contributed to keep the debt ratio at a low level. A comparison with the US shows that in the US, it has, to a larger extent, been possible to rely on high GDP growth in order to limit the debt ratio. Since population growth, and thus also GDP growth, are expected to continue to be higher in the US than in Sweden, it will also in the future be more important to limit the growth in government debt with a budget balance or a budget surplus in Sweden than in the US. Then, we discuss the relationship between financial crises and fiscal policy as well as the design of the fiscal policy regulatory framework.

In *Chapter 5*, we discuss Swedish monetary policy. Is there a need to reformulate the inflation target? Should monetary policy put more weight on other circumstances, such as for example the situation on the labor market or the risk for instability on the financial markets? Should the inflation target be higher? We also discuss the important question of who should be responsible for financial stability. Should the Riksbank get a more extensive responsibility for financial stability or should a completely new authority be established? Here, we provide a survey of those arguments that have been presented in the debate and discuss possible solutions.

1 2 3 4 5

Rules for economic policy

In the last few decades, Sweden and many other countries have undergone a change towards a rules-based economic policy. In this chapter, we enter into the background of this trend and draw some general conclusions. In the following chapters, the consequences of these conclusions are developed for Sweden.

Inflation target and an independent Riksbank

The banking crisis and the dramatic fluctuations in the exchange rate at the end of 1992 raised the idea that the Riksbank was to abandon the fixed exchange rate and change to a price stability regime, which was introduced in 1993. In practice, the price stability objective has been defined as a two-percent target for the inflation rate according to the consumer price index. In 1999, the price stability objective was confirmed by law, the Riksbank obtained greater independence and an Executive Board with six members was created. Currently, the Riksbank enjoys an exceptionally good reputation among the general public as well as in political circles and in academia.

Fiscal policy rules

Sweden has also made the transition to a more rules-based fiscal policy regulatory framework. Normally, people talk about fiscal policy restrictions as being rules-based if they fulfill two conditions: they are (a) permanent and (b) stipulate numerical limits. Both these conditions have been fulfilled. Similar to other EU-member countries, Sweden is subject to those restrictions for budget deficits and debt in relation to GDP that are stipulated in the Stability and Growth Pact.

Moreover, Sweden has introduced a government budget surplus target amounting to 1 percent for the public budget over the entire business cycle and follows a system with a yearly expenditure ceiling with a fixed budget margin. Since 2007, the Swedish Fiscal Policy Council has pursued an independent surveillance of fiscal policy and has evaluated to what extent it is compatible with the stipulated numerical objectives. The Swedish fiscal policy regulatory framework is widely recognized and has come to serve as a role model for other countries. The British coalition government of Liberal Democrats and Conservatives created their »budget unit« (OBR) shortly after it came into power, and this unit does largely play the same role in the British budget process as the Swedish Fiscal Policy Council in the Swedish one. In the Danish election campaign in September 2011, there were economists who suggested that the country should import a fiscal policy regulatory framework

The Swedish framework is a role model for other countries

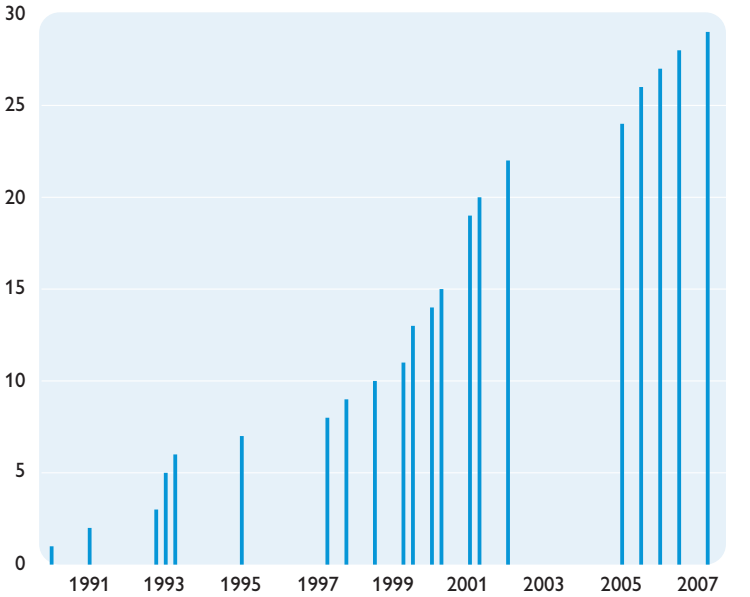


Figure 2.1 Number of countries that have introduced an inflation target.

Source: Svensson (2010).

in accordance with the Swedish model and Irish economists have had similar lines of reasoning.

These development tendencies reflect a wider movement towards a rules-based economic policy. The idea of having a set objective for the price level or inflation was already discussed at the beginning of the twentieth century, but it is only lately that the idea has been transformed into policy in practice in a large number of countries. This trend started in 1990 with the Reserve Bank of New Zealand Act 1989. The inflation targeting policy has then spread to a large number of countries (see Figure 2.1).

»Strict inflation targets« are not popular

The exact design varies somewhat between different countries, but most countries do have an inflation target that allows a certain flexibility. So-called strict inflation targets have not gained any larger popularity. In practice, monetary policy is often discussed in terms of changes in the short-term interest rate based on forecasts about expected inflation. A large number of academic findings indicate that setting the short-term interest rate according to the Taylor rule provides a relatively good description of central bank policy also in countries that do not follow explicit inflation targets, such as the US.

Fiscal policy rules have a long history. They were sometimes applied in the nineteenth and twentieth century when government debt had grown so large that there was a need for stabilizing the debt situation. An example is the introduction of budget balance rules in Germany, Italy and the Netherlands after World War II, rules which were then abolished when the economic conditions had improved. Lately, there has also been an increase in the use of simple numerical rules under less dramatic circumstances. Figure 2.2 illustrates statistics collected by the European Commission on the numerical rules that are applied in the EU economies. There has been a strong increase in the number of fiscal policy rules in the last two decades even if the trend seems to have returned to a level somewhat below that of *The Great Recession*. Also outside Europe, there has been a strong increase in the use of fiscal policy rules, in particular in growing economies and low-income countries, see IMF (2009). The fiscal policy regulatory frameworks include explic-

BOX 2.1 THE TAYLOR RULE

A suggestion for a rule for determining the nominal short-term interest rate of the central bank was presented by John B. Taylor in 1993. Taylor thought that interest rate policy should be characterized by three criteria: The first criterion is that the central bank should design its monetary policy considering both inflation and real economic activity, measured as GDP. The second criterion is that the interest rate should not be affected by the exchange rate, except indirectly through its effect on the two above mentioned indicators. The third criterion is that in monetary policy, one should work on the monetary policy rate instead of money supply. The specific rule suggested by Taylor can be expressed in the following way:

$$i_t = r_t + \pi_t + \theta_y (y_t - y_t^*) + \\ + \theta_\pi (\pi_t - \pi_t^*) + \theta_x x_t$$

where i_t is the nominal interest rate, r_t is the natural real interest rate, π_t is inflation, π_t^* is the inflation target, y_t is production, y_t^* is an indicator for desired production, x_t are other indicators that might have a direct influence on the interest rate and θ_y, θ_π and θ_x are the effects on the interest rate at deviating values on the three indicators.

The original Taylor rule left no room for other shocks (θ_x=0), the inflation target was assumed to remain unchanged at 2 percent per year and the normal nominal interest rate was assumed to be fixed at 4 percent. Furthermore, Taylor assumed that θ_y=θ_π=0.5. Referring to both empirical and theoretical reasons, later research has advocated rules where inflation has a considerably stronger effect, with θ_π above 1.

In practice, the monetary policy rates of many central banks seem to correspond to a behavior where the interest rate rule is based on a forward-looking inflation measure. In addition, normal Taylor rules must be based on some kind of measure of desired production. This is often considered to be the natural production level (which would be realized when there is full employment) or the efficient production level (that would be realized if all prices and wages were completely flexible). Both these measures are impossible to observe in practice, even if they can be estimated with econometric methods. The interest rate rules that are used by central banks do also mean that, in practice, interest rate changes are evened out over time. The difference between the actual interest rate and the interest rate level that is determined by the rule is gradually eliminated over time.

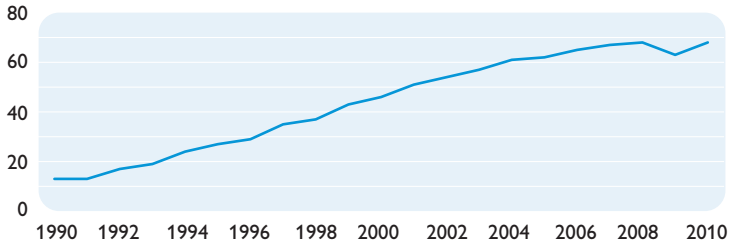


Figure 2.2 An increasing number of fiscal policy rules in the EU.

Note: The number of fiscal policy rules in the EU.
Source: European Commission.

it restrictions on expenditure, taxes, deficits and level of debt. These apply for different institutional levels (for example, governments and municipalities), but in contrast to monetary policy, the fiscal policy rules consist of restrictions on the political *control instruments* (while the inflation target is instead about the *objective* of monetary policy).

This chapter deals with the following questions:

- What economic forces motivate the use of a rules-based economic policy?
- What are the fundamental differences between the frameworks of monetary and fiscal policy?
- Can monetary policy and fiscal policy rules be discussed separately? Are there any connections to the financial sector?
- What does economic theory say about »optimal« rules?
- Should there be any flexibility in applying these rules?
- What do the empirical findings say about the efficiency of rules-based policy?

The arguments for rules

The trend towards a rules-based policy might, in a way, seem strange: If fixed rules set limits to the possibilities of politicians to react to eco-

nomic shocks with policy measures, how come that those who design economic policy still seem increasingly anxious to introduce such rules?

Monetary policy rules are needed to counteract high inflation

Independent central bank and inflation target

The main argument for a fixed regulatory framework for monetary policy is well-known and related to the time inconsistency problem of optimal policy. If the politicians lack mechanisms for committing themselves for the future, the monetary policy might create tendencies to inflation. The stumbling block is the discrepancy between the incentives for those who are responsible to promise low inflation ex ante (in advance), at the same times as they have incentives ex post (in arrears) to create higher inflation once the private sector has expectations about low inflation. Such differences between commitments to the policy ex ante and the actual policy ex post emerge when those who are responsible do not only care about the inflation outcome but also about aggregate economic activity (including the outcome on the labor market). In such situations, the private sector, does, however, always take the incentives of those who are responsible into consideration ex post and thus, it has higher inflation expectations than what those in power have incentives to express ex ante. The result is that there emerges an equilibrium with unnecessarily high inflation (inflation bias), a wedge between the inflation rate that is the target of those who design the policy and the real inflation rate.

Lower flexibility is compensated by less inflationary tendencies

Due to such time inconsistency problems, politicians might find it optimal to limit their freedom of action and delegate the policy to an independent central bank. The general idea is thus that the delegation of monetary policy to an independent authority with a clear mandate (for example an inflation target) and an adequate institutional framework is to eliminate the incentives to deviate from the stipulated objectives of monetary policy ex post. The cost for such a rule is lower flexibility. However, this is more than sufficiently compensated by the advantage of no longer having any inflationary tendencies due to a discretionary policy. The important thing is that the monetary regime provides a credible framework for pursuing monetary policy. Without

credibility, there is a risk that delegation will have no effect. We will return to this later.

Other factors have also contributed to lower inflation

A superficial reading of the findings from empirical research indicates that a rules-based monetary policy has been successful when it comes to keeping inflation down, given the trend with a falling inflation rate that we have observed in the last few decades (see Chapter 1). But the experiences must be interpreted with some care, since there are also other factors that have contributed to low inflation (such as the gradual removal of trade barriers at the international level). Academic research has not succeeded in showing that countries with inflation targets have had a lower inflation than countries without any such monetary policy regime, see Ball and Sheridan (2003). However, the lack of empirical support for the gains of a system with inflation targets might reflect a lack of sufficient information for controlling for endogeneity: If only countries that have tendencies to inflation introduce inflation targets, it might be difficult to discover the advantages of such a policy in country comparisons.

Time inconsistency is also an argument for fiscal policy rules

Fiscal policy rules

Time inconsistency is also a fiscal policy problem. A well-known example concerns time inconsistency in optimal taxation of capital income. Due to the distortionary effects, conventional economic theories favor a low (no) optimal taxation of capital income. But in the absence of binding rules, a government with a capital income tax of zero percent has a strong incentive to tax capital income once the capital stock has been well-established. This time inconsistency problem gives an inefficient final result with less private investments than what is optimal, since the private sector expects a higher taxation of capital income.

However, there are other and probably even more important reasons than these for introducing a rules-based fiscal policy. Some arguments that have often been put forward for a fixed regulatory framework for fiscal policy include:

The risk of too high a debt level

Moral hazard. Fiscal policy is limited by the budget restriction, but despite this, there might be an incentive for those who are responsible

to pursue an irresponsible fiscal policy if they think that other agents will come to their rescue if they do not succeed in paying their debts. This gives rise to a potentially serious problem which is an example of so-called *moral hazard*.

- It might, for example, be tempting for municipal and regional agencies to act in an irresponsible way if they can count on the fact that the government will intervene and rescue them.
- In supranational contexts – such as the European currency union – sovereign states might have incentives for too high levels of debt, if they can count on being rescued by other countries.
- *Moral hazard* can also be a problem at the government level within countries, since current generations have an incentive to shift the financing of current expenditure to future generations. In that case, there is a risk that politicians make decisions that lack a long-term perspective. *Moral hazard* can thus give rise to »too large debt« and create external effects for different public institutions by affecting the costs for the level of debt.
- Rules limiting the level of debt can be a way of dealing with such problems. However, such rules only work if there are efficient punishment and surveillance mechanisms that allow some kind of intervention if the rules are not adhered to.

Common pool problems. Public expenditure is usually related to the needs of different groups in society; revenue, on the other hand, is usually taken from the whole economy. Thus, individual groups have incentives to lobby for succeeded in obtaining a larger share of the common revenue (see, for example, Velasco, 1999).

Special interests might lead to too large budget deficits

- Different ministries within a government can give rise to common pool problems, which tend to lead to far too ambitious spending plans.
- Special interests can put pressure on politicians in order to favor their interests at the expense of other special interests.
- Municipal and regional agencies can compete about budget items in the government budget.
- Common pool problems do thus give rise to a tendency to too large public expenditure and too large deficits.

- Common pool problems can be dealt with through expenditure limits, possibly in combination with restrictions on the largest allowed budget deficit and through the design of the budget process.

Democratic aspects on fiscal policy. In democratic countries, there are inherent mechanisms that tend to give rise to large public sectors, too large budget deficits and too large fiscal policy volatility.

Voters with a short-term perspective can lead to large deficits

- The electorate sometimes has a short-term perspective on deficits. Accordingly, politicians tend to pursue an expansive policy, which might lead to a deficit. This can occur if the voters have no knowledge of (or undervalue) to what extent funding is, in fact, shuffled onto future voters. This problem is related to (but still differs from) the above mentioned *moral hazard* problem.
- Democratically elected governments do also have a strong tendency to far too large expenditures in years with an abnormally large tax revenue as well as in election years if such expenditure contributes to the popularity of the government. This mechanism creates a tendency to a procyclical fiscal policy that leads to macroeconomic uncertainty.
- The current government in politically strongly polarized countries might swing between overconsumption and too high taxes due to the temptation to pursue a policy that will also limit the scope of action of future governments.
- These conditions serve to legitimize expenditure limits that restrict the possibilities for democratically elected governments to make use of the short-term perspective and incur deficits that deal with the procyclical element and decrease fiscal policy volatility.

A tax ceiling provides security for investments in physical capital and human capital

- Some countries have even introduced explicit limits to taxation. The idea is that these limits constitute implicit expenditure ceilings which give the private sector security when investing in physical capital and human capital.

In summary, there are many reasons why governments that are not controlled by any rules do not behave in an optimal way. Fiscal policy rules that can solve this kind of problems might thus lead to a better macroeconomic outcome.

Which of these factors are, in reality, most important for the design of the fiscal policy rules? The answer depends on what level of public decision-making and what kind of restriction this is about. Figure 2.3 illustrates those rules for the level of debt and budget balance that were in force within the EU member countries in 2008, at different levels of the public sector. The *moral hazard* problems are, moreover, important reasons for the restrictions on budget deficits and debt levels that have been imposed on all governments in EU member countries through the Growth and Stability Pact. Such problems also motivate restrictions on the municipal and regional sectors.

At the government level, expenditure rules reflecting that there is a concern about overconsumption and too large a public sector at this

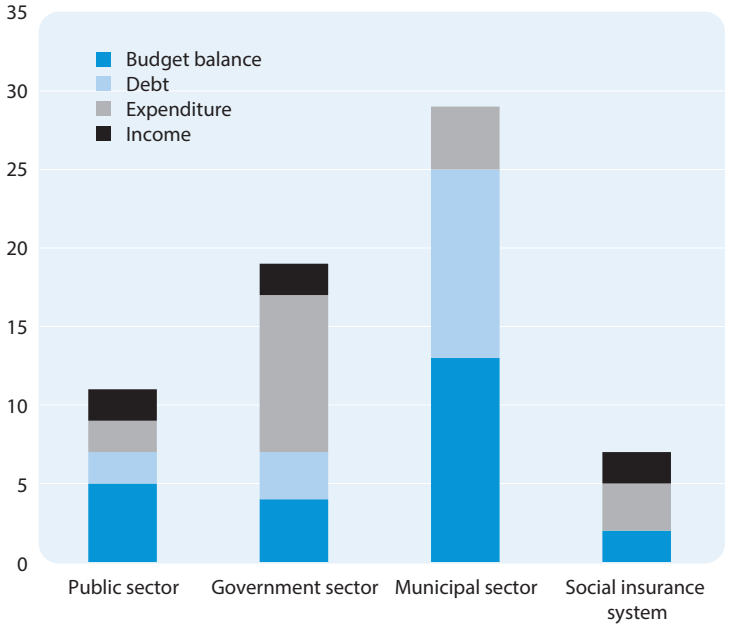


Figure 2.3 Distribution of the fiscal policy regulatory structure within EU countries in 2008.

Note: Divided into number of rules, kind of rules and sectors.
Source: European Commission.

level are especially common (government rules are here defined as the rules for the country as a whole, but not for its individual parts).

A comment about the arguments for fiscal policy rules is that questions about *moral hazard* do not only concern public institutions. Also large agents in the public sector can do business with the notion that the government would come to their rescue in case they were to become incapable of paying their debts. A sector where this is of particular importance is the financial sector. Large banks or other companies in the financial sector can believe that they are »too large to be allowed to fall«. Under such conditions, the borderline between private and public debt obligations can be dissolved and even a government that has pursued a responsible fiscal policy can have serious debt problems due to implicit debt obligations that are related to the private sector.

Large banks create risks for public debt

Differences between monetary and fiscal policy rules

There are several important differences between how monetary and fiscal policy rules are usually designed.

Instrument versus target rules

The inflation target can be considered as a rules-based objective which, in itself, does not constitute a numerical rule for the monetary policy control instrument (the interest rate). The inflation target could be expressed as a principle for controlling the interest rate of the central bank but, in practice, one tries to avoid tying the policy to such explicit rules. Within fiscal policy there are, however, usually simple numerical rules for the policy tools. Given the large range of fiscal policy instruments that is available, the rules are, however, usually tied to overall quantities (such as budget deficits or government debt) rather than to individual policy instruments (such as individual taxes or expenditure items).

The inflation target is no explicit rule for the interest rate

Is delegation of the policy a good solution?

Fiscal policy rules apply for policy incentives

Rules only work if they are credible. Credibility, in turn, requires an institutional framework within which the responsible decision maker can independently make decisions as part of her attempt to reach the stipulated objectives. This also requires that the decision-maker can be held responsible if the objectives are not fulfilled.

One has tried to deal with the problem of credibility of the monetary policy regime in many ways. Two critical factors concern the freedom of the central banks from political influence in the daily decisions and the existence of a clear institutional framework that specifies the responsibility of the central bank and what measures that are to be taken if the target rule is not followed. For the Swedish Riksbank, the price stability objective was confirmed by law in 1999 and other authorities are prohibited from trying to influence the decisions of the Riksbank. When appointing members of the executive board of the central bank, weight is also attributed to appointing people who are known to be critical to inflation and who have a good reputation among the general public.

Other authorities are prohibited against influencing the Riksbank

Fiscal policy is different. First, delegation is not always suitable, at least not when it comes to government policy. Besides technical adjustments, changes in fiscal policy instruments normally require legislative changes and are subject to democratic institutions. Rules for policy instruments at the government level are normally the result of political agreements. Thus, they cannot be interpreted as strict rules, they instead rather work as a way of conveying government intentions. This does not necessarily mean that parties in a government position will not follow such rules, but one must realize that governments can actually change rules that limit them in an undesired way. The breaking of such rules is, in particular, sanctioned by the risk for loss of popularity among the electorate. This risk might be sufficient to prevent governments from breaking rules, but one must realize that it is only a clearly indirect sanctioning mechanism.

A government can change fiscal policy rules that it has designed itself or that have been designed by previous governments

This is in contrast to the application of rules for authorities at the municipal level. These rules are often part of the special administrative law or constitution, while the sanctions are usually stipulated in laws

or political agreements. For rules introduced by supranational institutions that apply for sovereign states, the credibility is often fragile since there are no real sanctioning mechanisms.

Variations in the possibilities for sanctions

A crucial problem for the credibility of fiscal policy rules is insufficient reporting (»creative accounting«). If the deficiencies in the reports are sufficiently serious, the whole basis for the fiscal policy rules has deteriorated since there is thus no way of establishing whether they are actually being followed. Deficiencies in the reports are often obvious in retrospect but it can be difficult to see the risks in advance. Hallerberg, Strauch and von Hagen (2004) stress that »… *restraints on amendments have tightened the budgetary process in Germany, Italy and Greece*«. The reforms in Greece did, in fact, contribute to spread additional mist over the budget situation.

But the problems with deficiencies in the reports can be even more extensive. A special problem concerns »golden rules« that exempt government long-term investments from otherwise existing rules for the level of debt and deficits. In practice, it might be difficult to distinguish between consumption and investment, which makes it more difficult to apply golden rules. Another case of insufficient reporting is when the reporting measure that has been applied for public expenditure is shifted, backwards or forward in time. In order to counteract such problems, it is important that there is adequate surveillance via independent authorities.

Surveillance of independent authorities is important

Besides this, it can be established that fiscal policy rules that concern variables outside the direct control of those who are responsible are not particularly meaningful. An example of this is that the government tax revenue is directly dependent on the tax base and thus, on aggregate economic activity, but this is outside the direct control of those who are responsible. If strict limitations to tax revenue are introduced, they will thus be of little importance in practice.

Communication and openness

A clear communication strategy is important for the general public to be able to understand measures taken by the central bank. Such a

strategy makes it possible for the general public to understand both the current decisions of the central bank and how it looks at the future. By pursuing a monetary policy that is consistent with its communication, the central bank can create credibility for its policy.

Central banks with an inflation target regularly publish inflation forecasts and analyses of the general outlook of the economy. The aim of such analyses is to explain different possible measures that can be taken as well as the risks faced by those who are responsible for the policy – and the economy as a whole. Different central banks publish their minutes to various extents, but also those that are characterized by a certain degree of secrecy are usually extremely anxious to explain their fundamental monetary policy strategy.

Similar strategies are applied considerably less often in fiscal policy and also less strictly. Ministries of Finance publish reports on the outlook of the economy and the budget, but it is not often that whole sets of alternative policy measures are evaluated. A possibility would be to give the Swedish Fiscal Policy Council or the Swedish National Institute of Economic Research a more clearly defined mandate to supply such information (the budget agency of the American Congress, CBO, has made great progress in this direction). However, there might be reasons why those who are responsible for fiscal policy deliberately choose a lower degree of openness. Limited openness makes it possible for governments to keep a certain freedom of action in their policy. The cost is that the general public gets less insight into how the rules affect policy and whether the rules are followed at all. Consequently, the lack of transparency decreases the credibility gains that can be obtained with a fixed fiscal policy regulatory framework.

Lack of transparency decreases the gains from fiscal policy frameworks

Sanctions

Having a sanctioning mechanism is important for credibility. If monetary policy is delegated to an independent central bank, the government (or parliament) will have at its disposal different ways of punishing a central bank that shows bad results. Leaders of the central bank and members of fiscal policy councils are usually appointed for a fixed

period of time. Thus, it is also possible to punish them by the agency that is responsible for the appointment abstaining from renewing their mandate. In certain countries (such as Britain), the central bank is expected to give a public explanation if it does not meet the objective that has been set. This is a kind of sanction for the central bank that runs the risk of a loss of popularity among the general public.

The fact that there are no possibilities for sanctions against government parties and sovereign states besides affecting their reputation is an obvious problem. A fiscal policy council can contribute to increased credibility by subjecting fiscal policy to a critical review by an expert panel. A fiscal policy council can have additional impact if it is involved in the budget process, for example by producing forecasts for relevant macroeconomic statistics (or critically evaluating public forecasts) or if it gets access to statistics from a higher level. However, this does not solve the fact that fiscal policy is subjected to democratic institutions and that politicians can make changes in the rules in reaction to economic events.

A fiscal policy council contributes to greater credibility

It is easier to use sanctions when it comes to rules for municipal or regional agencies. Municipal or regional agencies that show bad results can be punished directly by being allocated less government resources. However, this procedure requires that there exist surveillance mechanisms that are of sufficiently high quality.

For supranational rules, the question of sanctions is still an awkward subject that must be improved shortly. Within the EU, it is still very unclear if it entails any considerable costs for individual member countries to break the rules of the Stability and Growth Pact. The consequences of this have become very obvious in the present debt crisis.

The possibilities for sanctions within the EU are unclear

Rules and interaction between fiscal and monetary policy

A large part of the non-academic discussion on rules-based policy considers the fiscal policy regulatory framework to be isolated from monetary policy and the other way round. However, such a separation is misleading since there is a close interaction between monetary policy

and public debt. Basically, the interaction occurs because there is a link between monetary policy and public debt through the public budget restriction. A country that suffers from large budget deficits might find it hard to maintain a monetary policy targeting low or modest inflation. In the same way, an irresponsible monetary policy has effects on the price for the public sector and thus has a direct effect on fiscal policy.

Active and passive policy

The interaction between fiscal policy and monetary policy can result in inefficient and unexpected outcomes. An illustrative example is Sargent and Wallace's (1981) »unpleasant monetarist arithmetic«. The public budget restriction states that current expenditure (including interest and amortizations on outstanding debts) must equal public revenue and new debts that have been incurred. Public revenue does, in turn, consist of tax levies and revenue from public-owned assets (for example, the monetary monopoly). Assume that those who are responsible for the fiscal policy have committed themselves to a certain level of taxation and expenditure for the purchase of goods and services. In that case, it is monetary policy that must finally finance government debt, which might have unexpected consequences. Assume that the central bank sells government bonds on the open market. Normally, this would be expected to lead to lower inflation since the government decreases the liquidity in the economy. But higher inflation is instead generated when the fiscal policy regulatory framework has already been established. The explanation for this is that the operations on the open market for government bonds increases outstanding government debt and this, in turn, means that there must be an increase in public revenue to cover the additional interest payments and – since tax revenue and government expenditure are given – this must be done by the central bank generating profit by printing money. If the government were instead to adjust the tax or the expenditure, inflation could fall in the long run. The interaction between fiscal and monetary policy is accordingly crucial for understanding the effects of policy.

Sargent and Wallace emphasized the interaction between fiscal policy and monetary policy

Under the assumption that governments pay their debts, the inter-

action between fiscal policy and monetary policy creates restrictions which guarantee that there is one single equilibrium. The existence of one single equilibrium is important since it prevents the economy from fluctuating between high and low activity solely due to self-fulfilling changed expectations. In order to obtain such a stable equilibrium, however, the monetary and fiscal policy rules must be designed so that there is the right combination of »active« and »passive« policy, see Leeper (1991) for an early analysis of this. A passive fiscal policy rule is, for example, a rule where government debt has an effect on government expenditure and/or revenue and which is, moreover, sufficiently strong to ensure government solvency. An active fiscal policy instead means decisions on public expenditure and revenue that are not affected by the size of government debt.

An example of an active monetary policy rule is the Taylor rule which was discussed earlier in this chapter, while an example of a passive fiscal policy rule is a tax rule that aims at keeping government debt within a certain framework. The most common policy combination in the academic literature is probably that monetary policy is specified as an interest rate rule which allows expected inflation to have a sufficiently strong effect on the interest rate decision of the central bank (while GDP or unemployment only has a small effect), while fiscal policy is partly dependent on government debt. In such a regime, monetary policy creates an anchor for inflation expectations while fiscal policy serves as an anchor for a balance in the government budget and thus also for expectations on future taxation.

The Taylor rule for monetary policy and passive fiscal policy creates a stable equilibrium

Other economic policy combinations can also lead to one single equilibrium, but create undesirable effects of the economic policy. In the current recession, the fall in aggregate economic activity in certain countries was so strong that it was difficult to firmly anchor its fiscal policy. An insufficient ability to increase the tax revenue leads to a transition to an active fiscal policy. But deficiencies in one of the anchors or politicians pulling in different directions are problematic. There is a risk for a combination of fiscal and monetary policy where government debt cannot be stabilized so that a debt crisis occurs and central banks lose their ability to control the inflation trend.

The interaction between monetary and fiscal policy and connections to financial stability

In periods of extensive shocks in the financial sector, the borderline between monetary and fiscal policy becomes less clear. If solvency has been reduced in particularly important financial institutions or large parts of the financial sector, governments are forced to rescue firms in the financial sector and transform private debt into public debt. There might also be a need to supplement the assets of the central bank. Such a process does inevitably lead to incentives to lower the level of debt due to an increase in money supply. Thus, in such circumstances, there exists no real difference between fiscal policy and monetary policy.

Two important insights follow from this:

1) A sound monetary and fiscal policy requires a sound financial sector. The problem with *moral hazard* in large financial institutions can deteriorate monetary and fiscal stability. Thus, it is of utmost importance to create a regulatory framework which can handle the risk management of large agents in the financial sector and pursue an economic policy that can handle system risks.
2) It is not obvious how public debt should be calculated. Countries might have considerable commitments in the form of implicit debt obligations which means that the potential levels of debt can be far higher than what is shown in the public accounts.

The latter problem has become evident in connection with the current problems with the level of debt in Europe, and it was also a crucial factor in the East Asian crisis at the end of the 1990's. In the current crisis, the Irish experience is an example of how potential levels of debt can quickly be turned into real debt. Before *The Great Recession*, Ireland seemed to be financially stable; the country had a public debt in relation to GDP that was far below the 60 percent level that is stipulated in the Stability and Growth Pact. But in connection with the banking crisis, private debts were transformed into public debt and the public financial situation became unsustainable in a very short period of time.

Regulatory frameworks are needed to counteract risks for financial instability

In summary, the surveillance of the financial sector and an efficient regulation of the financial sector both at the micro and macro level are of utmost importance for macroeconomic stability.

Crisis in the financial sector means potentially large levels of public debt

Ireland is an example

At the same time, stability in the financial sector is dependent on a sound monetary and fiscal policy. An irresponsible monetary policy might have an immediate effect on the payment system and thus on the financial sector. A public sector with a very high level of debt can constitute a threat to the stability of the financial sector, not only indirectly through monetary policy but also directly through effects on the balance sheets. The financial sector usually invests a considerable part of its assets in government debt obligations. Accordingly, doubts about whether the public debt situation is sustainable easily spill over into a crisis in the banking sector. This creates scope for several different »equilibria« where speculative forces can trigger macroeconomic crises.

A stability council for the financial sector

Stability in the financial sector is also dependent on fiscal and monetary policy

One way of dealing with these questions would be to establish a stability council for the financial sector. The council would be responsible for the surveillance of macro financial questions at the system level. It would also supervise the regulation of the financial sector and analyze how this sector of the economy works. It would also be able to estimate potential debt levels for the public sector based on alternative scenarios for risks and the macroeconomic trend. Given the close connection between the area of responsibility of the Riksbank and stability in the financial sector, an alternative is that such a stability council be closely connected to the Riksbank. The financial stability council should also have an ongoing communication with the Ministry of Finance and/or the Swedish Fiscal Policy Council. These different parties should cooperate on certain questions but should, in normal circumstances, maintain their separate roles. An issue that must be solved is whether the financial stability committee should be given any policy instrument, such as the current Executive Board of the Riksbank, or if its role should only be supervisory.

This reasoning is in line with that of Goodhart and Rochet (2011), but partly builds on other arguments, not the least the fact that stability in the financial sector is considered to play a very important role for

fiscal policy and monetary stability. We will return to these questions in Chapter 5.

Optimal policy

It is natural to ask the question of whether economic theory provides any guidelines to what are »good« rules, in the sense that rules promote economic welfare. A government that has mechanisms at its disposal for committing its policy for the future could, in principle, be able to introduce rules that are entirely adapted to the situation and which take every current macroeconomic situation into account. But such rules would be very complicated and difficult to implement. In practice, it is thus not easy to see how the government can commit its future economic policy without giving up part of its flexibility in counteracting the different shocks to which the economy is exposed.

Rules adapted to the situation are difficult to implement

Regulatory framework under normal conditions

There is an extensive academic literature which studies the arguments for delegating monetary policy to independent central banks. Lately, there have also been analyses of how to formulate simple and efficient rules that are close to the kinds of rules that are used in practice. By »simple«, we here mean rules that do not assume any complicated forms where the policy is entirely adjusted to the situation, while »efficient« means rules that are based on variables that are easily measured in practice.

Schmitt-Grohé and Uribe (2006) analyze a so-called DSGE-model which is typically considered to provide a good description of monetary and fiscal policy. DSGE-models are mathematical macroeconomic models of the kind that is used in many central banks today. They describe the interaction among firms, households and politicians with the ambition of replicating the most important elements in the aggregate economy. An advantage of these models is that they can be used for policy and welfare analysis since they work with an explicit model of how firms, households and politicians act and focus on the aggregate

outcome (the equilibrium) of their actions.

Schmitt-Grohé and Uribe find that monetary policy should follow interest-rate rules that take the inflation rate and aggregate economic outcome into account (GDP). In order to be able to apply this in practice, Schmitt-Grohé and Uribe allow for the actual GDP level to be included in the rule instead of »potential GDP« or »GDP at flexible prices«. They also allow earlier interest rates to affect the current interest rate (so-called *interest rate smoothing*), which mirrors the fact that under normal conditions, central banks usually want to avoid swift changes in the interest rate. Furthermore, Schmitt-Grohé and Uribe specify a fiscal policy tax rule where the tax revenue reacts to government debt via the tax rates. The outcome of these rules is evaluated in the theoretical model and is contrasted to an ideal so-called Ramsey-optimal policy. The latter is constructed to obtain the best possible outcome, given the existence of certain limitations that must be dealt with by those who are responsible.

The most important results of Schmitt-Grohé and Uribe's analysis are:

- Interest rate rules that are characterized by a sufficiently strong impact of inflation and, at the same time, a modest reaction to GDP create welfare levels that are similar to the Ramsey-optimal one.
- Exactly how large is the effect of inflation is of no greater importance as long as the reaction is sufficiently strong to generate a unique equilibrium.
- However, it is important that GDP does not have any strong effect on the interest rate policy. When that is the case, the monetary policy rule generates far lower welfare and is often not compatible with a unique equilibrium.
- A strict inflation target gives rise to a welfare that is very close to the Ramsey solution.
- For economic welfare, a combined policy that consists of »active« monetary policy (that reacts strongly to inflation) and »passive« fiscal policy is superior to other policy combinations. Under such a regime, the tax policy is affected by government debt in a way that guarantees public solvency and, at the same time, makes it possible for fiscal policy to stabilize the economy using automatic stabilizers.

The interest rate policy should react strongly to inflation

Tax equalization

The above result does not necessarily mean that there are any strict limits to the public budget deficit or government debt. This might not be very surprising considering that we have previously argued that there might be a need to counteract *moral hazard* and the *common pool problem* with some kind of limitations, while both are missing in the theoretical model used by Schmitt-Grohé and Uribe (2006) in their analyses. But we would still like to emphasize that there are more general reasons for why it might be difficult to set strict limits for budget deficits and government debt.

The interest rate policy should not react strongly to GDP

A well-known fiscal policy principle is the hypothesis that taxes should be held constant over time (*tax smoothing*) by Barro (1979). This principle postulates that temporary changes in public expenditure should be followed by a permanent change in taxation so that the changed tax revenue should, in the longer run, finance the present discounted value of the expenditure change. In other words, an unexpected temporary increase in public expenditure should be followed by a temporary weakening of the government budget. However, permanent changes in public expenditure should immediately be tax financed. In other words, the principle of tax equalization means that rules on budget balance are not always desirable and that too strict rules for the public budget deficit might entail large costs, provided that the changes in public expenditure do not tend to be permanent.

Fiscal policy should be affected by the debt level

Lucas and Stoke (1983) have shown that the hypothesis about the tax rate is strongly dependent on what assets the government has at its disposal. If the government has a sufficiently large number of tools for handling public debt at its disposal, the persistence of a tax might be tied to the time profile of public expenditure. A budget balance rule does then only entail small disadvantages. Aiyagari, Marcet, Sargent and Seppala (2002) have shown that an equalization of the tax ratio should be applied in a situation where governments only have access to risk free bonds and have a limited maximum level for debts and assets. Under such conditions, it is optimal that taxes are very sluggish and the introduction of strict budget rules is then connected with considerable welfare costs.

Difficult to set limits for budget deficits and government debt on theoretical grounds

Optimal government debt

Too strict budget balance rules might incur large costs

An obvious question that one would like to reply to is what level of government debt that is optimal? A possible answer might be that governments should not incur any debts at all, since the current levels of debt do simply reflect future primary budget surpluses. This would mean that it is future generations that pay for »the overconsumption« of current generations.

However, this is too simple a view for many reasons. One such reason is that there might very well be particularly favorable opportunities that motivate public loans today. It might be the case that such investment opportunities cannot be used due to a zero rule for public debt. If such investment opportunities will mainly emerge in the future, it might certainly be optimal for the government to accumulate assets. But the normal rule is still that there are no special reasons why government debt (or assets) should be kept around zero.

Sluggish taxes might be optimal

When there are risks that the private sector cannot insure itself against, there might also be a tendency to too large precautionary savings. This might lead to an »over accumulation« of capital, something that the government can fix by taxing capital income. In the long run, a stable government debt thus requires a government net debt. Against this background, it is thus difficult to draw any definite conclusions about the optimal level of government debt, but this reasoning does, at any rate, show that there are circumstances where it is optimal for the government to have a long-term net debt.

The lesson we can learn from this is that a careful analysis of the economy is a condition for being able to have a fixed view of a suitable level of government debt. The fact that Sweden has a government budget surplus target means that in the long run, the government becomes a net lender. If this is good or bad cannot be determined without very careful economic analyses.

Normally, there are no special reasons why government debt should be zero

Unusual times and escape clauses

The above discussion applies for an economy that fluctuates normally over time, but it provides no information about what policy that

should be pursued under »extreme« conditions. In times of crisis, there might be serious restrictions on the control instruments for economic policy due to which those who design policy cannot apply the usual regulatory framework. During *The Great Recession*, for example, the nominal short-term interest rates in many countries have been located at, or very close to, their lower limit. For this reason, the central banks have not been able to use the interest rate to stimulate the economy. Furthermore, the considerable decreases in the tax revenue, which were triggered by the sharp fall in economic activity, have prevented taxes from reacting strongly to the larger government debts. In such circumstances, there might be conditions for escape clauses which allow a temporary deviation from normal policy.

Eggertsson and Woodford (2003) analyze optimal monetary policy in a so-called liquidity trap where the short-term interest rate is close to zero. Assume that the central bank sets the interest rate level according to an interest rate rule which prescribes that it keeps strictly to the current inflation target. Due to a large shock, the economy might fall into a liquidity trap, where the short-term interest rate cannot be reduced any further. Even if the central bank cannot, in such a situation, further decrease the short-term interest rate, a monetary policy strategy that gives the central bank possibilities for temporary deviations from the inflation target *after* the economy has escaped from the liquidity trap might be both efficient and optimal. Even when the economy is at the lower interest rate limit, such a policy will affect the inflation expectations and thus contribute to stimulate the activity by lowering the real interest rate. In other words, it might be optimal to, under certain conditions, allow temporary deviations from an inflation target, even if the central bank has a strict inflation target. Such a policy does, however, require that the central bank can commit to a certain policy in the future, which is not so easy in practice.

Deviations from the normal policy can be motivated in extreme situations

But the consequences of excluding the possibility of using escape clauses in liquidity traps might be even more serious. Escape clauses might be needed to exclude certain kinds of bad equilibria which would emerge if there were no scope for flexibility (see, for example, Benhabib, Schmitt-Grohé and Uribe, 2002). More specifically, assume

that the central bank applies a Taylor rule where the interest rate is controlled by inflation and GDP. If the private sector becomes strongly pessimistic about the future and decreases its consumption expenditure, firms tend to lower their prices. Thus, this process triggers a deflationary pressure, which can be dealt with by the central bank by reducing the nominal interest rates. But if the fall in consumer demand is sufficiently dramatic, the short-term interest rate might reach its lower limit. If this happens, the low inflation rate might trigger a recession which is in this case entirely driven by the pessimistic expectations. But this only occurs because the central bank is not allowed any flexibility. If the central bank could, in such situations, shift to a rule where money supply is allowed to grow at a certain rate, there might no longer be any pure equilibria with deflation driven by expectations. This is a strong reason for allowing escape clauses in advance and this line of reasoning shows that the lack of such flexibility might have undesired effects.

Temporarily higher inflation targets might be motivated in a liquidity trap

The fact that these considerations are of importance in practice became very apparent in the latest large recession. Due to the fact that the interest rates have reached their lowest level, many central banks have pursued another kind of monetary policy in this period, such as increasing the money supply and pursuing a credit policy. The future will show the effects of such unconventional policy and whether it is desirable. However, it is clear that the central banks have been very anxious to deviate from their normal low inflation policy despite the widespread agreement in central bank circles that the inflation targets have contributed to create credibility and keep inflation at a low and stable level.

In a number of studies, it has also been emphasized that the effects of increased public debt might be very large in liquidity traps and than an expansionary fiscal policy might be optimal in such a situation, see Christiano, Eichenbaum and Rebelo (2010) and Woodford (2010).

Pessimistic expectations might be self-fulfilling

Christiano, Eichenbaum and Rebelo (2010) show that the government expenditure multipliers in a liquidity trap might very well be above 1.0; this means that private consumption is reinforced when there is an increase in public consumption. The logic is that larger public consumption in a liquidity trap does not only directly stimulate

aggregate demand, but also indirectly by leading to a reduction in the real interest rate. The latter effect is due to the fact that larger public consumption leads to inflation pressure under an unchanged short nominal interest rate. Such analyses thus provide a theoretical basis for the expansionary fiscal policy that has been pursued in many countries during *The Great Recession*. The message is that in a deep recession, there might be good reason to raise the expenditure ceiling if the economy has been caught in a liquidity trap.

Moreover, it is interesting that these studies also show that a tax reduction in a liquidity trap is counterproductive since it increases the real interest rate and stimulates savings in the private sector. Accordingly, this result puts into question the policy in those countries that have implemented tax reductions, including Sweden.

Expansionary fiscal policy might be optimal in a liquidity trap

Mertens and Ravn (2010) show that the results of the multiplier effects for public expenditure are strong while the tax multipliers are small or negative in a liquidity trap depending on what is the fundamental reason for the shock that brought the economy into the liquidity trap. The authors show that there are other kinds of equilibria where the consumption multipliers are smaller in a liquidity trap than under normal conditions, while the tax multipliers are unusually large in a liquidity trap.

Moreover, one must be aware of the fact that it might be necessary to abandon prevalent fiscal policy rules after periods with a strong increase in public debt. It might be impossible to implement a tight balance objective or a rule about a strong relationship between the level of debt and tax revenue at a high level of government debt. Under such conditions, it might be optimal with rules that commit the government to gradually decrease its debt, if this can be made credible. This is obviously relevant in the current situation when *The Great Recession* and the crisis in the financial sector have entailed that many countries must tighten up their fiscal policy

During *The Great Recession*, a number of economies have either changed or abolished their national fiscal policy rules. In a survey by the IMF (IMF, 2009), the responsible authority in 43 percent of those countries that replied stated that there was no need to change the rules.

The effect of fiscal policy depends on which shock the economy is subject to

Of the remaining 57 percent, many countries reported that the rules had either already been changed or that changes were on their way. Figure 2.4 shows the strictness of the fiscal policy regulatory framework for a number of countries in Europe in 2007 on the horizontal axis; higher values indicate stricter rules for both the numerical rule as such and for how it is applied considering the institutional conditions. The vertical axis measures the change in public gross debt from 2008 to 2011, in relation to GDP in 2008. Lax fiscal policy rules do clearly seem to have a connection to larger increases in government debt, but the figure also provides certain support for the fact that the regulatory framework can become *too* strict, with the result that countries do not adhere to it. Despite the fact that Spain and Britain had among the strictest rules for fiscal policy before the crisis, both countries came to experience some of their largest increases in government debt in relation to GDP.

It might be optimal to gradually decrease government debt – if it is credible

In summary, economic research confirms that it should be possible to abandon the normal fiscal policy regulatory framework in a situation like *The Great Recession*, while the exact consequences of this are uncertain. The most important lesson might be that there must be a careful surveillance of the economy and that one should not hesitate to make unusual policy interventions if necessary. Certain caution might, however, be preferable to putting the stakes on individual multipliers being unusually large. It is interesting that this recommendation is compatible with the Swedish policy during *The Great Recession*, but not with the policy that has been pursued in Britain and the US, for example.

The fiscal policy rules have been changed during the recession

Flexibility under normal conditions

A key issue that must be dealt with in rules-based regimes is how large the scope for flexibility should be. Since we have just discussed escape clauses we will, in this section, concentrate on the flexibility of rules under »normal conditions «.

Even under normal conditions, there might be good reasons to have certain flexibility but this also entails certain problems. The most important question is how flexible rules are to be made credible.

Adjustment of the fiscal policy to the business cycle

Tax revenue is highly cyclical and thus, very strict budget balance rules might lead to a procyclical expenditure policy which might counteract automatic stabilizers and contribute to macroeconomic instability. For this reason, it is generally assumed that adjustments to the business cycle must be allowed in fiscal policy. There are three main alternatives for such adjustments:

Uncertain consequences of expansionary fiscal policy call for caution

- Many countries apply rules that are to hold over a *business cycle*. This means that the individual rules are to be fulfilled on average over the whole period, where the period in this case is defined by the length of the business cycle.
- Alternatively, a rule can be applied to a *period of several years*, which need not coincide with a business cycle. Such a rule might still mean an implicit adjustment to the business cycle, if the time interval to which the rule is applied is sufficiently large.
- Finally, budget rules can be applied to *measures adjusted for the business cycle*, such as public expenditure and revenue instead of to pure budget items.

In practice, each of these attempts suffers from severe difficulties. Britain and Sweden both have rules that span over economic trends, but the experience is mixed and in Britain, this rule was abolished in the middle of *The Great Recession*. The main question is how, at a given point in time, it is possible to see whether the economy is in a business cycle recession or if it is a business cycle downturn on trend. Economic-policy decision makers might be tempted to interpret unexpectedly good outcomes as a break in the trend (which might indicate increased public expenditure) and an unexpectedly bad outcome as the result of a temporary business cycle downturn (which requires that there is no decrease in public expenditure). Such an analysis creates a permanent tendency to too large deficits.

Strict budget balance rules can lead to a procyclical policy

Rules should allow flexibility over the business cycle

Making adjustments according to the business cycle is difficult in practice since it requires that those who are responsible have a good understanding of the non-business cycle dependent structural factors. Assume that one would like to make a business cycle adjustment of the tax revenue. This requires that one can divide the variations in tax

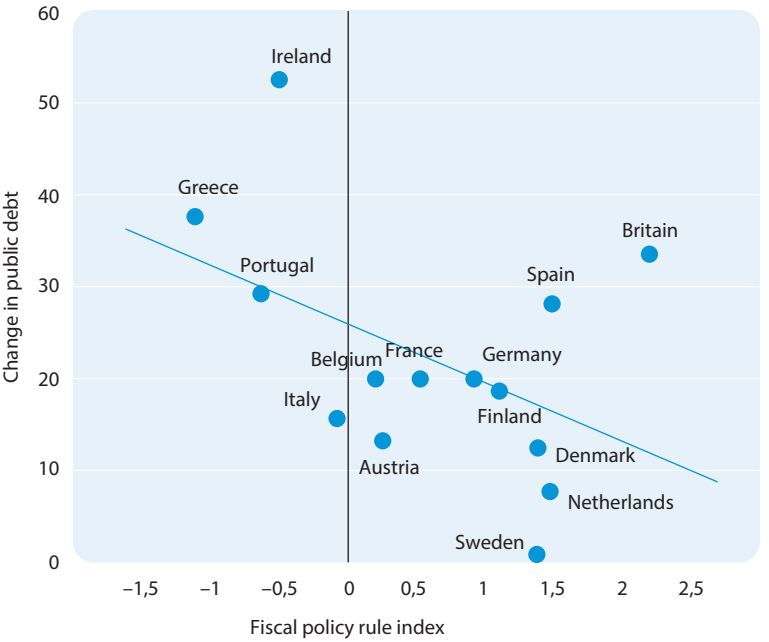


Figure 2.4 Tightness in fiscal policy and change in public debt.

Note: Fiscal policy rule index 2007 as compared to the change in the consolidated gross debt of the public sector. 2008-2011, percent of GDP 2008.
Source: European Commission.

revenue that occur over time into, on the one hand, variations that are due to automatic reactions that depend on variations in the aggregate activity in the economy and, on the other hand, variations that are due to discretionary tax changes. If one succeeds in capturing the first of these factors, it will be possible to make an adjustment to the business cycle. However, this is far from trivial since aggregate activity in the economy is most likely also due to discretionary policy changes. In other words, the evaluation of possible adjustments to the business cycle must take endogenous shifts into account. Only relating tax revenue to the aggregate activity in the economy probably serves to underestimate the automatic adjustment of tax revenue to the variation in aggregate

activity. This is due to the fact that discretionary tax increases most likely have a negative effect on aggregated activity in the economy. Such institutions as the OECD thus make continuous evaluations of the business cycle that build on combined information about the tax system and the income distribution. Such an approach is also connected with considerable difficulties, however.

Difficult to determine whether a downturn is due to a business cycle or a trend

In summary, it must be said that it is problematic to apply budget balance rules that allow for an adjustment to the business cycle. Those restrictions that apply over a business cycle and that have been adopted in Sweden are difficult to maintain since they rest on continuous evaluations of the business cycle, something that is notoriously difficult and raises questions about whether there are any incentives for the government to manipulate its evaluation of the business cycle. It would be an advantage if such incentives could be counteracted by a delegation of the evaluation of business-cycle dependent elements to the Swedish Fiscal Policy Council. This would, indeed, not solve all complicated questions related to the continuous evaluation of the state of the economy, but it might counteract politically distorted analyses.

Strict and flexible inflation target, respectively

Above, we have argued that escape clauses from normal monetary policy rules can be needed under extreme conditions. But should there also, under normal conditions, be a flexibility in how monetary policy rules are applied?

Difficult to measure to what extent tax revenue depends on the business cycle

An argument in favor of this would be that the interest rate policy requires flexible monetary policy reactions to the movements of the business cycle, in terms of, for example, capacity use or unemployment. In practice, most countries use inflation targets that allow a certain flexibility, but where the definition of this is usually rather vaguely defined. This gives rise to difficult challenges when policy is to be communicated. The question will then be if the central bank deviates from the inflation target for reasons related to time inconsistency or if it reacts to other factors that affect the focus of the monetary policy. Too much flexibility is a problem since it is in direct contrast

to the objective of being able to deal with questions concerning time inconsistency and the possibilities of monetary policy to serve as an anchor for inflation expectations. Moreover, the analysis of optimal simple and efficient interest rate rules indicates that if the interest rate is allowed to react to business cycle fluctuations, this might give rise to considerable average welfare costs.

The Swedish Fiscal Policy Council can evaluate the dependence on the business cycle

Against this background, we do not find any strong reasons to allow any larger flexibility in the interest rate policy under normal conditions. Focusing on the inflation target makes it possible to pursue monetary policy with greater credibility and it does not seem to entail any large costs as compared to more flexible rules.

Empirical support for the effect of fiscal policy rules

How do the rules affect the economic outcome? In this section, we look at studies of this; the discussion here concerns the fiscal policy regulatory framework. Much of the empirical literature that evaluates the effect of fiscal policy rules has focused rather narrowly on the effects on the budget deficits and the long-term sustainable level of debt. The literature gives certain, but relatively vague, support for fiscal policy rules having an effect on fiscal policy sustainability.

IMF (2009) has investigated the effect of fiscal policy rules on *large fiscal policy consolidation processes*. These are defined as periods when there was a continuous fall in the level of debt in relation to GDP by at least 10 percentage points during a three-year period and government debt decreased by at least 20 percent.

Monetary policy flexibility is not unproblematic

The analysis shows that countries with a fiscal policy regulatory framework made larger changes in their debt at an early stage and in a shorter period of time than countries without such a regulatory framework. However, it also appeared in the analysis that countries with a fiscal policy regulatory framework normally have a higher level of debt than countries without any such rules. Thus, it is not possible to draw the conclusion that the existence of fiscal policy rules leads to lower government debt in the long run. A reasonable hypothesis is that a high

level of debt entails a need for numerical limits for fiscal policy.

A focus on the inflation target gives monetary policy greater credibility

A closely related question is what is the effect of fiscal policy rules on the level of public debt. European Commission (2009) has investigated this using statistics from the European Union for 1990–2005. The study indicates that countries that have introduced a new fiscal policy regulatory framework, or that have tightened their existing framework, succeed in improving the primary budget balance adjusted for the business cycle to a lager extent than the average in the selection used in the study. However, there is a very large variation between different countries and no definite conclusions can be drawn. Moreover, the European Commission shows that countries that have introduced a numerical expenditure ceiling or that have tightened their existing regulatory framework have succeeded in cutting their current primary public expenditure in relation to GDP by 3.1 percentage points in the following five-year period. The 95 percent confidence interval for this estimate is between 1.2 and 4.4 percent and thus indicates that there is a direct effect of the expenditure rules on actual expenditure. In all countries included in the study, the share of primary public expenditure in relation to GDP fell by 2.1 percentage points. This indicates that the decrease in expenditure in countries that have introduced (or tightened their) expenditure rules is partly part of a larger tendency to decreased government expenditure.

Fiscal policy frameworks lead to larger debt reductions

The focus of the effects of the fiscal policy regulations on government finances might be too narrow since it is far from irrelevant whether the improvement in the government finances occurs at the cost of a stabilization of the economy as a whole. Fatas and Mihov (2003) have studied the effects of discretionary fiscal policy and the introduction of a fiscal policy regulatory framework using statistics from 91 countries in the period 1960–2000. Their analysis, which also focuses on public expenditure, indicates that discretionary applications of fiscal policy measures that are not motivated by stabilization policy reasons, lead to larger macroeconomic volatility in terms of the standard deviation for yearly productivity growth. Moreover, they argue that the increased volatility will deteriorate average growth in the economy in the long run. Their results indicate that a discretionary policy entails consider-

able costs both in the short and the long run. Finally, they show that rules and institutions might favor a responsible fiscal policy. This relationship might indicate that a fiscal policy regulatory framework that limits the possibility for arbitrary political decisions entails considerable macroeconomic gains.

Expenditure ceiling affects actual expenditure

Fatas and Mihov (2006) and Canova and Pappa (2006) have evaluated the effects of fiscal policy rules in US states. The US states are of interest due to the extensive fiscal policy restrictions (rules for deficits and levels of debt) and due to the different applications of the rules which are due to the fact that different states have different institutional frameworks. Similarly to the study based on country-wide statistics, Fatas and Mihov (2006) find that states with strict budget restrictions have a lower volatility in their discretionary fiscal policy. They also claim that a stricter regulatory framework gives less scope for automatic stabilizers. Finally, they find that the net effect of rules on macroeconomic volatility is that stricter rules decrease the volatility so that the first of these effects is predominant. This points to the fact that there are potential stability gains from introducing an explicit fiscal policy regulatory framework.

Discretionary fiscal policy entails costs in the short and long run

However, the analysis by Canova and Pappa (2006) shows that volatility and cross-correlations between macro variables resemble each other in different states that have different restrictions for fiscal policy instruments. Nor do they succeed in showing that the rules have any effect on the debts and deficits of the states, which means that both the gains and losses from a fiscal policy regulatory framework seem to be fairly small.

A problem with the existing literature is that it devotes very little attention to controlling for the fact that a new fiscal policy regulatory framework (or the tightening of an already existing one) might be an endogenous answer to deficit problems, or that institutional reforms might allow a better application of the regulatory framework. It is likely that countries or regions with a better budget situation are less inclined to introduce strict fiscal policy rules, while countries (or regions) that fight against difficult debt level problems are forced to implement institutional reforms, for example by tightening their fiscal policy rules.

Thus, there does seem to exist certain empirical support for the fact that fiscal policy rules contribute to a better budget outcome and there is also certain, though weak, support for the fact that rules decrease the macroeconomic volatility which improves the result of the economy in the long run. Moreover, at least some researchers have argued that these gains do more than compensate for a possibly reduced ability to stabilize the economy using fiscal policy. More research on these questions is required in order to reach any stronger conclusions.

Strict rules give less scope for automatic stabilizers

Conclusions

The following points have been emphasized in this chapter:

- In the last few decades, economic policy has to an increasing extent come to be characterized by rules-based control.
- There are important differences between monetary and fiscal policy rules:
  - Monetary policy rules, for example an inflation target, are about the objective governing the policy, while fiscal policy rules are about rules for the policy instrument (the tool).
  - Monetary policy rules are based on the need to deal with time inconsistency, while fiscal policy rules also try to deal with a number of additional factors, such as *moral hazard* and policy-motivated tendencies to deficits.
- Monetary policy can be delegated to a central bank authority and credibility for the policy can be achieved by a constant and clearly communicated policy.
- Fiscal policy cannot be delegated to the same extent and it is much more difficult to obtain credibility for it since rules for government agencies can be changed by those parties that are currently in a government position. The credibility for rules that limit municipal and regional agencies is easier to deal with.
- There is an interaction between fiscal policy and monetary policy: Monetary and fiscal policy rules cannot be studied in isolation from each other. A sound monetary policy is dependent on a sound fiscal policy and the other way round.

- Stability in the financial sector is important:
  - Monetary and fiscal policy are dependent on a stable financial sector.
  - In periods of crisis in the financial sector, the borderline between fiscal and monetary policy tends to be dissolved.
- A financial stability council should be established. It remains to be determined what instruments the council should have at its disposal and how it should be constructed. Due to the close connection between fiscal policy and monetary policy and the financial markets, the new council should continuously communicate with the Executive Board of the Riksbank and the Ministry of Finance and/or the Swedish Fiscal Policy Council .
- A system with simple and efficient rulers is almost optimal if inflation has a strong effect on the interest rates of the central bank while the activity in the real economy has a little or no effect on the interest rate. Such rules guarantee that the monetary policy provides a nominal anchor.
- Fiscal policy must firmly establish the expectations on government debt, which requires that government debt has an effect on taxation and/or public expenditure.
- A flexible application of the rules is difficult under normal conditions:
  - Adjustment to the business cycle and an application of the fiscal policy rules over the whole business cycle require solid estimations of the business-cycle dependent elements. This is difficult in practice.
  - If the interest rate policy does systematically react to the trend in the real economy, this might easily lead to credibility problems. All such attempts must be followed by strategies for clear communication.
- Flexibility under extreme conditions – escape clauses – are preferable both ex ante and ex post. In periods of crisis, it can be difficult to use normal political instruments and unconventional measures might be motivated.

¶ There is certain empirical support for the fact that fiscal policy rules contribute to stabilize the primary deficit and decrease the level of debt more swiftly. There is also support for the fact that fiscal policy rules mean a less volatile fiscal policy, but that, at the same time, they can counteract the effects of automatic stabilizers.

1 2 3 4 5

Savings and investment

Low private and public savings combined with high investments in housing are often mentioned as important explanations for the financial crisis that broke out in the US in 2007–2008. These factors also seem to have contributed to the spread of the crisis in Europe. The Swedish development has been different, however. In contrast to the United States and several European countries, Sweden was not hit by a financial crisis or by any strong fall in housing prices. Sound public finances are often mentioned as an important explanation for the Swedish development. The aim of this chapter is to penetrate more deeply into public savings and other aspects of Swedish savings and investment behavior, factors that constitute the basis for several questions that are often mentioned in the Swedish economic-policy discussion.

Large surplus in the Swedish current account

One such question, which according to us has been given a somewhat obscure role in the discussion, is the reasons for and the consequences of the Swedish current account surplus. Many people have been concerned by the so-called global imbalances with large current account surpluses in, for example, China and Germany and deficits in the US and other European countries. They consider these surpluses to be problematic and at least partly reflecting a failed policy in the surplus countries. Since the mid 1990s, the Swedish surplus has been larger (in relation to GDP) than that of Germany and China. The underlying development in Sweden has also, in several respects, been similar to

the development in Germany in the last few years. Are those possible problems with low investments and low domestic demand that have been identified for Germany also problems for the Swedish economy?[1]

Other questions, which have been given more attention in the Swedish discussion, concern public sector savings. Do public savings contribute to a too tight fiscal policy in the present business cycle downturn, too large accumulation of public wealth, or maybe an unfair redistribution from old to young? Or do the high public savings contribute to public investments?

The savings behavior of households has also been observed. Similarly to the trend in several of the crisis countries, there was a sharp increase in Swedish household debt in relation to GDP in the decade before the financial crisis and there was also a rapid increase in housing prices. Many people have interpreted this development as a worrying sign of a loan-driven housing bubble, maybe caused or aggravated by the low-interest rate policy of the Riksbank.

Many people were concerned about a loan-driven housing bubble

The ambition in this chapter is not to sort out all these questions. We instead want to describe some basic theoretical lines of reasoning on international capital flows, savings and investments. Moreover, we will describe the Swedish development, partly in light of the theoretical presentation, but mainly in a historical and international perspective. This description constitutes the basis for several of the questions on fiscal and monetary policy to which we will return in Chapters 4 and 5.

The current account and global imbalances

The current account balance is the difference between the total savings and investments of a country. In Sweden, the current account balance was negative for a long time, i.e. the investments were larger than the savings. Investments were then financed by an inflow of foreign capi-

1. Posen (2011) argues that there must be an increase in German demand, for example through higher German wages. His statement can indirectly be interpreted as German savings being too high. International Monetary Fund (2011) instead argues that German investments are too low.

tal. In the mid 1990s, the current account balance changed to a surplus, which has, on average, amounted to 7 percent of GDP in the last decade.

Do the large current account surpluses indicate a healthy development of the Swedish economy or do they give cause for concern? The answer to this question is not obvious. There might be many reasons for the level of savings to deviate from the level of investments in a country. Let us first discuss international capital flows that reflect fundamental factors and give rise to a more efficient allocation of capital use in the world.[2]

According to prevalent consumption theories, households try to smooth their consumption over the lifecycle. If their income is expected to be high in the future, households try to consume more already today and thus save less. If current income is high in relation to future income, households save more to be able to consume at a high level also in the future.

Savings should depend on the income trend in the country over time

These lines of reasoning also have consequences for the total savings of a country. It is thus motivated that a country saves unusually much if its income is temporarily high. A typical example is a country that is rich in oil when the oil price is unusually high or if its oil extraction is expected to be temporary. Another typical example is a country with an unusually large share of the population of working age, since that country should then build up pension savings.

In a similar way, there might also be rational reasons for why the investment level varies between countries and over time. Large investments are motivated either if the current capital stock is for some reason unusually low or if capital is expected to be more useful in the future. An unusually low capital stock might, for example, be due to capital having been destroyed in a natural disaster or that investments having been neglected for a longer period of time. Future capital can be expected to be more useful if the number of individuals of working age is expected to increase or if the country is expected to become more productive, for example due to rapid technological development.

2. These explanatory variables are sometimes called »neoclassical« since they follow from basic neoclassical theory.

Many international capital movements can be explained on basis of such lines of reasoning. A typical example is a country that has just discovered oil deposits. Another example is an underdeveloped country that has just opened up to trade with the surrounding world. The oil deposits both provide hope for high future income, which will thus increase current consumption and reduce the savings, and generate a large need for investments to build up an industry for oil extraction. Similar mechanisms emerge for the country that has just opened up for international trade. Income growth is expected to be high because of catching-up, and there is a need for large investments to modernize the capital stock. In both the oil country and in the emerging-market economy, there are thus several mechanisms that indicate that a current account deficit should emerge. Another typical example is the oil country when oil extraction has taken off. The country now has high a income due to the sale of oil (in particular if the price of oil is as high as in the last few years). But the revenue is only temporarily high, since the oil resources are finite. In order to maintain high consumption also in the future, savings in the country must be high, and there should then be a current account surplus.

The trend in Norway corresponds well with those mechanisms that can be expected in an oil country. In the late 1970's, i.e. when oil prices rose and the oil industry was in the process of being built up, the deficit in the current account of the country amounted to an average of 7 percent of GDP. The deficits have then turned into surpluses, which have amounted to an average of 15 percent of GDP in the last decade. The large current account deficits in the Baltic countries after the dissolution of the Soviet Union and in connection with the countries joining the European Union are good examples of the mechanisms in emerging-market countries.

Growing global imbalances

But there are also several reasons to be concerned about large international capital flows. In the last few decades, and in particular in the decade preceding the financial crisis, there was an increase in the international capital flows. The net flows became increasingly larger, i.e. more countries had large surpluses or deficits in their current accounts (see Figure 3.1). Moreover, and maybe even more of a concern,

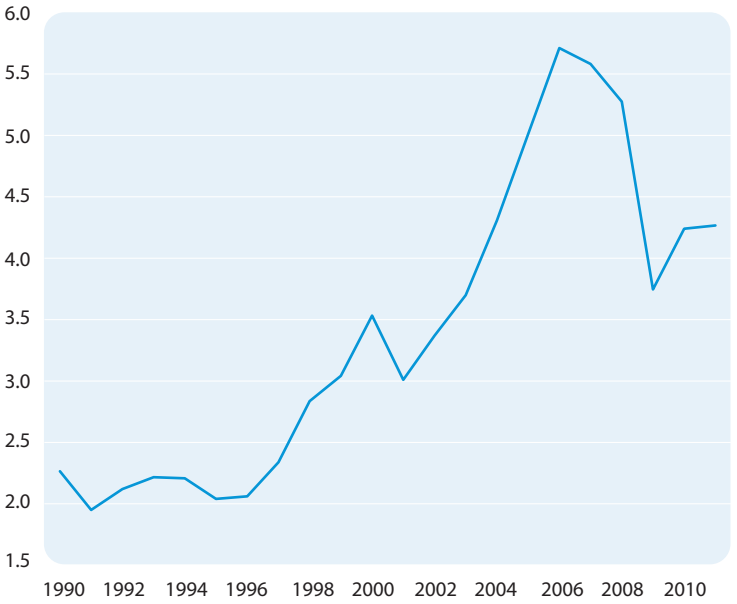


Figure 3.1 Global imbalances.

Note: The current accounts in the world, absolute values, percent of world GDP. Processed data.
Source: IMF WEO.

the gross flows behind these net flows literally exploded. The current account surpluses led to a fall in Sweden's net foreign liabilities from 31 percent of GDP in 1995 to 15 percent of GDP in 2010.[3] At the same time, there was still an increase in gross financial debt from 106 percent of GDP to 295 of GDP. That both international gross debt and gross assets increased considerably more rapidly than economic growth was not unique to Sweden; it rather characterizes the trend in most countries in the last few decades. Why were then economists and decision makers concerned about the increasingly extensive capital flows, often called *global imbalances*?

One reason is that macroeconomic crises have often been preceded

3. This is according to the financial accounts of Statistics Sweden.

by large current account deficits. The deficits might be a sign of domestic imbalances, for example that the domestic economy is driven by an optimism that results in an unsustainable consumption or investment growth or that unsustainable deficits in the public finances result in too low total savings in the country. Moreover, foreign capital seems to be more mobile than domestic capital. If the optimistic view of the future is revised downwards, foreign capital might disappear quickly and necessitate a dramatic change in the economy of the country, which happened during the crisis in Southeast Asia in 1997–1998.[4]

The surplus in China is not due to market mechanisms

Moreover, economists were concerned about the fact that the capital flows went from China to the US in particular. The Chinese surpluses most likely did not emerge as a consequence of normal market mechanisms, but because the leaders of the country deliberately maintained an undervalued exchange rate, both in order to favor the export industry and in order to avoid getting into the same situation as the neighboring countries during the crisis 1997–1998. The large Chinese surpluses have emerged despite investments having been very high in an international comparison. Savings have thus been even higher and many consider this to be a result of poorly developed social insurance systems. Chinese households are building up reserves for their old age, the education of their children, medical care etc.

The US have had access to cheap foreign capital

The US deficits partly seem to have emerged as an effect of the special position of the US dollar as an international reserve currency and maybe also because the US financial system was considered to be safer and more developed than that in other countries.[5] The inflow of foreign capital meant that US citizens got access to cheap foreign capital. Economists were debating whether this trend was sustainable and many were concerned by how the US economy would be able to deal with a stronger Chinese currency and more expensive US borrowing, factors that would, among other things, enforce a change from high consumption and domestic production of services to a larger production for

4. A few additional possible mechanisms are mentioned in the survey by Blanchard and Milesi-Ferretti (2011).

5. See Forbes (2010).

export markets. Certain economists also issued a warning that the US financial markets were not sufficiently well-functioning to be able to deal with the increasingly large inflow of international capital.[6]

However, the financial crisis in the last few years did still not follow the trend that many economists had been concerned about in connection with the global imbalances. The crisis was neither triggered by a stronger Chinese exchange rate nor by a flight from the US dollar. Obstfeld and Rogoff (2009) instead find that the global imbalances and the financial crisis were caused by common underlying factors.

Empirical studies indicate that the fundamental, neoclassical explanatory factors only explain a small share of the international capital flows, at least in the short and medium run.[7] In particular, normal fundamental factors cannot explain why capital flows from poor to rich countries, something that has been a predominant part of the global imbalances in the last few years.[8] However, it seems that capital flows within Europe are better explained by these fundamental factors.[9] The total current account balance for Europe has remained stable at around zero for a long period of time. Within Europe, capital has moved from rich countries such as Germany, Sweden and Finland to countries in East and Southern Europe with rapid growth. The frictions that prevent capital flows from rich countries to less developed countries in Africa and Asia have probably been considerably less important within the European Union, also in relation to countries that have been on their way towards joining the union. However, in several cases, it seems that capital has flown too easily into the emerging markets. In 2006 and 2007, there was a rapid increase in the deficits in the Baltic countries, Bulgaria and Greece. For example, the current account deficit in Latvia rose from 12 percent of GDP in 2005 to 22 percent in 2006 and 2007. In Bulgaria, the deficit rose from 12 percent of GDP in 2005 to

Within Europe, capital has flown from rich to swiftly growing countries, as predicted by theory…

6. See, for example, Obstfeld (2005).

7. See, for example, Chinn and Prasad (2003) as well as Lane and Milesi-Ferretti (2011).

8. That capital does not flow into poor countries in the way that is foreseen by the neoclassical theories is not a new phenomenon. See Lucas (1990).

9. See Lane (2010).

30 percent in 2007. The capital flows in the years before the financial crisis were hardly driven by normal fundamental factors but rather by an excessive optimism among both domestic households and public investors.

… but capital flows do also seem to have been driven by an excessive optimism

How large should savings and investments be?

Our discussion of the determining factors of the current account gives indications about how the current account balance, and the savings and investments behind that balance, should develop over time and in relation to other countries. Yet, the discussion does not provide any clear answer to how large savings and investments should be. This applies for both the total savings and investments of the country and those parts that concern the public sector. Although these are important and much studied questions, there is not much concrete guidance to be obtained from research. The most concrete insight is the risk that the economy invests too much and thus builds up an inefficiently large capital stock.

Theories on investment and savings

A large capital stock requires large continuous investments in maintenance in order to counteract a fall in the capital stock. It is possible that those investments that are required on the margin are larger than the additional production to which they give rise. If this is the case, the economy is said to be *dynamically inefficient*. Consumption can then be increased now as well as in the future by a reduction in investments. This inefficiency might emerge as a market outcome in an otherwise well-functioning economy if households do not trust that later generations will contribute to the upkeep of the old.[10]

Investments might be too high

According to the basic growth models, the economy is dynamically inefficient if the interest rate is lower than the growth rate in the economy. In practice, it would be difficult to exactly define and evaluate this

10. See Weil (2008) for a relatively easily accessible survey of these mechanisms.

criterion. In an uncertain world, both the interest rate and the growth rate vary over time and, moreover, different assets generate different interest rates (or returns). For example, Blanchard and Weil (2001) show that the interest rate on safe government bonds might be lower than the growth rate of the economy, and even negative, on average and almost with certainty when the economy is dynamically efficient. Abel et al. (1989) and Barbie et al. (2004) have developed more general methods for judging whether economies are dynamically inefficient. These methods indicate that the US economy is dynamically efficient. The analyses also indicate that this also applies for Japan, despite the fact that investments have been larger there than in most developed countries for a long period of time.

There is no corresponding criterion for determining whether a (dynamically efficient) economy has an inefficiently small capital stock. Higher investments today mean that consumption will fall in the short run in return for higher future consumption. If this is desirable or not depends on preferences. A well-functioning market economy should not result in inefficiently low investments. In practice, however, there are several distortions and market failures which might generate too low investments. In particular, taxes on capital income and firm profits can decrease the willingness to invest. For example, Sweden has a broad welfare state with high taxes, which could, in principle, lead to distortions that create too low investments.

Distortions might lead to too low investments

Another kind of market failure concerns the supply of so-called public goods, i.e. goods where a user's consumption does not limit the consumption of other users or where it is difficult to limit the consumption of the goods for another individual. Infrastructure does, to a large extent, have these collective characteristics and is thus usually supplied by the public sector.

Infrastructure is seldom a purely public good, partly because there is often a risk for congestion (queues on the roads, full trains), partly because there are often possibilities to limit its use (for example through toll charges and train tickets). However, there are mechanisms that are closely connected to the characteristics of the public goods which reinforce the need for public planning of the infrastructure. First, the

Infrastructure requires public planning

infrastructure might give rise to externalities which are not taken into account by individuals. Second, investments in infrastructure are characterized by large fixed costs and low marginal costs. The fixed costs should not mainly be financed by fees connected to their use, since the use will then be lower than what is efficient.

Since the infrastructure is thus, almost necessarily, determined by the political process rather than on the market, there is no clear connection between households' willingness to pay and the investment levels. The problems in finding out the households' willingness to pay constitute an important reason for why the market cannot supply the infrastructure. In principle, decisions about specific investments in infrastructure should instead be preceded by a cost-benefit analysis where consequences of the investment are studied. Such analyses are, however, often related to large uncertainties and possible sources of error.[11] It is therefore possible that the country's investments in infrastructure end up at an inefficient level.

There is well-developed theoretical and empirical research on household savings behavior. This was indirectly presented in the discussion of the determining factors of the current account. The central insight is that households try to smooth consumption over time by saving and borrowing. At an aggregate level, however, the possibilities of achieving a smooth consumption profile depend on what productive resources are available at different points in time. For the world economy as a whole, savings must equal investments. Somewhat simplified, one could say that the savings of a country should, on average, equal its investments. This statement is quite a crude simplification, however. Our earlier discussion of international capital flows shows that there might be good reasons for savings to *temporarily* deviate from investments. But these mechanisms can also motivate deviations from the investments in the long run. If, for example, a country has temporarily high income, its savings should be large in the short run. The country then accumulates an international wealth position. An optimal long-

The savings and investments of a country do not have to be equal, even in the long run

11. See Nilsson et al. (2009) for a survey of how economic estimates are actually used and could be used in Sweden.

term strategy for the country, or its households, might be to keep this wealth constant relative to the size of the economy, and such a strategy does usually lead to savings being higher than investments, also in the long run.[12]

Theories on public debt

The most interesting analyses on savings concern the construction of debt or wealth in the public sector and how large government debt should be. The analyses do not result in any definite insights; it is only found that there is not any optimal level of debt. As discussed in Chapter 2, Barro (1979) showed that with an optimally designed fiscal policy, the tax level should be expected to be constant. If the economy is hit by a temporary cost increase (for example during a business cycle downturn), the debt should increase by about as much as the temporary cost increase, and then be expected to remain at the new higher level. If a country anticipates changes in public expenditure in the future, for example because of an ageing population, there should immediately be a reduction in the debt in order to distribute the cost increase over time.

The ageing population has often been mentioned as a motivation of the surplus target for Swedish public finances. It might be interesting to note that the population is expected to age considerably more quickly in many other countries than Sweden. Several Southern European countries had very low birth ratios in the 1980's and 1990's and will therefore have a rapidly increasing share of old people in relation to the population of working age in the next few decades and also a falling population size.[13] According to Barro's theory of tax smoothing, there are therefore larger reasons for public savings in Southern Europe than

12. The lines of reasoning on this international debt and wealth dynamics are similar to those on the debt dynamics of the public sector, which are discussed in Boxes 4.1 and 4.2 (the net wealth and the total budget balance of the public sector are then exchanged for the international net wealth of the country and the balance of its current account, respectively).

13. According to the UN population forecasts, the number of individuals aged above 65 per 100 individuals aged between 20 and 64 will increase from 31 to 34, respectively, in Sweden and Italy today, to 47 and 68, respectively, in four decades. In Italy, the popula-

in Sweden, in contrast to what we see in practice.[14]

Stronger reasons for large public savings in Southern Europe than in Sweden

Somewhat simplified, we could still say that Barro's analysis shows that the debt ratio should be kept at the present level, notwithstanding if it is low or high. It should however be pointed out that Barro's analysis builds on the assumption that there is no upper limit for the tax levy and that no debt is too large to pay back. A more sophisticated analysis (Lucas and Stokey, 1983) confirms the main conclusions in Barro's analysis, but also indicates that the repayment of the debt should be contingent on the economic development. In practice, a high level of debt also seems to be problematic and is often related to debt crises or similar macroeconomic crises. For example, Reinhart and Rogoff (2011) find that gross government debt exceeding 90 percent of GDP is related to considerably lower GDP growth rates than lower debt levels. Manasse and Roubini (2005) find that a high level of debt (in particular if it is external) in emerging-market economies increases the risk for a debt crisis, but they also find that this risk might still be low if the country has a current account surplus, the debt has a long duration and an exchange rate that is not overvalued.

In practice, a high level of debt seems to be problematic

Another aspect of public debt concerns the possibilities of avoiding that the investments in the economy become too large, i.e. that the economy becomes dynamically inefficient. An increased public debt drives up the interest rate level and crowds out investments in physical capital. In that way, an increased debt might lead to inefficiently large investments being avoided. This motive for public debt is of small importance in practice, however. First, it is doubtful whether investments and the capital stock are really affected by the size of government debt in a small open economy such Sweden. Second, there are better instru-

tion is expected to shrink by 2 percent during this period of time while it is expected to increase by 16 percent in Sweden.

14. See Flodén (2003) for an analysis of the implications of this theory for savings in different countries. The fact that an ageing population constitutes a public-financial burden is partly due to an assumption that in the future, we will stop working at the same age as today, despite the fact that we are then expected to live longer. The part of the ageing of the population that is due to the fact that we live longer is more efficiently dealt with through an increase in the retirement age than by a reduction in the public debt level (see Andersen, 2008).

ments for counteracting dynamic inefficiency, in particular with the aid of pension systems. Third, and maybe most important, there are no signs of the economy being dynamically inefficient.[15]

Low interest rates create possibilities and risks

The observation that the interest rate on government bonds is often lower than the growth rate of the economy is then of greater interest.[16] If the interest rate is lower than the growth rate, government debt can be held constant relative to the size of the economy while new loans are used both to pay interest on the debt and to finance public expenditure. Increased public borrowing then seems very attractive. But if the economy is dynamically efficient, there is a risk that this debt strategy will fail and that future generations will be hit by large costs for debt restructuring.[17] Moreover, this strategy often fails exactly in periods of low growth, i.e. in periods when a debt crisis is especially problematic. The debt and budget crises in Southern Europe and the US in the last few years might possibly be interpreted as the result of a deliberate debt strategy which failed when the economy weakened.

The conclusion of this survey is that economic research is not particularly helpful in pinning down optimal savings and investment levels for a country or for the public sector. There is a theoretical risk that the investments become inefficiently high, but there is nothing that points to this having occurred in practice in Sweden or in other developed market economies. There are certain theoretical arguments for why a high government debt might be desirable, but there are also theoretical arguments in favor of a low government debt. Moreover,

15. A closely related reason for public debt emerges in economies where households cannot insure themselves against income risks and thus build up precautionary savings. A large government debt provides the households with increased savings possibilities, without at the same time having to enforce an unnecessarily large physical capital stock (Woodford, 1990, Aiyagari and McGrattan, 1998). Once more, this argument is hardly suitable for a small open economy and also in this case, inefficiency might be better counteracted using social insurance (Flodén 2001).

16. This has been the case on average and in a majority of years in the US in slightly more than the last century (Ball et al. 1998) and in Sweden in slightly more than the last decade.

17. Simulations in Ball et al. (1998) indicated that such a strategy had a large probability of being successful in the US economy, but that the probability of failing was not negligible.

empirical evidence indicates that very high government debt ratios generate problems.

Large scope for political assessments

This lack of clear guidance from research might explain why public debt ratios vary so much between countries (as we saw in Chapter 1). There is simply a large scope – and need – for political assessments when it comes to determining what level of savings, investments and debt that is desirable. But this does not mean that all political decisions are acceptable. This uncertainty rather indicates that there should be a proper discussion based on both economic and political analyses. Fiscal policy councils can play an important role in such discussions. Not mainly by telling the government what it should do, but by carefully studying and commenting on the different analyses and arguments that are being advanced.

Fiscal policy councils can scrutinize analyses and arguments

The Swedish current account

Since Sweden is a small country, its capital flows are relatively unimportant in a global context. China, Japan and Germany are often blamed for contributing to the global imbalances through too large savings and low consumption. But Figure 3.2 shows that in relation to the size of its economy, Sweden has had an even larger current account surplus than these countries during the last decade.[18]

Sweden has a larger surplus than China and Germany

The persistent surplus in the Swedish current account has received relatively little attention in the economic-policy discussion. To examine if the Swedish surplus constitutes a problem, we here enter more deeply into possible explanatory factors behind the surplus.

We previously noted that the fundamental explanations for a current account surplus can, in principle, be summarized as pessimism about the future economic development in the country; low expec-

18. For all that, the Swedish surpluses have not been negligible, at least not at the beginning of this period. In the five-year period 2000–2004, total Swedish surpluses amounted to USD 79 billion as compared to USD 188 billion in China and USD 183 billion in Germany. However, the Japanese surpluses did amount to as much as USD 628 billion, and did thus constitute a considerable share of the US deficits amounting to USD 2 418 billion.

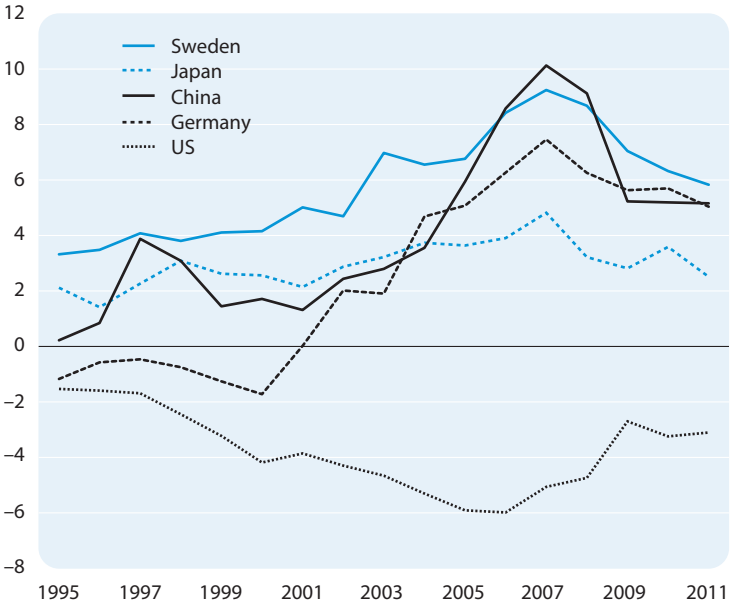


Figure 3.2 Has Sweden contributed to the global imbalances?

Note: Current accounts, percent of GDP.
Source: IMF WEO.

tations about future income growth and productivity will increase household savings and decrease the firms' willingness to invest. But we also noted that the fundamental factors only account for a limited part of the international capital flows in the last few years.

A mechanism that, in contrast, gets strong support in empirical studies is that public sector savings affect the current account.[19] Bluedorn and Leigh (2011) find that a tightening of the fiscal policy by 1 percentage point of GDP leads to an increase in the current account by 0.6 percentage points and that this increase is in approximately equally large parts caused by an increase in the total savings of the country and a fall in its investments. According to their study, the tightening of the

19. According to neoclassical theory, it is not evident that public sector savings should affect the total savings of the country.

The tightening of fiscal policy is an important factor behind Sweden's current account surplus

fiscal policy contributed to an improvement in the Swedish budget balance by 10.6 percentage points of GDP between 1993 and 1998.[20] Their study thus indicates that the consolidation of the Swedish public finances in the mid 1990's might be an important factor behind the Swedish current account surplus.[21]

Another factor that might have contributed to the Swedish current account surpluses is Sweden's close connection to the Baltic economies. We previously mentioned that the neoclassical theory appears to explain a large part of recent European capital flows. The Swedish investments in the Baltic countries have been considerable since the mid 1990's. An additional explanation might be the ageing population, where the Swedish development is somewhat earlier than in most other countries and therefore has motivated a high current account surplus.[22] It is also possible that the Swedish pension reform in 1994 made the need for an increase in private pension savings more transparent than in other countries.

We have found that the Swedish current account has shown a large surplus since the mid 1990's, that the surplus might be seen as part of the global imbalances and that the surplus has probably been caused by the Swedish budget consolidation after the crisis in the 1990's. The Swedish current account balance might not, in itself, be as interesting as its underlying components. Let us therefore focus on these components, i.e. on Swedish savings and investments.

20. Bluedorn and Leigh use data from Devries et al. (2011) where fiscal policy constraints are identified on basis of statements in policy documents, such as budget proposals. A fiscal policy constraint is a tax increase or a decrease in the expenditures that is implemented to reduce a budget deficit

21. The current account turned from an average deficit of 1 percent of GDP in 1985–1991 to an average surplus of 6.8 percent in 2001–2007.

22. Simulations in Domeij and Flodén (2006) indicate that the Swedish current account surplus, on basis of demographic factors only, should be at a high level until about 2010 and then gradually fall towards a balance in approximately 2040.

Behind the current account surpluses: savings and investments

The surplus in the Swedish current account has, on average, amounted to 7 percent of GDP in the last decade. Total savings have thus exceeded investments by 7 percent of GDP. Can this be interpreted as Sweden having saved too much and invested too little?

Swedish savings

Large savings in Sweden as compared to other countries

Figure 3.3 shows that total gross savings in the Swedish economy have been large in an international comparison in the last decade and Figure 3.4 shows that also total net savings have been large.[23] Moreover, Figures 3.4 and 3.5 show that Swedish savings are large in both the public and the private sector.[24] The relatively large savings in the public sector are the result of the budget consolidation that started in the 1990's in combination with too low public savings in the surrounding world in the good years before the financial crisis. We return to a more profound discussion of public savings in Chapter 4.

Countries with small savings have been hit hard by the financial crisis

That the savings are large as compared to the surrounding world can, of course, be due to other countries having saved too little. The five countries in Figure 3.3 that had the smallest savings in the years before the crisis (Greece, Britain, US and Italy) have been hit relatively hard in the years after the financial crisis.

Moreover we can note that the savings of Swedish *households* as a share of GDP are around the European average.[25] The extensive welfare services in Sweden mean that the need to save for old age, illness and children's education is low as compared to many other countries. In

23. Net savings are given by gross savings less capital depreciation.

24. Moreover, Figure 3.5 shows no indication of public savings having crowded out private savings, rather it indicates that countries with large public savings have also had large private savings.

25. The savings of Swedish households are usually expressed in relation to disposable income. Swedish savings do then seem to be larger in an international comparison, since the high tax level in Sweden makes disposable income low in relation to GDP.

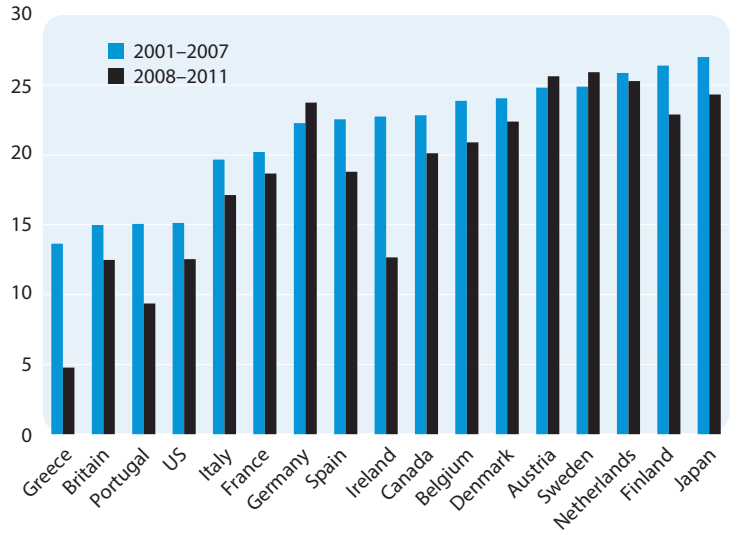


Figure 3.3 Large savings in Sweden.

Note: Total gross savings, percent of GDP. Average value 2001–2007 and 2008–2011, respectively.
Source: IMF WEO.

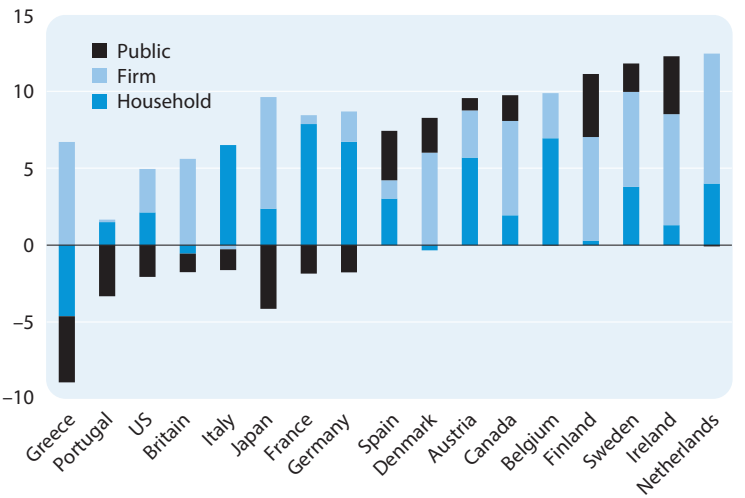


Figure 3.4 Savings per sector.

Note: Net savings, percent of GDP. Average values 2001–2007.
Source: Eurostat and OECD.

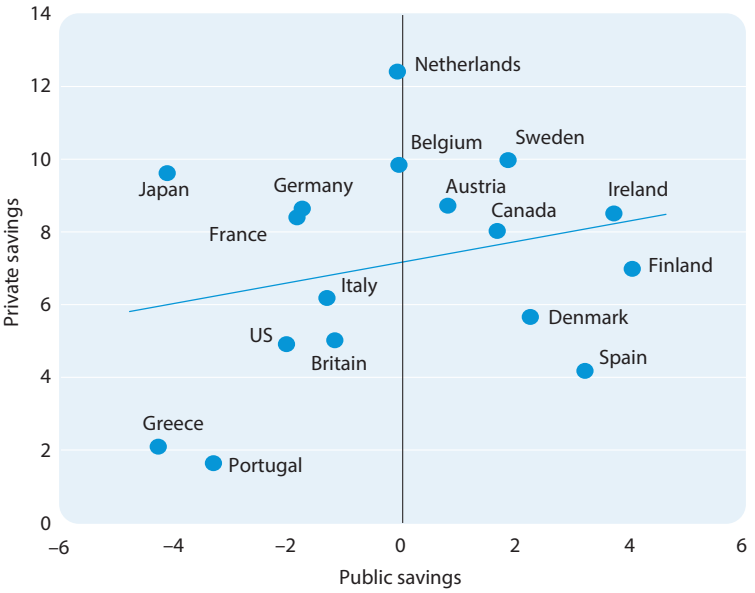


Figure 3.5 Public and private net savings.

Note: As in Figure 3.4.
Source: As in Figure 3.4.

light of this observation, the savings of Swedish households seem relatively large.

The pension system affects the savings

One explanation for the relatively large savings might be that the reform of the pension system in the 1990's increased the transparency about low future pensions. According to forecasts of the European Commission, the average pension payment from the public pension system will fall from 49 percent of an average wage in 2007 to 30 percent in 2060 (European Commission 2010).[26] For many households, it is thus clear that the public pension must be supplemented with other savings or later retirement. This need should be at least as large in other

26. If funded pensions and occupational pensions (which are included in the private savings) are included, the replacement ratio is expected to fall from 64 percent of the wage to 46 percent. These systems will thus not be able to compensate for the fall in income pension to any larger extent.

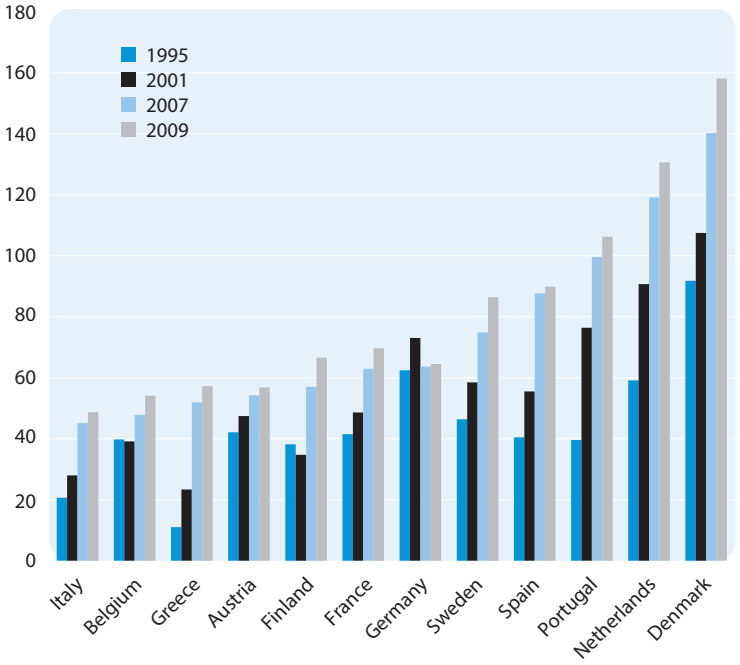


Figure 3.6 There has been an increase in household debt.

Note: Household debt, percent of GDP.
Source: OECD.

countries. Before the financial crisis, however, only a small number of countries had succeeded in designing pension systems that can handle the ageing populations. The existing pension systems that are unsustainable in the long term might have given the households false hope that private pension savings were unnecessary.

We still often hear that people save *too little* in Sweden.[27] This statement often takes its starting point in the observation that there has been an increase in household debt in the last few years (see Figure 3.6). But Figure 3.7 shows that there has been an increase in household savings in parallel with increased borrowing. The debts amount to slightly

Household savings have increased in parallel with higher levels of debt

27. See, for example, Josefson (2011).

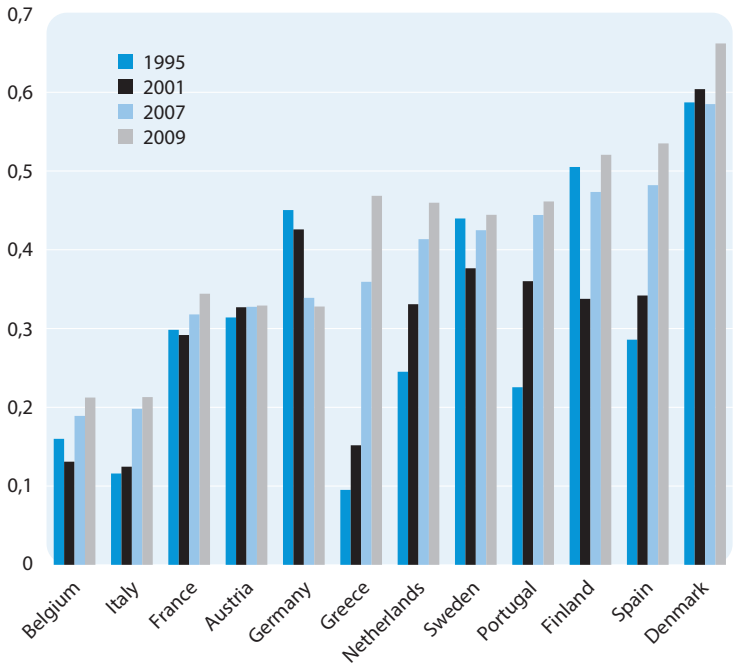


Figure 3.7 The household debt ratio has been stable in Sweden.

Note: Household financial debt in relation to their financial assets.
Source: OECD.

less than half the value of the households' financial assets.[28]

Despite household financial net wealth (assets less debts) having been stable in relation to incomes in the last few decades, there might be reason to be concerned by the increasingly large gross debt. Household assets largely consist of shares and equity mutual funds, the value of which is stochastic, as well as of pension savings that cannot be realized quickly. The larger balance sheets have therefore raised the riskiness of household portfolios.

A larger gross debt is related to higher risk

A possible explanation for the increase in both household savings and borrowing is the design of the pension system. Møller and Nielsen

28. The household ownership of cooperative apartments, but not real estate, is included in the financial assets.

(2011) argue that the occupational pension system forces young workers and high-income earners to save more than what should be necessary. Similar mechanisms are built into the general pension system. While young workers save for their future old age, many also take out large loans to finance the purchase of their first apartment. Rather than buying both housing and pension insurances, partly with borrowed means, young workers should be able to concentrate their savings to the housing markets but with a lower degree of borrowing.

In summary, we do not see any large problems with Swedish savings. That the savings rate has been higher than in other countries is probably sound, since there is a great deal that indicates that savings in both the public and the private sector were too low in too many countries before the outbreak of the financial crisis.

Swedish investments

Low investments in Sweden as compared to other countries

Figure 3.8 shows that the Swedish investment rate before the financial crisis was low in an international comparison. Countries that were later severely hit by the financial crisis often had higher investment rates despite low savings (Greece and Portugal) or considerably higher investment rates in combination with normal savings rates (Ireland and Spain). But the Swedish investment rate has been relatively low, even if we disregard the worst crisis countries. A closer examination of investment data (see Figure 3.9) shows that it is investments in real estate and infrastructure that have been relatively low in Sweden. Investments in machinery have been relatively large while investments in intangible assets have been larger than in most other countries.

Low investments in real estate and infrastructure

Regulations behind the low level of construction

Table 3.1 summarizes the international investment development in a longer perspective, while Figure 3.10 shows the changes in the Swedish capital stocks over time. It is clearly seen that the current investment level in real estate and infrastructure is low, also in a historical perspective. Investments in housing were very low in large parts of the 1990's, and the housing stock might have decreased in this period. According to Lind (2003), a long and uncertain municipal planning process as well as rent control contributed to the low level of construction work

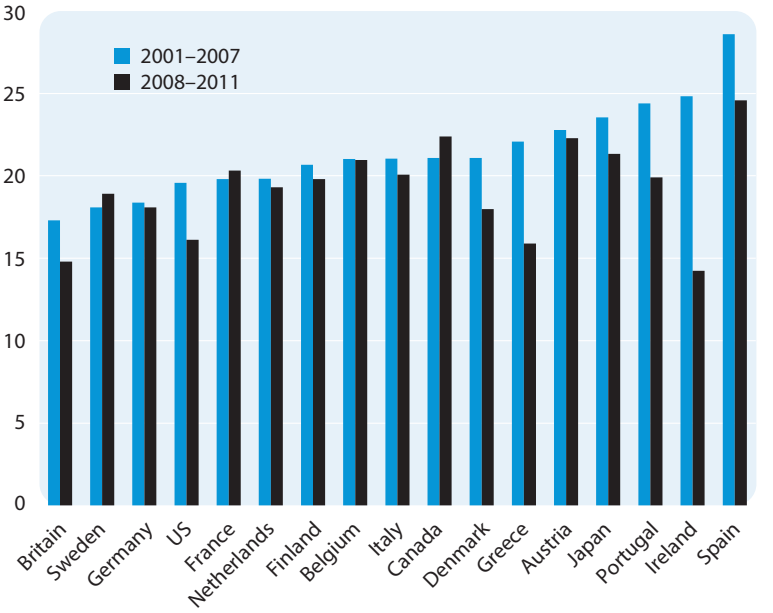


Figure 3.8 Low investments in Sweden.

Note: Total investments, percent of GDP. Average value 2001–2007 and 2008–2011, respectively.
Source: IMF WEO.

in 1995–2001. He also argues that a relatively large housing stock after the strong expansion in the 1960's and 1970's might have kept the investment level down, but it is doubtful whether this argument can also be used to explain why housing construction has remained low in the last decade.

Low level of housing construction behind high housing prices in Sweden?

Note that housing investments were at a very high level in Ireland and Spain before the crisis where a rapid price increase in housing prices before the crisis has been followed by strong falls in the last few years (see Figure 3.11). We also saw a combination of a high level of construction of new housing and a rapid price increase in Japan and Sweden in the late 1980's, followed by sharp price falls in the following years.[29] The

29. Housing investments in Japan and Sweden reached a peak of slightly less than 6 percent of GDP in 1988 and 1991, respectively, by comparing 14.0 and 9.3, respectively, of GDP in Ireland and Spain 2006.

rapid increases in housing prices in Sweden since the mid 1990's have, however, been combined with a low level of construction of new housing. This indicates that it is the low level of construction, rather than the credit expansion, that has generated the increasing housing prices.

As noted above, the level of investments in infrastructure is almost necessarily determined in the political process. There is therefore no direct relationship between households' willingness to pay and political investment decisions. It is also possible that households' total willingness to pay does not coincide with the social utility of the investments, which cannot be easily observed either. Investments in infrastructure can therefore in principle be inefficiently high or inefficiently low. However, there seems to be general agreement on both that Swedish infrastructure has been neglected and that the fiscal framework has given rise to the low investments. We will return to the influence of the fiscal framework on investments in Chapter 4. Here, we will instead focus on the investment level in infrastructure.

From Table 3.1 and Figures 3.8 and 3.9, it appears that Swedish investments in »other buildings and structures« are very low in an international comparison, and that these investments are also low as compared to Swedish historical levels. Yet, earlier Swedish investment levels have not been remarkably high, so the reason for the low investments in the last decade is hardly that we earlier had an unusually well-developed infrastructure.

The Swedish Fiscal Policy Council (2009) provides an overview of how public investments have developed over time and as compared to other countries. Their study also shows that there has been a strong fall in investments over time, but they do not find that Swedish public investments are low in an international comparison. However, OECD (2009, p. 42) issues a warning against using sector-specific investment data in international comparisons, since ownership and the use of capital do not always coincide. We therefore suspect that the division into asset types gives a more accurate picture of the investments in infrastructure.

We previously noted that research does not provide much guidance for the optimal investment level, besides the insight that countries in-

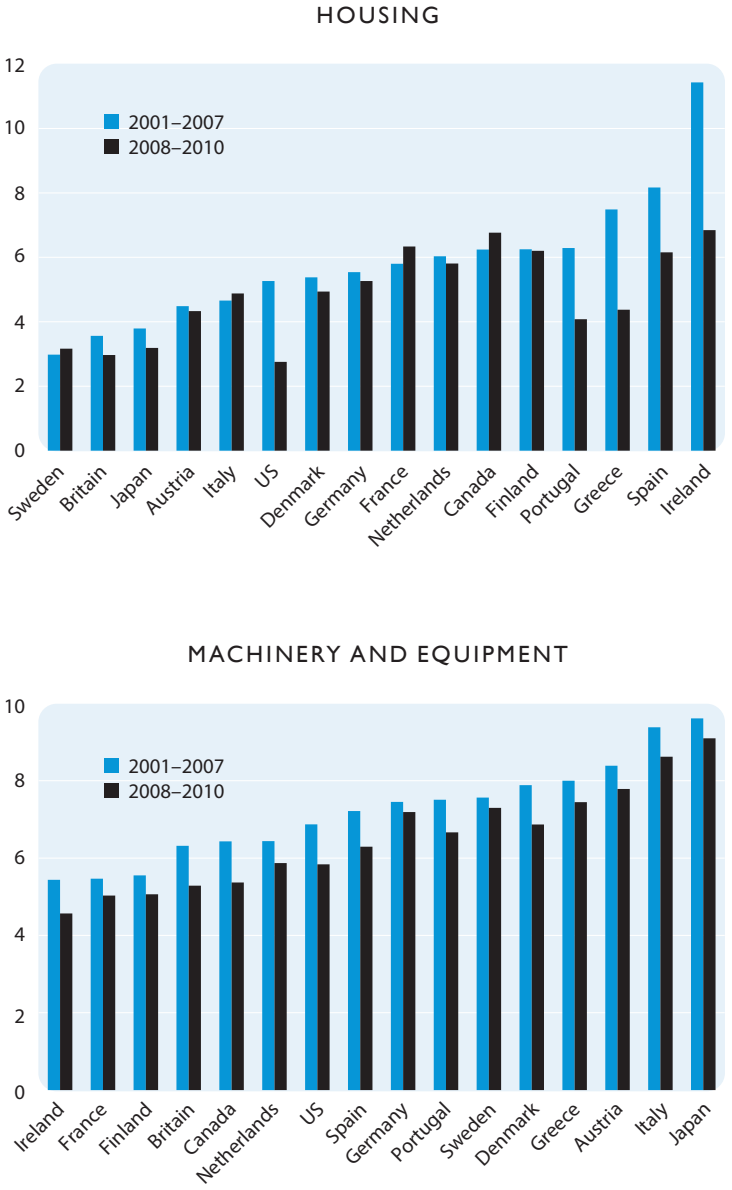
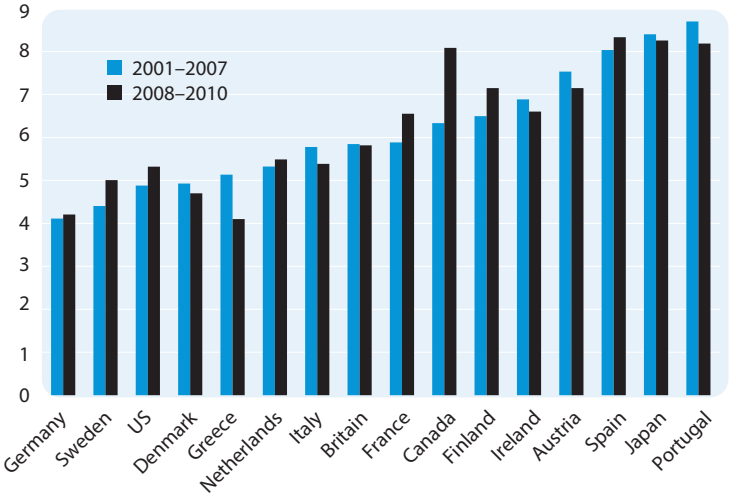


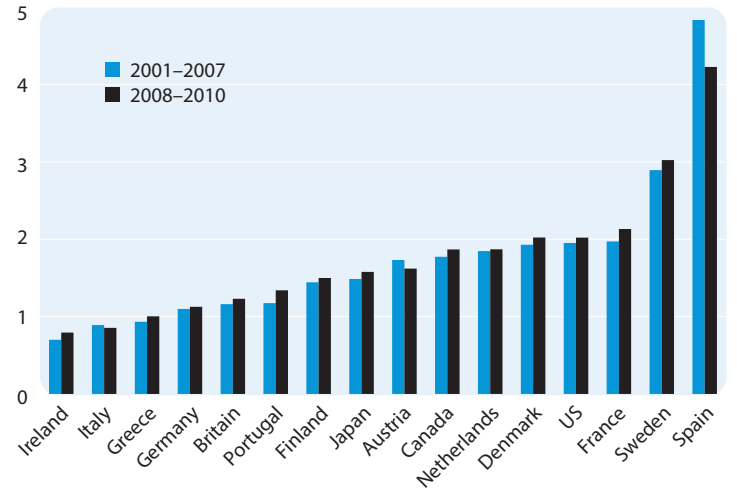
Figure 3.9 Investments distributed over different sectors.

Note: Percent of GDP. Average value 2001–2007 and 2008–2010, respectively. The 2010 value is missing for Ireland and Japan, thus the black pillar only concerns 2008–2009.
Source: OECD.

OTHER BUILDINGS AND STRUCTURE



INTANGIBLE FIXED ASSETS



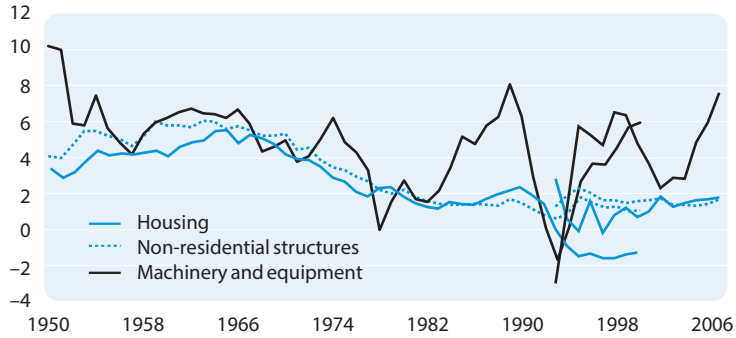


Figure 3.10 Low growth in the stock of buildings and non-residential structure.

Note: Swedish net capital stocks, yearly volume growth. The break in the dataset is due to the fact that two different data sources have been used, according to the below sources.
Source: Edvinsson (2005) (1950–2000), SCB (1993–2007).

Table 3.1 Gross investments (percent of GDP)

	Total			
	1970's	*1980's*	*1990's*	*2000's*
Denmark	23.8	19.4	18.7	20.0
Finland	28.1	26.0	19.8	20.0
France	22.9	19.9	18.3	19.4
Greece	25.5	21.5	19.0	20.9
Ireland	23.8	20.7	18.5	23.2
Italy	25.1	23.0	19.8	20.5
Japan	33.3	29.3	28.7	23.2
Canada	22.7	21.7	19.2	20.9
Netherlands	23.9	21.4	21.8	20.0
Portugal	27.6	27.9	24.8	23.7
Spain	25.2	21.9	22.6	27.7
Britain	19.8	18.4	17.2	16.7
Sweden	21.9	20.6	17.5	18.1
Germany	24.5	22.0	22.1	18.5
US	19.2	19.3	17.7	18.6
Austria	26.5	23.1	24.1	22.2
Average	*24.6*	*22.3*	*20.6*	*20.8*

Note: Unweighted average. *Source:* OECD National Accounts.

vesting more than Sweden do not appear to be dynamically inefficient. Determining whether total investments in infrastructure are *too* low is therefore difficult. Swedish Fiscal Policy Council (2009) still criticizes the government for not having analyzed whether public investments are at an optimal level. But the main criticism of the council, with which we agree, is that the government does not even produce good statistics on public investments, its capital stock and wealth. As a consequence, the government and parliament have insufficient information to even try to analyze whether the total investment level is too low or too high.

Bristfälligt underlag försvårar analyser av investeringar

An alternative approach is to use cost-benefit analyses to investigate whether specific investment projects are motivated. Nilsson et al.

Housing				Other buildings and structures			
1970's	*1980's*	*1990's*	*2000's*	*1970's*	*1980's*	*1990's*	*2000's*
	4.8	3.9	5.3		5.8	5.3	5.0
	6.8	5.4	6.2		8.9	6.3	6.7
	6.8	5.5	5.9		6.1	5.6	6.0
15.4	12.8	8.4	6.9	6.6	5.4	5.4	5.1
			10.2				6.8
7.1	5.8	4.8	4.7	7.0	6.6	5.3	5.7
	5.6	5.1	3.7		12.1	11.5	8.4
6.5	6.0	5.2	6.2	8.6	7.4	6.1	6.6
	5.9	5.6	6.0		6.2	5.9	5.5
8.0	8.4	7.5	6.1				8.6
			7.7				8.0
	3.7	3.0	3.4		5.7	5.5	5.8
4.8	4.4	3.0	2.9	7.8	5.8	4.8	4.5
	6.1	7.1	5.6		6.7	6.1	4.2
5.0	4.4	4.1	4.7	6.3	6.2	4.7	5.1
	5.5	5.9	4.6		7.2	7.8	7.5
7.8	*6.2*	*5.3*	*5.6*	*7.2*	*7.0*	*6.2*	*6.2*

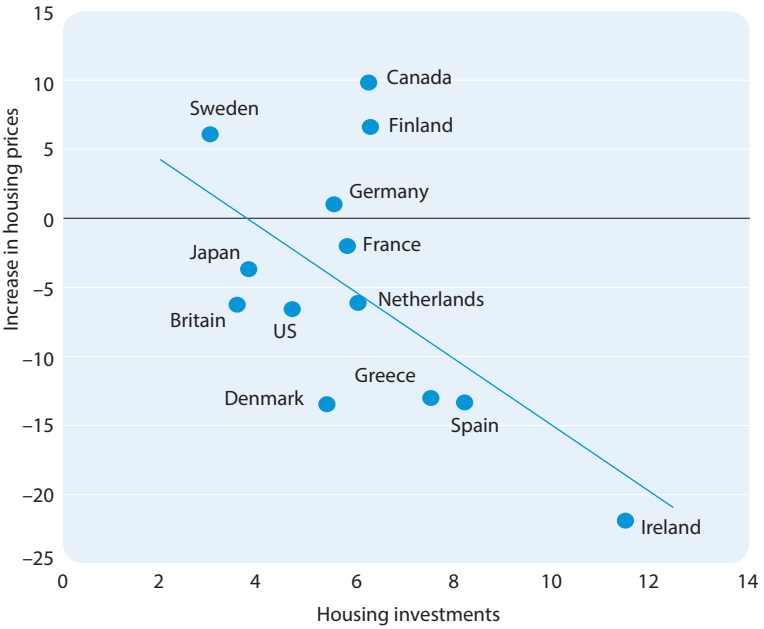


Figure 3.11 Large housing investments were followed by a fall in prices during the crisis.

Note: Housing investments, percent of GDP, average value 2001–2007. Increases in housing prices, average growth 2009–2010.
Source: OECD Economic Outlook 89.

(2009) find that such estimates seldom show that investments in railways are profitable. However, they indicate that this might be because it is often large and spectacular investment projects that are analyzed, while investments in small and less spectacular projects might be more efficient. Investments in roads are more often assessed to have higher benefits than costs, but Nilsson et al. still find that on basis of cost-benefit analyses, it has not yet been clarified whether Swedish infrastructure investments are too low.

In summary, our study shows that the Swedish investment rate is low in a historical and international comparison and that this mainly concerns investments in buildings and structures. There are clear indications that housing construction has been too low due to regula-

tions, but it seems more difficult to determine whether infrastructure investments has been too low. In contrast, an international comparison does not indicate that the industry's general willingness to invest is low. Measures for increasing investment should focus on regulations of the housing market and incentives in the public sector for giving priority to investments in infrastructure, a question that we will return to in the next chapter.

Conclusions

Our main observations and conclusions in this chapter can be summarized in the following points:

- There has been a large surplus in the current account in Sweden in the last fifteen years, i.e. the country's savings have been larger than its investments.
- The surplus has probably largely been due to the fiscal consolidation in the mid 1990's.
- Sweden's close ties to the rapidly growing Baltic countries might also have contributed to the surpluses, since Swedish capital has contributed to financing large current account deficits in these countries.
- The Swedish savings ratio is somewhat large in both a historical and an international perspective and this concerns both the public and the private sector. However, it is difficult to claim that the savings ratio is *too* high.
- The Swedish investment ratio is low in a historical and an international comparison. This only applies to investments in buildings and structures, however. Investments in other areas (for example machinery) are large as compared to other countries.
- Investments in buildings and structures are probably too *low*. In order to increase the investments, a change in the regulations on the housing market is required and a changed economic policy giving priority to investments in infrastructure. We see no obvious need for measures for improving the general investment climate in the industry.

Savings in Sweden are large

Low investments in buildings and structures

12345

Challenges for fiscal policy

In our surrounding world, weak public finances have become an increasingly obvious problem in the last few years. The origins of these problems are multi-faceted and partly differ between countries. There are long-term problems caused by the fact that the pension and transfer systems have not been adjusted for dealing with an ageing population. There are problems where countries have been obliged to take over or at least implicitly guarantee debts in the private sector in the wake of the financial crisis. There are countries that, in the good years with high growth preceding the financial crisis, pursued far too expansive fiscal policies and avoided decreasing their levels of debt. And there are countries that despite weak public finances at the outbreak of the financial crisis decided on extensive fiscal stimulations without having any strategy or a working regulatory framework to also tighten up fiscal policy in the longer run.

Several different reasons for weak public finances in many countries

Strong public finances in Sweden

Government borrowing costs are low

However, Swedish public finances have been strong during these developments. There has been a decrease in the gross debt of the public sector in relation to GDP in this period and the government borrowing costs are lower than in most countries. The strong public finances have, without any doubt, been of great assistance during the crisis years. But, at the same time, there has been a discussion about whether too much of the fiscal policy focus has been on strong finances rather than on measures for stabilizing the business cycle or for long-term growth.

In this chapter, we first discuss the fiscal policy regulatory framework

and how it was an important component in the transition to sounder public finances after the economic crisis at the beginning of the 1990's. Then, we discuss how, according to research, fiscal policy should be used as a stabilization policy tool and how Swedish fiscal policy has actually developed over the business cycle. We then discuss what approach fiscal policy should take to developments on the financial markets. Finally, we discuss whether the fiscal policy regulatory framework generates excessive saving or low investment as well as whether the framework needs to be changed in light of the developments in the last few years.

The fiscal policy regulatory framework and the budget consolidation

The fiscal policy regulatory framework consists of rules and institutions surrounding the tax and expenditure policy of the public sector. The most important components of the Swedish framework are *the government budget process, the government budget surplus target, the expenditure ceiling, the requirement for municipal balance, the European budget rules* and the *Fiscal Policy Council*. We discussed the overall objectives for such rules in Chapter 2. However, let us here discuss the components of the Swedish regulatory framework in more detail.

The budget process and the expenditure ceiling are the result of the reforms in the 1990's

The budget process and the expenditure ceilings might be the most important parts of the framework. These are the result of the reforms in the 1990's. The government budget now follows a top down perspective in several steps. First, an expenditure ceiling is set for three years. Then, parliament takes a decision on the total scope of the budget under the limitations of the previously set expenditure ceiling. The total scope of the budget is then allocated to different expenditure areas. This procedure implies a stricter negotiation process within both the government and Swedish parliament. A minister or a party can only obtain increased resources for »her« area if there is a decrease in the resources for another area.[1]

The government budget surplus target was gradually introduced in

1. The background to the budget process is described in Molander and Paulsson (2008). Ljungman (2009) describes how the top down perspective strengthens the budget process.

the 1990's and has been an explicit part of the fiscal policy regulatory framework since the year 2000. The objective is that the financial savings of the public sector are to amount to an average of 1 percent over the business cycle. There have been many motives for this objective (Swedish Fiscal Policy Council 2008 lists 16 different motives that have been stated in the budget document!). The current government has only used four motives, however: long-term sustainable public finances, buffer in a downturn, an even allocation of resources across generations and economic efficiency.[2]

Several different motives for the government budget surplus target

According to the municipal law code, strong finances are a prime target for the municipalities. From the year 2000, this rule has been supplemented with a requirement that the municipality budget revenues should at least equal the level of the budgeted costs. If a deficit still occurs during the year, this must be compensated by a corresponding surplus in the coming years. However, surpluses must not be used to compensate for *future* deficits.

The European budget rules (Stability and Growth Pact) often stipulate that the public sector budget on average over the business cycle should be close to balance or in surplus. The public debt ratio should not exceed 60 percent of GDP and the financial savings deficit must normally not exceed 3 percent of GDP. These budget rules have been criticized both for being badly designed and for not having been implemented in practice. There is now ongoing work at designing a more efficient European framework.[3]

The Swedish Fiscal Policy Council evaluates fiscal policy

The Swedish Fiscal Policy Council was established in 2007. The main task of the council is to evaluate if the fiscal policy pursued is compatible with long-term sustainable public finances. But it should also, among other things, study whether the fiscal policy has been clearly motivated, well adjusted in relation to the business cycle and whether it has respected the budget rules that have been drawn up.[4]

In Chapter 2, we found that research both gives support to the

2. Ministry of Finance (2010) provides an extensive description of the government budget surplus target along with the motivations behind it.

3. See, for example, European Commission (2010).

4. See Calmfors (2010).

view that budget rules and fiscal policy surveillance agencies are necessary and the view that budget rules improve budget outcomes. We also found that a well-working monetary policy requires that the fiscal policy ensures that the government debt ratio is kept stable in the long run. Fiscal policy is then said to be passive. A requirement for the condition for passive fiscal policy to be fulfilled is that the primary government budget balance (the balance adjusted for interest rate payments) is strengthened when there is an increase in the debt ratio and weakened when there is a decrease in the debt ratio. This condition is fulfilled due to the government budget surplus target, since the objective concerns the total budget balance (balance including interest rate payments). If there is an increase in the debt ratio, there will be an increase in the interest rate payments and then a higher primary budget balance is required in order to fulfill the government budget surplus target etc.

Our view is thus that the framework fulfills an important function. Moreover, like most people, we argue that the reforms of the Swedish framework have contributed to more budget discipline and to a better economic-policy debate and discussion on fiscal policy. Despite this, we wish to make a small reservation. In Chapter 2, we found that, in practice, it is not possible to design an optimal regulatory framework that takes all imaginable (and unimaginable) possibilities into account. In practice, the regulatory framework is designed to apply to the normal state of the economy. Under extreme circumstances, these rules might lead to serious and unintentional limitations of the policy. It might then be motivated to temporarily deviate from the regulatory framework, at least if it is clear that the conditions are really extreme. In the Swedish regulatory framework, it is mainly the expenditure ceilings and the requirement for municipal balance that might have put unnecessary constraints on policy in the recent crisis. The limitations of the municipal balance requirement were partly mitigated by additional government subsidies to the municipalities, but the expenditure ceilings seem to have constrained fiscal policy in the initial years of the crisis, which we consider to have been unnecessary. The expenditure ceilings should thus be supplied with an escape clause so that they need

not be followed in a deep business cycle downturn.[5]

The debt ratio culminated in 1994

In Box 4.1, we show how the budget balance, interest rates, inflation and growth contribute to changes in the government or public sector debt in relation to GDP. We have studied how these components have contributed to the trend of the Swedish debt ratio since 1970.[6] Figure 4.1 shows the trend for those time series that constitute the basis for our study. The first panel shows that Sweden had a stable debt ratio of around 20 percent during the first half of the 1970's, that the debt ratio then rose until the mid 1980's and then fell towards 40 percent before the crisis at the beginning of the 1990's. In the wake of the crisis, there was a strong increase in the debt ratio and it culminated at 77 percent in 1994. Government debt has then decreased to 35 percent of GDP. The following panels show the evolution of the nominal interest rate, inflation and the real interest rate. Inflation has generally been lower and somewhat more stable since the introduction of the inflation target in 1995 and the nominal interest rate has also been considerably lower in the same period. However, the real interest rate was negative during large parts of the 1970's and then considerably higher, but then once more low in the last decade. The last two panels show the evolution of the primary deficit, i.e. the budget deficit adjusted for interest rate payments, trend and real GDP growth. Periods with budget deficits have, not entirely unexpectedly, often coincided with periods of weak GDP growth.[7] A large share of the deteriorating budget is due to so-called automatic stabilizers that vary with the business cycle, which will be discussed in more detail later on.

A negative real interest rate reduced the debt ratio in the 1970's

Figure 4.2 shows the contribution of the various components to the change in the debt ratio, expressed in percent. The first panels show how inflation, or negative real interest rates, contributed to reducing the debt ratio in the 1970's. The low real interest rates were hardly a

5. See Calmfors and Flodén (2009).

6. The decomposition applies to net debt but we apply the analysis to gross debt. Since we focus on government debt rather than on public sector debt, the difference between these terms is, in practice, relatively small.

7. From now on, we will sometimes, somewhat carelessly, use the terms »budget surplus« and »budget balance« as synonyms of what in the official statistics are called »financial savings surplus« and »financial savings«.

BOX 4.1 CONTRIBUTIONS TO THE CHANGE IN THE DEBT RATIO

Government net financial debt is developed according to the following equation

$$D_{t+1} = (1 + i_t)D_t - P_t$$

where D_t is debt at the beginning of period t, i is the nominal interest rate and P_t is the primary budget balance, i.e. tax revenue less primary expenditure (expenditure net interest rate expenditure). Now, divide by GDP on both sides of the equation, let d and ρ be debt and budget balance relative to GDP and let δ be the nominal growth rate of GDP. We then get

$$(1 + \delta_{t+1})d_{t+1} = (1 + i_t)d_t - p_t.$$

We can divide the nominal growth rate into inflation, π, and real growth, γ, according to $\delta \approx \pi + \gamma$. The previous equation can then, somewhat simplified, be written as

$$d_{t+1} - d_t = (i_t - p_{t+1} - \gamma_{t+1})d_t - p_t.$$

The change in the debt ratio is thus explained by four terms: nominal interest rate payments on the debt, the undermining of the debt ratio due to inflation and real growth and the decrease in the debt due to primary surpluses. Also note that the real interest rate is the difference between the nominal interest rate and inflation. Sometimes, it might be more meaningful to merge the first two components, i.e. the nominal interest rate less the inflation rate, to real interest payments on the debt.

market outcome, they can rather be explained by the strongly regulated credit markets in Sweden in this period.[8] In later periods, it has mainly been the primary budget balance that has contributed to the evolution of the debt. In particular, large deficits contributed to the accumulation of the debt in the wake of the crisis in the 1990's. We can also clearly see how the budget consolidation from the mid 1990's has resulted in a budget surplus which has reduced the debt ratio. From the mid 1990's,

Since the mid 1990's, the budget deficit has reduced the debt ratio

8. See Werin (1993) for a description of the regulated markets.

high GDP growth has also contributed to the lower debt ratio.

The debt ratio in the US has been stabilized by high GDP growth

Based on a similar division of the contributions to the trend of the US debt ratio, Hall and Sargent (2010) showed that GDP growth had been an important explanation for the fact that it has been possible to keep the US debt ratio relatively stable despite the fact that the budget has shown systematic deficits. Figure 4.3 shows how the different components have contributed to the evolution of the debt in Sweden and the US. We see that interest rates and inflation have made similar contributions in the two countries. Budget surpluses have reduced the debt ratio in Sweden since the mid 1990's, but throughout, it has contributed to an increased debt in the US. In contrast, a swifter growth has more clearly held back the increase in the debt ratio in the US than in Sweden. Real GDP has, on average, grown by 2.9 percentage points per year in the US as compared to 2.1 percent in Sweden. The major part of the difference (0.6 percentage points) is explained by higher population growth in the US.

Population growth contributes to a lower debt ratio in the US and Sweden, but not in Southern Europe

According to the latest population forecasts from the UN, the population growth in the next decades will remain at around 0.4 percent per year in Sweden but fall from 1.0 percent to slightly less than 0.7 percent in the US. The US will thus hardly be able to rely on GDP growth as a tool for stabilizing the debt ratio to the same extent as previously. As compared to many other countries, the population growth will provide relatively good conditions for debt developments in both Sweden and the US. Population growth is expected to be considerably lower in several of the Southern European countries that are burdened by debt and in both Portugal and Italy, the population is expected to fall until 2050.

In sum, we find that budget surpluses have been necessary in order to decrease the government debt ratio after the crisis in the 1990's and then stabilize the debt ratio at a low level. Due to stronger economic growth than in Sweden, the US had been able to stabilize its debt ratio until the outbreak of the financial crisis despite budget deficits in almost every year since 1970. In Sweden, the fiscal policy regulatory framework and the stricter budget discipline have contributed to the public sector budget surplus in most years since the mid 1990's. However, the fact that the current Swedish framework is a clear improve-

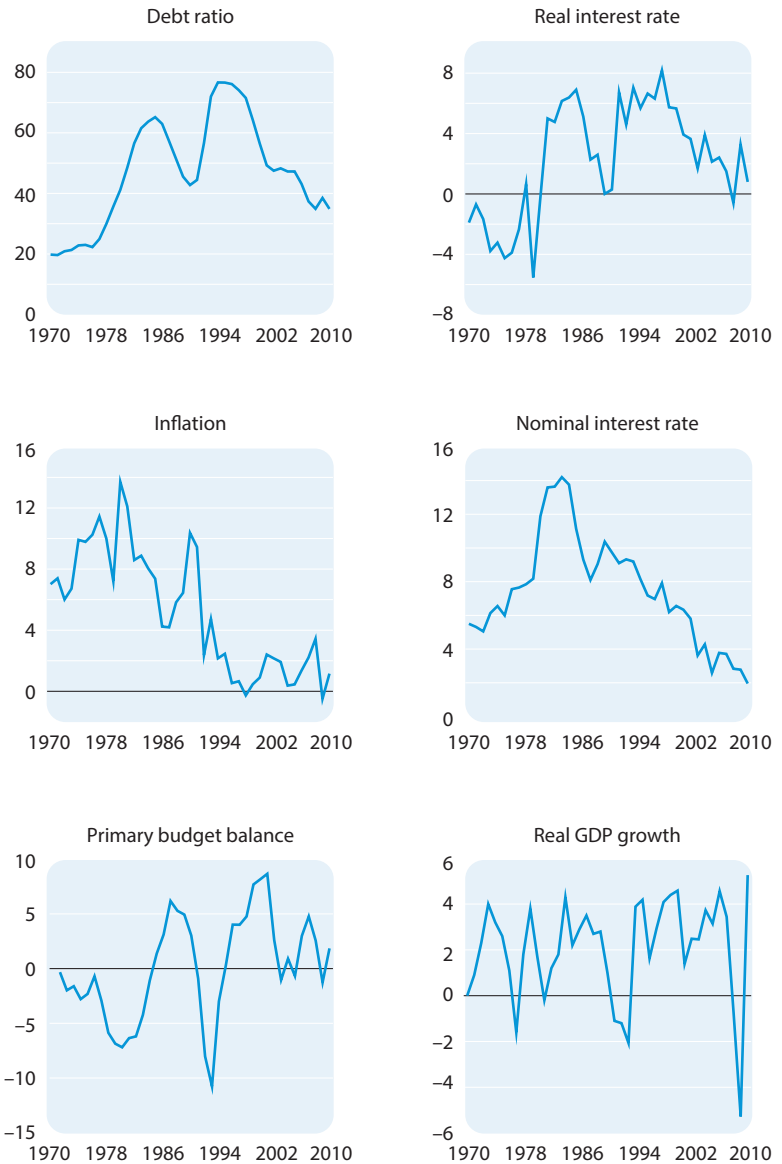


Figure 4.1 Swedish government debt and causal variables.

Note: Gross financial government debt, percent of GDP. Nominal interest rate and primary budget balance, based on the actual interest rate payments of the government, the need for borrowing measured as CPI. Real interest rate = nominal interest rate – inflation.
Source: ESV (government debt, budget balance, interest rate) and OECD (GDP, GDP growth).

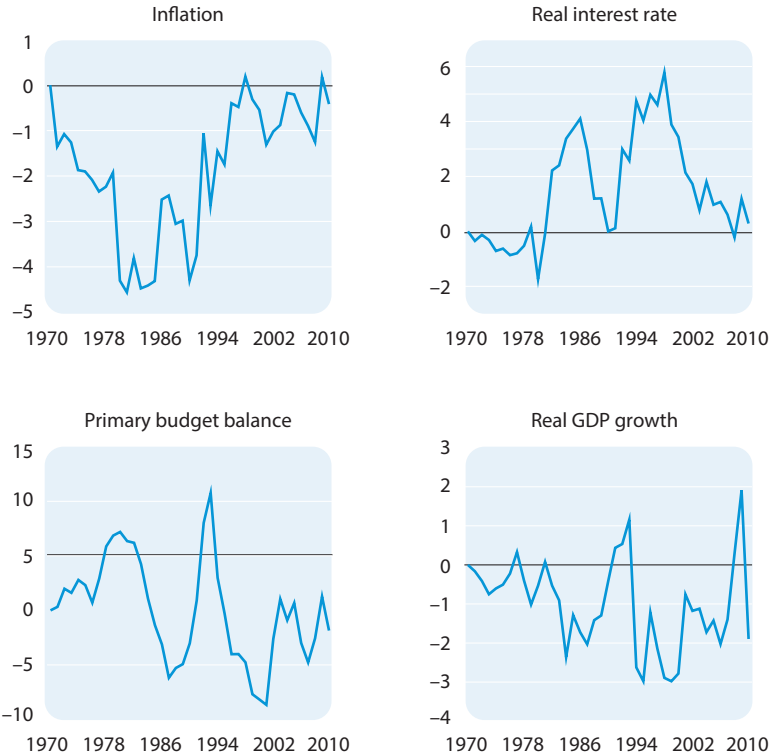


Figure 4.2 The effect of the variables on Sweden's government debt (percentage points).

Note: Processed data (see Box 4.1 for an explanation).
Source: As in Figure 4.1.

ment on the previous framework does not mean that it is optimal. In the following, we will both discuss whether the framework crowds out efficient stabilization policy measures or desirable long-term investments and whether the framework needs to be updated as the surrounding world evolves.

Fiscal policy is affected by the business cycle through automatic stabilizers and discretionary decisions

Fiscal policy over the business cycle

The reactions of fiscal policy to the business cycle are usually described as either automatic or discretionary. The so-called *automatic stabilizers*

are public revenue and expenditure that vary with the business cycle without there being any need for new decisions. When there is a business cycle downturn, there is a fall in the tax revenue due to the fact that there is a fall in household and firm incomes and, at the same time, there is an increase in unemployment insurance expenditures since there is a rise in unemployment. In addition to the automatic stabilizers, the government or the municipalities can make continuous decisions on *discretionary* fiscal policy measures in order to try to stabilize the business cycle. Discretionary measures include, for example, changes in tax rates, public consumption and investments. There is no clear distinction between automatic and discretionary measures. For example, there is an almost automatic increase in the extent of labor market policy programs when there is a rise in unemployment, but this part of fiscal policy is usually considered to be discretionary.

During the latest financial crisis, discretionary decisions came to play an important role in many countries, in particular after the interest rates had fallen to levels close to zero and the possibilities of the central bank to stabilize the economy with conventional monetary policy measures were limited. The efficiency of discretionary fiscal policy has been subject to debate, however, and there is a strong variation in the magnitude of the estimated effects between different studies.

Multiplier effect of fiscal policy according to Keynesian theory

Different researchers have tried to empirically estimate the so-called *multiplier effects* of discretionary fiscal policy. Expansionary fiscal policy in terms of higher public consumption or investments increases aggregate demand in the economy. According to traditional Keynesian analysis, the increase in demand means that there is an increase in the production of the economy, which increases household income and thus contributes to even higher growth etc. The increase in public consumption thus also leads to an increase in household consumption, and that GDP increases *more* than the initial increase in public consumption, which the Keynesian analysis describes as the multiplier being larger than one. According to more modern theories, both neoclassical ones (with well-functioning markets) and Neo-Keynesian ones (with market failures such as price rigidities or imperfect competition), it is, however, likely that more public activity crowds out private

Crowding out effects decrease the multiplier

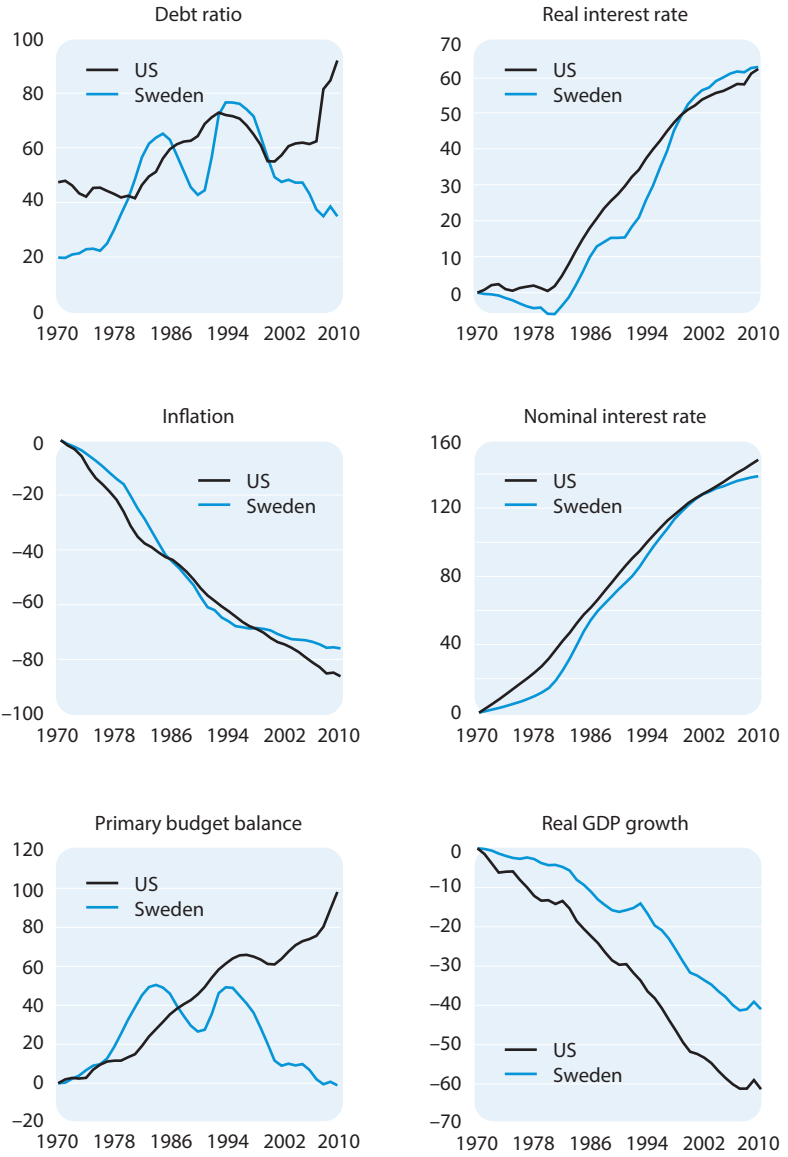


Figure 4.3 The debt ratio of Sweden and the US as well as the cumulative effect on the debt ratio of the variables for the debt ratio for each respective country.

Note: Processed data (see Box 4.1 for an explanation). For the US, government debt refers to the consolidated gross debt of the public sector.
Source: Sweden. See Figure 4.1. US: OECD Economic Outlook 89 (interest rate, budget balance, GDP, GDP growth and public debt) and OECD MEI (inflation).

activity, mainly since public expenditure must probably be financed by higher taxes, but also since an independent central bank can react with a less expansionary monetary policy when fiscal policy becomes more expansionary.[9] These crowding out effects reduce the multiplier and only in certain special cases will it be larger than one.

Empirical studies indicate small multipliers

As already mentioned, the empirical studies provide very different results. Yet, a study by Ramey (2011) indicates that the majority of the estimates indicate a multiplier at around one, after a loan-financed increase in public consumption, which means that more public activity has a small effect on private activity (GDP increases as much as public demand, but not more). However, most studies are based on US data from periods with high economic activity. In a small open economy with a flexible exchange rate, like the Swedish one, smaller stimulatory effects can be expected since the exchange rate can be driven upwards. This conjecture is corroborated by the empirical results in Ilzetzki et al. (2011). However, one can imagine that the stimulatory effect becomes larger in a deep business cycle downturn when the risk for crowding out effects is smaller.[10]

Our conclusion in this presentation is that discretionary fiscal policy, at least in the shape of public consumption and investment, might at most have a small stimulatory effect on private activity. In contrast, fiscal policy can contribute to stabilizing the total economy, where the public sector also is an important component. However, there is no reason to let the resources of schools or medical care vary over the business cycle, but an increase in certain other public activity, in particular investments, can be motivated in a business cycle downturn since this contributes to stabilizing the overall economic activity.

9. Woodford (2011) and Leeper et al. (2011) describe the main mechanisms that can emerge in modern models. The problem of crowding out becomes smaller if the government can credibly promise to finance current expansion with lower public expenditure in the future.

10. Ramey (2011) and Parker (2011) present certain empirical support for this assumption.

The automatic stabilizers

Automatic stabilizers mainly seem to work through taxes and transfers

By definition, automatic stabilizers differ from discretionary fiscal policy as they exist without any actual decisions having been made. In practice, there is another difference. Discretionary fiscal policy can consist of variations in both public investments and consumption, as discussed above, such as tax and transfer levels, but the automatic stabilizers are mainly of the latter kind. It is generally accepted that automatic stabilizers are a welcome part of the economy and that they contribute to stabilizing the business cycle.

The automatic stabilizers might have become weaker

The automatic stabilizers are often expressed as a budget elasticity that stipulates by how many percent of GDP financial net savings are »automatically« improved if there is an increase in GDP by 1 percent relative to its trend. According to an estimate by Girouard and André (2005), the Swedish budget elasticity is 0.55, which is higher than in other countries. That the Swedish automatic stabilizers are strong is due to our high taxes and extensive transfers. Even if the automatic stabilizers in Sweden are strong, there is reason to suspect that they have been weakened over time and that they are weaker now than in the crisis of the 1990's, for example, since there has been a decrease in the tax pressure, for example due to the introduction of the earned income tax credit and since there has been a fall in the unemployment replacement rate.[11]

Experience indicates that many components in the public budget develop more or less automatically without being captured by the usual estimates of the automatic stabilizers.[12]

Figure 4.4 shows how public sector revenue and expenditure developed in relation to GDP in the crisis in the 1990's and in the business cycle downturn in the last few years, respectively. The figure shows that the revenue trend has been similar during the two crises, but that it fell

11. A counteracting factor is that the tax system has become increasingly progressive in the last few years due to earned income tax deduction. The estimates in Flodén (2009), based on the method of Girouard and Andrés, indicate that there was a fall in budget elasticity between 1998 and 2009, but that the change is small.

12. For example, Bénétrix and Lane (2011) show that the current account and the trend on the financial markets give rise to automatic budget effects that are not captured by the normal estimates of the stabilizers.

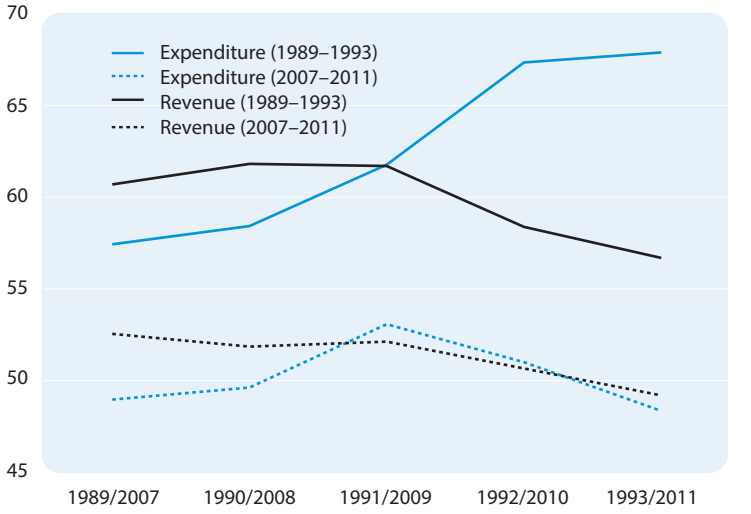


Figure 4.4 Revenue and expenditure in the Swedish public sector.

Note: Percent of GDP.
Source: IMF WEO.

somewhat less during the latest crisis. The reasons for the tax revenue trend are not the same, however. During the crisis in the 1990's, there was a sharp fall in both employment and asset prices, which led to lower tax revenue. During the latest business cycle downturn, discretionary decisions about tax decreases, mainly the earned income tax credit, have been of importance.

Public revenue fell less in the latest crisis

However, public expenditure developed very differently in the two periods. The business cycle reached its peak in 1990 and 2008, respectively.[13] Expenditures grew in relation to GDP in 1991 and 2009. Expenditures then continued to grow during the crisis of the 1990's, but began to fall in the latest business cycle downturn. This difference can at least partly be explained by the evolution of unemployment. There was a very sharp increase in unemployment, by slightly more than 8 percentage points, in the crisis in the 1990's. Moreover, the un-

13. There is no established method for determining exactly when the business cycle »reaches its peak« or bottom. According to the survey by the Swedish Fiscal Policy Council (2011), the peaks were reached in one of the first two quarters of 1990 and in the last quarter of 2007 or the first quarter of 2008, respectively.

The costs for labor market policy increased during the crisis in the 1990's

employment benefits were more generous at that point in time that in the last few years, and a larger share of the unemployed was covered by the insurance, see Figure 4.5. There was also a considerably stronger increase in the costs for active labor market policy, mainly various labor market programs, during the earlier crisis. Total public expenditure for unemployment benefits and labor market policy in relation to GDP increased by slightly less than 4 percentage points between 1989 and 1993. The total expenditure increase in the same period amounted to 10 percentage points, however. Even if the developments on the labor market were considerably more severe during the crisis in the 1990's than during the latest downturn, the explanation for the expenditure increase must also be sought elsewhere.

Another explanation for the different developments in government expenditure is the evolution of the banking sector in the two periods. The banking system has had considerable problems in both business

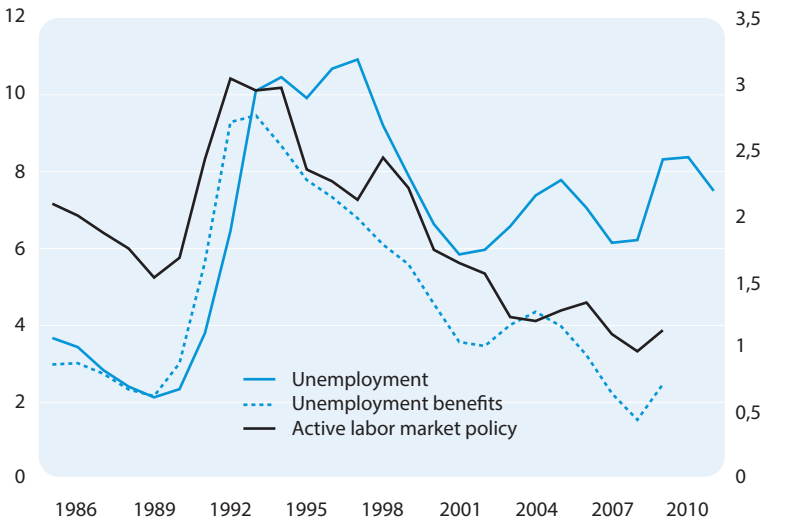


Figure 4.5 Unemployment (left-hand axis) and the cost of unemployment benefits and active labor market policy (right-hand axis).

Note: Unemployment, percent of the total labor force. The two other variables in percent of GDP.
Source: National Institute of Economic Research, Konjunkturläget August 2011.

Higher public expenditure for financial support to banks during the crisis in the 1990's

cycle downturns. In the previous period, the government was forced to intervene with supporting measures that generated expenditures amounting to about 2 percent of GDP per year during the budget years 1992/93 and 1993/94.[14] The support from the government to the banking system during the current business cycle downturn has not yet given rise to any considerable costs.

Risk that fiscal policy becomes procyclical at the municipal level

That the public sector budget balance has not been weakened to any considerable extent during the current crisis might also be due to the balanced budget requirmenet for local governments that has existed since the year 2000. Since the municipalities must plan for a balanced budget every year, there is an increase in the risk that fiscal policy at the local level actually becomes procyclical, i.e. that one is forced to cut down in business cycle downturns in order to balance the budget. In a business cycle downturn, this might lead to a situation where fiscal policy is expansionary at the central level but contractionary at the local level. Next, we study this potential problem in more detail.

Has fiscal policy served to stabilize the economic trend?

We have argued that a strict fiscal policy regulatory framework might contribute to a better budget discipline. But we have also argued that fiscal policy rules do not solve all the underlying problems that motivate the regulatory framework. By limiting the scope for economic policy, tendencies to systematically run deficits are counteracted, but it is possible that also the possibilities to pursue efficient stabilization policy deteriorate.

In Sweden, this concern is perhaps most well-founded for the economic effects of the balanced budget requirement on local governments. Municipal expenditures correspond to about 23 percent of GDP and thus, constitute almost half of public sector expenditure. About 70 percent of public *consumption* are municipal consumption. Since labor incomes covary strongly with the business cycle and, at the same time, constitute the most important source of revenue for the munici-

14. Statistics Sweden, Statistical Yearbook for Sweden 1996, table 276.

Table 4.1 Public activity over the business cycle.

	Correlation with:	
Variable	*GDP in the same quarter*	*GDP four quarters earlier*
Public consumption	0.18	–0.27
…government	–0.07	–0.48
…municipal	0.23	–0.06
Public investments	0.15	0.08
…government	0.01	–0.20
…municipal	0.22	0.34
Employment in the public sector	0.61	0.04
…government	0.22	–0.50
…municipal	0.57	0.23

Note: All variables are seasonally adjusted and HP-filtered. Quarterly data 1995:1-2011:II.
Source: Statistics Sweden and own calculations.

palities, there is an obvious risk that the balanced budget requirement leads to procyclical policies that reinforce business cycle fluctuations at the local level.

Our study of Swedish business cycle data provides some support for this view. In Table 4.1, we show how public sector consumption, investments and employment have covaried with GDP over the business cycle. The table shows that *government* activity has, at least to some extent, increased in business cycle downturns and decreased in business cycle upturns and has thus counteracted the business cycle fluctuations. In contrast, the *municipal* activity has tended to increase in business cycle upturns and decrease in business cycle downturns.[15] However, the problem does not seem to have been exacerbated by the

Government expenditure counteracts business cycle fluctuations

15. The estimates in the table build on HP-filtered quarterly data 1995:I-2011:II. We have also made estimates for the period 1980:I-2011:II, and the growth rate in four quarters in stead of HP-filtering. The results are then similar. Also Assarsson (2011) finds similar results when, using somewhat different methods, he studies how municipal consumption and employment vary over the business cycle. The underlying employment data of the results in Table 4.1 build on the labor force survey, which in turn builds on interviews with a limited number of people. These data are thus more prone to measurement error

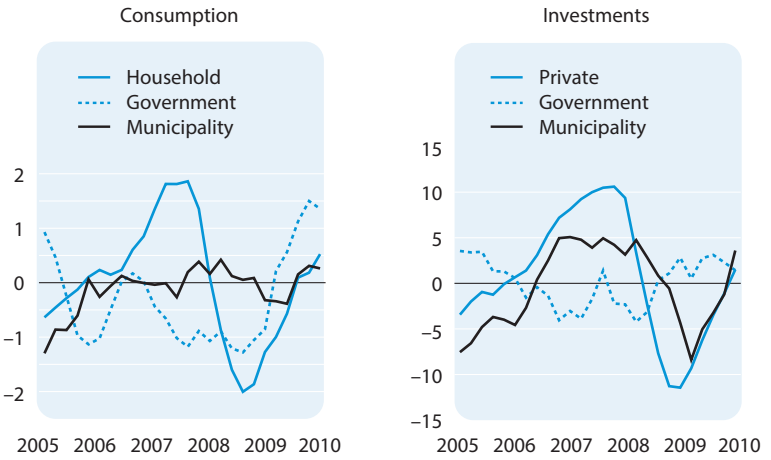


Figure 4.6 Consumption and investments, deviation from the trend.

Note: Divided into sectors. Deviation from HP-trend. Four quarters rolling averages (see also Table 4.1 and its note for an explanation).
Source: See Table 4.1.

introduction of the municipal balanced budget requirement. This can partly be due to the fact that the regulatory framework for the municipal finances has also previously meant that municipalities should aim for budget balance, and partly due to the fact that municipalities do not have any obvious *incentives* to pursue stabilization policy.

The behavior of the municipalities is procyclical

Figure 4.6 indicates that the weakly procyclical behavior of the municipalities has emerged also in business cycle downturns in the last few years. There was a marginal decrease in municipal consumption relative to its trend at the end of the year 2009, while there was a more pronounced decrease in municipal investments.

The pattern that stabilization policy pursued at the central level is counteracted at the local level is not unique to Sweden. The problem appears to have been considerably more severe in many other countries during the recent crisis. For example, Aizenman and Pasricha (2011) show that consumption and investment in the US states have covaried

than the variables in the national accounts and this particularly applies to employment in the government sector, since only a small share of the population works in that sector.

with the evolution of GDP and that this has largely served to counteract fiscal policy stimulations at the federal level.[16]

The municipalities should be given the driving forces to stabilize their activity over the business cycle

In the spring of 2010, a government committee was appointed to study the possibilities of preventing that the municipal sector amplifies business cycle fluctuations. The proposal of the committee (SOU 2011:59) is that municipalities should be given increased possibilities to balance their result over time. We also see the need for a change in the current system. However, further attention must be paid to the design of the regulatory framework. The regulatory framework should provide the municipalities with possibilities and driving forces to stabilize the business cycle while maintaining the driving forces for budget discipline and limiting the possibilities of accumulating debt.

Fiscal policy and financial stability

Close relationship between fiscal policy and financial policy

Well-functioning financial markets are a condition for the economy to work well as a whole. If the financial system is threatened, the government must thus be ready to intervene with various support measures, which often entail considerable public expenditure. In a financial crisis, government revenue also decreases in relation to the financial sector. Due to all this, the government budget runs the risk of deteriorating considerably in times of financial crises which limits the scope for fiscal policy. As pointed out in Chapter 2, there is thus a close relationship between fiscal policy and financial stability, at least in situations where financial stability runs the risk of turning into instability.

The risks that instability on the financial markets entail for the public finances are confirmed by empirical studies. For example, Reinhart and Rogoff (2009) find that there tends to be a marked growth in public debt after banking crises. Moreover, Bénétrix and Lane (2011) show that the current account and credit growth of the economy do not only affect the public finances through general business cycle effects but that these variables have a separate, larger effect on the budget. The

16. However, Taylor (2011) thinks that the additional federal subsidies to the individual states in the business cycle downturn have resulted in *lower* consumption and investments at the state level (but larger expenditures for transfers).

automatic stabilizers thus provide an incorrect picture of the adjustment of fiscal policy to the business cycle if these are not corrected for developments on the financial markets.

Financial instability affects the adjustment of fiscal policy to the business cycle

Figure 4.8 shows that the total assets of the Swedish banking sector amount to about 400 percent of GDP, which makes it somewhat smaller than the banking sector in Britain but larger than in most other countries. It is thus likely that uncertainty on the financial markets would be a larger public-financial problem in Sweden than in many other countries. Finance minister Anders Borg has also explained that one of the reasons why the government did not choose to pursue more expansionary fiscal policy during the latest crisis was that it wanted to maintain substantial margins if the Swedish banking system were to be seriously threatened, in particular by the developments in the Baltic countries.[17]

The recent financial crisis has made it painfully obvious that the conditions on financial markets are of the utmost importance for the public finances. Next, we will first provide a brief summary of the different fiscal policy measures that have been implemented to deal with the crisis in different countries and then discuss what lessons can be learnt for the future, about the relationship between fiscal policy and financial stability.

The government interventions for dealing with the financial turmoil in different countries comprise liquidity support, solidity support, guarantees, compulsory administration and indirect measures. In most countries, the liquidity problems have been handled by the central banks but the fiscal policy have varied between countries. In the US and Britain, the government did, for example, buy toxic assets. In Ireland, the government created a deposit guarantee for the six largest banks in 2008. In addition, in 2009 an authority (NAMA) was created that would take over the loans of banks seeking support and sell them on. The Irish government has also, on several occasions, contributed with capital to large banks, which has resulted in the govern-

17. Dagens industri April 2, 2009.

ment obtaining extensive control of the Irish banking system.[18] Lane (2011) emphasizes that capital support to the banking sector has been a very important reason for the large Irish budget deficits of 14.5 and 32 percent of GDP, respectively, in 2009 and 2010. These large deficits have, in turn, served to accelerate Irish government debt. In the indirect support measures, we do, for example, include the euro countries' attempts to try to help Greece deal with its recession without writing down the value of government debt, which would lead to problems for banks in other euro countries.

Capital support to the banking sector is an important reason for the budget deficit in Ireland

In Sweden, the fiscal policy program to ensure financial stability included (i) an increase in the deposit insurance for bank customers; (ii) a guarantee program for banks and other financial institutions; (iii) a stability fund that was established in 2008 and (iv) loans to other countries.[19] The objective of the deposit insurance is to safeguard individual customers who have deposited amounts in banks and certain other financial institutions. The government insurance program, which was abolished on June 30 2011, meant that the government could guarantee loans up to SEK 750 billion and aimed at decreasing the costs for loans for banks and mortgage institutions. The stability fund is to be used to deal with financial crises and is partly financed by fees from participating banks and credit institutions. Thus, it is outside of the government budget. In addition, a new law (2008:814) on government support to credit institutions was introduced. The Support Law, as it has come to be called, provides the government with possibilities of providing support to solvent credit institutions. This includes the possibility of taking over the ownership of a bank through a compulsory purchase of shares.

Stability fund for dealing with financial crises is outside the government budget

It is difficult to assess what costs are related to the public support measures that are used in a crisis on the financial markets, since the measures often consist of the government taking over assets with an uncertain future value or issuing guarantees for possibilities that only

18. See Lane (2011) and the Riksbank (2011) for a further description of how the Irish government dealt with the crisis in the banking system.

19. Information about the various programs from the government homepage: http://www.regeringen.se/sb/d/11586. For an overview of the measures taken by the government in the latest crisis, see Bergström (2009).

occur with a low probability.[20] Reinhart and Rogoff (2009) and Frydl (1999) also point out that estimates of the direct costs of banking crises vary considerably between studies.[21] However, Eurostat (2011) presents estimates of what direct costs the latest financial crisis have entailed for the European countries in 2008–2010. Here, other kinds of expansionary fiscal policy have been omitted and only the differences between revenue and costs that can be referred to the financial sector have been estimated. The results show that the financial crisis entailed certain costs, 0.0004 of GDP, for Sweden in 2008. In contrast, in 2009 and 2010, the net revenue was positive for Sweden (0.04 and 0,06 percent of GDP, respectively). The main reason why Sweden shows a surplus in these years is the government revenue from fees within the government deposit guarantee system.

The direct costs of the financial crisis have so far been small in many countries . . .

. . . but the Irish example shows how a limited debt can escalate quickly

So far, the costs have been limited in most countries. An obvious exception is Ireland where large parts of the banking system have been nationalized during the crisis. The costs for these measures have been large and amounted to 2.4 percent of GDP in 2009 and to as much as 20 percent of GDP in 2010. This has contributed to an increase in Ireland's public debt ratio from 29 percent of GDP in 2007 to slightly more than 120 percent of GDP in 2011. The Irish example shows exactly how a limited debt can escalate quickly if the banking system is threatened and that such a country thus has a high *prospective debt level*. The Irish experience teaches us that the existence of certain fiscal policy emergency measures can be justified if the banking system entails serious risks. According to many evaluations, several other European countries, perhaps Spain and France in particular, face considerable problems within their banking systems. There might very well be a sharp increase in the costs for

20. See Reinhart and Rogoff (2009) and Norges Bank (2004) for a discussion.

21. Earlier in this chapter, we mentioned that Statistics Sweden (1996) reports that the expenditure for the support measures during the Swedish banking crisis in the 1990's has been estimated to about 2 percent of GDP annually during the budget years 1992/93 and 1993/94. Reinhart and Rogoff (2009, p. 164) report that the estimates of the total costs for the same crisis vary between 3.6 and 6.4 percent of GDP. Jennergren and Näslund (1998) estimate that the total final cost, after the government had sold those assets that it had taken over, amounted to about SEK 35 billion, which corresponds to 1.8 percent of the GDP in 1997.

support to the banking sector in these countries in the next few years.

Can what happened in Ireland also happen in Sweden? Of the four large Swedish banks, Swedbank and SEB have been highly exposed to the Baltic markets. The deep downturn in the Baltic countries in the last few years has thus posed a severe threat to the Swedish banking sector. The Baltic markets amounted to 60 and 75 percent of the total credit losses for Swedbank and SEB, respectively, in the first three quarters of 2009 (Riksbank, 2010). In retrospect, finance minister Anders Borg has also stated that he made the assessment that Swedbank and SEB were close to a government takeover in the summer of 2009.[22]

The Swedish banking sector is large

As shown in Figure 4.8, the Swedish banking sector is also large, which indicates that a government takeover might have entailed large public costs. However, it is unclear whether it is the total assets of the banks that are the relevant measure in this context. For Sweden, the blue pillar in the figure shows that the domestic assets of the Swedish banks amount to almost 253 percent of GDP. Foreign assets correspond to 178 percent of GDP and thus, slightly more than 40 percent of the total assets. Since several of the large Swedish banks have a large part of their business in other countries, it is not likely that the Swedish government would need to intervene and support subsidiaries in the event of a possible banking crisis. It can be argued that the Nordea subsidiaries in the Nordic countries are as important for the system in those countries as is the parent company for the Swedish system. The same thing can be said for Swedbank's subsidiary in Estonia and SEB's subsidiary in Lithuania.[23]

It is not meaningful to build up a buffer that is sufficiently large for dealing with a banking collapse

We have argued that problems on the financial markets often turn into a problem for public finances. Since the Swedish banking sector is large, this problem is also particularly important to consider here. The question is, however, in what way the potential risks on the financial markets should be taken into account in fiscal policy. In our view, it hardly makes sense to try to create a fiscal buffer that is sufficiently large to deal with a collapse of the large Swedish banks. In order to be

22. Dagens industri January 20 2011.
23. Swedish Financial Supervisory Authority (2010).

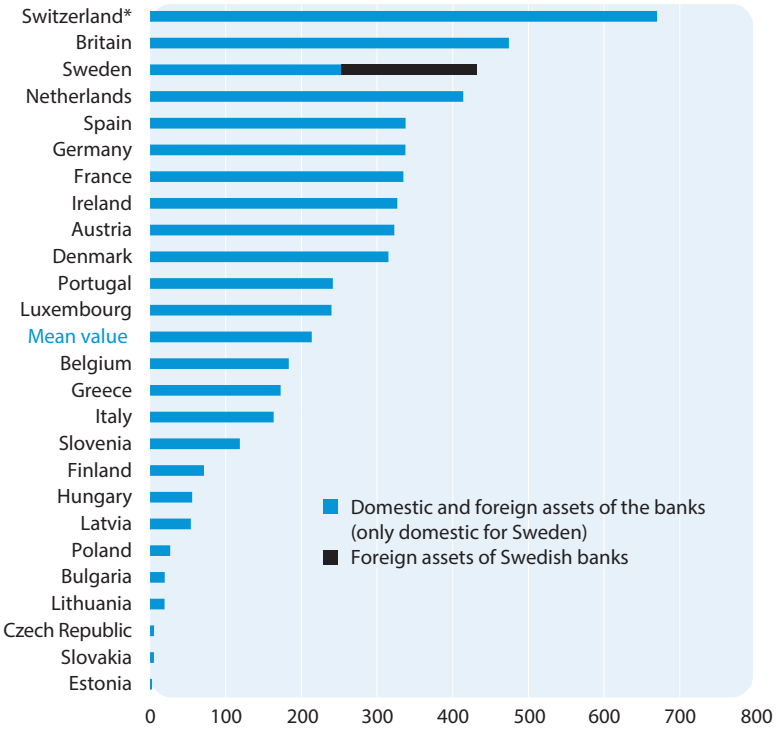


Figure 4.7 Sweden's banking system is large.

Note: Percent of GDP June 2010. Sweden's foreign assets show the foreign assets of the four large banks. Data for Switzerland concerns 2009.
Source: Sveriges riksbank

effective, such a buffer would need to be very large. Moreover, it would not affect the basic mechanisms due to which risks on the financial markets are also public-financial risks. Instead, better regulation of the banking system is needed so that there is a decrease in the risks implied for public finances. In almost all countries, there are now discussions about how regulations should be changed. The most common proposals are an increase in the taxation of the financial markets and increased capital requirements.[24] In some countries, there are also plans for or

A better regulation of the banking system is needed

24. The fees to the stability fund can be considered as a tax or an insurance premium for Swedish banks. The aim is that, in the long run, the fees will mirror the public-financial risks that the individual financial institutions give rise to. Within the euro area, there

A better regulation of the banking system is needed

decisions about more radical reforms of the banking regulations, often through limitations of the business that can be pursued by banks that are covered by deposit insurances.[25] More thorough reforms of the regulation of the Swedish banking system have so far not been discussed to any larger extent. However, this question deserves more attention also in Sweden.

Thus, The Economic Policy Group does not consider potential financial market risks to be a motive for large public savings in the long run. Introducing new regulations takes a long time, however, and fiscal policy must take potential risks on the financial markets into consideration also in the short run. If Sweden maintains its sound government finances, there is reason to believe that we would be well-equipped for dealing with a banking crisis on a somewhat smaller scale. In the absence of better regulations of the financial markets, these risks can be considered a temporary motive for keeping the government budget surplus target for the public finances, since the scope for fiscal policy measures that our current government finances allow provides a certain security.

Risk for problems in the banking system are arguments for a temporarily high government budget surplus target

Has the fiscal policy contributed to low investments?

In Chapter 3, we showed that Swedish investments have been low in an international comparison. Moreover, we showed that the low investments are mainly due to low investments in buildings and infrastructure. Explanations for the low investments in buildings might be regulations of the construction sector and the housing rental market. The low investments in infrastructure are probably more closely related to fiscal policy.

A criticism that has often been raised against the government budget surplus target is that it concerns the *financial* savings rather than the *total* savings of the public sector and thus limits public *ex-*

is also an ongoing discussion about the taxation of financial transactions. The objective then seems to be to decrease the transaction volumes.

25. Examples are the so-called Volcker rules in the US and the Vickers' Commission in Britain. See Chow and Surti for an analysis of these rules.

penditure instead of public *costs*. When financial savings are estimated, the entire expenditure is included in the year when the investment is made, while a cost estimate takes into consideration that an investment is not immediately consumed. For example, Bäckström (2007) and Lindbeck (2008) argue that the government budget surplus target should be abandoned exactly for the purpose of making it possible for us to allow larger investments financed by the public-sector budget.[26] The Swedish Fiscal Policy Council (2008) discussed the possibility of changing the wording of the government budget surplus target so that it concerned total savings instead of financial savings (a so-called *golden rule* of public finance).

The government budget surplus target concerns financial savings, not total savings

In what way does the government budget surplus target then limit public investments?[27] The question can be approached in several different ways. Let us first establish that in the long run, the government budget surplus target does *not* limit the scope for the fiscal policy to fund investments, rather it facilitates large investments.

The government budget surplus target facilitates investments in the long run

In Box 4.2, we show how the government budget surplus target leads to the stabilization of public debt (or wealth) in relation to GDP in the long run and what this, in turn, implies for the scope for fiscal policy measures. If a government budget surplus target is introduced when the debt ratio is larger than the one implied by the government budget surplus target, the debt must be reduced during a transition period. The debt reduction entails temporarily higher taxes or lower expenditure than what would otherwise have been possible. In the new long-run equilibrium, the scope for public consumption and investments (or lower taxes) will be higher, however, since the interest payments on government debt will be lower.[28] Figure 4.8 shows an example of how the primary expenditures develop in relation to GDP when an

26. See also Pålsson (2011), Eriksson et al. (2011) and Lindbeck (2011) for related contributions to the debate. Jakobsson et al. (2007) present a broader criticism of the surplus target.

27. By »public investments« we mean investments initiated by, and mainly financed by, the public sector.

28. Some of the criticism of the surplus target in Jakobsson et al. (2007) is that it leads to an overtaxation of the economy. Note, however, that the government budget surplus target changes the time profile of the taxes, but not necessarily their average level. With

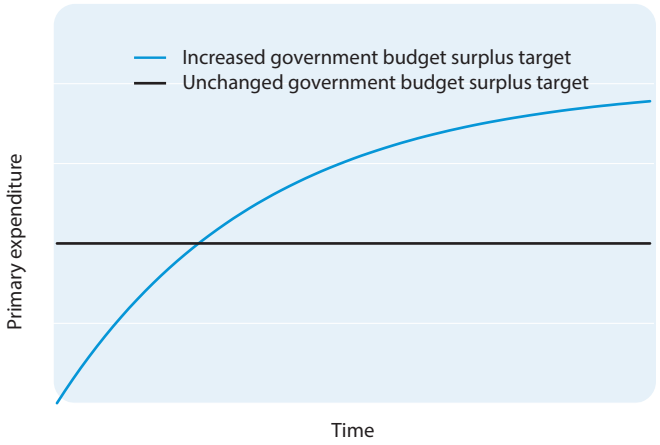


Figure 4.8 Primary expenditure of the public sector in relation to GDP.

Note: The trend of public sector primary expenditure (consumption and investment) when there is an increased government budget surplus target, assuming constant tax levels (see also Box 4.2 for an explanation).

ambitious government budget surplus target has been introduced.

Figure 4.9 shows that the net wealth of the public sector now amounts to 25 percent of GDP. Our numerical example in Box 4.2 indicates that the current government budget surplus target will stabilize net wealth at around 20 percent, i.e. close to the current level of this wealth. A possible interpretation of the developments in recent years is thus that the primary expenditures, possibly mainly investment expenditures, have been low while the debt ratio was reduced, but that there is now a larger scope for fiscal policy action, exactly because the public debt level has been reduced.[29]

There is, however, a great deal to indicate that the additional scope for policy action is not particularly large. In Box 4.2, we show that a financial savings surplus of 1 percent a year instead of a yearly budget bal-

a lower government budget surplus target, taxes could be decreased in the short run, but then need to be increased in the longer run.

29. If we changed the surplus target to an objective for budget balance, an increased scope for fiscal policy actions would, of course, emerge in a transition period when public net debt is reduced towards the new long-run equilibrium (which then means that we neither have debt nor wealth).

ance gives rise to an additional scope for fiscal policy action amounting to *(interest rate – growth) x (1 percent) / growth.* In the period 1984–2010, the average interest rate on one-year treasury bills amounted to 6.7 percent while the average yearly growth rate was 5.7 percent. The additional scope for fiscal policy action would thus be slightly less than 0.2 percent of GDP which can almost be considered negligible.

In the last few years, the interest rate has also, on average, been lower than the growth rate, which could be interpreted as no additional fiscal scope policy for action emerging when there is an increase in savings. However, there are several objections that can be made to such an interpretation. In Chapter 3, we discussed the possibilities of using

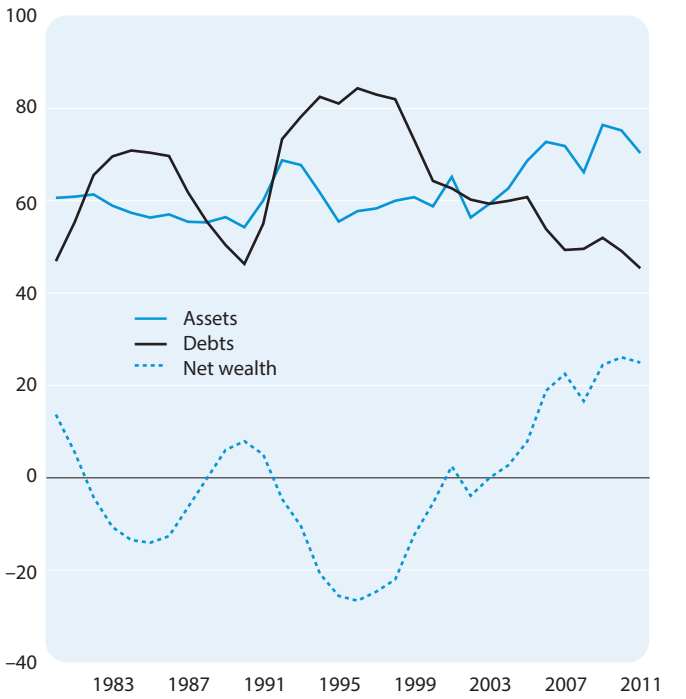


Figure 4.9 The financial assets, debts and net wealth of the public sector.

Note: Percent of GDP.
Source: OECD Economic Outlook 89.

BOX 4.2 DEBT DYNAMICS

In Box 4.1, we showed that the debt ratio develops according to

$$(1+\delta_{t+1})d_{t+1} = (1+i_t)d_t - p_t.$$

Now, let the variables refer to the public sector instead of the government, and let $s_t = p_t - i_t d_t$ be the financial net savings of the public sector in relation to GDP, i.e. the magnitude that is covered by the government budget surplus target. The debt dynamics can then be described by the equation

$$(1+\delta_{t+1})d_{t+1} = d_t - s_t.$$

Now assume that the savings ratio is kept constant (for example s=1% as indicated by the government budget surplus target) and that the GDP growth rate is constant and positive. The debt ratio will then be stabilized at the level

$$d = -\frac{s}{\delta}.$$

If, for example, savings are s=1% and the nominal growth rate is δ=5%, the debt ratio will be d=−0.2, i.e. the net wealth of the public sector will be stabilized at 20 percent of GDP.

Let us now divide financial savings into their components, $s=\tau-g-id$, where τ is the tax ratio and g primary public expenditure as compared to GDP. We can then rewrite the equilibrium condition $d=-s/\delta$ as[1]

$$g = \tau + \frac{i-\delta}{\delta}\, s.$$

1. This derivation assumes that the nominal interest rate in the long-term equilibrium is higher than the nominal growth rate. This is the only reasonable scenario, in particular for a small open economy such as the Swedish one. If the interest rate is lower than growth, there can be an increase in public borrowing without weakening the public finances.

a low interest rate on public borrowing in order to pursue speculative debt strategies. We found that there is a risk that such strategies fail and lead to a costly debt crisis in periods of low economic growth. This interpretation also requires that the interest rate on Swedish government bonds would have been as low even if government debt had been

At given tax rates, a higher government budget surplus target (a higher s) will thus lead to an increase in primary public expenditure (consumption and investments) in the long-run equilibrium.

Frycklund (2011) points out that the estimate of the long-run debt ratio is affected by the fact that the increase in the value of the assets held by the public sector, particularly in the AP-funds of the pension system and government-owned companies, is not included in the financial savings. In order to illustrate how the debt dynamics changes when the increase in value is taken into account, we divide net debt, D, into two components, $D=B-A$ where A are assets with a value increase rate δ^{α} and B is government debt without any value increase. Debt dynamics, in relation to GDP, is now described by two equations:

$$(1+\delta)a_{t+1} = (1+\delta^{\alpha})a_t + s_t^a$$

and

$$(1+\delta)b_{t+1} = b_t + s_t^a - s_t$$

where s_t^a are new savings in the assets. Now assume that the state chooses the new savings s^{α} so that the assets are held constant in relation to GDP. Then, we obtain $s^{\alpha}=(\delta-\delta^{\alpha})\alpha$. In an equilibrium where also debt is stable in relation to GDP, net debt will be stabilized at the level

$$d = b - a = -\frac{s + \delta^{a} a}{\delta}$$

Assume, as previously, that the savings are s=1% and that the nominal growth rate is δ=5%. Assume further that gross assets are kept constant at 60% percent of GDP and that the value of growth is δ^{α}=2%. The debt ratio is then d=-0.44, i.e. public sector net wealth will be stabilized at 44 percent of GDP.

2. Gross public sector assets have amounted to between 51 and 76 percent of GDP between 1970 and 2010. Frycklund uses an increment value that implicitly means that $\delta^{\alpha}\alpha$=1.2%, i.e. δ^{α}=2% when α=60%.

higher. There is a great deal that indicates that there would have been an increase in the interest rate during the European debt crisis in the last few years if Swedish government debt had been higher.

Finally, it can be claimed that the interest rate on government bonds does not provide an accurate picture in these estimates. The financial

net wealth of the government (and the public sector) also includes other debts and assets than government bonds only. The public assets, in particular the AP-funds in the pension system and government-owned companies, often display a value increase that is not included in the financial saving. With reasonable assumptions, net wealth will be stabilized at between 40 and 50 percent of GDP, when due consideration is given to this increasing value and under the condition that the assets are kept constant in relation to GDP (Frycklund 2011, see also Box 4.2). If these public assets are kept in the long run, we can thus expect a continued increase in net wealth. With this approach, it is relevant to ask the question of whether there is any reason to continue to accumulate public wealth, or whether we should try to stabilize wealth at the present level. The numerical examples that we have used above indicate that a reformulation of the government budget surplus target into an objective of budget balance would lead to a stabilization of net wealth at around the current level if the value of the public assets continues to increase.

It is relevant to ask whether there is any reason to continue to accumulate public wealth

Despite this, we do not want to recommend that the government budget surplus target be abandoned at present. We have two reasons for this view. First, the discussion about the effect of the value increase on long-term net wealth assumes that the public sector will also own these assets in the future. This assumption can be questioned, partly because the government has expressed ambitions to sell several of the government-owned companies, partly because the buffer of the pension system in the AP-funds is expected to shrink considerably in relation to GDP at the same rate as the population is ageing in the coming decades. Second, there are, at least in the short run, additional reasons for continued high public savings. For example, we have pointed out that there are risks on the financial markets that motivate high savings until these markets are more regulated. Moreover, and probably more importantly, the ongoing European debt crisis has led to countries with a tendency to weak public finances having been hit by rising risk premia and thus, higher costs for interest rates on outstanding government debt. Making the fiscal policy regulatory framework less strict in this situation would hardly be wise. But we do have difficulties in seeing that there would be a need for saving more than what follows

The buffer of the pension system is expected to shrink

from the framework. The government budget surplus target applies to average savings over the business cycle but allows for budget deficits in a downturn, something that the current government seems reluctant to allow for at present, despite the fact that it predicts a deeper business cycle downturn next year.[30]

Weak public finances give higher interest rate expenditures

We would also like to point out that a reformulation of the government budget surplus target to include *total* savings instead of financial savings would not increase the average scope for public investments either. New investments would indeed not »burden« the budget balance in the current year to any larger extent, but instead depreciations on investments in earlier years would be included in the balance. Investments must, of course, always be financed and will always affect the scope for fiscal policy, notwithstanding how this is reported.[31]

Figure 4.10 does indeed indicate that there is a weak negative relationship between public savings and the level of investments in infrastructure in the country, but this relationship is not statistically significant. According to our earlier discussions, larger public savings should not crowd out public expenditure either. Thus, we consider the government budget surplus target not to be problematic because it limits the scope for public investments. However, it is possible that the government budget surplus target results in the government focusing on »simple« measures for reaching the objective.

As discussed in Chapter 2, there is a risk that the political process results in the planning horizon of fiscal policy becoming shorter than what would have been economically desirable. The fiscal policy regulatory framework is supposed to deal with these problems. The

30. For example in The Government Budget Proposals for 2012 (p. 29), the government writes that »financial savings are expected to be close to balance in 2012, which ensures satisfactorily safety margins for dealing with considerably more difficult developments than those that are currently predicted«. According to the government forecasts, there will be an increase in unemployment and GDP will be 3.6 percent below its potential level in 2012. In such an economic state, we would usually see public savings that are more than 1 percentage point below the average level.

31. One might possibly mean that certain financially »profitable« investments are crowded out with the current regulatory framework.

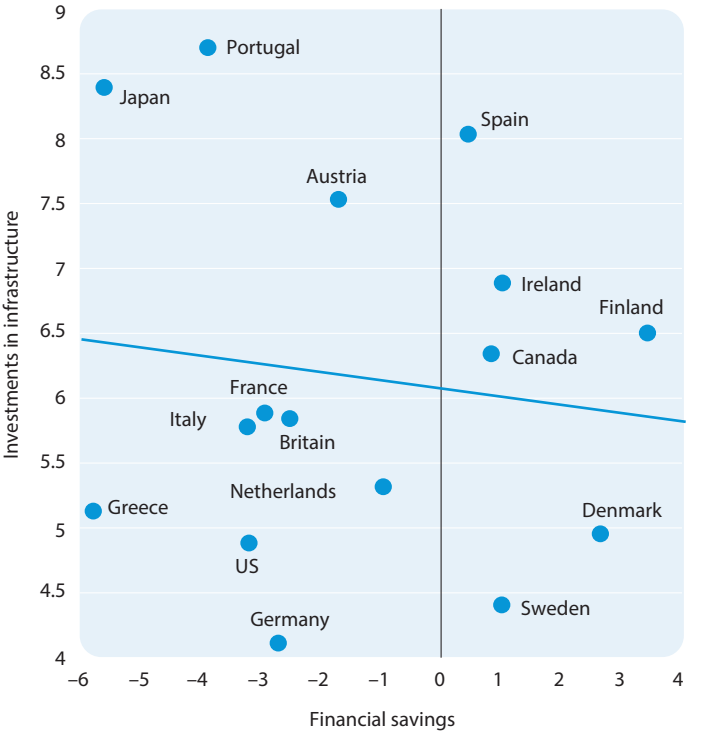


Figure 4.10 Financial net savings in the public sector and investments in infrastructure in the country.

Note: Percent of GDP. Average values 2001–2007.
Source: OECD.

government budget surplus target limits the possibilities of financing expenditures today with tax revenue in the distant future. And the expenditure ceilings necessitate long-term planning of the total scope of the expenditures. However, there is no obvious element in the framework that necessitates a long-term planning of the structure of the expenditures. Pushing an investment into the future can be considered easier than immediately decreasing public consumption expenditure. The government budget surplus target may have reinforced such a short-term focus.[32]

The government budget surplus target can lead to investments being pushed into the future

32. See Section 1.2.3 in Swedish Fiscal Policy Council (2008) and Section 4.3 in Swedish Fiscal Policy Council (2009) for further discussions of these mechanisms.

This problem would be smaller if the government budget surplus target applied to total saving instead of financial saving (i.e., with a golden rule). A similar proposal would be to change the expenditure ceiling so that it instead limited public *expenditure*. Those investments that are made in a certain year would then not be limited by the expenditure ceiling in that year. However, we still do not want to advocate any such change, mainly due to the well-known problems in delimiting what expenditures that are to be classified as investments rather than consumption and how high the depreciation on these investments should be.[33]

We argue that it is better to try to tackle the roots of those problems that might give rise to far too low public investments. Thus, mechanisms are needed that reinforce the priority given to investments in fiscal policy. We have two suggestions: First, the government should present a plan for public expenditure in investment in the coming years in connection with the expenditure ceiling being set for the next three years. This plan might be considered as an investment expenditure floor within the framework of the expenditure ceiling. Due to the above mentioned problems in delimiting which expenditures that are to be classified as investments rather than consumption, this investment floor should be given a less formal role than the expenditure ceiling. Second, the Swedish Fiscal Policy Council should have a more clearly defined mandate to supervise that public investments are given due priority. The Council should thus be given the mandate of carefully studying whether the planned investments are well-motivated as well as evaluating whether the fiscal policy is then compatible with the investment plans that have been made. Due to the problems in distinguishing between investments and consumption, and the informal role that the investment floor should be given in the fiscal policy regulatory framework, this evaluation should be delegated to an external, independent expert council such as the Swedish Fiscal Policy Council.

Mechanisms are required that strengthen the priority given to investments in fiscal policy

Investment floor

The Swedish Fiscal Policy Council should make a careful study

In sum, we argue that the current government budget surplus tar-

33. See Swedish Fiscal Policy Council (2008) and Ministry of Finance (2010) for a thorough survey of these problems.

get has contributed to strong public finances and that it is desirable that Sweden also in the future has a low public debt and balance or surplus in its finances in normal times so that it becomes easier to deal with business cycle downturns without the debt and the need to borrow becoming too large. But we also find that the regulatory framework might have contributed to too low public investments. This is not because the regulatory framework limits the scope for investments but because it provides weak incentives for the government to *choose* sufficiently large investments.

Debt- or balance objective?

Above, we showed that the government budget surplus target also has implications for the debt level in the public sector. Somewhat simplified, the government budget surplus target might be described as an indirect target also for the debt ratio. The relationship between the government budget surplus target and the implicit debt target is not, however, quite as simple as indicated by our calculations in Box 4.2. The parameters that determine the level of the implicit debt target, i.e. growth and interest rate, are probably not stable over time. Moreover, it is incorrect to talk about *one* interest rate, since the returns vary between different assets in the public placement portfolio. One can also consider that a debt target gives more unclear signals for short-term fiscal policy. For example, it is unclear how quickly the debt should move towards the target and how the debt should be allowed to react to value changes in the investment portfolio. Based on such arguments, Ministry of Finance (2010) stated that it is better with an objective for financial saving than for the (net-) debt ratio.

Given the debt crisis in Europe in the last few years, there may be reason to partly review this evaluation. Debt crises can partly occur as an effect of self-fulfilling expectations due to »contagion effects« or »snowball effects«. If the market, on more or less solid grounds, finds that there is an apparent risk that the country will write down the value of its debts, it will require a high interest rate for buying the country's government debt. The high interest rate might lead to the debt

situation of the country really becoming unsustainable and that the country is forced to write down its debt.[34] The risk for the emergence of such negative expectations is, of course, small if the public finances are sound. But, in principle, such a debt crisis can be driven by expectations in a country with sound public finances as long as the country has a short-term need to borrow that is larger than what can be covered by a swift tightening in the economy or the sale of government assets. A high gross debt might thus be a problem even if net debt is low, in particular if the duration of the debt is short.[35] Certain government statements indicate that the government now considers that a low gross debt has an intrinsic value despite that fact that this is not stipulated as part of the fiscal policy regulatory framework.[36] We completely agree with the evaluation that such a target might be motivated, but that it should then indeed be clearly formulated as a part of the fiscal policy regulatory framework.

Expectations can create a debt crisis in a country with sound public finances

The target for gross debt can be motivated

At the same time, it is probably not desirable that gross debt becomes *too* low. Government bonds, in particular those with a long duration, fill several important functions on the financial markets. The Swedish National Debt Office (2011), which administers government borrowing, thus wants to create a floor for gross government debt. Upon a continued decrease in net debt, The Swedish National Debt Office would then start buying assets, for example foreign government bonds, instead of reducing government gross debt. The Swedish National Debt Office's line of reasoning is controversial but we think that it merits further discussion. It is important that those assets that would possibly be taken over are selected with care so that the risk of self-fulfilling debt crises remains low. As pointed out by the Swedish National

34. Calvo (1988) and Cole and Kehoe (2000) analyze how the expectations might lead to self-fulfilling debt crises.

35. An entirely contradictory, but not unreasonable, argument takes its starting point in the observation that the currently very low interest rate on government bonds motivates *large* government borrowing, either to invest in real capital (for example infrastructure) or financial assets with larger returns. Since we do not fully understand the reasons for the low interest rate level, such strategies should probably be avoided. See our discussion in Section 3 and Bohn (1999) for a further analysis of this problem.

36. See, for example, Norman (2011).

Debt Office, the assets should be as safe as Swedish government bonds and give approximately the same return. Moreover, the assets should be liquid also when the financial markets are shaking. Historically, US government bonds have more than sufficiently fulfilled these criteria; in periods of crisis, the dollar and US government bonds often serve as a place of refuge. But naturally, there is no guarantee that the future will be similar. It is possible, and maybe even probable, that the role of the dollar as the world reserve currency will be increasingly questioned and that a future crisis can take the form of a crisis for the US dollar in particular. If the Swedish government then holds US government bonds, there is a considerable risk that our economy is hit by contagion effects.

Government bonds have an important role on the financial markets

In summary, we consider there to be arguments in favor of the proposition that a target of a low public gross debt ratio should be part of the fiscal policy regulatory framework. This objective can probably be expressed in vague terms and should probably be subordinated to the government budget surplus target. At the same time, it is important that there is a well-working market for Swedish government bonds. Gross debt should thus maybe not be entirely abolished.

Government debt should thus maybe not be entirely abolished

The Swedish Fiscal Policy Council

In Chapter 2, we discussed how the delegation of monetary policy to an independent central bank has restricted the likelihood that monetary policy is driven by considerations that are too short-term. Delegation makes it easier for the central bank to establish credibility for efficient long-term policies rather than the policy that gives the highest political return in the short run. The fiscal policy regulatory framework largely consists of *rules* that limit the scope of action for policy rather than tackling the problems with too short a planning horizon. The Swedish Fiscal Policy Council is a relatively new part of the fiscal policy regulatory framework and it can be considered as precisely an attempt at promoting a longer planning horizon. In our view, the Council is therefore an important part of the fiscal policy regulatory framework.

The Swedish Fiscal Policy Council is an important part of the framework

But the establishment of a fiscal policy council has not been without problems. The Council has complained about lack of resources and

the recruitment of members to the council has been difficult exactly because the work effort of the members has become so extensive.[37] In the first few years, the Council has been given, and has also assumed, an important role, which has not only focused on actual fiscal policy. The council's assessments have also covered the design of the tax system, labor market policy, the sickness insurance system and educational policy.

In our view, external assessments of all these areas are desirable, but the task should not necessarily fall on the Swedish Fiscal Policy Council. Our line of reasoning in Chapter 2 and earlier in this chapter suggests that it is mainly the actual fiscal policy pursued that benefits from continuous assessment by an independent council. The council should, in particular, analyze and illustrate whether fiscal policy is sufficiently forward looking, i.e. whether it avoids falling into the typical traps that easily emerge when political considerations weigh too heavily. The council should thus investigate if investments, which yield returns in the long run, obtain the same weight in the planning as consumption expenditure or tax reductions which are of more immediate use to the electorate.[38] A related problem, at least from a historical perspective, has been that fiscal policy is often used to stimulate the economy in a business cycle downturn, but that it does not necessarily become tighter in a business cycle upturn. The Council should thus also study whether fiscal policy is well-adjusted to the economic development. Another important task for a fiscal policy council is to closely study whether the government description of fiscal policy is transparent and whether the policy is compatible with the intentions in the rest of the fiscal policy regulatory framework. We consider it to be important that these functions can be kept within the scope of the future work of the Swedish Fiscal Policy Council. With limited resources, it is, however, doubtful whether the council should have any greater ambitions beyond that.

The Council should in particular analyze whether the fiscal policy is sufficiently forward looking

The Council should carefully study the adjustment to the economic trend and transparency

37. See Swedish Fiscal Policy Council (2010).

38. Since education can be considered to be an investment in human capital, with costs in the short run but returns in the long run, the council should carefully study *the extent* of the educational measures. It is not equally obvious whether it is the task of the council to carefully study educational policy in detail.

Conclusions

Earlier in this report, we have argued that rules help create a long-run perspective in stabilization policy and counteract decisions that are too short-term. The Swedish fiscal policy regulatory framework is often praised in the international debate and Sweden's strong public finances are often considered to have made the country resistant to the turbulence in the last few years.

However, the sound finances do not mean that the framework cannot be improved and in this chapter, we have discussed a number of points where we consider the design of fiscal policy to require further discussion.

Our conclusions for the fiscal policy regulatory framework and stabilization policy are:

- A decomposition of Swedish government debt as a share of GDP shows that the consolidation of the public finances after the crisis in the 1990's has contributed to keeping the debt ratio at a low level. A comparison with the US shows that they have been able to rely on real GDP growth to limit the debt ratio to a larger extent. Since population growth, and thus also GDP growth, are expected to be higher in the US than in Sweden, it will also in the future be more important to limit the growth in government debt by balance or surplus in the budget in Sweden than in the US.
- There is reason to believe that the automatic stabilizers are weaker now than previously but the changes seem to be small. A more important factor is that the requirement for municipal balance runs the risk of making fiscal policy procyclical at the local level so that expansionary fiscal policies at the central level run the risk of being counteracted by contractive fiscal policies at the local level. Thus, there might be reason to either soften the requirement for municipal balance or make the government subsidies to the municipalities dependent on the business cycle.

The requirement for municipal balance constitutes a risk for procyclical policy

- The size of the Swedish banking sector is considerable in an international perspective and should be supplied with better regulations so that the implied risks for the public finances are limited.
- The large uncertainty in our surrounding world results in a large

uncertainty about how the Swedish financial markets and the state of the economy will develop in the coming years. Thus, there is good reason to maintain a certain readiness for the fact that fiscal policy might be forced to deal with problems on the financial markets or increasing unemployment. We do not argue that public savings currently need to be any higher than what follows from the government budget surplus target, but this is hardly the right time to lower the government budget surplus target.

Not the right point in time to lower the government budget surplus target

- It is possible that a high public gross debt might give rise to self-fulfilling crisis expectations even if net debt is low. A low gross debt objective could thus further reinforce the fiscal policy regulatory framework. However, such a target should be subordinated the government budget surplus target.
- The fiscal policy regulatory framework needs to be supplemented with clearer rules for public investment policy. The current framework necessitates a long-term planning for the extent of public expenditure but not its composition. There is a risk that the political process creates incentives for public consumption and transfers at the expense of long-term investments. We suggest that the government presents a plan for public investments in the coming years in connection with the expenditure ceiling being set for the next three years. This plan can be considered as a floor for investment expenditure within the framework of the expenditure ceiling.
- The Swedish Fiscal Policy Council is an important part of the fiscal policy regulatory framework, but its mandate has become so wide that it has become difficult for the council to recruit members. Thus, we encourage a discussion about whether the Swedish Fiscal Policy Council should be assigned a more narrow task that is more clearly focused on whether the public finances are chosen with a sufficiently long-term planning horizon, are sustainable in the long run and well-adjusted to the state of the economy.

Investment floor

12345

Challenges for monetary policy

The economic crisis in the US and Europe has raised questions about whether the focus of the central bank on stabilizing inflation should be reconsidered. In a recent report published by Brookings Institution, a »Committee on International Economic Policy Reform«, consisting of sixteen experts, argues that central banks will have to do a bit of rethinking (Eichengreen et al 2011). The dominating strategy – flexible inflation targeting – does, for example, need to be supplemented with an explicit objective for financial stability according to this committee. This is consistent with our argument in Chapter 2, that financial stability is a prerequisite for the credibility of monetary policy (and fiscal policy) rules. At the same time, there are always risks that credibility problems, in particular, emerge when changes are made in the stabilization policy regulatory framework, which speaks in favor of its being better to stick to the current regime.

Criticism against the monetary policy

There did, however, exist some criticism against the monetary policy, also before the latest economic crisis. This crisis did not so much address the flexible inflation targeting regime as a strategy, but more actual policy desicisons. In Sweden, the debate has, among other things, been about how well the Riksbank has succeeded in fulfilling its objectives, whether the level of the inflation target should be raised and whether the inflation target should be supplemented with objectives for the real economic activity, for example unemployment. There have also been discussions – both in Sweden and other countries – about

whether there should be a greater emphasis in monetary policy on the development of, for example, asset prices and credit growth. These discussions have taken off again as a result of the latest crisis.

We start this chapter by discussing the current monetary policy strategy – the flexible inflation targeting policy. Then, we discuss the Riksbank's responsibility for financial stability, what changes that might be of interest in this area and what the consequences of this might be for monetary policy.

The monetary policy strategy of the Riksbank

The monetary policy regulatory framework was reformed in several respects in the 1990's. In 1993, the Riksbank announced an explicit inflation target which means that the yearly change in the consumer price index (CPI) should be at around 2 percent. A certain flexibility in relation to the target was allowed for already from the start. First, the target was not to be implemented until 1995. This was motivated by the fact that the strong weakening of the Swedish krona and the changes in the indirect taxes gave inflationary impulses that it would be difficult to counteract with monetary policy in the short run. Second, a tolerance interval was announced which meant that deviations from the inflation target of 1 percentage point in either direction should be accepted.[1]

Target of inflation at 2 percent

To make the inflation target credible, a number of measures were taken to make the Riksbank independent. The current regulatory framework is described in Boxes 5.1 and 5.2.

A more independent Riksbank

Figure 5.1 shows inflation measured as the yearly change in the CPI (consumer price index) 1970–2010 as well as inflation measured as the yearly change in the CPIF (consumer price index with a fixed interest rate) 2000–2010. CPIF is a price measure where the effects of interest rate changes on housing costs have been adjusted for. The figure shows that inflation was considerably higher in the 1970's and the 1980's when the objective of monetary policy was to maintain a fixed exchange rate

1. The tolerance interval was removed from the monetary policy strategy in June 2010 since the Riksbank did not consider it to have been of any importance in practice.

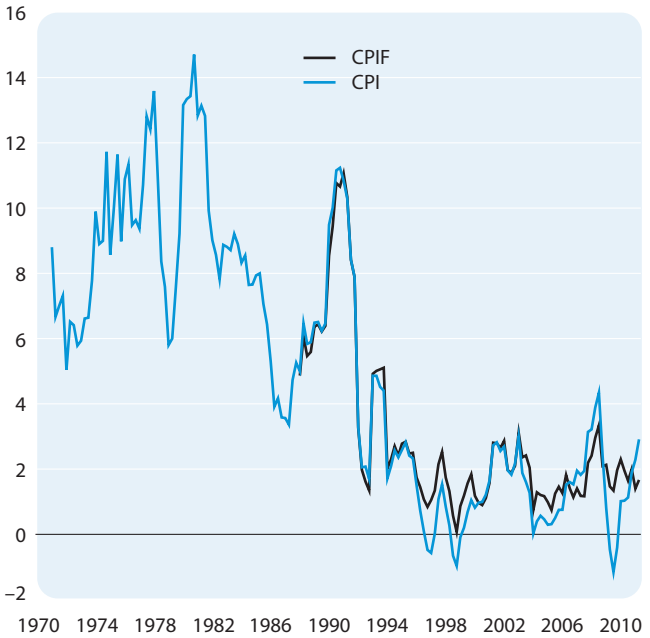


Figure 5.1 Inflation.

Note: CPI and CPIF, change expressed in percent as compared to the same period in the previous year.
Källa: Statistics Sweden.

An average 8 percent inflation in 1970–1992

towards other currencies.[2] In this period, an inflation rate close to 10 percent was not unusual and average inflation in 1970–1992 was 8.1 percent. Inflation peaked at a level above 13 percent in 1981.

The figure shows that inflation has been considerably lower after the introduction of the inflation target. Average inflation in the period 1995–2010 was 1.2 percent, which is thus below the 2 percent target.

2. After the breakdown of the so-called Bretton Woods system in 1973, a more or less fixed exchange rate was maintained within the framework of different currency arrangements until the Swedish krona was allowed to float entirely freely in November 1992. Sweden was a member of the so-called currency snake in 1973–1977, tied the krona to a currency basket in 1977–1991 and finally to the ECU 1991–1992. Adjustments (devaluations) of the fixed exchange rate of the Swedish krona in relation to foreign currencies were made several times in the 1970's and 1980's.

Inflation lower than the target on average 1995–2010

The inflation measures CPIF and CPI follow each other closely. Since CPIF is corrected for interest rate changes, this measure might be higher or lower than CPI, depending on whether the Riksbank has increased or lowered the policy rate. The deviations are thus large in times of large interest rate changes, but the inflation measures follow each other well in the longer run.

A gradually more flexible interpretation of the inflation target

The Riksbank has come to interpret its inflation target in an increasingly flexible way over time, not the least the way in which the Riksbank has increasingly clearly communicated that besides inflation, it puts certain weight on stabilizing real economic activity. However, it is not evident how flexible the inflation targeting policy should be and there is a lively debate both among researchers and more in general about how central banks should act in order to maximize welfare.

BOX 5.1 THE INFLATION TARGET

According to the Sveriges Riksbank Act (1988:1385), the objective for the work of the Riksbank is to maintain a fixed value of money. The Riksbank is also to promote a safe and efficient payment system. According to the law, the Riksbank is allowed to announce regulations within the framework for its responsibility for monetary policy.

More specifically, the Riksbank formulated an inflation target in 1993 which was to apply from 1995. The inflation target means that the yearly change in the consumer price index (CPI) is to be 2 percent.

The monetary policy shall also »support the objectives of general economic policy with a view to achieving sustainable growth and high employment«. This wording exists in the preliminary work of the Sveriges Riksbank Act and is nowadays also included in the Riksbank's wording of the monetary policy strategy (Riksbank, 2010a). This means that, besides stabilizing inflation, the Riksbank tries to stabilize production and employment around development paths that are sustainable in the long run. However, the Riksbank does emphasize that the inflation target is superior to the attempt to achieve real economic stability.

A common way of describing the monetary policy strategy of the Riksbank and many other central banks is that the central bank is assumed to set the interest rate so as to minimize a so-called loss function. The monetary policy objective is thus to minimize the deviations from the inflation target and some measure of long-term sustainable real-economic activity. A common assumption is that the central bank's loss function is quadratic so that the loss to policy makers in each period can be described by the equation:

Balancing in monetary policy is described as a loss function

$$L(\pi_t, y_t) = (\pi_t - \pi^*)^2 + \lambda (y_t - y_t^*)^2 \quad (5.1)$$

Here, π_t is the inflation rate in period t, π^* is the inflation target, y_t is production (GDP) and y_t^* is potential GDP, the natural rate of GDP or the level of GDP that is sustainable in the long run. $\lambda \geq 0$ is a parameter stipulating how large relative weight the central bank attributes to the real economic activity in the economy, in this case the output gap. A central bank, which stabilizes both inflation and production, so that $\lambda > 0$, is said to pursue a flexible inflation target and a central bank which is only concerned about inflation, so that $\lambda = 0$, is said to pursue a strict inflation target (Svensson, 1999).

How much weight monetary policy should attribute to production has been subject to much debate

How much weight monetary policy should attribute to the output gap or some other measure of real economic activity is a question that has been subject to considerable debate. Adherents to a flexible inflation target think that the economy as a whole works better if a certain weight is also attributed to real economic activity. Critics argue that a central bank that solely gives priority to price stability is more likely to succeed in stabilizing the economy by anchoring inflation expectations. These two approaches are discussed in more detail below.

However, we will begin by providing a picture of what the Riksbank has actually done since the inflation target was introduced.

Monetary policy in Sweden 1996–2011

The interest rate that would be obtained if the central bank were to follow the Taylor rule that we described in Chapter 2 is *one* way of showing

which interest rate that would apply in the economy if the central bank were to set the interest rate as a function of the deviation of actual inflation from the inflation target and the output gap.

However, one should be aware of the fact that the Taylor rule is neither a perfect description of how central banks actually set the interest rate in practice, or how they should act. One reason for this is that it is usually considered to take two, or even three, years before a change in the interest rate has full impact on the economy. Thus, the Riksbank must form an idea about what the level of inflation will be in the longer run. This means that, in practice, central banks have expected inflation in mind when setting the interest rate. Another reason for the central bank to base monetary policy on forecasted inflation rather than on currently observed inflation is that the target for monetary policy is not to control inflation in a certain quarter or year, but seen over a longer period of time. The same line of reasoning applies for the second argument in the Taylor rule, the output gap. Moreover, it is far from obvious what measure of real-economic activity that should be used when estimating the output gap.[3] The Taylor rule should thus only be considered as a simple rule of thumb and one should remember that it only represents a very simplified picture of how monetary policy could be pursued.

Monetary policy is affected by expected inflation

The Taylor rule provides a simplified picture of monetary policy

We compare the interest rate set by the Riksbank to a hypothetical reference rate according to the following Taylor rule:

$$i_t = 4 + 1.5 \cdot (\pi_t - \pi^*) + 0.5 \cdot (y_t - y^*_t) \qquad (5.2)$$

The first term in the equation is the repo rate that would be obtained in the economy if the inflation target had been reached and the output

3. There both exist different definitions of the output gap in the theoretical literature and different measurement methods in the empirical literature. In theoretical models with price rigidities, the long-term sustainable measure of production is the production level that would emerge in an equilibrium where prices were flexible. No such equilibrium is, of course, directly observable in the data. Empirically, potential GDP, normal GDP or GDP with respect to the trend are estimated using more or less sophisticated methods. For simplicity, in our estimates of the Taylor rule, we have used the OECD definition of the output gap.

gap were zero, i.e. if the economy were in equilibrium. Thus, we here assume that this interest rate level is 4 percent. This is not unreasonable if both inflation and real economic growth are close to 2 percent, but these assumptions can, of course, be questioned. We have here chosen to base our estimates on CPIF rather than CPI since the fluctuations in the implied interest rate become unreasonably large if using CPI.

Figure 5.2. shows how the repo rate and our hypothetical reference rate have developed over the period 1996–2011. The figure shows that there are no signs of the repo rate having been systematically higher or lower than the reference rate: the estimated interest rate fluctuates

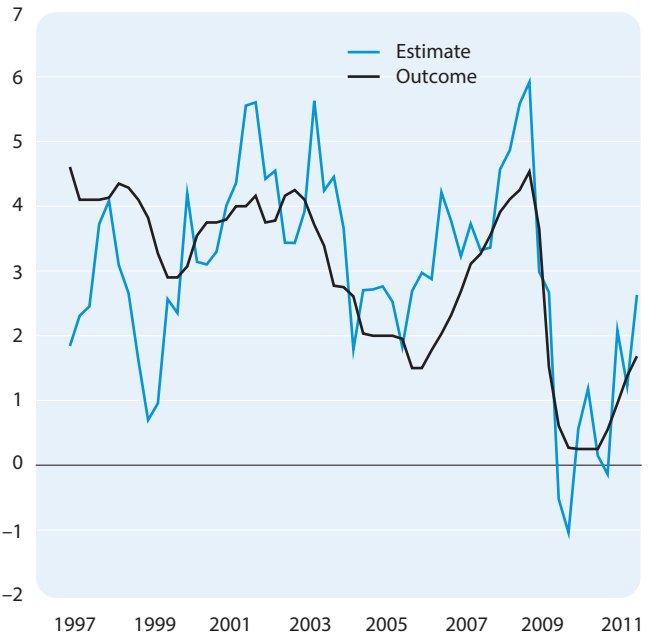


Figure 5.2 Estimated Taylor rule.

Note: Estimated Taylor rule based on CPIF-inflation (see Figure 5.1) and the production gap in real time as well as the outcome of the repo rate. Real time is defined in such a way that the OECD report for the respective six-month period determines the current and following quarter.

Source: The Riksbank (repo rate), OECD Economic Outlook 60–89 (production gap) and Statistics Sweden (CPIF).

around the actual repo rate. It is interesting to note that the actual repo rate was higher than the interest rate level implied by the Taylor rule in the period 1996–1999. This could be interpreted as the Riksbank pursuing a relatively tight policy in the second half of the 1990's to establish credibility for the new inflation targeting regime.

Strict monetary policy in the second half of the 1990's

The Taylor rule leads to larger fluctuations in the monetary policy rate than what we observe for the actual repo rate. This is mainly due to the fact that the Taylor rule puts great weight on inflation stability. Since inflation fluctuates relatively strongly in the selection period (see Figure 5.1), this results in relatively large fluctuations in the interest rate according to the Taylor rule.

The figure shows that the Taylor rule advocates strong increases in the interest rate at the beginning of the twenty-first century. This is a consequence of the swift price increases that emerged in connection with the Mad Cow disease and the Foot-and-Mouth disease at the beginning of the millennium. The high reference rate in the years just before the latest financial crisis is due to an increase in inflation caused by, among other things, high oil prices in these years that made inflation culminate at 4 percent in the spring of 2008.

Two interpretations can be made here: The evolution of the actual repo rate has been more smooth than the reference rate since the Riksbank has interpreted these price increases as temporary and has not chosen to respond to them with interest rate increases. Alternatively, the Riksbank should have responded more aggressively to shocks. We see that the Taylor rule does, for example, suggest interest rate increases from 2005 onwards. Whether an increase in the interest rate (far) earlier than that actually made in September 2008 could have helped to keep assets prices down and whether this would have been desirable is an open question.

Negative interest rate during the latest crisis, according to Taylor

The Taylor rule generates a temporarily negative monetary policy rate in the latest crisis. Even if a negative interest rate could be imagined in theory, many people believe that negative interest rates are difficult to implement in practice. As is well-known, like many other central banks, the Riksbank instead turned to a number of so-called unconventional measures to make the credit markets work, keep the general

interest rate level down and try to stimulate the economy. Yet, it is interesting to note that the Taylor rule, which is often considered to be a useful rule of thumb for monetary policy, actually indicates that a very low and even negative repo rate would have been motivated based on the evolution of inflation and the output gap.

The Riksbank policy has created a more stable interest rate than the Taylor rule

The conclusion is thus that the monetary policy of the Riksbank is characterized by a more stable repo rate than that implied by the Taylor rule. A reasonable interpretation of this result is that monetary policy has not reacted strongly to those deviations from the inflation target and the possible fluctuations in the output gap that have been considered temporary. Instead, monetary policy is based on forecasts of inflation and the output gap and the objective is to make these variables

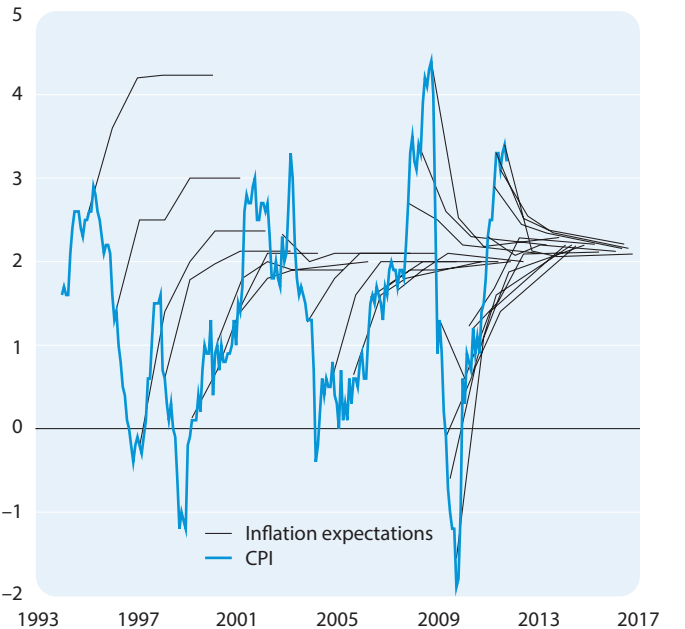


Figure 5.3 Inflation and inflation expectations.

Note: CPI-inflation as a change expressed in percent as compared to the previous period. Inflation expectations among money market agents.
Source: The Riksbank.

approach the objectives in a few years (see Riksbank, 2010a).

This seems to have been a successful strategy, at least for stabilizing inflation expectations. Figure 5.3 shows actual inflation and inflation expectations two years ahead in the period 1994–2011. The graph shows how efficiently the inflation target has succeeded in stabilizing expectations at around 2 percent. Shortly after the introduction of the inflation target, there were expectations about an inflation exceeding 4 percent. Then, there was a gradual fall in these expectations and from 1998 onwards, the expectations are close the target of the Riksbank.[4]

Inflation expectations stable at around 2 percent

The flexible inflation targeting policy can thus be characterized as a monetary policy which, at least compared to the Taylor rule, does not normally entail aggressive changes in the interest rate, but that has still succeeded in stabilizing inflation expectations. On average, inflation has been somewhat below the target, however. In the monetary policy debate, there have both been arguments that the Riksbank should have a target for the real economic activity and that the level for the inflation target should be changed. We will now provide an overview of this discussion.

Should the Riksbank have an unemployment objective?

The main task for monetary policy is, according to the Sveriges Riksbank Act, to maintain a fixed value of money, which is interpreted by the Riksbank as inflation being low and stable. The Riksbank has changed from communicating a relatively strict inflation target in the years after the target was declared in 1993 to having been increasingly clear over time about having a flexible inflation target and also trying to stabilize the real economic activity. Since it was important for the Riksbank to establish credibility for the inflation target when it was introduced, it most likely made the assessment that there was no large scope for stabilizing production in the 1990's. As the Riksbank gained credibility for the inflation target regime, it has, however, created more

The Riksbank becomes increasingly clear about having a flexible inflation target

4. Apel and Vredin (2007) discuss possible factors behind the more stable expectations and identify the transparency of the Riksbank as a possible cause.

scope for stabilizing the real economy without risking its reputation of favoring antiinflationary measures.

In order to understand why the Riksbank put so much weight on inflation just after the introduction of the inflation target, one must consider the time inconsistency problem of economic policy that we discussed in Chapter 2.[5] As previously discussed, a time inconsistency problem emerges when politicians cannot commit to implementing a certain policy forever but instead makes continuous decisions. A central bank that both cares about inflation stability and real economic activity and announces that it will maintain a stable inflation rate runs the risk of not being believed by the general public. Agents understand that the central bank still has incentives to create inflation in order to try to stimulate the real economy. Accordingly, a so-called inflation bias might emerge, i.e. there is a transition to a high-inflation equilibrium, without there having been any increase in production or employment.

The time inconsistency problem indicates a large weight on inflation

As also discussed in Chapter 2, the time inconsistency problem can be solved or at least mitigated by institutional reforms that make the promises of politicians and governors of central banks about economic policy more credible. Rogoff (1985) pointed out that a »conservative« central bank, that puts greater weight on stable inflation than society as a whole, decreases the risk that a time inconsistency problem will arise. In an economy where monetary policy is controlled by such a central bank, expectations about low and stable inflation are created, which can provide incentives for restraint in the wage formation process and thus, decrease the risk for an inflation bias. A »liberal« central bank which attributes less weight to inflation than the rest of society and instead has as its objective to stabilize production and employment can, in contrast, give rise to high inflationary expectations and increase the risk for an inflation bias.

In Sweden, the time inconsistency problem has been dealt with by an increase in the independence of the Riksbank and by its having been established in the Sveriges Riksbank Act that the monetary pol-

5. Kydland and Prescott (1977) and Barro and Gordon (1983) made the crucial economic analyses that constituted the basis for the discussion of the time inconsistency problem of economic policy.

icy objective should be to maintain a fixed value of money. However, similarly to many other central banks, the Riksbank does, as discussed above, maintain a flexible inflation target. An advantage of not only focusing on stabilizing inflation around a given target is that large fluctuations in interest rates, exchange rates and the economic activity can be avoided (see, for example, Svensson 1998, 2000). Propoents of a flexible inflation target believe that the economy works better if the central bank aims at reaching the inflation target in a slightly longer run and also assigns certain weight to production stability.

Not full agreement on flexible inflation policy

However, there is no consensus on how monetary policy under a flexible inflation target is to be designed in practice, for example if the inflation target should be supplemented with any explicit target for real economic stability. In their evaluation of Riksbanken's monetary policy from 2006, Giavazzi and Mishkin did, for example, discuss whether the Riksbank should have an explicit target for GDP, unemployment, employment etc. Their conclusion was that *no* such target should be introduced.

An argument for why the central bank should focus on price stability is that there is not necessarily any trade-off between stable inflation and stable production. How this is regarded depends on what theories on the functioning of the economy one believes in, but also on by what shocks one believes that the economy tends to be hit. In a normal class of models – so-called Neo-keynesian ones– a target for stable inflation will automatically lead to a stabilization of production if the economy is hit by demand shocks – a result that Olivier Blanchard and Jordi Galí have referred to as *the divine coincidence*.[6] However, Blanchard and Galí (2007) show that this result only applies under certain conditions. If the economy is subject to what is known as a demand shock, which leads to rising inflation while production falls (or the other way round), one needs to choose between stabilizing inflation and stabilizing the business cycle. Rogoff (1985) argues that thus, it is not advisable with an

6. The Neo-keynesian model, sometimes also called *The New Neoclassical Synthesis*, is discussed in Goodfriend and King (1997), Clarida, Galí and Gertler (1999) and Woodford (2003). Svensson (1998, 1999) discusses how the conflict of objectives between inflation stability and output stability is affected by various kinds of shocks.

Not good with an »ultra-conservative« central bank when there are supply shocks

»ultra conservative« central bank that puts too much weight on stable inflation. If the economy has a tendency to suffer from demand shocks, this might give rise to large fluctuations in production.

However, Orphanides (2009) and Orphanides and Williams (2006) emphasize the importance of firmly anchoring inflation expectations in the economy. In a world where there is large uncertainty, they find that it is important that central banks focus on maintaining low and stable inflation and do not care about the real economic activity. Schmitt-Grohé and Uribe (2007) have compared the outcome of different policy rules in a theoretical dynamic general equilibrium model with realistic properties such as price and wage rigidities and distortionary taxes. Their conclusion is that a central bank that tries to stabilize production runs the risk of creating large welfare losses.

Different measures of resource utilization

On theoretical grounds, it can thus be claimed that it might be better if the central bank only focuses on fighting inflation and that a certain degree of flexibility is good. In practice, all central banks also attribute weight to stabilizing the business cycle, which has been particularly clear when considering the measures that have been taken during the latest crisis. But even if one draws the conclusion that the inflation target should be flexible, the question remains of how monetary policy should be pursued in practice.

It is not obvious how central banks are to take the real economy into account

First, it is not obvious how the central bank is to take the real economy into account.[7] Should the central bank consider the output gap, employment, unemployment or some other measure of capacity utilization? An alternative is, of course, for the central bank to take several different indicators into account to obtain an overall picture of the real-economic situation. But too many measures can result in its being difficult to make an unbiased evaluation of the fulfillment of the objective. Thus, it also becomes more difficult to predict the monetary policy and evaluate it afterwards, which might lead to new credibility

7. See Palmqvist (2007) for a discussion.

problems. If too many measures are used, each evaluator can always find something that supports that individual's view of what monetary policy should be pursued. This is an argument for why one single measure of the economic activity should be used.

Second, it is very difficult to determine what are the desirable levels of employment, investment and production levels. This is partly due to the fact that none of the government, the Riksbank or any other »social planner« can determine what decisions about investments, production and consumption that households and companies should make. But this is also because of the fact that due to different market imperfections, the level of activity that is socially optimal does not necessarily coincide with that which is optimal from the perspective of individual agents..

Arguments for why the Riksbank should stabilize unemployment

Svensson (2011) argues that, besides stabilizing inflation, the Riksbank should try to stabilize unemployment around a level that is sustainable in the long run.[8] He suggests that since data on unemployment are continuously updated and, moreover, are not revised in the same way as GDP, this variable is more easily observed and more reliable. He also argues that it is easier to estimate the lowest level of unemployment that is sustainable in the long run than the long-term production level that is required to estimate the GDP gap. Svensson thinks that the advantages of focusing on unemployment in relation to its long-term level is that the unemployment target can be expressed as a stable percentage share, fluctuates relatively slowly and little, can be estimated using several different types of models and that Swedish micro- and macro research in the labor market area is at a very high international level, which paves the ground for a strong anchorage in academia. Moreover, it is easier for the general public and external experts to evaluate an objective that is based on stable unemployment.

However, is it easier to measure long-term sustainable unemployment than the long-term sustainable level of production? Rogerson (1997) has studied the literature on so-called equilibrium unemploy-

8. He also argues that instead of focusing on CPI, the Riksbank should focus on stabilizing CPIF.

It is unclear what is meant by equilibrium unemployment

ment and points out that it is extremely unclear what this term really means. There exist many different definitions of equilibrium unemployment in the theoretical literature and the meaning varies depending on what theoretical model that is taken as the starting point. Moreover, actual unemployment is easier to affect by using economic-policy measures than the long-run sustainable production level or actual resource utilization. Thus, it is not obvious that any reliable measure of actual equilibrium unemployment, or any other measure of unemployment, is easy to produce.

A related and important question is what kind of unemployment that the Riksbank can actually affect with its interest rate policy. If a lower interest rate stimulates demand and thus increases employment, this is something that is normally assumed to reduce cyclical unemployment, i.e. the deviation of actual employment from long-term sustainable employment. Monetary policy is usually not assumed to have any effect on long-term unemployment, which is instead determined by structural factors on the labor market. However, the largest problem in Sweden is hardly cyclical unemployment but rather the fact that long-term unemployment has become so high.

Cyclical unemployment is not the greatest problem

Is it then possible for the Riksbank to affect equilibrium unemployment? The most common assumption in macroeconomic models is that monetary policy only has temporary effects on the real economy and that the central bank cannot, and thus should not, try to affect long-term growth and employment. There are researchers who claim that an inflation targeting regime can actually reduce long-term unemployment by creating incentives for restraint in the wage formation process and prevent high real wages from increasing unemployment; see, for example, Soskice and Iversen (2000).[9] This kind of models can, however, generally not say anything about the total welfare effects over

9. Soskice and Iversen (2000) show that a conservative central bank can reduce wage claims and thus promote high employment. The explanation is that wage setters who are sufficiently large for their wage claims to affect the inflation rate understand that the central bank will respond with a higher interest rate if the wage increases threaten the inflation target. Since such increases in the interest rate can increase unemployment among trade union members, such a conservative central bank creates incentives for restraint in the wage formation process.

time and thus, nothing about what would be an optimal policy in a longer perspective. This is due to the fact that the models typically are static and disregard many relevant relationships that affect the development of the economy in the long run, so-called dynamic general equilibrium effects.[10]

As argued in Chapter 2, our discussion about the monetary policy framework shows that rules are good for firmly establishing expectations and promoting efficient policies. However, it is not obvious how the rules are to be designed and how policy should be pursued in practice. Our survey of the research literature and different arguments has led us to the conclusion that a flexible inflation target works well. However, at present, we do *not* consider it appropriate for the Riksbank to formulate an explicit objective for unemployment, the output gap or any other measure of capacity utilization. Such an objective could, in principle, provide greater clarity about what a flexible inflation targeting policy really entails. This could, in turn, make monetary policy more predictable and easier to evaluate. Constructing a theoretically meaningful and empirically relevant measure of the desirable level of unemployment or production is, however, associated with great difficulties and it is thus doubtful whether such a target would actually create greater transparency and credibility. However, we are positive to the Riksbank making its analyses and its communication on resource utilization and the labor market situation more profound, so that it becomes easier for outsiders to understand how other factors than inflation affect the design of the policy pursued.

Not appropriate that the Riksbank formulates an explicit unemployment target

A deeper analysis and communication of the labor market situation is needed

Should the inflation target be raised?

The discussion about the flexible inflation targeting policy has so far been about the importance of maintaining *stable* inflation around a given target. But we have not more specifically mentioned the *level*

10. An exception is Gnocchi (2009) who considers the effects of large wage setters in a dynamic Neo-keynesian model. He shows that it is easier to stabilize both inflation and production in economies with centralized wage setting than in economies where wage formation takes place at a decentralized level.

of the inflation target. Since high inflation is really a tax on money and gives rise to inefficiencies and distortions in the economy, there is a strong consensus that *low* inflation is desirable; see, for example, Goodfriend (2007) for a discussion.

Consensus that low inflation is good

There is extensive research on what is the optimal level of inflation. It is not unusual that the conclusion of such analyses is that the optimal inflation rate is either negative or weakly positive; see, for example, Schmitt-Grohé and Uribe (2010). Thus, this result does not indicate that the inflation target should be raised, rather that it should be *lowered*. The main argument for this is that inflation is a tax on money, it is good that money is used for transactions and that the government can provide the society with money basically free of charge. Thus, the tax on money should be as low as possible, and if money is to yield the same return as other assets, inflation should be negative.

Why do other evaluators mean that the inflation target is too low? A common view for a long time was that there was a trade-off between inflation and unemployment, the relation known as the Phillips curve. According to this view, low inflation can only be obtained at the cost of higher unemployment. Since Swedish unemployment was established at a permanently higher level after the crisis in the 1990's and thus after the inflation target had been implemented one can, if one believes in the Phillips curve, argue that the high unemployment may be due to the fact that the inflation target has been set at too low a level.

The inflation target is too low if one believes the Phillips curve

Critical voices have also been raised against the fact that the policy of the Riksbank has been even more restrictive than what is allowed within the framework of the inflation target. We have previously reported that inflation has, on average, been 1.2 percent in 1995–2010 which is thus below the 2 percent target. This has had large effects on the evolution of the price level. Spread over 15 years, this means that, if we instead of 1.2 percent had had 2 percent inflation each year, we would have had 15 percent higher prices than what we actually have today. Thus, there is reason to discuss whether less restrictive anti-inflationary policies could have contributed to lower unemployment.

Inflation has been below the target

There is, however, considerable theoretical and empirical support for the thesis that there is no interchangeability between inflation and

unemployment in the long run. The Phillips curve might possibly say something about which unemployment level that is compatible with *stable* inflation in the long run. All attempts at using monetary policy to reduce unemployment by allowing higher inflation will only have temporary effects on unemployment. This means that the central bank must continuously create increasingly higher (and surprisingly higher) inflation to keep unemployment down. These are also the ideas behind the research on the time inconsistency problem discussed earlier.

However, Akerlof et al. (2000) suggest that there exists a trade-off between inflation and unemployment for low levels of inflation, but not for high levels for inflation.[11] This line of reasoning builds on the assumption that individuals are rational when they form their inflation expectations but only to a certain extent (*near rationality*). Akerlof et al. think that individuals do not take the inflation in wage- and price formation into account to any larger extent as long as it is at a low level. At high levels of inflation, however, inflation runs the risk of becoming so costly that everyone requires full compensation for this in their price- and wage setting decisions. Akerlof et al. claim to have found empirical support for these predictions.[12]

Balance between inflation and unemployment at low levels of inflation

Benigno and Ricci (2011) present a similar argument within the framework of a dynamic general equilibrium model. Their results suggest that there exists no Phillips relationship for high levels of inflation but that there is a negative relationship between inflation and unemployment for low levels of inflation. Their results imply that countries with high macroeconomic volatility and low productivity growth should have higher inflation targets.

The levels of the inflation targets of the central banks have come into focus after the latest crisis, partly for other reasons that those we have just presented. First, low inflation makes it easier to run the risk

11. See also Holden (2004) who argues that there is more likely to be a balance between inflation and unemployment for low levels of inflation in economies where collective agreements play a large role.

12. This argument has also been applied to and tested on Swedish data by Lundborg and Sacklén (2002, 2006) who argue that an increase in the inflation target to 4 percent would decrease equilibrium unemployment to between 1.5 and 3.5 percent.

of getting into a so-called liquidity trap where conventional monetary policy can no longer be used to stimulate the economy. Second, many reviewers argue that higher inflation would be an efficient way for many economies that have been hit by the crisis to reduce the real value of their government debt. Third, a more expansionary monetary policy can be more generally pursued if the inflation targets are temporarily disregarded. During the latest crisis we have also seen that the central banks in the US, Britain and the euro area have, in fact, allowed for higher inflation than what is normal, in order to stimulate their economies.

Low inflation increases the risk for a liquidity trap

The problem with a liquidity trap emerges in a business cycle downturn/crisis when the central bank tries to pursue an expansionary monetary policy in order to stimulate the economy. In practice, the central bank then lowers its (nominal) monetary policy rate. The problem arises when the nominal interest rate is lowered so that it approaches zero: in such a situation, the central bank can no longer stimulate the economy with conventional measures. Blanchard et al. (2010) argue that if inflation had been higher before the crisis, the monetary policy rates of the central banks would have been at a higher level and in that case, there would have been scope for more forceful decreases in the interest rate that could have stimulated the economy. The argument is thus that too low inflation targets result in also the monetary policy rates tending to be at a low level, which decreases the scope for monetary policy when the economy is hit by a negative shock.

The argument for higher inflation targets that takes the liquidity trap as its starting point has been opposed, however. Coibion and Gorodnichenko (2011) suggest that a higher inflation target can lead to the central bank having to react more strongly to various shocks to maintain the same level of welfare. McCallum (2011) also claims that the problem with liquidity traps will be less important in the future when money is likely to only exist in electronic form. In such a future, both inflation and the nominal interest rate may very well be negative.

Higher inflation is a common and efficient way of undermining the real value of government debt. Our decomposition of Swedish government debt in Chapter 4 shows that inflation has contributed to keeping

the debt ratio down also in Sweden. Rogoff (2008, 2011) is one of many people who have argued that a temporarily higher inflation would help many affected countries solve their severe debt problems. He considers that a temporary inflation rate of 4–6 percent over a number of years would be suitable.[13] However, it is doubtful if this argument is particularly relevant for the countries in the euro area or Sweden. In the euro area, public debt is a problem in certain countries, but not in others, while the level of inflation cannot be adjusted to current government debt in each country since they have a common monetary policy. If the ECB were to temporarily disregard price stability as a monetary policy objective, this would provide scope for a more expansionary monetary policy, however, which might help the euro area. Sweden has strong government finances in an international and historical perspective, so here it is hardly of any immediate interest to drive up inflation to get rid of any debt.[14] It could rather be said that Sweden's strong finances create credibility for the inflation target since government debt is not a very important reason for an increase in the inflation target, as opposed to the situation in the US and Britain, for example.

The value of government debt is deteriorated by inflation

We find that research on the optimal inflation rate offers arguments for both higher and lower targets for inflation than exactly 2 percent. Our conclusion from the survey of the research in this area is that the inflation target of the Riksbank should *not* be raised. In our view, there are not any sufficiently convincing arguments for there being any obvious gains from changing the inflation target. The risks for decreased credibility and increased uncertainty about monetary policy are obvious. Most people probably agree that the level of unemployment is higher than what is desirable in Sweden today, but we think that there are many other measures that are far more important for decreasing the unemployment rate than raising the inflation target. There is reason

Government debt is no strong argument for higher inflation targets in Sweden

The inflation target of the Riksbank should not be followed

13. Rogoff (2008) focuses on the fact that temporarily higher inflation would help deflate away a large part of private sector debt but the same line of reasoning can, of course, also be applied to debt in the public sector.

14. In an interview in Dagens Nyheter on September 5 2011, Lars Calmfors argues that due to its strong government finances, Sweden would, as opposed to many other countries, be able to afford to take the opportunity to increase the inflation target without running the risk of losing the credibility for its economic policy.

to believe that the firm anchorage of inflation expectations that the current inflation target of 2 percent has entailed has had positive effects on the functioning of the Swedish labor market and the economy as a whole. Against this background, we do not recommend any change in the inflation target. However, there continue to be reasons for the Riksbank to analyze the consequences of using various definitions of targeted inflation, for example whether the target should be formulated in terms of CPI or CPIF.

Reasons for the Riksbank to analyze various definitions of the inflation target

Monetary policy and financial stability

So far, we have studied the arguments for changes in the monetary policy within the framework of a mainly unchanged strategy, the flexible inflation targeting regime. We now continue by discussing financial stability.

In Chapter 2, there was a discussion about the advantages and disadvantages of stabilization policy rules. We thought that theoretical and empirical research speak in favor of letting policy be controlled by relatively simple rules. This creates transparency and credibility but does, at the same time, entail disadvantages since policy cannot be fully adjusted to the current circumstances. At the same time, we emphasized that it might be motivated to deviate from the rules when the economy is hit by unusually large shocks. Keeping these principles in mind, it is interesting to start by analyzing what the Riksbank actually did during the latest crisis.

During the financial crisis, the Riksbank lowered the repo rate to almost zero. Moreover, what has been called »unconventional measures« were largely undertaken, which was mainly about strongly increasing the lending to banks and under other conditions than what is normal (see Bryant, Henderson and Becker, 2011). In 2010, the Riksbank began to gradually increase the repo rate and abolish the unconventional measures. The interest rate policy can, in principle, be motivated on basis of a simple rule, more specifically the Taylor rule that we presented in Figure 5.2. Objections can, of course, still be made against the measures of the Riksbank. One can, for example, question the measure

The Riksbank implemented »unconventional measures«

of resource utilization that the Taylor rule takes as its starting point or whether the Taylor rule is a relevant norm at all. A flexible inflation targeting policy, where the objective is instead to minimize a loss function, like equation (5.1), might indicate a lower interest rate path both during and after the crisis, given those forecasts for inflation and resource utilization that have been published by the Riksbank itself. Unemployment has certainly fallen somewhat after the crisis, but has remained at a high level. Inflationary pressure has not been an imminent problem if inflation is measured as CPIF, where the direct effects of the repo rate on housing costs have been excluded.

A flexible inflation target policy might favor a lower interest rate

An argument that has been made in favour of increases in the repo rate in 2010 and 2011 has been of a completely different character: concern about increasing household debt and what this might mean in terms of risks for macroeconomic stability. This view is in line with the proposal by Eichengreen et al. (2011) that the flexible inflation target policy should be supplemented with a financial stability objective. Such a supplement would, however, imply an overall change in the monetary policy strategy. The unconventional measures can, indeed, be seen as a combination of monetary policy and measures for financial stability, but the question is if these tasks should also be connected under more normal circumstances or whether the responsibility for financial stability should instead be delegated to some other institution. We start such a discussion by giving an account of what the legal text actually says about the responsibility of the Riksbank for financial stability.

Increases in the interest rate might be motivated by financial stability

The mandate of the Riksbank

It could be said that, in line with recommendations from Eichengreen et al. (2011), the Riksbank already has an objective for financial stability. In the Sveriges Riksbank Act which came into force in 1999, paragraph 2 states

»The Riksbank is responsible for monetary policy.

The objective of the Riksbank's activities shall be to maintain price stability.

The Riksbank shall also promote a safe and efficient payment system.«

According to the Act, the objectives of the Riksbank thus differ from the objective function that was presented in equation (5.1) and which has so far constituted the starting point for our discussion on monetary policy.

The objectives of the Riksbank differ from the objective function behind the flexible inflation targeting strategy

First, the law stipulates that the Riksbank »shall maintain a fixed value of money«. It is not unreasonable to translate this into meaning that inflation is to be stabilized around a certain inflation target, as in the objective function. Moreover, it is not unreasonable to formulate this objective in terms of the change in the consumer price index, which is the most common measure of inflation. But the Sveriges Riksbank Act does not mean that the objective of a fixed value of money is to be interpreted exactly as inflation measured as CPI being stabilized at around 2 percent per year. The latter is a closer definition of the objective that the Riksbank itself chose to make already in 1993, when the fixed exchange rate was abandoned and before there was a change in the law. Some kind of definition must be given, but the legislator has intentionally delegated this task to the Riksbank. This is very reasonable, since the desirable degree and meaning of a »fixed value of money« might vary over time, depending on how the economy and the research community's understanding of different macroeconomic relationships develop.[15] Thus, a general wording of the Act is needed, which can then be operationalized when implementing the monetary policy. When so needed, the Riksbank principal, parliament, can, via the Governing Council of the Riksbank and the Standing Committee on Finance, require explanations from the Riksbank for how it has chosen to define »fixed value of money« and how the bank considers that it has succeeded in achieving its objective.

The legislator has delegated to the Riksbank to define »fixed value of money«

Second, as opposed to the objective function (5.1) above, there is no wording in the law that the Riksbank should stabilize the real economy,

15. For many years, the objective of monetary policy was to maintain a fixed value of the Swedish krona, in relation to the currencies of other countries.

measured as the deviation of GDP from its potential level, the deviation of unemployment from its long-term level or something else. This is no coincidence. Before the introduction of the new Sveriges Riksbank Act in 1999 – when the price stability target was introduced and the Riksbank was made more independent (see Box 5.2) – it was discussed in the preliminary work to the new law whether the Riksbank should have a legislated mandate to stabilize the business cycle.[16] It was a deliberate choice not to include such a target. One reason was that the experience of stabilization policy from the 1970's and the 1980's indicated that it was important to have an independent central bank that puts great weight on pursuing a non-inflationary policy in relation to the stabilization of the business cycle (we have discussed the arguments for this in Chapter 2 and earlier in this chapter).

No target for stabilizing the economic trend in the Sveriges Riksbank Act

Another reason was that it was considered so obvious that the Riksbank should try to stabilize the business cycle – as long as the price stability target is not threatened – that this did not have to be written down in the law. The result was thus that the law emphasized the objective of a fixed value of money, but not stabilization of the business cycle.[17]

Third, the law contains a wording that the Riksbank should promote »a safe and efficient payment system«, an objective which is often called financial stability. This objective is not reflected in the objective function (5.1) and, until the outbreak of the financial crisis in 2008, most often not in the discussions about monetary policy either.

Before the crisis, price stability (a fixed value of money) and financial stability were generally considered to be two entirely different

16. See Ds 1997:50, Riksbankens ställning, Ministry of Finance and also the earlier Riksbanksutredningen SOU 1993:20.

17. Despite this, the argument that the Riksbank has the »main responsibility for stabilization policy« or something similar does often appear in the debate. It is somewhat unclear where this idea comes from. According to the Sveriges Riksbank Act, it is evident that the Riksbank does not have any such responsibility. The argument might possibly come from the old Mundell–Fleming-model, where monetary policy but not fiscal policy can affect GDP when the exchange rate is flexible. Or, the arguments could come from the idea that the fiscal policy scope for business cycle stabilization is limited by the fiscal policy regulatory framework.

BOX 5.2 THE DEVELOPMENT OF THE RIKSBANK TOWARDS INCREASED INDEPENDENCE AND INFLATION TARGETING POLICY

1988

New Sveriges Riksbank Act

- The chairman of the Governing Council of the Riksbank is no longer appointed by the government, but by the seven other members of the council.
- The term of office of the Governor of the Riksbank is made longer (five years) than for the other members of the Governing Council (whose term of office corresponds to that of parliament, three years at that point in time).

1991

The government declares that "in a policy for fairness and full employment, the attempt to pursue a non-inflationary policy must be superior to other ambitions and requirements" (Finansplanen 1991, Bilaga 1 till budgetpropositionen, p. 2)

1992

The focus of monetary policy on a fixed exchange rate is abandoned in November.

1993

January: The Riksbank declares an explicit inflation target to apply from 1995.

February: The committee Riksbanken och prisstabiliteten (The Riksbank and Price Stability) (SOU: 1993:20) is presented.

1997

A proposal for a new Sveriges Riksbank Act, focusing on increased independence and a price stability objective, is presented with wide political agreement. See Ds 1997:50, Riksbankens ställning (The Position of the Riksbank), Ministry of Finance.

1999

A new Sveriges Riksbank Act comes into force. The first official step towards a more "flexible inflation target policy" is taken: The new Executive Board of the Riksbank presents a clarification of its view of monetary policy and the inflation target (see Heikensten, 1999).

2006

The Executive Board of the Riksbank takes another official step towards "flexible inflation targeting policy" in the publication Penningpolitiken i Sverige (Monetary Policy in Sweden).

Sources: Heikensten and Vredin (1998, 2002) and Apel and Vredin (2007).

objectives that could be analyzed using different methods and handled with different tools. But those measures that have been taken by the Riksbank (and other central banks) during the crisis have obviously been motivated both by the price stability objective and the objective of »promoting a safe and efficient payment system«, if well-functioning banks and credit markets are considered to be a condition for this objective to be fulfilled. Stabilizing production and employment has also been important for the actions of the Riksbank.

Before the crisis, price stability and financial stability were considered to be completely different objectives

The Riksbank described its policy in terms of flexible inflation targeting long before the current crisis, but nowadays it also points out that »Risks related to the trend on the financial markets are included in the interest rate decisions«.[18] The Riksbank considers that »a safe and efficient payment system requires a stable financial system so that payments and capital provision can work well. […] A stable financial system is also a condition for the Riksbank to be able to pursue an efficient monetary policy. […] 'Promoting a safe and efficient payment system' does thus, in practice, have a broad meaning. In practice, this is about a responsibility to promote stability in the financial system.« (Riksbank, 2010b, p. 3.)

This could also be interpreted as the Riksbank considering financial stability and a safe and efficient payment system to be the same thing. And that this is a condition for being able to pursue an efficient monetary policy, for example focused on price stability.

Financial stability is a necessary condition for an efficient monetary policy

Eichengreen et al. (2011) recommend that central banks all over the world should supplement their current strategies, i.e. the flexible inflation targeting policy, with explicit objectives for financial stability. We observe that the Sveriges Riksbank Act contains such an objective even if it is formulated as »a safe and efficient payment system«. But can this be considered to be sufficiently explicit? And what is the relationship between a fixed value of money and a safe and efficient pay-

18. See the publication Penningpolitiken i Sverige (Monetary Policy in Sweden) (Riksbank, 2010a), which was first published in May 2006. The main objective was then to explain «how the Riksbank, when setting its interests rates, takes due account of both the development of inflation and the development of real economic activity (growth, unemployment, employment etc.)«.

ment system (financial stability)? Do both the promotion of a safe and efficient payment system and the objective of a fixed value of money fit into the framework of the responsibility of the Riksbank for *monetary policy*? Or are these to be considered as two different tasks where monetary policy (focusing on price stability) is the main task and a safe and efficient payment system (financial stability) is a secondary task? A retrospective look at the tasks of the central bank throughout history provides an interesting perspective.

The tasks of the central bank in a historical perspective

The central bank is the bank of banks

If the activities of central banks are studied in a historical perspective, (see, for example, Goodhart et al. 1994), they seem to have had two apparent tasks. First, to be the »bank of banks«. Many central banks did not start out as public institutions but at private initiatives to improve the functioning of the credit markets and the payment system. Second, central banks have obtained a role as the »government bank«. Monopolies for issuing banknotes and coins were, however, very common long before the existence of central banks. Such a monopoly could possibly be motivated by the fact that it is necessary to maintain a »safe and efficient payment system«. However, there is an extensive academic literature where this is being questioned. Moreover, there are many examples in practice, that are also from Sweden, of the fact that a private issue of bank notes and coins might actually work.[19] An argument that has, apparently, throughout history, been decisive for central banks having become public institutions with a monopoly on issuing banknotes and coins is that they constitute an important source of government revenue.

Government revenue from the monopoly on banknotes and coins, what is known as *seignorage*, is no longer so large in relation to the tax revenue. But the financial crisis in the last few years has shown the value of having public-owned central banks which, besides pursuing stabilization policy (at least in times of crisis), can »promote a safe

19. See Jonung (1989).

and efficient payment system«. Central banks that control the issue of means of payment and that cannot become bankrupt have sufficiently »deep pockets« to dig into when the financial system runs the risk of falling apart and the lack of credit and means of payment threaten the functioning of the entire economy.

Promoting a safe and efficient payment system has been a fundamental task

In a historical perspective, it cannot be said that the task of »promoting a safe and efficient payment system« is a secondary task, it rather seems to have been a major task. A fixed value of money has indeed also been an objective for the activities of the Riksbank and other central banks. For long periods of time, the objective of a fixed value of money has been maintained by the value of the currency having been kept fixed in relation to, for example, gold or silver.[20] But this objective has been disregarded at times, mainly when there has been some kind of political and economic crisis – a typical pattern throughout the centuries.[21] Not until after the economic depression in the 1930's did it become common all over the world that central banks could, in the Keynesian spirit, contribute to stabilize the economy also in normal times. However, this led to a gradual increase in inflation, until price stability once more became a central objective for economic policy at the end of the 1980's and the beginning of the 1990's. The objective of a fixed monetary value was introduced in the new Sveriges Riksbank Act from 1999. Before that, the law said that the Riksbank was responsible for currency and credit policy, i.e. a much more general wording than the current one.

Price stability and the payment system

As stated above, the Riksbank (2010b) claims that a safe and efficient payment system is a necessary condition for its being possible to pursue an efficient monetary policy. But it can also be claimed that price stability is a necessary condition for a safe and efficient payment system.

The credit and payment system is sometimes considered to be the

20. Average inflation has been close to 2 percent since Rikets Ständers Bank was founded in 1668. See Edvinsson et al. (2010).

21. See Wetterberg (2009) for a description of the history of the Riksbank.

Price stability is a condition for a safe and efficient payment system

«blood circulatory system« of the economy. For a market economy to work in an efficient way, and not consist of pure barter where individuals and firms exchange goods and services directly with each other, a means of payment is required. The borderline between means of payment and credit is floating. A transaction can be conducted by an immediate payment with banknotes and coins, at the same time as the business transaction is carried out. But payments are often made using debit or credit cards, or by the delivery being paid afterwards through a payment via, for example, the bank giro system. When something has been delivered in advance against payment afterwards, it is, of course, important that the parties setting up the contract agree on the price. If the price has been set in terms of a currency where the value can change swiftly through sudden and strong inflation or deflation, the value of the business transaction becomes uncertain. In the worst case scenario, uncertainty about the value of money might lead to less business transactions being carried out than what is desirable, that the currency is abandoned and that some other means of payment is beginning to be used, or that the market economy returns to barter trade.

Even with a modest inflation, this problem will emerge if the value of money is uncertain

Such a horror scenario might feel remote when it comes to discussions about the development of the Swedish economy in modern times. Other countries have, however, experienced such developments in times of hyperinflation. But also with a modest inflation, problems appear if the value of money is uncertain. In Sweden, the problems in the 1970's and 1980's were mainly due to centralized wage negotiations being based on high inflation expectations, which then led to economic policy in practice being designed so that these inflation expectations were fulfilled. Attempts at breaking this trend led to erratic economic policy and a negative development of the Swedish economy.

Against this background, one could conclude that a fixed value of money is a necessary – but hardly sufficient – condition for an efficient and safe payment system. In Chapter 2 of this report, we also argued that financial stability is a necessary condition for a sustainable fiscal policy (with a government debt that is not running riot) and that a sustainable fiscal policy, in turn, is a condition for a sustainable monetary policy aimed at price stability. Although with a somewhat different

motivation than ours in Chapter 2, the Riksbank (2010b) also considers that financial stability is a condition for an efficient monetary policy.

Thus, there are several reasons to claim that the objectives of price stability and financial stability are closely related to each other. It could even be claimed that financial stability is the main task for the central bank and that price stability is a condition for financial stability. In that case, the ranking between these tasks should be the opposite to how the Sveriges Riksbank Act is interpreted today.

The objectives for price stability and financial stability are intimately connected with each other

The debate about the relationship between monetary policy and financial stability

In the Executive Board of the Riksbank, there have, in 2010 and 2011, been different views on how monetary policy should be designed. Until September 2011, a majority wanted to implement gradual increases in the interest rate. Based on the forecasts that have been made and the objective function (5.1) as the starting point, a minority has claimed that there should be no increase in the repo rate. Those who want to enter more deeply into this discussion will find a thorough presentation of the different arguments that have been presented in the published minutes from the meetings of the Riksbank. In summary, it can be said that the majority of the Executive Board puts certain weight on the fact that, besides the forecasts for inflation and the level of activity in the economy, there have been other indicators in favor of an increase in the interest rate. This has, for example, concerned the increase in the housing loans of the households and their total indebtedness.

However, Svensson (2011) does not consider housing prices or the level of household debt to be a problem. He also thinks that *if* rising housing prices were a problem, there would exist more efficient instruments for dealing with these. In Chapter 3 of this report, we argued that rising housing prices are probably the result of low investments and not enough construction rather than the increased level of household debt, which indicates that the price increase is driven by the supply-side. This line of reasoning does also provide support for the view that the repo rate should not be used to try to mitigate the evolution of house prices.

There are several different explanations for the financial crisis that hit the US and Europe in 2007 and 2008 and then turned into a general economic crisis with falling or weakly increasing production and deteriorated public finances. But there is no doubt that financial innovations, low interest rates, increasing debt levels of both households and governments, and swiftly increasing housing prices made the economies in the US and Europe very sensitive to shocks.[22] Both the Riksbank and the government have increasingly talked about the importance of financial stability, that the financial unrest has affected the design of both fiscal policy and monetary policy.

A rising level of debt made the economies in the US and Europe very sensitive to shocks

Eichengreen et al. (2011) claim that measures for financial stability affect macroeconomic stability and that monetary policy affects financial stability. After the trend in the last few years, it is obvious that there is a two-way connection, but what conclusions should be drawn when it comes to the need for changed rules of the game for monetary policy is not as obvious.

The repo rate is normally considered to be the main instrument for maintaining price stability. But since the repo rate and other Riksbank interest rates determine the costs for private banks when they want to borrow from (or deposit money in) the Riksbank, it is not unreasonable to imagine that the interest rate level also affects how safe and efficient the payment system is and the degree of financial stability. Blanchard et al. (2010) and many other evaluators do, however, argue that the repo rate is too blunt an instrument for dealing with financial stability and point out that there are other tools that are better suited for this purpose. Possible instruments for contributing to safeguard financial stability at the macro level have lately been the subject of a swiftly growing literature; see, for example, Galati and Moessner (2011) for a survey.

The interest rate level can affect the degree of financial stability

There have been several different initiatives for committees on both how the Riksbank actually dealt with the financial crisis and how the responsibility for the macroeconomic surveillance of the financial

22. A relatively early warning was issued by Rajan (2005). Reinhart and Rogoff (2010) have described what similar crisis scenarios have looked like over the centuries.

markets should be allocated. The Standing Committee on Finance did in June 2010 appoint Charles Goodhart and Jean-Charles Rochet to evaluate Swedish monetary policy in 2005–2010. Shortly thereafter did SNS give Torbjörn Becker, Ralph Bryant and Dale Henderson the task of studying the »unconventional monetary policy« of the Riksbank during the crisis. Moreover, at the beginning of 2011, the government decided to appoint a Financial Crisis Committee which is to review the regulatory framework for dealing with financial crises. The Swedish Fiscal Policy Council did also deal with these questions in its report in 2011.

As opposed to Eichengreen et al. (2011), Goodhart and Rochet (2011) seem to think that it is possible to distinguish between the tasks of monetary policy and the objective of financial stability. Goodhart and Rochet's report is at any rate divided into two parts, one of which is about monetary policy and one about promoting a safe and efficient payment system (financial stability).

When it comes to financial stability, Goodhart and Rochet state that »the Swedish monetary and regulatory authorities were relatively successful in avoiding financial disaster, despite a relatively poorly designed institutional and legal structure«. Goodhart and Rochet argue that the mandate for the Riksbank of maintaining financial stability according to the Sveriges Riksbank Act is insufficient. They think that »the present legal and institutional structure in Sweden for the maintenance of financial stability needs a thorough overhaul«. In particular, they emphasize that the allocation of roles between the Riksbank and the Swedish Financial Supervisory Authority is unclear, something that has also been found by the governor of the Riksbank together with the chairman and the vice chairman of the Governing Council of the Riksbank (see Gernandt, Pagrotsky and Ingves, 2010).

The allocation of roles between the Riksbank and The Swedish Financial Supervisory Authority is unclear

Similarly to Eichengreen et al. (2011) and many others, Goodhart and Rochet consider that the latest economic crisis shows that there is a need for a systematic »macro surveillance« of the evolution of financial stability; a continuous surveillance of the developments on the financial markets as a preventive measure, and a set of measures that can be used when problems have been identified. The problem – not only in Sweden but also in other countries – is that the responsibility for

The responsibility for financial stability is divided between different authorities

The Swedish Financial Supervisory Authority has at its disposal tools that have consequences for the macroeconomy

financial stability is divided between different authorities, at the same time as there is not always any clear connection between responsibility and authority. In Sweden, the Swedish Financial Supervisory Authority pursues »micro surveillance«, but also has tools at its disposal (for example capital requirements and lending rules for banks) that have consequences for the macro economy. Goodhart and Rochet suggest that the Sveriges Riksbank Act be changed so that it is exactly stated what mandate the Riksbank actually has when it comes to promoting financial stability and what tools the Riksbank has at its disposal for this purpose.

Goodhart and Rochet mainly see two alternatives. The responsibility for financial stability is either divided between different authorities or the responsibility is given to the Riksbank. In the first scenario, one should in that case create a coordination committee (a »system risk committee«) with representatives of the different authorities that share the responsibility. If the Riksbank is instead to be given the responsibility, it is probably required that a special committee for financial stability is created, but then under the roof of the Riksbank. The view of Goodhart and Rochet – that it is, at least under normal conditions, possible to separate monetary policy and financial stability – indicates that there could be separate committees for these two areas within the Riksbank. Goodhart and Rochet believe that the stability committee should include committee representatives for other authorities, even if it is physically located under the Riksbank roof.

Alternative 1: Coordination committee

Alternative 2: The Riksbank gets the responsibility for macroeconomic surveillance

The Swedish Fiscal Policy Council (2011) also presents two alternatives. One is exactly the same as that of Goodhart and Rochet, that the Riksbank gets the responsibility for financial stability. The second, however, is not a coordination committee with representatives from other authorities, it is rather an entirely new authority. According to the Swedish Fiscal Policy Council, the latter alternative would be a »financial stability council« of independent experts, who supervise financial stability and give recommendations to existing authorities but have no authority to make decisions. Such an authority would be similar to The Swedish Fiscal Policy Council and act as a »financial watch dog«.

Alternative 3: Financial stability councils as independent authorities

Bryant, Henderson and Becker (2011) mainly emphasize the large dependence of Sweden and Swedish banks on international developments. They argue that regulations are needed that decrease the sensitivity to shocks. As concerns the relationship between monetary policy and financial stability, Bryant, Henderson and Becker think, similarly to Eichengreen et al. (2011), that the relationship is stronger than what the responsible authorities have thought so far when organizing their work. Measures for safeguarding financial stability might have effects on the general interest rate level, the economic activity and inflation, while the interest rate policy of the Riksbank affects financial stability. The strong relationship between financial stability and monetary policy indicates that the Riksbank and The Swedish Financial Supervisory Authority need to coordinate their analyses and decisions. This can either be done by merging the authorities or by creating a new co-coordinating agency.

On February 3, 2001 the government decided to appoint a committee, The Financial Crisis Committee, which is to review the Swedish regulatory framework for dealing with financial crises. This both concerns rules that can prevent the emergence of financial crises and rules for how the crises are to be dealt with once they have occurred. The committee shall, among other things, review the allocation of responsibility among the Riksbank, The Swedish National Debt Office, The Swedish Financial Supervisory Authority and the Ministry of Finance. It should also analyze and suggest improvements in how the Riksbank deals with questions on financial stability. The Financial Crisis Committee is to present its conclusions on August 15 2012 at the latest. We have been able to establish that the price stability and financial stability objectives are very closely connected to each other. Thus, in line with Eichengreen et al. (2011), we could draw the conclusion that the Riksbank should continuously take into account financial stability when setting the interest rate. At the same time, there are many arguments in favor of simple rather than complicated monetary policy rules. Moreover, there are instruments that are better suited for dealing with instability on the financial markets than the repo rate. A solution that could take all these arguments into account would be to give the Riksbank

the responsibility for the macroeconomic surveillance of financial stability, but (under normal circumstances) give this tasks to a separate stabilization committee within the Riksbank. In that way, the inflation target would still be the primary objective when the Executive Board makes decisions about the repo rate.

Conclusions

In Chapter 2, we presented the essential arguments for stabilization policy rules, including the arguments for having an independent central bank with an inflation target. However, already in that chapter we found that there are a number of trade-offs that have to be taken into account when policy is to be designed in practice.

In this chapter, we have divided our monetary policy discussion into two parts:

1) Is there any reason to change the monetary policy strategy of flexible inflation targeting?
2) Are more thorough changes of the institutional framework needed? How is the responsibility for financial stability to be allocated?

We draw the following conclusions:

- The current monetary policy strategy with a flexible inflation target does in general work well. Even if the advantages of *simple rules* favor a strict inflation target, a flexible inflation target is to be preferred in practice. How flexible the inflation target should be is an open question, but we believe that the Riksbank should take the real economy into account also in the future.
- The Economic Policy Group does not consider, however, that there are sufficiently important reasons for introducing an explicit objective for stabilizing the real economy. The strategy that has governed economic policy since the inflation target was introduced has created credibility for low and stable inflation.
- Both the choice of CPI as the objective variable and the level of the inflation target can be questioned. But this is about fine tuning the monetary policy which should not be given any great priority. We

do not consider there to be any sufficiently convincing arguments to motivate raising the level of the inflation target. We believe that such an increase would jeopardize the credibility of the inflation target but that it is very unclear if such an adjustment would improve the functioning of the economy or improve the scope of action for stabilization policy.

- However, there are reasons for the Riksbank to in the future try to clarify how it evaluates different measures of both inflation and the economic activity. It is important that the policy is as transparent as possible and thus, can stabilize the expectations of the general public and facilitate evaluations of the policy pursued.
- During the latest crisis, it has become evident that an overall macroeconomic surveillance of the financial system is required. How the responsibility for this surveillance is to be allocated must be more exactly defined. Similarly to other evaluators, we see three alternatives: (i) to give a special stabilization committee within the Riksbank the main responsibility for financial stability; (ii) let the Riksbank share the responsibility with other existing authorities within the framework of a »system risk committee« outside the Riksbank; or (iii) establish a financial council that works as a financial watch dog by giving recommendations to existing authorities but that itself has no instruments at its disposal.
- The Economic Policy Group does not consider it to be obvious which of these three alternatives that is the best but argues that many factors speak in favor of a financial stabilization committee within the Riksbank. The Swedish experience during the financial crisis, the developments in other countries, historical experience and fundamental lines of reasoning indicate that there is a very strong interdependence between monetary policy and financial stability. It is difficult to draw any clear line between the two tasks of the Riksbank according to the current wording of the Sveriges Riksbank Act: to be responsible for price stability and promote a safe and efficient payment system (financial stability). The close connection between traditional monetary policy and the financial markets would make a solution within the Riksbank natural.

- In order to maintain the credibility of the inflation target, it is important that the responsibility for financial stability is in that case delegated to a separate committee within the Riksbank. This committee should have a number of instruments at its disposal, but the repo rate should not be one of them. The repo rate should mainly be used to maintain the flexible inflation target. The two committees within the Riksbank should have separate objectives and act independently of each other. They should, however, have a close communication, in particular in times of crisis. These changes require a change in the Sveriges Riksbank Act .
- We consider that the Finance Crisis Committee should suggest that a committee is appointed with the aim of producing a new Sveriges Riksbank Act – to the extent that the committee cannot present such a legislative proposal already this coming August. Besides this, a further investigation of what instruments that the new financial stabilization committee should have at its disposal is required.
- A question that should be considered in the design of the new Sveriges Riksbank Act is which of the tasks of the Riksbank that should be the primary one: price stability or a safe and efficient payment system. There are arguments suggesting that promoting a safe and efficient payment system is already the superior target since a fixed monetary value can be considered to be a condition for such a payment system.
- The independence of the Riksbank and the inflation target have created credibility for low and stable inflation. There is a risk that a new legislation will affect this credibility. If the responsibility for financial stability is delegated to a new committee, the risk for such credibility losses will decrease.

Finally: what do these lines of reasoning about the monetary policy strategy and the importance of financial stability for the monetary policy of the Riksbank in the near future mean? Against the background of the strong connection between monetary policy and financial stability, it is not, in principle, wrong that those decisions that are made by the Riksbank take both the financial stability objective and the price sta-

bility objective into account. For the credibility of the inflation target, it might be desirable that both objectives are kept separate and are handled with different tools under normal circumstances, to the largest possible extent. In crisis situations, the targets will, however, be even more closely connected than what is usually the case and monetary policy must then take both objectives into consideration at the same time. Our assessment is that this also happened both when the repo rate was lowered at the same time as more »unconventional« measures were taken in 2008–2009, and when the repo rate was increased in 2010–2011. It is not only the inflation target that has served to control the actions of the Riksbank in these years. If the economic and political crisis in Europe were to become worse and the economic development be further weakened, the Riksbank can also, within the framework of the current legislation and strategy, take similar measures as in 2008–2009. At present, it seems as if such measures need not conflict with the inflation target. But if that were to be the case – a situation that some other countries are now facing – it would be motivated to under a limited period of time and under these exceptionally difficult circumstances, accept a higher inflation than normal. Both the more fundamental arguments that we put forward in Chapter 2 and the more detailed discussion about monetary policy in this chapter indicate this. A lower repo rate and more »unconventional« measures aimed at supporting the functioning of the credit markets could indeed lead to a growth in household credit, which would increase their indebtedness once more. Such a trend undeniably entails risks, but our discussion about savings and investments in Chapter 3 indicates that savings in the Swedish economy are generally high and that the risks created by an increasing level of debt, increased housing prices and so on are smaller than in other countries.

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