SPEECH

DATE: 16 May 2025

SPEAKER: Erik Thedéen

VENUE: Handelsbanken

TIME: 08:00—09:00

DOCUMENT CLASSIFICATION: RB PUBLIC

On risk, uncertainty and geoeconomic fragmentation[1]

The last five years have been unusually turbulent. We have lived through the worst pandemic in a hundred years, Russia has invaded Ukraine, and the United States has started trade conflicts with several of its most important trading partners, including China and the EU. We have also had a period of very high inflation that has now fortunately fallen back to normal levels; see Figure 1.

In recent months, uncertainty in the global economy has increased strongly, not least due to the United States' new trade policy. In our latest Monetary Policy Update, published last week, we assessed that international developments – particularly the elevated uncertainty – are dampening the economic prospects in Sweden. In turn, this suggests that inflation, in the long term, may become lower than in our most recently published forecast from March. But we also pointed out that there are several risk factors, such as those linked to companies' global value chains, and that inflation thus could well become unexpectedly high.

This illustrates, almost too clearly, that the economic outlook and inflation prospects are always uncertain and there are several reasons for this. One of them is that our models cannot capture all the complex relationships that characterise real economies. There could also be uncertainty over political decisions or how developments abroad affect the Swedish economy. However, regardless of the reason, we cannot exactly know what inflation will be in two years or how changes in the policy rate will affect inflation. The pandemic also

[1] I would like to thank Magnus Jonsson and Liza Tchibalina for their help with this speech. I would also like to thank Hanna Armelius, Aino Bunge, Charlotta Edler, Matilda Kilström, Henrik Lundvall, Calum McDonald, Marianne Sterner and Anders Vredin for their valuable comments.

Postal address: SE-103 37 Stockholm, **Visiting address**: Brunkebergstorg 11
Telephone: +46-(0)8-787 00 00, **Website:** riksbank.se

reminded us that sometimes unpredictable events happen that can have major economic consequences.

Of course, it is nothing new that uncertainty forms an important part of monetary policy analysis. Quite a few economists and central banks have pointed this out before, including the previous chairman of the Fed, Alan Greenspan:[2]

"*Uncertainty is not just an important feature of the monetary policy landscape; it is the defining characteristic of that landscape.*"

But even if risks and uncertainty have always been part of the monetary policy environment, it is not obvious how monetary policy should best handle them. Today, I would like both to present some lessons from the academic literature and to describe how we manage risk and uncertainty in practice in the Monetary Policy Report and decision-making process. I will also discuss the rising geopolitical risks and the increasing geoeconomic fragmentation, that is, the division of the global economy into rival blocs.

The difference between risk and uncertainty

In the academic literature, some researchers make a distinction between the concepts of risk and uncertainty.[3] According to them, risk means events in which the probability of possible outcomes is known or can be calculated using historical data, economic models or experience. Usually, examples of risk are taken from insurance or gambling, as the probability of different outcomes are known or can be calculated in these cases.

The concept of uncertainty is usually used for events for which probabilities cannot be calculated.[4] This includes events such as the pandemic, Russia's full-scale invasion of Ukraine or the stock market crash of 1929. Uncertainty can therefore be of various types – for example, uncertainty about the development of the stock market is different from uncertainty about when the next pandemic will break out.

The uncertainty over stock market movements is reminiscent of the uncertainty the Riksbank faces in its forecasting. The probability and outcomes for future inflation, for example, could be said to be almost, but not entirely, known.

---

[2] See A. Greenspan "Monetary policy and uncertainty: Adapting to a changing economy", symposium, Federal Reserve Bank of Kansas City, Jackson Hole 2003.

[3] The Riksbank's communication does not make this distinction between risk and uncertainty all that often, at least not explicitly.

[4] This uncertainty is sometimes called 'Knightian uncertainty'; see F. Knight *Risk, Uncertainty, and Profit*, Houghton Mifflin Company, Boston, 1921.

Normally, we can also forecast inflation fairly well. But sooner or later, an event occurs with major effects on inflation that neither we nor anybody else could predict. These days, such events are often called 'black swans', a term coined by author and mathematician Nassim N. Taleb.[5]

A black swan can be anything from a stock market crash to a natural disaster or pandemic, although there are some shared features. A black swan is unpredictable because no known information can be used to predict when it will happen. Typically, it has major consequences for the economy and society. In addition, once it has occurred, many people ask themselves why they did not see it coming and why they were not better prepared. Taleb exemplifies a black swan with the so-called Turkey Problem:

Turkeys live a carefree life on a farm. They are well cared-for and are fed several times a day. This pattern repeats day in, day out. After a while, the turkeys take this as proof that every day in the future will be as carefree. But one day, everything is not like usual. It's Thanksgiving.

Three approaches to risk and uncertainty

Monetary policy decisions are more frequently characterised by uncertainty than risks. There are few situations in which the probability of different outcomes is entirely known or can be calculated. While central banks often communicate in terms of risk, there is not infrequently also a measure of uncertainty in these cases. In actual fact, there is a scale between events where we know the probability for various outcomes with quite considerable certainty and events where we know nothing about the probabilities.

In principle, risk and uncertainty should be managed in different ways when making decisions. We can manage risks by calculating an uncertainty band around the forecasts or showing scenarios for various possible outcomes. But this is harder to do for uncertainties. According to some, intuition and simple rules of thumb can be at least as good in such circumstances.[6] In monetary policy, the so-called Taylor rule, a simple rule of thumb or rule of action for the policy rate, is often used.[7] However, we cannot expect rules of thumb to provide good guidance in all situations. Monetary policy decisions are based on a number of different

[5] See N. N. Taleb *The black swan: The impact of the highly improbable*, Penguin Books, London, 2010.

[6] See G. Almqvist "Om risk och osäkerhet" [On risk and uncertainty], in *Risker och riskhantering i näringsliv och samhälle* [Risks and risk management in the business sector and society], Ed. Richard Wahlund, SIR, Stockholm School of Economics Institute for Research, 2016.

[7] See J. Taylor "Discretion versus policy rules in practice", *Carnegie-Rochester Conference Series on Public Policy* 39, 1993. See also M. Jonsson and G. Katinic "Is the Swedish monetary policy in line with the Taylor rule?", *Economic Commentaries* 2017:4, Sveriges Riksbank.

factors and difficult trade-offs that cannot be captured completely by simple rules. This applies particularly in crisis situations, which often require rapid and forceful efforts.

Fundamentally, there are three approaches that can be taken towards risk and uncertainty. You can act cautiously, more forcefully or completely disregard it. This last strategy occurs quite frequently in the academic literature on monetary policy, where it is known as **'certainty equivalence'**.[8] The strategy can be derived from a number of restrictive assumptions over the way the economy works and, at first, does not sound particularly reasonable. Why would any decision-maker wish to disregard uncertainty? In actual fact, however, certainty equivalence can be a relevant starting point when considering how best to conduct monetary policy. It can answer this question: how would we have acted if we were completely unconcerned about uncertainty? Not until this question is analysed can it be possible to move on and precisely define the problem that is in focus for today's discussion: how should actual uncertainty affect the decisions we take about monetary policy?

Acting more cautiously and gradually may be the most common way of managing uncertainty and is often known as the **'conservatism principle'**.[9] It is based on the insight that central banks can affect uncertainty in the economy through their actions. For example, in the face of uncertainty over how strong an impact monetary policy may have on inflation, a gradual adjustment of the policy rate may be justifiable. Acting forcefully may lead to large variations in inflation and thus to increased uncertainty in the economy.

The current situation provides an example of when it is reasonable to apply the conservatism principle. As I said, uncertainty in the global economy has increased strongly since the change of US president. Developments are very hard to assess and there are several possible scenarios for inflation going forward. To get a somewhat better picture of the inflation and economic outlook, it is therefore appropriate to be cautious and await more information. If conditions change rapidly, it would, of course, be possible to act more resolutely.

Acting more cautiously may also be justifiable if the effects on the economy cannot be observed until later and fresh statistics are uncertain. The more uncertain the latest information is, the less importance this should be given and

[8] See J. Alsterlind "How can monetary policy take account of uncertainty and risk?", *Sveriges Riksbank Economic Review* 3, Sveriges Riksbank, 2015.

[9] See W. Brainard "Uncertainty and the effectiveness of policy", *American Economic Review Papers and Proceedings* 57, 1967.

the more emphasis should be placed on historical correlations and observations.[10] Central banks are sometimes seen as being a little 'slow off the mark' but there may be good reasons for their actions. There is always uncertainty over the point at which a decision guidance document can be said to be adequate. An important part of monetary policy decision-making is the trade-off between awaiting new information and acting decisively on the information that is available.

Rapid and forceful action is justifiable when the risk of really bad outcomes is high.[11] This could include a weakening of confidence in the inflation target or the risk that the policy rate will approach its lower bound. Two recent events where resolute action was justified were the global financial crisis of 2008 and the outbreak of the pandemic in 2020.

During the financial crisis, the Riksbank cut the policy rate faster and more forcefully than historical behaviour justified. In addition, the shocks to the financial system were so large that the impact of monetary policy on the financial markets risked being weaker than normal. The Riksbank therefore needed to deploy a series of extraordinary measures to safeguard the liquidity of the financial system. The coordination of certain measures with other central banks also emphasised how important international cooperation is in such situations. The resolute actions of the Riksbank and other authorities contributed to reducing the costs of the crisis. Falls in both inflation and GDP were smaller and not as persistent as they probably would have been with a more cautious approach.

When the pandemic broke out, the Riksbank also acted rapidly and forcefully. It soon became clear that this crisis was fundamentally different from the financial crisis. The economic consequences of the pandemic were due to the comprehensive measures required to reduce the spread of infection, rather than imbalances in the economic system. At the same time, however, this meant that developments were highly uncertain as there were no previous experiences to rely on. The Riksbank put in place a package of measures to secure the supply of credit in the financial system and ensure that interest rates remained low. The measures by the Riksbank, together with measures by the Government and other authorities, meant that we could maintain the supply of credit and confidence in the inflation target. In addition, the negative economic consequences could be mitigated more generally.

---

[10] See M. Apel, M. Nessén, U. Söderström and A. Vredin "Different ways of conducting inflation targeting – theory and practice", *Sveriges Riksbank Quarterly Review* 4, Sveriges Riksbank, 1999.

[11] See U. Söderström "Monetary policy with uncertain parameters", *Scandinavian Journal of Economics* 104, 2002.

Risk and uncertainty in the Monetary Policy Report and decision-making process

Scenario analyses and uncertainty bands are often used to illustrate risks and uncertainty. The Riksbank has a long history of publishing scenarios in its Monetary Policy Reports and the forms for this have varied somewhat over the years. About two years ago, we reintroduced a scenario section to the report after a pause of a few years. In this section, we also try to manage uncertainty by placing the scenarios into a narrative – rather than by setting probabilities for the various scenarios.

The scenarios can also be useful when uncertainty is so great that it is impossible to make regular forecasts, as the Riksbank deemed to be the case at the start of the pandemic. In the Monetary Policy Report from April 2020, we published no forecasts but only discussed possible future events on the basis of various scenarios.

The scenario section of the report serves several purposes. It helps us in the Executive Board to balance the effects of various risks and uncertainties in our monetary policy decisions. The scenarios help specify various risks surrounding our forecast and make it easier for us to think through how we would adjust monetary policy should the risks materialise. Ultimately, this should lead to better grounded policy rate decisions.

The scenarios have also proved to be a valuable pedagogical tool in monetary policy communication. They illustrate current risks and uncertainty in a simple way and make clear that our forecasts are therefore uncertain. In the scenario section, we also attempt to illustrate the design of our monetary policy reaction function so as to help make monetary policy predictable. We do this via policy rate paths for the different scenarios shown in the diagrams and in the reasoning for the monetary policy in the accompanying text. The important thing here is no to try to predict exactly how the policy rate may change in the event of a specific shock but instead to explain what we would be trying to achieve with monetary policy in such a situation. Hopefully, making monetary policy more predictable will allow us to help reduce overall uncertainty over the development of the economy.

The scenario section also raises questions

However, it may be worth pointing out that the policy rate paths in the scenario section sometimes create discussion and give rise to a number of questions. This is something we have occasionally experienced when the actual course of events has ended up resembling one of our published scenarios. A couple of times, some of the Report's more well-informed readers have wondered why we have not followed the policy rate path in the relevant scenario.

One current example, which I think illustrates the difficulties quite well, is that of two scenarios we published in the Monetary Policy Report from last December and which concerned the risk of trade barriers and increased geopolitical tension. These scenarios assumed that the United States would raise its tariffs against the rest of the world by 20 percentage points and that all of the United States' trade partners, including the EU, would respond with equivalent increases. These measures were assumed to lead to higher inflation, in both the United States and Europe, and to lower growth. In addition, one of the scenarios assumed increased geopolitical tension that exacerbated the situation further, partly via stronger inflationary impulses. The monetary policy response, illustrated in the December report, involved the Riksbank raising its policy rate to ensure that inflation again stabilised at the target.

As we now know, some of the assumptions in these scenarios were unfortunately quite close to the reality we now have to face. So why has the Riksbank not raised the policy rate? An initial answer to this question is that we may yet be forced to tighten monetary policy. One important part of the puzzle is probably the outcome of the ongoing negotiations between the US government and the European Commission. As I mentioned, the scenarios from December assumed that the EU would introduce reciprocal tariffs against the United States of 20 percentage points. As yet, no such decisions have been taken, and I hope they can be avoided.

Another explanation for the Riksbank not acting in accordance with the policy rate paths in the tariff scenarios is that other risks have also materialised since the December decision. As I have said, we have seen a substantial rise in several different measures of uncertainty and it is likely that the uncertainty itself is now affecting demand, both globally and in Sweden. In the December report, alongside the tariff scenarios, we also published a scenario in which demand was lower and prices increased more slowly than in our main forecast. One of the imagined channels in this scenario was weaker international development impacting confidence among economic agents. In this scenario, there was reason for the Riksbank to ease monetary policy with the aim of dampening the downturn and preventing inflation from falling too far below the target.

There are signs that this scenario too, at least partially, is on the way to materialising. The uncertainty risks impeding both consumption and investment and thus leading to a worsened economic outlook. As yet, it is too early to determine how large this effect will be and the consequences it will have for inflation in Sweden. The risks of a clear economic slowdown are one reason that we now consider it slightly more likely that inflation will become lower, rather than higher, than in our latest forecast from March.

These examples illustrate some of the challenges brought by the Report's scenario section. One suggestion we have received from those reading the Report more carefully is that we should refer back to our previously published scenarios and explain whether and, if so, why we have reached other conclusions in our decisions than the monetary policies described in the scenarios. I think this is a good suggestion that I hope that I have accommodated, at least to some extent. We will continue to publish scenarios in our reports as we assess that they help us to illustrate the various risks and trade-offs that are important when we design monetary policy. I also look forward to continuing and deepening our dialogue with the Report's readers and others closely following the Riksbank's activities.

Complementary ways we illustrate risk and uncertainty

The texts in the Monetary Policy Report and the monetary policy minutes provide complementary methods to manage risks and uncertainty. The minutes play a special role as they explain how individual Executive Board members see current risks. An example that can illustrate this is the minutes from the monetary policy meeting in January. In these, I argued that it could be wise to adjust monetary policy more gradually. We should place more emphasis on the ongoing evaluation of monetary policy in the light of incoming statistics. I also emphasised the importance of a forward-looking approach and predictability in our interest rate setting so as to anchor inflation expectations and facilitate target fulfilment. This reasoning is reminiscent of Brainard's conservatism principle.

The neutral interest rate and resource utilisation are two important variables in the monetary policy analysis. But they are neither observable in data nor well-defined in theory and are thus very uncertain. We manage uncertainty about the neutral interest rate by using an uncertainty band. In our latest assessment of the long-term neutral interest rate, the uncertainty band was set between 1.5 and 3 per cent. To manage uncertainty in the assessment of resource utilisation, we analyse several different measures or indicators, which is to say the GDP gap, the employment gap, unemployment and the demand situation in the business sector, along with a summary indicator of resource utilisation that we calculate ourselves.

Advantages and disadvantages of uncertainty bands

For several years, the Riksbank published an uncertainty band for the policy rate forecast, and during some time for the forecasts for inflation and GDP growth as well. These days, we do not publish uncertainty bands for the policy rate forecast or any other forecast variables. For some time, we have chosen to illustrate uncertainty over the policy rate forecast in another way, by showing the forecast over two different time horizons. The reason for this is to clarify how we in the

Executive Board view the decisions in the near term and in the longer term, which is more uncertain. As a rule, there is more information on developments over the next few quarters than there is for further ahead and the forecasts for the coming quarters are therefore less uncertain. For the most part, the Executive Board can predict the next few monetary policy decisions with somewhat greater accuracy than those further ahead, even though the forecasts for the next few decisions are also uncertain.

Uncertainty bands can be used in different ways. For example, they are an easy way of communicating that the coming period is unusually uncertain and therefore there is a greater probability that we will deviate from our historical behaviour. This is an instructive way of illustrating uncertainty over which shocks may affect the economy during the forecast period or uncertainty over how the economy is working. They can also be used to improve the conditions for a systematic discussion of the sources of uncertainty and their quantitative significance.

However, the advantages of an uncertainty band depend on how it is calculated. The Riksbank's uncertainty band around the policy rate was based on historical forecasting errors, which led the band to become broader over time, thus failing to communicate the uncertainty existing at a specific decision date. For example, we could not illustrate the great uncertainty existing at the start of the pandemic with a band based on historical forecasting errors. There are ways of calculating uncertainty bands that could manage this but, at present, we have no plans to reintroduce any form of uncertainty band. We next plan to improve and develop our scenario analysis, which has shown itself to work well when we want to illustrate uncertainty and show how the Riksbank may act if certain selected risks were to materialise.

Deglobalisation, geopolitical risks and increasing geoeconomic fragmentation

I now intend to shift focus and discuss a couple of the risks that are currently topical. The global economy is in an uncertain situation. Geopolitical and security considerations are playing an increasing role in international relations, partly with consequences for trade patterns and financial flows between countries and regions.

From the end of the Second World War until the outbreak of the global financial crisis in 2008, world trade as a share of global GDP increased thanks to trade liberalisation and technological gains. The formation of the Bretton Woods system and institutions such as the IMF and World Bank also contributed. This was also

the start of an accelerating globalisation of the world economy.[12] Trade and investment flows between countries increased and various parts of production were increasingly placed in other countries. By locating production in places with the most advantageous competence and costs, companies could make major efficiency gains.

With the global financial crisis, growth in world trade as a share of global GDP stopped and the trend towards globalisation halted. At present, the share of global trade is at about the same level as at the outbreak of the financial crisis, which nevertheless means that global trade is at historically high levels; see Figure 2. Although the financial crisis was the triggering factor that broke the trend of globalisation, deeper and more structural changes had been taking place in the background for a longer time.

Distrust and criticism of globalisation and free trade had emerged in several western countries. This criticism was fuelled further after the financial crisis. The critics were not opposed to the rising economic prosperity and escape from poverty that globalisation had brought to many people but maintained that inequality had increased within countries and that weaker groups had been exploited. Brexit is regarded by many as a consequence of this.

For individual companies, it is also risky to place production with several stages of processing in different countries. Global value chains are sensitive to various types of shocks, particularly in the absence of alternative suppliers when problems arise in a part of the value chain. Recent years' global shocks such as the pandemic, Russia's full-scale invasion of Ukraine and the increasing geopolitical risks have shown how sensitive value chains can be to shocks. This suggests that, going forward, increased geographical risk diversification and larger inventories of input goods could become more important to increase resilience to value chain shocks.

Over the last ten-year period, we have also seen how geopolitical risks have increased; see Figure 3.[13] Russia's annexation of the Crimean Peninsula in 2014, the subsequent full-scale invasion of Ukraine in 2022 and the escalating crisis in the Middle East are important events underlying this development. A more structural cause that has probably also contributed is the decline in western

[12] An initial wave of globalisation took place from the middle or latter part of the 19th century until the First World War; see S. Aiyar et al. "Geoeconomic fragmentation and the future of multilateralism", IMF Staff Discussion Notes, SDN/2023/001. In the 1930s, a rapid downturn in international trade took place, partly due to various protectionist measures and the breakdown of the gold standard.

[13] The term geopolitics was originally coined by a Swedish political scientist called Rudolf Kjellén at the start of the 20th century. The concept spread rapidly in Europe in the inter-war period and then to the rest of the world.

influence in the world order.[14] The growing rivalry between the United States and China that seems likely to reshape global trade patterns is one expression of this. Another is the emergence of the BRIC countries, which has created a bloc of emerging market economies in the global south that could provide an alternative to prevailing western organisations.[15]

In other words, geopolitical and security considerations seem likely to have increasing significance in international relations. One consequence of this is that the global economy could split into rival blocs whereby countries in each bloc prefer to have economic, financial and technological exchanges with one another – a process known as geoeconomic fragmentation.[16] [17]

In the data, we can see several signs that geoeconomic fragmentation has increased. The number of trade restrictions has increased over the last decade; see Figure 4. Industrial policy has become increasingly interventionist. In particular, strategic sectors such as electronics, energy and air travel have been subsidised; see Figure 5. Global direct investment is being increasingly driven by geopolitical reasons, particularly direct investment to strategically important sectors; see Figure 6.

Sanctions aimed at the financial system have become increasingly widespread. The United States is increasingly using sanctions to put pressure on so-called hostile nations. One example is the forceful sanctions placed on Russia after its full-scale invasion of Ukraine. Together with the EU, the United States froze around USD 300 billion in Russian central bank reserves at the same time as Russian financial institutions were denied access to global financial markets. Another example is the sanctions against Iran. Figure 7 shows that the number of sanctions has steadily increased since 2010.

---

[14] See T. Blair "After Ukraine, what lessons now for Western leadership?", speech, 2022. See also Jean-David Levitte "With the end of four centuries of Western dominance, what will the world order be in the 21st century?", commentary, Brookings, 2019.

[15] BRICS currently consists of the founding members Brazil, Russia, India, China and South Africa, along with new members Egypt, Ethiopia, Indonesia, Iran and the United Arab Emirates. Some twenty countries have also applied for membership.

[16] Geoeconomics can have different meanings. However, the concept can be attributed to the political scientist Edward Luttwak, who argued that the end of the Cold War would mean that the means of gaining global influence would shift from geopolitical competition in the form of military means to economic means; see R. Luttwak "From geopolitics to geoeconomics – logic of conflict, grammar of commerce", *The National Interest*, 1990.

[17] Fragmentation means a concentration of economic activity within a certain bloc or area. In general, fragmentation does not have to be caused by these geopolitical considerations but geoeconomic fragmentation does entail this. The concept of geoeconomic fragmentation has recently been addressed by Aiyar et al. "Geoeconomic fragmentation and the future of multilateralism", IMF Staff Discussion Notes, SDN/2023/001, J. Nagel "Geoeconomic fragmentation: handling inflation pressures and volatility, increasing resilience", speech, Tokyo University, 2024 and A. Norring "Geoeconomic fragmentation, globalization, and multilateralism", BoF Economics Review, No 2/2024.

Risk of less economic efficiency, financial instability and inflation

Geoeconomic fragmentation is associated with risks to global stability and security but may also have negative economic consequences. Increasing protectionist trade policies impede international trade and have a negative impact on global value chains. Increased checks on goods, services, capital and people moving from country to country also make it more difficult to develop global value chains. An increasingly fragmented commodity market leads to various commodities becoming more expensive and harder to obtain. The costs of this in terms of less economic efficiency and productivity are probably significant.

In addition, the financial system may be divided into different blocs if financial capital flows and payments are restricted. As capital flows can rapidly change direction and banking relationships be broken, this also entails risks for financial stability.

For central banks, the effects on inflation are of particular interest. Globalisation and the integration of individual countries into the global economic system led to high productivity and falling inflationary pressures. Consequently, increasing geoeconomic fragmentation may lead to rising inflationary pressures.

An IMF report shows that costs in terms of reduced global production can vary from 0.2 per cent in a scenario with limited fragmentation and low adjustment costs to 7 per cent in a scenario with a high degree of fragmentation and high adjustment costs.[18] If the calculations also take into account a division of countries in which technological exchanges come to a halt, production loss rises to between 8 and 12 per cent in some countries.

A report from the World Economic Forum presented calculations in which the global costs of geoeconomic fragmentation may amount to around 5 per cent of global GDP.[19] The report also showed that tariffs and deteriorating financial markets could help push inflation up. In these calculations, a relatively small degree of fragmentation entails a rise in global inflation of around 0.6 percentage points, while it may be as much as 5.2 percentage points higher if fragmentation is very extensive; see Figure 8.

In some cases, the costs could be highly tangible for individual households and companies. Many of these were impacted by rising energy prices in conjunction

[18] See Aiyar et al. “Geoeconomic fragmentation and the future of multilateralism”, IMF Staff Discussion Notes, SDN/2023/001.

[19] See World Economic Forum “Navigating global financial system fragmentation”, Insight report, 2025.

with Russia's full-scale invasion of Ukraine. After the invasion, imports of gas from Russia to Europe decreased by about one-third compared with before the invasion. This decrease was compensated for with gas from the United States and Norway, but the sanctions nevertheless contributed to higher gas and energy prices, not least in Sweden.

Geopolitical risks can, in themselves, be inflationary

Geopolitical risks and considerations can, in themselves, be inflationary. President Trump's new and high tariffs, primarily aimed at China, may be partly geopolitically motivated.[20] Higher tariffs lead prices for imported goods to rise, which affects both consumers and companies. In addition, they mean that competition from abroad decreases. Domestic companies can exploit this by raising prices to a greater degree than their costs can justify. Growing trade barriers can also reduce direct investment and technology transfers and lead to lower productivity growth. All in all, these effects can be inflationary and lead to higher interest rates.

Geopolitical risks have increased both in Sweden and abroad, particularly in recent years; see Figure 3. The figure also shows that geopolitical risks in Sweden have covaried with risks abroad. However, the effect geopolitical risks have on inflation is not self-evident as both demand and supply factors play a part. Several studies show that elevated geopolitical risk tends to be linked to increased inflationary pressures and lower economic growth, which indicates that supply effects are more important that demand effects.[21] Isabel Schnabel of the ECB's Executive Board has also pointed this out:

"… a major escalation could impact oil prices, affect confidence or trigger new supply chain disruptions. Geopolitical shocks are a key risk that we need to watch, and this poses upside risks to the inflation outlook".[22]

[20] See H.R. McMaster and A. J. Grotto "Economic statecraft: The need for an integrated approach", Hoover Institution, 2025. Other reasons may be that the tariffs are only a negotiating tool aimed at forcing China and other countries to lower trade barriers. They are aimed at restoring the US manufacturing sector or providing incentives for US companies to manufacture goods such as semiconductors and medicines that will be important in the event of a new pandemic or war. These and the geopolitical reasoning are discussed by M. McArdle "What exactly is Trump trying to achieve with his tariffs?", debate article, Washington Post, 2025.

[21] See D, Caldara, S. Conlisk, M. Iacoviello and M. Penn "Do geopolitical risks raise or lower inflation?", unpublished manuscript, Federal Reserve Board, 2024.

[22] See I. Schnabel, interview with Nikkei, 13 May 2024,

An Economic Commentary recently analysed how geopolitical risks could affect inflation in Sweden.[23] The study showed that Sweden's specific geopolitical risks lead to rising inflation, in line with the findings of other studies for other countries; see Figure 9. One explanation for this is that our specific risks are leading to a weakening of the exchange rate and an outflow of capital. However, as the development of the krona does not always follow historical patterns, this result should be interpreted with some caution. According to the Commentary, global geopolitical risks have significantly less effect on Swedish inflation.

The study additionally shows that the GDP indicator reacts slightly negatively to Sweden's specific risks. One interpretation of this could be that the negative supply effects also dominate the demand effects in Sweden.

Forward-looking monetary policy with increased focus on supply shocks

So how should the Riksbank manage geopolitical risks and geoeconomic fragmentation? I consider that the strategy for monetary policy that we are already applying, usually called a flexible inflation targeting strategy, also gives us a good framework to manage these challenges. As we all know, the cornerstone of this strategy is our inflation target of 2 per cent; in times of elevated uncertainty, monetary policy contributes to stability primarily by holding the rate of price increase sustainably low and stable.

But the Riksbank does not strive for a rate of inflation that is always exactly 2 per cent – such a strategy would be neither possible nor desirable. Monetary policy does not have the precision to let us ensure that inflation will be exactly 2 per cent every month or quarter. If we attempted to achieve something like this, we would risk overreacting with the interest rate weapon, thereby contributing to instability instead of creating stability.

If the economy is affected by unexpected shocks that temporarily push inflation over or under our target, we look ahead and try to adjust the policy rate and policy rate forecast so that inflation stabilises one or two years ahead. This is a good strategy, partly because it takes time for our decisions to reach their full impact on inflation and the real economy. Normally, our decisions are a matter of finding a suitable trade-off between the speed with which inflation is to be

[23] See M. Klein, E. Skeppås and U. Söderström "How is Swedish inflation affected by geopolitical risk?", Economic Commentary No. 3, Sveriges Riksbank, 2025.

brought back to the target and the effects on growth, employment and other real economic variables.

When we are confronted with new risks, such as various geopolitical risks and those associated with geoeconomic fragmentation, we must primarily strive to weigh them into our forecasts. As I have said, we will also continue to work with scenarios to improve our own and the general public's understanding of the economic consequences of various types of risk. This requires great vigilance and curiosity so that we can constantly improve and adapt our analysis and our assessments to new conditions.

It is therefore important to dedicate some resources to better understanding the economic consequences of both geopolitical risks and geoeconomic fragmentation. While central banks have little opportunity to influence developments themselves, if we better understand the risks and uncertainty these entail, we can conduct a monetary policy that can, in the best case, limit some of the negative economic consequences. In addition, credible communication of the economic effects can hopefully influence policy and developments in a better direction. One example of this is Fed chairman Jerome Powell's statement from his most recent press conference, in which he stated that large increases in tariffs are likely to generate a rise in inflation and a slowdown in economic growth.[24]

The Swedish economy is in a relatively favourable position with inflation of close to 2 per cent and strong government finances. The conditions for managing different types of risk should therefore be relatively good.

More analysis of the economy's supply side is needed

Many of the shocks that central banks have managed in recent years – the pandemic, the war in Ukraine and the sharp rise in inflation in 2022 – have been related to supply. Geopolitical risks and the increasing geoeconomic fragmentation that I have discussed today also resemble supply shocks in which inflation and production move in different directions.

In general, it is more difficult to manage supply-related shocks than demand shocks. When inflation and production move in the same direction, the central bank does not have to make a trade-off between stabilising inflation and

[24] See the transcript of Powell's press conference on 7 May 2025.

production. But in cases of supply shock, a trade-off must be made between stabilising inflation and production.

According to the textbooks, central banks should disregard the effects on inflation of temporary supply shocks. In practice, this is harder than it sounds as it is tricky to determine, in real time, how long a shock will last. The pandemic is a recent example of this.

Central banks have traditionally spent a lot of time analysing the role played by demand for inflation and monetary policy, while the analysis of the economy's supply side has not received the same attention. This was pointed out in the review of the Reserve Bank of Australia in 2023 and in Ben Bernanke's review of the Bank of England's forecasting process.[25] The role played by supply factors has also been emphasised in studies discussing the Riksbank's monetary policy.[26] This suggests that central banks should invest more resources in improving the analysis and understanding of the economy's supply side, which applies not least to the risks I have addressed today.

Concluding comments

The global landscape appears to be changing. A world previously characterised by global cooperation slowly seems to be shifting towards more confrontation and fragmentation. Geopolitical considerations are being given greater significance in international relations and the global economy risks being divided up into various rival blocs. This is a worrying development that does not just imply security risks but also negative consequences for the economy. To conduct a well-balanced monetary policy, we need to understand the economic consequences, particularly for inflation and the financial markets.

Our experiences in recent years have also taught us that it is not always clear how to handle supply shocks, not least because, in real time, it is very difficult to determine whether a shock is temporary or more long-term. Previously, central banks have expended a lot of time on analysing the demand side of the economy,

[25] See B. Bernanke "Forecasting for monetary policy making and communication at the Bank of England: a review", Bank of England, 2024 and G. de Brouwer, R. Fry-McKibbin and C. Wilkins "An RBA fit for the future", review of Reserve Bank of Australia, Australian Government, 2023.

[26] See J. Hansson, M. Nessén and A. Vredin "The storm after the calm – Lessons for monetary policy analysis", *Economic Review* No. 4, Sveriges Riksbank, 2018. See also E. Bylund, J. Iversen and A. Vredin "Monetary policy in Sweden after the end of Bretton Woods", *Comparative Economic Studies,* 66, 2024 and M. Jonsson and A. Vredin "30 years of inflation targeting: from simple to complex", *Economic Review*, No. 1, Sveriges Riksbank, 2025.

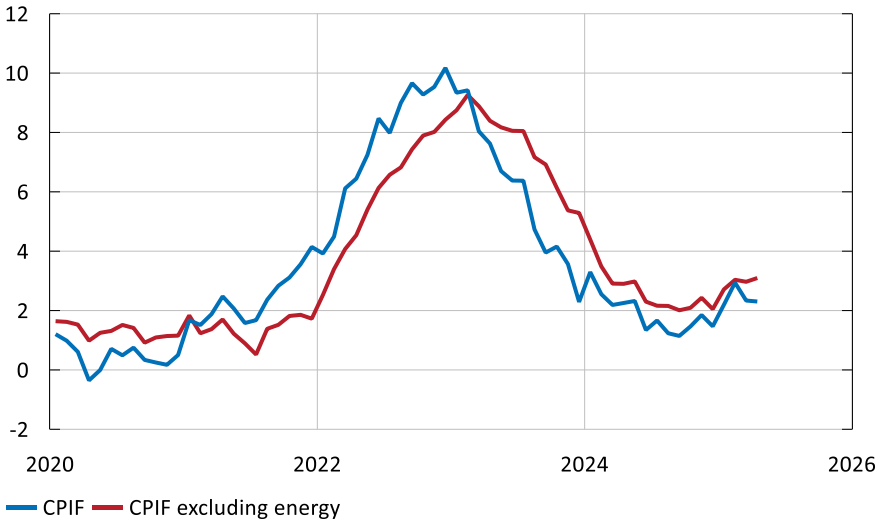
but developments in recent years indicate that we also need to become better at understanding the economy's supply side.

Various types of risk and uncertainty have always been key parts of monetary policy analysis and decision-making, but it is not obvious how these should best be handled. Recently, the Riksbank has started to include alternative scenarios in each Monetary Policy Report, which has proved to be a good way of communicating various risks and uncertainties. We also know that it is appreciated by readers of the Monetary Policy Report. We have also started to divide the forecast for the policy rate into two time horizons: one over the shorter term in which uncertainty is lower and one over the longer term in which uncertainty is higher. It is still a little early to make any firm statements on how this has worked, even though our experiences so far have been good.

Figures

Figure 1. Inflation measured with different consumer price indices

Annual percentage change

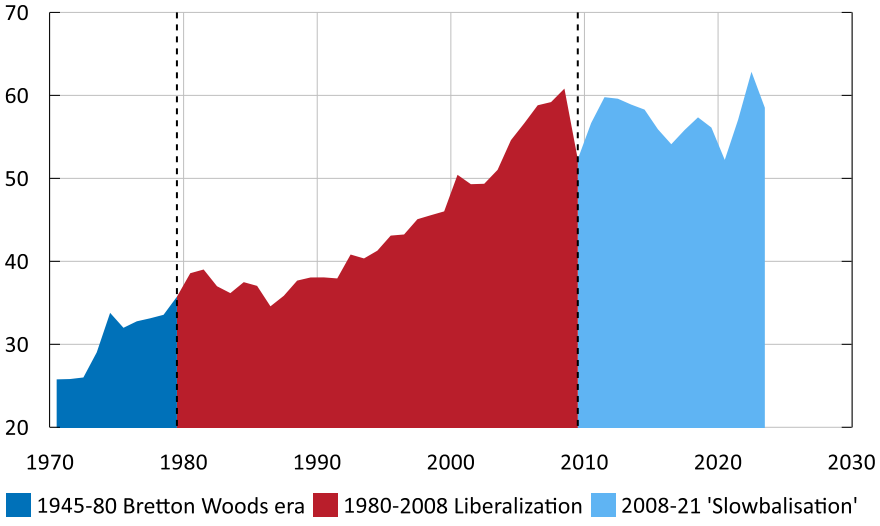


Note. Seasonally adjusted data.

Source: Statistics Sweden.

Figure 2. Global trade

Per cent

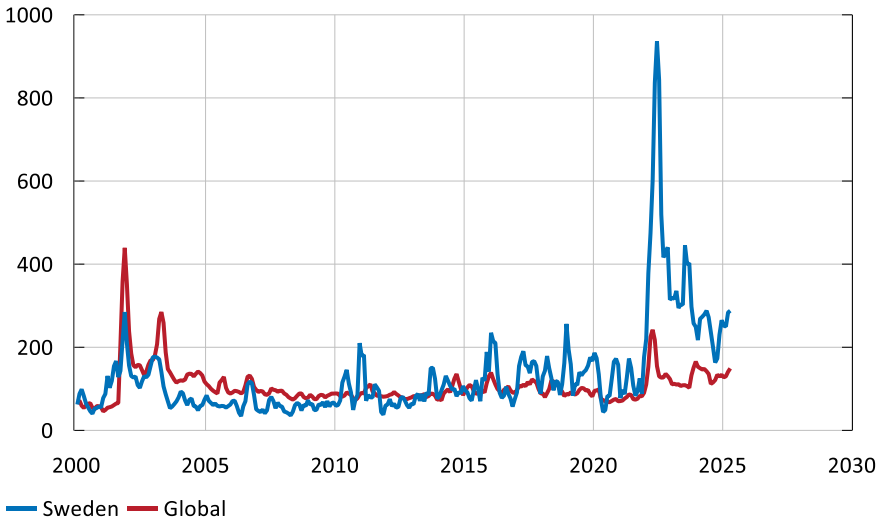


Note. Global trade is calculated as the sum of exports and imports in global trade in relation to global gross domestic product (GDP).

Source: World Bank.

Figure 3. Geopolitical risk in Sweden and globally

Index

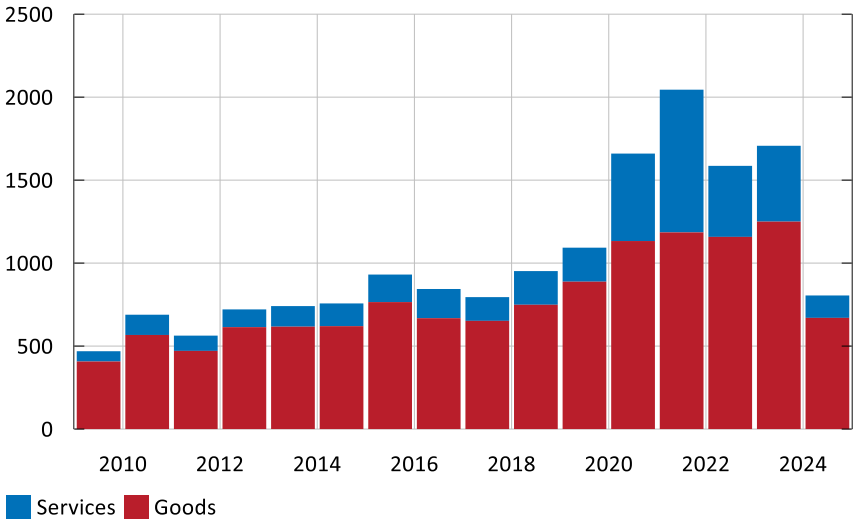


Note. Average in 1985–2019 = 100. Three-month moving average.

Source: D. Caldara and M. Iacoviello “Measuring geopolitical risk”, American Economic Review, 112, 2022.

Figure 4. New trade barriers for goods and services

Number

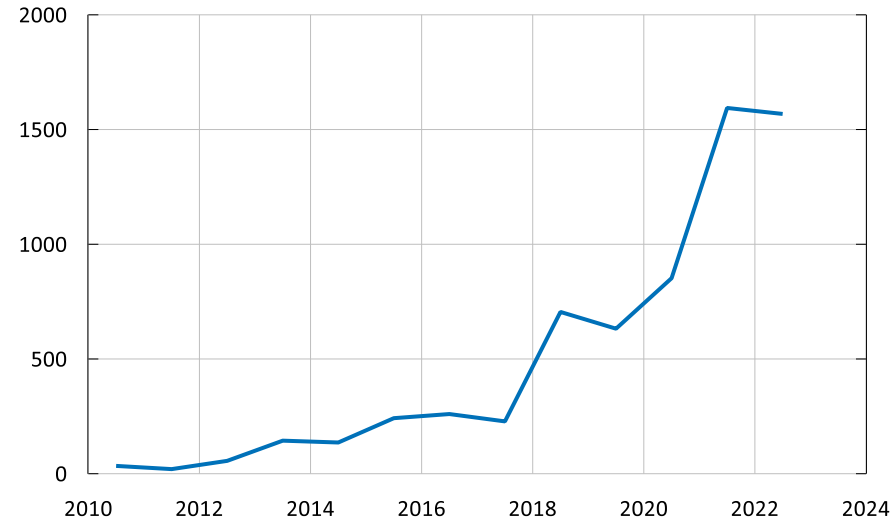


Note. Implemented trade barriers worldwide. Includes the two most common trade barriers: import tariffs and financial subsidies. Financial subsidies are the most common form of state subsidy. The number of import tariffs stayed relatively unchanged over the period 2009–2024. The change from 2019 is therefore primarily due to the growth rate of financial subsidies.

Source: Global Trade Alert.

Figure 5. Industrial policy measures

Number

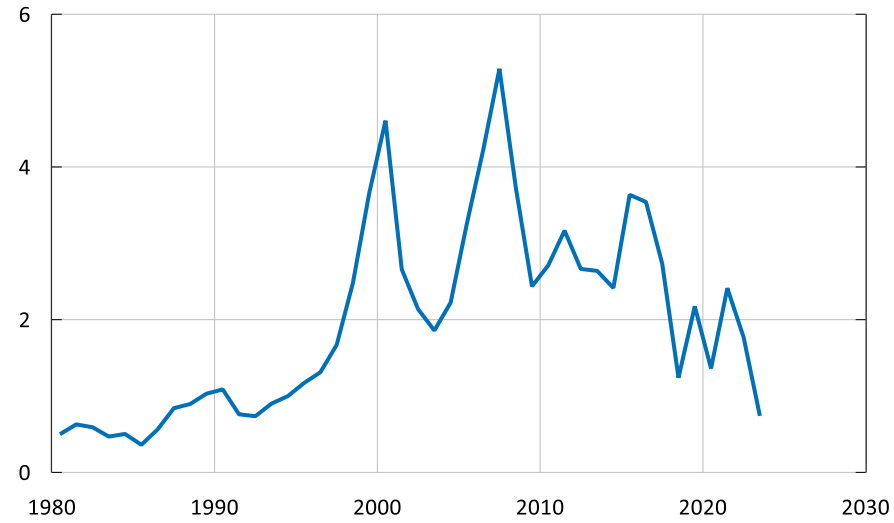


Note. Total number of industrial policy measures worldwide.

Source: Data from version 2 of Juhász et al. “Updated Descriptive Statistics for ‘The Who, What, When and How of Industrial Policy: A Text-Based Approach’”, STEG WP050, 2023.

Figure 6. Foreign direct investment

Per cent

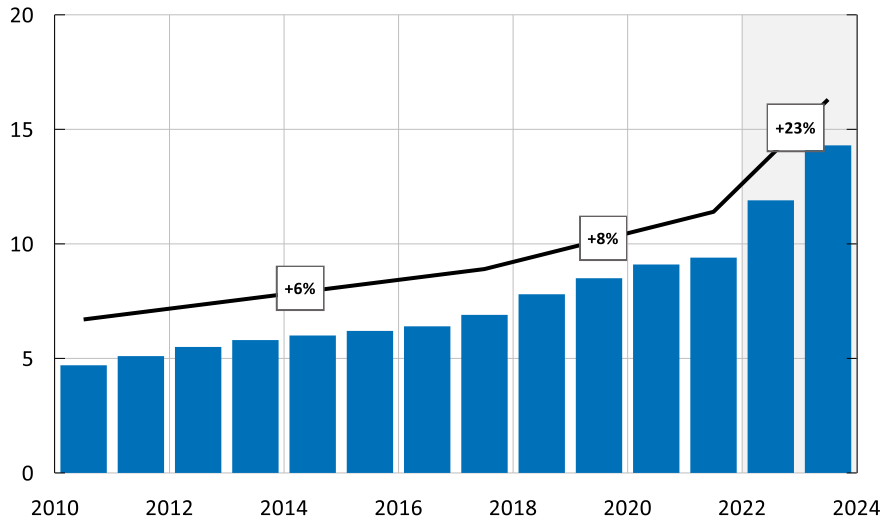


Note. Net inflow of foreign direct investment as a share of global GDP.

Source: World Bank.

Figure 7. Active sanctions issued by the US Department of the Treasury

Thousands

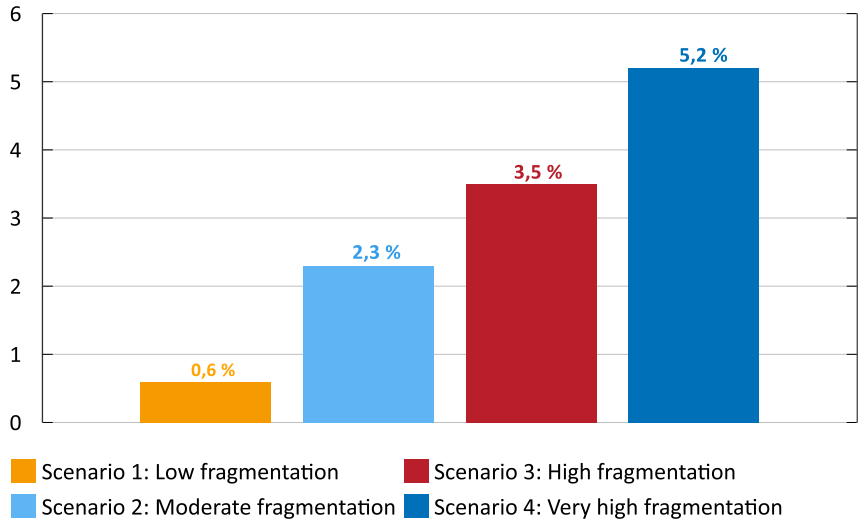


Note. Number of active sanctions issued by the US Department of the Treasury against a specific state, organisation or individual. The grey area marks the period after the invasion of Ukraine.

Source: Oliver Wyman Forum Analysis.

Figure 8. Geoeconomic fragmentation and global inflation

Percentage points

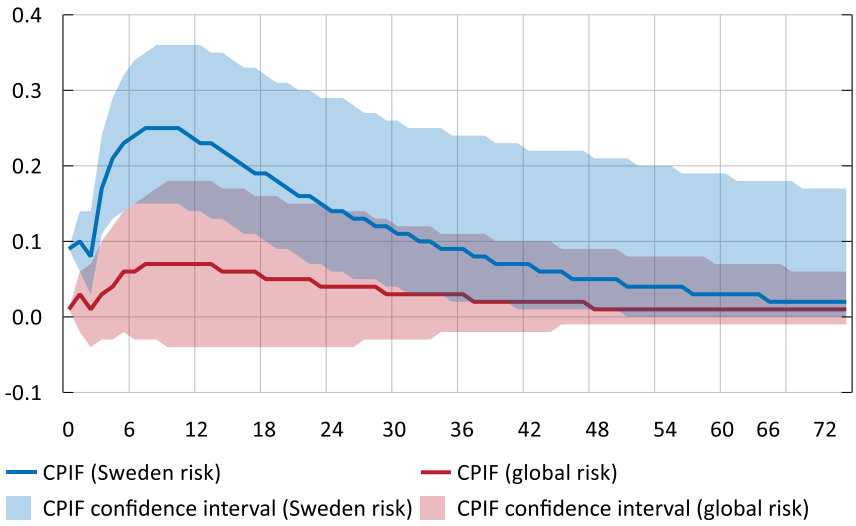


Note. Short term deviation from main scenario. The short-term effect is calculated as the macroeconomic shock after one year.

Source: World Economic Forum.

Figure 9. Geopolitical risks and Swedish inflation

Percentage points



Note. The figure illustrates how increased geopolitical risk corresponding to a standard deviation in each index affects annual CPIF inflation at different monthly horizons. The shaded areas represent the 90 per cent confidence interval.

Source: The Riksbank.