

SPEECH



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Inflation and monetary policy in the shadow of war¹

With a war in Europe, we are all being reminded of the essential functions in a society: shelter, food for the day and energy to warm up houses and transport people and goods. I would therefore like to begin by expressing my full support for the people of Ukraine and by sending special greetings to our colleagues at the National Bank of Ukraine, who have managed to maintain critical functions under inhuman conditions.

The war is having repercussions for many European countries, including Sweden. For us at the Riksbank, the focus lies on the effects on the Swedish economy and, above all, on inflation.² As Deputy Governor of the Riksbank, my role, together with my colleagues, is to contribute to maintaining price stability.

After nearly 30 years of low and stable inflation, the Riksbank, like other central banks, is facing a new situation: inflation is rising rapidly – to levels well above the target of 2 per cent aimed at by monetary policy (see Figures 1 and 2). Russia's invasion of Ukraine is reinforcing the trend of rising inflation that began last year.

Inflation is already noticeably high for many households and companies in Sweden, and it is expected to rise further over the coming months. In addition, prices are rising particularly rapidly for essential goods and services – energy and food – for basic needs that we have no choice but to fulfil. However, central banks' analysis and communication often use measures of underlying inflation, from which energy and food are usually excluded. This makes it reasonable to wonder, "What is the point of an inflation index that doesn't take into account that you need to eat and heat your home?"

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² In parallel, we are focusing on our second main task – maintaining a safe and efficient payment system. But my speech today focuses on inflation.

When inflation is low and stable, the difference between the inflation that households experience and the measures of underlying inflation that guide monetary policy is not a major problem. However, when inflation is high and varies greatly, it can cause problems. If the gap between how households perceive inflation and how we analyse it and communicate it is too great, this may reduce public confidence in the inflation target and cause a de-anchoring of inflation expectations together with a vicious cycle of increasing wage and inflation expectations.

Today, I would therefore like to talk about what we, at the Riksbank, can do when inflation is high and the outlook is uncertain. Three important elements I would like to focus on are (1) how inflation is measured, (2) the difference between what we can influence in the short term and in the long term and (3) monetary policy strategy in an uncertain world.

My messages today can be summarised in three points:

- Inflation will be significantly higher than in our latest forecast
- We cannot prevent rising inflation in the short term
- However, we can and will act to bring inflation close to the target in the medium term

Low and stable inflation cannot be taken for granted. It will take much deliberation on our part to achieve the inflation target in the future. We may need to use the entire toolbox – for example, it is reasonable to bring interest rate increases forward. Before I develop my thoughts on the monetary policy strategy in an uncertain world, I would like to discuss how we measure inflation, how households form inflation expectations and why this is important at present.

What is inflation and how do we measure it?

According to the law, the objective of the Riksbank's operations is to maintain price stability. Since 1993, we have interpreted this in terms of an inflation target of 2 per cent.

Most people probably associate the concept of inflation with price increases.³ For example, 50 years ago, a litre of milk cost SEK 1.50, while the price today is SEK 11.75. However, changes in prices for individual goods are not inflation in itself – the concept of inflation reflects the rate of price increase in the economy as a whole. There are different ways of measuring this. Most of the time, some type of consumer price index (CPI) forms the focus of economic policy. The CPI measures the price development of goods and services that households buy in Sweden.⁴ The CPI could be seen as the price development of the total consumption of an 'average household'.

The CPI is calculated by Statistics Sweden and is used for many purposes, for example, for calculating compensation for price increases in social compensation systems aimed at households, for calculating real or inflation-adjusted wages and

³ This is a little different from how the concept has been used historically. For an interesting overview, see, for example, Bryan (1997).

⁴ There are also other measures of inflation, with the GDP deflator being perhaps the best known, which instead show the price development of GDP, meaning what is actually produced in Sweden.

as a target variable for monetary policy. Since the CPI has such a broad field of use, it is important that it actually measures what it is supposed to.

The CPI in practice

Every month, we consume various things: food, electricity for heating our homes, furniture, travel, restaurant visits, concerts etc. Figure 3 shows different items and their weight in the CPI. Perhaps not surprisingly, accommodation and food are the two largest items.

Statistics Sweden collects *hundreds of thousands* of prices every month from sales points around the country, directly in the shops, via the Internet or by telephone. A price index is then calculated and weighed together in what is known as a CPI basket, based on the most accurate composition of consumption possible. Statistics Sweden updates the basket each January.⁵

Cost of living or inflation – what is the difference and does it matter?

Inflation can be measured in different ways. One idea that may perhaps seem reasonable at first glance is to calculate a fixed basket index, sometimes also referred to as the **inflation index**, which shows the price development of a constant consumption basket, in order to capture 'clean' price changes. We fill a basket with goods and services at a certain time and follow price developments in the basket over time.⁶

But we do not consume the same goods and services today as we did 50 years ago. Just look at our eating habits – cappuccinos and sushi were not part of the Swedish consumer basket 50 years ago. Today, we charge both mobile phones and electric cars – goods that were not available at that time either. Consumption patterns are affected by the addition of new goods, by changes in preferences over time and by different goods becoming relatively cheaper or more expensive over time. One clear example of this is that food made up a significantly higher share of expenditure in the 1950s than it does today.⁷ Instead, we are now spending more money on restaurants and hotels, reflecting the rise in living standards – society as a whole has become richer, and more people can afford to eat out today, for example, than they could a few decades ago. Energy efficiency, more fuel-efficient cars and better technology for heating homes also mean that the cost of heating homes and driving cars has made up a largely unchanged share of average household expenditure over the last 20 years (see Figure 4).⁸

Consequently, if we measured price developments for exactly the same goods over time, it would not reflect actual household expenditure. The weights must be updated to reflect the development of those prices relevant to households. But the CPI is also based on the **cost-of-living index**. The cost of living is the cost of

⁵ Technically, the CPI is a so-called chain index, which, in simple terms, means that price increases over a year are multiplied – chained – by price increases in previous years.

⁶ This kind of fixed basket index is commonly referred to as a Laspeyres Index, after the German economist Étienne Laspeyres.

⁷ For an interesting overview, see Statistics Sweden (2020).

⁸ Note that distribution has been made differently than in Figure 3.

maintaining a certain standard of living. We can think of the standard of living as a certain level of consumption that generates the same welfare or utility for the household.

A simple way to think about the concept of cost of living is to look at your bank statement for a month: what do all the deductions look like? We can see that we spend money on many different things, not only purchases in shops, but also insurance and interest payments on our mortgages. One important thing to bear in mind is that it is the *price development* of this expenditure that the cost of living refers to, *not the increase in consumption* as a result of an increase in living standards.

Several factors mean that a cost-of-living index will, as a rule, show a lower rate of increase than if we determine a fixed consumption basket and then follow price developments over time. One factor is that the cost-of-living index allows for the possibility of *replacing goods that have become more expensive with other, cheaper goods*. If the price of pears rises heavily, households can buy apples instead and still fill their fruit bowls at home at a lower price than if they had continued to buy pears. But this does not have to happen. In particular, the rapid price increases that we are seeing now may cause involuntary adjustments of consumption, as households simply cannot afford to maintain their standard of living. The changed consumption basket thus entails a fall in the standard of living.⁹

A related factor is that the cost of living index allows *new goods to be added*, such as mobile phones in the 1990s and smartphones in the 2000s, and *old goods to be phased out*, such as typewriters in the 1990s. In many cases, it is reasonable to assume that new goods replacing old ones reflect an increased standard of living.

Challenges in measuring the cost of living – the example of electricity prices in different parts of the country

Although the starting point for capturing the development of the cost of living is reasonable, there are a number of challenges in measuring price developments in the CPI. The most frequently discussed ones include the role of housing prices, how to take account of quality changes and the major changes in consumption patterns during the coronavirus pandemic.¹⁰

It is also important to remember that the CPI measures an average across the country. Price developments affecting individual households may look different. As this has affected so many households in Sweden recently, I am going to focus today on electricity prices and how they differ from one part of the country to another.

⁹ See, for example Dagens Nyheter (2022).

¹⁰ For a discussion of the role of housing prices, see Statistics Sweden (2021a) and Sveriges Riksbank (2021a). For a description of quality improvements, see Johansson (2015). A description of the effects of the pandemic on inflation is given in Sveriges Riksbank (2021b). One particular problem for the Riksbank in the past was that the cost of owning housing depends on the level of interest rates. This means that, if the Riksbank raises the policy rate to bring down the inflation rate, household mortgage rates rise, causing CPI inflation also to rise in the short term. Since 2017, the CPI with a fixed interest rate – the CPIF – has therefore been used instead as a target variable. See Sveriges Riksbank (2017).

Sweden is divided into four so-called electricity areas from north to south: Luleå, Sundsvall, Stockholm and Malmö. When calculating the CPI, the price developments in the various electricity price areas are monitored and weighed together, with the weights being determined by the number of customers and their consumption. The aim is to monitor prices that are representative of the whole country.

As there are more users in relation to output in southern Sweden, a deficit often occurs there, while northern Sweden, as a rule, has a surplus of electricity. In general, electricity prices are therefore slightly higher in the southern parts of the country (see Figure 5). However, more short-term changes can also have a varying impact on different parts of the country. A clear example is given by the rising prices for natural gas that have pushed up electricity prices in Europe. As the electricity market in southern Sweden is more interconnected with the continental market, electricity customers in the southern part of the country have been hit harder (see Figure 5). But the CPI only considers the average price of electricity across the whole of Sweden.

Electricity prices are a good example of a price category that the Riksbank cannot influence in the short term. They are largely influenced by factors that are completely outside the Riksbank's control, such as whether we are having a cold or warm winter. Electricity prices are also affected by how much it rains and how windy it is because both hydroelectric power and wind power are important energy sources in Sweden. International conditions too can affect energy prices. Fuel prices are another category that is primarily affected by conditions beyond Sweden's borders.

The CPI thus does not capture differences in price developments between *different parts of the country* and neither, therefore, can it capture differences between *different types of households*.

Inflation differs between different types of household

The inflation rate for different household groups differs according to their consumption patterns. Statistics Sweden has mapped the rate of inflation for three types of household that it categorises as follows: a family with children, a student and a retired couple.¹¹

The family consists of two adults with two school-age children. The whole family enjoys being outdoors, getting some exercise. The adults in the family are interested in cooking and gardening. Evenings at home take priority over restaurant visits.

The student enjoys shopping and dining at restaurants. He or she lives in an apartment close to the shopping malls and urban bustle. In addition, he or she prioritises good mobile Internet access and a new mobile phone, and studies at college or university, reached either by bike or by public transport.

¹¹ See Statistics Sweden (2021b).

The two pensioners live in a single-family house that they bought in the 1970s. The couple prioritises theatre visits, good food and drink, and travel.

These are stylised examples that should be taken with a pinch of salt: obviously, many students also appreciate being outdoors and some families with children live in single-family houses built in the 1970s. The point is that different households have different preferences and different needs. This affects their cost of living and thus the inflation they face. Figure 6 shows the weights for the different household types, which can be compared with the weights in the total CPI basket in Figure 3.

Figure 7 shows month-by-month inflation in 2021 for the different household types, together with CPI inflation. For the family with children and the student, inflation was fairly close to the total CPI figure, while it was lower for the retired couple. All household types felt the rise in inflation in the second half of 2021.

We can look at the figures for December to understand the differences better. Inflation was 4.3 per cent for the student, 4.1 per cent for the family with children and 2.6 per cent for the retired couple, which can be compared with 3.9 per cent, which was the overall rate of increase in the CPI. Figure 8 shows the annual price increase for various expenditure items in December 2021. We can see that housing costs showed the highest rate of increase, while health and medical expenditure had the lowest.¹² At the same time, we saw in Figure 6 that the retired couple had a lower weight for housing and a higher weight for healthcare compared to the other household types. This explains why their inflation rate was lower than it was for the other households.

These calculations thus strongly suggest that inflation may vary between households but, when inflation is low and stable, the differences are not particularly large in practice. Nevertheless, over time and as a measure of inflationary pressure in Sweden as a whole, an average measure is still relevant to many households.

In reality, however, the differences may be significantly greater than for the household types described here, since the recent rise in inflation has been largely driven by energy and food prices. For example, there may be a very large difference between different households depending on whether they live in a single-family house with direct electric heating and a variable electricity price or in a rental property with electricity included in the rent. And, as I mentioned earlier, the price of electricity is also affected by the part of the country in which the household lives.

By looking at the price development in December 2021 for different categories of expenditure in Figure 8 and relating them to our own consumption expenditure, we can all get an idea of whether our personal inflation was higher or lower than

¹² Falling prices for pharmaceuticals were one explanation for the development of health and medical expenditure in the CPI. See Statistics Sweden (2022).

the total CPI figure at the end of last year. In the United States, the Federal Reserve Bank of Atlanta has created its own page called “My CPI”, where households can estimate their personal inflation in a similar way.¹³

In Sweden, inflation is thus measured using a cost-of-living index. This reflects an average household’s consumption expenditure and consumption pattern, and is allowed to vary over time. Different households face different inflation rates. This is particularly clear now that energy and food prices are rising. So the next question is – what can the Riksbank do to counteract a high rate of inflation?

¹³ See Federal Reserve Bank of Atlanta (2022).

The dilemma of monetary policy – balancing short-term fluctuations against long-term stability

In the near future, energy and food prices are very likely to continue to be high as a result of the war in Ukraine. The earlier rise in inflation may thus be further diluted via several different channels. This is mainly connected with Russia exporting significant quantities of oil, natural gas and fertiliser and Ukraine being a major exporter of cereals, mainly wheat and maize. Let me give you a very rough overview:

- The price of oil has risen strongly and rapidly, which has already resulted in record high petrol and diesel prices in Sweden, among other things.
- The price of natural gas has developed similarly, driving up electricity prices in Europe. As the electricity market in Europe is heavily integrated, this is spilling over onto electricity prices in Sweden, especially in the south.
- The rising prices for wheat and maize mean that food prices in Sweden are being affected both by rising prices for input goods in the food industry and by direct effects on bread and cereal prices in the shops. In turn, higher prices for fertilisers and fuel may drive up input prices in Swedish agriculture.

We are now working on new forecasts for inflation and will return to that analysis at the next monetary policy meeting. But we can already note that inflation is and will be significantly higher than in our last forecast. In addition, we cannot prevent rising inflation in the short term. However, we can and will act to bring inflation close to the target in the medium term. In order to determine appropriate monetary policy, we need to include various factors that affect inflation in the medium term: the labour market, growth and inflation expectations. Let me briefly discuss how the war is affecting the prospects for the Swedish economy.

Although our direct trade with Russia and Ukraine make up a small part of our total foreign trade – only around 2 per cent – Swedish growth risks being adversely affected by the war (see Figure 9). Other countries in Europe are probably being hit harder than we are, which, in turn, may affect their trade with us.

There is genuine uncertainty about the future. However, if the war does not escalate further, I still believe that we can expect continued good growth and a strong labour market in Sweden. We are well placed to deal with uncertain growth prospects, thanks to strong public finances and a competitive business sector.

In addition, many countries in Europe have already announced major fiscal policy initiatives in the form of rearmament, an early energy transition and support for households to counter rising electricity and fuel costs. There is also great willingness to help the people fleeing Ukraine, which may also contribute to higher demand in many European countries.

All in all, my assessment is that the war in Ukraine will contribute to higher inflation in Sweden, while the labour market and growth should be able to continue to develop reasonably well. If this assessment is correct, monetary policy will need to be adjusted to keep inflation at the target in the long term. In order to achieve

this, we need to act to ensure that inflation expectations remain firmly anchored around 2 per cent.

How do households shape their inflation expectations and how does this relate to how we measure inflation? There is a paradox between how households perceive inflation and how central banks evaluate it. Households will experience inflation differently depending on their consumption patterns. But everyone needs to eat and many people are affected by rising energy costs. Nevertheless, when formulating monetary policy, central banks often ignore energy prices and sometimes food prices and instead focus on measures of underlying inflation. Let me discuss why and whether it is reasonable to do so today.

Underlying inflation – a way of capturing the trend

Inflation is affected by a large number of factors, including those that can be considered temporary and those that are due to special events. Examples include oil prices rising due to production disruptions, bad harvests affecting the price of fruit or increases in VAT. There are also prices that vary so much that they only represent 'noise' and make it difficult to interpret inflation figures from one month to the next.

In order to address these problems, central banks often use different measures of underlying inflation, with the aim of capturing the trend in price developments.¹⁴

There are different ways of calculating underlying inflation. Among central banks, the most common way is simply to exclude certain prices from the CPI basket (see Figure 10). In this context, energy and food are by far the most common. Here at the Riksbank, we have used the CPIF excluding energy as a measure of underlying inflation for a number of years. This can be of great help in explaining the causes of variations in inflation, not least recently, when energy prices have contributed to significantly pushing up inflation. Food prices have been more stable in Sweden but have begun to increase faster recently (see Figure 11).¹⁵

“What is the point of an inflation index that does not take into account that you need to eat and heat your home?”

The CPI basket shows the actual purchases of an average household, but does not reflect what is necessary. There is a built-in contradiction when many measures of underlying inflation exclude categories that households cannot do without – food and/or energy – simply because they are more volatile. This makes it reasonable to wonder, “What is the point of an inflation index that does not take into account that you need to eat and heat your home?”

Sometimes it is argued that the prices for energy and/or food should be excluded because prices for these are due to factors that the central bank cannot influence, as it does not have access to either oil platforms or arable land. But this argument

¹⁴ I recommend that you read the speech on this topic that my colleague, Henry Ohlsson, gave a few years ago. See Ohlsson (2019).

¹⁵ Again, note that distribution has been made differently than in Figure 3.

is weak.¹⁶ For example, an initially isolated rise in energy prices may spread to the general rate of price increases, that is to say inflation. This is often referred to as *indirect effects* and *secondary effects*.¹⁷

Indirect effects mean, for example, that higher prices of petrol and diesel lead to more expensive bus and taxi travel or that higher prices of electricity lead to more expensive hotel stays. *Secondary effects* mean that the price increases observed among the general public can raise inflation expectations, which can lead to higher wage demands and, by extension, increased prices. The central bank must therefore ensure that these spillover effects are not so great that the inflation target is not met. The Riksbank is currently in this phase.

Measures of underlying inflation have an important role to play in mapping these spillover effects. We have seen recently that measures of underlying inflation have risen sharply in the world around us, and now also in Sweden (see Figure 10).

The fact that the situation is different from normal is confirmed by our latest Business Survey, despite the fact that it was carried out prior to the Russian invasion of Ukraine.¹⁸ Having for a long time reported how difficult it has been for companies to raise prices, this Survey is now reporting comments such as “I have never before experienced customers accept price increases so easily” and “because we have not had inflation for a long time, there is a pent-up need for a larger increase now”.

At present, the major challenge is to find the right balance between rising inflation in the short term, exacerbated by the war in Ukraine, and the factors that affect the conditions for price stability in the longer term.

Let me start with the issue of how households perceive inflation, how it relates to the inflation target and why inflation expectations are so important for us to be able to lead inflation back to two per cent in a few years’ time.

How price developments are perceived and how they relate to the inflation target

Various studies have observed that households tend to attach relatively large importance to certain factors when experiencing inflation¹⁹:

- prices that are rising more than those that are falling
- prices that are changing a lot
- prices of goods and services purchased frequently

At present, energy and food prices are rising more than other prices. These are prices that change a lot and concern goods and services that are bought – and

¹⁶ One obvious reason is that the central bank is not in a position directly to influence many of the other components of the CPI either, such as the price of clothes, concert tickets or furniture. See Wynne (2008).

¹⁷ See Sveriges Riksbank (2022a).

¹⁸ See Sveriges Riksbank (2022b).

¹⁹ For a review, see, for instance, Jacobs et al. (2014).

that must be bought – often. And these are essential goods and services. Their prices will most likely affect households’ inflation expectations.

In the United States, the American Institute of Economic Research has taken on board this insight into how households perceive inflation and developed an Everyday Price Index or EPI, which contains goods and services that households buy frequently in the United States. This has shown that households’ own view of inflation affects their expectations of it more than the official CPI statistics.²⁰ Recently, the perceived inflation rate in the United States, measured by the EPI, has also been even higher than the official CPI statistics show (see Figure 12).²¹

In Sweden, households’ inflation expectations tend to be higher than both actual inflation measured by the CPIF and expectations among the players in the money market, as shown in Figure 13. However, the figure also shows that this seems to be explained by households perceiving inflation to be higher than the official figures show. Households’ ‘too high’ inflation expectations and their perception of inflation have so far not caused any problems for the Riksbank in keeping inflation low and stable. However, two important differences now compared with the past are (1) that actual inflation is also high and risks becoming entrenched at a high level, and (2) that the rise in inflation is driven by goods and services that households cannot do without – energy and food.

Another issue is that the general public generally sees inflation higher than the target level as a greater problem than inflation below the target level. This is also something that the European Central Bank (ECB), among others, has discussed. At its meeting last December, the ECB noted that “... *the general public was typically less concerned if actual inflation turned out lower than expected*”.²²

Like that of the ECB, the Riksbank’s target is symmetrical – too low inflation and too high inflation are equally bad.²³ I believe that a symmetrical inflation target is appropriate, but we need to be aware that households’ tolerance for inflation above the target is lower than it is for inflation below the target. We need to be prepared for the eventuality that inflation above the target may lead more quickly to problems with inflation expectations than inflation below the target.

²⁰ See Vlasenko and Cunningham (2015).

²¹ See American Institute of Economic Research (2022).

²² See ECB (2022).

²³ In July last year, the ECB changed over to a symmetrical target of 2 per cent, having previously set a target of “below but close to 2 per cent”. See Sveriges Riksbank (2021c).

Monetary policy needs to be flexible – we are prepared to act

We are now about a month from the next planned monetary policy meeting and I do not want to pre-empt our decision here today. However, it is quite clear that Russia's invasion of Ukraine means that our forecasts from February will be revised substantially, above all as regards inflation (see Figure 14). This also means that our assessment of the policy rate in the future, the policy rate path, is overplayed.

In my speech today, I have examined, among other things, how the war may affect inflation and how households perceive inflation. This leads me to three conclusions:

Firstly: In *many cases*, it is a reasonable monetary policy strategy to 'look beyond' upturns in energy and food prices. They cannot be counteracted and tend to be followed by declines. *As a rule*, they also do not have any lasting effects on general inflationary pressures.

Secondly: Today, we are likely to see *more lasting rises* in energy and food prices than usual – a trend that is being exacerbated by the war in Ukraine. In addition, *the indirect effects* will probably also be greater than normal.

Thirdly: We will *not be able to prevent* inflation from rising in the *short term*. But we *can act* to ensure that inflation moves back to two per cent in the *medium term*.

Essentially, this is a question of confidence in the inflation target. High inflation is harmful to society.²⁴ Moreover, if the gap between how households perceive inflation and how we analyse it and communicate it in our monetary policy is too great, it can ultimately reduce public confidence in the inflation target and cause a dangerous spiral of inflation. That is why we need to work continuously to improve our analysis and communication.²⁵ And we need to be able to explain, at all times, what monetary policy can achieve in the short and long term. We must constantly be on our toes and learn new lessons, while preserving the advantages that the inflation target has brought.

There are many indications that we may experience large fluctuations in inflation over a fairly significant period of time. In addition to the war in Ukraine, the energy transition and climate change are important areas that will create substantial volatility in inflation in the coming years. In these cases too, it is precisely energy prices and food prices that will be in focus.²⁶

²⁴ For an overview, see, for example, Federal Reserve Bank of Minneapolis (2022). National Australia Bank has compiled an index of consumer stress in Australia, where, as a rule, the cost of living takes top place, even above consumers' concern for their own health and the risk of losing their jobs. See National Australia Bank (2022).

²⁵ I think it would be interesting to investigate the possibility of developing a service in which households can obtain an estimate of how their personal inflation relates to CPI inflation. This could contribute to increased knowledge of how inflation is measured and influenced by the way consumption changes over time. Another interesting line of thought is whether it would be possible to develop and integrate measures that correspond to the American EPI in the monetary policy analysis at the Riksbank. This could increase our understanding of how inflation is determined and how economic actors form their expectations.

²⁶ See, for example, Sveriges Riksbank (2020) and Schnabel (2022).

In this uncertain environment, monetary policy needs to be characterised by flexibility. With a war in Europe and high inflation in Sweden and abroad, we cannot tie ourselves to a particular system between increases in the policy rate and measures linked to the balance sheet. The entire toolbox can be used.

An increase in the policy rate would probably be more effective in counteracting high inflation than a reduction of bond purchases, but the continued gradual tapering of bond purchases may nevertheless be appropriate. Bond purchases were concluded at the end of the year and now we only buy bonds to compensate for maturing assets, so-called reinvestments. At the last meeting in February, I already considered that reinvestments should be tapered because I saw a risk that inflation would be higher than forecast.

In my view, it is important not to wait too long to take action. The longer we wait, the greater the risk that we will have to make many and frequent increases in the policy rate and/or actively sell securities. It is better to slow down gently than to risk having to slam on the brakes later.

New information in the run-up to the April meeting will determine which measure or combination of measures will be most appropriate and when it would be best to implement them. The important thing is that we will act to continue to attain our inflation target.

Thank you for listening.

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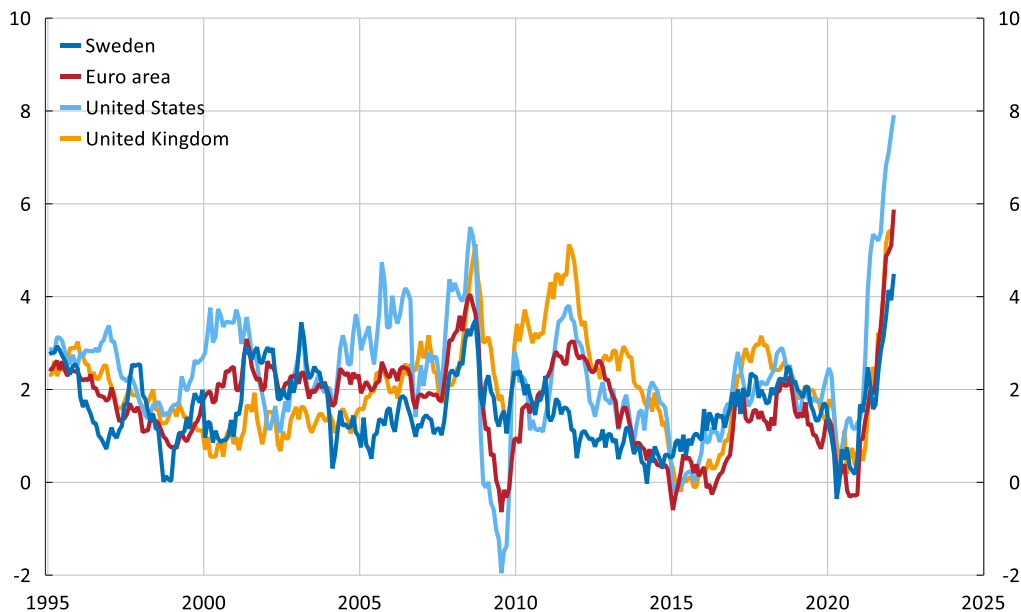
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Figures

Figure 1. Inflation in various parts of the world

Annual percentage change

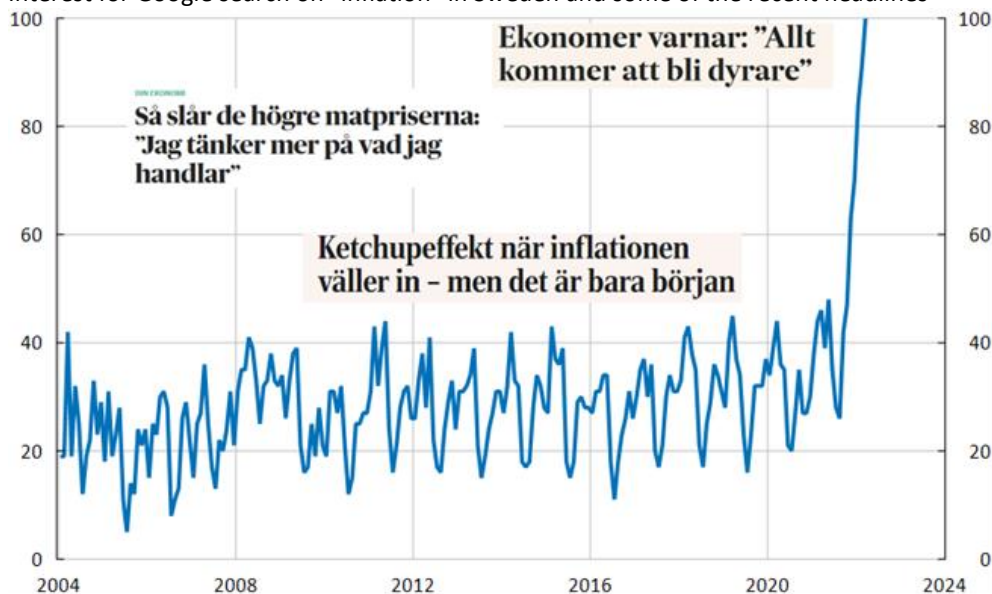


Note. According to the CPI for Sweden, the HICP for the euro area and the CPI for the United States and United Kingdom.

Sources: Eurostat, Statistics Sweden, U.K. Office for National Statistics and U.S. Bureau of Labor Statistics.

Figure 2. Inflation on the agenda

Interest for Google search on "inflation" in Sweden and some of the recent headlines

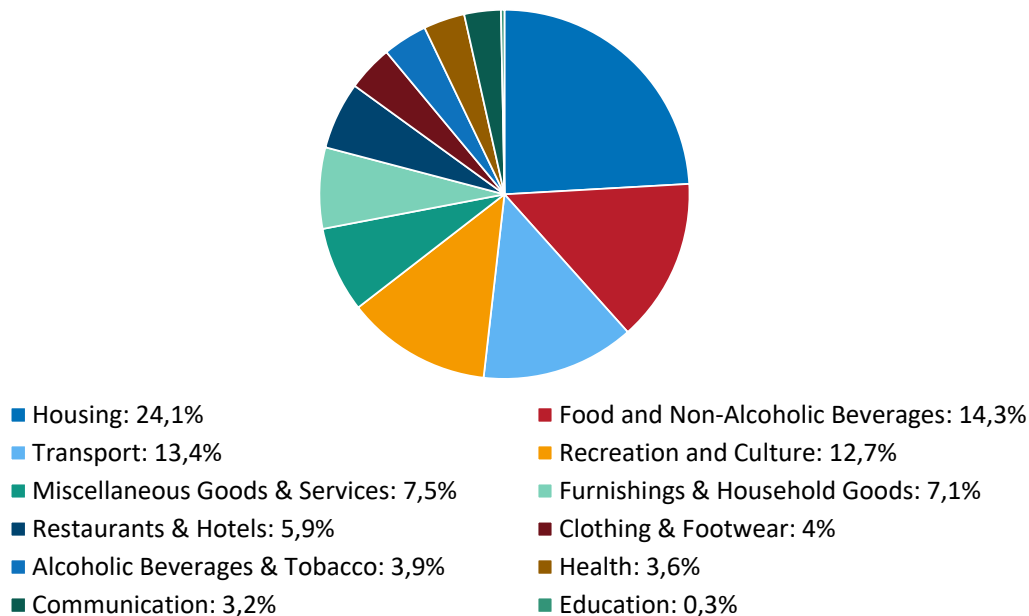


Note. The numbers indicate the search interest relative to the highest number on the figure for a given region and time. A value of 100 indicates the highest interest in the search query, 50 indicates that it is half as popular, and 0 indicates that there is not enough data for the search term.

Source: Google Trends.

Figure 3. Weights in the CPI 2022

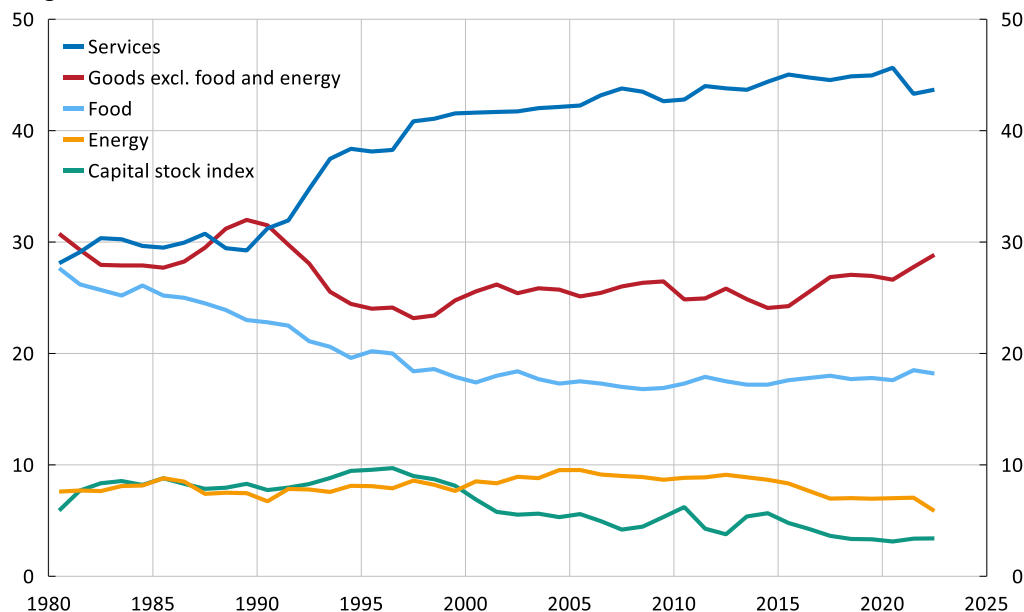
Per cent



Source: Statistics Sweden.

Figure 4. Our consumption patterns change over time

Weights in the CPIF



Note. The CPI includes a measure of the cost of living in owner-occupied housing using what is known as a cost calculation. Capital expenditure is captured in an interest expenditure index, which reflects the level of interest rates (interest rate index) and how much capital has been put into the housing (capital stock index). In the CPIF, the mortgage-rate index is held constant and therefore it is only the development of the capital stock index that affects the development of the CPIF.

Source: Statistics Sweden.

Figure 5. Electricity prices in different parts of Sweden

SEK/KWh

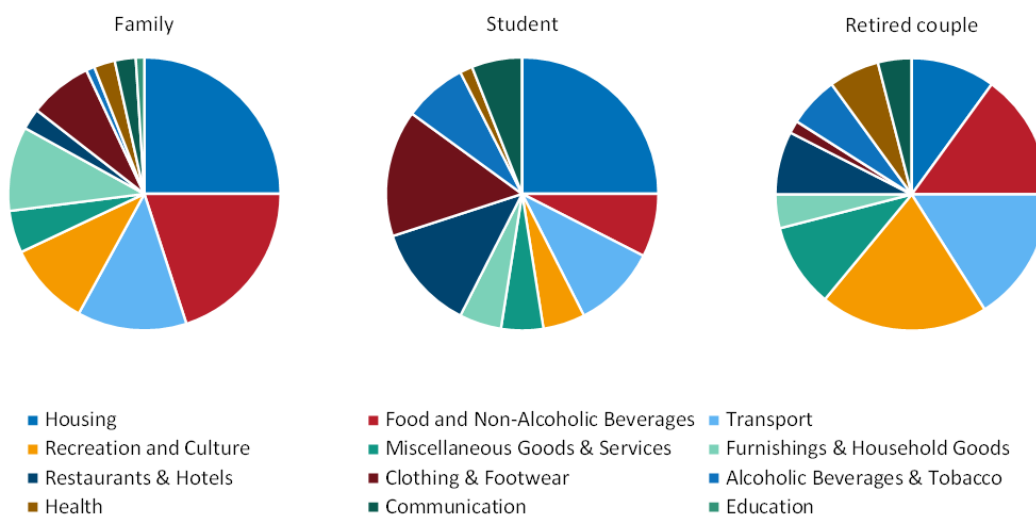


Note. 14-day moving average. The lines for Luleå and Sundsvall are on the same level and appear in the diagram as one line.

Source: Nord Pool Spot.

Figure 6. CPI weights for 3 different household types

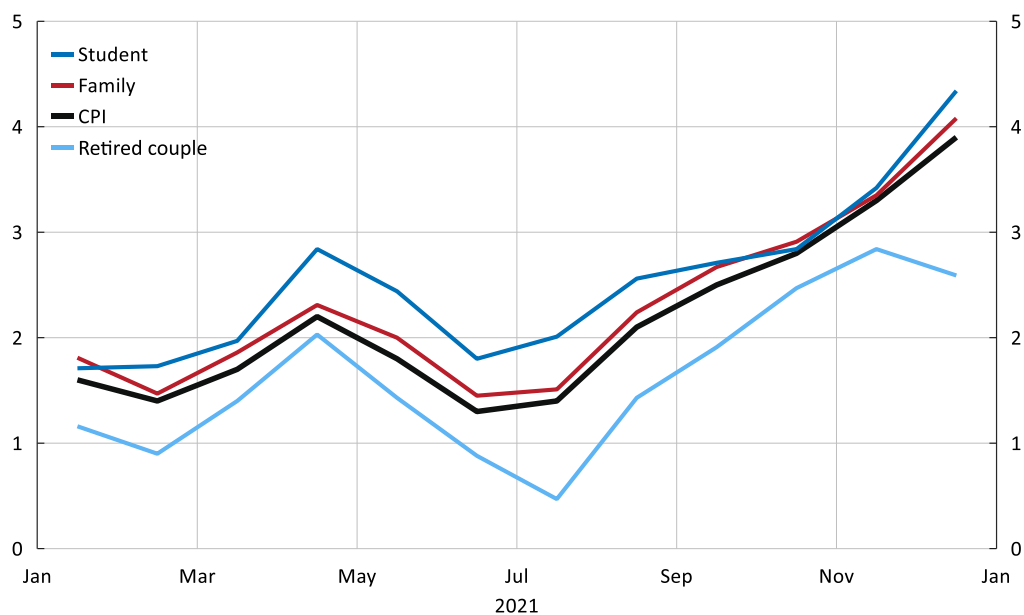
Per cent



Source: Statistics Sweden.

Figure 7. Inflation in 2021 for different household types

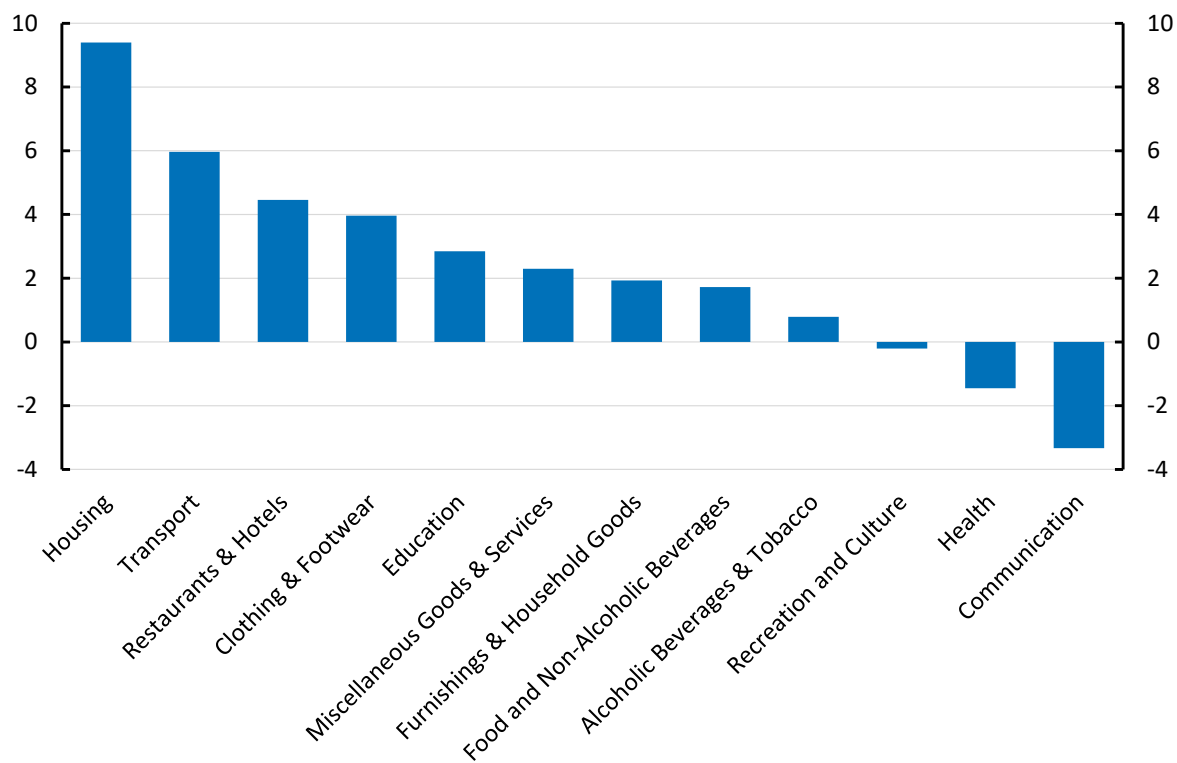
Annual percentage change



Source: Statistics Sweden.

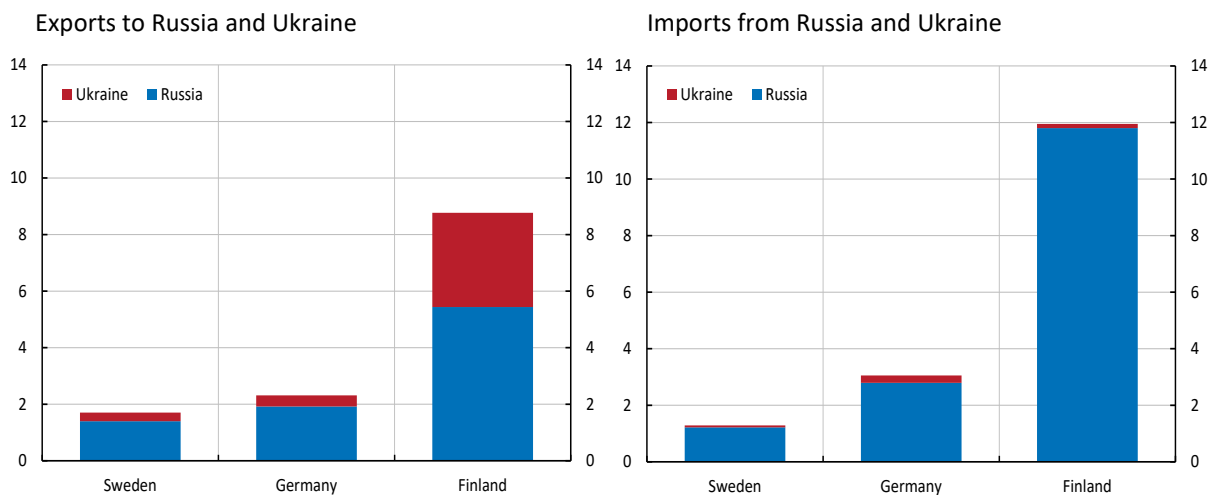
Figure 8. Annual rate of price increase for different sub-categories in the CPI, December 2021

Per cent



Source: Statistics Sweden.

Figure 9. The war is affecting the Swedish economy, even though Russia and Ukraine account for a small share of Swedish trade

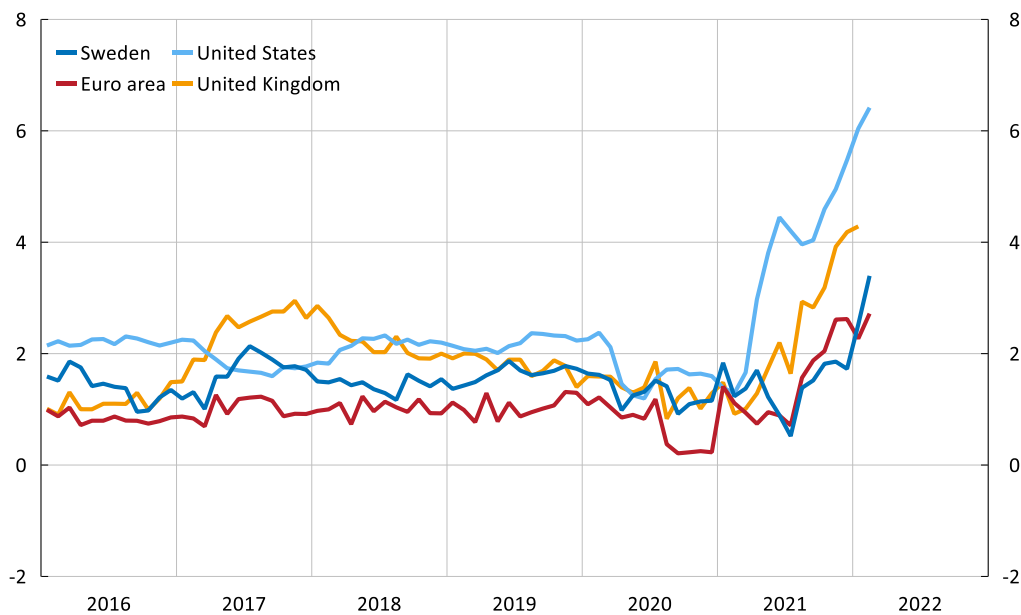


Note. Per cent. Share of total exports/ imports (2021).

Sources: National sources.

Figure 10. Underlying Inflation in different parts of the world

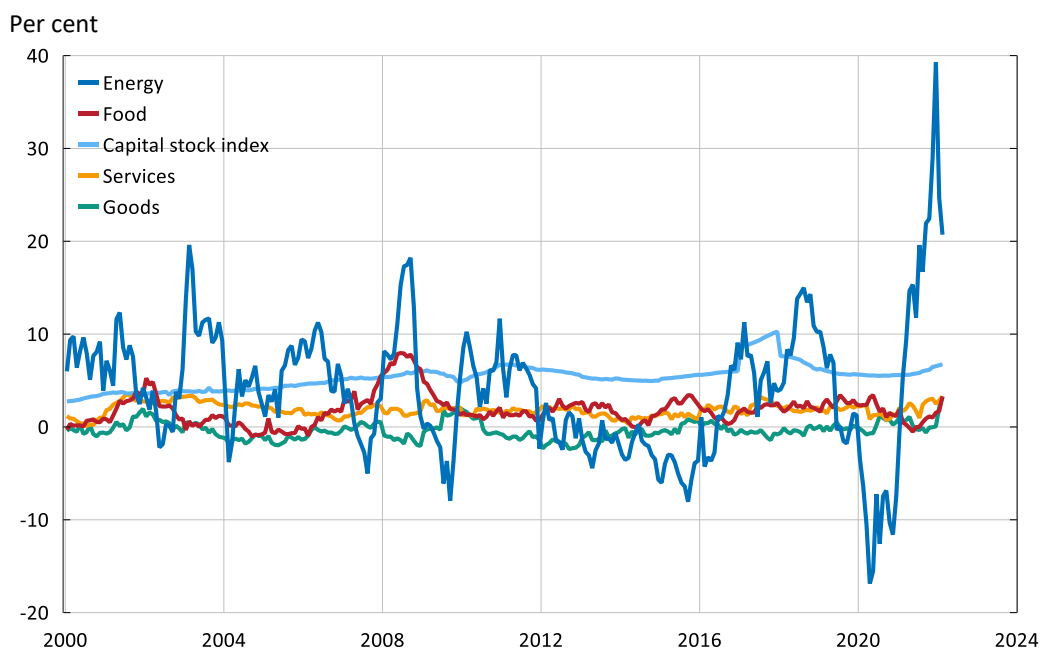
Annual percentage change



Note. Sweden: CPIF excl. energy, Euro area: HICP excl. energy, food, alcohol and tobacco, USA: CPI excl. energy and food, UK: CPI excl. energy and food.

Sources: Eurostat, Statistics Sweden, U.K. Office for National Statistics and U.S. Bureau of Labor Statistics.

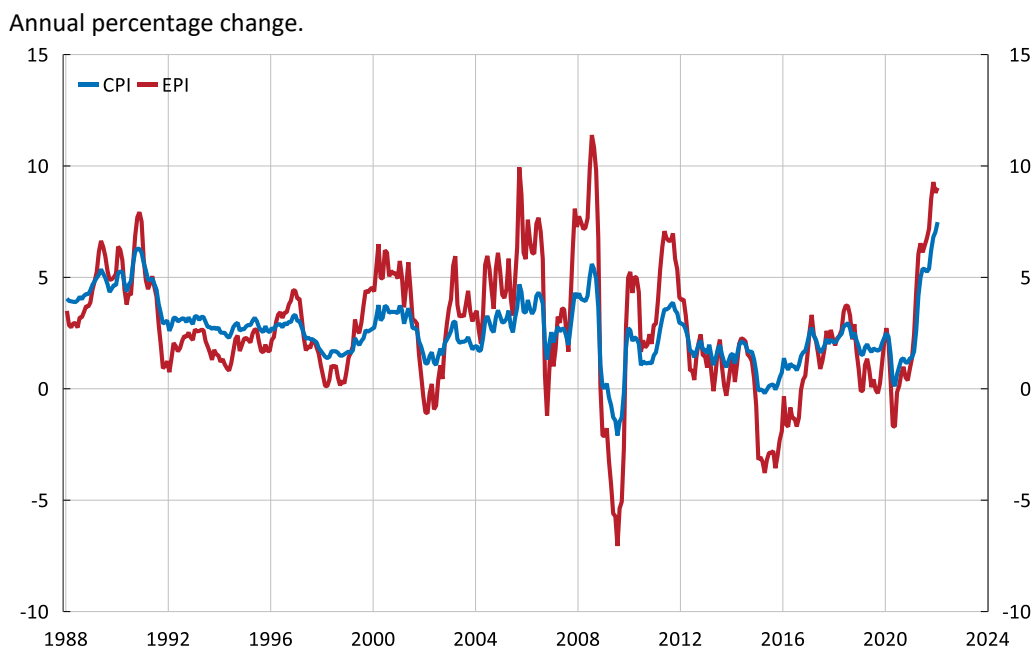
Figure 11. Annual rate of price increase in different subgroups in the CPIF



Note. The CPI includes a measure of the cost of living in owner-occupied housing using what is known as a cost calculation. Capital expenditure is captured in an interest expenditure index, which reflects the level of interest rates (interest rate index) and how much capital has been put into the housing (capital stock index). In the CPIF, the mortgage-rate index is held constant and therefore it is only the development of the capital stock index that affects the development of the CPIF.

Source: Statistics Sweden.

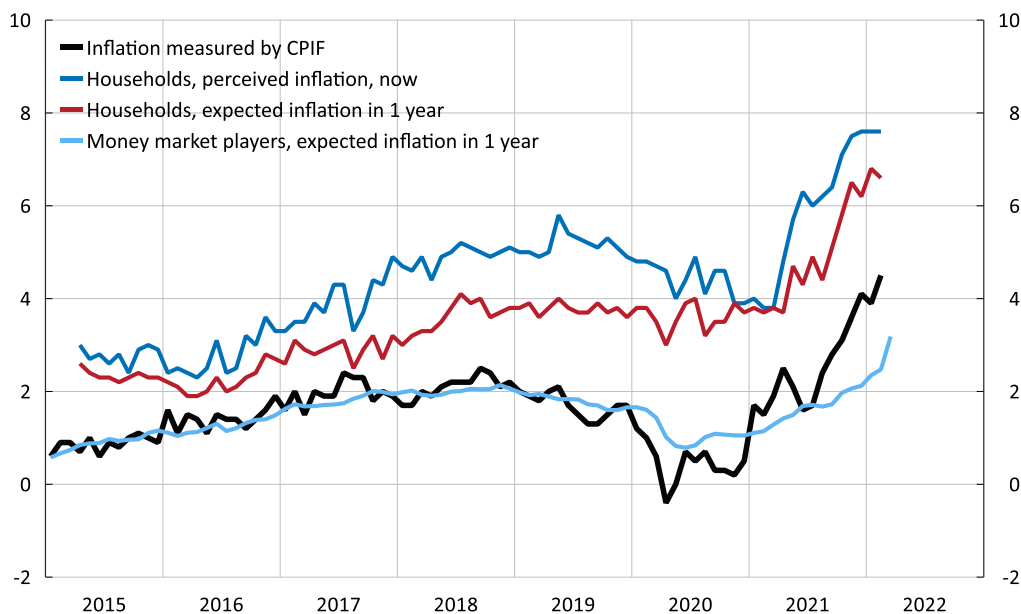
Figure 12. Inflation in the United States according to the Everyday Price Index (EPI) and the Consumer Price Index (CPI)



Source: Bureau of Labor Statistics and American Institute of Economic Research.

Figure 13. Actual inflation, expected inflation in one year's time according to money market participants and households, and perceived inflation among households

Annual percentage change

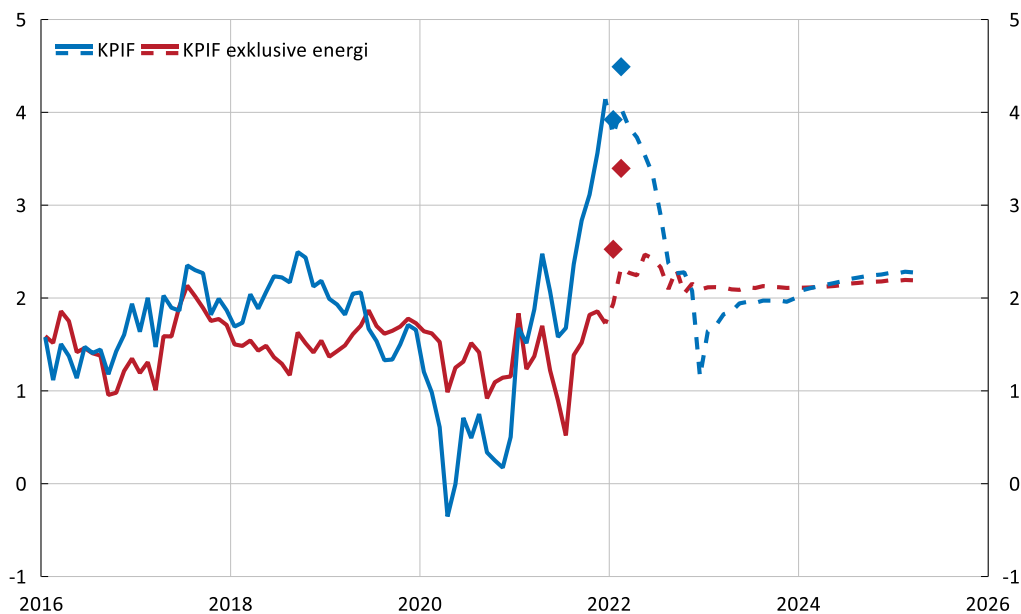


Note. Actual CPIF inflation. Households refer to the average excluding extreme values.

Sources: Statistics Sweden, the NIER and TNS Sifo Prospera.

Figure 14. Inflation measured as CPIF and CPIF excluding energy

Annual percentage change



Note. Solid line refers to outcome, broken line refers to the Riksbank's forecast. Dots refer to the outcome after the monetary policy meeting in February.

Sources: Statistics Sweden and the Riksbank.