Economic Commentary

How sensitive are different components of consumption to interest rates?

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How sensitive are different components of consumption to interest rates?

Inflation rose sharply in many countries in 2021-22, prompting the Riksbank and many other central banks to raise their policy rates. Since then, interest-sensitive parts of demand, such as consumption and housing investment, have been weak. However, the interest rate cuts initiated by the Riksbank in 2024, together with rising real incomes, are expected to lead to stronger growth in these components of GDP. In this Economic Commentary, we examine the sensitivity of different components of consumption to interest rates.[1] We show that interest rate changes have broad effects on consumption, but that consumption of durable goods, such as cars, is particularly sensitive. The biggest effects on consumption come with a time lag, but the fastest effects are on durable goods. Indicators of how consumption of such goods is developing, such as households' planned purchases of capital goods or new car registrations, could therefore provide an early outlook on how the Riksbank's interest rate cuts will affect consumption in the future.

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The Riksbank's previous analyses have shown that the increased indebtedness among households has meant that the impact of monetary policy on private consumption and demand in the economy has increased over time.[3] In this Economic Commentary, we examine the interest-rate sensitivity of different components of consumption, and we relate our estimates to how consumption has evolved over the 2022-2024 interest rate hike period.

Durable goods account for around 9 per cent of total private consumption. We show that the interest-rate sensitivity of durable goods consumption is almost three times that of other consumption. This is in line with international research on the effects of monetary policy on consumption in the euro area and the United States. According to

[1] Economic Commentaries are brief analyses of issues with relevance for the Riksbank. They may be written by individual members of the Executive Board or by Riksbank staff. Staff commentaries are approved by the relevant head of department, while Executive Board members are themselves responsible for the content of the commentaries they write.

[2] We would like to thank Vesna Corbo, Jens Iversen, Björn Lagerwall, Carl-Johan Belfrage and Tanja Lind for their valuable comments.

[3] See Sveriges Riksbank (2022), Stockhammar et al. (2022) and Berggren et al. (2024). The fact that the fixed-rate period for mortgages is short also means that interest rate sensitivity becomes greater.

our estimates on Swedish data, this result is largely driven by the impact on consumption of cars, which accounts for about 3 per cent of consumption. Therefore, although these components represent a relatively small part of consumption, their contribution to fluctuations in consumption is significant.[4] For other components of consumption, interest rate sensitivity is more homogeneous. One conclusion is that a pick-up in consumption in the wake of lower interest rates is likely to be seen earliest and most clearly in the consumption of durable goods. At the same time, the upturn will be broad-based, covering a wide range of goods and services. Therefore, closely monitoring various indicators of durable goods consumption, such as households' planned purchases of capital goods or new car registrations, can provide an early indication of how the recovery in overall consumption is progressing.

Interest rate adjustments have substantial effects on consumption of durable goods

We use a Bayesian vector autoregressive (VAR) model to study the effects of a monetary policy change in the policy rate on consumption and its various components.[5] In the basic model, we have quarterly data for three external variables and five Swedish variables. The external variables are trade-weighted measures of log GDP, the quarterly change in the CPI and the policy rate in level (per cent). The domestic variables are log GDP, unemployment in per cent, the quarterly change in the CPIF, the policy rate (percentage points) and the log real exchange rate. All variables are thus included in the level, except for the international and Swedish price indices. We estimate the model with 4 lags for the period 1996Q1-2019Q4. We choose not to use data for the period after 2019 in the estimation, as various restrictions during the pandemic meant that consumption patterns deviated significantly from normal. The monetary policy shock is allowed to affect the exchange rate, but no other variables, in the same quarter as the policy rate adjustments.

We then add consumption and its various components to the model, one variable at a time, and study the effects of an unexpected change in the policy rate on the various variables. Here we focus entirely on the effects on the consumption variables. Consumption is divided into goods and services. Goods are further divided into durable, non-durable and semi-durable, while services are divided into rents and other services.[6] Durable goods are further divided into cars and other durable goods.

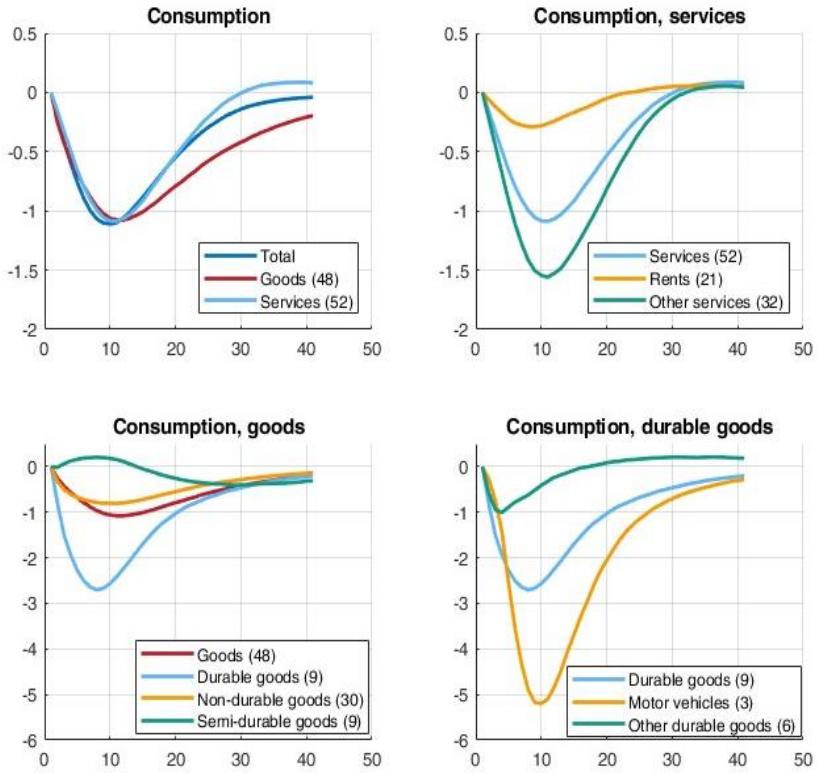
[4] See also Almgren (2024) for an analysis of how consumption of durable goods varies with the business cycle in Sweden, and Casalis and Krustev (2020) for an analysis of the corresponding data for the euro area.

[5] The model is described in more detail in Berggren, Mammos and Strid (2024). Here we only give a brief description.

[6] Durable goods are defined in the European System of National and Regional Accounts (ESA 2010) as consumer durables that are used by households for final consumption repeatedly over periods of time of more than one year. Examples of durable goods are refrigerators, furniture and cars.

Figure 1 shows the effects on the consumption variables of a monetary policy interest rate change that is normalised so that the policy rate is initially raised by one percentage point.[7] We see there that the peak effect on consumption is slightly larger than 1 per cent, and that it occurs after slightly more than two years. This means that the greatest effects of a change in interest rates come with a certain time lag. The effects on the consumption of goods and services are similar, but the effects on the former are slightly more protracted. We then divide the effects on goods consumption into durable, semi-durable and non-durable goods. The impact on non-durable goods is roughly in line with the impact on total consumption, while the impact on durable goods is almost three times as large and occurs more quickly. The impact on semi-durable goods is close to zero. In the next step, we divide the effect on durable goods into effects for cars and other durable goods. We see that the maximum effect on the consumption of cars is about five times as large as the effect on total consumption. The maximum effects on other durable goods are about the same as for total consumption, but the greatest effects come much faster. A breakdown of the consumption of services into rents and other services further shows that rents are not sensitive to interest rates, while the effects on other services are somewhat larger than for total consumption.[8]

Figure 1. Effects of an increase in the policy rate on consumption and its parts



Note. The figure shows the effects of a monetary policy shock from structural VAR models, where the initial effect on the policy rate has been normalised to one percentage point.

[7] The normalisation is arbitrary and aims to allow us to compare the effects on the different consumption variables.

[8] Examples of other services are hotels and restaurants, package holidays and insurance.

The model is estimated for the period 1996Q1-2019Q4 for all variables. The figures in brackets indicate the share of each variable in consumption, on average for the period 1996-2024.

Our finding that durable goods are more sensitive to interest rates than other consumption is in line with the results of international studies of the effects of monetary policy on different components of consumption.[9] The fact that consumption of durable goods is more affected by changes in interest rates is due to the fact that purchases of such goods often involve larger amounts and are financed to a greater extent by loans. Non-durable goods, such as food, and rents are more necessary to consume, which means that the variation in their consumption is naturally smaller. But apart from these effects on the consumption of durable goods, we see that the impact of interest rates on the consumption of other services (32 per cent of consumption), non-durable goods (30) and other durable goods (6) is quite similar. This can be interpreted to mean that interest rate changes nevertheless affect large parts of the consumption of goods and services in a rather similar way.

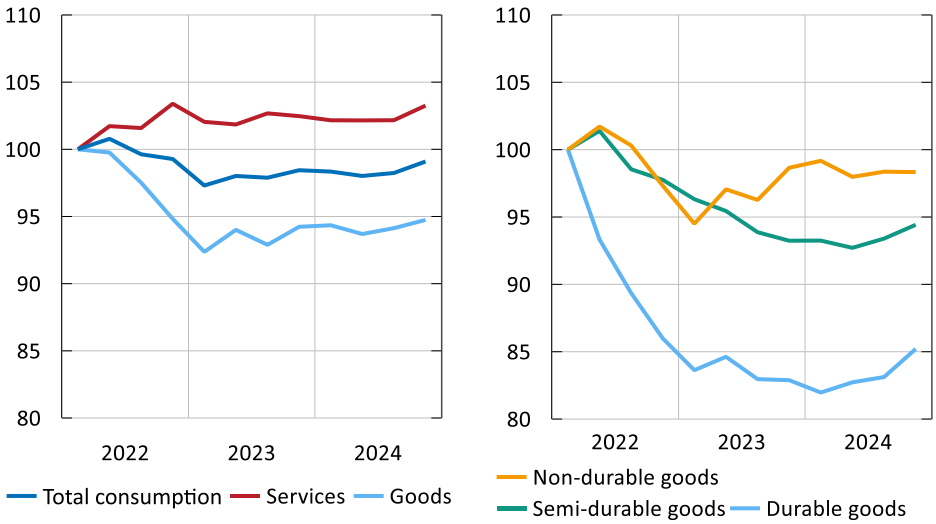
Consumption of durable goods has been weak in recent years

Figure 2 shows how consumption and its components have developed over the years 2022-2024. We see that consumption has fallen slightly, and it is almost 10 per cent lower than it would have been if it had grown at a normal rate over this period.[10] Consumption of services has increased slightly, while consumption of goods has decreased. Furthermore, we see that the decline in goods consumption is associated with a large decline in the consumption of durable goods (both cars and other durable goods), while the consumption of non-durable goods has fallen less.

[9] Dietrich et al. (2025) estimates the effects of monetary policy on the consumption of durable and non-durable goods using a Bayesian VAR model on data for the euro area 1999-2019. The impact on durable goods is about three times as large as the impact on non-durable goods. Monacelli (2009) estimates the effects of monetary policy on durable and non-durable consumer goods using a structural VAR model on US data for the period 1952-2007. The effects on durable goods are about twice as large as those for non-durable goods. Sterk and Tenreyro (2018) estimate the effects of monetary policy on consumption and other variables using a structural VAR model on US data over the period 1979-2012. The effects on expenditure on durable goods are about twice as large as the effects on total consumption, while the effects on expenditure on non-durable goods are much smaller.

[10] The average growth rate of consumption over the years 1996-2024 was 2.3 per cent. Consumption of goods grew on average by 2.7 per cent and consumption of services by 2.1 per cent.

Figure 2. Household consumption broken down by goods, services and duration
Index 2022 Q1 = 100



Note. Seasonally adjusted data. Constant prices.

Source: Statistics Sweden and the Riksbank.

Consumption of durable goods has thus developed weakly compared with other consumption in recent years. This is possibly what one would expect during a period of rapid interest rate increases, given the effects of monetary policy rate changes as described above.

However, in previous periods of interest rate increases during the inflation targeting period, consumption, in particular consumption of durable goods, developed relatively strongly. One example of such a period is 2006–2008. This illustrates that the reasons for raising interest rates have been partly different. A somewhat simplified picture is that the reasons for previous interest rate increases have been strong economic growth and higher inflation than normal (a demand-led economic upturn). Instead, the pick-up in inflation in 2021-22 was driven to a greater extent by various adverse supply shocks than in previous episodes.[11] The shocks led to high inflation and negative effects on the real economy, for example in the form of lower real wages.[12] Such shocks mean that the central bank faces a more difficult trade-off between stabilising the real economy or inflation. When central banks have had to raise interest rates to bring down inflation, this has exacerbated the downturn, as reflected, for example, in the weak performance of consumption, especially its more interest-rate sensitive components.

[11] See, for example, Löf and Stockhammar (2024), who use various models to show that supply factors have been more important than demand factors in explaining the development of inflation in the years 2021-2023.

[12] Batini (2024) uses a structural VAR model to study the drivers of the weak consumption in recent years. She shows that rising energy prices in 2022 have been an important factor behind the decline in consumption, and in particular the consumption of durable goods. Such a shock leads to higher inflation and higher policy rates.

Important to closely monitor indicators of the consumption of durable goods

Consumption of durable goods is the most interest-sensitive component of consumption, and in recent years this component of consumption has developed weakly. The fact that the Riksbank's policy rate has now been cut by almost two percentage points in a short period of time in itself suggests that this part of consumption will develop more strongly in the future. The development of consumption of durable goods can give an indication of the development of consumption in general. Therefore, it may be of particular interest to monitor various indicators for durable goods, now that the economy is at a likely turning point.[13]

Examples of indicators for durable goods include the responses of respondents in the durable goods trade in the Riksbank's Business Survey and households' planned purchases of capital goods according to the National Institute of Economic Research's Consumer Tendency Survey.[14] An example of more frequent statistics that can indicate where consumption is heading is the number of newly registered cars that Statistics Sweden publishes every month.[15] This is strongly correlated with the consumption of cars but thus becomes available much earlier than National Accounts data. [16] Since inflation started to rise and the policy rate was increased, the number of newly registered cars has decreased. However, in the autumn of last year, the number of newly registered cars increased again, and the increase has also continued in early 2025.

[13] Along with residential investment, durable goods are often considered a good indicator of economic activity, as they are often financed by loans, see Mian and Sufi (2010).

[14] Hansson (2024) shows that households' planned capital purchases in the coming 12 months have a relatively high correlation with growth in consumption.

[15] Transport Analysis is the authority responsible for the statistics and Statistics Sweden has produced the statistics on behalf of Transport Analysis. The industry organisation Mobility Sweden also provides a database of newly registered vehicles.

[16] From 1996 until 2019, the correlation between the change in consumption of cars and the number of newly registered cars was 0.94. However, in recent years the correlation has been weaker. This could be because when the economy is weak, more people choose to buy a used car instead of a new one, see the news item "Increased sales of used electric cars", Begbilsrapport 2024, Kvdbil. The National Accounts measure of consumption also includes used cars, provided they are sold through a dealer.

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