

**Housing prices and household indebtedness have increased rapidly over a longer period of time. This development can largely be explained by limited supply, rising incomes, tax cuts and relatively low interest rates. However, a major fall in housing prices cannot completely be ruled out. Such an event could entail significant negative effects for the economy. There is thus every reason to try to avoid a steep fall in housing prices.**

Since the middle of the 1990s, housing prices have increased by an average of approximately 8 per cent per year. Even during the financial crisis, housing prices developed surprisingly strongly. For example, prices fell significantly less in Sweden than in many other countries during the most acute phase of the crisis, following which they have again increased at a rate comparable to that prevailing before the crisis. Household borrowing has increased sharply in tandem with the rapid increase of housing prices. The average rate of increase has been approximately 8 per cent per year since 1996 (see Figure B3).

### A major fall in housing prices cannot be completely ruled out

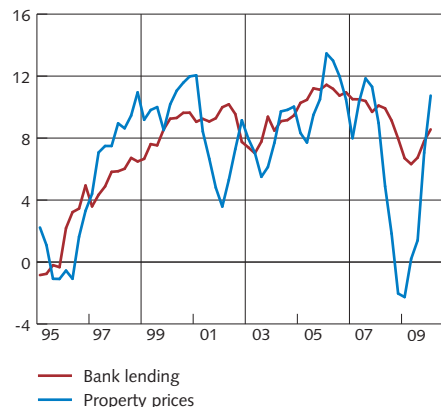
The rise in housing prices can largely be explained by the development of supply and demand. For example, relatively few new homes have been built, at the same time as rapidly rising incomes, tax cuts and relatively low interest rates have contributed to the high demand.<sup>16</sup> As there are reasonable economic explanations for the rise in prices, the risk of dramatic downward adjustments is small. However, it cannot be completely ruled out that the increase is partially due to unrealistic expectations regarding the future development of interest rates and prices, which, in such a case, would entail a risk for future falls in housing prices. The Riksbank has made the assessment that the development of the housing market at present does not form a problem. At the same time, the strong growth trend in housing prices and household borrowing does not appear to be sustainable in the long term, but may, if it continues, contribute towards problems arising in the future.

The main conclusion of the Riksbank's analysis is that the increase in housing prices will probably be dampened over the slightly longer term as new construction increases, but that this will not lead to any dramatic price adjustments. Despite this, there may still be reason to attempt to gain an understanding of how the economy would be affected if a larger downward adjustment of housing prices were to take place. What would this entail for inflation, GDP growth and unemployment?

### An arithmetical example in which housing prices fall by 20 per cent

This article presents an arithmetical example in which housing prices fall by 20 per cent. In terms of size, this is in line with the fall in

**Figure B3. House prices and bank lending to households**  
Annual percentage change



Source: Statistics Sweden

<sup>16</sup> The development of housing prices is discussed in more detail in the article "Housing prices in Sweden" in the Monetary Policy Report, October 2009.

prices of the crisis of the 1990s. In all probability, such a major fall in prices would not happen by itself – a triggering factor of some kind is usually present, such as, for example, an unexpectedly rapid economic turn down. However, possible reasons for a fall in prices to occur are not the focus of this article. This article only analyses the isolated, partial effect of a fall in housing prices. However, it may be worthwhile to bear in mind that those factors that may trigger a fall in prices could very well amplify the negative effects on the economy of a fall in prices as such.

Changes in housing prices impact demand in the economy via various channels.<sup>17</sup> When housing prices increase, household wealth increases. When households become richer in this manner, they experience that their scope for consumption increases. Homes can also function as collateral for loans and, if the value of homes increases, it can become easier for households to take more loans and under better conditions. Of course, when housing prices fall, these mechanisms are reversed.

The analysis has been made in the form of simulations in an economic model, largely based on the mechanisms discussed above.<sup>18</sup> It should be emphasised that the simulations should be considered as arithmetical examples and that the specific results should be interpreted with caution. Housing prices are assumed to fall by 20 per cent over a one-year period. Monetary policy is assumed to react in accordance with a Taylor rule, which means that the interest rate is governed by the deviation of inflation from target and by resource utilisation in the economy.<sup>19</sup> In order to clarify the isolated effects of a fall in housing prices, the result arising when monetary policy is not changed is also presented. The results of the simulations are shown in Table B2.

**Table B2. Change from a fall of housing prices of 20 per cent**  
Deviation in percentage points

<b>With repo rate cut</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Repo rate	-0.6	-0.5	-0.2
CPI inflation	-0.1	-0.1	-0.1
Unemployment	0.6	0.8	0.6
GDP growth	-0.9	-0.3	0.3
<b>Without repo rate cut</b>			
CPI inflation	-0.2	-0.7	-0.6
Unemployment	0.8	1.5	1.4
GDP growth	-1.2	-0.9	0.1

Source: The Riksbank

<sup>17</sup> See, for example, F. S. Mishkin, "Housing and the Monetary Transmission Mechanism", in *Housing, Housing Finance and Monetary Policy*, Federal Reserve Bank of Kansas City Jackson Hole Symposium, 2007.

<sup>18</sup> More precisely, these simulations utilise the aid of two different models: firstly a model that captures the connection between the housing market and other areas of the economy (described in P. Sellin and K. Walentin, "House prices and the economy", *Economic Commentary* no. 6, 2008).

<sup>19</sup> The Taylor rule is taken from the model that includes the housing market. It should be noted that the Taylor rule includes a "simplified" monetary policy that is not necessarily the best possible.

As can be seen in table B2, a fall in prices on the housing market would lead to a lower repo rate path. Nevertheless, GDP growth slows down to a relatively large degree and inflation becomes somewhat lower. Unemployment increases by, at most, almost 1 percentage point, taking place one year after the fall in housing prices. Monetary policy easing is able to mitigate the effects to a certain extent, but the development nevertheless becomes noticeable weaker. If the repo rate is not decreased, the negative effects will be amplified. Unemployment now increases by 1.5 percentage points, one year after the fall in prices. However, it would also be possible to limit the effects further by way of an even more expansionary monetary policy, assuming that such a policy would be feasible.

### **Reason to believe that the arithmetical example underestimates the effects on the economy**

There is reason to assume that the effects of an equivalent price fall could, in reality, be even greater than is suggested by the model simulations. One reason is that the model does not capture all of the aspects that may be important driving forces for price fluctuations on the housing market. For example, the model used, like most models, is based upon the assumption that participants in the economy will act rationally and will have access to all the information required to take the best possible decisions. In reality, factors such as future expectations, 'mood' and attitudes toward risk presumably have a more complicated relationship with asset prices than is assumed by the models. Price fluctuations can be particularly large if the upturn phase is characterised by excessive optimism and high risk propensity. The downward fall can then be heavy when the trend changes. Prices fall, the mood changes to one of excessive pessimism, lenders and borrowers become increasingly unwilling to take risks and the banks' loan losses increase. The result can be a long period in which households and companies hold on to their money more firmly, in order to strengthen and balance their economies. Such psychological factors can make the effects on the economy associated with a fall of housing prices considerably greater than indicated by the simulations.

Another reason, already touched upon above, is that housing prices seldom start to fall without reason. Falls in housing prices usually coincide with other negative events in the economy. For example, these may include an unexpected downturn in economic activity or an increasing unease on the financial markets. In such situations, the combined effects can be significantly greater than indicated by the simulations. This particularly applies if the scope for action of monetary policy is limited, in the sense that the repo rate has already been lowered as far as is deemed possible.

All in all, it can be observed that there are circumstances under which it may be difficult to stabilise the economy in the event of a major fall in housing prices. This observation is backed up by the experiences of various countries in which this has occurred.

The housing market is considered in the formulation of monetary policy to the extent that the Riksbank deems necessary, considering the macroeconomic risks. There are many indications that, under certain circumstances, it may be difficult to dampen the effects of a dramatic fall in housing prices and that there therefore exists every reason to try to avoid the development of prices in a manner increasing the risk of this happening. However, the repo rate is a relatively blunt instrument when it comes to affecting housing prices. In a situation in which credit expansion and housing prices are deemed to be increasing in an unsustainable manner, other instruments, controlled by authorities other than the Riksbank, should also be utilised.