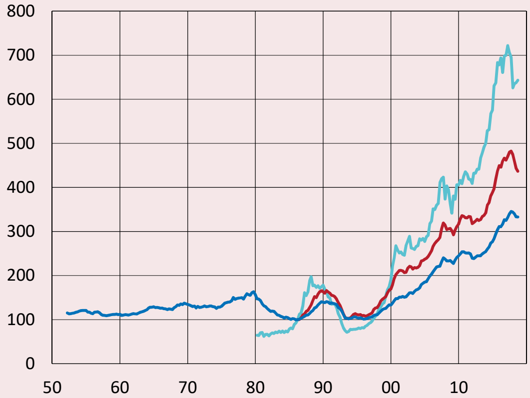
ARTICLE - New production of housing and financial stability

Since the fall in housing prices began in autumn 2017, there has been increased uncertainty in the Swedish construction sector and on the housing market. This has resulted, for instance, in households being hesitant about signing pre-sale agreements for newly-produced homes, particularly for tenant-owned apartments where the moving-in date is far ahead in time. In turn, this has contributed to fewer sales and production starts, particularly for small housing developers, having a negative impact on their financial situation. The banks' direct exposures to these companies are relatively small, however, and at present the contagion risks from these agents to the rest of the economy are considered limited. If the uncertainty on the housing market persists, or if housing prices fall further, there is however a risk that more companies, and also more households will encounter problems. In such a situation the problems may spread through the economy and the financial system, and thereby have macroeconomic consequences and threaten financial stability.

Changed conditions on the housing market
In Sweden, housing prices have risen to historically high levels. Real single-family house prices have more than tripled since the mid-1990s. The price rise has been even greater for tenant-owned apartments. In Stockholm alone, prices of tenant-owned apartments have increased almost sevenfold (see chart 22).

There are several factors that can explain the price rise. Rising real wages, falling interest rates and reduced taxes have increased households' disposable incomes. Moreover, there has long been considerable demand for housing, at the same time as the supply has been limited.[50]

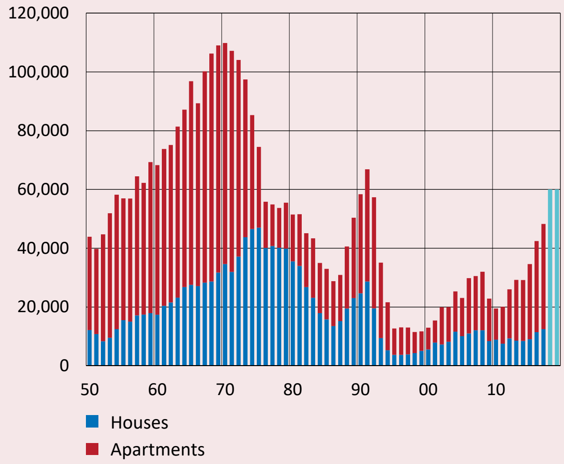
Chart 22. Real housing prices
Index, quarter 1 1986 = 100



Note. Housing prices have been inflation-adjusted by CPI.
Sources: Statistics Sweden, Valueguard and the Riksbank

In recent years, however, the supply of housing has gradually risen as housing construction has been at a high level. Housing investment's share of GDP has increased substantially, from 3.5 per cent to 5.5 per cent between 2013 and 2017. The Swedish National Board of Housing, Building and Planning estimates that this year approximately 60,000 homes will be completed and the same number is expected to be completed next year.[51] The current rate of building is thus the highest for almost 30 years (see chart 23).

Chart 23. Completed homes
Number



Note. The light blue staples represent the forecast done by the Swedish National Board of Housing, Building and Planning.
Sources: The Swedish National Board of Housing, Building and Planning and Statistics Sweden

Housing construction and the sharp rise in prices have meant that housing developers[52] have shown good

[50] Emanuelsson, R. (2015), Housing supply in Sweden. Economic Review, 2015:2. Sveriges Riksbank.
[51] Boverkets indikatorer, June 2018 [Boverket's indicators] The Swedish National Board of Housing, Building and Planning.
[52] A housing developer is a company that invests in land or buildings, and then engages building contractors to build housing on the land or to convert the existing buildings into homes to be sold on. Normally, a housing developer is responsible for the whole development chain in a housing project, from acquiring the land, the idea

profitability for several years, which is also reflected in the fact that the listed companies have experienced a rise in stock prices. The number of housing developers has also increased in recent years, especially in Stockholm.[53]

Since autumn 2017, however, housing prices have fallen on an annual rate and the price fall has been largest in the cities. One contributing factor to the price fall is probably the increase in the supply of housing which has in turn contributed to a market saturation with regard to expensive tenant-owned apartments in cities.

The price fall has contributed to increased uncertainty in the construction sector and on the housing market. Fewer building permits being granted are also an indication that construction will decline going forward. When housing prices fall and housing construction slows down it can affect housing developers and other agents in the housing market in various ways. This article describes the risks to which various actors are exposed when housing is produced and how these risks can have macroeconomic consequences and affect financial stability.

New production of housing entails risks

Producing new housing in Sweden is a time-consuming process that involves many agents. During the time a housing project is being completed, households, housing developers and banks are exposed to various risks, depending on the phase the construction project is in.

Prior to the production start the housing developer buys land, begins selling homes to households with pre-sale agreements and applies for construction credit[54] from banks. Some companies also use other financing, for instance, by issuing bonds, which exposes the housing developer to risks when these bonds mature and financing has to be repaid or renewed.

For the bank, the risk with construction credit is that the housing developer may experience problems repaying it. To reduce this risk, the bank makes the requirement that the housing developer must have sold a large share of the homes before it begins paying the construction credit.[55] Moreover, the bank normally requires that companies must purchase the homes that may remain unsold. The bank does this to reduce its credit risk in relation to the housing cooperative when the homes are completed.[56]

To attain the bank's selling requirement and reduce the risk that a housing project becomes unprofitable, the housing developer also wants a certain share of the homes to be sold before the production start. Both the companies' and the bank's sales requirements therefore mean that the actual construction of the homes does not normally start before a large share of the homes have been sold through binding pre-sale agreements with households. This means that households enter into binding agreements relatively early in the process, sometimes up to two years prior to moving in, agreeing to pay a predetermined price for the home. Here the households are taking both price risks and financing risks. The probability of these risks materialising increases the further from the moving-in date the pre-sale agreement is signed.

During the period the homes are being completed, the housing developer is exposed to the risk that the demand for housing will decline. This can affect the company's opportunities to sell further homes in the ongoing production. If few homes are sold when the housing project is complete, the housing developer may need to buy homes from the housing cooperative. The cost of these can be substantial if the company has several large-scale projects with many unsold homes. This can in turn contribute to the company having problems in paying back the construction credit, which can also affect the bank which then faces loan losses.

The various actors involved in the project consequently expose themselves to different risks during the entire construction process. Below is a review of how some of the risks have developed for households, housing developers and banks given the price fall last autumn and the uncertainty now characterising the housing market.

Risks for households

When a household signs a binding pre-sale agreement regarding a newly-produced home, the construction company wants the household to have a pre-approved mortgage limit from the bank for the new home. However, the pre-approved mortgage limit has a time limit and is not binding on behalf of the bank. When it is time for the household to sign a contract with the cooperative before moving in, a new credit check is therefore carried out. If the conditions have changed in

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and design, to selling the homes. On the other hand, the housing developer does not normally conduct any operations of its own with regard to building contracts. Some of the larger construction companies, on the other hand, have both housing development and building contracts as business areas.

[53] The number of developers of construction projects in Sweden increased from 111 to 439 between 2008 and 2017. (Statistics Sweden).

[54] A construction credit is a loan used when building new housing or reconstructing existing housing. A bank that has issued a construction credit pays all the housing developer's invoices for production costs, which means that the borrowed amount grows during the time the housing is being completed. When the housing is complete, some of the construction credit is converted into a normal loan for the housing cooperative with the property as collateral.

[55] The percentage varies, depending on the housing developers' credit rating, but usually 50-80 per cent of the homes must be sold before production start.

[56] If the housing developer does not have any commitments with regard to the unsold homes, it is the newly-formed housing cooperative that must bear the cost. The housing cooperative's liabilities will thereby be higher than expected when revenue fails to materialise. Similarly, there will be fewer members in the cooperative, which means that fewer people have to share the higher costs.

the meantime, for example if housing prices have fallen, a household that has not allowed for such a scenario risks getting into financial difficulty. In this situation, it is not certain that the bank will grant the loan in accordance with the pre-approved mortgage limit.[57]

There is a particularly large risk for households who already own another mortgaged home as they wait to move into their new one. As a price fall means that the profit from the sale of their home will probably be lower than the household had expected, the household's potential cash down-payment will decline. In addition, the household has signed up for a price that is higher than the current market price.

A buyer who is counting on a contribution from the sale of an existing home is thereby exposed to the risk of falling housing prices both via the new and the old home whilst the new one is under construction. As the possibility for a household to back out of a pre-sale agreement is limited, the household risks being obliged to compensate the housing cooperative or housing developer for the financial injury entailed if the household does not fulfil the agreement. There are no statistics on how many households have this type of double exposure, but simple calculations indicate that the number may be significant, given the large number of new homes that have started production in recent years.[58]

The fall in prices and the uncertainty on the housing market have revealed the risks that households are exposed to when signing a pre-sale agreement.

Risks for housing developers

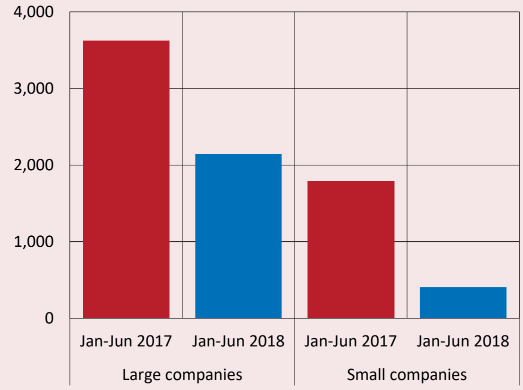
Fewer sales and production starts

The increased risk awareness among households has contributed to housing developers finding it more difficult to sell new homes. This is reflected, for instance, in the number of republished advertisements for newly-produced housing having increased. The companies' interim reports show moreover that sales have declined. During the first half of 2018, the number of homes sold halved in relation to the same period in the previous year for a number of housing developers.[59] The lower sales apply to both large and small companies (see chart 24).[60]

Households appear to be particularly cautious with regard to signing pre-sale agreement for housing where the moving-in date is far ahead. This applies in particular to housing where production has not yet started.[61]

Chart 24. Sold homes

Number



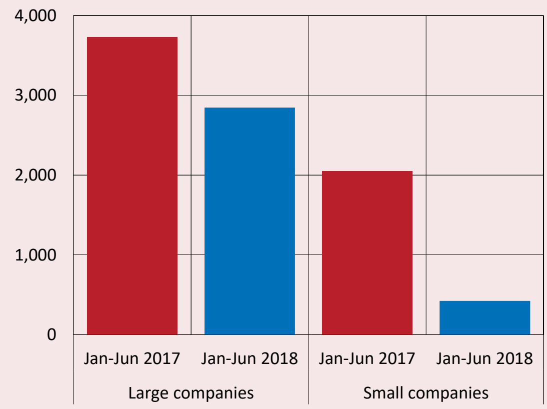
Sources: The respective companies' interim reports

One clear sign of this is that the number of production starts for housing developers has declined. During the first half of 2018, the number of housing production starts declined by around 40 per cent in relation to the same period a year earlier.

It is primarily small companies that have reduced their production (see chart 25). This could be because they have concentrated to a greater degree on new production of relatively expensive tenant-owned apartments in cities, that is, the homes that have been hit hardest by the uncertainty on the housing market. They may therefore find it more difficult than the larger companies to sign enough pre-sale agreements to secure funding for a particular project.

Chart 25. Housing production starts

Number



Sources: The respective companies' interim reports

[57] Lidberg, A. (2018), Housing cooperatives and financial stability, *Economic Commentaries* no. 4. Sveriges Riksbank.

[58] On the assumption that it takes 1 year to build a single-family house, 95 per cent of which is comprised of owner housing, and 2 years to build a multi-family house, which is comprised of 50 per cent tenant-owned apartments, and a sales ratio of 70 per cent there are now an estimated 40,000 households who have signed a pre-sale agreement for a newly-produced home in Sweden. However, there is no information on what percentage of these that already own an apartment or house.

[59] The sample has been divided up into large companies (Peab, Skanska and JM) and small companies (ALM Equity, Besqab, Bonava, Oscar Properties, SSM, Tobin Properties and Veidekke). This breakdown has been based on how many homes the companies have in production in Sweden. These companies are listed on the stock exchange and are either large participants in the market or specialised in housing development.

[60] Underlying data in Charts 24, 25 and 26 is based as far as possible on the companies' operations in Sweden and on their production of tenant-owned apartments.

[61] It is not possible to distinguish between the housing sold before a project has begun and the housing sold after production has started in the interim reports.

The banks' demands regarding the number of pre-sale agreements signed are also typically higher for smaller companies.

The reason why production starts have been fewer could also be that companies assess the price fall to mean that certain projects are no longer profitable in relation to the company's required rate of return. One sign of this is that companies have returned land allocation[62] to municipalities.

One way of examining how profitable it is to build at present is to compare the market price of existing housing with the cost of producing a new, similar home. This ratio is known as Tobin's Q. According to the prices for new production and total costs for new production, it would appear according to Tobin's Q that it is still profitable to build in large parts of the country, as the ratio is higher than 1.[63] This is despite construction costs in Sweden being high in relation to many other countries.[64]

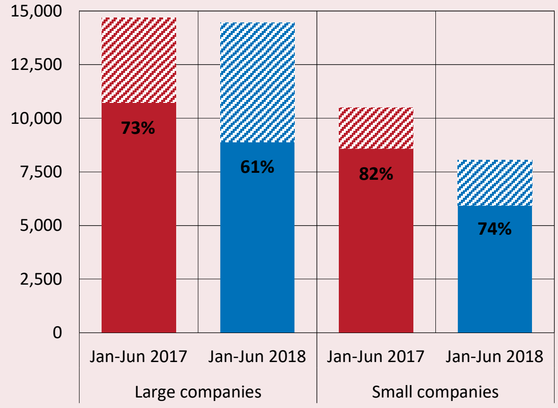
Fewer sales increase the risks for the companies

The housing developers' interim reports show that the companies, regardless of size, at present have few unsold homes in the projects that are completed, although this figure has increased somewhat over the past year. The risk that a housing developer will have to buy a large number of unsold homes from the housing cooperatives in these projects is thus relatively small.

The difficulty in selling homes to households does entail a risk that housing developers' commitment for the number of unsold homes will increase as the ongoing projects are completed. These commitments increase further if the household has greater opportunity to withdraw from a pre-sale agreement that is assessed as invalid.[65] During the first half of 2018 the percentage of homes undergoing production that were sold was less than in the equivalent period of the previous year with regard to both large and small companies (see chart 26). For small companies, moreover, their ongoing production was also less, with fewer production starts than the number of homes completed. This affects the small housing developers' future profitability, as their sales volumes decline.

Chart 26. Sold housing under production

Number and percentage



Note. The columns show the number of homes under production. The shaded areas represents the number of homes that remain unsold and the coloured areas the number of homes that have been sold. The figures state the percentage of homes sold.

Sources: The respective companies' interim reports

Large bond maturities in the coming years

In general, it is easier for larger housing developers to buy unsold homes where many of these companies also have income from other business areas and sometimes from other countries. They are thus more diversified than smaller companies. This also means that they can usually finance themselves at a lower cost, which also improves their capacity to refinance themselves and start production of new projects. Smaller companies additionally often have a larger share of wholesale funding in relation to their total assets, which in general makes them more exposed to risks with regard to refinancing.

Several companies have also issued bonds that will mature in the coming years, which increases their risks (see chart 27). The risks are particularly large for companies with many delayed projects and many unsold homes in ongoing production as they can have more difficulty in managing their liquidity and their cash flows. If the companies are not able to refinance their bonds when they mature, the risks may spread to the banks if they choose to finance the housing developers through bank loans.

On average, own capital in relation to total assets is around 40 per cent for the housing developers in the sample. This level is lower than the average for the non-financial corporate sector as a whole.

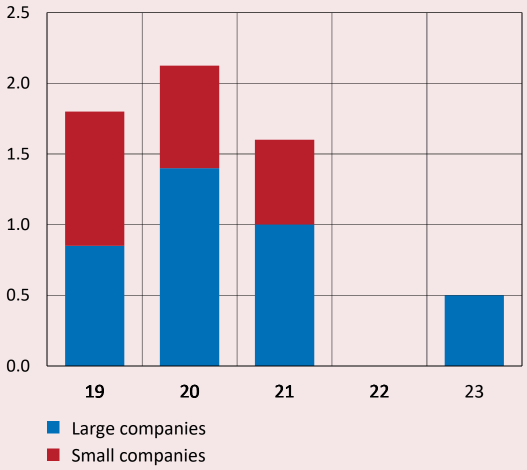
[62] A land allocation is the sole right for a housing developer during a certain time period (normally two years) to negotiate with a municipality on acquiring municipal land to build on, and to carry out the intended building work.

[63] The calculation is based on data on housing prices and construction costs. The total costs also include companies' profits and land costs, which means that this method underestimates the profitability of construction.

[64] One reason for the high construction costs is that planning, construction and environmental legislation make substantial demands on new housing. For instance, there are noise pollution limits that must not be exceeded, there must be elevators installed and toilets must be adapted for the disabled, and so on. Moreover, the cold climate in Sweden entails different structural requirements than in, for instance, southern Europe, which pushes up costs for those who build. Similarly, special municipal requirements may push up construction costs and hamper competitiveness in the construction sector.

[65] In recent years housing developers have sold tenant-owned apartments at such an early stage that the dates for transfer and moving in could not be determined with any certainty in the agreements, but were stated in varying time intervals instead. Often the dates for moving in were delayed and thus did not agree with the original dates stated in the agreements. This has resulted in a discussion that many of the pre-sale agreements signed can thus be invalid, and there are currently several legal cases ongoing with regard to this.

Chart 27. Maturity structure for different housing developers' bonds
SEK billion



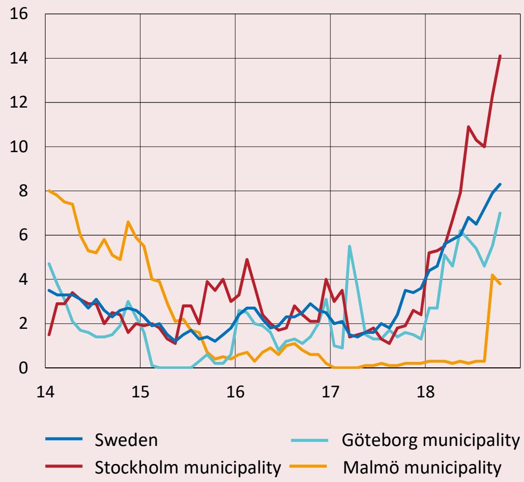
Sources: Dealogic and the respective companies' interim reports

The companies are adapting to the new market situation
To increase the sales of housing, the companies can cut the prices of the unsold homes. The percentage of reduced price objects has also increased significantly over the past year (see chart 28). Several housing developers have also offered to pay the monthly fee to the cooperative for a period of time for households who buy a newly-produced home. Price reductions and rebates reduce the companies' profits as they usually do not change the prices set in the housing cooperatives' financial plans. Large price cuts in new production can in turn contribute to lower housing prices on the secondary market.

In the longer run, it is probable that housing developers will adapt their planned projects to the current market situation to increase their sales. The companies may need to cut their required rates of return or adapt their production by building tenant-owned apartments at a lower production cost and thereby a lower price. The companies can also build rental properties to a greater extent. Rental properties are usually cheaper to produce than tenant-owned apartments, partly because the land prices are lower. Some companies have adapted their production of housing over the year to instead produce rental properties.

The increased uncertainty on the housing market has thus reduced profitability for housing developers, which can make it more difficult for them to renew their financing. That the production starts are becoming fewer indicates that small companies in particular have difficulty in signing a sufficient number of pre-sale agreements to secure financing for their projects. The small companies are also assessed to have poorer resilience if the market situation deteriorates. However, many housing developers have been profitable over a long period of time and so far there are only a few smaller companies that have filed for bankruptcy, been forced to make right issues or been bought up by larger agents. If the uncertainty remains, however, more companies may experience problems, potentially affecting the banks.

Chart 28. Share of price-reduced advertisements for new production
Per cent



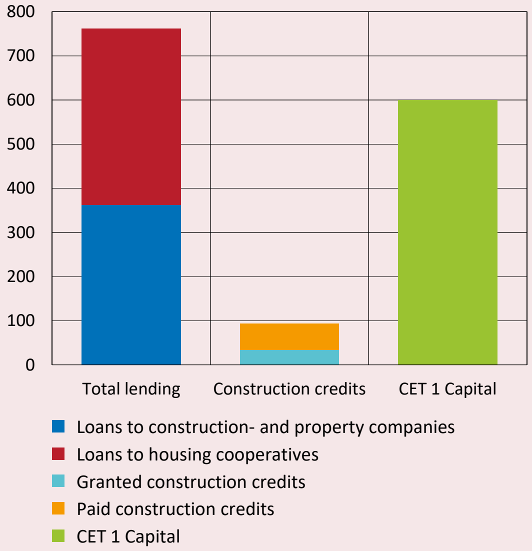
Note. New production refers to sales of tenant-owned apartments directly from a housing developer.
Source: Booli

Risks for banks
The four major banks' total lending to financing of residential properties in Sweden amounts to around SEK 750 billion, of which around half comprises loans to construction and property companies and the remainder is loans to housing cooperatives.[66] Around SEK 60 billion of this consists of loans for new production of housing, in the form of construction credits paid to housing developers. The banks' total granted construction credits to housing developers amounts to just over SEK 90 billion, which leaves scope for these agents to borrow a further SEK 30 billion for ongoing housing projects. The major banks' lending can be seen in relation to their CET 1 capital which amounts to almost SEK 600 billion (see chart 29)

Most of the major banks' lending is to larger housing developers, but the overall lending to smaller companies nevertheless accounts for a relatively large share of the banks' lending for new production of housing. However, the smaller companies generally have construction credits for smaller amounts as their projects are smaller in number and in size.

[66] These figures do not include lending to households for the purpose of buying a home, which in September 2018 amounted to a good SEK 3,200 billion.

Chart 29. The four major banks' exposures to housing property
SEK billion



Note. CET 1 is an abbreviation for Common Equity Tier 1.

Sources: Banks' interim reports and the Riksbank

The banks generally set tougher demands on the smaller housing developers. For instance, they require that the smaller companies inject a larger share of own equity to receive loans for housing projects. Moreover, the banks require that the smaller housing developers sell a larger share of their housing through pre-sale agreements than they require of the larger companies, before the bank begins to pay construction credit.

Due to the fall in prices and the uncertainty on the housing market, the banks have also become more restrictive in their lending to households for housing purchases, for example by more frequently demanding that households sell their homes before purchasing new ones.

If the uncertainty on the housing market persists, or if housing prices fall further, the risk that the smaller housing developers will encounter problems increases. But as the banks do not have such large exposures to the smaller companies, it is not likely that several failures among these companies alone would affect the banks' solvency. If risks and uncertainty spread from the smaller companies to the larger companies and to the remainder of the housing market, however, the consequences could be greater.

A change in risk sharing between agents may be necessary

All in all, the price fall last autumn and the increased uncertainty on the housing market so far have mainly affected individual companies and households that have signed a pre-sale agreement regarding a newly-produced home. This need not in itself have macroeconomic consequences or threaten financial stability. However, if the uncertainty on the housing market persists, or if housing prices fall further, more companies and households could encounter problems. In such a situation the problems may spread through the economy and the financial system, and thereby have macroeconomic consequences and threaten financial stability.

The price fall and the uncertainty on the housing market have also highlighted shortcomings in the funding model used by housing developers in the new construction of homes. The main problem is that a very large part of the risk in housing projects has been taken on by households, as the model is based on a large portion of the homes being sold before the start of production. This has reduced the risks for the housing developer and the bank, but increased the risks for the household.

In the short term, there is a risk that housing construction will slow down, particularly the construction of expensive tenant-owned apartments in the cities. A lower level of housing construction in the coming years is also in line with the Riksbank's forecast (see chart 4).[67] In the longer run, it is likely that the agents must use other funding models and share the risks more in order for more tenant-owned apartments to be produced.

[67] See *Monetary Policy Report*, October 2018. Sveriges Riksbank.