ARTICLE – Bankruptcies during the initial phase of the coronavirus pandemic

The economic consequences of the coronavirus pandemic have hit companies in Sweden hard and many filed for bankruptcy at the very start of the pandemic. Between March and June, about 3,000 companies filed for bankruptcy, which is nearly 20 per cent more than the average over the last five years for the same period. The Riksbank has studied a sample of these companies. A comparison with remaining companies shows that those that filed for bankruptcy were highly levered and were already struggling to pay their interest expenses in 2018. This article also shows that there is still about 40,000 companies with similar characteristics and highlights the risks to financial stability that this entails.

The coronavirus pandemic quickly changed the conditions for running a company in Sweden

The restrictions introduced to reduce the spread of infection and the resulting changes in behaviour among households and companies have had major effects on the economy. Both in Sweden and in other countries, many companies have encountered problems due to sharply reduced demand and to production problems.[79]

In Sweden, many companies filed for restructuring or bankruptcy at the very start of the coronavirus pandemic.[80] The Riksbank has studied a sample of the companies that filed for restructuring or bankruptcy in the period March to June 2020.

Based on the 500,000 limited liability companies (Swedish: *aktiebolag*) that were active in December 2018, the Riksbank has studied a sample of companies that belong to the category non-financial companies and that submitted an annual report to the Swedish Companies Registration Office for the financial year of 2018. This means that we exclude financial companies such as banks and insurance firms, as well as companies that, for example, were founded in 2019 and filed for bankruptcy in the period March to June 2020.

[79] This article is based on C. Cella (2020), Bankruptcy at the time of COVID-19 – The Swedish experience, *Staff Memo*. Sveriges Riksbank.

[80] A company or its creditors can file for the company to enter into restructuring or bankruptcy. A district court decides whether companies are to enter into restructuring or bankruptcy. A restructuring takes place when the company has economic problems but has a possibility of surviving in the long run. The aim of the restructuring is for the company to be able to continue its operations. A bankruptcy takes place when the company cannot pay its debts, neither now nor in the future, and means that the company is wound up.

Of the companies in the sample, 1,700 filed for restructuring or bankruptcy in the period March to June 2020. Using their annual reports for 2018, the 1,700 companies' financial positions are compared with those of the remaining companies.[81] The analysis treats all companies as independent, regardless of whether they belong to a corporate group.

Of the 1,700 companies, 166 companies filed for restructuring and 1,554 companies filed for bankruptcy (all hereinafter referred to as bankrupt companies). Together, these 1,700 bankrupt companies make up about 0.4 per cent of the companies in the sample.[82] The bankrupt companies correspond to about 0.2 per cent of the total number of companies in Sweden.[83]

In this article, we first show the bankrupt companies' regional distribution. We then present their financial situation prior to the coronavirus pandemic. This is followed by a review of the remaining companies and how problems in the corporate sector can have an effect on financial stability in the event of a prolonged crisis.

Bankruptcies have affected companies throughout Sweden

The bankrupt companies can be found across the entire country. In absolute terms, the regions around Stockholm, Göteborg and Malmö were hit hardest with just over 1,000 of the total 1,700 bankruptcies. In relative terms, all regions in Sweden have been affected, even if the regions of Västernorrland, Gävleborg, Västmanland, Örebro County, Kalmar and Blekinge have been hit the hardest (see Chart 30). In Västmanland, 0.9 per cent of companies filed for bankruptcy in the period, which was the highest proportion of bankrupt companies. The lowest proportion of bankrupt companies was measured in Gotland: 0.4 per cent. The difference between the proportion of bankrupt companies in the worst affected region and the least affected region is thus relatively small.

As regards how different sectors have been affected, the 1,700 bankrupt companies can be found in all sectors except energy supply, where no companies filed for bankruptcy (see Chart 31).[84] The chart also makes clear that a relatively large part of the bankruptcies were in the trade sector and other service sector. Overall, bankruptcies have affected companies in all regions of Sweden, and virtually all sectors have been affected. The fact that bankruptcies have been so widespread suggests that many of

[81] Data from 2018 is the latest available from the database we use. Remaining companies are those in the same sector and size category as the bankrupt companies but that survived at least until June 2020.

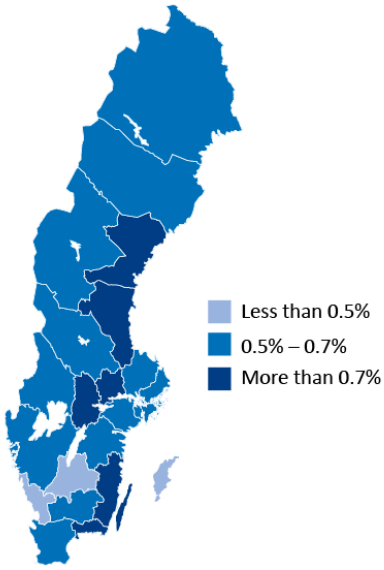
[82] Including all legal forms of companies, financial undertakings and companies that did not submit their annual report for 2018 to the Swedish Companies Registration Office, the number of bankruptcies over the period March to June 2020 would have amounted to about 3,000. This is about 20 per cent more than the average in the same period over the past five years. See Section 2.2 in this report for information on bankruptcies up to the end of September 2020.

[83] Including all legal forms such as sole proprietorships and incorporated partnerships, there are 1,200,000 companies.

[84] Energy supply comprises the Swedish Standard Industrial Classification (SNI) category of Electricity, gas, steam and air conditioning supply. Bankruptcies may have occurred in this sector but were not included in our sample.

the companies would probably have encountered problems regardless of the coronavirus pandemic, although it may have speeded up the process.

Chart 30. Regional distribution of bankruptcies from March to June 2020
Per cent

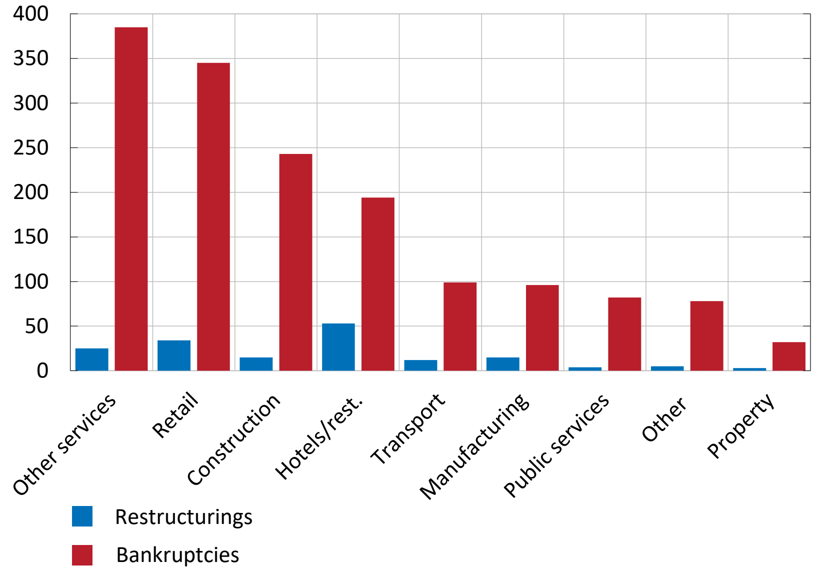


Note. Proportion of companies in the region filing for bankruptcy. The distribution of companies is based on addresses of head offices. The default rate is based on the 1,700 bankrupt companies, which is to say it corresponds to 0.4 per cent of the companies in the sample.

Source: Bisnode.

Chart 31. Bankruptcies and restructurings in various sectors over the period March to June 2020

Number



Note. The classification of companies is based on Swedish Standard Industrial Classification (SNI), but has been divided into nine sectors. Other services sector includes IT, corporate and technical services, among others. Other includes agriculture, mining and companies without SNI codes, among others. For more information on how companies have been classified, see C. Cella (2020), Bankruptcy at the time of COVID-19 – The Swedish experience, *Staff Memo*. Sveriges Riksbank.

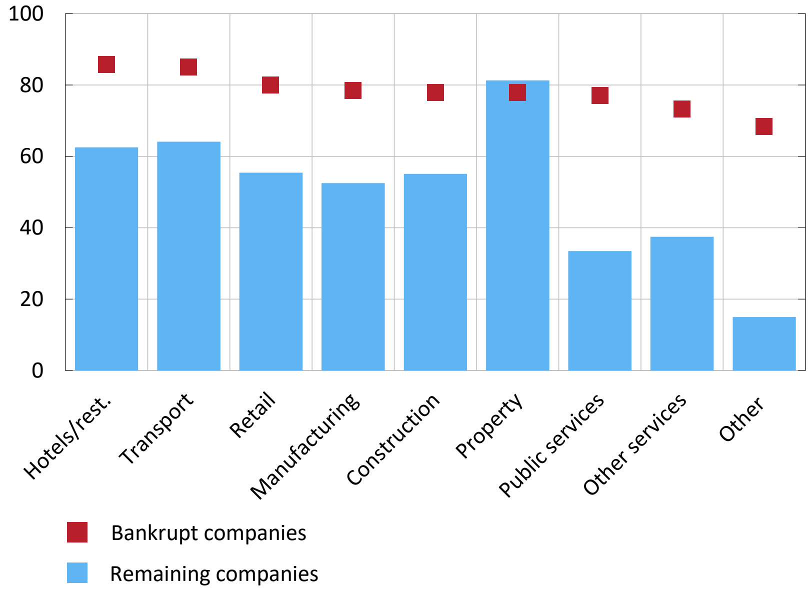
Source: Bisnode.

Higher leverage and lower interest coverage ratios among bankrupt companies than among remaining companies

Overall, the bankrupt companies were more indebted than the remaining companies (see Chart 32). Among the bankrupt companies, the average leverage was 74 per cent and the median was 79 per cent. This can be compared with the remaining companies, where the average leverage was 48 per cent and the median was 46 per cent. A leverage of 50 per cent indicates that the company funds approximately half of its operations with loans and the other half with equity. All else being equal, a lower leverage implies lower exposure to risk and a better ability to fulfil financial commitments.

Chart 32. Leverage of bankrupt and remaining companies in 2018

Per cent



Note. Medians. A company's leverage is defined as its debt divided by the sum of debt and equity. Debt includes the company's short and long-term liabilities (excluding the category Other long-term liabilities). For information on the key indicators and classification, see and C. Cella (2020), Bankruptcy at the time of COVID-19 – The Swedish experience, *Staff Memo*. Sveriges Riksbank.

Source: Bisnode.

Chart 32 illustrates how the bankrupt companies (red dots) had a higher leverage at the end of 2018 than the remaining companies (light blue bars) in the same sector. This applies to all sectors except the property sector, where leverage was higher among the remaining companies than the bankrupt companies. In the underlying data, we can see that large companies generally have higher leverage than small ones.[85] This may be due to large companies normally having greater bank commitments and being able to pledge better collateral for their loans, such as property, and thus being able to secure more attractive loan terms.[86]

In addition to higher leverage, the bankrupt companies generally did not generate enough earnings to make interest payments on their loans. The median for the interest coverage ratio (ICR), which represents the company's ability to pay interest expenses by using their earnings, was -0.97 among the bankrupt companies. An ICR of 1 means that the company can pay its interest expenses using the earnings it generates. As the interest coverage ratio for the bankrupt company that forms the median amounts to about -1, this implies that its loss was as large as its interest expenses.

[85] In each sector, companies have been divided into four equally large size categories based on total assets: micro, small, medium-sized or large companies. The average company in the micro company category had assets of SEK 176,000. The corresponding figure in the large company category was SEK 210 million.

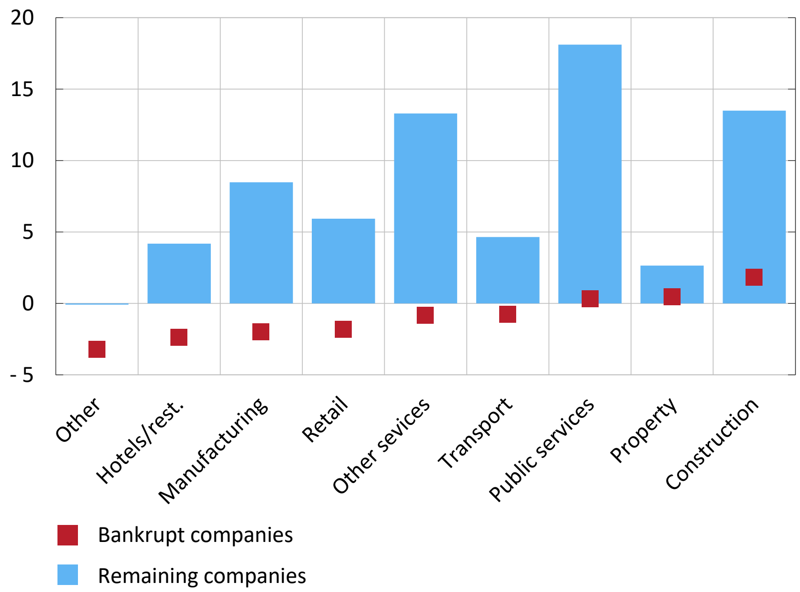
[86] Read more about how large companies differ from smaller companies as regards how they borrow in the article *Banks' lending capacity in light of the coronavirus pandemic* in this report.

When a company reports a loss, it means that it may need to receive financial support such as an increase in equity to meet its interest expenses. However, even if such additional funds to cover interest expenses may work over the short term, in the long term, the company will have to start to generate earnings or else it may be forced to shut down. For the remaining companies, the median interest coverage ratio is 5, meaning that the company generates earnings that are five times greater than the company's interest expenses.

Chart 33 shows that the bankrupt companies (red dots) overall had a lower interest coverage ratio than the remaining companies (light blue bars). In most sectors, the bankrupt companies had a negative interest coverage ratio, meaning that they reported a loss in 2018. However, bankrupt property and construction companies generally had a positive interest coverage ratio indicating that they reported a profit in 2018. While both bankrupt and remaining companies in the property sector showed a relatively low interest coverage ratio, there was a large difference between bankrupt and remaining companies active in the construction industry, where the remaining companies overall had significantly higher interest coverage ratios than the bankrupt companies. In the underlying data, bankrupt companies classed as micro companies in the hotel and restaurant sector and the construction and property sectors generally had a significantly worse interest coverage ratio than small and medium-sized companies in the same sector, as many of the micro companies reported a loss for the financial year of 2018.

Chart 33. Interest coverage ratios of bankrupt and remaining companies in 2018

Ratio



Note. Medians. Interest coverage ratio is defined as the company's operating profit/loss and financial income divided by its financial costs. For information on the breakdown and sectors, see Chart 31 and C. Cella (2020), Bankruptcy at the time of COVID-19 – The Swedish experience, *Staff Memo*. Sveriges Riksbank.

Source: Bisnode.

The companies in the sample that filed for bankruptcy in the period March to June 2020 had approximately the same liquidity in 2018 as the remaining companies. Liquidity is assessed based on the companies' quick ratio, which indicates their ability to pay their short-term liabilities, that is debt that falls due for payment within one year.[87] However, as liquidity reflects the company's short-term debt-servicing ability, it can change quickly. Given that the companies' liquidity situation is based on data from 2018, it is difficult to say anything about liquidity among the bankrupt and remaining companies in the period March to June 2020.

Overall, it can be noted that many of the companies filing for bankruptcy in March to June 2020 were already in a relatively weak position at the start of the coronavirus pandemic, judging by their financial position in 2018.

Signs of a return to normal bankruptcy levels

Between March and June, mostly micro, small and medium-sized companies filed for bankruptcy. Compared with remaining companies, bankrupt companies had generally existed for a shorter time period. Among the bankrupt companies there was, however, some variation concerning how long they had existed; those that filed for bankruptcy in March had existed for a longer time period than those that filed for bankruptcy in June. Furthermore, we observe that the number of bankruptcies in June was almost the same as in June of the previous year.

Using the Riksbank's credit database KRITA, which includes information from the companies' creditors, the probability of default calculated by the creditor for each company can be studied. Despite the lower number of firms that filed for bankruptcy during the end of the studied period, companies that filed for bankruptcy in May and June 2020 had a lower probability of default than those that filed for bankruptcy in early 2020.

Banks are exposed to companies with weak financial positions

Table 1 presents the group of remaining companies from the sample that, like many of the bankrupt companies, are categorised as highly levered. Remaining companies classed as highly levered are those belonging to the most levered 25 per cent in each sector and size category respectively.

The remaining highly levered companies are divided into various categories depending on their quick ratio and interest coverage ratio. The review is based on data from the companies' annual reports for 2018 and aims to show the proportion of companies that are highly levered, and have low quick ratios and interest coverage ratios, as

[87] The quick ratio is the ratio of current assets (minus inventories) to current liabilities.

well as how large a proportion of the employees they make up and how large a part of the bank loans they have taken.

About 33 per cent of the remaining companies are classified as highly levered.[88] This corresponds to about 150,000 companies. Of these, about 40,000, or the equivalent of 8 per cent of the total number of remaining companies, are classified as highly levered and have a low quick ratio and an interest coverage ratio of one or less (marked blue).[89] Considering that these companies may find it difficult to pay their interest expenses, it may be interesting to note, from the perspective of financial stability, that they make up 18 per cent (marked red) of the bank loans that the remaining companies in the sample have. This corresponds to SEK 340 billion, which can be seen in relation to banks' total outstanding corporate loans in Sweden of SEK 2,488 billion in September 2020.[90] These 40,000 companies can be found in all sectors, even if the retail sector has a slight predominance.

Table 1. Share of remaining companies classified as highly levered

Per cent

	Highly levered					
	Low quick ratio			High quick ratio		
	ICR<0	0≤ICR≤1	ICR>1	ICR<0	0≤ICR≤1	ICR>1
Percentage of total number of companies	**7.0%**	**1.1%**	18.7%	0.9%	0.2%	4.6%
Percentage of total number of employees	11.3%	1.0%	29.9%	0.5%	0.2%	4.9%
Percentage of total liability to MFI	**14.5%**	**3.0%**	14.9%	2.1%	0.8%	5.7%

Note. Share of total number of companies, total number of employees and total liabilities to MFI relates to all remaining companies in the sample of limited liability companies. Liabilities to MFI include both short-term and long-term liabilities. Short-term liabilities fall due for payment within 1 year. MFI include banks, mortgage institutions, financial institutions, municipal and corporate-financed institutions and monetary securities companies.

Source: Bisnode.

Assuming that the financial position has not changed to any great extent since 2018, Table 1 indicates that there is a large number of the remaining companies that have a relatively weak financial position, similar to many of the companies that entered bankruptcy in the period March to June 2020. Bankruptcies among these companies could lead to an increase in banks' credit losses.

[88] Even if we select the most levered 25 per cent in each sector and size category respectively, the total proportion of highly levered companies can exceed 25 per cent as there is a different number of companies in each category.

[89] Low and high quick ratio corresponds to the companies being below or above the median in each sector and size category.

[90] This SEK 2,488 billion refers to total lending from Monetary Financial Institutions (MFI) to non-financial companies. Source: Statistics Sweden. For more information on banks' lending during the coronavirus pandemic, see the article *Banks' lending capacity in the light of the coronavirus pandemic* in this report.

Many measures have been taken to help companies but more may be needed

This article has shown that the companies that filed for restructuring or bankruptcy in the period March to June 2020 already had a weak financial position before the crisis: many were highly indebted and had low interest coverage ratios. The article has also demonstrated that many companies with relatively weak financial positions remain and that bankruptcies among these companies may lead to increased credit losses. A smaller increase in the number of bankruptcies would not necessarily be a problem. However, if bankruptcies spread from sector to sector and increase to a great extent, it will increase the risks to financial stability.

Several measures have been taken to help companies get through the crisis. The Riksbank's measures have focused on keeping the level of interest rates low and supporting credit supply. The fiscal policy measures have aimed to support companies, both with grants such as short-term work allowance and rent support, as well as with different forms of loan such as tax forbearance and credit guarantees. These support measures have been of varying reach. Some have been earmarked for specific sectors, while others, such as temporary cuts to employers' social security contributions, have been more general.

It is important that the measures taken are not phased out prematurely. If the crisis now becomes deeper or more prolonged, even more fiscal policy support may also be needed, partly through general measures and partly measures targeting particularly vulnerable sectors. The Riksbank, for its part, is ready to contribute the liquidity necessary to support credit supply and safeguard financial stability.