Riksbank study

Towards a better functioning corporate bond market

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S V E R I G E S   R I K S B A N K

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Riksbank studies

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Foreword

Swedish corporates currently finance their operations to an increasing extent in the capital market by issuing bonds. As a result, the corporate bond market has grown strongly, both in volume and in importance, over the last decade. Corporate bonds now account on average for just over one third of the total loan financing of Swedish corporates. With regard to the largest corporates, the share is considerably higher than this. This development has taken place under relatively favourable market conditions with high investor demand, which has led to many corporates often finding it more beneficial to take up bond financing than bank loans.

When the coronavirus pandemic broke out, corporate bond markets around the world were very negatively affected by the uncertainty that arose. The Swedish market was no exception. During a period of time, the market completely ceased functioning, which severely weakened the corporates' ability to finance their operations. To keep down the general level of interest rates and contribute to a smooth supply of credit to Swedish corporates, the Riksbank introduced several powerful measures in spring 2020, which included the purchase of corporate bonds.[1]

The effects of the pandemic on the market have revealed the vulnerabilities that have existed in the corporate bond market over a long period of time. These primarily concern a lack of transparency and insufficient liquidity in the secondary market. In addition, the role and behaviour of the funds in the market must also be taken into account, which also an issue that is discussed in international contexts. The shortcomings in the functioning of the market make it vulnerable to shocks. It is therefore important to try to address the existing shortcomings to ensure that the growing and increasingly important market for corporate bonds in Swedish krona functions well.

It is positive that the authorities as well as the private sector are now working to increase transparency, improve liquidity and increase standardisation in bond issues. The Riksbank has highlighted in its Financial Stability Report various measures that it considers to be important in addressing the lack of transparency and insufficient liquidity. The Riksbank has also participated, together with representatives from various market players, in the round tables arranged by Finansinspektionen and supports the continued work in this area. Continued good interaction between the various players is important, not least for implementing the measures that have been presented to improve the functioning of the market. When the corporate bond market functions better, its resilience to future shocks improves, which is important to avoid jeopardising the supply of credit to corporates.

The Executive Board of the Riksbank

[1] The Riksbank has offered to purchase corporate bonds issued in Swedish krona by Swedish non-financial corporations to a nominal amount of SEK 13 billion until 31 December 2021. During the first quarter of 2022, the Riksbank will purchase corporate bonds for another SEK 1 billion to compensate for maturing volumes. See the Riksbank's web page for the purchase of corporate bonds: https://www.riksbank.se/en-gb/monetary-policy/monetary-policy-instruments/purchases-of-corporate-bonds/. It also contains all decisions taken under the purchase programme.

Summary

The report has been prepared by the Financial Stability Department under the leadership of Olof Sandstedt.[2]

Corporate bonds have emerged as an important form of funding for Swedish corporates over the past decade. The outbreak of the coronavirus pandemic highlighted the structural shortcomings and vulnerabilities in the Swedish corporate bond market that risk amplifying negative developments in the event of financial turbulence. These primarily concern a lack of transparency and insufficient liquidity. The shortcomings need to be remedied to increase resilience and ensure that the market functions well, as it is important for Swedish corporates' funding.

The Riksbank's latest Financial Stability Reports have highlighted a number of proposals on how to improve the functioning of the Swedish corporate bond market. These concern making higher demands, on the one hand, of the corporates issuing bonds and the banks assisting in the issue process and in their role as intermediaries in the market, and, on the other hand, higher demands on the funds in their role as major investors in the market. The aim of this Riksbank study is to present a more detailed account of the proposed measures in the Financial Stability Reports, and to explain their background and why they can help to solve some of the fundamental problems in the market.

[2] Thank you to Anders Gånge, Mia Holmfeldt, Johanna Stenkula von Rosen, Sante Carbone, Martin Regnér, Vanessa Sternbeck Fryxell, Stephan Wollert, Heidi Elmér, David Forsman, Anders Nordborg, Ulf Stejmar, Jens Iversen, Tommy von Brömsen and Caroline Jungner for valuable comments and help in writing this report. Thanks also to colleagues at Finansinspektionen who shared their knowledge. The authors would also like to thank Elizabeth Nilsson for valuable assistance in the translation of the publication.

1 The corporate bond market needs better resilience

Corporate bonds have emerged as an important form of funding for Swedish corporates, especially over the past decade.[3] This development has taken place under favourable conditions, with, for example, a strong real economic development. The low interest rates have also contributed to investors seeing corporate bonds as an increasingly attractive investment option, as many other interest-bearing assets have yielded very low returns. This has made corporate bonds a relatively favourable form of funding for corporates.

1.1 Coronavirus pandemic highlighted vulnerabilities

When the coronavirus pandemic broke out in March 2020, risk premiums on corporate bonds increased significantly as a result of the uncertainty and stress prevailing in general on financial markets around the world. This led to many investors wanting to sell risky assets. At the same time, the possibility to sell corporate bonds on the secondary market deteriorated, as few wanted to buy. Inadequate information about the prices at which corporate bonds were trading on the market contributed to the need for about thirty funds with holdings in Swedish corporate bonds to suspend redemptions (that is to say, temporarily close the funds), since the value of the fund units could not be calculated in a reliable manner. Moreover, many funds had outflows from unitholders that were significantly higher than normal. This also created a sales pressure that was much higher than normal on the corporate bond market and resulted in large price falls. The problems that arose on the market also meant that it became much more expensive and considerably more difficult for corporates to issue new bonds.[4]

Although what happened in the spring of 2020 was an extremely unusual situation, it highlights the fact that there are structural shortcomings and vulnerabilities in the Swedish corporate bond market that risk strengthening negative developments in the event of financial turbulence. These primarily concern a lack of transparency and inadequate liquidity in the secondary market, even during times without stress. The shortcomings need to be remedied to increase resilience and ensure that the market functions well, as it is important for Swedish corporates' funding.

1.2 Some measures taken and others in progress

Finansinspektionen has held several round tables with representatives of the various market actors since the outbreak of the pandemic. The work carried out in this forum

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[3] Throughout this Riksbank study, corporate bonds refers to bonds issued by non-financial corporations.

[4] The Riksbank has described in more detail in several previous publications what happened on the market when the pandemic broke out. See, for example, Gustafsson and von Brömsen (2021), Sveriges Riksbank (2020a), (2020b), (2020c) and Wollert (2020).

is aimed at making the Swedish corporate bond market more uniform and less fragmented by establishing a standard in which the major issuers issue in the form of so-called benchmarks. This means, among other things, that larger amounts are borrowed in each individual bond instead of issuing a larger number of smaller bonds.[5] Many other bond markets have this kind of benchmark standard, for instance, the covered bond market. The aim of the benchmark issues is to concentrate bond trading to a more limited number of instruments and thus obtain better liquidity in the individual bond loans as opposed to trading in many small bond loans. This would contribute to a better functioning secondary market and also make it easier to price other bond loans through more accurate and transparent price formation. It can be noted that when Swedish corporates issue bonds on the euro market, this is usually done in benchmark format (see further 0).

Even before the outbreak of the pandemic, transparency in the corporate bond market had deteriorated since the entry into force of the EU regulation in MiFID II/MiFIR, contrary to the ambition of the regulatory framework.[6] This was particularly evident during the start of the pandemic when market participants had difficulty finding a reliable price picture. In the autumn of 2020, in connection with the first round table, Finansinspektionen commissioned the Swedish Securities Markets Association, which represents banks and securities companies, to quickly investigate how to improve transparency in the Swedish corporate bond market.[7] This resulted in self-regulation in the form of a recommendation in this area, which came into force on 1 July 2021.[8] In brief, the recommendation requires the industry to publish aggregated information on transactions completed on the Swedish corporate bond market (SE ISIN) at the end of the day. The information is collected from one supplier and is available to the public. The self-regulation thus applies in addition to the publication of transactions to be made in accordance with the regulations in MiFID II/MiFIR.

Liquidity risks for different types of fund are an issue that is being worked on both internationally, for example in the Financial Stability Board (FSB) and the European Systemic Risk Board (ESRB), and nationally. In Sweden, Finansinspektionen has stated that the liquidity management of the investment funds is an important key to strengthening the resilience of the Swedish corporate bond market.[9] Finansinspektionen has therefore called for fund managers to make a thorough liquidity analysis dur-

[5] The term benchmark is already used today for major bond issues, but there is no uniform standard for what this entails. The idea of this measure is to establish a more official standard with at least two organisers (banks) and a volume of at least SEK 1 billion.

[6] See Finansinspektionen (2019). MiFID II/MiFIR is Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (MiFID II) And Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (MiFIR).

[7] See the news item “FI wishes to see greater transparency on the corporate bond market” https://www.fi.se/sv/publicerat/nyheter/2020/fi-vill-se-okad-transparens-pa-foretagsobligationsmarknaden/, September 2020. Finansinspektionen. In Swedish only.

[8] See Swedish Securities Market Association (2020).

[9] See the debate article entitled ”Obligationsmarknaden måste ha högre likviditet” (The bond market must have higher liquidity') in *Dagens Industri*, 9 June 2021.

ing autumn 2021 and to take measures if the liquidity of the fund assets does not correspond to the redemption terms. Finansinspektionen says in its Supervision Report that it may be necessary for fund managers to change their investment strategy so that the assets become more liquid, or to adapt the redemption terms for the fund.[10] In the same report, Finansinspektionen also states that most fund managers so far had not made an adequate analysis of how the market might be affected if many actors want to sell assets of the same kind at the same time, and that it is unclear to what extent managers compare the liquidity profiles of the funds with the redemption requirements from unitholders that may arise under stress.[11] Finally, Finansinspektionen also makes some recommendations in the report on how managers can improve their stress tests and liquidity management in general.

There have been international discussions that funds need more tools to manage their liquidity risks, especially in times of stress. In line with these discussions, the Government commissioned Finansinspektionen to investigate the need for more of these tools through the 2021 regulatory letter.[12] Following this, Finansinspektionen suggests that a number of tools should be introduced and regulated by law and regulations. These are anti-dilution levies, redemption gates with limits and two types of swing pricing that take into account transaction costs from net flows in the fund by adjusting the fund unit value or the selling and redemption price.[13] However, one form of swing pricing (adjusted sales and redemption prices) is already deemed to be allowed by law and are therefore available to the funds to begin using after application to Finansinspektionen for a change in the fund regulations. This also applies to the anti-dilution levies. Finansinspektionen has stated that investment funds may use weekly redemption and proposed that funds should be open to trading less often than is currently permitted under Swedish fund legislation. In addition, Finansinspektionen has proposed that fund managers should be allowed to use notice periods.[14]

[10] See Finansinspektionen (2021a).

[11] However, Finansinspektionen points out that most of the studied stress test analyses were carried out before the managers had begun to apply the European Securities and markets Authority (ESMA) guidelines for stress tests, and that they require managers to develop better methods and limit values for their stress tests in accordance with the guidelines and will follow this up in their day-to-day supervision. See also ESMA (2020b).

[12] See, for example, ESRB (2020), ESMA (2020a), IMF (2020) and IMF (2021).

[13] Swing pricing means that either the fund unit value or the sales and redemption price of the fund units is adjusted up or down, depending on net flows in the fund. If, for instance, the fund has large outflows, the price is adjusted downwards, that is, the unit-holders receive less when redeeming. The purpose is to allocate the fund's costs for buying and selling the underlying assets to the unit-holders causing the net flows so that the remaining unit-holders do not need to cover these transaction costs.

Redemption gates are a form of deferment of redemption, that is, temporary closure of trading in investment fund units. Redemption gates can also be made with limits, which means that if the total redemption request in a fund exceeds a certain limit, the fund manager may postpone the redemption of the surplus part.

Anti-dilution levies are charges collected from investors in connection with the sale and redemption of investments fund units. This is to compensate for the transaction costs incurred by the fund in the purchase and sale of underlying assets resulting from the subscription to, or redemption of, investment fund units. As with swing pricing, the aim is to prevent transaction costs from affecting existing or remaining unitholders in the fund, i.e. to prevent dilution of fund assets.

[14] See Finansinspektionen (2021b).

In view of the coronavirus pandemic and turbulence in the corporate bond market, the Swedish Investment Fund Association has made it clear that there was no good risk measure for reporting the credit risk in the fixed income funds. To provide unitholders in fixed income funds (including funds investing in corporate bonds) with better information on the credit risk priced in the market, but also to a certain extent the liquidity risk, in the funds, the association has therefore developed a self-regulation that has started to apply in 2021.[15] The self-regulation is mandatory for all of the association's member companies and requires them to report in annual reports and interim reports a key figure known as 'spread exposure'.[16] The risk measures usually used for funds are based on historical standard deviation, which, for example, placed corporate bond funds in the lowest risk classes prior to the outbreak of the pandemic. This is because the financial markets had shown a relatively stable development in recent years, and thus a low standard deviation. In addition, prices are generally sluggish in the corporate bond market, since trade volumes are often small when the market is stable. This probably led to many unitholders underestimating the risks of saving in corporate bond funds prior to the outbreak of the pandemic. As developments in March 2020 showed, the fund unit values in interest-rate funds, such as corporate bond funds, may also fall sharply in certain situations.

The Riksbank's proposals for measures in the Financial Stability Reports

The Riksbank's reports, *Financial Stability Report 2021:1* and *Financial Stability Report 2021:2* highlighted a number of proposals as to how the functioning of the Swedish corporate bond market could be improved. These concern making higher demands, on the one hand, of the corporates issuing bonds and the banks assisting in the issue process and in their role as intermediaries in the market, and, on the other hand, higher demands on the funds in their role as major investors in the market. This Riksbank study describes in greater detail the measures proposed in the Financial Stability Reports, and explains their background and why they can help to solve some of the fundamental problems in the market.

[15] See The Swedish Investment Fund Association (2021).

[16] The spread exposure shows the size of the fall in value of a fixed income fund, measured as a per cent of the fund's value, if the interest difference between the fund's holdings and government bonds is doubled.

2 Important funding market for corporates

The Swedish market for corporate bonds has few issuers compared to the number of corporates that have bank loans. A relatively high proportion of the bond volume does not have a credit rating and many of the corporates that have issued bonds are within the property sector. This may pose a risk to financial stability, as disturbances in the property sector may spread to other sectors via the corporate bond market.

2.1 Corporate bonds account for a significant proportion of corporates' funding

Corporate bonds account for just above one third of the total loan debt held by Swedish corporates (see Chart 1).[17] This increase means that many corporates are increasingly dependent on the smooth functioning of the corporate bond market. If the market is turbulent when corporates are to refinance or issue new bonds, this may mean it is much more expensive to borrow or that corporates are not able to borrow at all. In October this year, the volume of corporate bonds corresponded to approximately SEK 1,400 billion, of which just under half were issued in Swedish krona and the remainder in foreign currency, mainly euro.

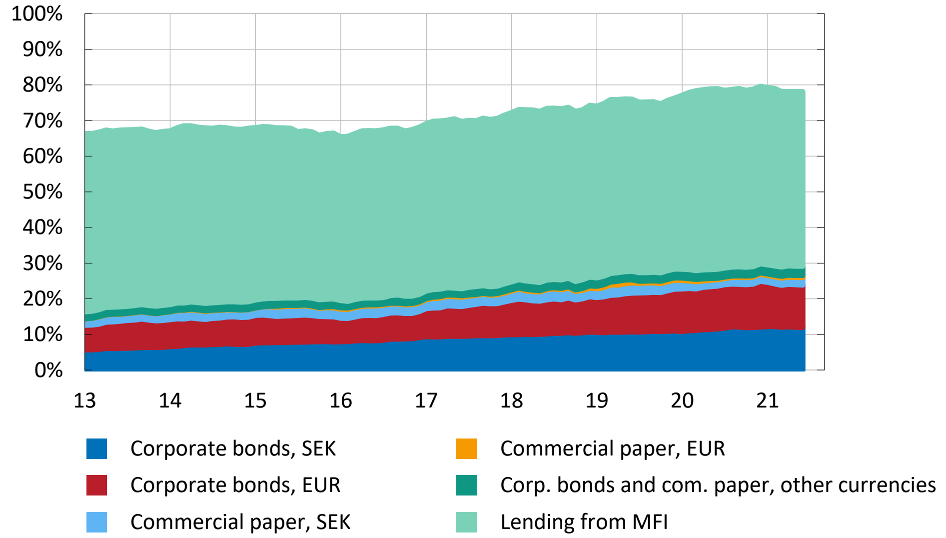
One reason for the increase is the fact that corporates have wanted to diversify their funding. Another reason is the generally low interest rates having made it increasingly cheaper for corporates to issue corporate bonds. There is, however, considerable variation between corporates, with some having a debt that consists almost completely of corporate bonds, while others do not fund their operations via the corporate bond market at all. Moreover, investors have to a large extent requested corporate bonds to increase the return on their fixed-income investments, which in turn has led to lower interest rates and lower credit spreads for many corporates.[18]

[17] Swedish corporates with no loans are not included in this comparison.

[18] See Wollert (2020).

Chart 1. Swedish non-financial corporates' loan funding as a percentage of GDP

Per cent



Note. Covers loans to Swedish non-financial corporates. Monetary Financial Institutions (MFIs) include banks, mortgage institutions, financial corporates, municipal and institutions financing municipalities and corporates, monetary securities corporates and monetary investment funds (money market funds). Group loans are excluded. Quarterly data on GDP has been interpolated on a linear basis. For corporate bonds and commercial paper the category other currencies includes for instance US dollars.

Source: Statistics Sweden and the Riksbank

2.2 Few and large issuers on the Swedish market

The Swedish market for corporate bonds consists of few issuers compared to the number of corporates that have outstanding bank loans. Those who issue the bonds are mainly relatively large corporates and corporates that are concentrated to certain sectors, particularly the capital-intensive property sector.

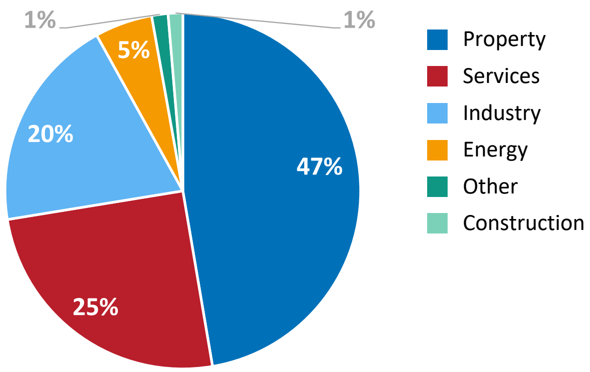
The largest issuers account for a significant share of the volume

A few corporates account for a relatively large share of the Swedish market for corporate bonds. At the end of October this year, approximately 300 Swedish corporates had outstanding bonds in Swedish kronor. Of these, the ten largest issuers accounted for almost 30 per cent of the outstanding volume. The same is true of the Swedish corporates that have issued corporate bonds in euro, where the ten largest issuers account for almost 60% of the outstanding volume.[19]

[19] Several of the Swedish corporates, which account for large volumes in Swedish krona, also account for large volumes in euro. There is thus a group of corporates that accounts for a large proportion of the total volume of bonds issued by Swedish corporates in Swedish krona and in euro.

From an industry perspective, corporates within the property sector are the largest category of issuers of corporate bonds in Swedish krona. In October this year they accounted for about 50% of the total outstanding nominal amount, while corporates in the services sector accounted for 25% (see Chart 2).[20] As corporates within the property sector form a large part of the corporate bond market in Sweden, this means that problems in the property sector that affect the bond market can spread to other actors with connection to the market.

Chart 2. Shares of outstanding corporate bonds issued by Swedish corporates in SEK
End of October 2021



Note. Refers to nominal amounts.

Source: The Riksbank and Statistics Sweden

2.3 Small issues and many issuers with no credit rating

A large proportion of the Swedish corporates bond financing issued in foreign currency consists of euro. When looking at the structure in the Swedish market it may therefore be relevant to draw certain parallels to the euro market.

Relatively small issue volumes are common

Corporates' strategy with regard to how often they issue bonds and how large issues they choose to make varies considerably. It may depend on the size of the corporate, but also on its preferences in terms of bond maturities and risk diversification, for example in order to reduce refinancing risks. In addition, investors in the bond market in Swedish krona and in euro have different preferences. This in turn affects corporates' ability to issue in the various markets.

As shown in Table 1, the corporates active in the markets in Swedish krona and euro have on average approximately the same number of outstanding bonds in each market. However, there are considerably fewer corporates that have issued on the euro

[20] One reason why corporates in the service sector are frequently present in the corporate bond market is that they often lack collateral, and it is therefore relatively easier for them to obtain a bond loan than a bank loan, since banks require more collateral to grant loans. The fact that property companies also borrow a lot through the bond market can be explained by them having such large loan needs, despite having a high level of collateral, that a certain proportion of the loans need to be taken out without collateral.

market compared with the market in Swedish krona. The table also shows that the average volume in the euro market is significantly larger. This is largely due to investors in the euro market having higher minimum requirements regarding volume, which means that it is mainly larger corporates that are able to issue there. The relatively small volumes of bonds in the market in Swedish krona can thus be partly explained by the fact that smaller corporates are active there and that Swedish investors in this market demand relatively smaller loans.[21] For example, Swedish funds often demand small loans, which can be explained by the fact that they want to invest apace with new deposits in the fund.

Corporates that issue both on the Swedish market and on the euro market often choose to issue several small bonds in Swedish krona, and to make larger issues in the euro market.[22,23]

Table 1. Characteristics of outstanding corporate bonds issued by Swedish corporates

End of October 2021

	Market in SEK	Market in EUR
Number of corporates that have issued	302	71
Number of outstanding bonds	1 128	275
Average - number of outstanding bonds per corporation	3.7	3.9
Average - nominal amount per outstanding bond, SEK M	556	2 278

Note. The nominal amount is expressed in Swedish krona for the euro, too.

Source: The Riksbank and the SCB

Many of the issuers do not have a credit rating

When investors trade in the bond market they always need to assess the credit risk associated with a particular issuer or a specific bond. A credit rating for the issuer or bond may then facilitate, even if the investor is nevertheless expected to make their own analysis.[24,25]

[21] The average nominal amount per outstanding bond of the ten largest issuers on the market in Swedish kronor was SEK 570 million in October.

[22] Small issues are often assumed to result in lower borrowing costs, but can also mean that turnover and pricing on the secondary market become more difficult, which can lead to poorer liquidity, which in turn has the opposite effect. As far as is known, there are no studies of whether large or small issues together give the lowest borrowing cost.

[23] Approximately 10 per cent of Swedish corporates that are active in the corporate bond market issue both in Swedish krona and in euro.

[24] Credit rating is consistently used to mean that there is a public credit rating.

[25] Even if an issuer or a bond has a certain credit rating that is normally associated with a certain credit risk and thus a credit spread, the market can price the bond higher or lower on the basis of its own analyses. Nevertheless, the choice to have a credit rating may contribute to greater transparency around the issuer or bond, for example if the credit report issued in connection with the credit rating provides information relevant to investors' own analyses.

However, the frequency with which individual bonds have their own credit rating varies, so does the need for an individual rating. For example, there is often a greater need for bonds issued by corporates in the property sector that have a large proportion of secured bank borrowing parallel to non-covered bonds. This is because they may have a higher credit risk, and therefore a lower credit rating, than the issuer itself has.[26]

The credit rating indicates whether the issuer, the bond or both belong to the category "investment grade", which is the higher rating, or "high yield", which is the lower rating.[27] Such information is important and sometimes necessary for investors, since they may have an investment mandate which provides that investments may only be made in assets with credit ratings. It may also be a question of limits as to how much can be invested in assets belonging to one of the two categories. Usually, it is a question of investors wanting to limit their credit risk and therefore only being allowed to purchase assets in the investment grade category.

Although more Swedish corporates have chosen to obtain a credit rating in recent years, a relatively high proportion – just over a quarter – of the outstanding volume in the Swedish market still lacks a credit rating (see Chart 3).[28] This is a considerably higher proportion than, for example, in the euro market, where only a small proportion lacks a credit rating.[29] One possible explanation for this could be that it is often too expensive for the smaller issuers to have a credit rating. Another explanation could be that there is a demand for corporate bonds without a credit rating. The fact that so many issuers on the euro market have credit ratings can also be due to the need for a credit rating to be included in the various indices for corporate bonds on the euro market. Due to this, many investors in the euro market prefer to buy corporate bonds that are included in indices.

[26] This is because lenders other than those who have invested in the bond may have lent against collateral, which means that they have a pledge with the borrower. This could in turn lead to a higher priority for creditors than for bond investors if the issuer goes bankrupt. The order in which creditors receive their money back in the event of bankruptcy is regulated in accordance with the preferential law laid down in the Swedish Rights of Priority Act (1970:979).

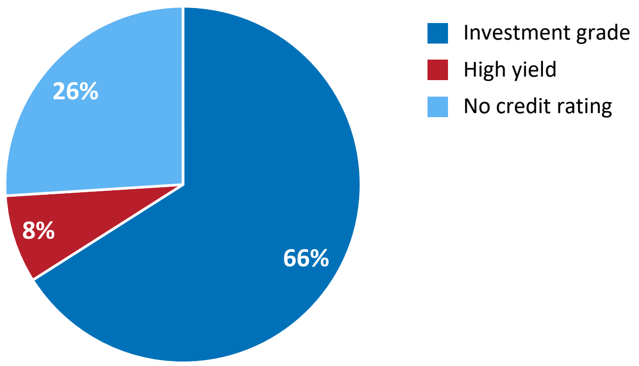
[27] Investment grade is a credit rating equivalent to BBB/Baa3 or higher. High yield is a credit rating equivalent to BB+/Ba1 or lower.

[28] The equivalent of approximately 140 issuers does not have a credit rating according to the same data from Bloomberg.

[29] By the end of august 2020 it amounted to around 8 per cent. See Wollert (2020). The current share is at an equivalent level according to data from Dealogic.

Chart 3. Breakdown of credit ratings for corporate bonds issued by Swedish corporates in SEK

Proportion of outstanding volumes, October 2021



Note. Refers to the credit rating either for the corporation or for the bond. In cases where there are several different ratings, the lowest one has been selected.

Source: Bloomberg

3 The funds are the largest investors

Investment funds are major investors in the Swedish corporate bond market. They also have certain characteristics that make them vulnerable and, ultimately, risk making the underlying market vulnerable. The behaviour of funds in a stressed market situation can thus lead to other investors holding corporate bonds being adversely affected in the form of losses and, in turn, to making it more expensive for corporates issuing on the market. Funds may also have to sell off other assets to free up liquidity, which in turn may lead to problems spreading to other financial markets. The design and behaviour of the funds on the corporate bond market thus affects the functioning of the corporate bond market.

3.1 Swedish funds own a good third of the volume

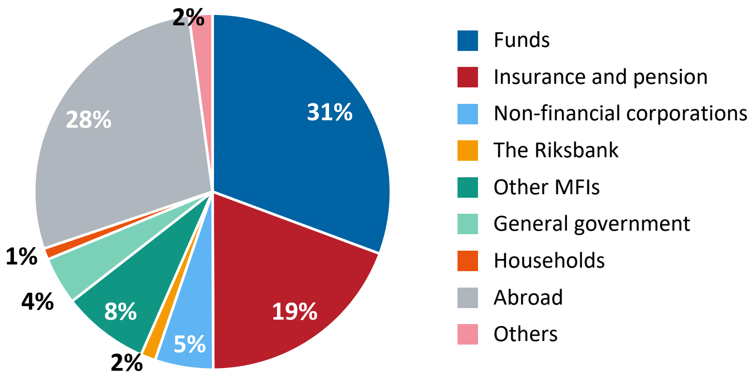
Chart 4 illustrates holders of corporate bonds issued by Swedish corporates in SEK. Investment funds registered in Sweden had 31 per cent of the outstanding volume at the end of the second quarter of 2021. There is probably also a large proportion of foreign funds in the 'abroad' category, which had 28%. These include the funds that Swedish fund managers have to different degrees registered abroad, particularly in Luxembourg. The actual share of corporate bonds in Swedish krona held in funds by Swedish fund managers and which thus to a large extent have Swedish unitholders is therefore likely to be greater than shown in the chart.

Households are a large group of unit holders in the funds investing in corporate bonds, as households often cannot make the individual investments necessary to reach the minimum investment amounts applicable when purchasing bonds directly on the market.[30] The funds thus play an important role in giving more types of investor access to the corporate bond market.

[30] The minimum investment amount in a corporate bond is usually SEK 1 million. The minimum investment amount in a corporate bond fund is often SEK 100.

Chart 4. Holders of corporate bonds issued in Swedish krona

Per cent of outstanding volumes



Note. Refers to percentage of market-valued volumes at end of 2021 Q2 Total outstanding volume is SEK 628 billion.

Source: The Riksbank and Statistics Sweden

3.2 The design of the funds creates vulnerabilities

In addition to their significant ownership in the corporate bond market, the funds have certain characteristics that make them vulnerable and, ultimately, risk making the actual corporate bond market vulnerable.

The funds can be said to be flow-driven in their trade in corporate bonds. This is because the funds buy bonds when unit holders buy shares in the fund. They do this because the funds want to be as close as possible to fully invested in relation to their fund assets for return and potentially other reasons, such as investment mandates. Similarly, the funds may also need to sell bonds in the event of outflows of capital from the fund, that is, if unit holders redeem their capital. This is particularly true if the outflows are large and cannot be covered in other ways. The fact that the funds are flow-driven means that they generally have continuous but small investment needs. This is probably a contributing factor to corporate bonds often being issued in small volumes on the Swedish market.

First-mover advantage – the fastest to the door wins

In a declining market, unitholders may benefit from selling their fund units at an early stage, to the detriment of unitholders who sell at a later stage. This is known as first-mover advantage and depends, for example, on different types of transaction costs that may affect the remaining unitholders if the fund needs to sell assets to cover the outflow. There are thus incentives for unitholders to sell off their fund units quickly if they suspect that the value of the assets will continue falling and that other unitholders will also want to sell. This risks reinforcing already existing sales pressures on underlying markets, such as the corporate bond market, in a stressed situation.

The funds' liquidity transformation can create liquidity risks

Funds that invest a greater part of their fund assets in corporate bonds usually offer daily opportunities for unitholders to redeem their capital. However, since it is not easy to quickly and at low transaction costs convert Swedish corporate bonds compared to many other asset types, this creates a discrepancy between liquidity on the assets side of the funds and on the liabilities side. This means that unitholders can redeem their fund units on a daily basis, but it is not as easy for the funds to sell larger volumes of corporate bonds in a short period of time. It is of course particularly difficult in a market where there are few buyers in stressed situations. In this way, these funds carry out so-called liquidity transformation. This may give rise to a liquidity risk, which means that the funds cannot meet the redemption requirements of the unit holders. In situations where this risk is high, one or more funds can act in a way that creates, reinforces or passes on stress to other players when they try to manage the risk. This means that other investors holding corporate bonds may be adversely affected, in the form of losses if the activity of the funds adversely affects the market. This, in turn, makes it more difficult and more expensive for the corporates to issue on the market. Funds may also have to sell off other assets, if they have them, to free up liquidity, which in turn may lead to problems spreading to other financial markets.

These liquidity risks among certain fixed income funds are not just a Swedish phenomenon. This has also been recognized as a vulnerability in European and international markets. The European Central Bank (ECB) claims that European investment funds have generally continued to reduce their liquidity buffers, especially since COVID-19 vaccinations accelerated. In addition, the ECB claims that fixed income funds that invest mainly in corporate bonds still have a relatively low proportion of liquid holdings in their portfolios. At global level, FSB has also recognised the liquidity transformation among certain fixed income funds as a vulnerability.[31]

Difficult to cover large outflows in a market with insufficient liquidity

As the corporate bond market is characterized by a lack of liquidity, the funds may therefore find it difficult to cover large outflows by selling corporate bonds. Normally, only a very small proportion of the outstanding volumes is traded every day (just over 0.2 per cent).[32]

When funds experience net outflows, this does not necessarily mean that the whole outflow needs to be covered by selling corporate bonds. The funds also have a certain amount of cash. However, this assumes that the cash balance is used. Schrimpf et al (2021) shows in a study of global fixed income funds that funds with a large proportion of illiquid assets sold assets to build up their cash balances during the major price falls and outflows in March 2020. In particular, these are funds that had a low propor-

[31] See ECB (2021) and, for example, FSB (2017).

[32] There are also other measures of liquidity than turnover. Some of these are presented and illustrated for the Swedish corporate bond market in Finansinspektionen (2020). One overall conclusion in the report is that the market is characterised by limited liquidity.

tion of cash before the outbreak of the pandemic. Funds that already had a high proportion of cash tended to a larger extent to use cash rather than build up their cash balances further.

3.3 The funds had different preconditions when the pandemic broke out

In March 2020, a number of Swedish fund managers chose to suspend redemptions, that is to say to close temporarily, with regard to some of their funds with holdings in Swedish corporate bonds. At most, around thirty or so funds were temporarily closed, which corresponded to just over SEK 120 billion in managed assets. All the funds stated as reasons for the closure that the price picture in the corporate bond market was unreliable and that they were thus unable to calculate a reliable fund share value. However, there may have been further contributing factors to the closures.

A comparison of the funds that closed temporarily and those that did not close in March 2020 shows that the funds that closed had on average a lower proportion of cash and a lower degree of diversification in their holdings. They also had on average larger outflows than those that did not close. This comparison can be found in the *Appendix*.

It may be worth pointing out that temporary closures are a liquidity management tool that the funds can use in exceptional cases and that are justified out of consideration for the fund owners' interests. The fact that many funds closed in March 2020 may have contributed to the Swedish corporate bond market not being hit by even greater price falls than was the case, as it removed some immediate sales pressure from the market.

4 The banks' role on the market

This section discusses the different roles of banks in the corporate bond market, both in the primary and secondary markets. In the primary market, banks help borrowers with everything from advice to the practical organization of issues. In the secondary market, the banks act as dealers and set prices on the bonds.

4.1 The banks help corporates in the issue process

When a company is to issue new bonds in the primary market, it turns to one or more banks that help the company in the different stages of the issue process. The role of the banks can range from advice on financing strategy to arranging both bond programmes and a specific issue. New borrowers in the market use banks to help produce prospectuses and other documentation, often in the form of a so-called MTN programme.[33] Borrowers who are already established on the market and have effective MTN programmes can then appoint banks that are part of the respective bond programme to arrange a specific issue of bonds in practice. The banks that have been given the mandate then have the task of helping the company to determine a marketing strategy, an appropriate issue volume and a possible price level, and then to publicly market and place the bonds with investors.

The banks that organise bond issues and trade in corporate bonds normally also have other transactions with the corporates that issue bonds. For example, they may provide corporates with different types of credit facilities, such as back-up facilities that corporates can use when they are unable to refinance on the market for various reasons. For corporates that have public credit ratings, this type of back-up facility is often a requirement for obtaining a certain credit rating.

4.2 The role as price-setters and dealers in the secondary market

The banks that have helped the corporates to issue the bonds usually also undertake to price them on the secondary market, whether or not there is trading in the bond. These prices are governed by either what their customers are prepared to pay, what they themselves are prepared to trade for, or how they assess the current state of the market. Over time, there are often additional price-fixing agents in the form of other banks and bond brokers, if there is sufficient customer interest to make it interesting for them to participate. There are around ten or so players who set prices in the Swedish secondary market for corporate bonds. In this context, it is worth noting that

[33] MTN stands for Medium Term Note. This means that a framework amount is set up from which the issuer can issue regularly.

those who set the prices have no obligation to buy the bonds themselves at the prices in question, but rather broker deals between the different investors.[34] Price setting is also a way for the banks to build trust with issuers and generate new deals on the primary market.

FACTS – the role of the banks has varied over time

When the Swedish capital market gradually emerged in recent decades following deregulation in the mid-1980s, there were different issue methods. In general, the issue volumes were very limited at the beginning and almost all issues were carried out as private placements aimed at one or a few investors. The banks that arranged the issues also purchased some newly issued bonds to have a stock of trade and be able to sell on to investors at a later stage. This was done by the banks entering into an underwriting agreement with the borrower.

In recent decades, larger issues have generally been made on ’best effort base’, in other words, the bank provides advice to the borrower throughout the issue process and places the bonds at the 'best effort base'. The advantage of this type of issue, which is carried out in public, is that a more transparent process is created, as pricing takes place in a book-building process that investors can follow.

Simple underwriting according to an older model would probably no longer be accepted by the market as it is not transparent and the issue therefore risks being less well placed in terms of prices on the market and trading risks being less liquid. The Swedish capital market has gradually adopted the same type of issue process as the euro market over the past 10 to 15 years, although there are still a great many private placements in various forms.

The banks have not entered into any formal retail agreements (so-called market-maker agreements) with issuers of corporate bonds and thus do not trade in corporate bonds with binding commitments, either on the Swedish market or on international markets. In the same way as banks act in the issue process, trading on the secondary market also take place according to a kind of 'best effort base'. Regular market-making would require the banks to both be able and willing to take on risks on their own balance sheet to a much greater extent than they do today.

With regard to the banks' willingness to take risks on their balance sheets, developments have rather been in the opposite direction, especially since the tightening of the international capital and liquidity rules (Basel III) was introduced in the wake of the global financial crisis in 2008-2009. The aim was to increase the banks' resilience, as they previously held too little capital and liquidity. However, one consequence of the new rules was that banks' trading books became more expensive, because they needed to keep more capital and liquidity than before for their holdings of corporate bonds. It therefore became less profitable for the banks to keep corporate bonds on

[34] However, the bank or banks that have helped to issue a bond may undertake to support trade in this bond. In this case, there will be an agreement between the issuer and the bank or banks.

their own balance sheets. The banks' trading books are therefore relatively small today and can quickly become full in times of stress.

5 Concluding remarks and possible action proposals

This section outlines possible proposals for action, addressed to issuers, investors and banks, with a view to improving the functioning of the market and thereby strengthening its resilience. This is important because it has gradually become an increasingly important market, both from the point of view of financing and investment.

5.1 Issuers can contribute to a better functioning market

Corporates that use the corporate bond market for their funding can contribute in various ways to it functioning better in terms of transparency and liquidity. This can be done by increasing the degree of standardisation of the bonds issued and by issuers providing the market with more information about themselves.

Issuing larger loans can contribute to better liquidity

One way to improve liquidity and transparency in the secondary market is to make larger issuers issue fewer but larger bonds to a greater degree. Finansinspektionen is currently working, together with representatives of several market players, on developing a standard for a Swedish benchmark bond that will contribute to that very thing. Such a measure would namely increase the likelihood that each bond is more frequently during its term. The issuer can benefit from this by establishing a clearer credit curve on the market and thereby facilitating investors' perception of the price picture of the issuer's bonds.[35] However, this measure may contribute to a higher cost for the issuer in the short term. On the other hand, this can be offset by lower long-term costs if investors value improved liquidity.

Although Finansinspektionen's work on a standard is mainly aimed at larger issuers, it can also benefit small and medium-sized issuers if this means that the market for corporate bonds has better transparency and liquidity.

More banks in the issue process may lead to increased trading in the bond

Another reason to establish a standard for a Swedish benchmark bond is that it involves more arrangers (banks). This increases the likelihood that more and different investors will be reached as the different banks complement one another. More participating banks may also increase the likelihood that they will continue to trade in the

[35] A credit curve shows the relationship between the credit spread and the maturity of the issuer's bonds. Under normal market conditions, the credit curve has a positive slope, which means that the credit spread rises as the maturity increases.

bond. This could mean that more banks know the issuer, and since they get involved in the issue process it will also make it easier for them to set prices in the bond.

More credit ratings reduce transaction costs

Another way of creating increased liquidity and better transparency is for a higher proportion of corporate bonds to have a credit rating. For example, when more issuers and bonds have a credit rating, it may reduce the difference in the information between the issuer/arranger and investors in the market. This may in turn help to reduce the transaction cost and risk associated with investing in a corporate bond.

5.2 Investors have a major role to play in improving the market

Investment funds are major investors in the corporate bond market. At the same time, they are vulnerable to large redemptions from unitholders. This vulnerability means that they can create or reinforce stress on the corporate bond market and that this stress can be passed on to other players and other markets.

The information provided by the funds has not reflected liquidity risks

In the wake of the turbulence in March 2020, when households and others wanted to sell their shares in corporate bond funds, there have been discussions that these households might not have fully understood the risks of funds investing in corporate bonds.[36] This was partly due to the fact that in some cases fund managers did not market the funds in a fair manner. Funds focused on corporate bonds must therefore provide information to their unit holders that accurately reflects the liquidity risks that exist. The funds need to make clear to the unitholders that the holdings are not liquid in all market situations and that they therefore cannot always expect to make immediate redemptions.

It is therefore a good thing that, since the turbulence in March 2020, Finansinspektionen has called on fund managers to ensure that the information on liquidity risks provided in the fund fact sheets is correct. Managers of corporate bond funds should provide information in particular about how liquidity risks can affect the unitholder's investment.[37]

In addition, fund managers may take additional measures. One such measure is to report the key figure spread exposure in as many available formats as possible. For example, by publishing the information on websites and fact sheets, not only in annual reports and interim reports as members of the Swedish Investment Fund Association are required to do. There may also be a need to develop additional risk measures that primarily take into account liquidity risks.

[36] See for instance, an article in Svenska Dagbladet on 11 April 2020, *"Fondkritik – sparare förstod inte riskerna (Criticism of funds – savers were unaware of the risks)"*.

[37] Finansinspektionen (2021a).

Limiting daily redemptions can make a positive contribution

The vast majority of funds that invest in Swedish corporate bonds still offer their unitholders the opportunity to make daily redemptions, even though the law allows them to have a lower frequency of trade. This is partly because the fund platforms where the funds are sold often require daily trade to protect consumers' rights to access their savings capital. However, this must be balanced against the financial stability risks to which the requirements can contribute. To better reflect the liquidity of the holdings and thereby reduce liquidity risk, the possibility of daily redemptions from funds that invest a large proportion of corporate bonds needs to be limited. The fund platforms therefore need to help enable such adjustment by not requiring daily redemptions to distribute the funds.

It is important that the funds have good liquidity preparedness

Funds that invest a large proportion of their portfolio in corporate bonds can improve their liquidity by keeping a higher proportion of liquid funds in their portfolios. This would reduce liquidity risk and thus increase resilience in the event of large redemptions.[38] One step in the right direction is Finansinspektionen's requirement of fund managers in autumn 2021 to conduct a thorough liquidity analysis and to take action if liquidity on the asset side does not meet the redemption conditions.

In addition, fund managers can apply for amended fund rules to be able to apply any of the liquidity management tools that Finansinspektionen has already identified as available today, namely a certain form of swing pricing and anti-dilution levies.. These tools can help reduce first-mover advantage and give fund managers better opportunities to manage stressed market situations. Moreover, it is positive that Finansinspektionen has proposed that more liquidity management tools should be introduced, as well as the possibility of notice periods.[39]

Finally, fund managers need to ensure that they comply with ESMA stress test guidelines in a correct way, so that sufficient account is taken of the liquidity profile and the redemption requirements they may face in stressed market situations.[40]

5.3 The banks are also needed to bring about change

Just as issuers on the market need to help with improvements, the banks that support corporates in the issue process, as well as acting as dealers of bonds on the market, also need to help.

[38] In its stability report, which looks at a more global level, the International Monetary Fund (IMF) highlights the importance of developing a framework for more robust risk management in relation to liquidity risks among funds, for example in relation to liquidity buffers. This also includes the need for a broad toolbox to better manage redemptions from fund unitholders, as well as to be able to identify these liquidity risks at an early stage. These measures are meant to increase the resilience of the global financial system. See IMF (2020).

[39] See Finansinspektionen (2021b).

[40] See ESMA (2020b).

Banks can affect issuers

Some of the proposed measures that were presented regarding issuers can also be influenced with the help from banks. They can, for example, in their advice encourage borrowers to obtain credit ratings and also reveal credit ratings for the bonds, not only for the company, in cases where it adds more transparency. They can also, as far as possible, avoid contributing to small so-called private placements and instead encourage issuers to make larger issues and involve more arrangers.

Banks can contribute to increased market transparency

Banks play a crucial role in the market, and it is therefore important that they also contribute to increased transparency. Above all, they can do this for the bond issues in which they are involved, for example by quickly publishing price data for the bonds, even if these have been sold through private placements. It is also important that the banks continue to fulfil the voluntary reporting according to the recommendation from The Swedish Securities Markets Association. Through the association, the banks could also work constructively and proactive to develop the market in the right direction, both in terms of form and function. This can, for example, be about documentation, trading and issuing processes.

Resale agreements can have positive effects but also disadvantages

Formal retail agreements between banks and issuers could be introduced to increase liquidity in the secondary market. Such an agreement would in practice mean that banks would be paid by issuers to be more active on the market in a similar way to that for covered bonds, for example. However, the disadvantages are that it is likely to be difficult to price this service, especially for bonds with higher credit risk, and it then risks increasing corporates' borrowing costs. Nor has there been any development in this direction in the international capital markets.

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APPENDIX – Funds temporarily closed in March 2020

This appendix describes some characteristics of the thirty or so funds with holdings in Swedish corporate bonds that were temporarily closed in March 2020. This was due to the fact that stress on the corporate bond market led to inadequate information on closing prices and volume trading, which meant that the value of the fund units could not be reliably calculated.

Lower cash share and lower diversification

With the help of data from Morningstar, funds that were temporarily closed in March 2020 could be compared with funds that did not close. The selection comprises two categories of corporate bond funds, *SEK Corporate Bond* and *SEK Flexible High Yield*.[41] The comparison is made for the end of February 2020, that is, what it was like just before the outbreak of the pandemic. Table 2 displays the results of this comparison.[42]

Table 2. The portfolio composition of Swedish corporate bond funds, end of February 2020

Shares of the portfolios and number of portfolios, respectively

	SEK Corporate Bond		SEK Flexible High Yield	
Closed temporarily in March 2020?	**Yes**	**No**	**Yes**	**No**
Percentage of cash, %	0	7	7	13
Percentage of corporate bonds, %	83	74	82	77
Number of bonds in the portfolio, #	89	141	120	128

Note. Refers to unweighted averages rounded to the nearest integer.

Source: Morningstar

On the basis of the comparison, it can be concluded that the funds which temporarily closed in March 2020 had, on average (not all) initially poorer liquidity preparedness in the form of a lower proportion of cash than the funds which did not close and a lower degree of diversification; both in terms of a lower proportion of other assets

[41] The SEK Corporate Bond category includes funds that mainly invest in corporate paper issued in Swedish krona with an investment grade rating (equivalent to BBB-/Baa3 or higher). The category SEK flexible High Yield includes funds that either invest only in commercial paper issued in Swedish krona with a High Yield rating (BB+/Ba1 or lower) or funds that have varying exposure to higher risk bonds.

[42] Note that, in addition to corporate bond funds, some other types of funds with holdings in corporate bonds were temporarily closed in March 2020 (for instance, single mixed funds and liquidity funds/short-term interest funds). These are not included in the table.

than corporate bonds and in terms of fewer bonds in the portfolios than the funds that did not close.

Generally larger outflows

Swedish corporate bond funds as a whole had net outflows of just over SEK 23 billion in March 2020, corresponding to just over 15 per cent of their total fund assets.[43] In Table 3, the same groups of Swedish corporate bond funds are compared as above, although with regard to net flows. It can be noted that the funds which temporarily closed in March 2020 had on average (not all) higher net outflows than the funds which did not close. However, there is a large spread between individual funds.

Table 3. Net flows of Swedish corporate bond funds, March 2020

Percentage of total fund assets

	SEK Corporate Bond		SEK Flexible High Yield	
Closed temporarily in March 2020?	**Yes**	**No**	**Yes**	**No**
Net flows, %	-13	-3	-47	-13

Note. Refers to unweighted averages rounded to the nearest integer.

Source: Morningstar

[43] Source: Macrobond.

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