Economic Commentary

The development of risk premiums on covered bonds during the corona-virus pandemic

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Economic Commentaries

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Summary

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This commentary examines how yields on covered bonds, also commonly known as mortgage bonds, developed during the coronavirus pandemic until the beginning of the summer of this year.[2] Like all market rates, these yields are affected by expectations of monetary policy and by risk- and liquidity premiums. In addition, they are affected by specific factors on the market for covered bonds and by the funding terms of individual institutions.

Differences in maturity and coupon rates mean that it may be misleading to compare bond yields directly to each other. Consequently, a measure – a type of yield spread or premium – is calculated here that makes it possible to highlight the part of the development of the yield that is specific to the covered bond market and that makes the bond yields of the various institutions comparable.

This measure shows that yields on institutions' bonds with a maturity of between three and five years rose in connection with the outbreak of the pandemic in March 2020 but then fell sharply until autumn 2020. The turbulence that prevailed in financial markets and the fact that many measures were implemented at approximately the same time by both central banks and governments, both in Sweden and abroad, makes it difficult to determine how much the Riksbank's various measures contributed to this. On the other hand, it can be noted that the premiums specific to covered bonds, which initially increased during the pandemic, fell to virtually zero after the Riksbank offered to buy bonds. The yield spread between institutions' bonds also shrank and yields also fell for covered bonds that the Riksbank has not purchased.

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[2] A covered bond may have different types of underlying collateral. In Europe, for example, there are public covered bonds, for which the collateral is formed of infrastructure projects and the funding is guaranteed by the public sector. The main underlying collateral for Swedish covered bonds is housing owned by households, so they are consequently also known as mortgage bonds.

1 How did premiums on covered bonds develop during the pandemic?

1.1 Background to the purchases

In the spring of 2020, the coronavirus pandemic caused a sharp decline in economic activity worldwide. The economic situation for households and companies was adversely affected as authorities imposed restrictions to varying degrees to combat the spread of infection. Uncertainty over the economic effects of the pandemic led investors to try and reduce the risks in their portfolios and to seek safe and liquid assets. Worldwide, the prices of shares and other riskier assets fell. Measures of risk premiums, such as yield spreads between higher risk bonds and safer investment options, rose rapidly.

In order to mitigate the consequences of the closing down of economies and to soften reactions on the financial markets, governments and central banks took extensive measures to make economic policy more expansionary. The central banks supported the financial markets through the purchase of financial assets and liquidity support for the banks so that the markets could continue to function. In Sweden, the Executive Board of the Riksbank decided on a number of different measures to keep interest rates low and ensure continued lending, thereby supporting the Swedish economy. One of the measures agreed was the purchase of covered bonds. One of the reasons given for this measure was to achieve a broad pass-through on interest rate setting.[3] It has been shown that the Riksbank's purchases and holdings reflect the supply of bonds from different issuers and for different maturities.[4] However, in order to investigate interest rate setting, we need to look more closely at what has happened to the yields on the institutions' bonds.

1.2 Premiums on covered bonds

In order to isolate the part of interest rate development that is specific to the market for covered bonds, a measure needs to be developed that identifies variations in expectations of monetary policy and general risk premiums such as the term premium. In addition, yields on bonds with different remaining times to maturity and different coupon rates are not directly comparable.[5] This commentary therefore reports a measure of yield spreads calculated according to a method that handles both these

[3] See annex to the minutes, 20 March 2020, "Purchase of covered bonds for monetary policy purposes", Sveriges Riksbank.

[4] See, in particular, Figures 5 and 6 on pages 10-11 in Birging and Hansson (2021).

[5] This method of comparing yields has the advantage of allowing constant monitoring of the actual market price of the bond, which is observable. The alternative would have been to calculate a synthetic yield curve in which maturities and coupon effects can be isolated, and then comparing it to a corresponding risk-free interest rate with the same maturity. However, adjusting for coupon and maturity may entail introducing sources of error, while the direct link to the observed market price disappears.

aspects.[6] In short, the method involves calculating the difference between the actual price of a bond and the hypothetical price of the same bond with a discount rate containing only expectations of the short, risk-free interest rate, which is to say the Riksbank's policy rate, and a term premium.[7] At the same time, the method corrects for differences in maturities and coupon rates between bonds, which is necessary if different bonds and institutions are to be compared. Market participants often use what are known as swap rates to discount, but sometimes also use yields on government securities. A discount rate is used here, which is calculated using the market pricing of the expected policy rate and is regularly included in the Monetary Policy Report.[8] This approach makes it easier to analyse the yields on the covered bonds in a monetary policy context.

1.3 How did the premiums develop for the bonds the Riksbank has purchased?

Figure 1 shows the development of these yield spreads before and during the coronavirus pandemic. We see that before the coronavirus pandemic, the yields on bonds from all institutions were 30 to 40 basis points higher than the yield on a bond discounted using the market pricing of the expected policy rate. The market thus priced a clearly positive premium for covered bonds, just as it did for other private bonds. However, compared to corporate bonds, the premium was relatively small.

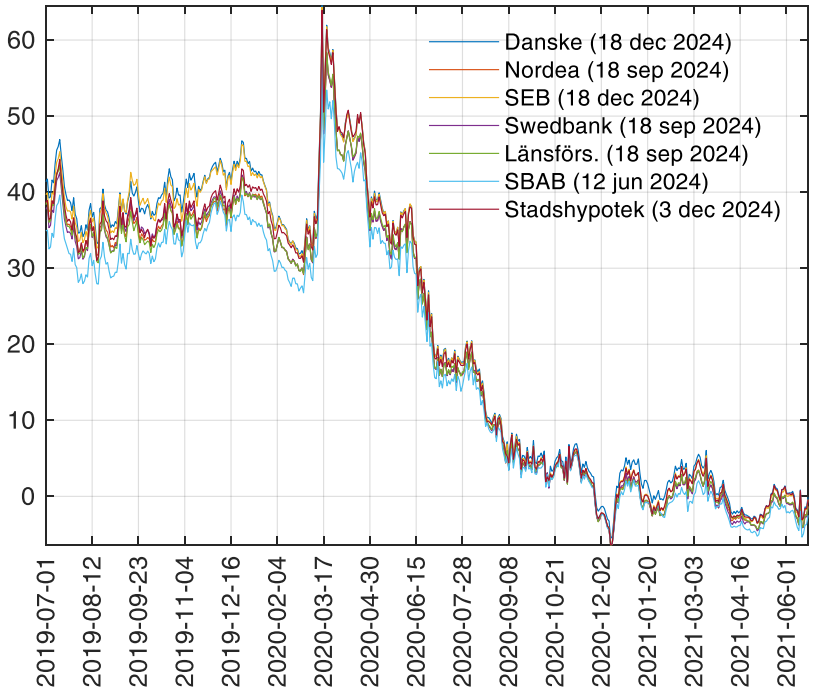
[6] The method is described in more detail in Gilchrist and Zakrajšek (2012). The method is reminiscent of the so-called asset swap spread (ASW), in which the present value of the cash flow for a higher risk bond is discounted by the swap curve and then compared with the actual price. The difference here is that we use another discount function that is easier to interpret in terms of monetary policy.

[7] It is therefore assumed that the expectations of monetary policy and the term premium are the same for the discount rate as for the yields on covered bonds. This assumption is realistic as monetary policy affects the risk-free interest rate in the economy. In addition, the term premium can be assumed to be the same in all bond markets, as it fully reflects the risk of owning a long-term bond compared to the short-term risk-free interest rate. However, it cannot be ruled out that the yield spread calculated here between covered bonds and a hypothetical covered bond may also depend on the duration of the bond. Consequently, one assumption made here is that a possible effect like this would not be affected too much by the bonds from the start of the investigation having maturities of more than four years, gradually changing to around three years.

[8] Our use of market prices means that we are not necessarily measuring true market expectations and that there may be a term premium in this yield.

Figure 1. Yield spread for benchmark bonds with maturity to 2024 issued by the seven major institutions and corresponding to bonds discounted using market pricing of the expected policy rate

Basis points



Note: A basis point is one hundredth of a percentage point and the term is often used in a financial context. The prices of the covered bonds refer to the average between the buy and sell price.

Source: Bloomberg, the Riksbank and the author's own calculations.

Before the spring of 2020, there were some differences among yields between the institutions, but they were not particularly large. The yield on SBAB's bond was the lowest, while yields on the bonds from Danske Bank and SEB were the highest. In March last year, the coronavirus pandemic began to have noticeable repercussions on the financial markets, with the result that risk premiums for all institutions rose.

On 20 March 2020, the Riksbank announced its intention to start purchasing covered bonds. Figure 1 illustrates that yield spreads began to decline gradually at the end of March 2020 and that they were approaching zero in the autumn of last year. This means that the institutions' bonds are discounted to the market price of the expected policy rate.[9] In other words, the market expected that the return on the bonds would be in line with the return obtained from an investment at an interest rate corresponding to the expected policy rate over the same period.

[9] The maturity of the bonds is becoming increasingly short as time passes. However, the synthetic price to which the actual bond is compared always has exactly the same maturity and, in mid-2021, the bonds analysed have a remaining maturity of three years or more.

This development indicates that risk premiums fell to virtually zero for all bonds.[10] The yield spreads have sometimes even been negative, which is probably due to the fact that the actual and expected overnight rate has been lower than the policy rate. This may also be a result of the many other monetary policy measures decided by the Riksbank, which, taken together, have resulted in a large liquidity surplus in the banking system.[11]

According to the measures shown in Figure 1, the yield spreads between the various institutions' bonds have also decreased significantly compared with the situation prior to March last year. The spread is still lowest for SBAB and highest for SEB and Danske Bank. However, the differences between the institutions' yields are very small. Actual yield developments have thus been in line with the Riksbank's objective of a broad pass-through on interest rate setting in the covered bond market.

1.4 How did the premiums develop for the bonds the Riksbank has not purchased?

The covered bonds that the Riksbank has offered to buy shall be issued in Swedish kronor by Swedish institutions with resale agreements and have a high credit rating. In practice, this means that the Riksbank buys so-called benchmark bonds from seven Swedish credit institutions.

Landshypotek is an example of a participant that issues covered bonds but does not follow the benchmark system and whose bonds the Riksbank has not purchased. Figure 2 compares yield developments for a bond from Landshypotek with principal payments in 2024 with a benchmark bond from Danske Bank, with approximately the same maturity and which is representative of the development of yields on benchmark bonds. As can be seen from the figure, the yields on two bonds have largely developed in a similar way. This development is in line with the ambition expressed by the Riksbank in the monetary policy decision of March 2020 for a broad impact on interest rates in the market for covered bonds.

Skandia Bank also has the right to issue covered bonds but, like Landshypotek, they do not issue benchmark bonds. Skandia Bank has not issued a coupon bond that matures in 2024, but it has issued a bond that matures in 2027. This bond has been analysed in a similar way to the others. Figure 2 shows that yields on Skandia's bonds have also fallen in line with benchmark bonds, even though the yield spread for Skandia's bond rose slightly during the spring of 2021. When the time horizon is as long as it is in this

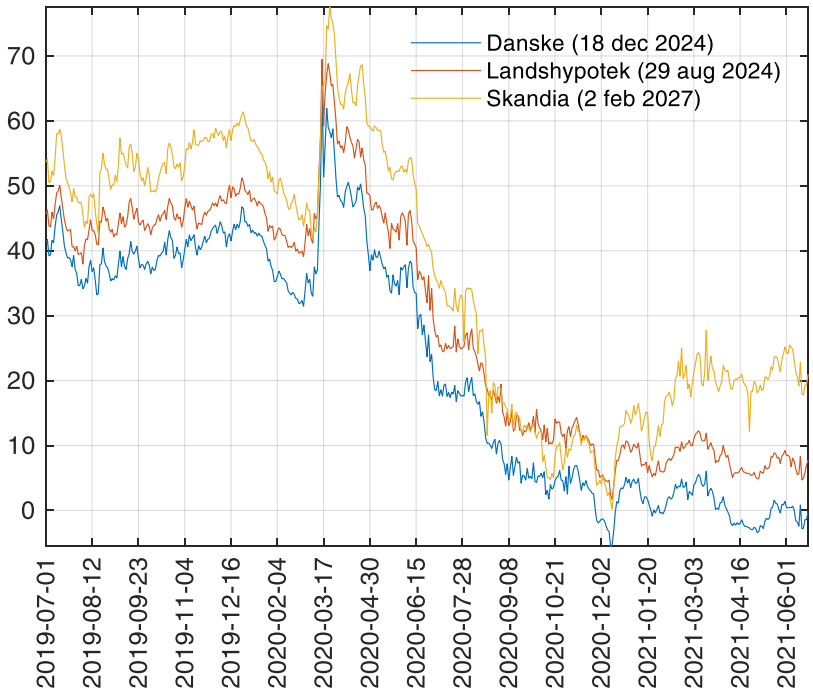
[10] The fact that the yield spread fell to virtually zero does not necessarily mean that the risk premium fell to zero. Although the yield spread reflects the risk premium, it can also be affected by a liquidity premium. When the yield spread is zero, such compensation for liquidity risk must be negative in order for the risk premium to remain positive. Although it cannot be ruled out that the liquidity risk premium is negative, the most likely explanation is that a yield spread of around zero also reflects a risk premium of around zero.

[11] The liquidity surplus has increased as a result of the Riksbank's asset purchases. Nor can it be ruled out that other monetary policy measures, such as lending programmes and amended conditions regarding collateral for borrowing from the Riksbank, have affected rate setting. During the spring, the Riksbank also introduced an operational framework with a narrow corridor that may also have affected interest rate setting.

case, the interpretation of the discount rate as an expression of expectations of the short policy rate is not entirely self-evident. This particular result should therefore be interpreted with particular caution.[12]

Figure 2. Yield spread for benchmark bonds with maturity to 2024 and 2027 issued by Landshypotek, Skandia and Danske Bank (included as reference) and corresponding bonds discounted using market pricing of the expected policy rate

Basis points



Note: A basis point is one hundredth of a percentage point and the term is often used in a financial context. The prices of the covered bonds refer to the average between the buy and sell price.

Source: Bloomberg, the Riksbank and the author's own calculations.

2 Conclusion

This commentary examines how yields on a number of covered bonds in the middle of the maturity segment that the Riksbank had purchased developed during the coronavirus pandemic until the beginning of the summer of this year. The commentary describes a measure that isolates the part of yield developments that is specific to the market for covered bonds and, at the same time, makes the yields of the various institutions completely comparable.

[12] It is doubtful whether the discount function we use can be interpreted as the market price for the expected policy rate when the time horizon is so long. Nevertheless, in order to maintain comparability with the other yields, we use this discount function in this case as well. The yield spread is perfectly comparable to the other spreads, but the interpretation of this particular yield spread in a monetary policy context should therefore be taken with a pinch of salt.

It is impossible to know with certainty that it was the Riksbank's purchases that affected the yields, given the turbulence that prevailed on the markets and given that many measures were implemented at the same time, both in Sweden and abroad. What is clear, however, is that yields on covered bonds fell sharply from the pandemic outbreak until autumn 2020. Yields for the bonds issued by the seven institutions and purchased by the Riksbank, which mature in 2024, were priced by the markets as if they were discounted by the expected policy rate. This means that the risk premiums on these bonds decreased to virtually zero and that individual differences in risk premiums between the bonds of the various institutions also basically disappeared. Yields also fell on bonds not purchased by the Riksbank. This development is in line with the Riksbank's objective that purchases of covered bonds should have a broad impact on the yields on these bonds.

During the pandemic, very low risk premiums have contributed to making financial conditions more expansionary. Although covered bonds have underlying collateral of good quality, this does not mean that the risk premiums should be around zero in more normal circumstances. Therefore, when there is a return to more normal market conditions, it cannot be ruled out that risk premiums will rise.

References

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