

Oct 4, 2022 10:17 CET

Sustainability Credit View

Sustainability a steadfast – what are investors' top priorities?

- Sustainability theme remains strong despite macro uncertainty
- Demand for green-bond issuance from other sectors
- Investors finding SLBs more attractive

Sustainability remains a steadfast amid global macro turbulence

Despite the Russian invasion of Ukraine, an energy crisis, soaring inflation and a looming recession, the drive for investments that facilitate a transition to a more environmentally sustainable economy remains strong. Following an initial drop in the volume of new transactions in Q1 2022, green bonds and other sustainability-related issuance has improved (Bloomberg, 2022). Political initiatives are being rolled out in both the EU and the US at similar levels to the COVID-19 packages. With regards to these developments, we have surveyed representatives from 24 fixed income funds, active in the Nordics, to procure an updated overview of investors' take on the thematic bond market and current trends.

We find gaps reviewing the Swedish green bond market

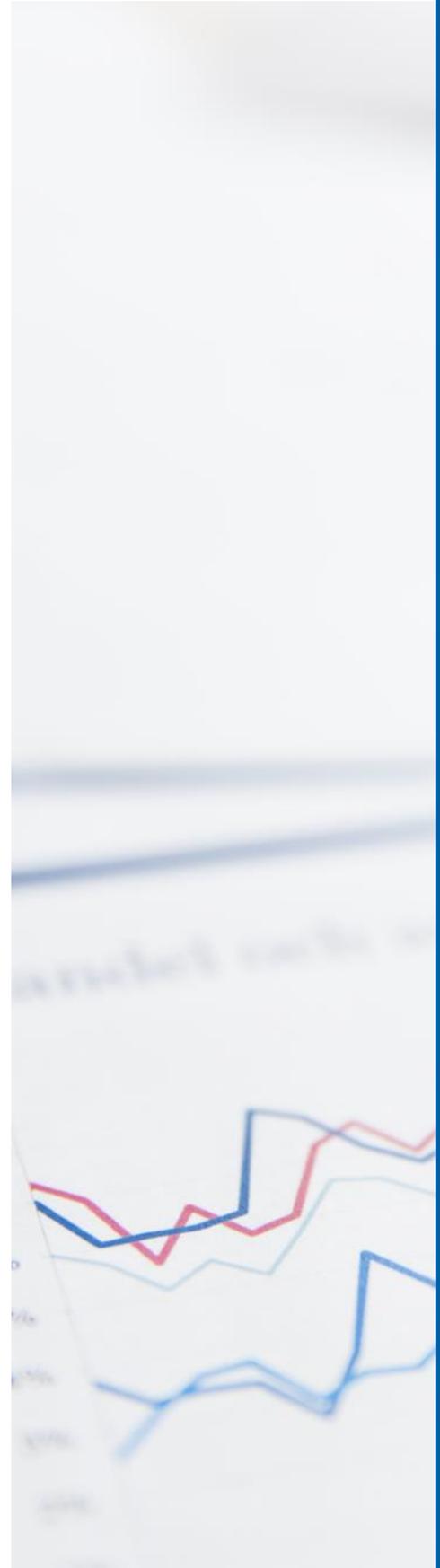
When asking investors, 66% would invest more if the supply of green bonds was larger. Looking more closely at the market, we find there is lots of space for companies other than in the real estate sector, as the market remains relatively homogeneous. In particular, if the company attains a credit rating other than A or BBB.

Regarding the EU Taxonomy and its recent application, 46% of the investors agreed that the EU's 'green dictionary' is important in order to mitigate greenwashing. However, only 34% preferred the EU Green Bond Standard over the Green Bond Principles when investing.

SLBs are becoming increasingly relevant for investors

While the majority of the investors did not prefer the use of 'use of proceeds' bonds (e.g. green bonds) over performance-based bonds (e.g. sustainability-linked bonds). Almost 60% of them said that they would welcome an increased supply of sustainability-linked bonds and would invest more if the supply of these bonds was larger. Still, around 40% preferred environmentally linked KPIs over social and governance-linked KPIs, although many highlighted the importance of them all in directing funds into areas that facilitate the transition to a more environmentally sustainable economy.

Maja Christiansson, maja.christiansson@handelsbanken.se, +46 73 032 60 56



The sustainability landscape: Top investor priorities

We recently conducted an investor survey across some of the largest fixed income funds active in the Nordic bond market. In addition to procuring an updated overview of investors' take on the thematic bond market and current trends, the survey identifies potential gaps in the landscape of sustainable-related bonds. We dive deeper into the use of proceed bonds (primarily green bonds) and performance-based bonds (primarily sustainability-linked bonds), and discuss Swedish investor preferences and their thoughts on second-party opinions.

Still a strong drive for investments that facilitate the transition to a more environmentally sustainable economy

Sustainability remains a steadfast amid global macro turbulence

Following an initial drop in the volume of new transactions in Q1 2022, green bond and other sustainability-related issuance has improved (Bloomberg, 2022). Over a relatively brief period, the market has had to navigate the Russian invasion of Ukraine, an energy crisis and soaring inflation. Furthermore, with recession looming, there is a risk that major investments will be put on hold. However, despite these pressing challenges, the drive for investments that facilitate a transition to a more environmentally sustainable economy remains strong.

Extensive political initiatives are being rolled out in both in the EU and the US to tackle the skyrocketing energy prices and mitigate climate change. For example, this year we have seen more and more payments from the EU's COVID-19 recovery package (where at least 37% of the total must contribute to a green transition). In the EU, new plans such as REPowerEU have been unveiled, which should accelerate the EU's ambitions regarding the transition to renewable energy and improved energy efficiency. Meanwhile, on the other side of the Atlantic, Biden's Inflation Reduction Act will allocate around USD 369 billion to climate and environment-related measures over the next ten years.

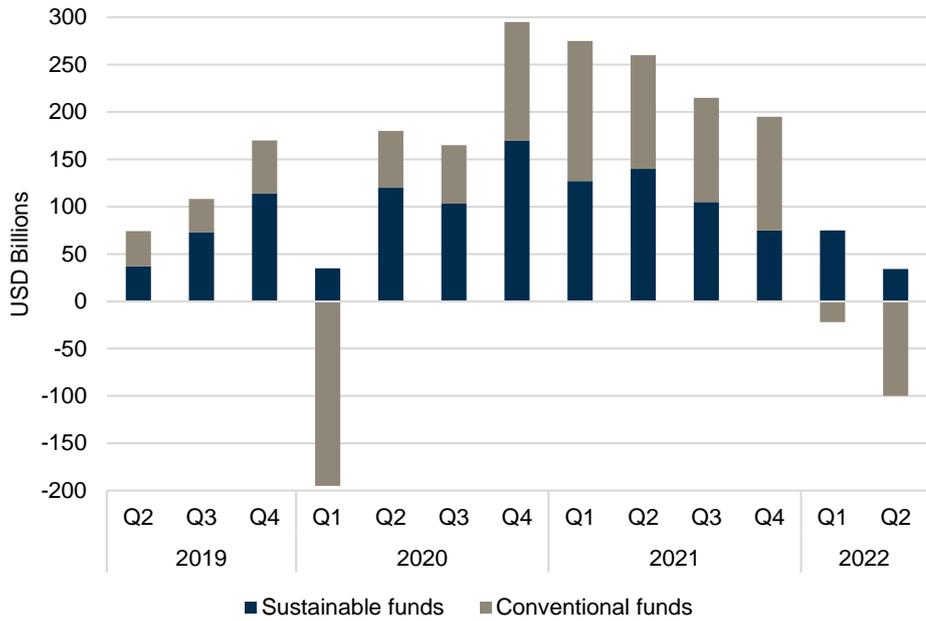
Sustainable fund flows seem to be more resilient; in Europe they represent 18% of total assets

In comparison to conventional funds in Europe, which experienced 2.5 times higher net outflows in Q2 2022 in comparison to Q1 2022, sustainable fund flows seem to be more resilient. This may be due to the fact that ESG-focused investors are typically more value-driven and long-term oriented, and therefore slower to pull money from the funds they are invested in. Going forward, it is difficult to predict the movement of flows, regarding both sustainable and conventional funds. However, we believe sustainable funds have a lot of potential.

In Europe, sustainable funds represent approximately 18% of total fund assets, a number which we expect to keep rising, as investors' sustainability preferences continue to grow. Total assets in European sustainable funds reached SEK 16,373bn in Q2 2022. The MiFID II amendment, which came into effect on August 2, 2022, also has the potential to accelerate the adoption of sustainable investments among investors, despite macroeconomic headwinds.

Figure 1: Sustainable fund flows compared with conventional fund flows (all asset types included)

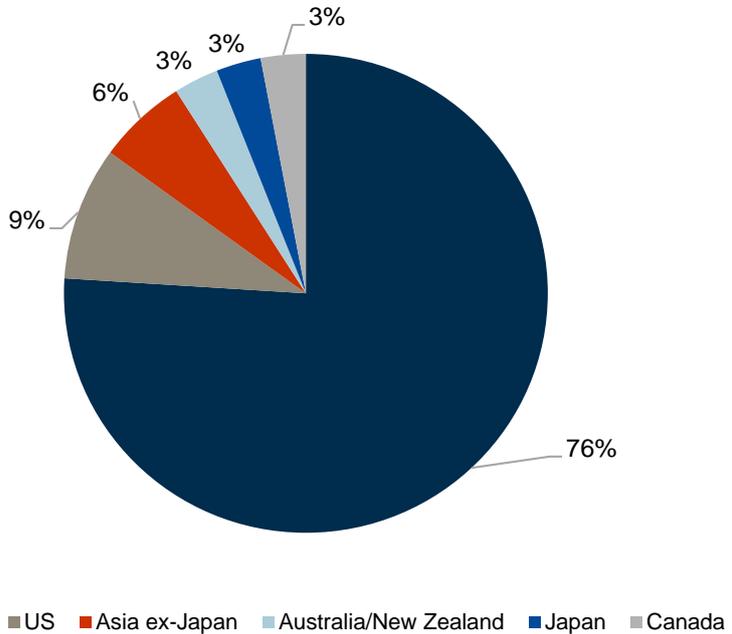
A large drop in conventional funds in Q2 2022, while sustainable fund have been more resilient



Source: Handelsbanken Capital Markets, Morningstar, 2022

Figure 2: Q2 2022 Sustainable Net Assets per region (total of USD 2,465bn)

Europe in the lead for Sustainable Net Assets



Source: Handelsbanken Capital Markets, Morningstar, 2022

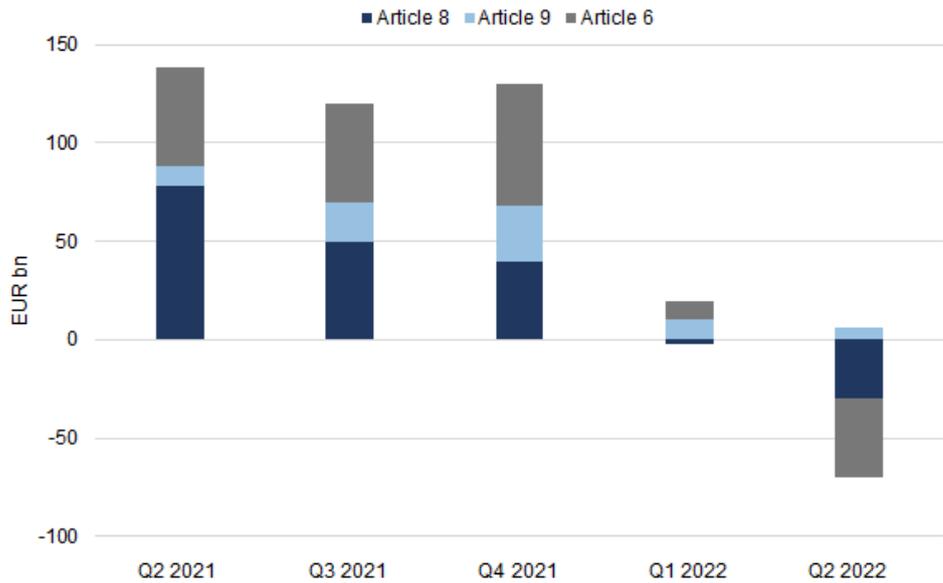
Article 6, 8 and 9 funds: The development

While Article 8 and Article 9 funds vary in asset-class exposure, fixed income remains under-represented. In Q2 2022, fixed-income funds accounted for 30.6% and 15.0% of Article 8 and Article 9 funds, respectively, compared to 32.7% in the Article 6 fund group. However, we believe that fixed-income funds will increase their relative share in the near future.

Fixed-income funds accounts for 30.6% of Article 8 funds and 15% of Article 9 funds

Since March 10, 2021, funds for sale in the EU have been classified by their managers as Article 6, 8 or 9, depending on their sustainability objectives. The Sustainable Finance Disclosure Regulation by the European Union requires asset-management companies to provide information about their investments' environmental, social and governance risks, as well as their impact on society and the planet. In Q2 2022, Article 6 and 8 funds lost EUR 30.3bn in outflows, while Article 9 funds attracted inflows of EUR 5.9bn amid investor concerns of a global recession, inflationary pressure and the conflict in Ukraine. These net inflows were nonetheless lower than the EUR 10.0bn net inflows recorded in the first quarter (see Figure 3).

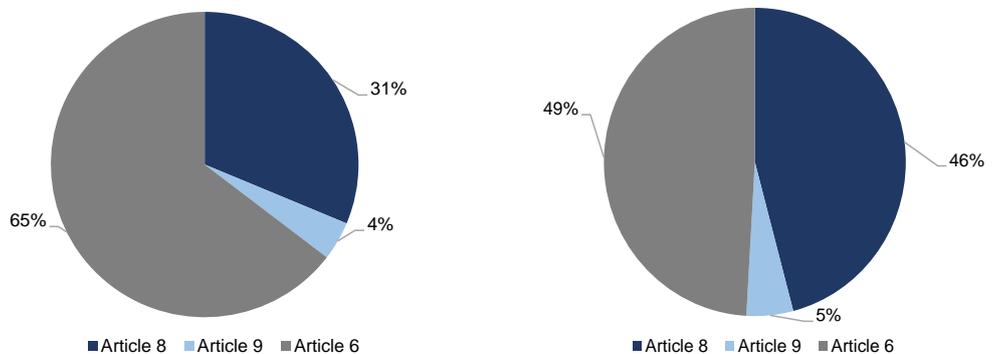
Figure 3: Flow into Article 8 and Article 9 funds vs. Article 6 funds (EURbn)



Source: Handelsbanken Capital Markets, Morningstar, 2022

Figure 4: SFDR fund type breakdown (by number of funds and assets)

Despite the large number of Article 6 funds, the split by asset shows almost a 50% split between 'sustainable' and 'non-sustainable' funds

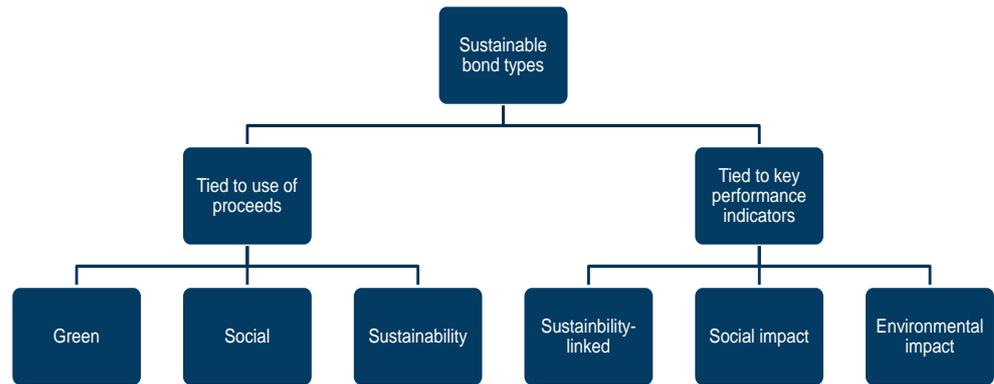


Source: Handelsbanken Capital Markets, Morningstar, 2022

We surveyed 24 of the largest fixed income funds active in the Nordic markets

Comprehensive survey of largest fixed income funds in Swedish/Nordic market
 With regards to these developments, we have surveyed representatives from 24 fixed income funds, active in Sweden and the Nordics. The survey included both qualitative and quantitative inputs and included open-end questions as well as a statements to which the respondent answered using a scale of between 1 and 5, with '1' indicating 'disagree' and '5' indicating 'fully or strongly agree'. In addition to providing an updated overview of investors' take on the thematic bond market and current trends, the survey identifies potential gaps in the market and indicates the direction in which the sector is moving in general.

Figure 5: Various bond-types



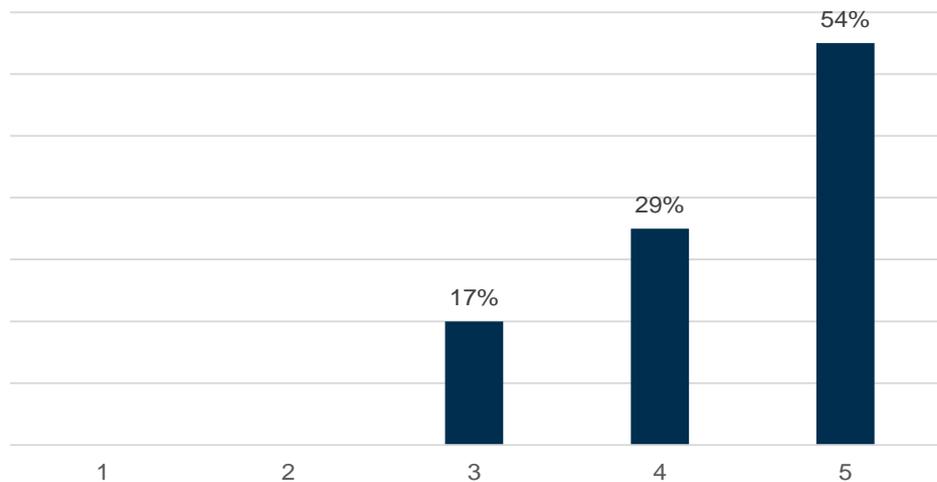
Source: Handelsbanken Capital Markets, 2022

Results of our review: Green bonds

Green bonds are financial instruments whose proceeds are used to finance sustainable investments. Currently, there are several voluntary green bond frameworks that financial institutions can follow when issuing green bonds. Two of the most widely accepted ones on the market are the International Market Association (ICMA)'s Green Bond Principles (GBP) and EU Green Bond Standards (EUGBS). Figure 6 and Table 1 show the aggregated results of our review of investors, investing in 'Use of Proceeds' (in this case green bonds) in the Nordic bond market.

Figure 6: Outcome of our survey on the relevance of green bonds as an instrument for steering capital towards sustainable investments

Over 80% of respondents viewed green bonds as a relevant instrument for its aim



Source: Handelsbanken Capital Markets, 2022

Table 1: Summary of our survey of Swedish investor preferences regarding green bonds in the Nordics (24 investment funds)

Scale (disagree to fully agree)	1	2	3	4	5
Green bonds should be premium priced	12.5%	41.7%	25.0%	16.7%	4.2%
We would invest more in green bonds if the supply was larger	0.0%	8.3%	25.0%	33.3%	33.3%
The supply of green bonds in the Nordics is well diversified (sector)	18.2%	63.6%	13.6%	4.5%	0.0%
The supply of green bonds in the Nordics is well diversified (maturity)	0.0%	4.5%	59.1%	31.8%	4.5%
The supply of green bonds in the Nordics is well diversified (credit risk)	0.0%	27.3%	54.5%	18.2%	0.0%
EU's Taxonomy is necessary to avoid Greenwashing	4.2%	12.5%	37.5%	41.7%	4.2%
Prefer green bonds in line with EU Green Bond Standard over Green Bond Principles	13.0%	4.3%	47.8%	17.4%	17.4%
A second party opinion is necessary to buy a green bond and/or classify the bond as green	4.2%	4.2%	4.2%	20.8%	66.7%
The second opinion suppliers are transparent	0.0%	4.3%	39.1%	47.8%	8.7%

Source: Handelsbanken Capital Markets, 2022

Still gaps in the market, with the majority of investors willing to invest more in green bonds if there was a more ample supply

Overall, we find that the investors are positive towards green bonds as a relevant instrument for directing capital towards sustainability investments, but that most disagree that green bonds should be priced higher. We also find that there is still room in the market, as 66% of the investors state that they would invest more heavily in green bonds if the supply was stronger. We also note, perhaps not unsurprisingly, that the investors (over 80%) were least satisfied with the lack of diversification in terms of sectors. This is likely attributable to the Nordic bond market's overall characteristics as well as the nature of the green bond instrument. In terms of the diversification of maturity and credit risk, the investors' seem to be more satisfied.

One of the more noteworthy findings was how split investors' were regarding the legitimacy of the EU Taxonomy. 38% were indifferent, while 46% found that the EU's Taxonomy is necessary to mitigate greenwashing. This ambivalence may be due to the pre-existing Green Bond Principles, which before the EU Green Bond Standard, were considered praxis in the market. Our survey supports this thesis with almost 50% of the investors being indifferent regarding their preference for the EU Green Bond Standard over the Green Bond Principles. Another feasible explanation for the indifference about the EU Taxonomy's role in mitigating greenwashing may be due to the EU Commission's recent inclusion of nuclear and gas power, which critiques argue weakens the trustworthiness of the EU's 'green dictionary'.

Second-party opinions (SPOs) are important, but lack transparency

We also note that most investors take second-party opinions into consideration. More interestingly, and perhaps slightly more relevant for the long-term trend in the sector may be that the market still seeks higher transparency, with over 50% of investors surveyed agreeing that second parties' assessments lack transparency.

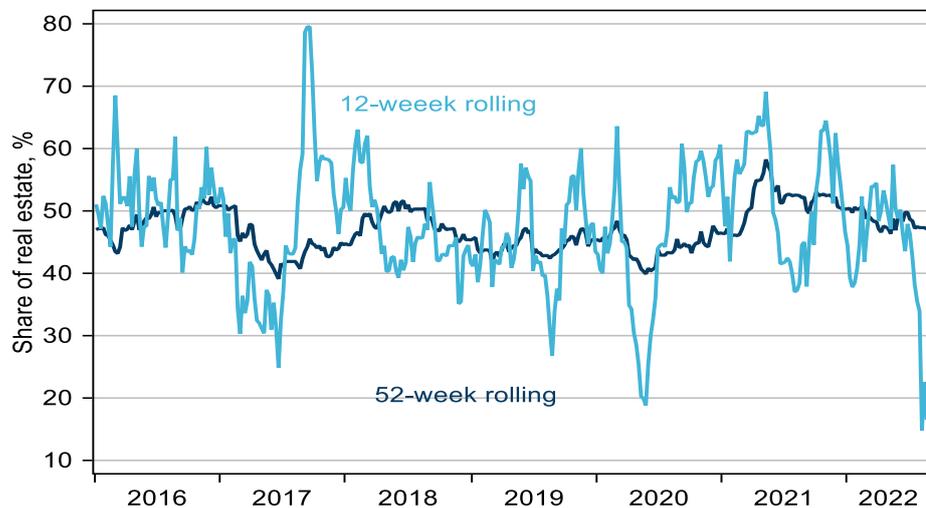
Summary of findings

Do you consider the supply of green bonds in the Nordic market well diversified in terms of sector, maturity, credit risk?

In general, and perhaps not surprisingly, the overwhelming majority of investors recognise (or disagree with) the lack of sector diversification in the Swedish green bond market. We believe this is because 66% of the investors also claim that they would invest more in green bonds if there was more ample supply.

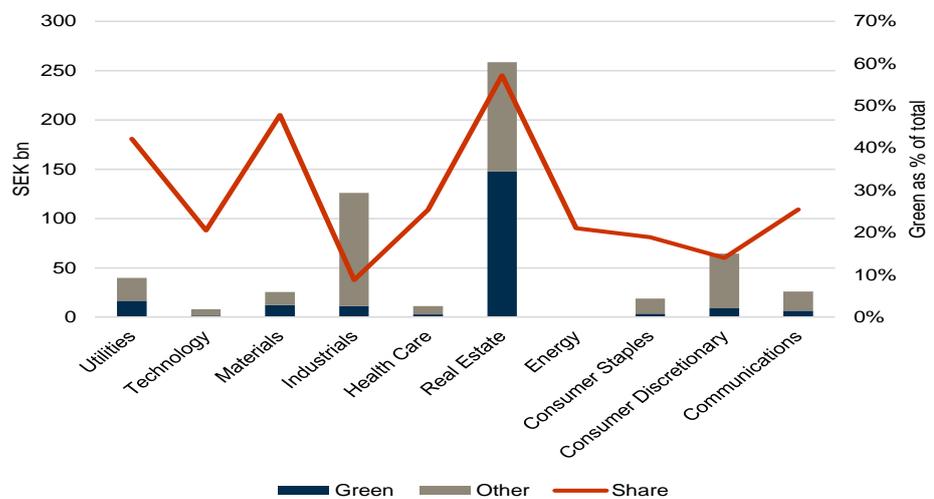
Again, the lack of diversification may be attributable to the Nordic bond market's overall characteristics as well as the nature of the green bond instrument. Over the past year, the real estate sector has represented 45-50% of the Swedish bond market, with some deviation during spring and summer this year due to the turbulent global macro environment. The instrument itself requires adequate underlying assets on the balance sheet to tie the debt to, which is feasible for real estate companies, but more challenging for other sectors with fewer potential 'green assets'.

Figure 7: Real estate sector as a % of SEK bond market



Source: Handelsbanken Capital Markets, 2022

Figure 8: SEK green bond market, sector split



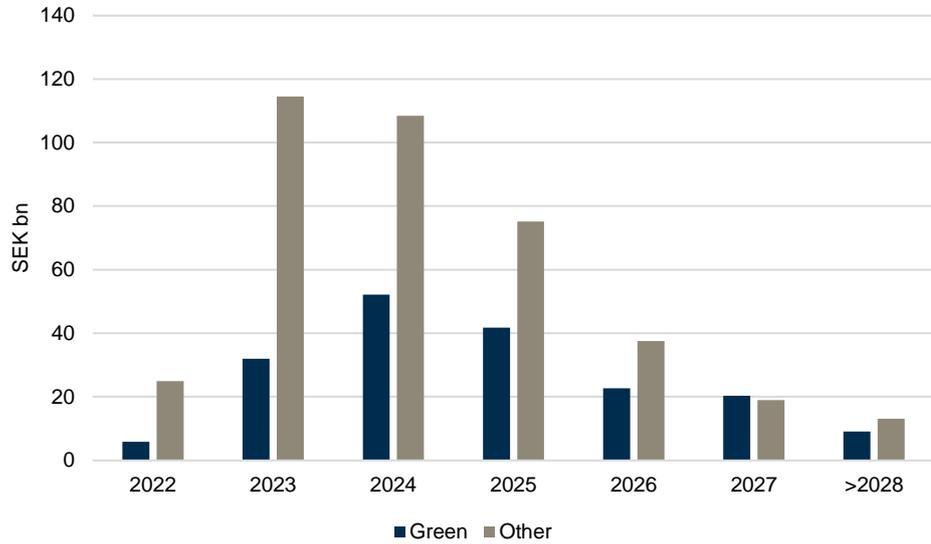
Source: Handelsbanken Capital Markets, Bloomberg, 2022

The graph illustrates an overrepresentation of the real estate sector in the green bond market

Furthermore, the investors seem to be more indifferent (or satisfied) about the diversification of maturity and credit risk. This is reasonable looking at the current SEK bond market with regards to maturity and the relative allocation between credit ratings.

Figure 9: Maturity on SEK green bonds

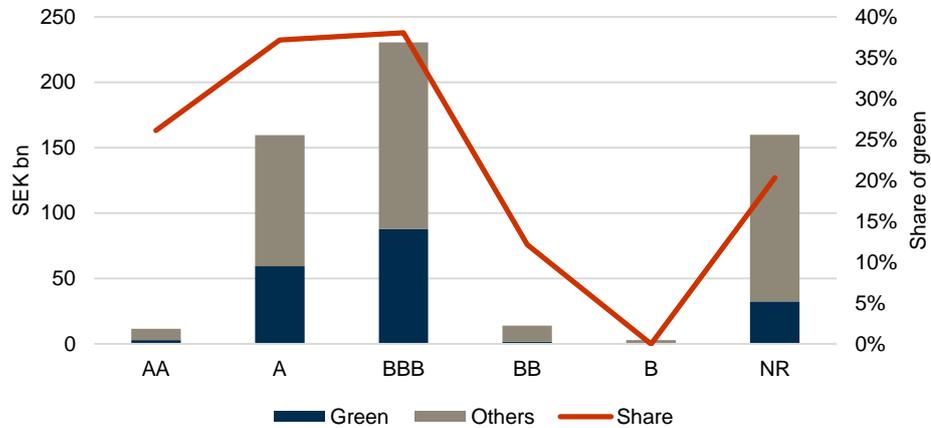
In line with our survey, it seems that the maturity of SEK green bonds is better diversified



Source: Handelsbanken Capital Markets, Bloomberg, 2022

Figure 10: SEK green bond allocation between ratings

There are more green bonds rated A or BBB, which is reasonable as it is related to the number of real estate companies in these credit rating-categories



Source: Handelsbanken Capital Markets, Bloomberg, 2022

With regards to the outlook of the green bond market, we conclude that there are gaps in the market for companies in other sectors than real estate and with credit ratings of AA, BB and B.

Do you prefer green bonds in line with EU Green Bond Standards over Green Bond Principles?

Almost 50% of investors were indifferent whether they preferred the EU Green Bond Standard over the Green Bond Principles

Despite recent action on the EU Taxonomy (i.e. first round of Taxonomy reporting), almost 40% (38%) of the investors surveyed seemed indifferent when asked whether the EU's Taxonomy was necessary to avoid or mitigate greenwashing, while 46% agreed it was necessary. This may be due to the already existing Green Bond Principles, which our survey may support, as almost 50% of the investors did not have any strong conviction on the EU Green Bond Standards or the Green Bond Principles. The key difference between the Green Bond Principles and the EU Green Bond Standards lies in the definition of a green project. The Green Bond Principles do not require the issuer to use or apply a specific taxonomy to assess or determine the 'sustainability' of its project, while the EU Green Bond Standards require the issuer to use only the criteria set forth in the Taxonomy regulation.

EUGBS, an enormous space for new issuers

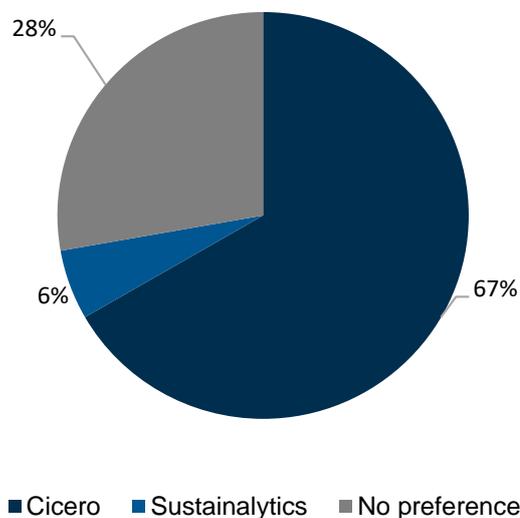
The recent EU Commission's inclusion of nuclear and gas power, which some argue demoralises or weakens the trustworthiness of the EU Taxonomy, may be another reason for the outcome. For example, the Institutional Investors Group on Climate Change, a coalition of investors, pension funds and asset managers in Europe, argued in an open letter that the proposal is incompatible with the EU's climate ambitions. Others are pro such a move as it sheds light on the most challenging sectors and drives improvement incentives. It is worth mentioning that to our knowledge there are only two companies (Diös and Latour) that have implemented an EU Green Bond Standard framework, leaving enormous space for new issuers.

Is a second opinion necessary for you to buy a green bond and/or classify the bond as such (green)?

The majority of investors preferred Cicero over Sustainalytics and other SPOs

Almost 90% of our respondents replied that it is essential to solicit a second opinion on a green bond before they would contemplate investing. Only 8% disagreed or somewhat disagreed. However, over 50% expressed that they believed second opinion providers are transparent. Furthermore, when asked about preferences among second-opinion providers, the majority voted for Cicero over Sustainalytics and other SPOs for green bonds, while 20% were indifferent.

Figure 11: Our findings regarding investors' preference of second opinion provider on green bonds



Source: Handelsbanken Capital Markets, 2022

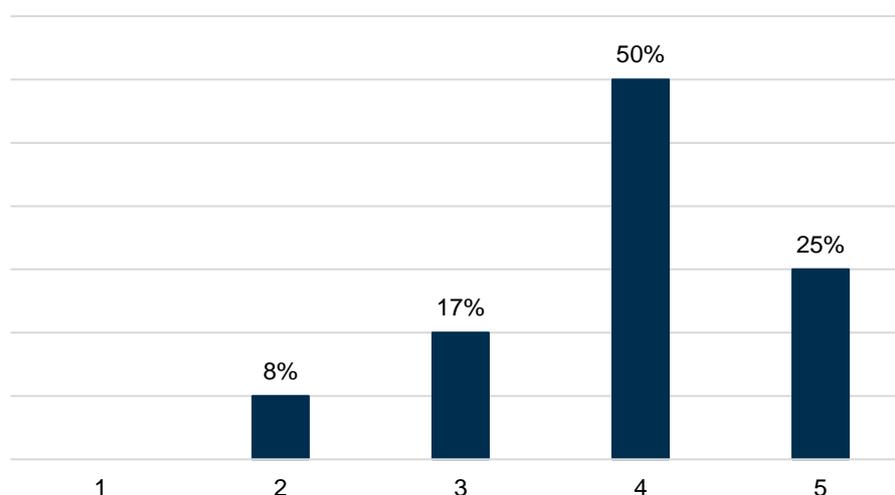
Results of our review: Sustainability-linked bonds

Sustainability-linked bonds (SLBs) are designed to enable bond issuance for financing corporations 'general purposes' linked to the sustainability performance of an issuer and is based on principles by the International Capital Markets Association (ICMA). The performance of the issuer ultimately affects the coupon to the bondholder, if the issuer fails to achieve a sustainability target, it has to pay a higher coupon to the investor.

Figures 12 and Table 2 show the aggregated results of our review of over 24 Swedish fixed income investors that invest in the Nordic bond market.

Figure 12: Overview of results from our questionnaires of SLBs relevance as an instrument for steering capital to sustainable investments

75% agreed SLBs are relevant as an instrument for steering capital to sustainable investments



Source: Handelsbanken Capital Markets, 2022

Given that sustainability-linked bonds are a fairly new instrument on the market, we asked investors about their views on them. Our result showed that most of the investors agreed that sustainability-linked bonds are a relevant instrument to steer capital to sustainable investments.

Table 2: Summary of our review of Swedish investors' preferences regarding SLBs in the Nordics (24 investment funds)

Scale (Disagree to fully agree)	1	2	3	4	5
SLBs should be premium priced	26.1%	26.1%	39.1%	8.7%	0.0%
We would invest more in SLBs if the supply was larger	0.0%	16.7%	25.0%	45.8%	12.5%
The supply of SLBs in the Nordics is well diversified (sector)	9.1%	36.4%	27.3%	22.7%	4.5%
The supply of SLBs in the Nordics is well diversified (maturity)	10.0%	20.0%	45.0%	20.0%	5.0%
The supply of SLBs in the Nordics is well diversified (credit risk)	9.5%	33.3%	38.1%	14.3%	4.8%
We prefer KPI:s verified by external parties (e.g. Science Based Targets)	0.0%	4.3%	17.4%	30.4%	47.8%
We prefer KPI:s linked to climate over KPI:s linked to S and G	8.7%	17.4%	34.8%	30.4%	8.7%
A second party opinion (SPO) is essential for me to buy a SLB and/or classify the bond as such	0.0%	8.7%	0.0%	30.4%	60.9%
The second opinion suppliers are transparent	0.0%	4.5%	31.8%	54.5%	9.1%

Source: Handelsbanken Capital Markets, 2022

Almost 60% of investors surveyed would invest more in SLBs if there was a more ample supply

During our interviews, we found almost 60% of investors surveyed would invest more in sustainability-linked bonds if there was a larger supply. Not surprisingly, there are only a handful of frameworks in the Swedish bond market currently, as highlighted earlier this spring in our report on sustainability-linked bonds ([link](#)) published in May 2022. Thus, there is clearly plenty of room for more. However, interestingly, albeit not surprisingly, almost all investors (over 90%) did not agree that sustainability-linked bonds should carry a higher price.

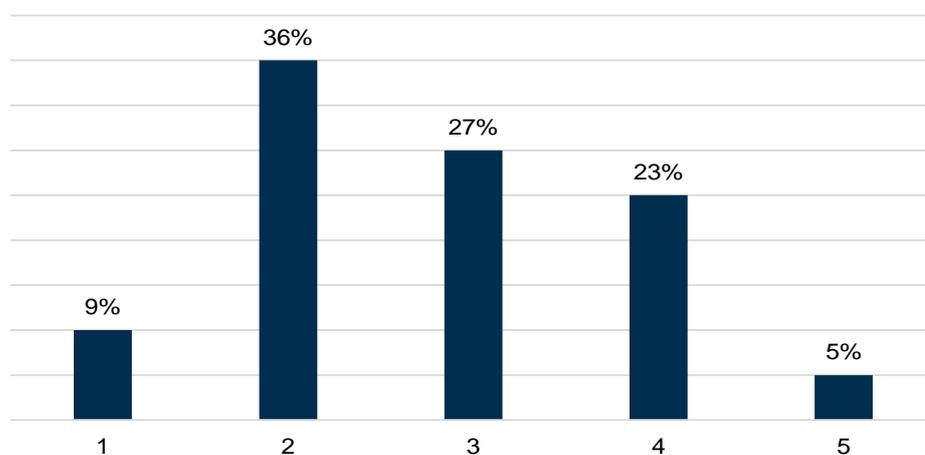
Worth mentioning, sustainability-linked bonds have an in-built pricing mechanism. On progression (or lack thereof) towards the targets, the issuer increases or decreases the coupon to the bondholder accordingly. Thus, if the issuer fails to achieve a sustainability target, it has to pay a higher coupon to the investor. This is called coupon 'step-up'. The step-up has typically been between 25bp per annum, although the market has witnessed step-ups of 50bp and 75bp.

Summary of findings

Do you consider the supply of green bonds in the Nordic market well diversified in terms of sector, maturity, credit risk?

When we asked the investors whether they felt the supply of sustainability-linked bonds in the Nordic countries is well diversified, more investors answered "agreed" than for the same question on green bonds in terms of sector, despite the relatively low percentage overall for each factor. There was an almost normal distribution among the answers regarding how well the market of sustainability-linked bonds is diversified regarding maturity while only 19% agreed it was concerning credit risk.

Figure 13: Overview of results from our questionnaire on how well diversified the SLB market is based on sector

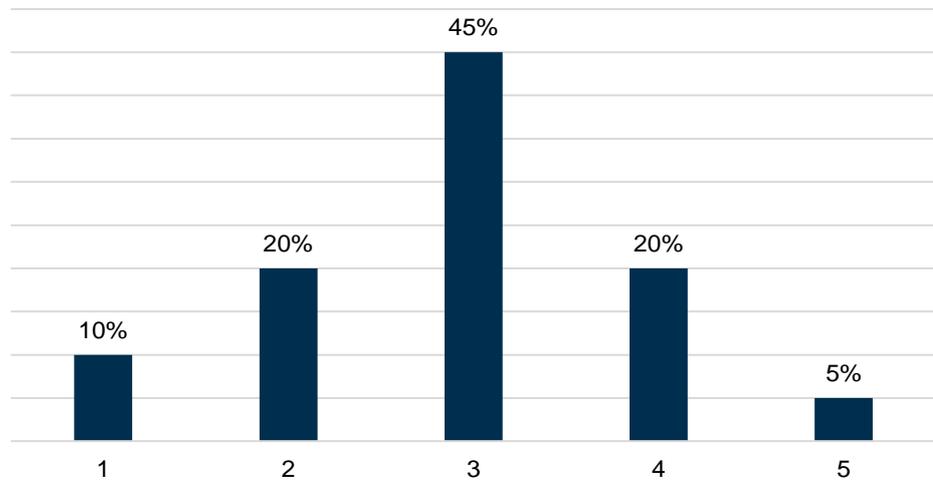


Source: Handelsbanken Capital Markets, 2022

A slightly higher satisfaction in comparison to green bonds

Figure 14: Overview of results from our questionnaire on how well diversified the SLB market is based on maturity

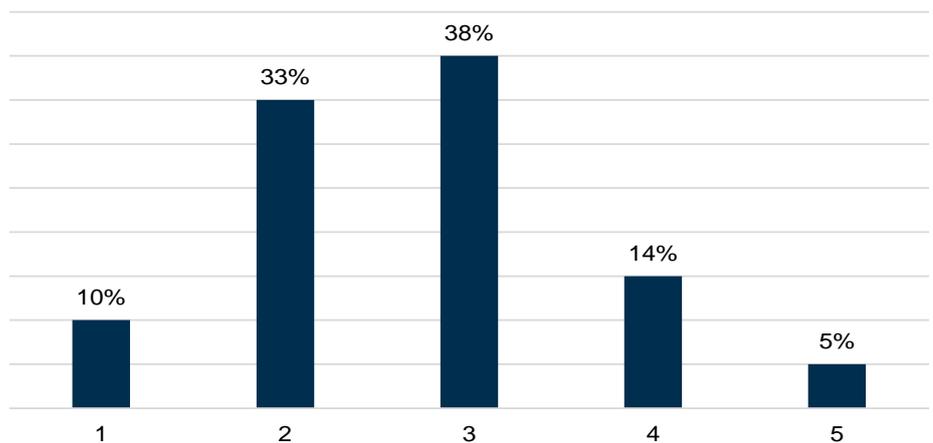
Almost normal distribution regarding the investors' opinion on diversification in terms of maturity for SLBs



Source: Handelsbanken Capital Markets, 2022

Figure 15: Overview of results from our questionnaire on how well diversified the SLB market is based on credit risk

Few agree that it is well diversified in terms of credit risk for SLBs

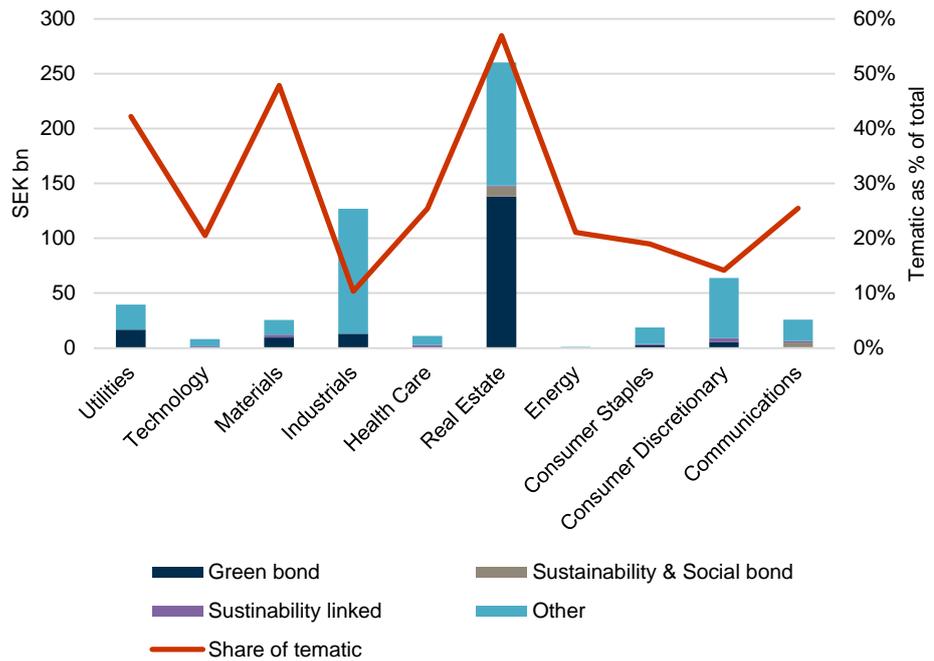


Source: Handelsbanken Capital Markets, 2022

Our findings from the survey might not be so shocking, looking closer at the market of sustainable-linked bonds and its relative allocation between sector, maturity, and credit ratings. Although the market is still small, approximately SEK 13.6 billion as of September 9, 2022 (Bloomberg, 2022), there is still an overrepresentation of the real estate sector in relation to other sectors in the market, while most of the existing sustainability-linked bonds will mature in 2024 or 2025. We also note that it represents a particular opportunity for companies with credit rating of AA, BB and B.

Figure 16: SEK thematic bonds, sector split

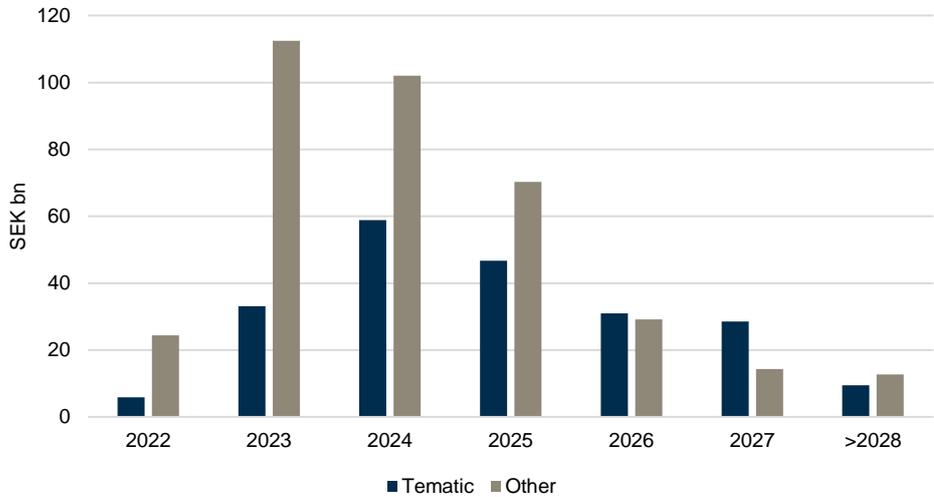
The real estate sector is also the most prominent regarding thematic bonds, relative to other sectors



Source: Handelsbanken Capital Markets, Bloomberg, 2022

Figure 17: Maturity on SEK thematic bonds

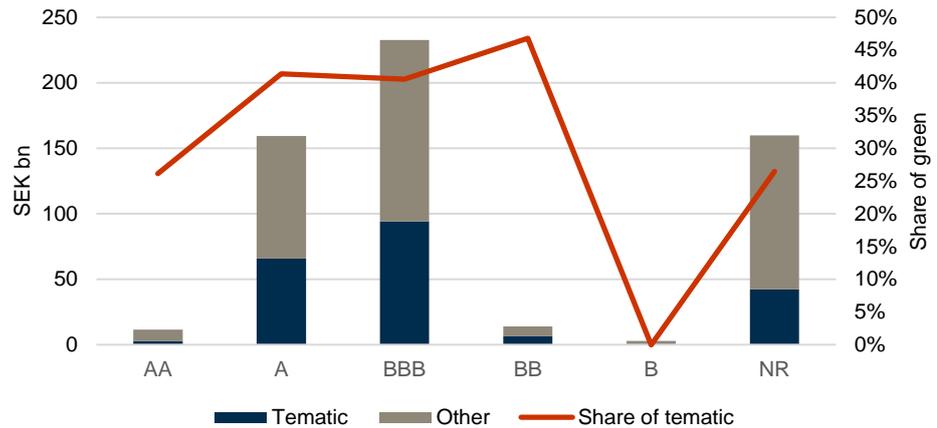
The majority of thematic bonds reach maturity in 2024 and 2025



Source: Handelsbanken Capital Markets, Bloomberg, 2022

Figure 18: SEK thematic bond allocation between ratings

The majority of thematic bonds attain a credit rating of A or BBB, similar to the green bond market, due to the overrepresentation of the real estate sector, we believe



Source: Handelsbanken Capital Markets, Bloomberg, 2022

Summary of findings

Do you prefer KPIs (e.g. science-based targets) to be verified by external parties?

When asked about the importance of having KPIs, such as science-based targets, verified by an external party, there appeared to be a consensus that this is much appreciated. The same cannot be said with regard to how many KPIs should be included in a sustainability-linked bond. However, it was emphasised by several investors that the most important thing is that the KPIs are relevant for the issuer and the sector, and clear and transparent in scope. Moreover, over 90% of the respondents stated that they consider a second-party opinion essential for them to buy or even classify an instrument as an SLB. The majority of the respondents preferred Cicero as a second-opinion provider.

Which one do you prefer? Green bonds or sustainability-linked bonds?

The majority of the investors did not prefer one sustainability-related instrument

Moving forward, we asked our respondents if they preferred use of proceeds bonds (e.g. green bonds) over performance-based bonds (e.g. sustainability-linked bonds) as an instrument. Interestingly, the majority of investors did not prefer a sustainability-related instruments over others. The reasons behind their answers varied. Several investors mentioned the different character of the instrument as complementary, while others emphasised the importance of the frameworks' level and ambition. Here are some of the responses:

"Both are preferred, we will add them in various 'brackets' for our investments. Use of proceeds are good when we focus on particular goals, while performance-based instruments are more long-term. It will make a difference in companies and enable them to become more sustainable."

"We do not prefer either or. Green bonds are not suitable for some organisations, while SLBs can be issued by more companies and do not need to be linked to the climate. For us, the vital part is whether the framework holds a high standard and if the KPIs are ambitious and realistic in order to actually make a difference."

The green bond market is more mature than the market for SLBs, which is why some investors prefer green bonds

Until now, it seems that some investors have been investing in green bonds due to the maturity of the market and its larger supply, but welcome sustainability-linked bonds as more companies establish frameworks. At the same time, a few investors articulated that the decision is dependent on the fund type as it can be challenging to include sustainability-linked bonds if there is a 'primarily green fund'. Investors who voiced a preference were quite even in number between investors preferring use of proceeds (e.g. green bonds) and those favouring performance-based (e.g. sustainability-linked bonds) instruments. The major argument for investing in use of proceeds (e.g. green bonds) was their simplicity. Two respondents expressed their preferences for green bonds as follows:

"It is much easier to make an analysis of use of proceeds, that being said, performance-based bonds or SLBs are a great complement to portfolios and enable us to invest in sectors beyond the most common ones. However, this requires a bit more effort, and for us, the utmost importance is within the KPIs and whether or not they are essential for the company and the sector to transition."

"Green bonds are easier to follow and keep track of."

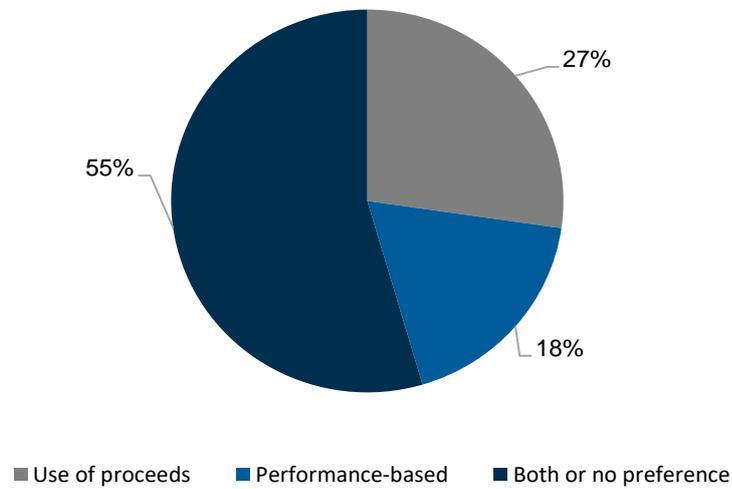
A few other investors also favoured the use of proceeds bond (e.g. green bond) as it is easier to determine where the liquidity is going in comparison to performance-based bonds, and since the follow-up, in their opinion, is more challenging to include in an article 9 fund. The investors who favour performance-based instruments (e.g. sustainability-linked bonds) adopted a more holistic approach for the companies, advocating transition 'to be better' than among already relatively good companies/assets:

"Our perception of sustainability; we advocate the entire company's transition. Because of this, SLBs as instruments are more suitable and in line. We do invest in green bonds, but in some cases we experience that light or medium green frameworks are too weak."

"We prefer to support the transition of an entire company with its strategy and business model rather than a specific bond, therefore we prefer SLBs."

Figure 19: Our findings regarding investors' preference for sustainability-related instruments and whether or not they prefer use of proceeds or performance-based instruments

55% of the investors had no preference between use of proceeds and performance-based instruments



Source: Handelsbanken Capital Markets, 2022

A final note

We appreciate the participation of all our respondents and we would like to include a few last investor comments. In our responses, we noted a curiosity for investments with social themes and that many investors would like to have more options in the market. However, there was an emphasis on the relevance, and ability to follow up and measure such targets. Furthermore, some investors also expressed an interest in governance-related targets and KPIs. Some investors would also like to engage in more proactive conversations between banks, investors, and issuers, to work together and, ultimately, drive the market(s) forward. Our respondents appreciate it when companies are interested in understanding what they are looking for in a framework, are brave, and take the lead in setting ambitious goals.

Research disclaimer

Risk warning

All investments involve risks and investors are encouraged to make their own decision as to the appropriateness of an investment in any securities referred to in this report, based on their specific investment objectives, financial status and risk tolerance. The historical return of a financial instrument is not a guarantee of future return. The value of financial instruments can rise or fall, and it is not certain that you will get back all the capital you have invested. At times, the expected total returns may fall outside of the above stated ranges because of price movement and/or volatility. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management.

Research disclaimers

Handelsbanken Capital Markets, a division of Svenska Handelsbanken AB (publ) (collectively referred to herein as 'SHB'), is responsible for the preparation of research reports. SHB is regulated in Sweden by the Swedish Financial Supervisory Authority, in Norway by the Financial Supervisory Authority of Norway, in Finland by the Financial Supervisory Authority of Finland and in Denmark by the Danish Financial Supervisory Authority. All research reports are prepared from trade and statistical services and other information that SHB considers to be reliable. SHB has not independently verified such information.

In no event will SHB or any of its affiliates, their officers, directors or employees be liable to any person for any direct, indirect, special or consequential damages arising out of any use of the information contained in the research reports, including without limitation any lost profits even if SHB is expressly advised of the possibility or likelihood of such damages.

The views contained in SHB research reports are the opinions of employees of SHB and its affiliates and accurately reflect the personal views of the respective analysts at this date and are subject to change. There can be no assurance that future events will be consistent with any such opinions. Each analyst identified in this research report also certifies that the opinions expressed herein and attributed to such analyst accurately reflect his or her individual views about the companies or securities discussed in the research report. This research report does not, and does not attempt to, contain everything material that there is to be said about the company or companies described herein. For additional information about our research methodology please visit, <https://reon.researchonline.se/desc/disclaimers>.

Research reports are prepared by SHB for information purposes only. The information in the research reports does not constitute a personal recommendation or personalised investment advice and such reports or opinions should not be the basis for making investment or strategic decisions. This document does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any securities nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever. Past performance may not be repeated and should not be seen as an indication of future performance. The value of investments and the income from them may go down as well as up and investors may forfeit all principal originally invested. Investors are not guaranteed to make profits on investments and may lose money. Exchange rates may cause the value of overseas investments and the income arising from them to rise or fall. This research product will be updated on a regular basis.

No part of SHB research reports may be reproduced or distributed to any other person without the prior written consent of SHB. The distribution of this document in certain jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions.

The report does not cover any legal or tax-related aspects pertaining to any of the issuer's planned or existing debt issuances.

Please be advised of the following important research disclosure statements:

SHB employees, including analysts, receive compensation that is generated by overall firm profitability. Analyst compensation is not based on specific corporate finance or debt capital markets services. No part of analysts' compensation has been, is or will be directly or indirectly related to specific recommendations or views expressed within research reports.

From time to time, SHB and/or its affiliates may provide investment banking and other services, including corporate banking services and securities advice, to any of the companies mentioned in our research.

We may act as adviser and/or broker to any of the companies mentioned in our research. SHB may also seek corporate finance assignments with such companies.

We buy and sell securities mentioned in our research from customers on a principal basis. Accordingly, we may at any time have a long or short position in any such securities. We may also make a market in the securities of all the companies mentioned in this report. [Further information and relevant disclosures are contained within our research reports.]

SHB, its affiliates, their clients, officers, directors or employees may own or have positions in securities mentioned in research reports.

In conjunction with services relating to financial instruments, the Bank may, under certain circumstances, pay or receive inducements, i.e. fees and commission from parties other than the customer. Inducements may be both monetary and non-monetary benefits. If inducements are paid to or received from a third party, it is required that the payment must aim to improve the quality of the service, and the payment must not prevent the Bank from safeguarding the customer's interests. The customer must be informed about such remuneration that the Bank receives. When the Bank provides investment research, the Bank receives minor non-monetary benefits.

Minor non-monetary benefits consist of the following:

- Information or documentation about a financial instrument or an investment service that is general in character.
- Written material produced by a third party that is an issuer to market a new issue.
- Participation at conferences and seminars regarding a specific instrument or investment service
- Corporate hospitality up to a reasonable amount.

The Bank has adopted Guidelines concerning Research which are intended to ensure the integrity and independence of research analysts and the research department, as well as to identify actual or potential conflicts of interests relating to analysts or the Bank and to resolve any such conflicts by eliminating or mitigating them and/or making such disclosures as may be appropriate. As part of its control of conflicts of interests, the Bank has introduced restrictions (“Information barriers”) on communications between the Research department and other departments of the Bank. In addition, in the Bank’s organisational structure, the Research department is kept separate from the Corporate Finance department and other departments with similar remits. The Guidelines concerning Research also include regulations for how payments, bonuses and salaries may be paid out to analysts, what marketing activities an analyst may participate in, how analysts are to handle their own securities transactions and those of closely related persons, etc. In addition, there are restrictions in communications between analysts and the subject company. According to the Bank’s Ethical Guidelines for the Handelsbanken Group, the board and all employees of the Bank must observe high standards of ethics in carrying out their responsibilities at the Bank, as well as other assignments. For full information on the Bank’s ethical guidelines please see the Bank’s website www.handelsbanken.com and click through to About the Group – Policy documents and guidelines – Policy on Ethical standards. Handelsbanken has a ZERO tolerance of bribery and corruption. This is established in the Bank’s Group Policy on Bribery and Corruption. The prohibition against bribery also includes the soliciting, arranging or accepting bribes intended for the employee’s family, friends, associates or acquaintances. For full information on the Bank’s Policy against corruption please see the Bank’s website www.handelsbanken.com and click through to About the Group – Policy documents and guidelines – Policy against corruption.

When distributed in the UK

This document may be distributed in the United Kingdom only to persons who are authorised or exempted persons within the meaning of the Financial Services and Markets Act 2000 (as amended) (or any order made thereunder) or (i) to persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the “Order”), (ii) to high net worth entities falling within Article 49(2)(a) to (d) of the Order or (iii) to persons who are professional clients under Chapter 3 of the Financial Conduct Authority Conduct of Business Sourcebook (all such persons together being referred to as “Relevant Persons”).

Any person who is not a Relevant Person may not rely on this research report.

UK customers should note that neither the UK Financial Services Compensation Scheme for investment business nor the rules of the Financial Conduct Authority made under the UK Financial Services and Markets Act 2000 (as amended) for the protection of private customers apply to this research report and accordingly UK customers will not be protected by that scheme.

When distributed in the United States

Important Third-Party Research Disclosures:

SHB research is not “globally branded” research and each recipient of SHB research is advised that in the United States, SHB research is distributed by Handelsbanken Markets Securities, Inc., (“HMSI”) an affiliate of SHB. HMSI does not produce research and does not employ research analysts. SHB research and SHB research analysts and its employees are not subject to FINRA’s research analyst rules which are intended to prevent conflicts of interest by, among other things, prohibiting certain compensation practices, restricting trading by analysts and restricting communications with the companies that are the subject of the research report. SHB has no affiliation or business or contractual relationship with HMSI that is reasonably likely to inform the content of SHB research reports; SHB makes all research content determinations without any input from HMSI.

SHB research reports are intended for distribution in the United States solely to “major U.S. institutional investors,” as defined in Rule 15a-6 under the Securities Exchange Act of 1934. Each major U.S. institutional investor that receives a copy of research report by its acceptance hereof represents and agrees that it shall not distribute or provide research reports to any other person.

Any U.S. person receiving SHB research reports that desires to effect transactions in any equity securities discussed within the research reports should call or write HMSI. HMSI is a FINRA Member, telephone number (+1-212-326-5153).

Credit Research

Credit Research

Johan Sahlström, Head of Credit Research +46 8 701 1174
Johan.sahlstrom@handelsbanken.se

Peter Wallin +46 8 701 2534
Peter.wallin@handelsbanken.se

Michael Andersson +46 8 701 1399
Michael.andersson@handelsbanken.se

Maja Christiansson +46 8 701 1108
Maja.christiansson@handelsbanken.se

Credit Sales

Sweden

Linda Piper +46 8 463 4577
Linda.piper@handelsbanken.se

Tommy Antic +46 8 463 4548
Tommy.antic@handelsbanken.se

Utta Wester +46 8 463 2586
Utta.wester@handelsbanken.se

Ronny Gustavsson +46 8 463 3701
Ronny.gustavsson@handelsbanken.se

William Ekblom +46 8 463 3607
William.ekblom@handelsbanken.se

Finland

Marko Kassinen +358 10 444 6243
Marko.kassinen@handelsbanken.fi

Norway

Lars Walvig +47 22 82 3072
Lars.walvig@handelsbanken.no

Morten Ihler +47 22 82 3059
morten.ihler@handelsbanken.no

Lotte Marie Andersen +47 22 82 3003
lotte.andersen@handelsbanken.no

Svenska Handelsbanken AB (publ)

Stockholm
Blasieholmstorg 11
SE-106 70 Stockholm
Tel. +46 8 701 10 00
Fax. +46 8 611 11 80

Copenhagen
Havneholmen 29
DK-1561 Copenhagen V
Tel. +45 46 79 12 00
Fax. +45 46 79 15 52

Helsinki
Itämerenkatu 11-13
00180 Helsinki
Tel. +358 10 444 11
Fax. +358 10 444 2578

Oslo
Tjuvholmen allé 11
Postboks 1249 Vika
NO-0110 Oslo
Tel. +47 22 39 70 00
Fax. +47 22 39 71 60

London
Handelsbanken Plc
3 Thomas More Square
London GB-E1W 1WY
Tel. +44 207 578 8000
Fax. +44 207 578 8300

New York
Handelsbanken Markets
Securities, Inc.
900 Third Avenue
New York, NY 10022-4792
Tel. +1 212 326 5153
Fax. +1 212 326 2730
FINRA, SIPC