

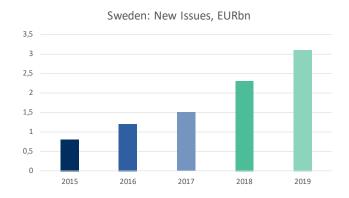
# The green bond market It all started in Sweden

In 2007, a group of Swedish pension funds looking for investing in climate friendly projects, approached the World Bank, which issued the first Climate Awareness Bonds.

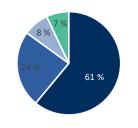
Since then, the green bond market has grown rapidly in the World as well as in Sweden, with many firsts: first municipality with Gothenburg in 2013; first company with Vasakronan AB; and then more firsts in the Real Estate, Wind Energy (Arise), Municipal Housing and lately the State of Sweden.

Sweden has been the first country to obtain a "Dark Green" rating from Cicero Shades of Green regarding its 3 Billion EUR bond program to boost spending on renewable energy projects.

At the end of 2019, Sweden represented the primary market for green bonds in Scandinavia with close to 80% of the total volume outstanding and 75% of the new issues.







■ Real Estate ■ Public Sector ■ Bank & Finance ■ Utilities, Transport, Forestry

Source: Stamdata 2020

### The Swedish green bond ecosystem

Green bonds are bonds where the proceeds are earmarked for investments with positive environmental effects. The issuer is therefore required during the issuance to provide a detailed description of the sustainable project (s) thus funded.

Issuers: The State of Sweden; Local Government Funding Agency: (LGFA) with pooled funding model to finance municipalities, counties, etc. They can raise funding in large amounts and use the proceeds to lend to the smallest public sector entities; corporates, etc.

**Exchange:** Nasdaq Stockholm hosts more than 170 bonds with issuers from real estate, utilities, agriculture.

**Investors:** Climate change focused funds, insurance companies (Storebrand, Skandia, Folksam, etc.) and pension funds (Aps) etc.

Rating agencies example CICERO Shades of Green:

Third party rating agency specialized in assessment of the "green" character of the investment programs. CICERO Shades of Green – a subsidiary to the non-profit independent research center CICERO Center for International Climate Research based in Norway – provides science-based external reviews and company assessments. Its "Shades of Green" methodology gives transparent information on how well green bonds align with a low carbon and climate resilient future.

With a 40% market share, CICERO Shades of Green remains the largest external reviewer by volume reviewed in 2019. Headquartered in Oslo, CICERO Shades of Green has reviewed many green bond frameworks in the Nordics, especially Sweden.

With 97% of green bonds in Europe having received an external review in 2019, CICERO Shades of Green encourages continued scrutiny of green bond frameworks and transparency to provide the urgently needed long-term contribution to the green transition.



### The benefits of green bonds

The relative lack of long series of market data and the rapidly evolving nature of the market leads us to be cautious while drawing conclusions on the benefits of Swedish green bonds, however some critical features can be identified.

#### For issuers,

### green bonds bring a series of well-known benefits

In addition to enhanced reputation and visibility, green bonds bring funding benefit for corporates. In the Swedish primary market, issuers have to pay slightly lower yield compared to traditional bonds. In the secondary market, Swedish green bonds have been, on average, priced higher than similar conventional bonds, which might reflect a growing interest from investors, resulting in higher demand and thus higher prices (Sjøstedt & Parow, 2019).

### For investors,

### green bonds behave first and foremost as bonds

Green bonds are subject to the same market and credit risk developments as other bonds and their performance is explained primarily by their underlying sectors, duration and credit features (issuer credit standing, bonds covenants, collateral, etc.).

### Slightly wider bid-ask spreads, in normal market conditions

Swedish green bonds have been trading at slightly larger Bid-Ask spread (average 24 bps versus 18 bps for conventional bonds, Sjøstedt & Parrow 2019), which can be explained primarily by smaller issue size and less trading activity on those bonds as they attract more "buy and hold" investors.

# How did Swedish green bonds behave during the Covid-19 crisis?

At a time when some are calling to take advantage of the Covid-19 crisis to rebuild an economy more respectful of the environment, it is interesting to understand how green bonds behaved during this period; what have been their trading patterns?

# Overall, green bond patterns differed to a certain extent during the liquidity crisis

"We have seen that green bonds have had interesting trading patterns in these stressed markets. An ESG integrated business model is an indication of a well-run company and in in times of high uncertainty, this gives investors additional comfort. From a demand perspective there are a broad range of investors that want to increase their exposure to green bonds which also creates a natural demand".

Gustaf Tegell, fund manager Pareto Nordic Cross Credit

### Looking first at selling pressure

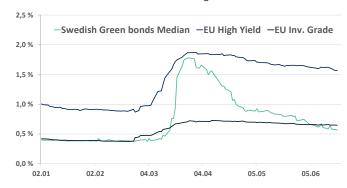
During this crisis, when traditional credit funds suffered strong outflows, some green bond funds registered rather positive net inflows. For example, in Europe, both Amundi and Lyxor green bonds ETFs doubled in size during 1H2020. This reflects the more long-term ("buy and hold") behavior of green bond holders as well as the increasing interest of investors for this asset class, regardless of market conditions.

### Bid-ask spread

To represent the entire Swedish green bonds market, we built up a portfolio comprised of all the 170 bonds denominated in SEK, equally weighted, and we plotted this portfolio over 1H2020.

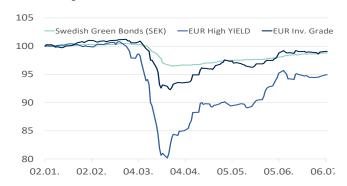
During the Covid-19 crisis, Swedish green bonds bid/ask spreads have significantly widened to reach as much as 180 basis points (median) the third week of March 2020, reflection of the fact that they are predominantly small to mid-size bonds compared to conventional European High Yield and Investment Grade bonds for example.

But, once the peak of liquidity crisis was over, spreads have tightened much quicker in the Swedish green bond market (source: Bloomberg indicative B/A).



#### Green bond performances

Compared to the European High Yield and Investment Grade indices, the Swedish green bonds suffered less drawdown during the COVID-19 crisis, and a much less volatile trajectory during the recovery phase (source: Bloomberg):





### Lastly, the primary market remained open

During 1H2020, CICERO Shades of Green has seen continued interest in external reviews from various green bond stakeholders.

Swedish issuers maintained a significant share of CICERO Shades of Green's clients throughout the pandemic. In June 2020, a dark green rated Second Opinion on the Kingdom of Sweden's green bond framework was published. Recently there has been interest in external reviews across the Nordics in sectors such as energy, real estate, shipping and aquaculture. This development is accompanied with a recent launch of a company assessments methodology starting with the Swedish real estate company K2A. CICERO Shades of Green provided investors with an overview of K2A's climate risk exposure as well as an assessment of K2A's revenue and investments according to Shades of Green and Brown.

Through the pandemic's tragic impact on people, but also on markets, CICERO Green has seen an increased need from Scandinavian issuers to accelerate the green transition and to rebuild in a low-carbon and climate resilient way avoiding the lock-in of carbon emissions.

#### In conclusion

Even though Swedish green bonds behaved primarily like conventional fixed income securities, they displayed interesting features for portfolio managers in times of crisis: rather short-lived bid-ask spread widening; limited maximum drawdown due to less selling pressure (combination most likely of increasing flows in this asset class and investors with long-term investment horizon) and little primary market disruption.

In Sweden, green bonds already represent 20% of the corporate bond market and growth prospects are very solid as authorities take actions to promote green finance (ref. the Kingdom of Sweden 3,3 USD Billion green bonds program to boost spending on renewable energy projects).

Overall, the growing dynamic in the Swedish green bonds should offer more and more idiosyncratic alternatives for portfolio managers to further shelter their portfolio against external shocks (as seen with the Covid-19 episode) as well as transition / physical risks due to the climate change.

### Pareto Asset Management Fixed income SICAVs

All Pareto Asset Management fixed income SICAVs hold Swedish, Danish or Norwegian green bonds:

Pareto Nordic Corporate Bond	Nordic High Yield	AUM 1.200 MEUR
Pareto Global Corporate Bond	Global High Yield	AUM 260 MEUR
Pareto Nordic Cross Credit	Nordic Cross Over	AUM 170 MEUR

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