

FI Strategy Denmark

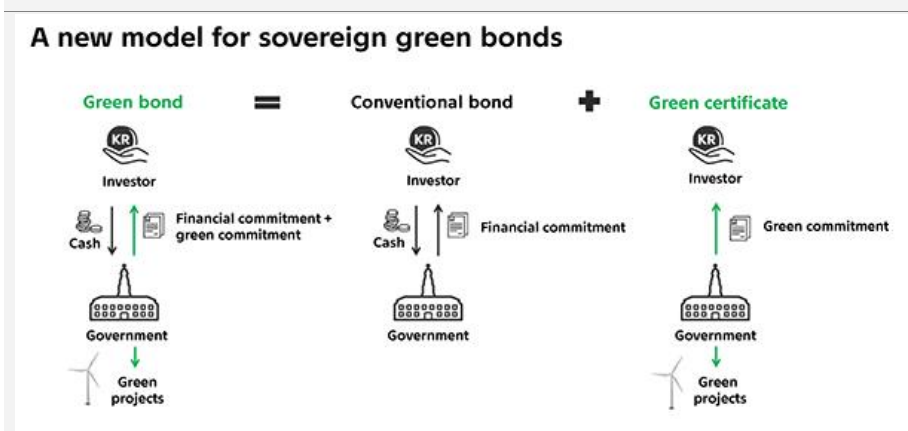
The Danish sovereign green bond model

The Danish Debt Management Office (DMO) has published a short note regarding the issuance of green bonds. The key challenge for the Danish Central Bank is that the funding need in coming years continues to be modest, given solid public finances, with a small deficit or even a surplus. Hence, the DMO has been working on a model *'that will enable small sovereign issuers like Denmark, with limited funding needs, to access the green bond market without compromising liquidity'*. See more on the DMO website *Green issuance*. The DMO sees the conventional green bond as comprising two components.

- A traditional government bond.
- A commitment that the expenditures for green projects will be financed through the proceeds of selling government green bonds.

In the Danish government's green bond model these components are split into two separate parts – a traditional government bond and a green certificate attached to the specific government bond as shown in the chart below.

Figure 1. Green bonds – the Danish alternative



Source: Nationalbanken, Danske Bank

According to the DMO, then *'the green certificates constitute a commitment by the Kingdom of Denmark, that the green expenditures at least match the proceeds from selling a package of a conventional government bond and a green certificate'*. Hence, in this model the DMO will sell certificates attached to a traditional Danish government bond such as DGB 0.5% 11/29.

It is still 'work in progress' for the DMO on how to issue green bonds. However, given that the DMO is working on the above model, we expect that this will be the most likely solution for the Danish government's green bond framework. Hence, the DMO will not supplement the current issuance of traditional government bonds with a new green bond such as we have seen in Ireland, Belgium, France and Netherlands. It is worried that this would 'dilute' the liquidity in Danish government bonds.

Key points

- The Danish DMO has published a note on future green bond issuance.
- The Danish DMO proposes a different model from the traditional green bond model, where sovereign issuers add green bonds to the existing non-green government bonds.
- The Danish DMO is worried about the liquidity of both the traditional DGBs as well as new green bonds if it just adds green bonds to the current portfolio of DGBs.
- Instead, the DMO has split the green bond into a traditional non-green bond and a green certificate. The green premium becomes very transparent as investors bid for the entire package at auctions.
- The green certificates are attached to a traditional DGB such as DGB 0.5% '29 and will have their own ISIN code, such that there can be secondary trading in the green certificates.

Chief analyst

Jens Peter Sørensen
+45 45 12 85 17
jenssr@danskebank.dk

However, there are a number of outstanding points, such as the secondary trading in green certificates, whether the DMO will take part in buying and selling green certificates and whether or not there will be a repo market for the them, etc.

This model makes the green premium (*'greenium'*) very transparent relative to the traditional model, where issuers have both green bonds and non-green bonds and the green premium can be difficult to differentiate from the non-green bonds.

There are pros and cons for the Danish green bond model. Firstly, we expect there will be a larger investor base as the green bond investor base is rapidly expanding. However, there may be a lower free float of DGBs as green bond investors are seen to be more buy-and-hold investors. Finally, we do not know the funding need for green projects going forward. Currently, the Danish government has set DKK25bn aside for green projects, but we do not know if it will be financed entirely by the issuance of new green bonds. Hence, we do not expect that green bond issuance will start before autumn 2020 or spring 2021.

How should these green certificates be priced? If we look at the current pricing of green bonds from France, Ireland and Belgium there is a premium (*'greenium'*) of 1-2bp, while for the Dutch green bond there is actually a discount of 3-4bp relative to the traditional non-green government bonds. This discount is mainly due to the expected issuance in 2020. Hence, we would expect that the green certificate will have a positive price.

We have the following details regarding the green certificates from the DMO.

- Green certificates and conventional government bonds are sold as a package at auctions – i.e. the investor bids for the total package at the auction.
- The certificate is associated with a specific government bond.
- The green certificates have their own ISIN code and can be traded separately in a secondary market.
- The certificate expires at the same time as the government bond and will be a zero-coupon bond with zero redemptions at maturity.

Disclosures

This research report has been prepared by Danske Bank A/S ('Danske Bank'). The author of this research report is Jens Peter Sørensen, Chief Analyst.

Analyst certification

Each research analyst responsible for the content of this research report certifies that the views expressed in the research report accurately reflect the research analyst's personal view about the financial instruments and issuers covered by the research report. Each responsible research analyst further certifies that no part of the compensation of the research analyst was, is or will be, directly or indirectly, related to the specific recommendations expressed in the research report.

Regulation

Danske Bank is authorised and subject to regulation by the Danish Financial Supervisory Authority and is subject to the rules and regulation of the relevant regulators in all other jurisdictions where it conducts business. Danske Bank is subject to limited regulation by the Financial Conduct Authority and the Prudential Regulation Authority (UK). Details on the extent of the regulation by the Financial Conduct Authority and the Prudential Regulation Authority are available from Danske Bank on request.

Danske Bank's research reports are prepared in accordance with the recommendations of the Danish Securities Dealers Association.

Danske Bank is not registered as a Credit Rating Agency pursuant to the CRA Regulation (Regulation (EC) no. 1060/2009); hence, Danske Bank does not comply with nor seek to comply with the requirements applicable to Credit Rating Agencies.

Conflicts of interest

Danske Bank has established procedures to prevent conflicts of interest and to ensure the provision of high-quality research based on research objectivity and independence. These procedures are documented in Danske Bank's research policies. Employees within Danske Bank's Research Departments have been instructed that any request that might impair the objectivity and independence of research shall be referred to Research Management and the Compliance Department. Danske Bank's Research Departments are organised independently from and do not report to other business areas within Danske Bank.

Research analysts are remunerated in part based on the overall profitability of Danske Bank, which includes investment banking revenues, but do not receive bonuses or other remuneration linked to specific corporate finance or debt capital transactions.

Danske Bank, its affiliates, subsidiaries and staff may perform services for or solicit business from Danish Debt Management Office and may hold long or short positions in, or otherwise be interested in, the financial instruments mentioned in this research report.

Danske Bank, its affiliates and subsidiaries are engaged in commercial banking, securities underwriting, dealing, trading, brokerage, investment management, investment banking, custody and other financial services activities, may be a lender to Danish Debt Management Office and have whatever rights are available to a creditor under applicable law and the applicable loan and credit agreements. At any time, Danske Bank, its affiliates and subsidiaries may have credit or other information regarding Danish Debt Management Office that is not available to or may not be used by the personnel responsible for the preparation of this report, which might affect the analysis and opinions expressed in this research report.

Danske Bank is a market maker and liquidity provider and may hold positions in the financial instruments mentioned in this research report.

As an investment bank, Danske Bank, its affiliates and subsidiaries provide a variety of financial services, including investment banking services. It is possible that Danske Bank and/or its affiliates and/or its subsidiaries might seek to become engaged to provide such services to Danish Debt Management Office in the next three months.

Danske Bank has made no agreement with Danish Debt Management Office to write this research report. No parts of this research report have been disclosed to Danish Debt Management Office. No recommendations or opinions have been disclosed to Danish Debt Management Office and no amendments have accordingly been made to the same before dissemination of the research report.

The analysts responsible for this report are prohibited from trading against their own recommendations.

Financial models and/or methodology used in this research report

Calculations and presentations in this research report are based on standard econometric tools and methodology as well as publicly available statistics for each individual fixed income asset.

Danske Bank bases its conclusion on an estimation of the financial risk profile of the financial asset. By combining these risk profiles with market technical and financial asset-specific issues such as rating, supply and demand factors, macro factors, regulation, curve structure, etc., Danske Bank arrives at an overall view and risk profile for the specific financial asset. Danske Bank compares the financial asset to those of peers with similar risk profiles and on this background, Danske Bank estimates whether the specific financial asset is attractively priced in the specific market. Danske Bank expresses these views through buy and sell recommendations. These signal our opinion about the financial asset's performance potential in the coming one to three months.

More information about the valuation and/or methodology and the underlying assumptions is accessible via <http://www.danskebank.com/en-uk/ci/products-services/markets/research/pages/researchdisclaimer.aspx>. Select *Fixed Income Research Methodology*.

Recommendation structure

Danske Bank expresses its views on specific financial fixed income assets through buy and sell recommendations. Often the recommendations will be expressed through country spreads, swap spreads or curve spreads. Danske Bank sets a target for the specific recommendation, which is normally expressed in basis points potential profit.

These recommendations signal Danske Bank's market opinion on a one- to three-month horizon. When Danske Bank publishes a specific recommendation, it reflects that it has a strong market conviction or that the risk/reward potential is specifically attractive relative to the loss the investor could potentially incur.

Risk warning

Major risks connected with recommendations or opinions in this research report, including a sensitivity analysis of relevant assumptions, are stated throughout the text.

Completion and first dissemination

The completion date and time in this research report mean the date and time when the author hands over the final version of the research report to Danske Bank's editing function for legal review and editing.

The date and time of first dissemination mean the date and estimated time of the first dissemination of this research report. The estimated time may deviate up to 15 minutes from the effective dissemination time due to technical limitations.

See the final page of this research report for the date and time of completion and first dissemination.

Expected updates:

None

Changes in recommendations

Danske Bank will normally change its recommendations and market views in regular publications, in which a list of currently open recommendation and closed recommendations (year-to-date) can be found for the relevant market. See this link for a full overview of all recommendation published by Danske Bank over the past 12 months: <http://www.danskebank.com/en-uk/ci/products-services/markets/research/pages/researchdisclaimer.aspx>. Select *Fixed Income Research Methodology*.

Validity time period

This communication as well as the communications in the list referred to below are valid until the earlier of (a) dissemination of a superseding communication by the author, or (b) significant changes in circumstances following its dissemination, including events relating to the market or the issuer, which can influence the price of the issuer or financial instrument.

Investment recommendations disseminated in the preceding 12-month period

A list of previous investment recommendations disseminated by the lead analyst(s) of this research report in the preceding 12-month period can be found at <http://www.danskebank.com/en-uk/ci/products-services/markets/research/pages/researchdisclaimer.aspx>. Select *Fixed Income Trade Recommendation History*.

Other previous investment recommendations disseminated by Danske Bank are also available in the database.

General disclaimer

This research report has been prepared by Danske Bank (a division of Danske Bank A/S). It is provided for informational purposes only and should not be considered investment advice. It does not constitute or form part of, and shall under no circumstances be considered as, an offer to sell or a solicitation of an offer to purchase or sell any relevant financial instruments (i.e. financial instruments mentioned herein or other financial instruments of any issuer mentioned herein and/or options, warrants, rights or other interests with respect to any such financial instruments) ('Relevant Financial Instruments').

The research report has been prepared independently and solely on the basis of publicly available information that Danske Bank considers to be reliable. While reasonable care has been taken to ensure that its contents are not untrue or misleading, no representation is made as to its accuracy or completeness and Danske Bank, its affiliates and subsidiaries accept no liability whatsoever for any direct or consequential loss, including without limitation any loss of profits, arising from reliance on this research report.

The opinions expressed herein are the opinions of the research analysts responsible for the research report and reflect their judgement as of the date hereof. These opinions are subject to change and Danske Bank does not undertake to notify any recipient of this research report of any such change nor of any other changes related to the information provided herein.

This research report is not intended for, and may not be redistributed to, retail customers in the United Kingdom or the United States.

This research report is protected by copyright and is intended solely for the designated addressee. It may not be reproduced or distributed, in whole or in part, by any recipient for any purpose without Danske Bank's prior written consent.

Disclaimer related to distribution in the United States

This research report was created by Danske Bank A/S and is distributed in the United States by Danske Markets Inc., a U.S. registered broker-dealer and subsidiary of Danske Bank A/S, pursuant to SEC Rule 15a-6 and related interpretations issued by the U.S. Securities and Exchange Commission. The research report is intended for distribution in the United States solely to 'U.S. institutional investors' as defined in SEC Rule 15a-6. Danske Markets Inc. accepts responsibility for this research report in connection with distribution in the United States solely to 'U.S. institutional investors'.

Danske Bank is not subject to U.S. rules with regard to the preparation of research reports and the independence of research analysts. In addition, the research analysts of Danske Bank who have prepared this research report are not registered or qualified as research analysts with the NYSE or FINRA but satisfy the applicable requirements of a non-U.S. jurisdiction.

Any U.S. investor recipient of this research report who wishes to purchase or sell any Relevant Financial Instrument may do so only by contacting Danske Markets Inc. directly and should be aware that investing in non-U.S. financial instruments may entail certain risks. Financial instruments of non-U.S. issuers may not be registered with the U.S. Securities and Exchange Commission and may not be subject to the reporting and auditing standards of the U.S. Securities and Exchange Commission.

Report completed: 5 December 2019, 14:07 CET

Report first disseminated: 5 December 2019, 16:20 CET