

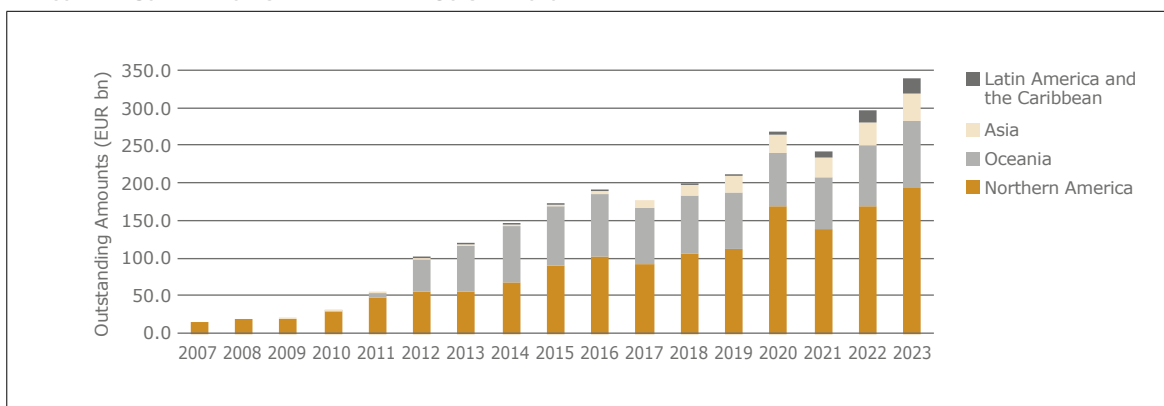
1.7 COVERED BONDS AND GLOBAL MORTGAGE LENDING

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Covered bonds have been an overwhelmingly European phenomenon for most of their 250-year history. However, things changed after the financial and eurozone crises, with banks issuing covered bonds for the first time in new markets such as Australia, Canada, and Singapore. Understanding the factors behind these success stories is key to understanding the role that covered bonds can play in financing housing markets outside Europe.

According to the European Mortgage Federation, covered bonds finance around 25% of European mortgage loans. Several factors explain their popularity with issuers and investors. Issuers like the ability to diversify their funding sources away from short-term deposits and toward longer-term instruments, which better match the maturity of their mortgage book. Covered bonds are cheaper and often have longer maturities than other funding sources, such as unsecured bank debt. Investors like the additional security that dual recourse offers to both the issuing credit institution and a cover pool of financial assets, usually prime mortgage loans. Covered bonds generally have higher and more stable ratings than the issuing banks, and have never defaulted over their long history.

> FIGURE 1: COVERED BONDS EXPAND RAPIDLY OUTSIDE EUROPE



Sources: European Covered Bond Council, S&P Global Ratings

Importantly, this perceived safety explains why covered bonds have proved to be a resilient funding source in times of financial turmoil. Even banks in markets more affected by the eurozone sovereign debt crisis, such as Italy and Spain, were able to issue covered bonds when other wholesale funding sources evaporated. Credit institutions and regulators outside the traditional European markets duly noted this, and expedited the approval of covered bond issuance legislation.

THE IMPORTANCE OF THE LEGAL FRAMEWORK

Even though there isn't just one recipe for the development of a new covered bond market, three seem to matter the most: a robust legal framework, a convincing business case, and a strong credit story.

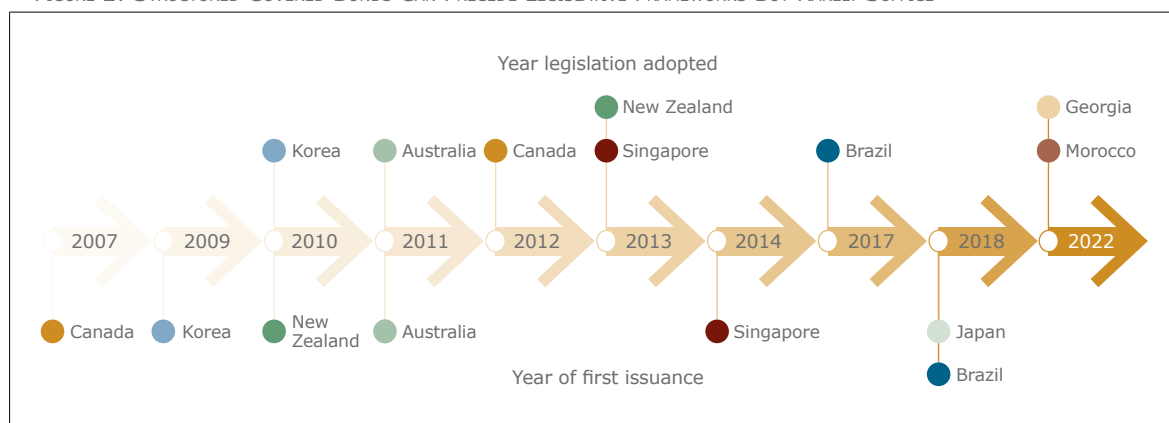
Banks generally issue covered bonds in accordance with a dedicated legal or regulatory framework (legislation-enabled covered bonds). The framework defines the programs' main characteristics: issuer structure, asset segregation and eligibility, overcollateralization and liquidity requirements, cover pool monitoring, and banking supervision.

When the Australian federal government decided to expand the funding options available to local banks after the financial crisis, it amended the country's Banking Act, allowing covered bonds issuance. Volumes have taken

off rapidly since then. Similarly, authorities in Singapore and South Korea introduced dedicated frameworks as a first step toward creating local markets.

Exceptions are possible but uncommon. Issuers can establish programs that replicate the main features of a dedicated legal framework by means of contractual arrangements, issuing so-called structured covered bonds. From 2007 to 2012 Canadian banks issued covered bonds based on a contractual framework, but dedicated legislation was introduced in 2012. Similarly, the first two Japanese programs were established based on a contractual structure, due to the lack of dedicated legislation, but many market participants expect that the authorities will step in and introduce a dedicated framework once issuance grows.

> FIGURE 2: STRUCTURED COVERED BONDS CAN PRECEDE LEGISLATIVE FRAMEWORKS BUT RARELY SUFFICE



Sources: European Covered Bond Council, S&P Global Ratings

The legislative process can take longer than expected, and even prove unsuccessful. Morocco was the first country in Africa to release draft covered bond legislation in 2013. However, the final law was only approved in 2022, reflecting the difficulties of navigating such a legislative process. Poland introduced dedicated legislation in 1997, but issuance only really took off in 2016, once substantial amendments were enacted.

A robust legal framework appears to be a necessary condition for the success of a new covered bond market, but on its own may be insufficient. Turkey aligned its framework to international standards at the end of 2014, but international issuance has so far been very limited. Other factors also play a decisive role.

THE BUSINESS CASE AND THE CREDIT STORY

Covered bonds can thrive when issuer and investor incentives are properly aligned. Banks find covered bonds attractive when their mortgage book is growing, and alternative funding options are limited. This was the case for many issuers in Canada and Australia after the financial crisis. Here, customer deposits financed a limited percentage of domestic loans by international standards, and alternative sources of funding, such as securitization, proved to be less reliable than previously expected within market turmoil.

Does this mean that issuers using customer deposit funding for most of their assets won't consider covered bonds? Not necessarily. Korea and Singapore pioneered covered covered bond issuance in developed Asia, despite local banks being mainly customer deposit funded. Their primary motivation for covered bonds issuance was to manage asset-liability mismatch risk, diversify their investor base, and lower their funding costs.

Central banks' quantitative easing measures have depressed bond yields in recent years, encouraging European investors to consider alternative—but not necessarily riskier—options, outside traditional markets. Most covered bonds outside Europe still come from banks located in countries with high sovereign ratings. This was

probably inevitable, since investors needed to familiarize themselves with new issuers, legal frameworks, and mortgage markets. While this doesn't preclude future issuance from banks located in countries with lower sovereign ratings, it reflects the importance of a strong credit story.

Market volatility may also complicate issuance plans. Banks may not find it economical or possible to issue in times of high market volatility if, for example, they are unable to find swap providers or enough investors. While in more established markets banks have been able to issue covered bonds even within market turmoil, this is not a foregone conclusion for new market entrants, especially lower down the rating scale. Turkey saw its first euro-denominated benchmark covered bond issuance in 2016, but market volatility and political uncertainty have prevented further international issuance since then.

Cautious Optimism For Issuance In Developed Markets

Covered bonds are poised to play a greater role in mobilizing private capital toward mortgage financing outside Europe, with significant differences between developed and developing markets. Since the potential for asset growth in developed countries is limited, the stimulus for further issuance may come principally through regulatory initiatives and evolving market conditions.

Most developed countries have already adopted a covered bond framework. One exception is the U.S., where securitization supported by the government agencies Fannie Mae and Freddie Mac limits the demand for alternative funding sources. Another exception is Japan, where the development of a local structured covered bond market could encourage the legislator to act. But regulatory developments may still affect issuance, even where a dedicated framework exists. First, asset encumbrance limits, which constrain banks' asset volumes in cover pools, can be revised. When the Monetary Authority of Singapore increased the asset encumbrance limit to 10% from 4% of the issuer's total assets, new banks decided to establish programs. Second, loss-absorbing rules can favor covered bonds over other debt instruments: in Europe covered bonds are exempt from bail-in, whereas senior unsecured debt is not. Similar regulation can be introduced elsewhere, making covered bonds more attractive for investors. Canada's 2018 resolution regime excluded covered bonds from bail-in, confirming their favorable regulatory treatment. Third, covered bonds can benefit from preferential risk weights, with Basel III reforms making these possible for covered bonds purchased by banks outside Europe. Moreover, the EU covered bond directive defines the pathway to achieve third-country equivalence – the alignment of the regulatory treatment of covered bonds issued by credit institutions inside and outside the European Economic Area.

Volatile market conditions can also support issuance in existing markets. Established, highly-rated issuers use their covered bond programs more when other funding sources, such as senior unsecured bank debt, become relatively more expensive or difficult to place with investors. At the same time, market volatility may complicate issuance plans for programs in new jurisdictions.

FIGURE 3: STRONG GROWTH POTENTIAL BUT LEGISLATIVE SUPPORT NEEDED

| Country | Long-term sovereign credit rating | Gross domestic product (EUR BN) | Expected population growth 2024-2044 (%) | Household debt (% of GDP) | Domestic loans (% of domestic deposits) | Dedicated covered bond legislation | Covered bonds outstanding (Mil. €) |
|---------------|-----------------------------------|---------------------------------|--|---------------------------|---|------------------------------------|------------------------------------|
| United States | AA+ | 25308.61 | 8.57 | 72.93 | 92.34 | No | -- |
| China | A+ | 16478.74 | (7.42) | 69.74 | 117.69 | No | -- |
| Japan | A+ | 3935.01 | (11.71) | 61.29 | 64.89 | No | 6505 |
| India | BBB- | 3308.69 | 13.73 | 24.19 | 84.49 | No | -- |
| Canada | AAA | 1982.33 | 12.41 | 102.21 | 150.21 | Yes | 192353 |
| Korea | AA | 1700.53 | (7.96) | 96.38 | 113.16 | Yes | 14591 |
| Brazil | BB | 2011.76 | 3.39 | 32.44 | 111.78 | Yes | 21417 |
| Australia | AAA | 1573.96 | 16.86 | 91.67 | 168.88 | Yes | 79777 |
| Mexico | BBB | 1658.49 | 12.17 | 16.27 | 112.39 | No | -- |
| Indonesia | BBB | 1268.75 | 11.58 | 9.26 | 98.62 | No | -- |

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|--------------|-----------------------------------|---------------------------------|--|---------------------------|---|------------------------------------|------------------------------------|
| Saudi Arabia | A | 987.18 | 31.45 | 36.56 | 112.18 | No | -- |
| Thailand | BBB+ | 476.68 | (4.48) | 91.29 | 104.96 | No | -- |
| Nigeria | B- | 455.04 | 42.68 | 1.34 | 94.64 | No | -- |
| Israel | A+ | 469.86 | 29.86 | 42.34 | 107.63 | No | -- |
| Argentina | CCC | 676.94 | 5.34 | 4.82 | 48.51 | No | -- |
| Egypt | B- | 306.43 | 30.65 | 8.25 | 56.95 | No | -- |
| Philippines | BBB+ | 404.54 | 13.93 | 10.75 | 85.53 | No | -- |
| Singapore | AAA | 463.74 | 5.76 | 54.09 | 81.45 | Yes | 13683 |
| Malaysia | A- | 370.08 | 20.24 | 84.16 | 135.71 | No | -- |

Sources: Our World in Data, European Covered Bond Council, S&P Global Ratings

GREATER POTENTIAL BUT ALSO BIGGER HURDLES FOR NEW MARKETS

Emerging covered bond markets have the greatest growth potential, but also daunting obstacles ahead of them.

The Brookings Institution forecasts that the share of middle-class purchasing power – as defined by individuals who have an income between \$10 and \$100 a day – will increase by 2030 to 22% of the global total in China, and to 17% in India, while decreasing to 20% in Europe and 10% in North America. A burgeoning middle class and a shortage of good quality housing should stimulate the expansion of mortgage financing, with household debt approaching the levels reached in developed economies. And when mortgage lending outpaces customer deposits, banks are incentivized to access the wholesale funding markets, using mortgage loans as collateral for issuing secured bonds – such as covered bonds or securitizations.

The lack of dedicated legal frameworks significantly impedes the development of covered bonds in new markets, and the legislative process can be complex and time-consuming. Despite the success of the first Japanese issuances, we don't believe that many banks outside Japan will establish contractually based programs. Most potential new issuers will await the approval of a dedicated covered bond legal framework, or at least an appropriate supportive regulatory framework, in our view. Nevertheless, a growing number of regulators, in China and India among others, are considering the product. And if it proves successful in Brazil, we expect to see similar legislative initiatives in other parts of Latin America.

Current market conditions could also impede issuance out of new countries, especially down the rating scale. Even when markets stabilize, issuers and regulators will have to work closely to create a compelling credit story for traditional covered bond investors. But history shows that it can be done. Until two decades ago, more than 90% of outstanding covered bonds were issued out of three 'AAA'-rated countries: Germany, Denmark, and France; since then, issuance has expanded to many more countries with lower ratings, even sub-investment grade. Similarly, until the onset of the eurozone crisis, almost 90% of covered bonds were rated 'AAA'. Since then, investors have been investing more in non-'AAA' rated covered bonds, and we have seen issuance out of 'BBB'-rated programs.

If authorities want to reduce housing deficits and help financial institutions diversify their funding tools, they should create the right conditions for covered bonds to establish a foothold in new markets. The process will take time, several years in some instances. But with an appropriate framework, the right incentives and timing, and appropriate pricing, covered bonds could thrive, even in these new markets.