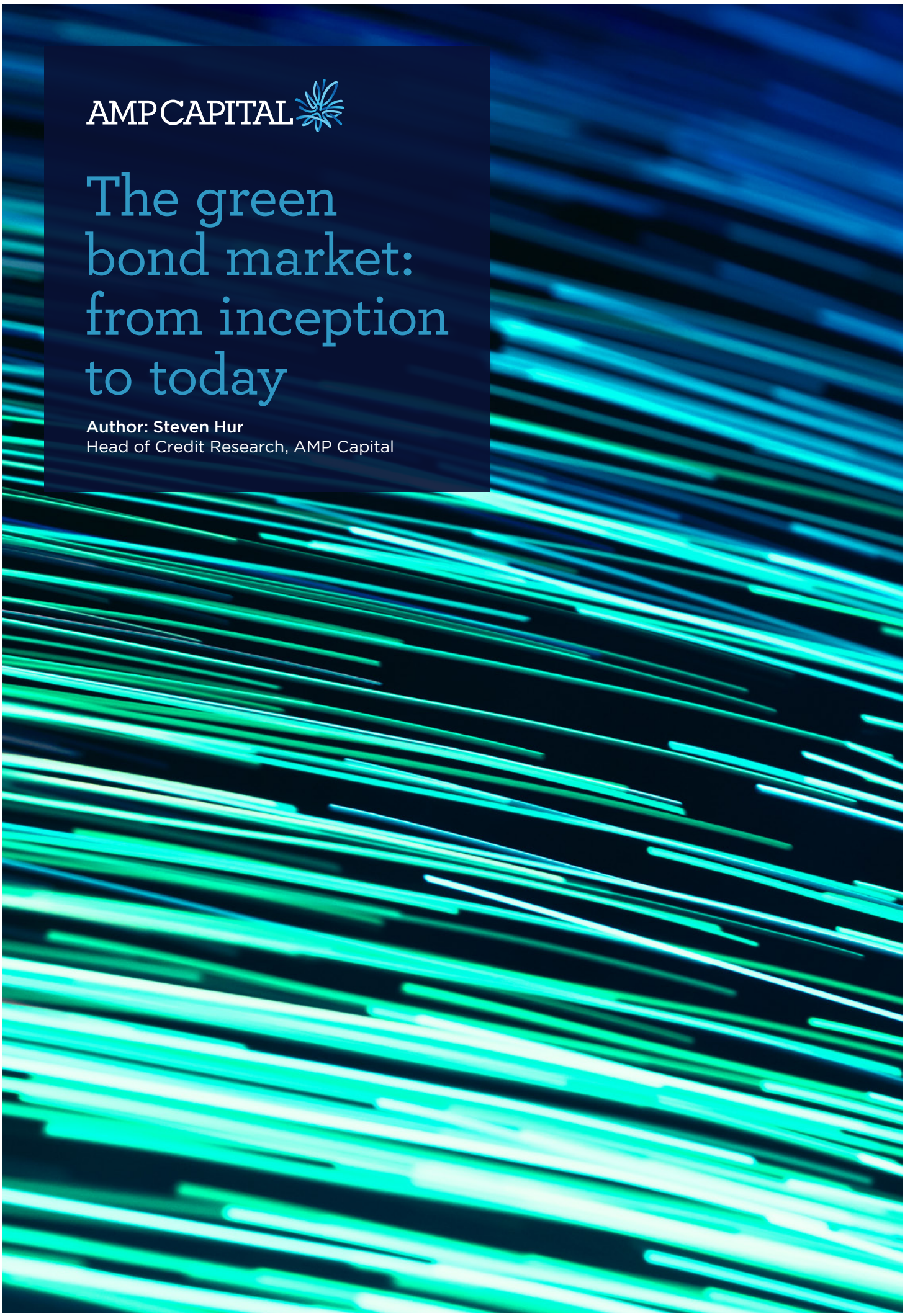

AMP CAPITAL

The green bond market: from inception to today

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Green bonds have been in the marketplace for a little over a decade – a slither of time compared to bank lending or government bonds. As such, the green bond market remains relatively immature, notwithstanding some substantial progress over the past five years. But it is undoubtedly among the fastest growing of the fixed income instruments.

The critical question for green bonds remains measurement – how to show the tangible environmental benefits emanating from the funds raised. Globally, banks and government agencies are working together to better define those benefits, encouraged by the strength of demand for green bonds.

According to Moody's Investors Service, issuers brought $US47.2 million of green bonds to the global market in the three months to the end of March, 2019, a year on year increase of 40 per cent[1], and Moody's now forecasts that this calendar year, issuance of green bonds will hit $US200 billion[2].

History

Bonds have been around for thousands of years, and can be traced back as far as 2400 B.C.^ The first use of government bonds goes back eight centuries to Europe, where they became a popular method of financing wars and public expenditures. Since those times, the use of bonds has grown exponentially and have become a staple of government and private financing.

The success of bond issuance was measured financially and practically – did a project bolster energy available for an economy, did a bridge allow better access for communities, were mine sites developed and resources exported?

There was scant attention paid to whether bonds issued were having a positive environmental impact.

But in early 2008, the World Bank got a phone call from a group of Swedish pension funds who asked whether there was a way of investing in projects to help slow climate change. Within a year, green bonds had been created.

^ Source: http://bondfunds.com/education/a-brief-history-of-bond-investing/

What is a green bond?

Green bonds are much like traditional bonds, except their proceeds are used for projects with tangible environmental benefits. The bond's risk profile remains dependent on the underlying credit quality of the issuer and the terms, conditions and maturity operate similarly to other types of bonds.

A challenge for green bonds is defining what constitutes 'tangible environmental benefits' – it needs to be more than a statement from the issuer claiming success. Over the past decade definitions have evolved and precedents have been established. Investors in green bonds expect enough detailed information from issuers to satisfactorily judge if the bond is sufficiently green. They want to know how the funds are used and see tangible evidence of positive impacts.

Increasingly investors in green bonds have been relying on third parties to help judge how green a bond is, among them academics, investment advisers, auditors, technical experts, the media and non-government agencies.[4]

Likewise, green bond indices have evolved as the market has grown. Barclays/Morgan Stanley Capital International (MSCI), Standard & Poor's and Solactive are useful benchmarks for green bond portfolios. They support transparency in definitions and processes. One major step forward in defining and measuring green bonds came with the development of the Green Bond Principles (GBP).

Green Bond/Loans***

Green bonds/loans are debt instruments labelled as green, with proceeds earmarked to finance green' projects & expenditures that deliver positive environmental benefits

Use of proceeds	Proceeds should be used to exculsively fund investment in 'green' projects that provide clear environmental benefits
Selection of eligible projects & assets	Issuers should ioutline their selection process and transparent eligibility criteria for identifying eligible 'green' projects and related expenditures, together with their environmental and/or sustainability objectives
Management of proceeds	Issuers should have a formal internal process to track, report and attest to the allocation of bond proceeds raised to eligible green projects and expenditures during the life of the bond
Reporting	Issuers should report annually on use of proceedsinculding allocation towards nominated green projects & expenditures, plus expected or actual environmental impact of these
External review	Issuers should obtain an external review of their Green Bond Framework and proposed Green Bond to confirm alignment with the GBP or compliance with the Climate Bonds Standards prior to bond issuance

Example Green Bond/Loan Use of Proceeds

Source: National Australia Bank

* ICMA's Green Bond Principles are voluntary process guidelines for issuing green bonds. https://www.lma.eu.com/news-publications/press-releases?id=146

** LMA/APLMA published the Green Loan Principles on 21 March 2018. https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/

Green Bond Principles

In early 2014, a group of banks within the International Capital Market Association initiated the development of GBP. These were a set of voluntary guidelines which help to define green bonds.

They aimed to promote integrity in the market, through the development of guidelines around transparency, disclosure and reporting. Both issuers and investors can use the GBP to access the information needed to judge whether a bond is green.

The principles were (and continue to be) developed through the collaboration of stakeholders in the green bond community. They are not stagnant. Instead they are updated once a year to reflect the development of the green bond market.

Projects funded by green bonds may not exclusively have environmental benefits, just as many projects funded by government or corporate bonds may have some tangible environmental attributes. The GBP dictate that the primary objective of the project being funded by a green bond should have environmental benefits.

The GBP have four core components:[5]

1. Use of proceeds – the funds raised by the bonds must be used for clear environmental benefits. There are several categories recognised under the GBP.

Renewable energy	Clean transportation
Energy efficiency	Sustainable water and waste-water
Pollution prevention and control	Climate change adaption
Environmentally sustainable management of living natural resources	Eco-efficient adapted products, production technologies and processes
Terrestrial and aquatic biodiversity conservation	Green buildings

2. Process for project evaluation and selection – the issuer of the green bond should communicate the environmentally sustainable objectives and the methodology that proves its success as well as any other relevant criteria.

3. Management of proceeds – to ensure a high level of transparency, the net proceeds of the green bond should be tracked by the issuer.

4. Reporting – issuers must make available, and keep up-to-date, the uses of the proceeds.

United Nations Sustainable Development Goals

The adoption of the UN Sustainable Development Goals (SDGs) have been another fillip for the green bond market. The SDGs provide guidelines to align investing and long-term environmental and social objectives.

The SDGs were developed by the UN to provide a blueprint to achieve a better and more sustainable future across the globe. The 17 goals relate to a broad range of global issues, including climate, poverty, inequality, environmental degradation, prosperity, sustainability and justice.

Source: https://www.un.org/sustainabledevelopment/

As the green bond market develops, the SDGs are increasingly relevant to issuers and investors. According to ratings agency Moody's Investors Service, around half of the $US22 billion in green bonds it assessed were aligned to clean and affordable energy and responsible consumption and production, as per the SDGs.[6]

Moody's has it owns green bond assessment and says green bonds issued are well represented in five of the 17 SDGs. But significant investment is needed to achieve all 17 goals, and this will potentially prove a boon for future green bonds.

The UN Commission on Trade and Development says achieving the SDGs by 2030 will require between $US2 trillion and $US5 trillion in investment per annum. The funding gap between what's invested now and what's needed is around $US2.5 trillion per year.

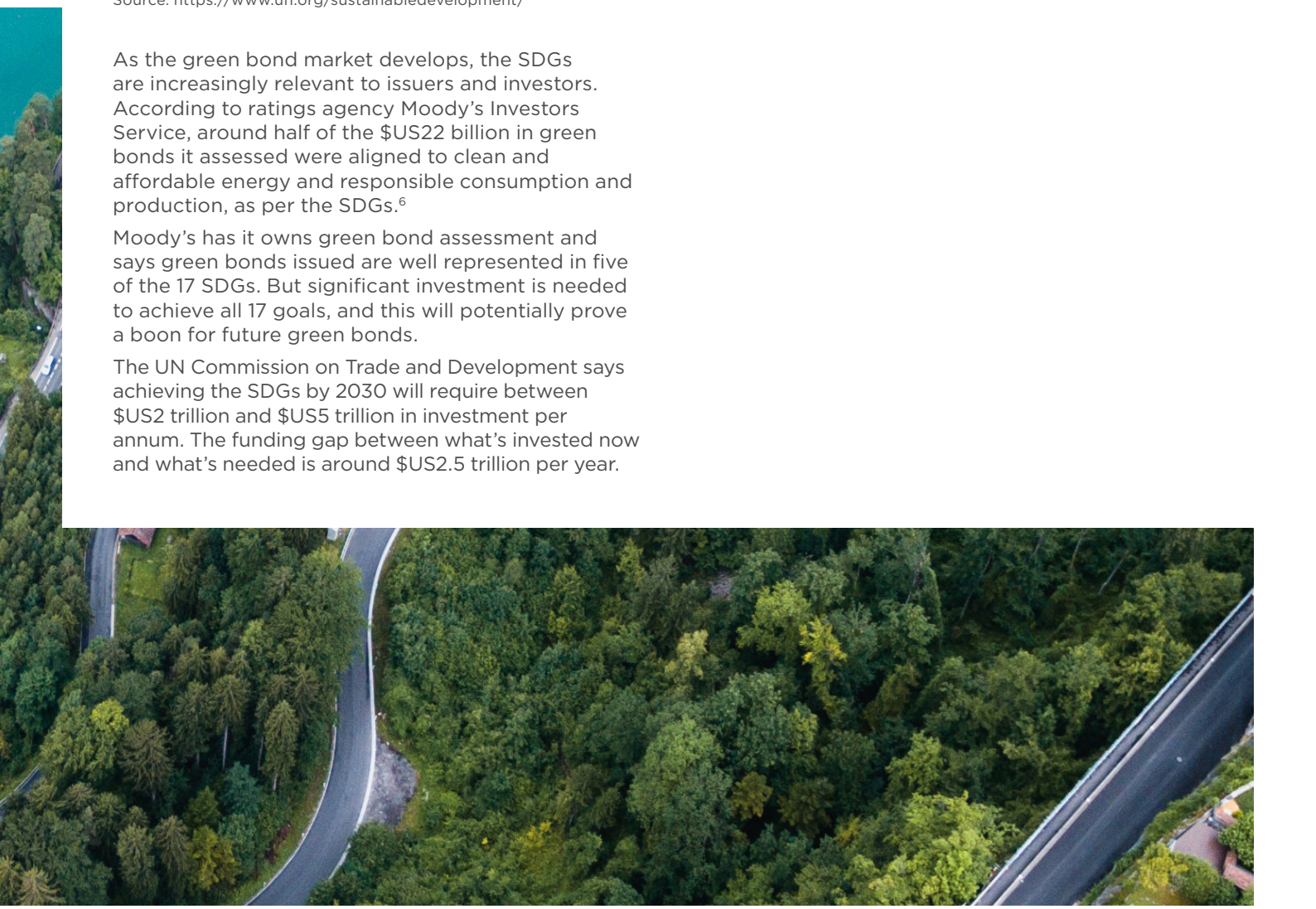
Are green bonds riskier than conventional bonds? What about pricing?

Green bonds, like conventional bonds, are fixed income securities that can be issed in both taxable and tax-exempt markets. The 'green' part of the instrument is dictated by the use of the funds raised, not the credit worthiness of the issuer. So from a credit perspective, there is no difference between an issuer's conventional bond and its green bond in terms of the probability of default or expected loss

Where green bonds are sometimes different to conventional bonds is in the suite of additional reporting and disclosure requirements needed to ensure they have tangible environemental benefits.

In general, green bonds are priced very closely to regular bonds, according to the World Bank[7]. Like any bond, the market price is determined relative to market conditions and a reference bond rate. For US dollar denominated bonds – the largest category of green bonds – the benchmark is US treasury bonds.

The similarity in pricing suggests investors are not willing to give up a return, or pay extra, for the green credentials of a bond. What could potentially affect pricing has been the growing demand and preference for green bonds by some mainstream investors. Given the scarcity of green bonds, the supply and demand mismatch may eventually push prices higher.



Why issue a green bond rather than a conventional bond?

Why issue green bonds? To help make a tangible difference to the environment. But there are more subtle benefits as well. A green bond allows issuers to reach investors that might otherwise be unavailable to them. For example, they attract investors focused on sustainable and responsible investing, and those that incorporate environmental, social and governance (ESG) criteria as part of their investment analysis. Green bonds effectively diversify the pool of investors available to an issuer.

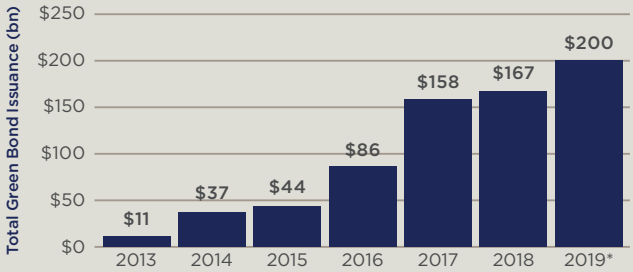
Governments use green bonds to raise awareness about projects that help constituents. While such bonds have an environmental benefit, they can also improve a community's quality of living, and increase the sense of connection and social responsibility.

Green bonds attract some additional transaction costs, because issuers have a greater responsibility to track, monitor and report on the bond. The offset is helping improve the environment, a positive marketing story and a diversified investor base.

The growth of green bonds

Along with forecasting that green bond issuance will hit $US200 billion this calendar year, Moody's Investors Services has forecast that the growth will also be accompanied by issuance diversification aiding maturity in the market. Initially dominated by supranatural development banks, such as the World Bank, the green bonds are predicted to become increasingly diverse in terms of sector, region and use of proceeds.

Global green bond insurance to reach $200bn in 2019

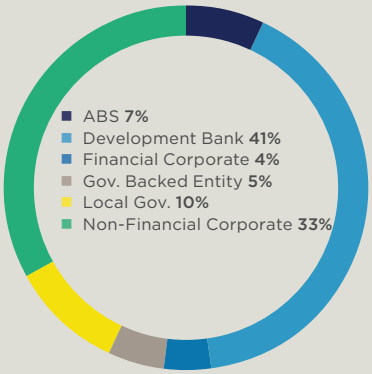


*2019 represents Moody's forecast for total global green bond issuance.
Source: Climate Bonds Initiative, Moody's Investors Service

What augurs well for the green bond market is the steady shift away from development bank issuance, towards financial corporates. This has aided in increasing acceptance and a deeper market for the bonds. The strongest growth has occurred during the past five years, and this is likely to continue.

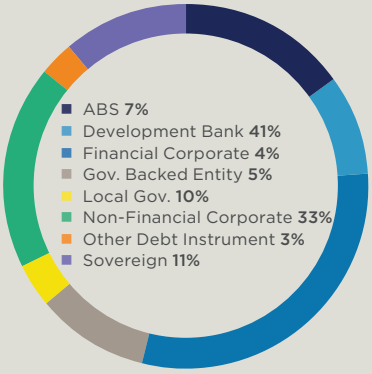
While development banks dominated in 2014...

Percent of 2014 global green bond issuance



...issuance was much more diverse in 2018

Percent of 2018 global green bond issuance



Sector breakdown provided by Climate Bonds Initiative
Source: Climate Bonds Initiative, Moody's Investors Service

AMP Capital's role in the green bond market

AMP Capital has actively promoted and invested in the development of green bonds in the Australian market. It has participated in green bond issuance including a National Australia Bank Residential Mortgage Backed Security, a bond for the Australian Catholic University and the largest ever green bond deal issued by the New South Wales Treasury Corporation.

The $1.8 billion NSW Treasury issuance funded clean energy projects including the Newcastle Light Rail which will incorporate climate risk into its design to ensure the development is climate-resilient while preserving Aboriginal artefacts in the construction process.

AMP Capital also worked with the World Bank to bring the first Australian dollar green bond issue to the market, in April 2014. The proceeds funded projects such as the rehabilitation of power plants and transmission facilities to reduce greenhouse gas emissions, solar and wind installations and sustainable forestry.

AMP Capital has been a signatory to the UN Principles for Responsible Investment (PRI) since 2007, a set of six principles that provide parameters for ESG investing. AMP Capital's Head of ESG, Adam Kirkman, and its Head of Credit Research, Steven Hur, were among a select core of working members for the UNPRI's inaugural fixed income investor guide publication. The principles and beliefs behind green bonds have informed decisions within AMP Capital for more than a decade.

The credit research team has integrated ESG analysis as a requirement in the credit fundamental research process. Considering ESG issues within fixed income investments offers investors in bonds and corporate credit increased protection in mitigating downside risks. AMP Capital believes material ESG issues could, under certain scenarios, impact the operating profit and cash flows of companies. In severe cases this could potentially affect the ability of a company to service their debt repayments (risk of default) and adversely impact the company's credit rating.

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1. https://www.moodys.com/newsandevents/topics/Green-Bonds-007034
2. https://www.moodys.com/research/Moodys-Green-bond-market-poised-to-hit-200-billion-in--PBC_1159526
3. www.worldbank.org
4. http://www.worldbank.org/en/topic/climatechange/brief/what-are-green-bonds
5. https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/
6. https://www.moodys.com/research/Moodys-Repeat-issuers-adoption-of-SDGs-to-support-green-bond--PR_391525
7. https://www.worldbank.org/en/news/opinion/2018/10/10/the-pros-and-cons-of-green-bonds