

August 2016

GBCNZ: GREEN BOND MARKET OVERVIEW

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EXECUTIVE SUMMARY

Green Bond Market

- A green bond is a bond where proceeds are used to **finance or refinance climate-friendly or environmental projects**
- The market has been in existence since 2008, and as at the end of 2015 reached **USD41.8bn of labelled Green Bonds issued globally**
- The market is open to **many types of issuers**: Corporates, Governments and semi-government bodies, Financial Institutions and Asset Owners

Benefits

Investor **Diversification**



Multi-Asset **Pools**



Establish Green **Credentials**



Potentially Longer **Tenor**



Preparation and Issuance



Identify Assets

- “Tag” in system
- Identify process to “tag” inflow of investor funds
- Setup monitoring and reporting
- Define use of proceeds language



Verification

- Appoint verifier
- Verification process
- Apply for external certification (if applicable)



Engage Investors

- Roadshow
- Issue green bond



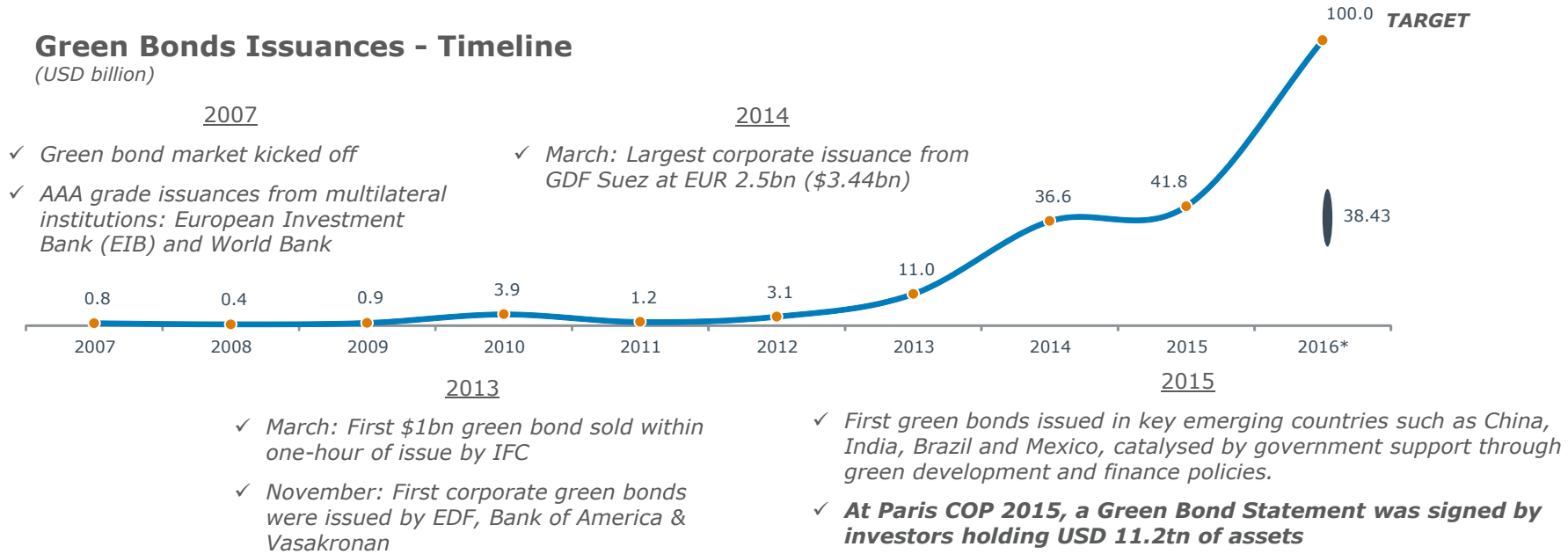
External verification and ongoing reporting

- Malleable to investor appetite

MARKET OVERVIEW

Green Bonds Issuances - Timeline

(USD billion)



Usage of 2016 Green Bond Proceeds - 24% was used for Energy Efficiency (green buildings)

Renewable Energy



Energy Efficiency



Low Carbon Transport



Sustainable Water



Waste & Pollution



Climate Adaptation



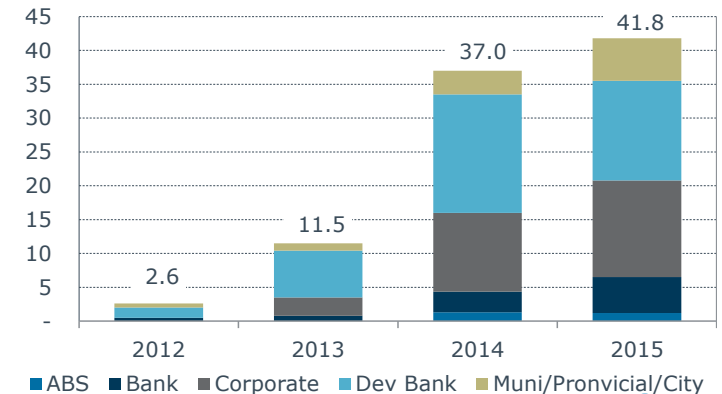
Agriculture & Forestry



*Sources: Climatebonds.net, Norton Rose Fulbright & ANZ analysis

2015 Issuance by Type

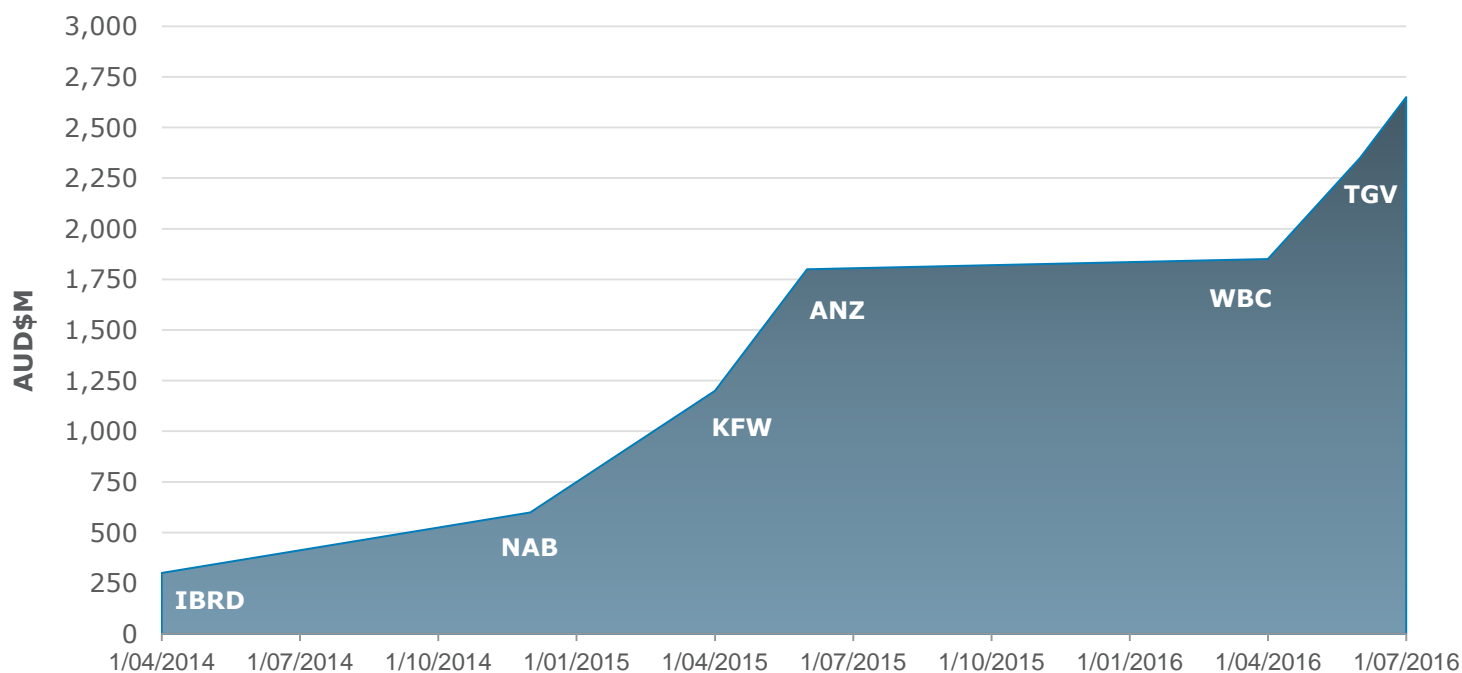
(USD billion)



AUSTRALIAN GREEN BOND MARKET

Issue Date	Issuer (Ticker)	Volume	Original Tenor	Maturity	Rating	Format	Series	Ranking	Issue Spread (bp)	Current Spread
29/04/2014	IBRD	300,000,000	5 Year	29/04/2019	AAA	Fixed	GDIF	Sr Unsecured	ACGB + 40.25	SQ ASW + 28
16/12/2014	NAB	300,000,000	7 Year	16/12/2021	AA-	Fixed	MTN	Sr Unsecured	ACGB + 137	SQASW + 130
2/04/2015	KFW	600,000,000	5.25 Year	2/07/2020	AAA	Fixed	MTN	Sr Unsecured	ACGB + 57.50	SQASW + 40
3/06/2015	ANZ	600,000,000	5 Year	3/06/2020	AA-	Fixed	TCD	Sr Unsecured	SQASW + 80	SQASW + 94
27/04/2016	FLEXI 2016-1 A2-G	50,000,000	1.37 Year WAL	23/05/2021	AAA	FRN	ABS	Securitized	1mBBSW + 150	1mBBSW + 150
3/06/2016	WBC	500,000,000	5 Year	3/06/2021	AA-	Fixed	MTN	Sr Unsecured	SQASW + 117	SQASW + 111
19/07/2016	TCV	300,000,000	5 Year	27/07/2021	AAA	Fixed	MTN	Sr Unsecured	3 yr EFP + 33 bps	ACGB + 19.75

Growth in AUD Green Bond Market – Total Outstanding Volume in A\$



INVESTOR APPETITE IN AUSTRALIAN GREEN BOND MARKET

Consideration	Description
Investor Type	<ul style="list-style-type: none"> • Institutional: insurance companies, fund and asset managers, superannuation funds: greening portfolios. • Middle market: councils, education bodies, religious groups, ethical funds: specific mandates or strong appetite. • Typically investors are long-term buy-and-hold investors
Investor Rationale	<ul style="list-style-type: none"> • Increasing exposure to 'green assets', • Consciously allocating larger segments of their portfolios to climate change investment activities • Driven by questions from clients and beneficiaries around investment practices and ESG considerations of fund managers
Issuer	<ul style="list-style-type: none"> • Australia: primarily SSA and Bank sectors • Growing interest from the Public sector and the Corporate sector • Diversity of issuer type welcomed by investors
Tenor	<ul style="list-style-type: none"> • In line with traditional market: 5yrs • Appetite for up to 7 years, and longer if appropriately priced
Volume	<ul style="list-style-type: none"> • Strong appetite for >A\$100m • Smaller sizes generally require a pricing premium
Audit, Disclosure, Reporting	<ul style="list-style-type: none"> • Second opinion or third party certification generally expected with disclosure of "use of proceeds" • Monitoring process to be evident • Semi-annual or and quarterly reporting



HOW TO MAKE A BOND GREEN








Two main options: The Green Bond Principals or Climate Bond Initiative standards.

Both provide a sound framework for identifying and applying bonds proceeds to a range of green expenditure categories.

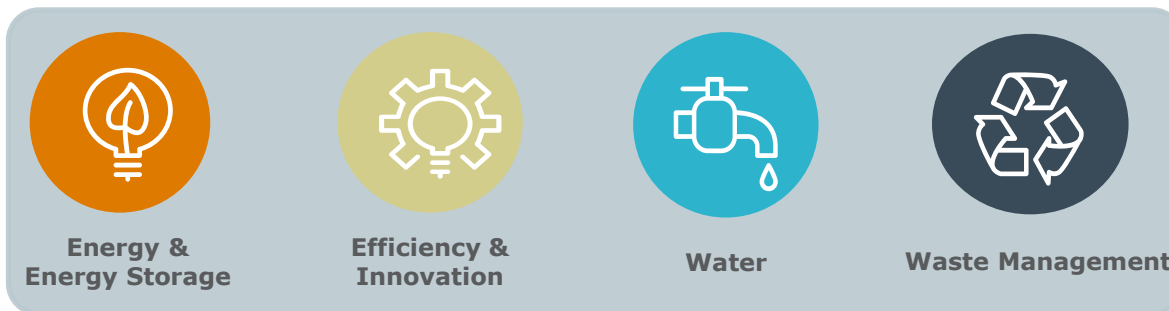
1) Green Bond Principals

- Renewable energy
- Energy efficiency (including efficient buildings)
- Sustainable waste management
- Sustainable land use (including sustainable forestry and agriculture)
- Biodiversity conservation
- Clean transportation
- Sustainable water management (including clean and/or drinking water)
- Climate change adaptation

2) Climate Bond Initiative

 Energy & Energy Storage	 Efficiency & Innovation	 Transport	 Water	 Waste Management	 Agriculture	 Resilient & Social Infrastructure
Renewables	Green Commercial Buildings	Public transport: Rail BRTs etc.	Stormwater adaptation investment	Waste water treatment and methane capture	Sustainable Forestry and Supply Chains	Adapting infrastructure to increased heat stress
Distribution/Management	Green residential mortgages	Electric vehicle infrastructure	Investments to deal with rainfall volatility	Waste to energy	Sustainable Agriculture & Supply Chains	Ports Redeveloped to address sea level rise
Energy Storage	EE technology & products	Cycling rental schemes & infrastructure	Water treatment and recycling	Recycling		Storm surge protection
Products/tech that support smart grid	Industrial Retrofits	Low emission vehicles	Waterways adaptation			Broadband
Data-centres using RE						

PROPERTY SECTOR GREEN BOND: POTENTIAL ASSETS



Eligible Asset Classes



Typical Property Company Asset Inclusions





01

ANZ AND OTHER CASE STUDIES

ANZ CASE STUDIES: ANZ

AUD 600,000,000



Australia & New Zealand Banking Group Ltd

Fixed Rate Notes



Sole Lead Manager

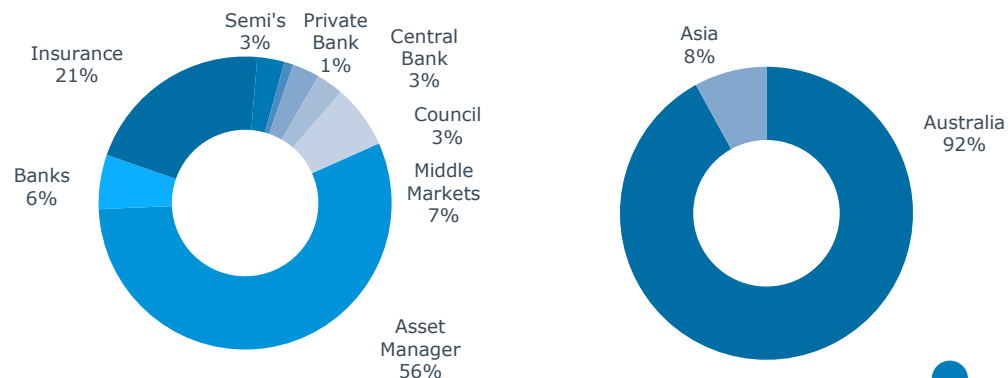
Transaction Summary

Issuer	Australia & New Zealand Banking Group Ltd
Issuer Rating:	AA-/Aa2 (Stable) (S&P/ Moody's)
Type:	Transferable Certificates of Deposit
Pricing Date:	27 May 2015
Settlement:	3 June 2015
Maturity:	3 June 2020
Size:	AUD 600,000,000
Coupon:	3.25%
Reoffer Spread:	s/q ASW+80bps
Reoffer Yield:	3.385%
Reoffer Price:	99.384%
Sole Lead Manager:	ANZ

Transaction Highlights

- **First A\$ Senior Unsecured Green Bond Transaction:** This 5-year fixed rate deal was the first A\$ senior unsecured Green Bond issue by Australia & New Zealand Banking Group Ltd ("ANZ") and the largest A\$ Climate related bond by an Australian issuer. It also equals the largest A\$ Green Bond deal, sitting along side KFW's 5yr which was executed in March 2015, which is double the size of the only previous major bank green bond.
- **Structure:** The portfolio comprises of existing loans to wind power and solar projects as well as Green Star rated commercial property buildings in Australia, New Zealand and parts of Asia. Projects in the geothermal power and fuel efficient transportation sectors may also be considered in due course.
- **Largest Fixed Rate Tranche Senior Unsecured Transaction for A\$ Financial for 2015:** The transaction was the largest fixed rate tranche senior unsecured A\$ issue in 2015. This demonstrates the continued strong appetite for Australian Major Bank paper and more specifically, the bank's commitment to supporting the transition to a lower-carbon economy via a transaction that is part of a developing market.
- **Highly Successful Oversubscribed Granular Order-book:** The benchmark issue was launched at 9:30am and the order book built swift momentum with books closing the following morning which provided an opportunity for offshore investors to participate. A broad and diverse spectrum of 46 investors participated in the transaction with the final book closing at A\$725m. The deal attracted existing ANZ investors as well as new investors.
- **Successfully Extending the Curve in the Australian Bond Market:** The new benchmark A\$ senior unsecured bond further extends ANZ's domestic curve to June 2020.
- **The Transaction Attracted Participation from a Diversified Group of Investors:** 25% of the investors in the bond were new to buying ANZ paper. The size, quality and granularity of the final order book highlights the high regard in which the Issuer is held by both domestic and offshore investors.

Distribution Statistics

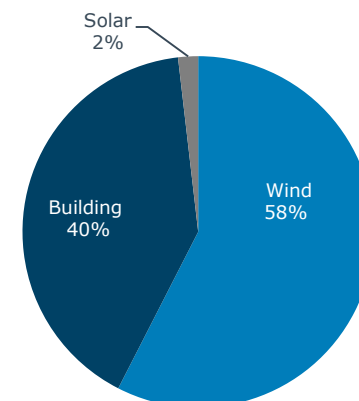


ANZ GREEN BOND ASSET POOL

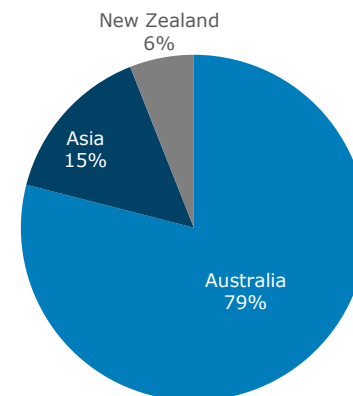
Project	Class	Country
Bald Hills Wind Farm	Wind	Australia
Collgar Wind Farm	Wind	Australia
Mumbida Wind Farm	Wind	Australia
Taralga Wind Farm	Wind	Australia
Wonthaggi Wind Farm	Wind	Australia
Macarthur Wind Farm	Wind	Australia
Hallet 5 - Bluff Range	Wind	Australia
Boco Rock Wind Farm	Wind	Australia
Royalla	Solar	Australia
Brookfield Tower Place 2, Perth	Building	Australia
Tower 4, Collins Square, Melbourne	Building	Australia
161 Castlereagh St, Sydney	Building	Australia
Mahinerangi Wind Farm	Wind	New Zealand
Tuararua Wind Farm	Wind	New Zealand
Changbin Wind	Wind	Taiwan
Chungwei Wind	Wind	Taiwan
Miaoli Wind Farm	Wind	Taiwan
Burgos Wind Farm	Wind	Philippines
Coonooer Bridge Wind Farm	Wind	Australia
Southern Cross	Building	Australia
Current Aggregated Volume		~A\$1.2bn

Portfolio Composition¹

By Asset Class



By Geography

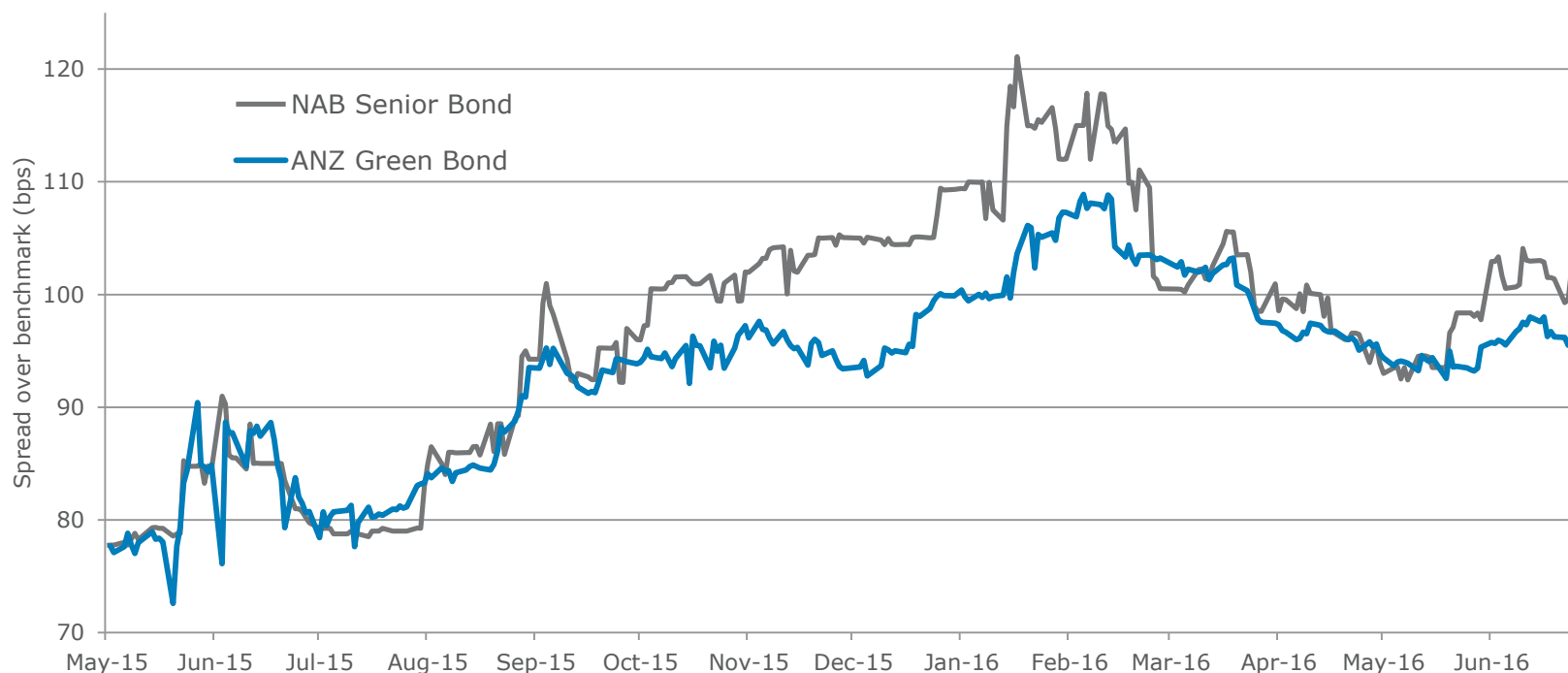


1. Calculated based on total drawn funding at time of issuance.

ANZ'S INAUGURAL GREEN BOND – PERFORMANCE

- ANZ and NAB both launched 5-year A\$ domestic deals on 26th May 2015 – ANZ's launching its debut domestic green bond, and NAB launching its first domestic senior benchmark deal for 2015
- Both deals were priced at a margin of 80bps over their respective benchmarks. NAB's intraday floating-rate deal was priced at 3m BBSW +80bps at a volume of A\$1.9bn, while ANZ's fixed-rate deal was priced the following day at s/q ASW +80bps at a volume of A\$600m
- Since printing, the ANZ Green Bond has traded at an average of 6bps inside the NAB Senior Bond on the secondary market. Both notes pushed wider towards the end of 2015 in line with the tougher macroeconomic backdrop and subsequent increase in market volatility

Secondary Market Performance – ANZ Green Bond & NAB Senior Bond



Source: Bloomberg

RECENT LANDMARK ISSUES

Recent issuances demonstrate how green bonds can be used for new projects as well as refinancing purposes, across multiple asset classes



November 2014: Stockland issued a **EUR 300m green bond** (equiv. AUD 435M) to fund investment in development, redevelopment or tenant improvements across its property portfolio that have or are expected to receive a Green Star rating above 4.

The bond has **1.5% coupon** and has a **7 year tenor**.

Key features of Stockland's list of eligible projects:

- **Outcome:** Introduces the use of green building rating systems such as the Green Star rating, while indicating the potential to pursue capital projects that produce energy water and/or waste reductions
- **Scope:** New and ongoing development, redevelopment or tenant improvements of retail, commercial, residential and retirement living projects that have or expected to receive a Green Star rating above 4.
- **Objectives:** Confirms the Group's commitment to long-term environmentally sustainable, accretive development across its portfolio
- **Significance:** First Australian green bond issued to 23 European investors



DIGITAL REALTY

June 2015: Real Estate Investment Trust (REIT) **Digital Realty Trust Inc.** issued its first green bond for **USD 500m** to finance **green buildings** for data centres

The bond has **3.95% coupon** and **7 year tenor**.

Key features of Digital's list of eligible projects:

- **Outcome:** Emphasises the use of integrative, multi-criteria green building rating systems, while mentioning the potential to pursue savings through energy efficiency, water conservation, or clean energy supply
- **Lifecycle:** Option to address each of the major phases in the lifecycle of commercial property: new or re-development, renovation, tenant improvement, and system-level upgrades
- **Scope:** Potential for using proceeds for projects around the world. The bond calls out high-quality national rating systems in the U.S. (LEED), UK (BREEAM), and Singapore (Green Mark). It also highlights a fully audited, property type specific rating system, Certified Energy Efficient Datacentre Award (CEEDA)



Feb 2016: Apple Inc., as part of its USD 12bn nine-part bond offering, issued a **USD 1.5bn green bond** to fund clean energy projects across its global operations

The bond **priced 2.85%** and has a **7 year tenor**.

Key features of Apple's list of eligible projects:

- **Outcome:** Emphasises the use of environmental design elements, energy & water efficiency projects and technologies and enhanced recycling & reuse
- **Scope:** New and ongoing renewable energy projects for Apple and its subsidiaries, including projects for which certification was received within the past 3 years
- **Objectives:** Reduce impacts of climate change by using renewable energy and driving energy efficiency in supply chain, facilities, and products. Conserve precious resources by pioneering use of greener materials in products and processes
- **Significance:** Biggest green bond issuance for a U.S. corporate to date

EXAMPLES OF CORPORATE PROPERTY GREEN BOND ISSUANCES

Date	Issuer	Amount	Pricing	Tenor	Use of Proceeds	Significance
Nov-13	Vasakronan	SEK\$1B (~USD\$157 M)	Various	3-5 yr	Green building projects aimed at both lower energy use and climate impact	First corporate green bond
Feb-14	Unibail-Rodamco	EUR\$750M	A+	10 yr	New or ongoing projects or existing assets that have or will receive certain BREEAM Design and In-Use standards	Bond was 3.4x oversubscribed. Subsequent EUR\$500M issuance in Apr-15 was 6x oversubscribed
Mar-14	Skanska	SEK\$850M (~USD\$131 M)	No rating	5 yr	Investments in green commercial property development	
May-14	Regency Centers	USD\$250M	BBB 3.75%	10 yr	New, ongoing or existing assets in the shopping centre portfolio which have or are expected to receive any LEED rating	First green bond issued by US REIT
Jun-14	Vornado Realty Trust	USD\$450M	BBB 2.5%	5 yr	New, ongoing and existing developments and tenant improvement projects with LEED rating; Capital projects to enhance energy efficiency	
Sep-14	MIT	USD\$370M	AAA 3.96%	24 yr	Refinance existing debt earmarked for carrying out extensive retrofits for 5 LEED certified buildings	
Nov-14	Stockland Trust Management	EUR\$300M	A- 1.5%	7 yr	New and ongoing green building development, redevelopment or tenant improvements that have or are expected to receive a Green Star rating above 4.	First Australian green bond issued to 23 European investors
Jun-15	Digital Realty Trust	USD\$500M	BBB+ 3.95%	7 yr	New and ongoing green building developments for data centres, renovations in existing buildings and tenant improvements	
Jul-15	500 Georgia Office Partnership	CAD\$225M	3.40%	10 yr	Retire the short-term construction financing and establish new financing for the TELUS Garden office tower that is compliant with LEED standards	First time in North America that green mortgage bonds have been issued to support property financing.
Jul-16	Link REIT	USD\$500M	A 2.87%	10 yr	Projects for new or existing building that has or is expected to receive BEAM or LEED certification; capital projects aimed at energy efficiency, waste reduction, water efficiency or promote low carbon transportation	First Hong Kong corporate property green bond. Bond was 4x oversubscribed.



02

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