



Green Bonds

The fastest growing segment of the capital markets

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February 2017

HSBC 

PUBLIC

What is a Green Bond?

Green Bond Principles

Four Pillars

1. Use of proceeds

Eligible Project Categories

- Renewable energy
- Energy efficiency (including Efficient Buildings)
- Pollution prevention and control
- Sustainable management of living natural resources
- Terrestrial and aquatic biodiversity conservation
- Clean transportation
- Sustainable water management
- Climate change adaptation
- Eco-efficient products, production technologies and processes

2. Process for project evaluation and selection

- Define sustainability objectives
- Define eligibility criteria
- Define governance structure
- Determine exclusions, if any

3. Management of proceeds

- Determine method for allocation of funds from net bond proceeds
- Ring-fenced special accounts = tracking method; OR
- Allocating funds to green projects = earmarking method
- timing of allocations to projects
- Unallocated balances

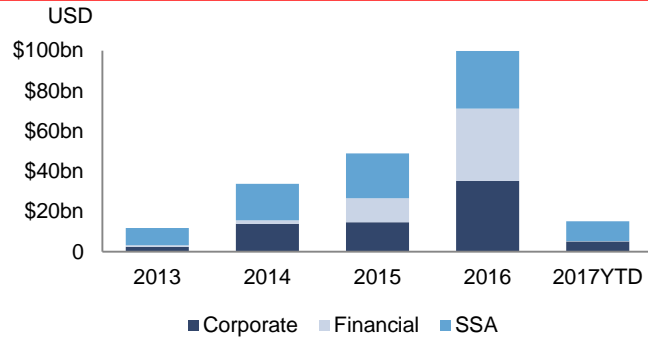
4. Reporting

- Annual (at least) reporting
- Consider Project or Portfolio level reporting
- Description of projects or sectors and amounts allocated
- Communicate ...via reports, newsletters, website update etc
- Independent assurance on annual report
- Impact reporting?

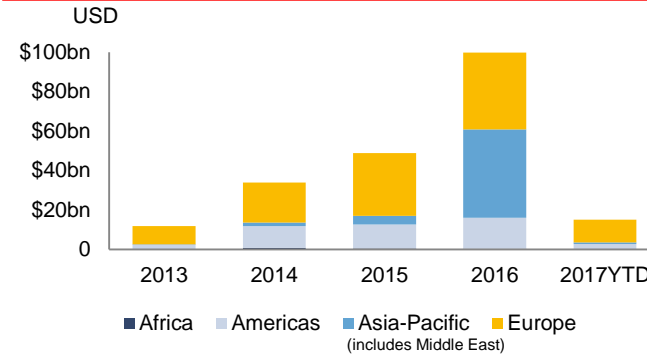
Green Bond Market Update

2016 more than double 2015 volume

Issuance progression by sector¹

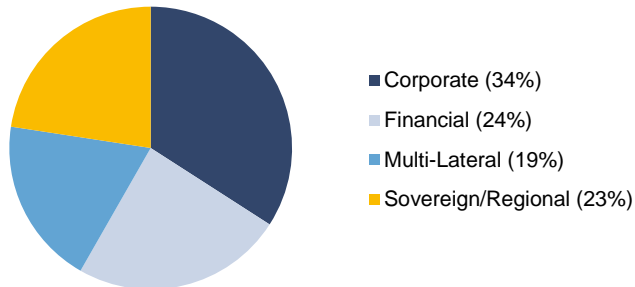


Issuance progression by region¹

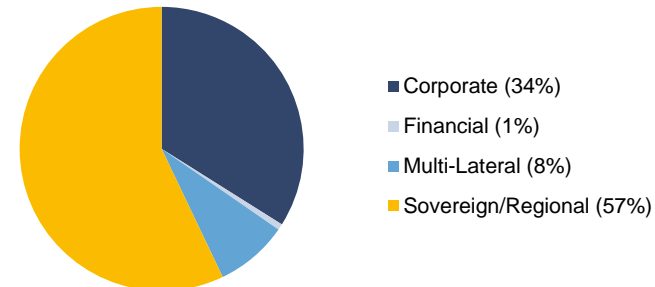


Green/Social issuance by sector¹

All Green, Social, Sustainability Bonds

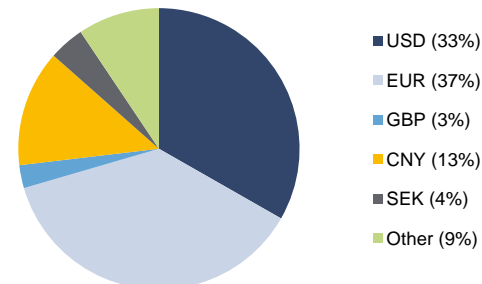


2017YTD Green, Social, Sustainability Bonds

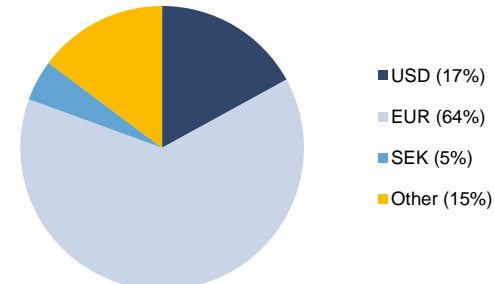


Green/Social issuance by currency¹

All Green, Social, Sustainability Bonds



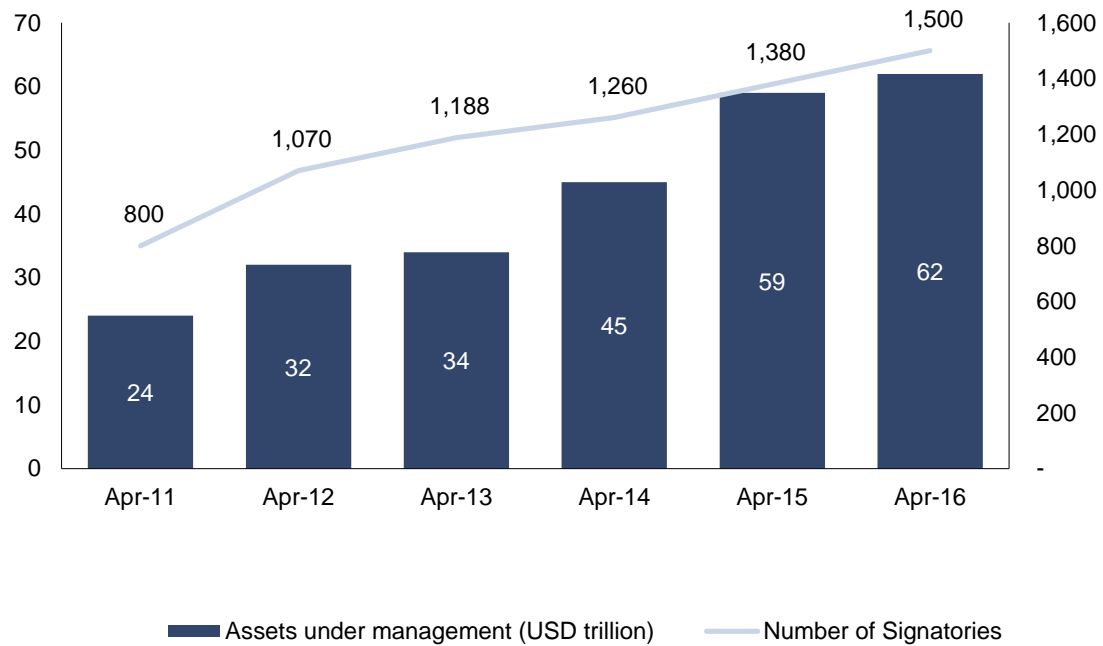
2017YTD Green, Social, Sustainability Bonds



Source:
1: HSBC Green, Social, Sustainability Bond database – based on Dealogic, CBI, Bloomberg, of 10 Feb 2017

Green Bonds - Investor Perspective

Growth of Responsible Investment¹



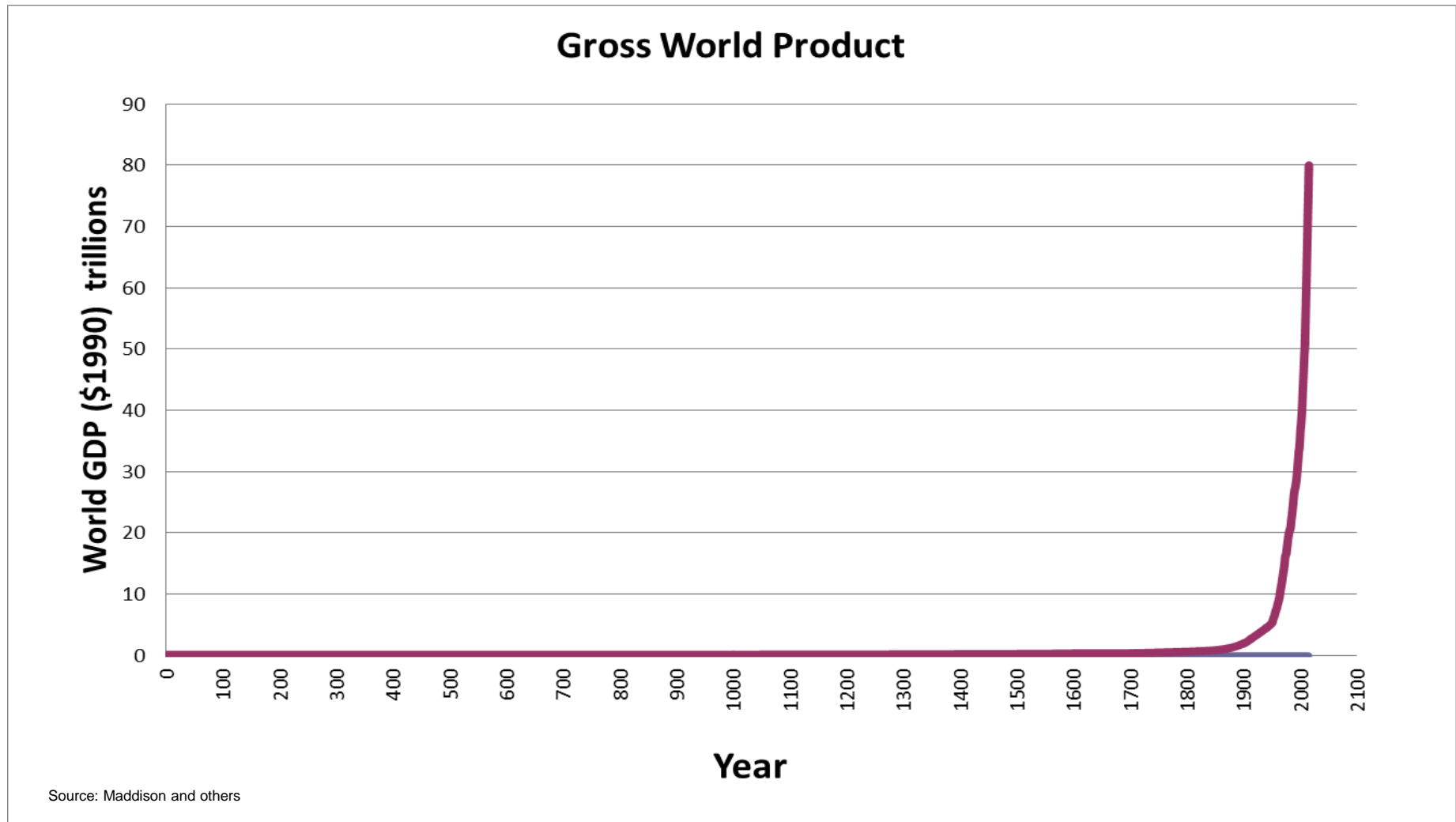
2016年二十国集团中国峰会



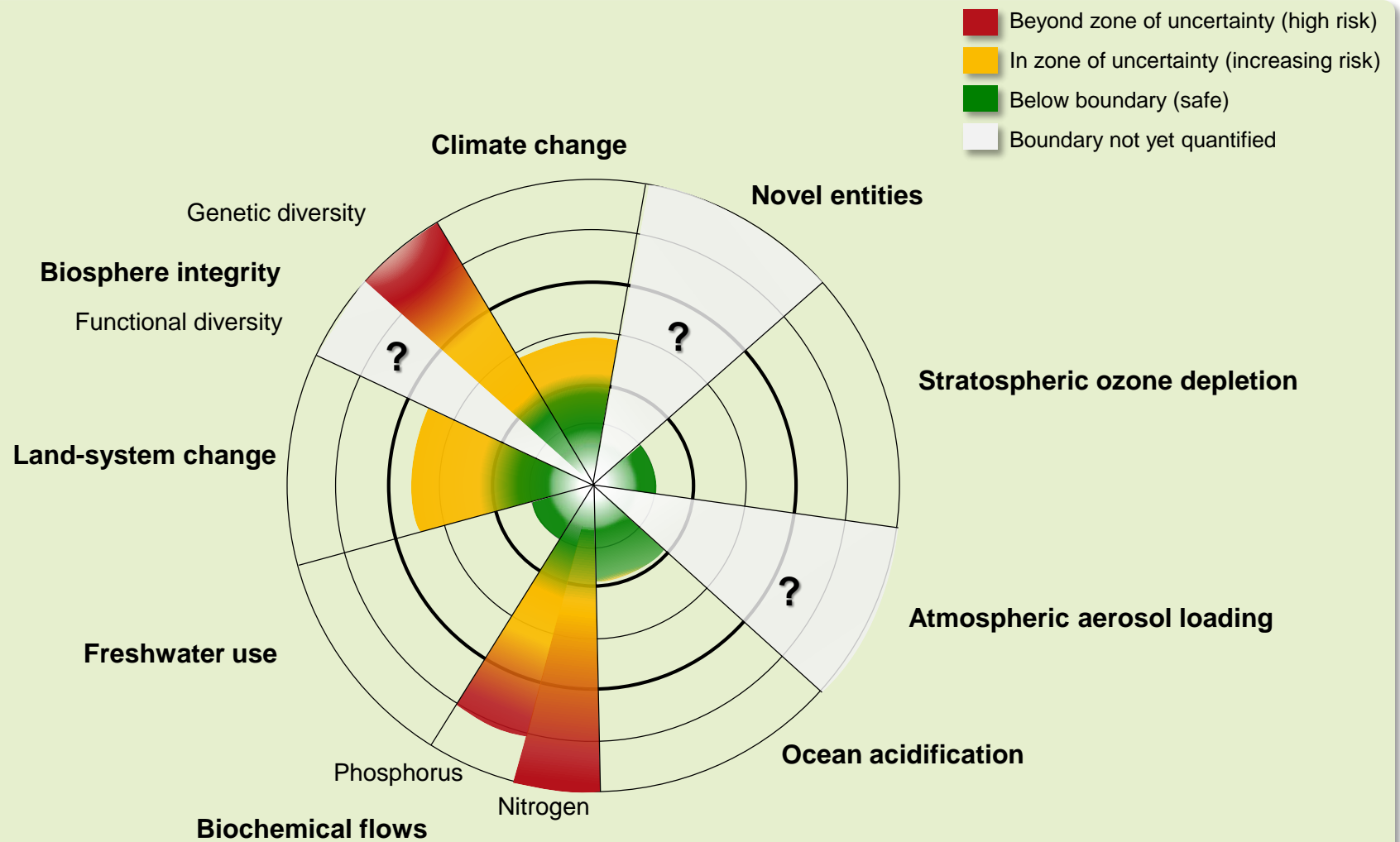
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Sustaining Economic Progress

Gross World Product

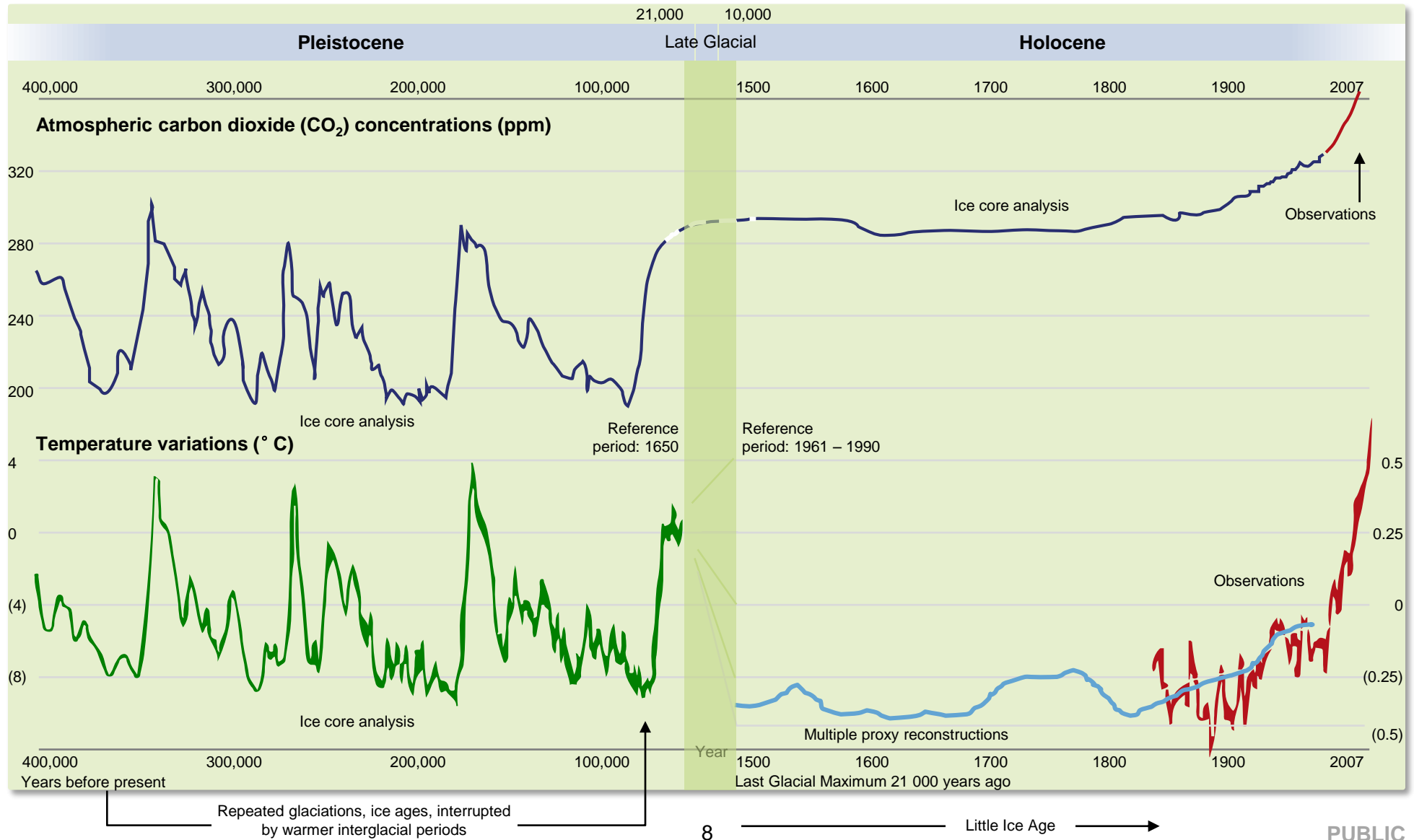


Planetary Boundaries

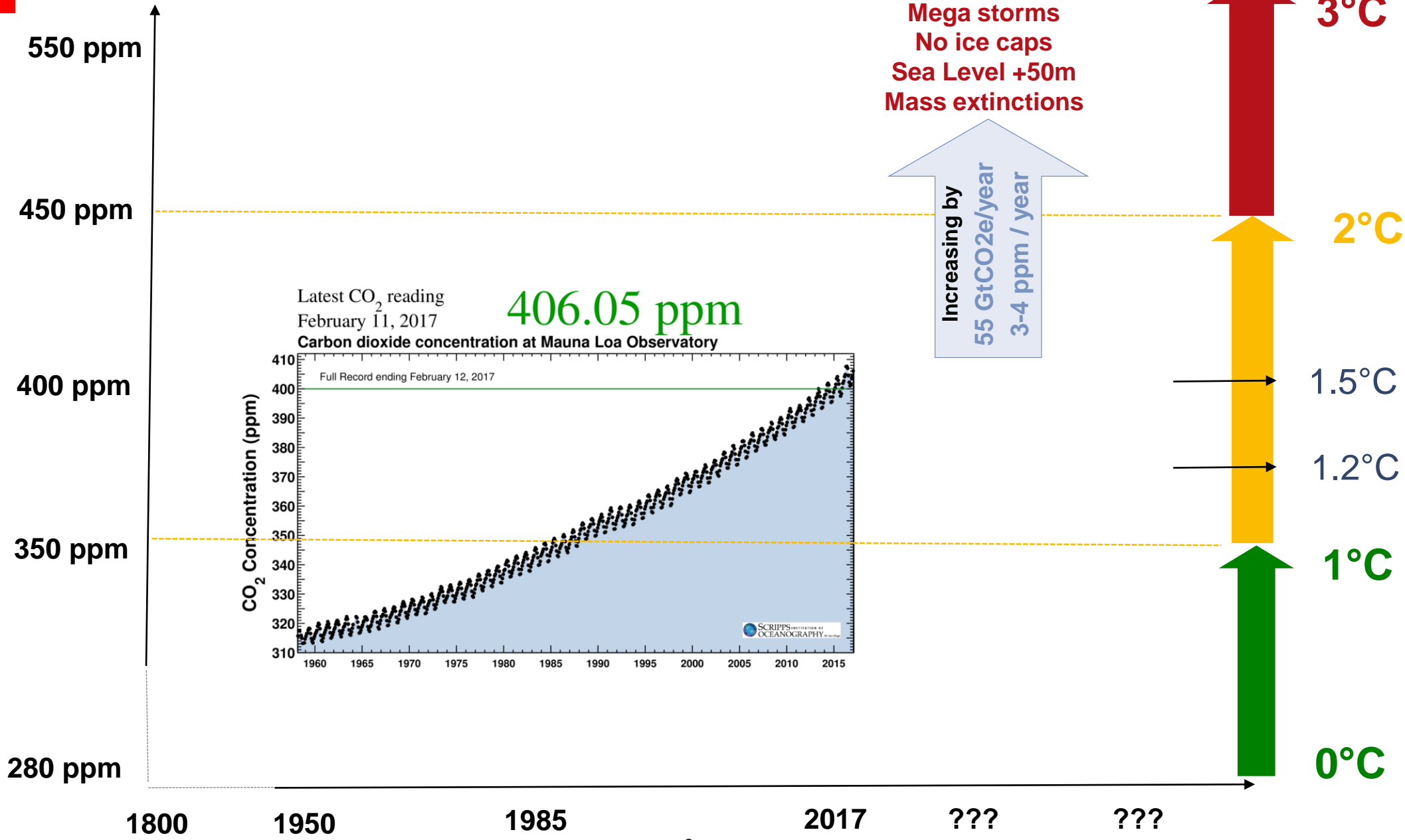


Source: Rockstrom and others

Correlation between CO₂ concentration and Temperature

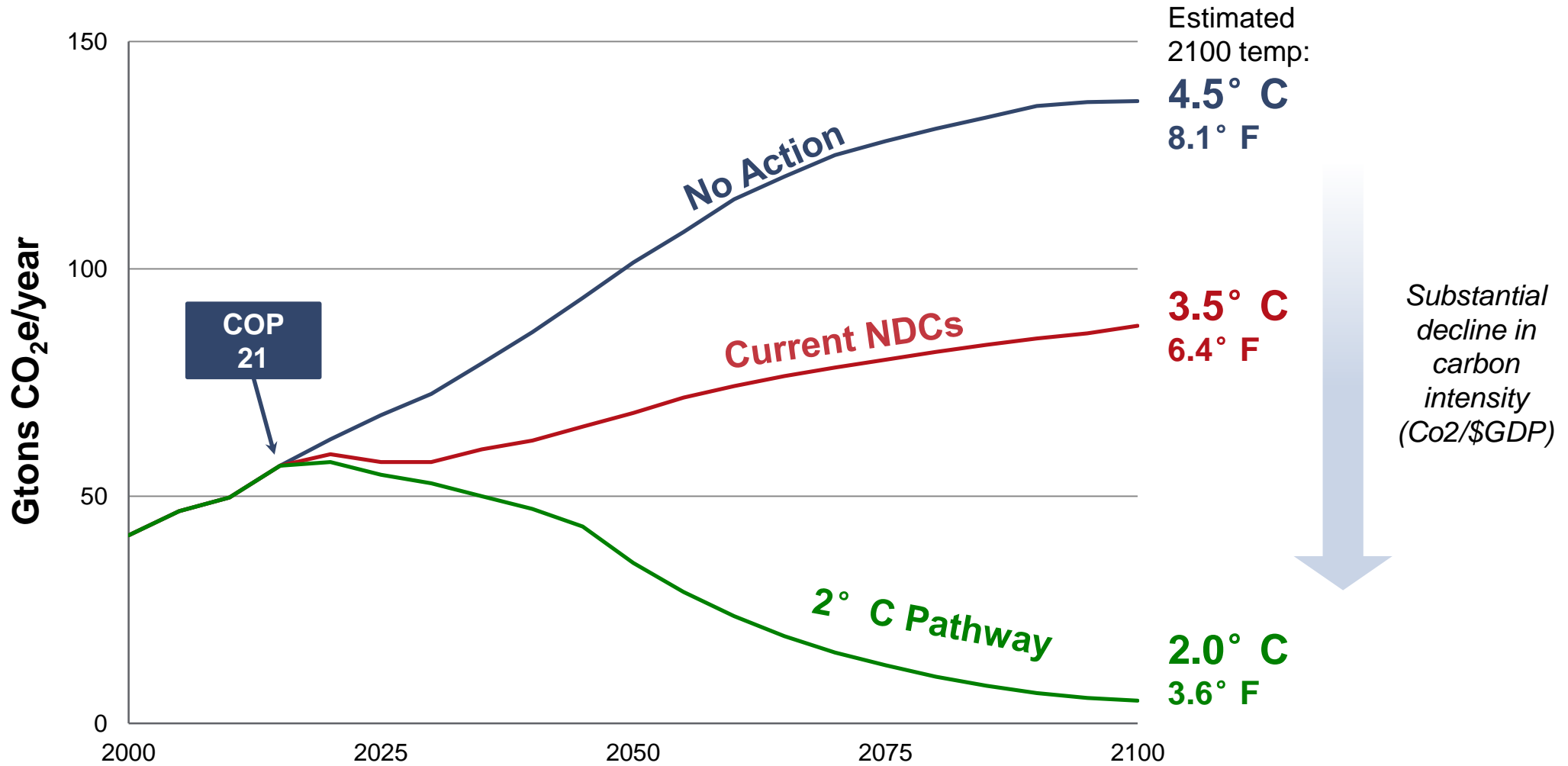


Timetable for Action on Climate Change

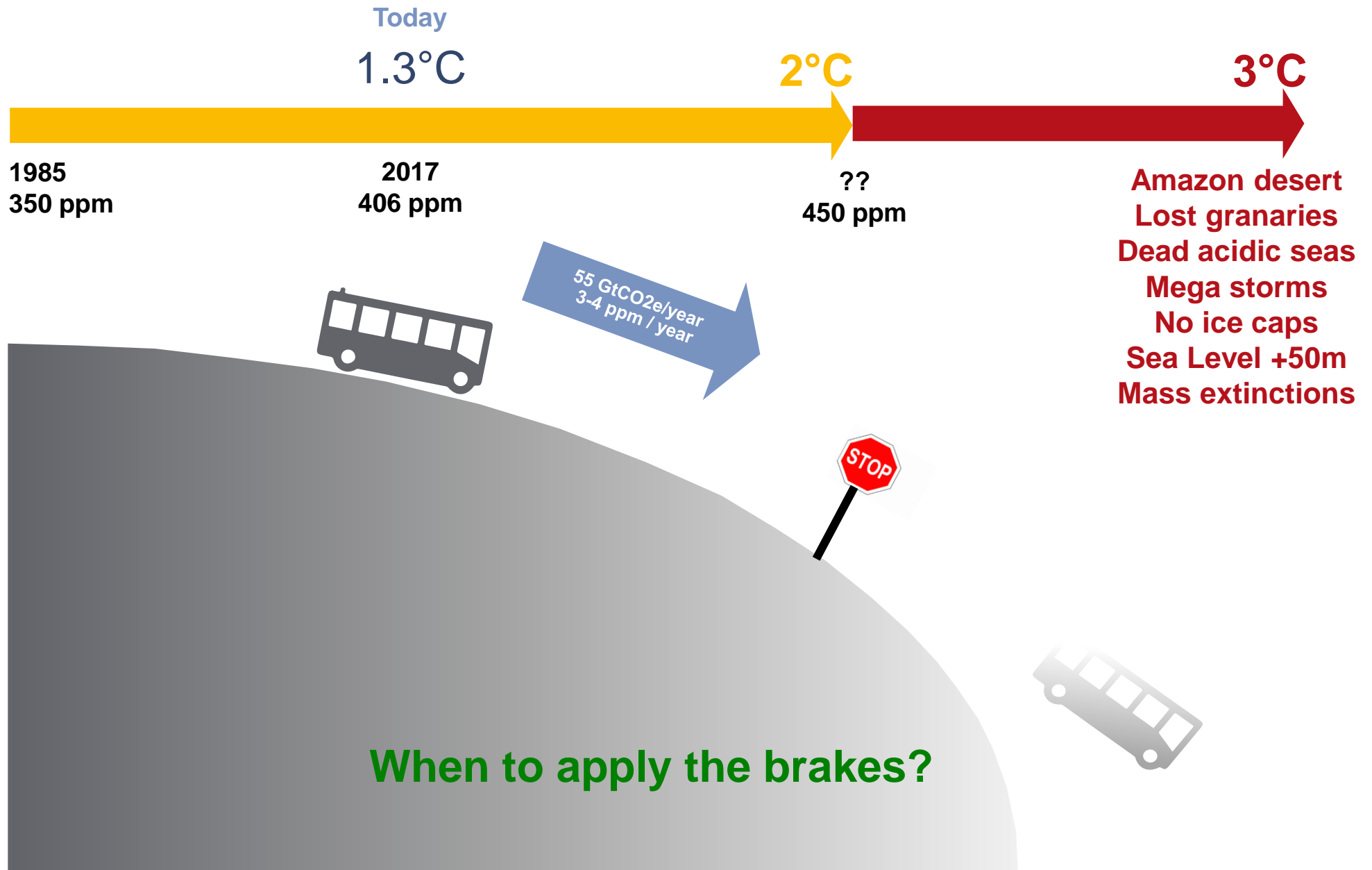


Climate Change Scenarios

Paris Agreement



Timetable for Action on Climate Change



Decarbonisation and Environmental Protection

Eligible green categories



- G20 – USD 90 trillion of investments required over the next 15 years

Green Bond – Why Issue?

Advantages of green bond over ordinary bond

Green bonds are simple to issue, but the benefits are manifold

Investor diversification

Price tension

Investor loyalty

Demonstrating innovation

Ease of issuance

Alignment with stakeholder campaigns

Align with government and policy agenda

Develop sustainable business platforms

Promote resource efficiency

Promote sustainable products / investments

Neerg Energy/ ReNew Power

USD475m 144A / Reg S 5NC3 6.000% 5-year Green Bond



On 6 February 2017, Neerg Energy Limited, an offshore SPV incorporated in Mauritius and owned by Neerg Energy Purpose Trust, priced a successful inaugural USD 475m 5NC3 transaction rated Ba3 by Moody's and B+ by Fitch

The Issuer will use the proceeds of the USD Notes to purchase INR denominated Masala Bonds issued by 7 subsidiaries of Renew Power Ventures Pvt. Ltd. These 7 entities of Renew Power own between themselves roughly 500 MW of wind and solar power producing assets

As Joint Green Structuring Advisor, HSBC reviewed and advised on the green bond framework drafting and assurance procedures. The bonds are expected to be certified Green

HSBC acted as Joint Global Coordinator for the transaction, and as Sole Ratings Advisor led the ratings process across all rating agencies, which was integral to the achievement of Ba3 / B+ issuance ratings from Moody's and Fitch respectively

Founded in 2011 by Sumant Sinha and currently backed by marquee investors such as Goldman Sachs, ADIA, ADB, Global Environment Fund, ReNew Power is the first Indian renewable independent power producer (IPP) to cross 1.0 GW of installed capacity

Summary terms and conditions

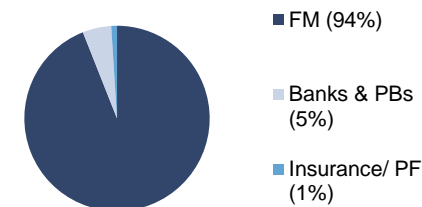
Issuer	ReNew Power Ventures Private Limited
Issue	Senior Secured Notes (the "Notes")
Issue Ratings	Ba3 by Moody's / B+ by Fitch
Format	Rule 144A / Reg S
Ranking	Senior Secured
Currency	US Dollars
Issue Size	US\$ 475M
Tenor	5NC3 years
Settlement Date	T+5, 13 February 2017
Coupon	6% s/a, 30/360
Reoffer Yield	6%
Reoffer Price	100%
Use of Proceeds	To subscribe to Masala Bonds issued by 7 subsidiaries of ReNew Power, under a Green Bond Framework
Security	1st priority security interest on the cash account, the Masala Bonds subscribed by the Issuer and a pledge over 100% shares of the Issuer
Covenants	Customary High Yield Covenant Package
Change on Control	At 101% upon a Change of Control under the Masala Bonds and a Ratings Decline
HSBC's Role	Joint Green Structuring Advisor, Joint Global Coordinator, Sole Ratings Advisor

Key execution highlights

- A comprehensive global marketing roadshow across SG / HK / London / New York / Boston / Los Angeles was conducted over 9 days, meeting over 100 investors in the process.
- On 6 February, taking advantage of a pricing window post the Chinese New Year holidays, a transaction was launched with initial price guidance at 6.375% area.
- The orderbook grew to a peak volume of USD 1.6bn on the back of high quality real money asset management demand. The transaction priced at a yield of 6.000%, representing a tightening of 37.5 bps.
- The issuance structure is a first of its kind in India and enabled Renew Power to raise funding at attractive rates from a diversified set of investors. Also, the bullet nature of the bond will enable Renew Power to use its operating cash flows more productively for funding its expansion plans.
- This transaction reflects HSBC's leading position in the India HY bond and ratings advisory space for debut issuers, adding to our impressive track record recently with issuers such as Jubilant Pharma, Glenmark, etc.

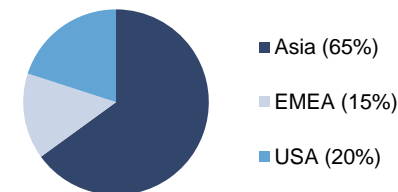
Distribution by type

% of allocation



Distribution by geography

% of allocation



Republic of Poland

EUR750m 0.500% 5 year Green Bond Issuance



On Monday, 12 December 2016, the Republic of Poland (“Poland” or the “Republic”) once again broke new ground by issuing its EUR750m 5yr Green Bond

This was Poland’s **inaugural Green Bond and the first-ever sovereign Green Bond**

The issuance follows a 3-day roadshow covering key Green accounts in London, Paris, Amsterdam, Frankfurt and Munich

The transaction marks the establishment of Poland’s **Green Bond Framework** and is in line with Green Bond Principles 2016 as per a Second Party opinion from Sustainalytics

The proceeds of the issuance will be used to fund Eligible Project falling in one of the below sectors:

- Renewable Energy
- Clean Transportation
- Sustainable Agricultural operations
 - Afforestation
 - National Parks
- Reclamation of Heaps

HSBC acted as Sole Green Structuring Advisor, Joint Lead Manager, Bookrunner and Billing and Delivery Agent on the transaction

Summary terms and conditions

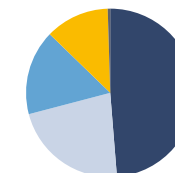
Issuer	The State Treasury of the Republic of Poland, represented by the Minister of Development and Finance
Rating (M/S/F)	A2 (Negative) / BBB+ (Stable) / A- (Stable)
Format	Eurobond - Reg S bearer, New Global Note
Pricing date	12 December 2016
Settlement date	20 December 2016
Tenor	5 years
Size	EUR 750,000,000
Maturity	20 December 2021
Coupon	0.500%
Re-offer Spread	MS + 48bps
Re-offer yield	0.634%
Re-offer price	99.343%
Spread vs. Bund	OBL 10/08/21 + 104.65bps
Denominations	EUR 1K x 1K
HSBC Role	Sole Green Structuring Advisor, Joint Lead Manager, Bookrunner and Billing and Delivery Agent

Key execution highlights

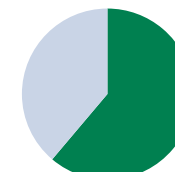
- Following a 3-day marketing exercise covering key Green accounts across Europe and a supportive market backdrop, the Republic of Poland successfully priced the first-ever sovereign Green Bond on Monday, 12 December 2016
- The transaction launched at the London open with IPTs of “MS+60bps area” but following a swift build-up in the orderbook price guidance was revised to “MS+50-55bps area” at 11:45am London time
- The orderbook grew to over EUR1.4bn, allowing final guidance to tighten further to “MS+48-50bps area” with the transaction pricing at the tight end of MS+48bps
- Final pricing was 12bps inside of IPTs with only 8bps of NIP vs pre-announcement FV
- The Republic garnered a broad geographic distribution with 93% sold outside of Poland and the majority of orders coming from SRI/Green investors at 61%
- This Green issuance marks an innovative year for Poland in the capital markets as Poland also became the first European sovereign to issue a Panda bond in August this year – a transaction that HSBC was also proud to have managed

Distribution by type

% of allocation



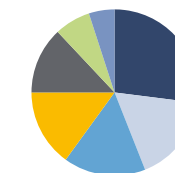
- Fund Managers (49%)
- Banks (22%)
- Pension Funds / Insurance (16%)
- Central Banks & Public Institutions (12%)



- SRI/Green (61%)
- General (39%)

Distribution by geography

% of allocation



- Germany / Austria (27%)
- Benelux (17%)
- UK / Ireland (16%)
- Nordic Countries (15%)
- France (13%)
- Poland (7%)
- Other (5%)

USD600m 10-year Reg S Green Bond Offering

On 24 October 2016, HSBC acted as Lead Left Joint Lead Manager, Joint Bookrunner and Lead Left Green Advisor on a 10-year USD600m Reg S Green Bond transaction for MTR Corporation Limited (“MTR” or the “Company”)

MTR Corporation Limited is a company listed (SEHK:0066) on HKSE, they are the sole railway operator in Hong Kong and runs the Mass Transit Railway as well as a major property developer and landlord in Hong Kong

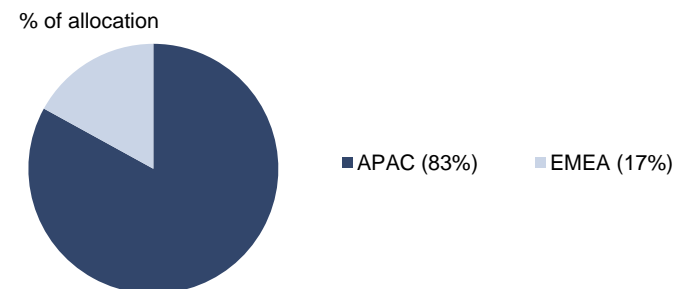
Summary terms and conditions

Issuer	MTR Corporation (C.I.) Limited
Guarantor	MTR Corporation Limited
Guarantor ratings	Aa1 (Moody's)/AAA (S&P)
Issue ratings	Aa1 (Moody's)/AAA (S&P)
Status	Senior unsecured
Format	Reg S, Registered
Tenor	10-Year
Settlement date	2 November 2016
Maturity date	2 November 2026
Issue size	USD600m
Coupon	2.500% Semi-annual
Reoffer spread	T +80bp
Reoffer price	99.675
Reoffer yield	2.537%
Listing	HKSE Listing
Terms	USD200k/1k Denoms, English Law
Summary Green Structure and Highlight	
External Review	Second Opinion by Sustainalytics
Use of proceeds	Fund or refinance eligible investments as set out in the Green Bond Framework
Highlight	First Asian rail corporate to issue a green bond with an external review
HSBC role	Lead Left Green Advisor, Joint Lead Manager and Bookrunner (B&D)

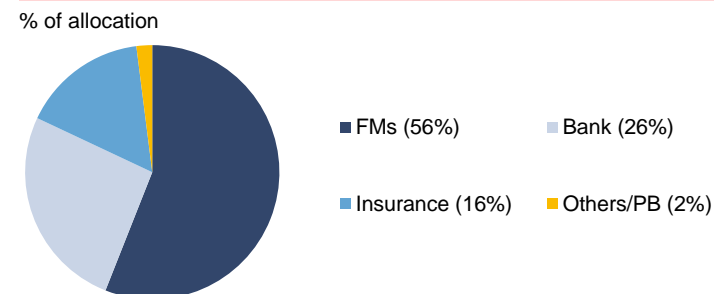
Execution highlights

- HSBC took a leading role on all key aspects of the transaction, including Green Bond Framework advisory, documentation, marketing, investor meetings and execution strategy. HSBC advised on the drafting of the Green Bond Framework and a second opinion was issued by Sustainalytics
- This landmark transaction represents MTR’s return to the market after a 4-year absence and the first ever green bond from them. The proceeds are to be used to invest in work related to low-carbon transportation, energy efficiency, sustainable transport solutions and real estate properties
- The transaction was announced with an initial price guidance of T+95bps area and MTR eventually priced a USD600m Green Bond transaction at reoffer spread of T+80bps. The strong investor response to the transaction was reflected in an orderbook of >1.4bn (representing 2.3x oversubscription) from 94 accounts, made up of high quality FMs, bank balance sheets and insurance companies
- The issuance was welcomed by Ms Christine Loh, Under Secretary for the Environment of HKSAR Government, "We are very pleased to see the MTR's success issuance of the Green Bond which is underpinned by rail being a low carbon mode of mass transport and the good response to this Green Bond issuance shows the financial community's growing interest in investing in responsible in sustainable companies"

Distribution by geography



Distribution by investor type



Link Real Estate Investment Trust

USD500m 10-year RegS Green Bond Offering



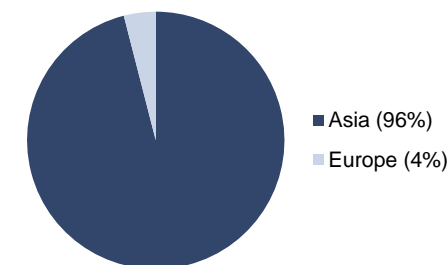
On 14 July 2016, HSBC acted as Green Advisor and Joint Bookrunner on a USD500m 10-year Reg S Green Bond issuance for Link Real Estate Investment Trust (“Link REIT”)

Link Real Estate Investment Trust (“Link REIT”) is the first real estate investment trust listed in Hong Kong, and currently Asia’s largest REIT and one of the world’s largest retail focused REITs in terms of market capitalization

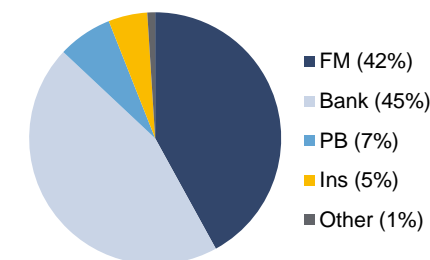
Summary of terms and conditions

Issuer	The Link Finance (Cayman) 2009 Limited
Guarantor	The Link Holdings Limited, Link Properties Limited and HSBC Institutional Trust Services (Asia) Limited (in its capacity as trustee of Link Real Estate Investment Trust)
Guarantor ratings	A (S&P) stable/A2 (Moody's) stable
Issue ratings	A (S&P)/A2 (Moody's)
Status	Senior, Unsecured, Drawdown off the MTN Programme
Format	Reg S, Registered
Tenor	10-Year
Settlement date	21 July 2016
Maturity date	21 July 2026
Issue size	USD 500m
Coupon	2.875% s/a
Reoffer spread	145bps vs T 1 % 05/15/26 (HR 94%)
Reoffer price/yield	99.123/2.977%
UST PX/yield	101-28+/1.527%
Terms	HKSE Listing, USD200k/1k Denoms, English Law
Summary Green Structure and Highlight	
External Review	Second opinion by Sustainalytics
Use of proceeds	To refinance or fund eligible green initiatives including energy efficiency, greenhouse gas emissions, water management, waste management and low carbon transportation
Highlight	First green bond issued by a Hong Kong corporate and an Asian REIT
HSBC role	Green Advisor and Joint Bookrunner

Distribution by geography



Distribution by investor type



Execution highlights

- HSBC helped Link REIT set up its Green Bond framework, which features a second opinion issued by Sustainalytics. The framework provides the structure to help guide Link REIT’s environmental, social and governance priorities. This includes various green initiatives including energy efficiency, greenhouse gas emissions, water management, waste management and low carbon transportation. The majority of the Green Bond funds will be used for upcoming HK-BEAM GOLD and LEED-GOLD certified buildings. Link REIT is the first Hong Kong corporate to issue a Green Bond, and the first Asian REIT to issue a Green Bond
- Following investor meetings in Hong Kong, Singapore and London, the deal was announced at initial price guidance (IPG) of T10+165bps area. On the back of a total orderbook of over 1.65bn, final price guidance was announced at T10+145bps to 150bps and the Company priced a USD 500million deal at the tight end of the final guidance, representing a 20bps tightening vs IPG. The deal featured participation from dedicated green investors
- The transaction marks HSBC’s 2nd USD mandate with Link REIT since its debut USD bond in 2014

Bank of China Limited, Luxembourg Branch

USD2.25bn/EUR500m multi-tranche RegS Green Bond

On 5 July 2016, HSBC acted as Joint Global Coordinator, Joint Lead Manager, Joint Bookrunner and Green Bond Advisor on USD750m 3-year floating rate, USD500m 3-year fixed rate, USD1bn 5-year fixed rate and EUR500m 5 year fixed rate RegS senior unsecured green bond offerings (the “bonds”) for Bank of China Limited, Luxembourg Branch (the “Issuer” or the “bank”). Bank of China Limited has also issued CNH1.5bn 2-year fixed rate note through its New York Branch

Proceeds will be used for urban rail projects, solar and wind power plants and waste water treatment projects. The bonds are rated GB-AAA by E&Y, which is the highest score on the firm's green rankings

This landmark transaction, together with the 2-year CNH1.5bn note from New York branch, marked the largest-ever green bond issuance globally and the first ever triple-currency green bond transaction by a Asian issuer. The Euro tranche was the first Euro-denominated green bond transaction from an Asian issuer. The bank was the first FI issuer ahead of European FI issuer to test the Euro primary bond market after the UK referendum. The issuer was able to achieve large size target and price flat with secondary levels simultaneously

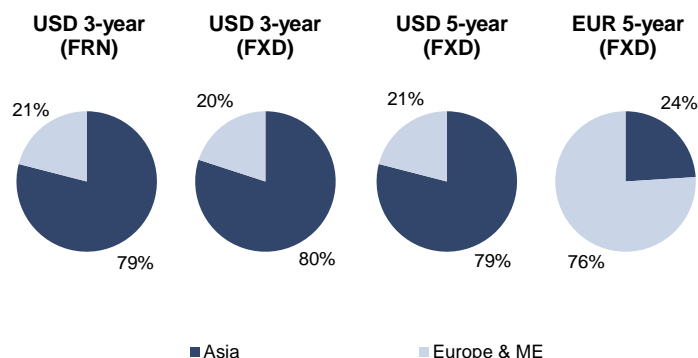
Summary terms and conditions

Issuer	Bank of China Limited, Luxembourg Branch			
Issuer Ratings	A1 (Moody's)/A (S&P)/A (Fitch)			
Expected issue ratings	A1 (Moody's)/A (Fitch)			
Status	Fixed rate, senior unsecured, drawdown from MTN Program			
Format	Reg S, Registered			
Maturity	07/12/2019	07/12/2019	07/12/2021	07/12/2021
Size	USD750m	USD500m	USD1.0bn	EUR 500m
Coupon	3mL+100	1.875%	2.250%	0.750%
Settlement Date	July 12, 2016 (T+5)			
Reoffer Price	100.000	99.930	99.836	99.839
Reoffer Spread	n/a	T3+125bps	T5+135bps	MS+95bps
Reoffer Yield	n/a	1.899%	2.285%	0.783%
Terms	Luxembourg Stock Exchange, English Law			
Denoms	USD200k/1k	USD200k/1k	USD200k/1k	EUR100k/1k

Summary Green Structure and Highlight

External Review	Independent Limited Assurance and rated by E&Y Green Evaluation System
Use of proceeds	Urban rail projects, solar and wind power plants and waste water treatment projects
Highlight	Largest green bond ever issued and first offshore green bond from China to be independently certified by a second party reviewer
HSBC role	Green Advisor, Joint Global Coordinator, Lead Manager and Bookrunner

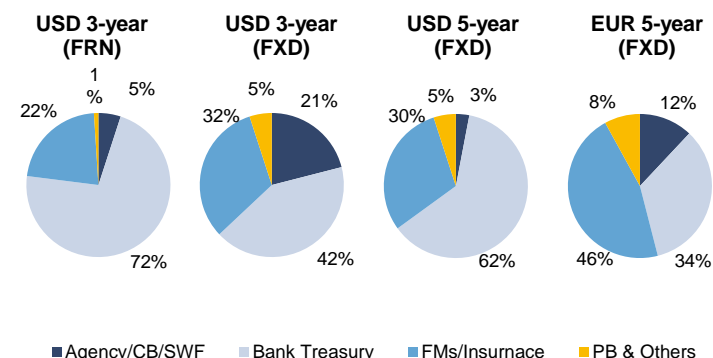
Distribution by geography



Execution highlights

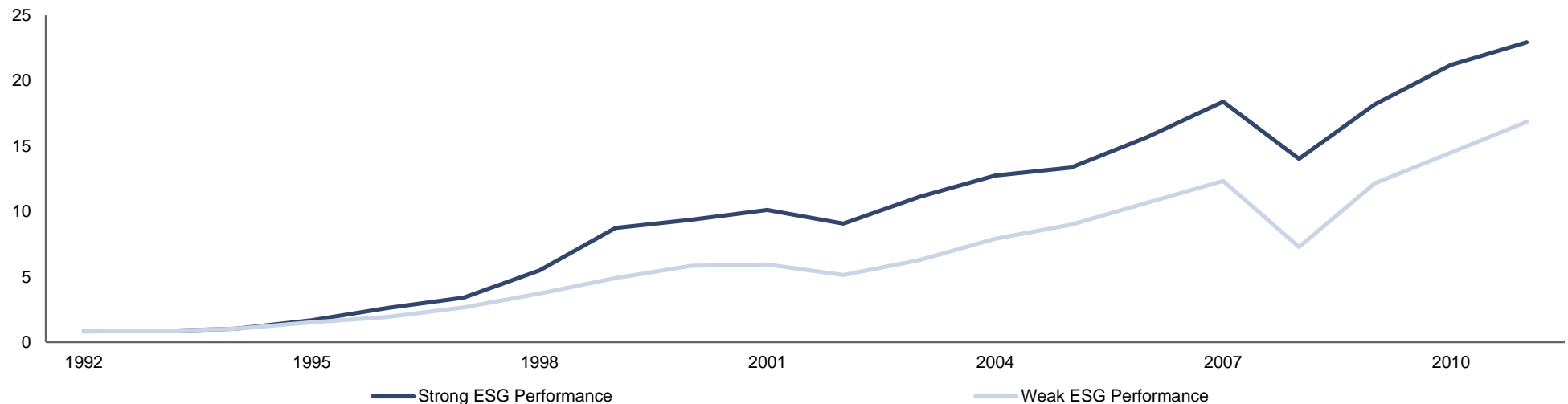
- The outcome of UK referendum has led to significantly volatility in global financial markets. The market chasing for safe assets has led to notable decrease of US treasury yields. The deal announcement was made on 4 July followed by two conference calls with Asian and European investors on the same day
- On the back of positive investor feedbacks, the bank decided to announce the transactions with initial price guidance of T3+145bps, T5+160bps and MS+120bps for USD 3-year, USD 5-year and EUR 5-year fixed rate notes respectively. The orderbook grew steadily over the course of the bookbuilding and strong demand for EUR tranche has witnessed after Europe open. Final demand reached to USD2.1bn, USD 2.3bn and EUR 1.3bn, enabling the notes to be priced at T3+120bps, T5+135bps and MS+95bps, representing 25bps tightening from the initial price guidance. The 3-yr floating rate tranche had initial price talk at three month Libor equivalent over the three year fixed rate note and received over USD 1.2bn orderbook, ending up priced at a margin of 100bp over three month Libor
- This transaction has successfully captured the optimal issuance window for swift intraday execution post-Brexit and attracted many high quality European investors to participate. The 76% of the allocation from Europe & ME region is significantly higher than the usual allocation of European investors in previous Asia RegS bond transactions

Distribution by geography



Performance of Sustainable Investment

Financial performance of companies with weak vs. Strong ESG performance¹



ESG can help bond portfolios outperform, says Barclays²

Portfolios that were "maximised" for ESG scores, while controlling for other risk factors, outperformed the index on average by 0.29% annually. On the other hand, ESG-minimised portfolios underperformed the index

Green Pricing beating Vanilla, says CBI and CCDC³

In the China Green Bonds Market Report 2016 published by Climate Bond Initiative together with the China Central Depository and Clearing Co Ltd (CCDC), CCDC indicates that for bonds with the same ratings, coupon rates of green bonds are slightly lower than regular bonds.

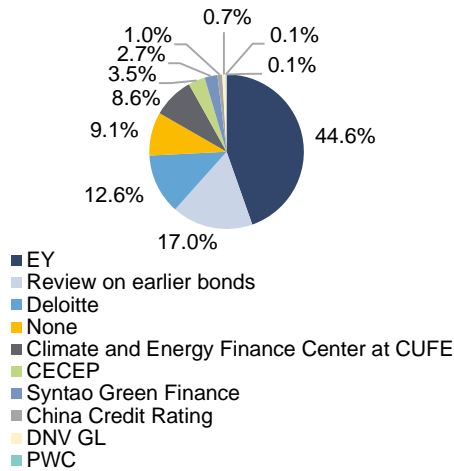
Source:

1. Eccles G.R., Ioannou I., Serafeim G. "The Impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance, Harvard Business School, November, 2011
2. Barclays- Sustainable investing and bond returns, November 2016
3. China Green Bond Market Report 2016, published jointly by Climate Bond Initiative and China Central Depository and Clearing Co

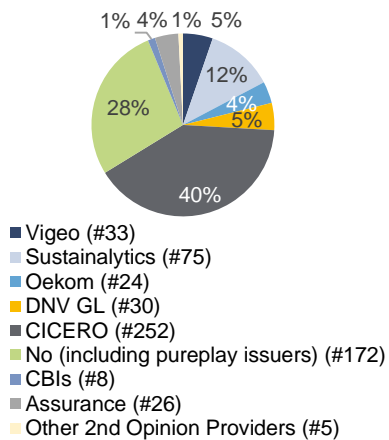
Green Bond – Independent Assurance

Various external review options are open to issuers

External review in China



Issuance by second opinion (All years)



Potential green bond external review strategies

1 Second Party Opinion

2 Climate Bond Certification

Approved Verifiers:

Certification available for	Certification soon available for
Wind, Solar	Bioenergy
Low carbon buildings	Water (out on consultation)
Low carbon transport, including BRT	Agriculture, forestry, other land use
Geothermal	Marine

3 Moody's Green Bond Assessment

4 S&P Global Ratings

- Available soon

Note: pie % = deal volume
 Legend (#) = number of deals
 Source: HSBC estimates, as at 11 November 2016

Best Practice for Impact Reporting

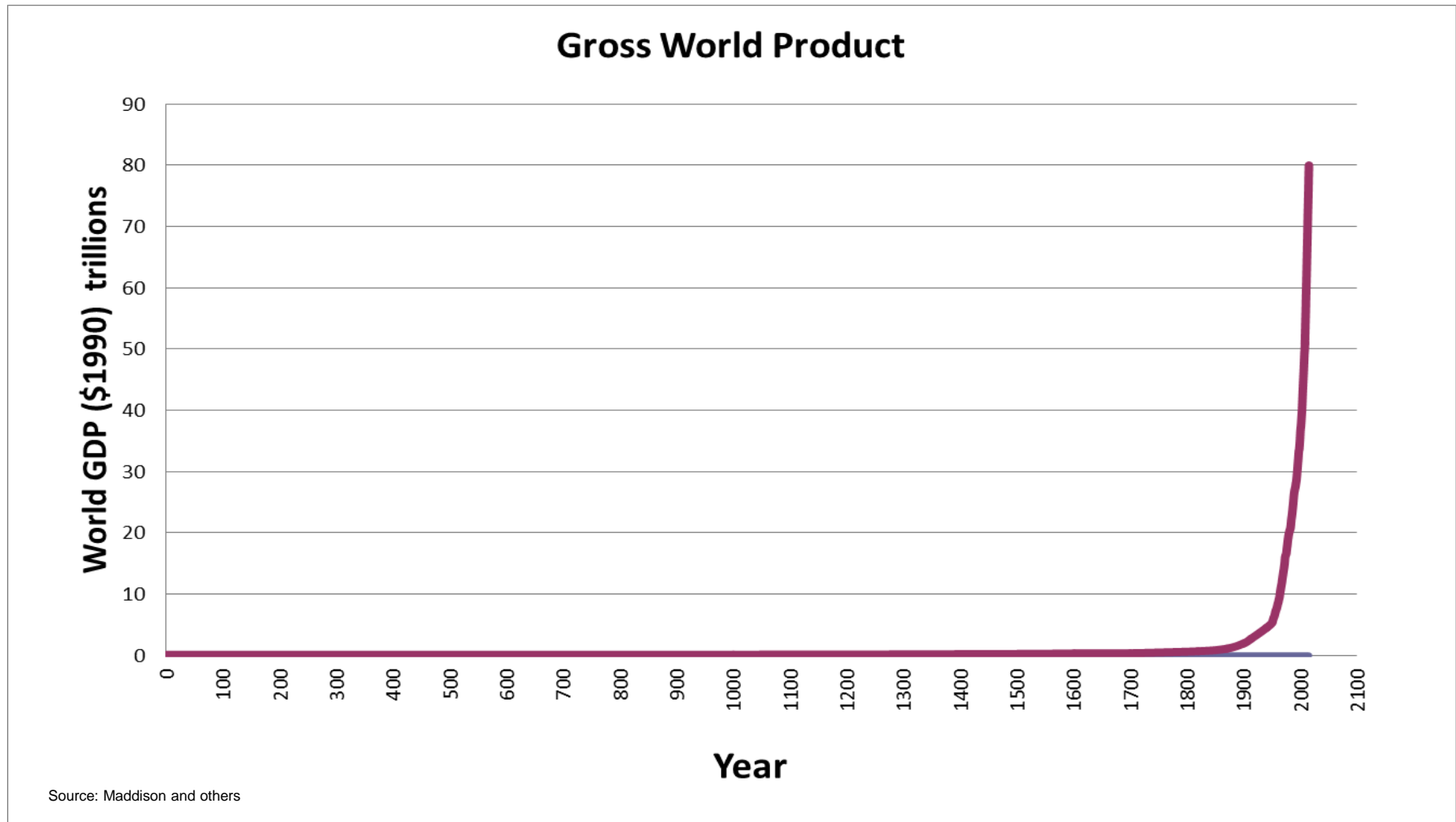
IFI Harmonised Framework for Impact Reporting



$$\text{Carbon}(T) = \text{Popn} \times \frac{\text{GDP} (\$)}{\text{Popn}} \times \frac{\text{Energy} (\text{kwhr})}{\text{GDP} (\$)} \times \frac{\text{Carbon}(T)}{\text{Energy} (\text{kwhr})}$$

Sustaining Economic Progress

Gross World Product



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