Climate & SDG aligned finance & the Paris Agreement

“Green finance (for climate & the SDGs) offers enormous untapped investment opportunities in developing countries. All financial actors have to work together to create the mechanisms for making these investments possible. With focus, resolve and ambition, we can lower the global thermostat and raise the level of economic opportunity for all.”

- Ban Ki-moon, UN Secretary-General (2007-2016)
Contents

• Some reminders (2015 and INDCs/NDCs)
• What is needed on finance and how much is available
• Drivers of green finance
• What are green bonds and some facts on issuers and underwriters
• Performance & standards
• Examples of experiences in India and SE-Asia
• Some solutions available to address the development of local and international capital markets
• The UNFCCC regional collaboration centres
The collective of the three core agreements from 2015

• **Paris Agreement** – to make financial flows consistent with a pathway towards low GHG and climate-resilient development including financing adaptation to the growing number of negative impacts of climate change;

• **The 2030 Agenda for Sustainable Development** – outlines a roadmap for generating ‘shared value’ – shifting capital away from ‘business as usual’ towards increased prosperity and social inclusion and environmental regeneration;

• **The Addis Ababa Action Agenda (AAAA)** – to strengthen regulatory frameworks to better align financial investment with public goals, including incentivizing sustainable practices, and foster long-term quality investment from domestic and international institutions.
Long-Term Goals of the Paris Agreement

- Long-term goals:
  - Limiting temperature increase to well below 2°C, pursuing 1.5°C (Article 2)
  - Aiming to achieve a balance between emissions by sources and removals by sinks of GHG in the second half of the century (Article 4.1)
  - Reducing aggregate emissions in 2030 to 40Gt (1/CP.21, paragraph 17)

- All Parties have committed to limiting their aggregate long term emissions to achieve these long-term goals expressed through NDCs
INDCs / NDCs

• 142 countries have submitted the first NDC
• **Unconditional / Conditional** on “the extent of financial resources, including technology development & transfer, and capacity building, that will be made available (to the Philippines.)”; Fiji: “combination of robust global market based mechanism, plus direct aid transfer will be essential”;
• Target cover selected sectors / emissions from **all sectors**
• **Increasing share** of renewable energy
• A conditional GHG reduction target of 70% below business as usual (BAU) levels by 2030 (Philippines); RE in primary energy supply to 23% by 2025 (from 6%, Indonesia); 100% RE for energy production (Fiji); energy sector 20% emission reduction target (Sri Lanka); increase wind, solar, transport model shift road to rail (Bangladesh);
• At the same time, countries continue implementation of planned new, retrofitted fossil fuel based power generation, which is **locking in emissions** for decades and will make some INDC/NDC targets unlikely to be met.
Connecting the dots on finance for climate

NDC or 2 degrees pathway of country X

- Small-scale, off-grid renewable energy
- Micro-insurance for weather-related risks
- Land efficiency in agricultural production
- Supply-side energy efficiency
- Expansion of protected forest areas
- Large-scale, on-grid renewable energy

Financial sources available

- Public budgets
- Development finance & ODA
  - Risk guarantees
  - Risk insurance
  - Bundling
  - Incentives (FITs)
  - Institutional readiness
  - Carbon pricing through market mechs.
  - Market readiness
- Domestic
  - Corporate loans
  - Listed equity
  - Mortgages
- International
  - Project finance
  - Private equity
  - Project bonds
  - Carbon finance

Financial sources available

- Project finance
- Private equity
- Project bonds
- Carbon finance
The entire financial system

Figure 1: Stock of Global Financial Assets

Source: McKinsey Global Institute, Haver, BIS, Deutsche Bank estimates
Drivers of green finance

2015 Paris Climate Agreement

created a need to finance $1 trillion a year in investments for renewable energy & other opportunities to limit global warming (before mid 2050) so as to avoid sciences worst expectations.

OECD analysis suggests that the 2020s have the potential to be the “golden years” for green issuance in the low-carbon sectors.

Portfolio diversification

Long-term investors are recognizing the threat of from GHG emissions and break-down in supply chains and have begun to veer away from climate risk and carbon-intensive investment

FSB Task force on climate disclosure

Extreme weather contention

Corporates are beginning to evaluate the consequences of increasing extreme weather and flooding

Art 173 French Energy Transition Law
1. **Listed companies** shall disclose in their annual report:
   - Financial risks related to the effects of climate change;
   - The measures adopted by the company to reduce them;
   - The consequences of climate change on the company’s activities and of the use of goods and services it produces.

2. **Banks and credit providers** shall disclose in their annual report:
   - The risk of excessive leverage (not carbon-specific) and the risks exposed by regular stress tests.

3. **Institutional investors** shall disclose in their annual report:
   - Information on how ESG criteria are considered in their investment decisions;
   - How their policies align with the national strategy for energy and ecological transition.
Current observations – renewable energy financing

• Lenders to renewable energy in larger emerging market countries are constrained. Examples:
  ➢ Brazil: Funding cuts to BNDES but current loans make up large portion of assets
  ➢ South Africa: Large amounts of outstanding RE debt on local bank balance sheets
  ➢ India: Lenders approaching limits on new loans without reducing current assets
• Virtually no industrial scale capital recycling is available in developing countries over project life cycles leading to constraints on bank lending and resultant higher prices
• International debt capital markets not currently providing debt to renewable energy infrastructure in developing countries due to lack of asset classes with acceptable risk profile
• Almost complete absence of private sector project finance in lower income developing countries

Consequences:
• Higher than necessary costs to energy consumers (high costs of interest & low sponsor equity leverage ratios), limiting affordability and uptake
• Projects either stagnate or development timeframes increase, leading to higher costs and risks to project developers
• Market failure: international debt capital markets are presently unable to contribute to Paris goals
What are Green Bonds?

Green bonds are standard bonds with “green” or “climate” as a bonus
- Proceeds **earmarked** for climate or environmental projects
- Labelled as ‘green’ by the issuer

Green bonds have a financial and an environmental dimension, but effective and credible standards are needed to keep the ‘green promise’

Majority of the green bonds issued are green “use of proceeds” or asset-linked bonds:
- proceeds are earmarked for green projects,
- are backed by the issuer’s balance sheet (senior unsecured)

Other types include:
- Green revenue bonds (revenue collateral)
- Green balance sheet bonds (B/S recourse)
- Green project bonds (asset recourse)
- Green securitized bonds (aggregated/covered)
- Green asset-backed bonds (pari-passu)
Conveyor Belt Financing – addressing market failure

Active debt capital markets would:
• Allow early risk-taking investors in projects to exit as they are brought to completion
• Increase the overall sum of capital available for low carbon investment (additionality of finance)
• Create a conveyor belt to allow entry and exit of appropriately priced debt providers at relevant stages of project’s life cycle

NBCF: Non-Banking Financial Company
NPA: Non-Performing Assets
ALM: Asset Liability Management
Key instruments in project finance

- Crowd investing concessionary lending
- Capital market access i.e. green bonds
- Risk mitigation i.e. guarantees
- Carbon Finance

- Debt Finance (Project Finance) (Indicatively, e.g., 7-8% in US$; 11-13% in INR)
- Mezzanine Capital (12-15%, somewhere between debt and equity return)
- Private Equity & Infrastructure Funds (18-25+%)
- Corporate & Compliance Investors (15-20%)

- Early stage project development
- Late stage project development
- Construction phase
- Initial operation
- Stabilized operation

Source: UNEP, Aequero
Green Bonds Address Challenges and Global Capital

- Long term debt
- Address asset liability mismatch
- Re-finance construction and long term loans

Fund RE projects

- Low cost funds
- Priority area for green investments

Funding across project cycle

Alternate market for funding RE
- List on alternate investment markets
- Bilateral trade uses risk mitigated, ring fenced structures

Green Bonds

Fixed interest, long tenor

- Lower cost, fixed interest, longer tenure, and non-recourse options of financing for borrowers
- Rapid increase in corporate issuances

Improve liquidity
Market actors

**ISSUERS**
entities with green projects needing funding or refunding

**INVESTORS**
p艺术 calls with a mandate to invest in green assets

**UNDERWRITERS**
financial institutions arranging the issuance of the green bonds

**INTERMEDIARIES**
such as stock exchanges, index providers and rating agencies

**EXTERNAL REVIEWERS**
verifying the "greenness" of the underlying projects
Green finance comprises <1% of the total capital market but... the demand for and supply of green investments is rising rapidly as new issuers enter the market and institutional investors look more aggressively for ways to hedge their climate exposures.

Bank of America launched a green bond that was oversubscribed by 3 times. Rabobank demand reached 4 times the final book size.
If current municipal bond issuance continues….

over $10 billion of new green municipal bonds can be expected in 2017 alone. State-run entities like infrastructure and healthcare trusts, public transportation authorities and Green Banks remain the most popular source of green bonds.

The total volume of green bonds more than doubled in 2016 to $93bn, Moody’s, forecasts that it will rise again in 2017 to $120bn.

The largest green bond in 2017 was a Euro 2 billion ($2.2 billion) issue from KfW, which will help finance its activities in renewable energy.
Sovereigns lead the supranational market in 2017, thanks to a record deal from the French government....

Over 70% of SSA debt issued in 2017 to date was denominated in euros. The state of France issued the first of a series of sovereign green bonds, driving the majority of SSA activity in 2017. Supranational activity from China remains minimal – most activity in the country is driven by financial organisations and corporations, not government agencies or development banks.

Source: Bloomberg New Energy Finance, Bloomberg Terminal
Green bond underwriters

French banks Crédit Agricole & BNP Paribas lead as green bond underwriters

,...underwriting 13 and 9 bonds in respectively. Both banks were bookrunners for the large 7 billion euro ($7.47 billion) sovereign bond from the French government.

Notes: Data for some deals is unconfirmed due to the nature of private placements. Bonds covered include corporate, supranational, ABS, MBS, project and municipal. Private placements are not included.

Source: Bloomberg New Energy Finance, Bloomberg Terminal
Utilities & financials are the top corporate issuers of green bonds in 2017

Government or government-agent issued bonds continue to dominate, but utilities are taking an increasing market share.

Globally, corporates remains one of the fastest growing sectors for green bond issuance.

China Longyuan issued a Yuan 2 billion ($291 million) green bond in May, which will be used to finance new wind projects and refinance existing.

Source: Bloomberg New Energy Finance, Bloomberg Terminal
Green bonds have not so far outperformed

The hedged Barclays green bond index has been broadly in line with the global aggregate equivalent since the market first emerged four years ago.
The problem is there is no universal certification system, which is holding the sector back as green bonds “do not fully qualify as mainstream investment vehicles”

……growth in green bond issuance is the most visible part of broader demand from investors for climate and SDG aligned investment; “a move from the traditional shareholder activism to bondholder activism”

In response, some forms of assessment are emerging:

International Capital Markets Association (ICMA) has a set of green bond principles, and the Climate Bonds Initiative (CBI), a UK government backed non-profit offers accreditation and certification. The UNFCCC secretariat also facilitates a technical working group of DFIs on harmonization of standards and baselines for GHG mitigation – also an ISO standard on climate finance and green bonds

- Indices have sprung up such as the Barclays MSCI green bond index and the S&P DJI green bond index.
- The rating agencies are also getting involved: Moody’s runs a green bond assessment, and Standard & Poor’s launched a green evaluation service last month.
Important for the PA are...

- Assessment of environmental net-benefit of the projects financed by the bond's proceeds over its lifetime relative to a local baseline - ‘actual’ instead of ‘promised’ or ‘pledged’

- Draw on, but not limited to, green bond principles and existing taxonomies - standardized disclosure to demonstrate actual benefit

- Assessment of “additionality” based on underlying project or assets not the financing instrument

- Connect the environmental performance to financial performance

- Inclusion of benchmarks in the sustainability space e.g. SPDJI Sustainability & MSCI Indices etc.

- Standards could include independent 3rd-party assurance and accreditation as an essential element to enhance credibility.

- Existing environmental standards can provide shortcuts and help close the existing gaps (e.g. buildings, transport etc.)
Domestic vs International Green Bonds

**Domestic Green Bonds**

**Advantages**
1. Easy to launch - no currency hedge required
2. No impact of country rating
3. Low risk of RE Projects becoming non-performing assets

**Key Challenges**
1. Stretched domestic banking sector due to infra lending
2. Lack of depth and flexibility in Indian green bonds market limiting demand
3. Limited trading opportunities in domestic market
4. Limited possibility for arbitrage over successive issuances.

Experiences from India
Domestic vs International Green Bonds

**International Green Bonds**

**Advantages**
1. Leverage low cost funds from global capital market/s
2. Potential for arbitrage over successive issuances

**Key Challenges**
1. Currency hedge required, can raise cost of bonds between 4-7%
2. India’s sovereign ratings of BBB- impact bond rates or require credit enhancement
3. External commercial borrowing guidelines pose challenges for usage of proceeds from green bonds
4. Double taxation
For International Green Bonds:

- **Exchange rate liquidity facility** – Using foreign reserves, Government of India (GoI) can hedge up to a certain range/period
  - Reduces hedging costs.
- **Credit enhancements** – Sovereign rating for India is BBB*. Borrowers will need credit enhancement to AA** to attract large pension funds, insurance companies, etc.
- **Re-financing and on-lending restrictions** for well rated issuers/portfolios should be removed.
- **Indexing tariff rates to inflation rates**
- **Leveraging guarantees from the Green Climate Fund to overcome the lower sovereign rating.**

For Domestic Green Bonds:

- Special tax rate (say 10%) of green bond interest for the investor, or the tax rate applicable to the investor, whichever is lower.
  - Very attractive to private fund (PF) investors
- **Tax benefits available to bonds above a certain rating, issued for green purposes (certified as green)**
  - Irrespective of the issuer
Capital market access – debt capital market services – mostly for sovereign

IFC Debt Capital Market (“DCM”) Product Offering - Overview

IFC offers a range of instruments aimed at helping clients successfully issue debt instruments (e.g. straight bonds, themed bonds, structured debt) in both international and domestic capital markets.

1. Anchor Investment
   - **Product:**
     - Investment in:
       - Plain Vanilla Bonds
       - Green Bonds
       - Asset Backed / Structured Debt, etc.
   - **What:**
     - Direct financing via purchase of a substantial portion of an issuance.
   - **How:**
     - IFC commits to subscribe to an issuance ahead of the public offering, which can be communicated to prospective investors to send a positive signal.

2. Credit Enhancement
   - **Product:**
     - Guarantee on:
       - Bonds
       - Asset Backed / Structured Debt
   - **What:**
     - Partial guarantee of an issuance to improve the risk profile of the instrument
   - **How:**
     - IFC provides a partial credit guarantee to improve the credit rating of an issuance for wider investor access and longer term financing.

Anchor investments
Partial Credit Guarantee (PCG)
Securitization
Diversified Payment Rights (DPR)
Covered Bonds
Interest rate swaps/caps & collars
Cross-currency swaps/FX forwards
Commodity hedges
Advisory services in capital market development
Capital market access - Green Bond Emerging Market Platform

Aim:

- Development of **financial markets and green bonds in emerging countries**, in accordance with IFC’s mandate, through the financing of bonds issued by FI
- Mobilization of **institutional investors to finance the energy transition in emerging countries** i.e. to support implementation of the Paris Agreement

Size $2bn:

- **7 year period** of active investment period
- first investments expected by **summer of 2017**, subject to regulatory approval
- IFC **invest $325mn** in the most **junior and senior** tranches
- **Amundi** raise the **remaining $1.675bn from institutional investors worldwide**
- **Amundi** & IFC spread green bond best practices in emerging markets via TA to suitable FIs:
  - Cover incremental costs of education, training and reporting for GB issuance
  - Provide research tools and methodologies as required
  - Embed market best practices in the FIs
  - Provide quality data for enhanced reporting standards
UN Regional Collaboration Centre - representation global

Banque Ouest Africaine de Développement (BOAD)
Corporacion Andina de Fomento (CAF)
East African Development Bank (EADB)
Institute for Global Environmental Strategies (IGES)
Windward Islands Research & Education Foundation (WINDREF)
RCCs mandate finance

**Guiding vision on finance:** to support efforts to **substantially scale up** finance and investment in contributing to the **objectives of the Paris Agreement** - integrate as rapidly as possible, the goals described by **Articles 2, 4.1, and 7.1** into the conduct of all relevant economic and social development activity.

Provide via **technical support, convening, & recognition** enable implementation of the PA via 4 core functions:

1. Assist **governments** to actively promote **low carbon and climate resilient investments** in their countries and **disseminate information on their enabling investment environments** to investors and other market players.
2. Make it easier for **financiers** to find markets, identify **co-financiers to form consortia**, access project **development funding** to support investment-mature projects, and **provide access to risk mitigation instruments** and help **structure projects and financing** along the PA.
3. Help provide **project owners** with increased **visibility for their projects** among financiers and other market players, making it easier to **identify relevant financiers, advisors, service providers** for specific needs and **enable targeted and relevant engagements/roundtables**.
4. Work with **financial institutions** in particular **bilateral funds, regional, multilateral development banks** on **mobilizing private capital**, assisting on **guarantee platforms**, and supporting infrastructure investment.
The 2030 agenda

Key Takeaways
- The climate-aligned bond market amounts to $694bn outstanding
- Labelled green bond market stands at $118bn outstanding (17% of total)
- $576bn outstanding is currently not labelled as green but is climate-aligned
- At 67%, low-carbon transport is the dominant theme
- It’s a long dated market: 70% of bonds have tenors of 10 years or more

Thank you