



A. Reasons to Issue Green Bonds

Credit Agricole Corporate and Investment Bank (“CACIB”) believes the potential Hong Kong Green Bond Program would be a significant milestone for Hong Kong as the international and regional green finance hub. It would not only be instrumental in further facilitating the maturity of the market, but more importantly, allows strategic alliance with Hong Kong’s environmental and sustainability goals. The potential green bond can increase transparency of Hong Kong’s public environmental efforts and allows higher engagement with all stakeholders. We believe the below would be the key benefits for such a milestone green bond issuance:

1. For Strategic Alignment And Implementation Of Hong Kong’s Climate Goals

- On the backdrop that China plays an instrumental role in the Paris Agreement, Hong Kong has a part to fulfil the Nationally Determined Contributions (“NDCs”) obligations with a set of deadlines. Hong Kong’s Climate Action Plan 2030+ has laid out its own environmental goals such as a 26-36% of absolute carbon emission reduction and a 65-70% carbon intensity reduction targets by 2030.
- The nature of green bonds, which is environmental-impact-oriented, with high standards of transparency and annual impact reporting, make it an ideal financial instrument to help Hong Kong increase its alignment between the funds and its climate/environmental/sustainability goals, and to become more effective in financing such change by helping the government through the exercise of identifying eligible projects, improving the tracking of funds, increasing transparency of reporting such as the result-oriented, environmental impact reporting, thus increase the visibility of its climate work, progress, and improve effectiveness.
- Sovereign green bond programs are often an integral part of, or at least strategically aligned to the country’s or region’s environment and climate strategy.

2. For The Development Of Green Finance Market

- Hong Kong government itself being the example of a green bond issuer sends a strong signal to the market that Hong Kong has a **mature platform and supporting infrastructure such as external reviewing systems** to allow issuers to readily and successfully issue green bond.
- As a quality, benchmark issue, the proposed Hong Kong sovereign green bond can bring **scale and market liquidity**, which encourage trading and facilitate pricing and provide strong basis for other issuers to issuing green bonds.
- For example, France’s inaugural green bond issuance (“**Green OAT**”) with an outstanding amount of c.EUR14.8 billion has been the world’s largest green bond to-date and has provided liquidity for the green bond market. With the benchmark sovereign bond issuances, alongside with various laws to support the green bond markets, such as the French Green Growth Act, which requires investor disclosure on how they factor sustainability criteria into their investment policies, France has become one of top countries in terms of green bond issuance size.



- Being one of the first green bond issuers in the region can allow the Hong Kong government to **gain a lead-speaking-right** to engage the region and increase dialogues and collaborations on building a low-carbon economy. This is especially important in the backdrop there are already numerous initiatives to boost the green bond market in the region. For example, in November 2017, the ASEAN Capital Markets Forum has launched the ASEAN Green Bond Standards. Meanwhile, some ASEAN government bodies have also introduced incentives to attract green bond new issuances. For example, Malaysia, launched tax deduction schemes, such as tax deduction on issuance costs and tax incentives for green technology activities, for issuers of Islamic debt instruments under the Sustainable & Responsible Investment Sukuk framework¹.
- Sovereign bonds tend to promote **high standards in terms of green definition, issuance processes, and other market standards**, especially regionally but also internationally. The green bond market is still in need of high-quality benchmark issuances to shape market standards and to facilitate the market's understanding of the green components in green finance, and sovereign bonds have a significant role in shaping the industry standards, resulting the updates of the International Capital Market Association ("ICMA")'s Green Bond Principles² for example.

3. Communication Value:

- Being a benchmark sovereign green bond issuer will communicate a **strong political message** that the government is fully committed towards developing Hong Kong as a green finance hub and its will to implement its climate agenda and sustainability strategies.
- Green bonds communicate and promote **higher transparency**. Green bonds adhere to market standards in the use of proceeds, requiring projects financed by the green bond to have clear environmental objectives, amongst other eligibility criteria. Tracking of funds is applied as a way to manage the proceeds, in order to ensure the proceeds are invested to the eligible projects. The issuer is expected to communicate an official process of how it determines a project is eligible. Post-issuance speaking, the market expects access to allocation reporting and environmental impact reporting of the green bonds, for example, the annual total amount of carbon dioxide avoided. In addition, market best practice involves external reviewers in verifying these reports. All these steps make green bond a much more transparent financial instrument than conventional bond. Transparency allows higher public and/or investor engagement, and thus also promotes higher accountability.
- The **visibility** of being amongst the first benchmark green bond sovereign issuers in the region can promote Hong Kong as the green financial hub and attract international green bond investors, talents and related institutions to further develop the Hong Kong green bond market. This is especially important because Hong Kong is positioned as an international financial hub, and green bond is indeed one of the most important development agendas in the international and regional financial market.

¹ Securities Commission Malaysia (2017): https://www.sc.com.my/post_archive/malysias-first-green-sukuk-under-scs-sustainable-responsible-investment-sukuk-framework/

² ICMA (2018): <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>



4. Financial Considerations:

- A Green bond is an instrument for Hong Kong to **diversify its investor base** by giving access to Socially Responsible Investment (“SRI”) investors and more specifically to dedicated green portfolio and funds (Fig. 1). SRI is a generic term encompassing every type of investment strategy combining the financial objectives with ESG (Environment, Social and Governance) considerations.
- In Europe, at the end of 2015, the explicit inclusion by asset managers of ESG risks and opportunities into financial analysis and investment decisions (ESG Integration) reached EUR 6.2 trillion i.e. a +18% growth compared to 2013.
- In particular, fixed-income is a major segment of SRI assets under management (approx. 64% of the SRI AUM, i.e. EUR 7.6 trillion in Europe).
- The Green OAT, for instance, has allowed France to widen its investor base (Fig. 2).

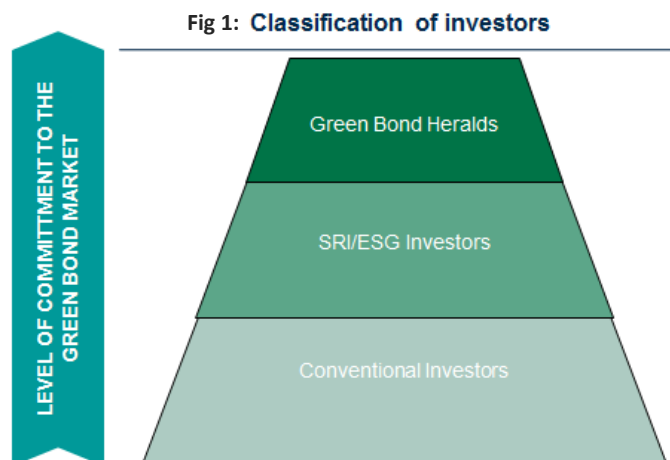


Fig 1: Classification of investors

Source: CACIB (2018)

Fig 2: Green OAT has broaden the investor base for France

	OAT 2036		Green OAT 2039
Order book size	More than EUR 12bn	➔	More than 23bn
Number of orders	125	➔	193
Average ticket size	~EUR 100m	➔	~EUR 120m
Share of Dutch investors in order book	1.0%	➔	7.3%
Number of orders from Dutch investors	3	➔	16
Share of Nordic investors in order book	0.6%	➔	2.7%
Number of orders from Nordic investors	2	➔	14
Share of real money investors in final book	52%	➔	71%
Number of orders from real money investors	74	➔	112
Average ticket size from real money investors	~EUR 65m	➔	~EUR 85m
Share of hedge funds in final book	8%	➡	3%

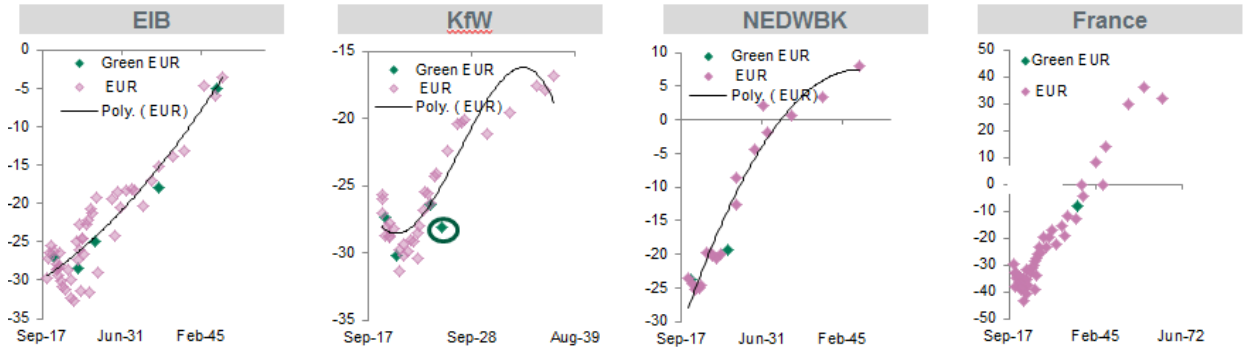
Source: CACIB (2018)

- Green bond tends to **cost the same**, even potentially slightly less than a conventional bond (Fig. 3), by broadening the targeted investor base a green bond can increase price



traction, which might eventually result in a better pricing and/or a stronger secondary market performance.

Fig 3: Pricing Comparisons between Green & Conventional Bonds of Sovereigns /Supra-nationals
(European Investment Bank EIB, KfW, Nederlandse Waterschapsbank NEDWBK, France)



Source: CACIB (2018)

- The potential Hong Kong Sovereign issuance will serve as a benchmark for other issuers, and entice them to access this new segment of the international debt capital markets.

B. Considerations on Institutional and Retail Tranches

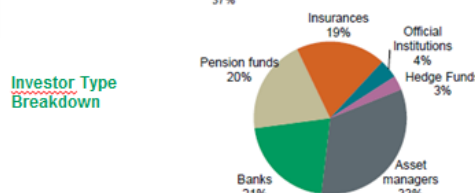
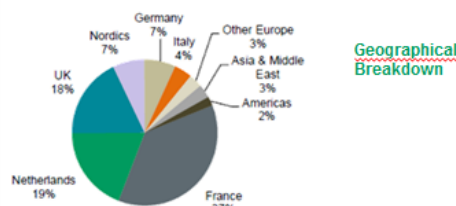
1. Institutional green bond tranches target at international institutional investors; thus can increase the communication value to amongst the international investment communities on promoting Hong Kong as an international green finance hub. On the other hand, retail tranches target at localized public investors, which will yield smaller international communication value.
2. Institutional tranches have the potential for a larger issuance amount. This will allow the higher liquidity in the market. It will also provide support for the green bond market with secondary trading. Retail tranches on the other hand, tend to have smaller issues size and more illiquid because retail investors tend to adopt a buy-and-hold strategy.



APPENDIX: Relevant Case Studies

The Example of Republic of France Green Bond (January 2017)

Issuer Name	Republic of France
Amount	EUR 7 billion
Issuer Rating	Aa2 (st.) / AA (neg.)
Date of issuance	24/01/2017
Maturity	22 years (June 2039)
Eligible Projects	<p>"The State intends to make Eligible Green Expenditures in the following sectors:</p> <ul style="list-style-type: none"> renewable energy, transportation, real estate, adaptation to climate change, protection of living resources, and air, water and soil protection."
Management of proceeds	Re-financing of recent expenditures and financing of current and futures expenditures (> 50% of financing)
Second opinion	Vigeo Eiris confirms that the bond intended by the French Republic represented by the Agence France Trésor is a "Green OAT" with positive footprint, aligned with the Green Bond Principles.
Reporting	The Republic of France will publish three reports for the Green OAT: <ul style="list-style-type: none"> a report on allocation of proceeds (audited by an audit firm), an output report, an ex-post impact report (under the oversight of the Evaluation Council).
Specificity	The Green OAT issue is a landmark transaction in the Green Bond market, as the longest-dated benchmark Green Bond ever issued. Green Bond Evaluation Council established for the Green OAT ex-post impact reporting is also a significant market innovation.
Crédit Agricole's Role	Sole Structuring Advisor and Joint-Bookrunner



Key Learning Points

- This ground-breaking transaction, which was the largest ever single tranche syndicated OAT, broke a large number of records in the Green bond's space, being the longest and the largest outstanding Green Bond.

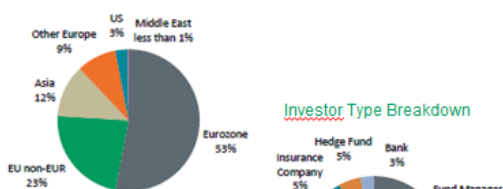
Orderbook

- In The allocation illustrates a large orderbook arising from a very diversified investor base. More than 190 final investors took part in the transaction with an impressive share of real money accounts (76%), out of which 33% were asset managers, 20% pension funds, 19% insurances and 4% official institutions.
- The geographical distribution reflects a strong demand stemming from domestic and international investors for French government bonds with long maturities.

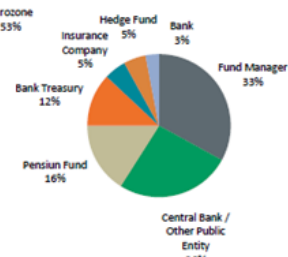
The Example of Kingdom of Belgium Green Bond (February 2018)

Issuer Name	Kingdom of Belgium
Amount	EUR 4.5 billion
Issuer Rating	Aa3 (Moody's stable) / AA (S&P) stable / AA- (Fitch) stable
Date of issuance	26/02/2018
Maturity	22 April 2033
Coupon	1.250%
Pricing dynamic	IPTs at m/s-11 bps area, priced at m/s-14 bps
Orderbook	in excess of EUR 12.7bn
Eligible Projects	<p>Eligible Green Expenditures include tax expenditures, investment expenditures and operating expenditures, as any of such expenditure can be deployed to meet Belgium's climate and environmental policies.</p> <p>Five sectors have been defined: energy efficiency; clean transportation; renewable energy; circular economy and living resources and land use</p>
Second opinion	Sustainalytics
Reporting	<p>Management/allocation of the proceeds: the allocated proceeds will be broken down by Green Sector and by type of expenditure. The first allocation reporting will be published in the year following the first issuance and then annually until full allocation. The allocation of the proceeds will be reviewed annually by an independent audit firm.</p> <p>Impact reporting: a task force – consisting of the DG Environment, FPS Finances, FPS Mobilité, FPS Economie / DG Energie, Régie des Bâtiments, Politique scientifiques and Coopération au développement, and any other relevant body – will provide input. The first impact report will be published in the year following the issuance, and as necessary thereafter following additional issuance/tap or subject to other relevant information becoming available.</p>
Crédit Agricole's role	Structuring Advisor and Joint-Bookrunner

Geographical Breakdown



Investor Type Breakdown



Key Learning Points

- With this new Green OLO, Belgium is the second Euro-Zone Sovereign to target the Green Bond Market. **Crédit Agricole CIB acted as Joint Bookrunner and Structurer on both transactions.**
- The Belgian Debt Agency conducted a two weeks pan-European roadshow that was followed by the announcement of the transaction on Friday 23rd and execution on Monday 26th February.
- The EUR 4.5bn size had been announced at the roadshow as the maximum possible issuance size, given the identified covered pool of Green Eligible Expenditures available at the Federal level.
- With more than 150 accounts participating, the orderbook met with high quality demand from the SRI and conventional world acknowledging a successful combination of both the features of the standard OLO and the Green format.



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