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As a result of new regulation (Basel III) and the Eurozone debt crisis, bank liquidity is increasingly constrained, particularly for longer tenor (+7 yrs)

Has resulted in a greater flow of infrastructure debt investment opportunities across EMEA for non-bank investors

With a global infrastructure team of 120 professionals (80+ EMEA), BNP Paribas is extremely well placed to originate and distribute such transactions to the market
Since the demise of Lehmans, the provision of financing for Infrastructure & Energy projects / related entities has changed significantly.

From a capital markets perspective the key events driving this change were the collapse of the monoline industry and more recently the Eurozone crisis.

### Pre-credit crisis (“AAA” & Numerous)
- Ambac
- Assured Guaranty
- FGIC
- FSA
- MBIA
- XL Capital (Now Syncora)

### Post-credit crisis (“AA-/A2” & Only 1)
- Assured Guaranty
  (Is now a merged entity incorporating FSA)

In the intervening period, excluding capital market issues for various Structured Corporate entities, financing for the Infrastructure / Energy sectors has almost exclusively been provided by:
- Multi-laterals (EIB / EBRD / IFC etc.)
- ECA covered loans &
- Bank debt

Despite the global downturn, investment in the Infrastructure & Energy sectors remains significant and alternative sources of funding are required to meet these needs.

**BNP Paribas strongly believes that the capital markets is a natural source to seek such alternative liquidity and is currently actively pursuing various such opportunities through its Specialised Product Group, a specialist Project Bond Team in its Fixed Income Division.**
### Key Infrastructure Sectors – Focus for PPPs

<table>
<thead>
<tr>
<th>Sector</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Transportation & Related Facilities** (Roads, Rail, Light Rail)      | Typically PPP transactions, incorporating availability based, shadow toll & real toll payments mechanisms  
| (Airports, Ports)                                                      | Mix of regulated and commercial revenues                                                                                                         |
| **Power & Other Utilities** (Power Plants, Water Treatment Plants, Transmission) | Long term power contracts focused on the credit strength of off-taker  
|                                                                        | For power plants, fuel supply arrangements also an important factor  
|                                                                        | Regulated revenues, typically set for a fixed period |
| **PPP / PFI Social Accommodation** (Government Buildings, Hospitals, Prisons, Schools) | Typically availability based payment based structures  
|                                                                        | Long tenor concession  
|                                                                        | Construction and maintenance risks vary |
| **Renewables** (Wind Farms, Solar, Waste to Energy)                     | Nature of tariff regime / subsidies  
|                                                                        | Need a favorable regulatory environment to entice development of renewable sector |
| **Oil & Gas / Commodities** (Production, Pipelines, Petrochemicals)     | Strong preference for limited market risk exposure  
|                                                                        | Focus on credit worthy off-takers and the strategic importance of the project for the country / region |
Main Transaction Types

**INFRASTRUCTURE / ENERGY**

**TWO BROAD CATEGORIES**

- **Infrastructure Corporates** (M&A, structured transactions)
  - UTILITIES – eg. Open Grid Europe, Thames Water, Net4Gas
  - AIRPORTS – eg. BAA / Gatwick / Stanstead
  - PORTS – eg. ABP
  - ROSCOS – eg. Porterbrook

- **Single Asset Project Financing**
  - PPP/PFI (Roads / Schools / Hospitals) ex-monoline wrapped transactions
    - Strong EIB support
  - RENEWABLES (Wind / Solar)
    - eg. Fixed tariff regime
  - CONVENTIONAL POWER
  - OIL & GAS

**Medium term ‘corporate’ transactions / Bond take-out / Significant Bank and Institutional Investor Interest**

**Long term bank liquidity constrained**

Growing institutional investor interest

Euro project bond market to build
Key Factors To Develop A Project Bond Market?

- Legal / tax framework
- Political Support
- Tender Requirements
- Credit Enhancement (Govt / Multilateral / ECAs / Banks)
- Complexity
- Listing / Rating

Broader investor universe

Tightening spreads

Competitiveness of Project Bonds

Liquidity
## Project Bonds vs. Project Finance Loans

<table>
<thead>
<tr>
<th>Features</th>
<th>Project Bonds</th>
<th>Project Finance Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>Minimum size expected (cost rationale / liquidity and benchmark issue for investors)</td>
<td>More flexibility on size (could finance small size projects)</td>
</tr>
<tr>
<td><strong>Maturity</strong></td>
<td>Longer maturities</td>
<td>Shorter maturities (now) introducing refinancing risk</td>
</tr>
<tr>
<td><strong>Debt Profile</strong></td>
<td>Bullet or amortising can be considered although there is a preference for bullet profile from Continental European investors</td>
<td>Bullet or amortising</td>
</tr>
<tr>
<td><strong>Interests</strong></td>
<td>Fixed rate</td>
<td>Variable rate + swap</td>
</tr>
<tr>
<td><strong>Pre-payment / Early-termination</strong></td>
<td>Expensive prepayment conditions (make whole)</td>
<td>Flexibility to prepay (however Swap MtM positions can be prohibitive)</td>
</tr>
<tr>
<td><strong>Lenders</strong></td>
<td>Bondholders typically not willing to take active role (“Trade out” not “work out”)</td>
<td>Active relationship banks inducing more flexibility (waivers, consents)</td>
</tr>
<tr>
<td><strong>Pricing</strong></td>
<td>Relative Value Driven - Incremental spread vs. sponsor debt or comparable projects</td>
<td>Driven by cost of funding of the bank + spread</td>
</tr>
<tr>
<td><strong>Construction Period</strong></td>
<td>Bond amount generally provided up-front. Negative cost of carry is key issue</td>
<td>Staggered drawdown possible but commitment fees payable</td>
</tr>
<tr>
<td><strong>Disclosure</strong></td>
<td>Public disclosure of information (dedicated publication / website…)</td>
<td>Confidentiality and less disclosure to market at large</td>
</tr>
<tr>
<td><strong>Rating</strong></td>
<td>Ratings are all important</td>
<td>Lesser emphasis on rating</td>
</tr>
</tbody>
</table>
Key Investor Issues

Format
- Bank Loan – Floating or Fixed Rate
- Private Placement – with or without Rating
- Public Bonds - Rating
- Relationship with Borrower – Lender of record / Trustee / Facility Agent / Novation, Loan Participation Notes
- Flow of information (Public vs Private)

Drawdown and Repayment Profile
- Drawdown Profile - Multiple Drawdowns
- Forward Sale Structures
- Guarantee Structures – Financial Institution Risk
- Prepayment protection (make-whole)
- Bullet or Amortising
- Final Maturity vs WAL
- Mini-Perm (margin steps or cash sweep)

Other Issues
- Currencies (Main focus $ / € / £)
- Yield requirements
- Construction vs Operational risk
- Typical investment size
- Requirement for a rating and if yes, the minimum rating level
- Listing requirements
- Ability to carry out own credit monitoring / decision making
- Ability to give firm indication of commitment at various bid stages (both private & public sector)
Appendix.  BNP Paribas Selected Case Studies
Dolphin Energy Limited LLC

USD 1,000mn Yield 5.500% Project Bond Notes due Dec-2021
USD 300mn Yield 5.340% Project Bond Tap

Key aspects

- On 7th February, Dolphin Energy priced a highly successful project bond transaction, representing:
  - The first international project bond transaction in 2012
  - The first Rule 144A/RegS project bond offering since 2009 from the Middle East
- Ongoing demand from investors and substantial reverse enquiries prompted Dolphin Energy to launch a tap for an additional USD 300mn on 9th February
- The success of the transaction is testimony to investors’ positive perception of the project’s high quality assets and historical operating cashflows, in addition to the wider Abu Dhabi story despite recent concerns relating to the Strait of Hormuz closure and continued uncertainty in the Eurozone
- In its return to the capital markets, Dolphin demonstrated the huge potential in the capital markets to raise highly competitive, long dated and large scale financing for non-recourse projects, with suitable structures and sponsor backing
- Exceptionally strong investor reception allowed the initial transaction to be priced at the tight end of the revised price guidance (5.50% final pricing)
- Notable real money account participation by an overall orderbook of c.USD 8.6bn via over 400 accounts for the initial transaction, and c.USD 2bn via 125 accounts for the tap

Execution and Placement Strategy

- June 2011, and have actively monitored the market for an appropriate window of execution
- On 7th February, solid market conditions prompted Dolphin to take advantage of the current opportunistic window. A swift intra-day execution strategy reduced exposure to market volatility - book building began at 09.30 London with official price guidance set at 5.75% area; revised price guidance was released at 11.00 London at 5.50%-5.625%; books were closed at 13.30 London - Final USD 10-year pricing came in at the tight end

Given the project location, the 51% ownership of Mubadala (Aa3/AA/AA) and Emirate of Abu Dhabi Change of Control clause, Mubadala’s longer dated bonds were a prime reference point used by investors- The day before launch Mubadala’s Apr-21 was trading at MS+305bp and IPIC’s Mar-22 was at MS+338bp. Final pricing versus the Mubadala Apr-21, was at a premium of circa 40bp, with effectively a zero new issue premium
- Final pricing achieved was less than Dolphin’s inaugural 5.888% USD 1.25bn (6.1-years WAL at launch) issued in June-2019
- Continued investor demand was catered for via Dolphin’s USD 300mn tap. The transaction was announced as USD 200-300mn, with an explicit no grow intention, at 13.15 London and accumulated a total orderbook of c.USD 2bn via 125 accounts in only 15 mins
- The quality and size of the orderbook allowed the issuer to price the tap at the tight end of guidance, marking a yield of 5.340%

Distribution of USD 10-year bond

<table>
<thead>
<tr>
<th>By region</th>
<th>US</th>
<th>UK</th>
<th>Continental Europe</th>
<th>MENA</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>By investor base</td>
<td>Fund Manager</td>
<td>Insurance / Pension</td>
<td>Bank</td>
<td>PB / Retail</td>
<td>Agency / Supra</td>
</tr>
</tbody>
</table>

Dolphin Project Core Components

BNP Paribas acted as Structuring Advisors, Joint Lead Managers and Joint Bookrunners

Launch date: 07 February 2012
Tap date: 09 February 2012

Private & Confidential 8 April 2013 | 11
Dolphin Energy Limited LLC

USD 1,000mn Yield 5.500% Project Bond Notes due Dec-2021
USD 300mn Yield 5.340% Project Bond Tap

Launch date : 07 February 2012
Tap date : 09 February 2012

Rationale for transaction

- Proceeds have been used to refinance existing commercial loans and undrawn commitments under the bank facility, worth USD 835mn, and raise some supplemental debt

Transaction Description and Security Package

- USD 1,300mn senior secured project bond
- 10-year bullet maturity
- As is typical in a non-recourse project financing, the bonds are fully secured on all assets of the project including security over:
  - All project bank accounts
  - All core project contracts including the Development Production Sharing Agreement signed with the State of Qatar and Sales Purchase Agreements
  - The financing documents
  - Physical assets located in Abu Dhabi
- The core covenant package includes:
  - Limitations on additional indebtedness and shareholder distributions
  - Strictly defined inter-creditor voting mechanisms
  - Restrictions on change in ownership, particularly Abu Dhabi (directly or indirectly) at a minimum of 51%
  - An interwaterfall loan mechanism brings together project cashflows between the upstream and midstream activities (Dolphin owns the midstream operations but operates the upstream on behalf of its sponsors)

Overall Dolphin Debt Position Pre and Post Refinancing

- The project has moved from being entirely financed with project finance loans (covered and uncovered) at inception to exclusively through bonds (apart from a residual $128mn provided by the Export Credit Agency SACE), making it the second largest scale project in the region to achieve migration
Dolphin Energy Limited (Aa3/A+)

USD 1.25bn 5.888% due June 2019 6.1-year average life

Key takeaways
- A ground-breaking transaction representing the first 144a / RegS project bond from a debut issuer since 2007.
- A fundamental building block for other non-recourse project companies to raise large scale competitive financing via the capital markets.
- The new bonds form part of a seamlessly integrated bank, bond and ECA refinancing package implemented by Dolphin Energy, totalling USD 4.14bn.
- Priced at the very tight end of initial price guidance; sized at the top end of the range indicated to investors.
- Excellent investor response with the final orderbook closing four times oversubscribed at USD 4.9bn.
- Solid European demand was driven by the UK and Switzerland whilst the US accounted for around a quarter of the overall orderbook.
- This transaction positions BNP Paribas the number 2 ranked bookrunner within the GCC during 2009 ytd.

Transaction description & security package
- USD 1.25bn senior secured project bond.
- 10 final maturity, 6.1 year WAL (amortising bonds).
- As is typical in a non-recourse project financing, the bonds are fully secured on all assets of the project including security over:
  - All project bank accounts;
  - All core project contracts including the Development Production Sharing Agreement signed with the State of Qatar and Sales Purchase Agreements;
  - The financing documents;
  - Physical assets located in Abu Dhabi.
- The core covenant package includes:
  - Limitations on additional indebtedness and shareholder distributions;
  - Strictly defined inter-creditor voting mechanisms;
  - Restrictions on change in ownership, particularly Abu Dhabi (directly or indirectly) at a minimum of 51 percent.
  - In addition, an interwaterfall loan mechanism brings together project cashflows between the upstream and midstream activities (Dolphin owns the midstream operations but operates the upstream on behalf of its sponsors);

Execution and placement strategy
- The transaction followed an extensive 5-day marketing campaign, focusing on Abu Dhabi, London, Los Angeles, Boston and New York.
- Following strong response from international investors and solid indications out of the US, a USD 1bn minimum size was indicated. Price guidance was announced at T+350bp area. The orderbook rapidly grew and closed at USD 4.9bn

Pricing and relative value
- Dolphin Energy successfully priced USD 1.25bn, 5.888% bonds at a spread of T+337.5bp at 15:30 BST on Thursday 23rd July.
- The transaction achieved competitive pricing in line with the recently issued 2014 RasGas project bonds, once adjusted for the steepness of the credit curve curve (5 year bullet vs. 6.1 year WAL), the amortising nature of the notes and Dolphin’s status as a Debut issuer in the capital markets (RasGas is a well known seasoned issuer).

A highly successful outcome
- This transaction confirms the continued strength of investor appetite for GCC credit and more specifically demonstrates the huge potential of the capital markets to raise highly competitive, long dated and large scale financing for non-recourse projects located in the GCC.
- The final orderbook was of an exceptional quality with a number of USD 100mn+ orders.
- Excellent demand once again from the Middle Eastern and European (primarily led by UK and Swiss) investors reiterates the importance of targeting a global investor base in today’s ‘new world’.

Allocation breakdown

<table>
<thead>
<tr>
<th>By Region</th>
<th>By Investor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Europe</td>
</tr>
<tr>
<td>21</td>
<td>38</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: BNP Paribas Issuemaster

BNP Paribas acted as Joint Lead Managers and Joint Bookrunners
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