

Overcoming Cross-border Financing Challenges

Gas Projects in East Asia

May 2013

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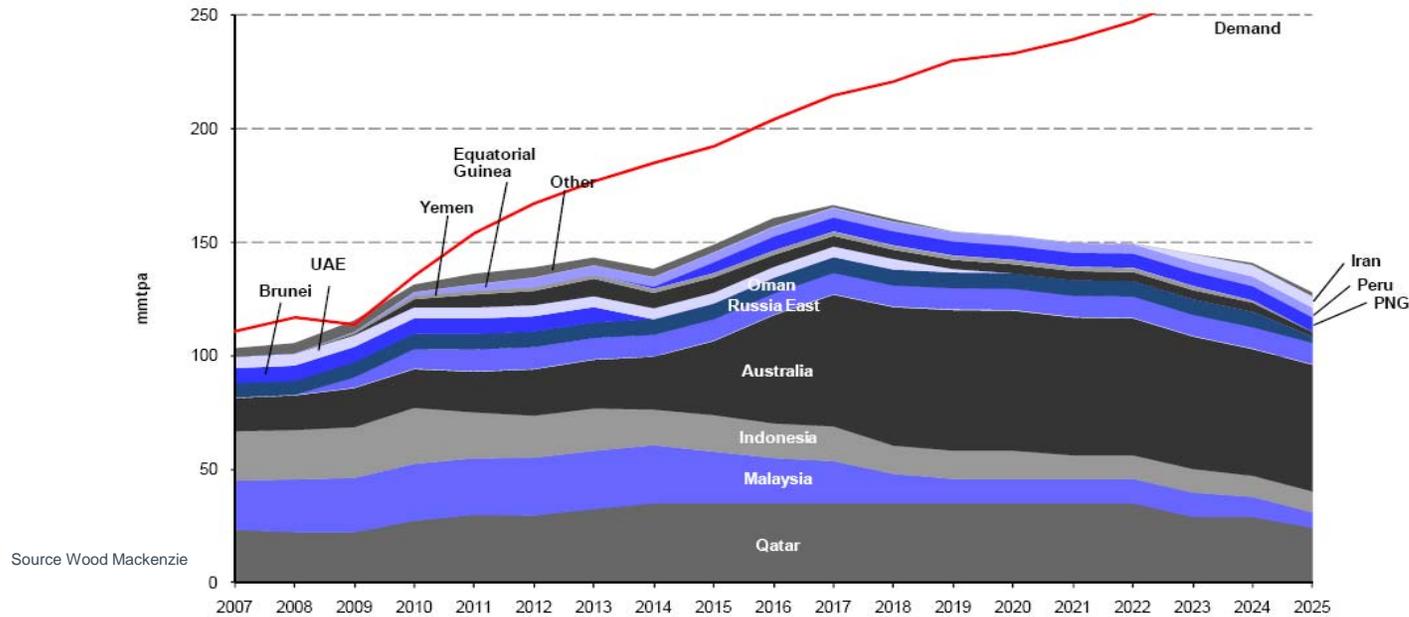
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Asia Pacific LNG demand outlook

There is currently a need for an incremental 40-50mmtpa of LNG in the Pacific Basin. Based on Australian projects discussed later in this publication, we believe over 55mmtpa of proposed Australian supply could potentially target the 2016-2017 shortfall window. In our view this implies some Australian projects will face delays, noting the supply shortfall continues to expand beyond 2017.



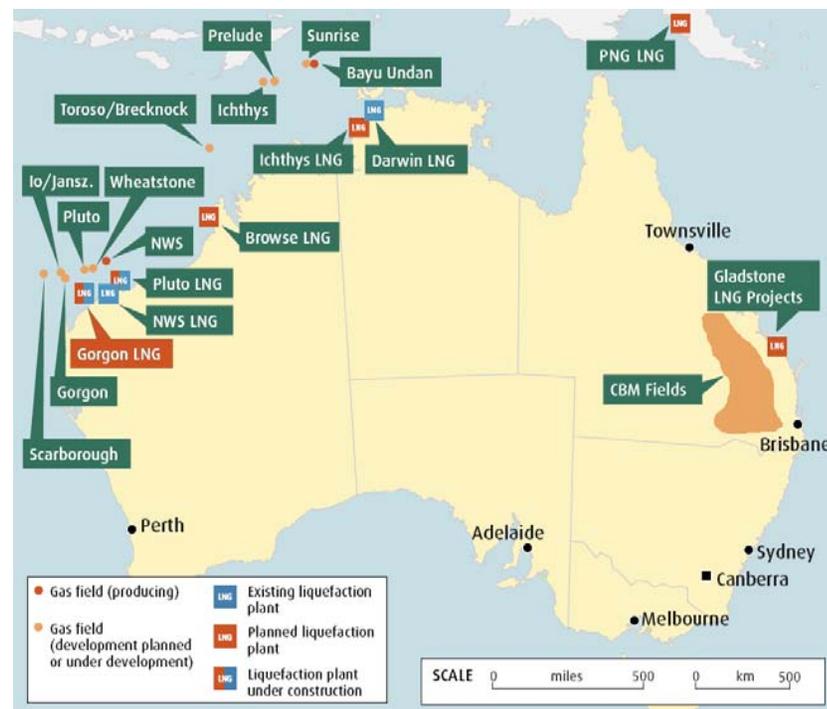
Indonesia transitioning from exporter to potential market

Indonesia has historically been a significant LNG producer. In 2007, the country was the second largest producer in the Pacific Basin. However, growth in domestic demand has seen reserves initially allocated to LNG facilities re-directed towards domestic consumption. The Indonesian Government has even raised the possibility of converting the Arun liquefaction facility in Aceh into a receiving terminal once LNG exports cease in four years time.

There are 8 LNG projects currently under construction

With a combined capital cost of more than US\$200b

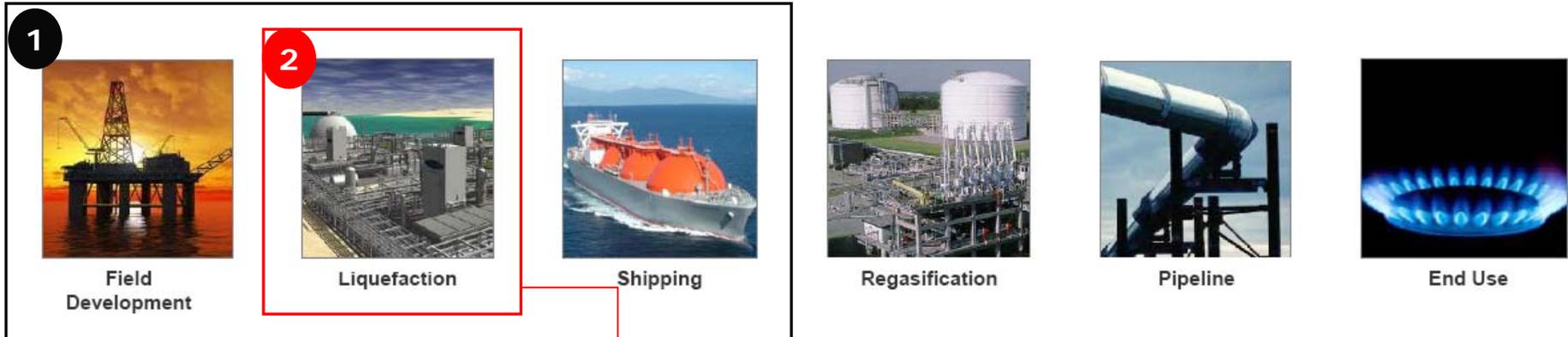
Project	Location	Size Mtpa	FID Date	% Complete	FID Cost US\$	Schedule FID Target
Pluto	WA	4.3	July 2007	100%	\$8.6b	2011
Gorgon	WA	15	Sept 2009	45%	\$43b	2014
PNG LNG	PNG	6.6	Dec 2009	60%	\$18b	2014
QCLNG	QLD	8.5	Oct 2010	35%	\$15b	2014
GLNG	QLD	7.8	Jan 2011	25%	\$16b	2015
Prelude FLNG	FLNG (WA)	3.6	May 2011	10%	\$13.6b	2017
APLNG	QLD	9.0	July 2011	17%	\$23b	2016
Wheatstone	WA	8.9	Sept 2011	10%	\$29b	2016
Ichthys	WA / NT	8.4	Jan 2012	3%	\$42.6b	2017



•Source: Woodmac, ANZ estimates

LNG Project Financing

LNG Value Chain



1
An integrated model would finance and hold security over entire project including the field development, pipeline, LNG plant and (potentially) vessels.
➤ Examples include PNG LNG or Ichthys

2
Financing of just the liquefaction component can take place under either:
➤ a transfer pricing structure (e.g APLNG)
➤ a tolling structure

Issues Considered in Funding via Corporate vs. Project Finance

Consideration	Corporate Financing	Project Financing	Examples
Flexibility / Confidentiality	✓✓✓		
Time and Complexity / cost of financing process	✓✓✓		
Margins / price	✓✓✓ Better for large, well diversified sponsors	✓✓✓ Better for smaller sponsors, higher ECA share	
Tenor		✓✓✓	
Country risk		✓✓✓	PNG LNG, Yemen LNG, Egypt LNG – all project financed
Debt Maximisation		✓✓✓ D:E = 70:30	
Balance sheet treatment		✓✓✓ Better for smaller sponsors	
Presence of smaller JV partners		✓✓✓	PNG LNG
Technology Risk	✓✓✓	✓ (subject to completion support)	PF Lenders struggle with newer technology and will require extensive due diligence
Financing discipline		✓✓✓	These projects are strategic to sponsors, who can welcome the rigour and discipline of a PF process/structure

General Challenges Going Forward

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- > Parties involved (Sponsors / Offtakers / Contractors) – need to be financially and technically capable. Any 'weak links' would make lenders wary.
- > Lender group generally include multilateral / ECAs / Sponsors alongside banks which could result in an extended financing timetable.
- > Oil linked pricing accepted for now but future less clear. Consumer countries will attempt to break oil link.
- > LNG Project costs have been increasing significantly leading to uncertainty for lenders. Challenges from alternative sources of LNG – US Pacific Coast / Central Asia
- > Increasing reliance on floating liquefaction facilities due to falling sizes of 'new' reservoirs – which adds costs / technical challenges
- > *Tax regimes are getting tighter around issues such as transfer pricing.*
- > *Local in-country gas price regulation can be an issue especially where end user industries such as electricity production and fertilizers are under stress and where subsidies have long been in existence.*



East Asia Challenges

>All the global challenges covered earlier do apply in some degree. In addition,

>East Asia not being a single landmass makes LNG a necessary mode of transporting gas thereby increasing costs further. Issues re; remoteness and access to infrastructure.

>East Asia is growing rapidly leading to growing domestic gas consumption at the expense of exports. Export oriented projects may struggle to get financed if there is any uncertainty on this matter.

>Onshore versus offshore capture of revenue

>Geo-political tensions remain in some pockets of production and consumption (South China Sea / Korean Peninsula)



Ichthys LNG Financing Structure – Project Finance

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Transaction Insights

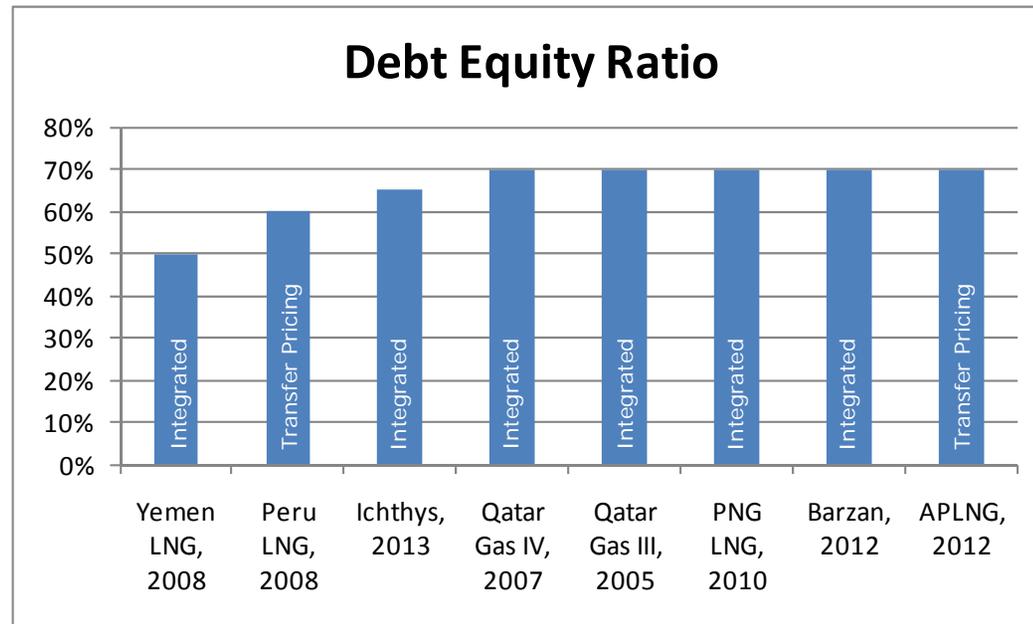
- > The field development plan, jurisdiction and reserves issues were conventional and well understood by PF banks
- > High level of condensate production underpinned the viability of the project and generated substantial early revenues within the upstream component of the project. Banks providing PF funding would have required the upstream revenues to be captured within the project waterfall and security structure. Therefore the Integrated Project model was most appropriate, with incorporated downstream project Borrower established, on lending to upstream UJV (equity levels matched between down and upstream).
- > Strong economics and jurisdiction of the project, made PF an ideal financing structure. Pre completion period (to steady state LNG production), supported by full parent guarantees.
- > ANZ played a major lead role in funding the PF facility and was sole underwriter of the Sponsor Covered Facility.

Key Transaction Terms	
Borrower	Ichthys LNG
Financing Type	Project Finance
Facility Type	Syndicated Amortising Term Loan Facility (with guarantees provided for some tranches)
Final Deal Size	Total Financing Package: US\$48.1bn
Financial Close	30-January-2013
Tenor (yr)	16 years
Margin	Step Up over time

Capital Structure	
Debt	US\$20.0bn (42%)
Equity	US\$28.105bn (58%)
Source of Funding	
Bank Loans	US\$4.801bn (uncovered)
	US\$5.37bn (ECA covered)
JBIC	US\$5.0bn
KEXIM	US\$0.68bn
EFIC	US\$0.15bn
Sponsor Co Lend	US\$4.0bn

Source: Loan Connector



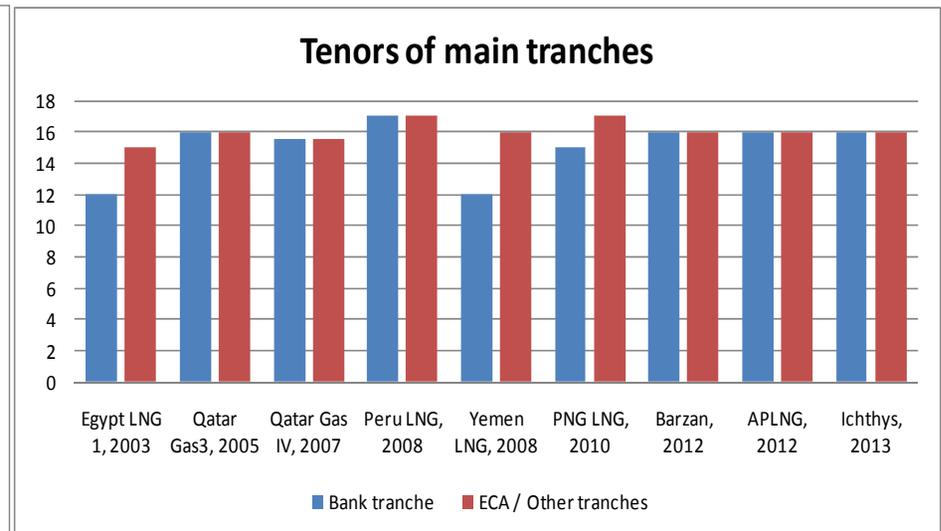
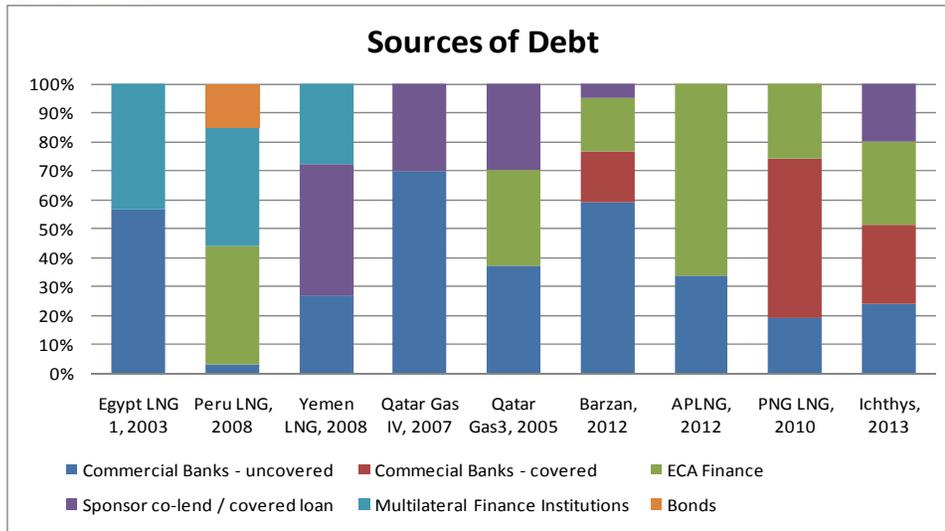


- > D:E norm is 70:30 across the board (lower levels of debt available for higher risk jurisdictions);
- > For projects financed on transfer pricing basis, the funding is only in respect of downstream costs; the upstream may attract separate non - recourse debt financing or could be entirely financed on a corporate basis by the sponsors.
- > Definitions of Equity can be varied in different projects, as a function of negotiation and structuring – eg. cumulative pre-completion (ramp up) cashflows can be included.

Profiling Funding Mix Within LNG Project Financings and Debt Tenors

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- > Deal debt size progressively increasing in above chart (from US\$0.95M in case of Egypt LNG 1 to US\$20B in case of Ichthys).
- > Commercial Bank loans remain an important source of debt (~30%); ECA direct / covered loans dominate the mix and have all but replaced the multilateral institutions due to increasing volume of debt required, though ECA debt is available alongside rather than in place of bank debt.
- > ECA debt generally available for longer tenors than corporate bank market – particularly relevant for higher risk jurisdictions, given provision of imbedded political risk cover.
- > Sponsor co-lend helps maintain competitive pricing, option to co-lend to Project entity/Borrower is a standard feature though Sponsors need not exercise if market liquidity is found to be adequate.
- > Bonds not generally used to fund throughout construction phase but are commonly considered as part refinancing of shorter term corporate/project debt post construction (mitigate negative carry costs and optimise longer term finance cost).

ECA (direct + covered) Involvement in LNG Projects



Deals	ECA % of total debt*	By ECA / Country	In Support of
Qatargas III (2005)	33%	US EXIM (US) – US\$0.34B JBIC (Japan) - US\$1B	Conoco Phillips – Sponsor & offtaker Mitsui - offtaker
Peru LNG (2008)	41%	US EXIM (US) – US\$0.4B Sace (Italy) – US\$0.25B KEXIM (Korea) – US\$0.3B	Hunt Oil – Sponsor Contractor SK Energy – Sponsor
Yemen LNG (2008)	28%	COFACE (France) - US\$0.432B KEXIM (Korea) - US\$0.160B JBIC/NEXI (Japan) - US\$0.08B	Total – Sponsor & Offtaker Kogas / others – Offtaker / sponsors Contractor
PNG LNG (2010)	46%	US EXIM (US) – US\$3B C EXIM (China) – US\$1.3B JBIC / NEXI (Japan) – US\$2.75B EFIC (Australia) – US\$0.35B SACE (Italy) – US\$0.9B	Exxon Mobil– Sponsor Sinopec – Offtaker TEPCO / Osaka Gas – Offtakers Oil Search / Santos – Sponsors Contractor
Barzan (2012)	31%	NEXI (Japan) – US\$1.2B KEXIM (Korea) – US\$1B	Contractor Contractor
APLNG (2012)	66%	US EXIM (US) – US\$2.951B C EXIM (China) – US\$2.675B	Conoco / Bechtel – Sponsor / Contractor Sinopec – Sponsor / Offtaker
Ichthys LNG (2013)	53%	JBIC / NEXI (Japan) – US\$7.75B KEXIM / KSURE (Korea) – US\$1.9B Other (European) – US\$1.3B	Inpex - Sponsor / Offtaker Contractors Contractors

- > Since 2005, ECAs have directly and indirectly funded a third or more of major LNG projects. Given the volumes of debt required, this trend is likely to continue.
- > Japanese ECAs (JBIC / NEXI), US EXIM and Korean ECAs (KEXIM / KSURE) are the most active though China EXIM is playing an increasingly important role in deals where Chinese companies are involved.
- > ECA's are providing direct loans to supplement both Corporate and Project funded LNG Projects/Corporates

*not considering residuals on covered loans



Tenor of LNG Projects – Getting Stretched



Deals	Gas supply agreement tenor (if TP structure)	Reserve Tail (for Integrated projects)	Take or pay LNG sales contract tenor	Loan tenor
Egypt LNG (2003)	N/A Tolling arrangement	N/A Tolling arrangement	20 years	15 years (international bank loans)
Qatargas III (2005)	N/A Integrated project	Not available but adequate (North Field)	25 years	15.5 years
Qatargas IV (2007)	N/A Integrated project	Not available but adequate (North Field)	25 years	16 years
Peru LNG (2008)	18 years	N/A	18 years	Banks / ECAs – 17 years; IDB – 2 tranches – 17 / 15 years; Local Bonds – 19 years
Yemen LNG (2008)	N/A Integrated project	Not Available	20 years	Banks (uncovered) – 12; ECAs – 16 years
PNG LNG (2010)	N/A Integrated project	46% and 35% after 15, 17 years (1C basis)	20 years	Banks (uncovered) – 15; ECAs – 17 years
Barzan (2012)	N/A Integrated project	45% / 9-years at debt maturity (2P basis)	N/A (volume risks not addressed via SPA)	16 years
APLNG (2012)	20 years	N/A	20 years	Bank / CEXIM – 16 years; US Exim 17 years
Ichthys LNG (2013)	N/A Integrated project	45% at debt maturity (1P basis)	15 years	16 years

> As the LNG spot market develops, loan tenors can get more aggressive vis-à-vis LNG SPAs, though comfortable level of gas availability via reserve tail / gas supply agreements will continue to be key factors considered for lenders in assessing Project risks.

Typical Project Finance Structuring Parameters

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- > Sponsor completion support by way of :
 - i. completion guarantees from sponsors covering debt service prior to completion, and covering repayment of outstanding debt in full if certain specified default events were to occur prior to completion;
 - ii. undertakings from the Sponsors to fund all construction cost overruns.
- > Comprehensive first ranking security package over all project assets, with complex inter-creditor agreements, tri-partite agreements and JV cross charges.
- > Coverage Ratios Typically >2.00x bankable NPV of surplus cash flow available for external debt service.
- > Strong investment grade off-takers providing long-term take or pay contracts in respect of LNG produced.
- > Application of all sales revenues and other cash flows from the project will be in accordance with a bank approved cash flow waterfall.
- > 6-month Debt Service Reserve Account to be maintained through the life of the debt.
- > Classic Project Finance structure requiring intensive external due diligence – technical, legal, contractual, and commercial.

Australian & Global LNG and Related Transactions

 <p>US\$ 20,000,000,000</p> <p>Ichthys LNG Project Financing</p> <p>Ichthys LNG Mandated Lead Arranger & Bookrunner, Sub-Facility Agent, Upstream Account Bank</p>	 <p>US\$ 8,500,000,000</p> <p>Project Financing for greenfield LNG Plant in Queensland</p> <p>Australia Pacific LNG Processing Ltd Mandated Lead Arranger, Documentation Bank, Bank facility & Intercreditor Agent</p>	 <p>US\$ 14,000,000,000</p> <p>Project Financing Facilities for LNG project co-sponsored by Exxon, Oil Search, Santos</p> <p>PNG LNG Limited Mandated Lead Arranger & Intercreditor Agent</p>	<p>Barzan Gas Company</p> <p>US\$ 7,214,000,000</p> <p>Project Financing for greenfield gas project in Qatar sponsored by Exxon & QP</p> <p>Barzan Gas Co. Ltd Mandated Lead Arranger</p>	 <p>US\$ 1,200,000,000</p> <p>ECA Financing for Santos' share in the Gladstone LNG project (Australia)</p> <p>Santos Limited Financial Advisor & Mandated Lead Arranger</p>
 <p>US\$ 1,100,000,000</p> <p>Term Loan Facility used to finance Pluto LNG project</p> <p>Woodside Petroleum Ltd Mandated Lead Arranger & Bookrunner</p>	 <p>US\$ 1,300,000,000</p> <p>Refinancing facility for a LNG plant at Qalhat Oman</p> <p>Oman LNG Lead Arranger & Underwriter</p>	 <p>US\$ 2,500,000,000</p> <p>Term Loan to fund 6.6mtpa LNG plant</p> <p>Oman LNG Lender and Underwriter</p>	 <p>US\$ 870,000,000</p> <p>Project financing to fund LNG gas port terminal in USA</p> <p>Gulf LNG Energy LLC Lender</p>	 <p>US\$ 225,000,000</p> <p>Payment bond to support HDEC in its EPC contract for the Mong Duong I project in Vietnam</p> <p>Hyundai E&C Mandated Lead Arranger</p>

Upstream Oil & Gas Financings

 <p>US\$ 160,000,000</p> <p>Reserves Based Lending Facility in respect of the Maari and Beibu fields (NZ / China)</p> <p>Horizon Oil Limited Mandated Lead Arranger & Structuring Bank</p>	 <p>US\$ 300,000,000</p> <p>Corporate Revolving Credit Facilities</p> <p>AWE Limited Mandated Lead Arranger</p>	 <p>US\$ 2,500,000,000</p> <p>Reserves based facility</p> <p>Lundin Petroleum Arranger</p>	 <p>US\$ 500,000,000</p> <p>Structured Corporate Facility</p> <p>Oil Search PNG Limited Advisor and Mandated Lead Arranger</p>	 <p>US\$ 325,000,000</p> <p>Reserved based Borrowing Base Facility for Oil and Gas Assets (Indonesia and Thailand)</p> <p>Salamander Energy (S.E. Asia) Lead Arranger</p>
 <p>US\$ 350,000,000</p> <p>Participation in Revolving Credit Facility</p> <p>Premier Oil Limited</p>	 <p>US\$ 350,000,000</p> <p>Borrowing Base Facility (Australia)</p> <p>Apache PVG Pty Ltd Arranger</p>	 <p>US\$ 190,000,000</p> <p>Financing for a floating production storage and offloading facility by Bumi Armada</p> <p>Armada OYO FPSO Mandated Lead Arranger & Bookrunner</p>	<p>Benaris International Pty Ltd</p> <p>US\$ 60,200,000</p> <p>Otway Gas Project Reserves Based Lending Facility (Australia)</p> <p>Senior Debt Provider Lender</p>	 <p>US\$ 115,000,000</p> <p>Syndicated facility financing for a drilling rig, jack-up Platform 3</p> <p>PetroVietnam Drilling Co-Arranger</p>
<p>Santos</p> <p>US\$ 65,000,000</p> <p>Borrowing Base Facility for oil and gas assets (Indonesia)</p> <p>Santos Limited Sole Arranger & Underwriter</p>	 <p>US\$ 35,000,000</p> <p>Borrowing base facility for oil & gas assets, Indonesia</p> <p>Pearl Oil Holding Sole Arranger & Underwriter</p>	 <p>US\$ 50,000,000</p> <p>Project Financing for the development of upstream assets</p> <p>Cairn Energy PLC Arranger</p>	 <p>UNDISCLOSED</p> <p>Structuring role with respect to the Crux development</p> <p>Nexus Energy Ltd Structuring Bank</p>	 <p>US\$ 120,000,000</p> <p>Assets in Mauritania</p> <p>Hardman Resources Ltd Sole Arranger & Underwriter</p>

Selected Oil & Gas Loan Experience

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China Oil and Gas Credentials



US\$ 5,000,000,000

Term Loan Facility

Sinopec Century Bright Capital Investment Ltd
Mandated Lead Arranger & Bookrunner



US\$ 2,677,000,000

Project financing for the development of Nanhai petrochemicals plant by CNOOC and Shell, China

Nanhai Petrochemical Project
Mandated Lead Arranger & Underwriter



US\$ 1,800,000,000

Project financing for a petrochemical project sponsored by BP, CPCC and Sinopec, China.

Shanghai SECCO Petrochemical Project
Arranger

Other Asia



US\$ 1,557,000,000

Project financing of a 4.5 million tonnes per annum condensate splitter and aromatics complex (Singapore)

Jurong Aromatics Corporation
Mandated Lead Arranger



US\$ 1,090,000,000

Term Loan Facility

Reliance Industries Ltd
Mandated Lead Arranger & Bookrunner



US\$ 700,000,000

Term Loan Facility

PT Pertamina (Persero)
Mandated Lead Arranger & Bookrunner