

Nuclear Project Financing Considerations For



ROSATOM

Goldman Sachs Russia

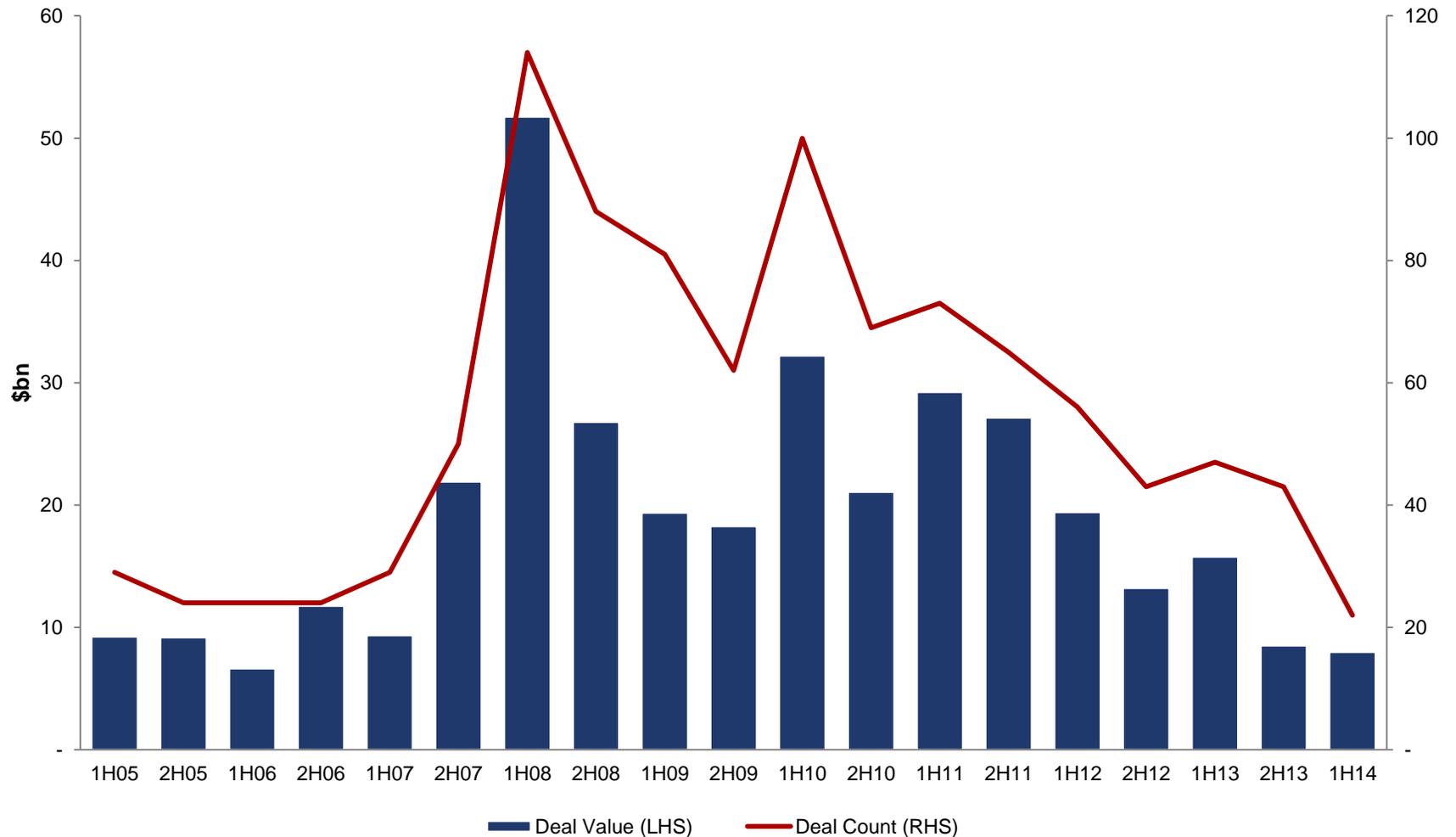
June 2014

Bank demand	<ul style="list-style-type: none">■ Bank demand for infrastructure lending remains strong but they are increasingly retrenching to domestic markets■ After a period of tenor contractions some banks are lending long-term to domestic issuers or core clients■ Japanese banks continue to lend long-term to projects
Institutional Investor demand	<ul style="list-style-type: none">■ European institutional investors have very strong demand for infrastructure. Many funds have dedicated pools of capital or teams for infrastructure■ An increasing number of institutional investors are prepared to take construction risk<ul style="list-style-type: none">— Most are still uncomfortable with this risk and the administration required■ Funds from outside Europe (including the PP market in the US and certain dedicated Australian infrastructure debt funds) are also active in the European infrastructure market
Multilateral Funding/ Government Support	<ul style="list-style-type: none">■ A number of programmes are in place to stimulate the project finance bond market during construction<ul style="list-style-type: none">— EIB is increasingly offering the Project Bond Credit Enhancement (“PBCE”) structure and UK Government is guaranteeing the debt on transactions■ The EIB is also very active providing direct debt lending or funding (guaranteed by banks)■ ECAs/ development banks are also increasingly active. Particularly in less developed countries.<ul style="list-style-type: none">— Certain ECAs are more active than others e.g. the Japanese ECAs (JBIC/ NEXI) and the Canadian ECA (EDC) are very active— Contemplating using equipment or sponsors from these jurisdictions can help fund projects
Other demand	<ul style="list-style-type: none">■ Pockets of other financing demand exists<ul style="list-style-type: none">— E.g. Siemens will finance projects which have a German/ European flavour— KfW IPEX (the commercial bank arm of KfW) will finance projects globally which have a European-component■ Assured Guaranty (a monoline) will wrap project bonds which can improve the all-in cost of finance

European PF Deals By Volume

Jan 2005 – May 2014

European project finance supply has been very weak over the past few years which has increased competition in the sector. Particularly given demand has increased



Source: LoanConnector

- In addition to traditional multilateral funding from the EIB or ECAs, several programmes are available to increase funding capacity for construction projects

Scheme	Commentary
Europe 2020 Project Bond Initiative <i>€230m pilot phase</i>	<ul style="list-style-type: none"> ■ EIB funding of €230m during the pilot phase ending 2014 ■ Credit enhancement to senior project debt, by providing subordinated guarantee for up to €200m / 20% of the project's debt ■ Targets an uplift in senior debt rating to single A area ■ Focused on transport, energy and broadband projects. Castor gas storage, Greater Gabbard OFTO and A11 in Belgium have closed to date
UK Treasury Guarantee <i>£40bn capacity</i>	<ul style="list-style-type: none"> ■ Structured as an irrevocable “monoline-like” guarantee ■ Can cover construction risk (construction must start no later than 12 months after the start of the guarantee) ■ Qualifying sectors include transport, utilities, energy and communication ■ Guaranteed projects must be approved by the UK Treasury (nationally significant; good value to the taxpayer) ■ Must be dependent on the guarantee to proceed (not otherwise financeable in a reasonable timeframe) ■ Must be “shovel-ready” by Dec 2016. Drax and Mersey Crossing have reached FC.
KfW Offshore Wind Energie Programme <i>€5bn capacity</i>	<ul style="list-style-type: none"> ■ Financing of offshore wind farms in the German North and Baltic Sea ■ Up to 20-year project financing (with three interest free initial years) ■ Funding of up to €400m / 50% of the total debt possibility to grant additional insurance against additional costs in the installation phase ■ Meerwind and Global Tech 1 were the first projects to benefit from the programme
Green Investment Bank <i>£3bn capacity</i>	<ul style="list-style-type: none"> ■ Commercial loans alongside private investors ■ Double objective: (1) environmental and sustainability targets, and (2) financial profitability ■ Priority sectors: Offshore wind, waste recycling, energy from waste, energy efficiency

Source: HM Treasury website, EIB website, Green Investment Bank website, KfW website, ij.com; Infranews

Notoriously difficult to finance

- Long maturity is required
- Long construction period
- High environmental cost and risk
- Large sums involved

Debt financing mechanisms

- On-balance sheet financing by large utilities: British Energy, E.ON, RWE, EdF
 - Bank loans
 - Bonds
 - ECAs
 - Derivatives (forward sale of base load)
 - Vendor financing
- Almost no project finance: Hinkley Point?
- Always one or the other form of state support

Equity financing mechanisms

- Strategic investors: generators or consumers
- Contractors: Areva
- Portfolio investors: pension funds

Increasing role of the state

- German utilities (E.On, RWE, EnBw) are in talks with German Government to create €30bn nuclear foundation into which nuclear assets and liabilities will be transferred
- UK announced new nuclear support program in January this year
 - 1 **Hinkley Point** (\$26bn project)
 - Investors: EdF, Areva, China General Nuclear Corporation, China National Nuclear Corporation, pension funds
 - Government role: 35 year take or pay off-take agreement (at a double market price); state guarantee for debt investors under 20 year National Infrastructure Plan
 - Developers: take construction risk
 - 2 **Horizon Nuclear Power**
 - \$13bn Wylfa Newydd project

Investor appetite for Russian equity and credit materially improved over the last several weeks

Credit markets are almost at the level they were pre-Crimea as sanctions concerns subsided and Ukrainian elections completed

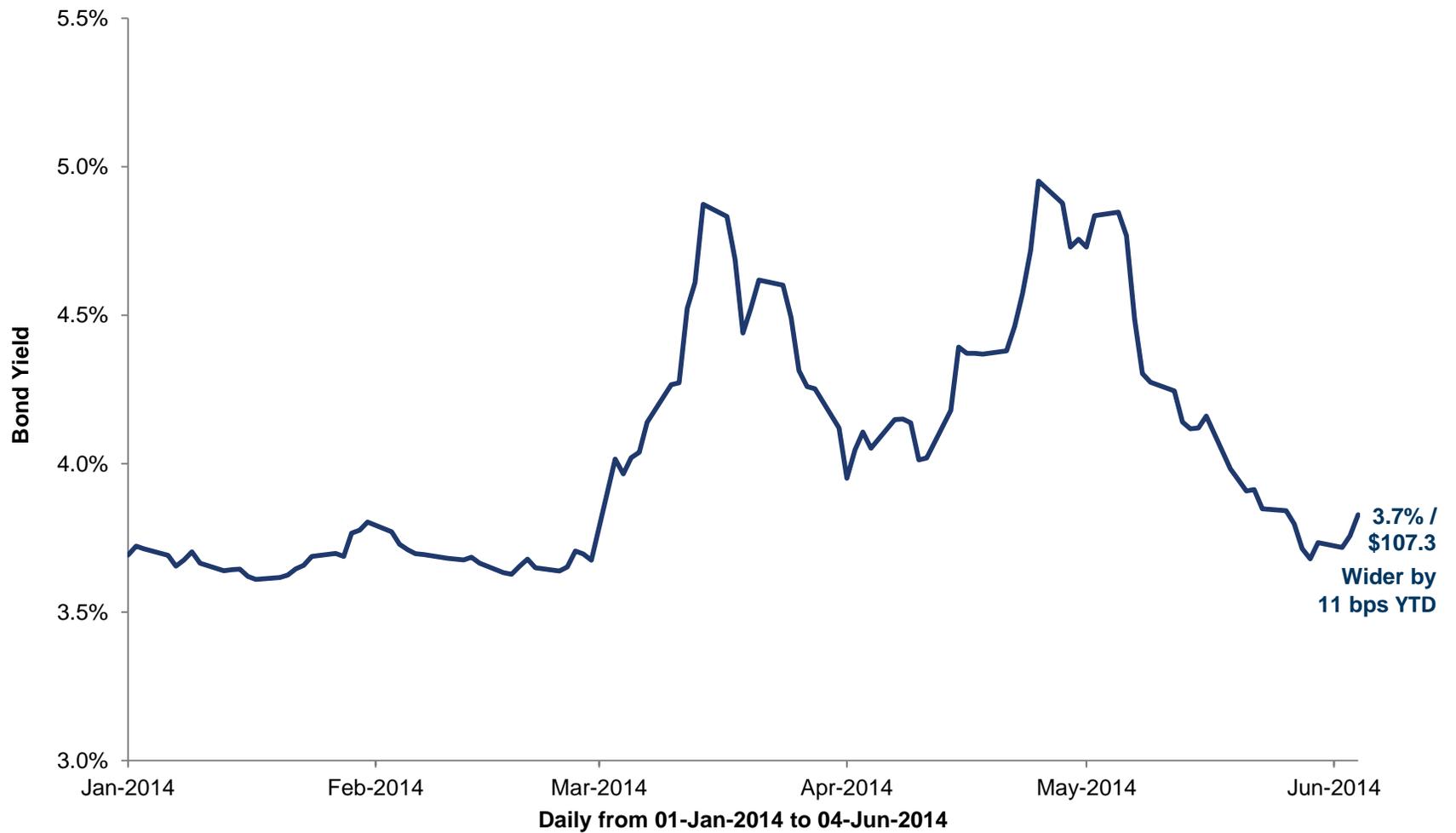
- Russian 2020 USD sovereign bond is trading only 11 bps wider than in January (100 bps tighter than in March)
- While higher beta banks and corporate names are still wider, their credit spreads are c. 150-300 bps tighter from their mid-March levels
- Alfa Bank Holdings have announced the first Russian public transaction since February
- While a fair number of risks continue to persist in the market (slower China, tightened tension around Eastern parts of Ukraine, slowing growth in Russia), we expect Russian investment grade banks and corporate start issuing very soon

Russian equity markets have gained back half of their post Crimea losses but remain highly volatile

- Russian RTS index is only 8% down YTD compared to 20% in March
- Daily liquidity on MICEX has started picking up
- We see material inflow of non-Russia, particularly US funds to Russian equities, albeit they are all “old” money of investors who had been long Russia in the past
- Yet, we do not observe any material inflow of direct foreign investments in Russia this year

What helps

- Decrease of political tensions around Ukraine
- Stable rate environment with US\$ near year-to-date low even with continued positive economic data
- Return to inflows in EM portfolios. This has been primarily in hard currency funds and is coming from both institutional and retail investors
- Light primary market calendar with CEEMEA US\$ issuance of debt down 44% at €42bn vs. 2013 and almost no new IPOs



Source: Bloomberg. Market data as of 4-Jun-2014.

RTS Index

YTD Performance



Source: Bloomberg. Market data as of 4-Jun-2014.