Oil and Gas Corporate Bonds in Asia

Oil and gas companies in Asia have significantly increased the amount of funds raised through bond markets over the past decade **(Figure 13)**.[6,7] Even against the backdrop of the global financial crisis and the eurozone debt crisis, bond issuances from the region's oil and gas industry have continued to exhibit an upward trend, buoyed by a positive outlook for Asia. The amount of oil and gas corporate bond issuance peaked at US$118 billion in 2012 before slowing to US$63 billion in 2014.

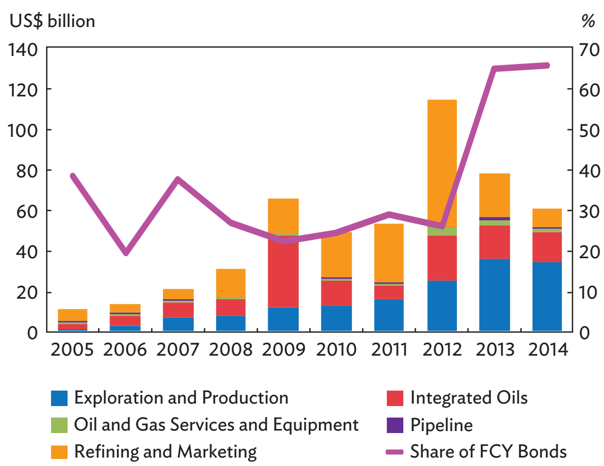
Within the oil and gas industry, the exploration and production subindustry has grown steadily through the years. In contrast, although issuance in the integrated oils subindustry jumped to US$36 billion in 2009, and issuance in the refining and marketing subindustry rose to US$64 billion in 2012, the growth in bond issuances in other subindustries has shown no consistent trend overall.

Amid rising levels of corporate debt, the region has displayed an increasing trend toward foreign-currency (FCY)-denominated debt since 2010. In 2014, the share of FCY-denominated bond issuance reached a record-high of 66%. The swing to FCY bonds, mainly US dollar bonds, was largely due to low borrowing costs caused by a weaker dollar and accompanied by excess liquidity in global capital markets as a consequence of expansionary monetary policies in advanced economies. However, a shift to more FCY-denominated bonds greatly increased the currency risk exposure of borrowers.

Looking at individual economies in Asia, the largest issuer of oil and gas industry bonds is the People's Republic of China (PRC) with over US$160 billion worth of bonds outstanding **(Table 5)**. The corporate bond obligations of the region's other economies are much smaller in nominal terms. Although as a share of total bonds outstanding, Kazakhstan's oil and gas industry has the region's largest share at over 20%. The share in all other economies is much smaller, ranging between 1% and 7%.

With growing bond issuance from the oil and gas industry in the region over the past decade and the recent plunge in oil prices, concerns have arisen over the vulnerability of some companies. Oil exploration and production companies have been hit by cutbacks in capital spending. Refining and marketing companies are nursing losses on their inventories due to falling oil prices. These factors will likely constrain the companies' earnings and cash flow, and thus their capacity to meet debt obligations. Further, declining values of oil and gas assets will decrease collateral values, which would affect their lines of credit.

Figure 13: Oil and Gas Bond Issuance in Asia



FCY = foreign currency.
Source: Bloomberg LP.

Table 5: Oil and Gas Bonds Outstanding by Economy

Economy	Amount Outstanding (US$ billion)	Share of Oil and Gas Industry Bonds to Total Bonds Outstanding (%)
People's Republic of China	163	1.8
Hong Kong, China	13	3.9
India	20	1.6
Indonesia	19	6.6
Kazakhstan	22	20.2
Republic of Korea	20	1.2
Malaysia	11	2.8
Philippines	2	1.4
Singapore	6	2.0
Taipei,China	7	2.4
Thailand	22	6.5

Note: As of 28 January 2015.
Source: Bloomberg LP.

[6] This includes all oil and gas industry bonds issued under Bloomberg Industry Classification System codes 3410 (integrated oils), 3412 (exploration and production), 3413 (oil and gas services and equipment), 3414 (refining and marketing), and 3415 (pipeline).

[7] In this Special Section, Asia refers to the People's Republic of China; Hong Kong, China; India; Indonesia; Kazakhstan; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei,China; and Thailand.

Moreover, the adoption by banks of Basel III standards may further limit the industry's access to financing as banks are constrained in lending by requirements to hold more capital and liquidity. Banks' risk appetite for lending to the oil and gas industry, which has assets that cannot be easily liquidated and usually requires loans with longer tenors to fund high capital expenditures, may be reduced.

Downgrades from major credit rating agencies have risen since the price of oil began to tumble in June 2014. In Asia there have already been 16 ratings downgrades in the oil and gas industry in 2015, following eight downgrades between June 2014 and December 2014.

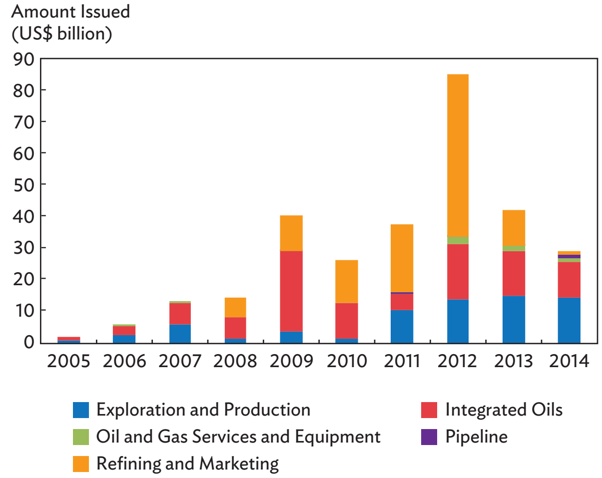
This Special Section of the Asia Bond Monitor will examine the bond-issuing segment of the region's oil and gas industry on an economy-by-economy basis, and review their capacities to service debt obligations. Using the latest financial data available,[8] the (i) leverage level (debt-to-capital ratio),[9] and ability to meet (ii) short-term debt (short-term-debt-to-EBITDA ratio),[10] and (iii) interest payment obligations (interest coverage ratio)[11] are analyzed.

People's Republic of China

Bond issuances from oil and gas companies in the PRC peaked in 2012 at US$85 billion. As of 28 January 2015, the industry's share of total bonds outstanding was 1.8% and spanned several subindustries, including refining and marketing (37% of oil and gas industry bonds outstanding), exploration and production (31%), integrated oils (27%), oil and gas services and equipment (3%), and pipeline (1%). The share of the top five obligors in the overall industry, all of which are state-owned entities, stood at 87%.

Figure 14 shows that the integrated oils subindustry accounted for a significant share of bond issuances over the past decade. Meanwhile, issuances in the exploration and production subindustry have been on an upward trend since 2011. The refining and marketing subindustry has displayed robust growth in bond issuances since 2008, peaking at US$51.5 billion in 2012 before tapering off in recent years. Figure 14 also shows the PRC as the main driver of growth in issuances in the region since 2005.

Figure 14: People's Republic of China Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

The oil and gas industry on the whole is not highly leveraged in the PRC, with the average debt-to-capital ratio at 0.38. The majority of firms also have a relatively low short-term-debt-to-EBITDA ratio, with the median being 0.74. However, a few smaller private companies may encounter difficulties in meeting short-term obligations and interest payments as their short-term-debt-to-EBITDA ratios are greater than 2.5 and their interest coverage ratios were low even before oil prices started to fall.

While a significant portion of the bonds outstanding have time to maturity of less than 3 years, most of these bonds are denominated in renminbi so there is minimal exchange rate risk in meeting short-term obligations **(Figure 15)**. In contrast, the bulk of the bonds with a longer time to maturity is almost equally divided between local currency (LCY) and FCY.

Hong Kong, China

Bond issuances in the oil and gas sector in Hong Kong, China set a new record of US$5 billion in 2014. As of 28 January 2015, the ratio of oil and gas industry bonds to total bonds outstanding was 3.9%. The top issuer, CNPC Finance HK Ltd., is a wholly owned

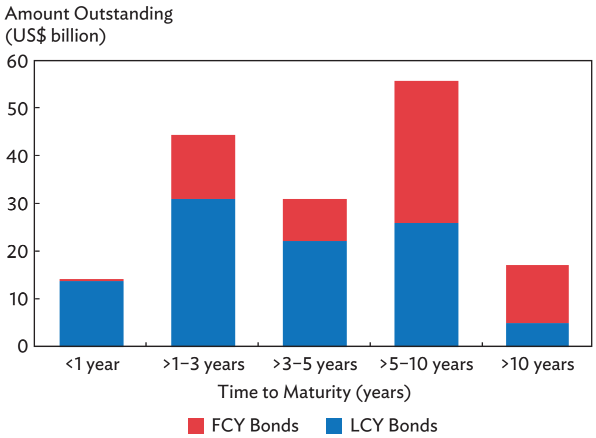
8 Data from latest company annual reports as retrieved from Bloomberg LP or oil and gas company websites.

9 debt-to-capital ratio = (total debt)/(total debt + total stockholders' equity).

10 short-term–debt-to-EBITDA = (short-term debt)/(earnings before interest, taxes, depreciation, and amortization).

11 interest coverage ratio = (earnings before interest and taxes)/(interest expense).

Figure 15: People's Republic of China Oil and Gas Bonds by Maturity and Currency

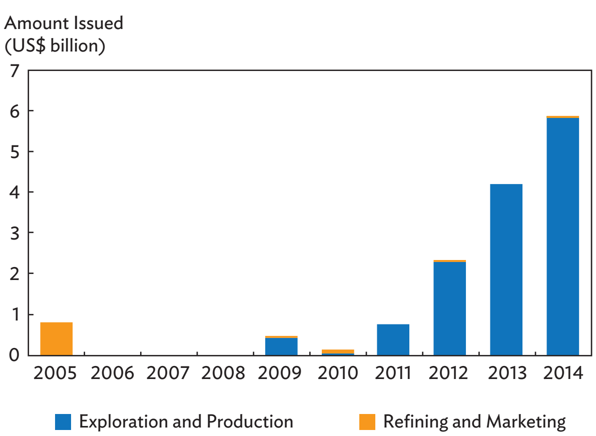


FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

subsidiary of China Petroleum Finance Co., Ltd. and is the offshore treasury center of China National Petroleum Corporation.[12] **Figure 16** illustrates how issuances from the exploration and production subindustry have notably accelerated since 2010. This solid growth is mainly driven by CNPC Finance HK Ltd.

While the median debt-to-capital ratio of the industry is 0.43, several firms encountered financial challenges in

Figure 16: Hong Kong, China Oil and Gas Bonds Issuance by Sector



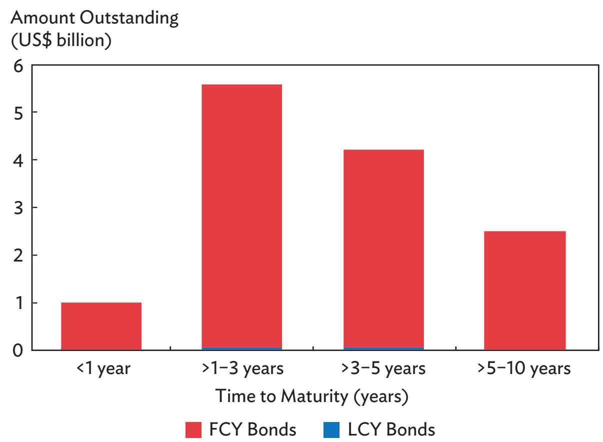
Source: Bloomberg LP.

[12] http://cpf.cnpc.com.cn/cpf/xggsnb/201406/47a0c2e036514f5eb793dc918ff03d91/files/391f20664e4f42858b4bf61d0f08df79.pdf

2013. A few small firms have high or negative short-term-debt-to-EBITDA ratios, and very low or negative interest coverage ratios. This situation is exacerbated in cases where the debt is FCY-denominated.

As illustrated in **Figure 17**, almost all bonds outstanding are in US dollars, with a large chunk coming due in 1–3 years. The FCY debt due in less than 1 year is mainly attributable to Titan Petrochemicals Group Ltd., which defaulted on some of its payment obligations before the oil price began declining in June 2014.[13]

Figure 17: Hong Kong, China Oil and Gas Bonds by Maturity and Currency



FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

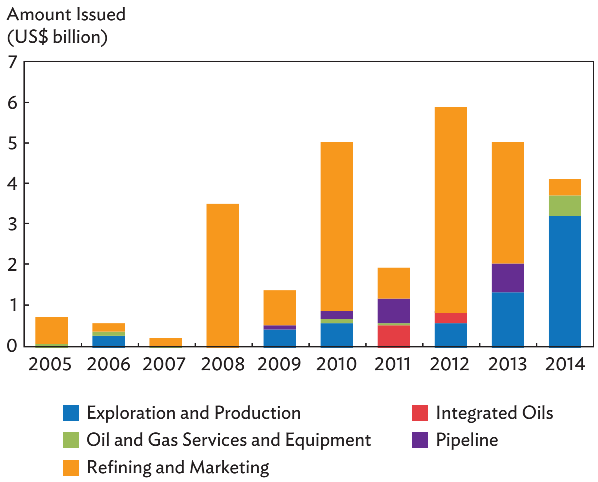
India

Oil and gas industry bond issuances in India totaled a record-setting US$5.8 billion in 2012. As of 28 January 2015, the ratio of oil and gas industry bonds to total bonds outstanding was 1.6%. The top five obligors, three of which are government-owned, accounted for 82% of the industry's bonds outstanding. Meanwhile, bond issuance is concentrated in two subindustry categories: refining and marketing (65%), and exploration and production (25%).

The value of issuances from the refining and marketing subindustry increased, albeit inconsistently, over the past decade. Another notable trend can be seen in the issuances of the exploration and production subindustry, which have grown significantly since 2012 **(Figure 18)**.

[13] http://file.irasia.com/listco/hk/titan/annual/2013/ar2013.pdf

Figure 18: India Oil and Gas Bonds Issuance by Sector

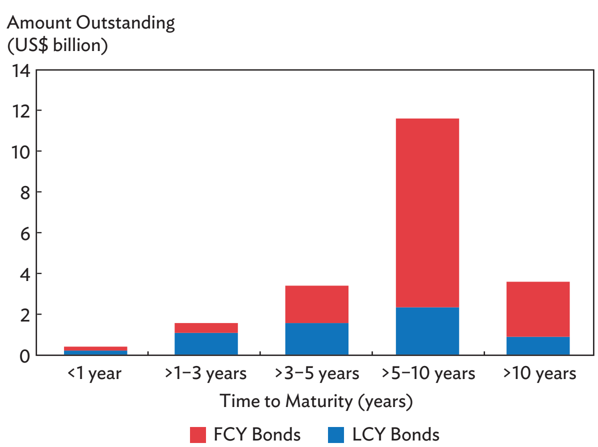


Source: Bloomberg LP.

The oil and gas sector in India has high average and median debt-to-capital ratios. Several state-owned and private oil and gas companies had high leverage ratios, high short-term-debt-to-EBITDA ratios, and interest coverage ratios below 2.0 even before oil prices began faltering in 2014. Challenges in meeting obligations may be encountered, especially by these private companies.

While 71% of the bonds outstanding are FCY-denominated, a large portion of these bonds have remaining maturities of more than 5 years **(Figure 19)**.

Figure 19: India Oil and Gas Bonds by Maturity and Currency



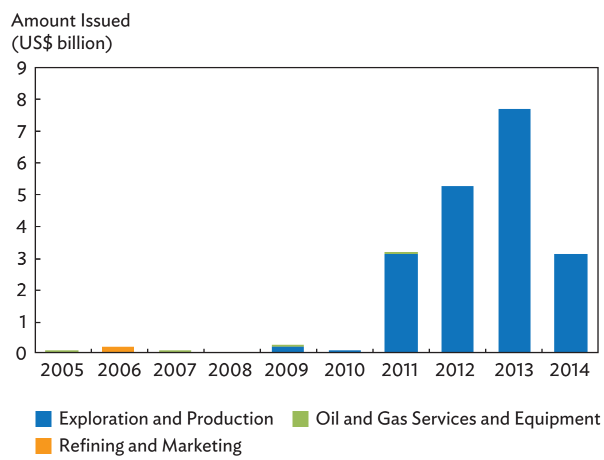
FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Indonesia

The value of bond issuances from the oil and gas industry in Indonesia climbed to a high of US$7.6 billion in 2013. While there are only three such issuers in the country, the ratio of oil and gas industry bonds to total bonds outstanding stood at 6.6% as of 28 January 2015, led by state-owned Pertamina Persero PT, which accounted for 92% of oil and gas industry bonds outstanding.

Figure 20 shows that there was a huge jump in bond issuances in the exploration and production subindustry between 2011 and 2013 before growth fell by more than half in 2014.

Figure 20: Indonesia Oil and Gas Bonds Issuance by Sector

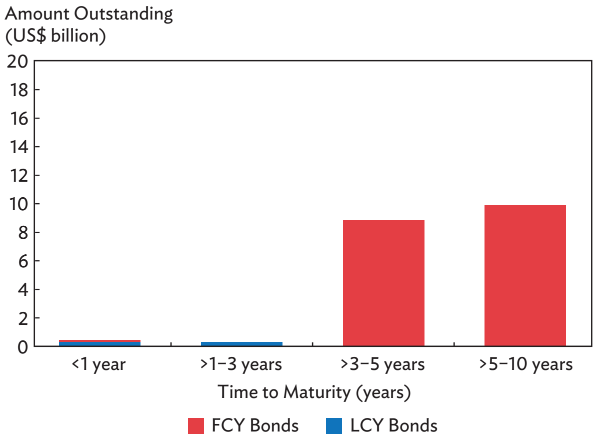


Source: Bloomberg LP.

Indonesian oil and gas bond issuers are moderately leveraged, with an average debt-to-capital ratio of 0.51. The average short-term-debt-to-EBITDA ratio is also below 1.0, indicating relatively good capacity to meet short-term obligations. In terms of meeting interest payments, however, one of the firms may encounter difficulty as its interest coverage ratio is below 0.5.

Most of the bonds outstanding have remaining time to maturity of more than 3 years. However, foreign exchange risk is significant as 98% of all bonds outstanding are in US dollars **(Figure 21)**.

Figure 21: Indonesia Oil and Gas Bonds by Maturity and Currency



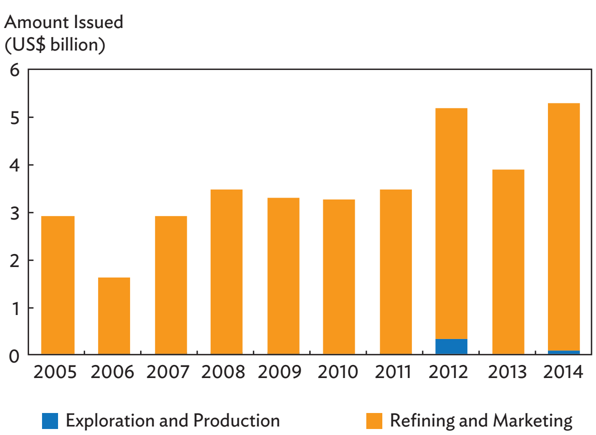
FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Republic of Korea

Bond issuances from the oil and gas industry in the Republic of Korea reached a high of US$5.2 billion in 2014. The industry's share of total bonds outstanding was 1.2% as of 28 January 2015. Almost all bond issuances in 2014 were from the refining and marketing subindustry, which has dominated issuances over the past decade **(Figure 22)**.

The industry is not highly leveraged as the average debt-to-capital ratio is 0.46. However, several firms may have difficulties in meeting short-term debt and interest payment obligations as they had negative or high short-term-debt-to-EBITDA ratios, and negative or low interest coverage ratios, prior to oil prices plummeting.

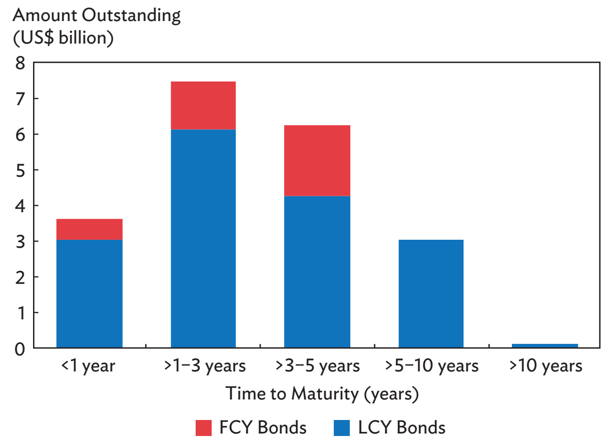
Figure 22: Republic of Korea Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

Of total industry bonds outstanding, 54% have remaining time to maturity of less than 3 years. However, a majority of these bonds are LCY-denominated and thus currency risk is reduced **(Figure 23)**.

Figure 23: Republic of Korea Oil and Gas Bonds by Maturity and Currency



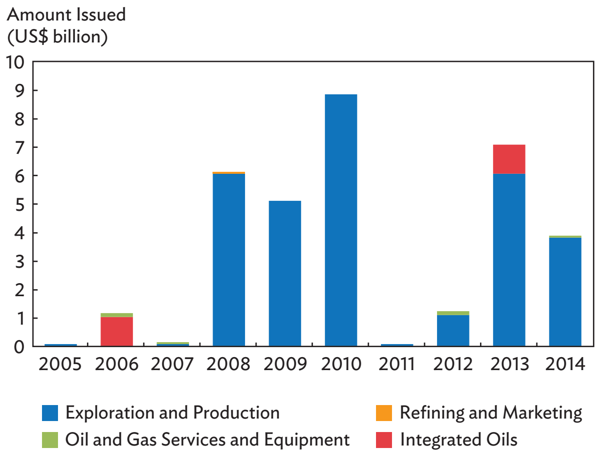
FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Kazakhstan

Oil and gas industry bond issuance in Kazakhstan peaked at US$8.8 billion in 2010. As of 28 January 2015, the industry's share of total bonds outstanding was 20.2%. Being an oil-exporting economy, the industry's most significant amount of bonds outstanding (95%) belongs to the exploration and production subindustry. State-owned KazMunayGas National Co. JSC alone accounts for 86% of the total amount of industry bonds outstanding. KazMunayGas National Co. JSC has been the growth driver in bond issuances over much of the past decade **(Figure 24)**.

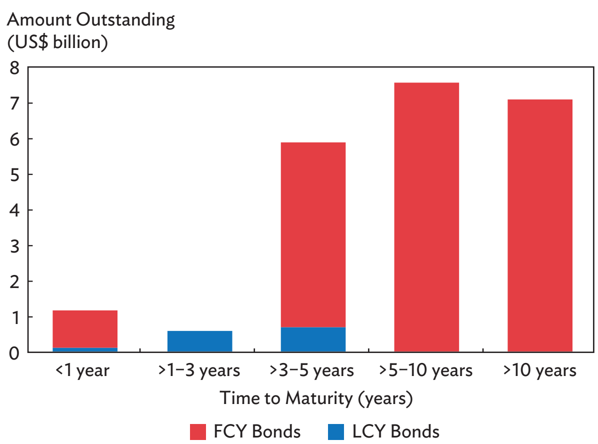
Overall, the oil and gas industry has a low debt-to-capital ratio, low short-term-debt-to-EBITDA ratio, and a high interest coverage ratio, implying good capacity in servicing debt. Despite most of the bonds outstanding having a relatively long tenor, most are also FCY-denominated **(Figure 25)**. Thus, the industry is highly exposed to currency risk.

Figure 24: Kazakhstan Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

Figure 25: Kazakhstan Oil and Gas Bonds by Maturity and Currency

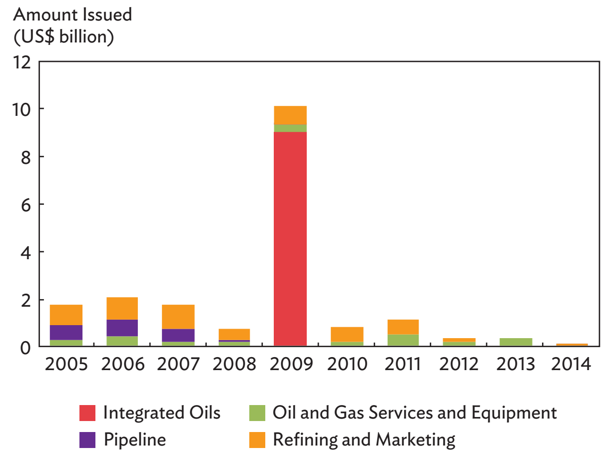


FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Malaysia

In 2009, Malaysia recorded its highest level of oil and gas industry bond issuance (US$10 billion) of the past 10 years. As of 28 January 2015, the ratio of oil and gas industry bonds to total bonds outstanding was 2.8% as bond issuances in the sector continued to shrink in recent years. Petroliam Nasional Berhad (Petronas), a major issuer and the firm responsible for the record issuance in 2009, is a state-owned integrated oil and gas company **(Figure 26)**.

Figure 26: Malaysia Oil and Gas Bonds Issuance by Sector

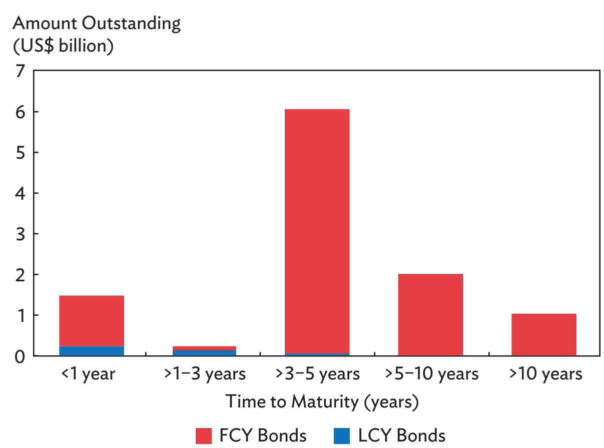


Source: Bloomberg LP.

Overall, the industry has a low debt-to-capital ratio, especially government-owned Petronas. The smaller oil firms are not highly leveraged, but a few may experience problems in meeting short-term debt and interest payment obligations.

Figure 27 illustrates that most of Malaysia's oil and gas industry bonds have time to maturity of more than 3 years. However, since these bonds are largely FCY-denominated, the sector is highly exposed to currency risk.

Figure 27: Malaysia Oil and Gas Bonds by Maturity and Currency



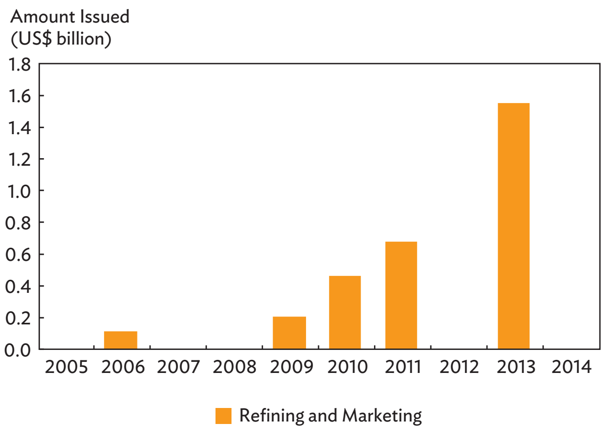
FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Philippines

The largest issuances of bonds from the oil and gas industry in the Philippines over the last 10 years occurred in 2013 with capital raised amounting to US$1.5 billion. The industry's share of total bonds outstanding stood at 1.4% on 28 January 2015 and was concentrated in the refining and marketing subindustry **(Figure 28)**.

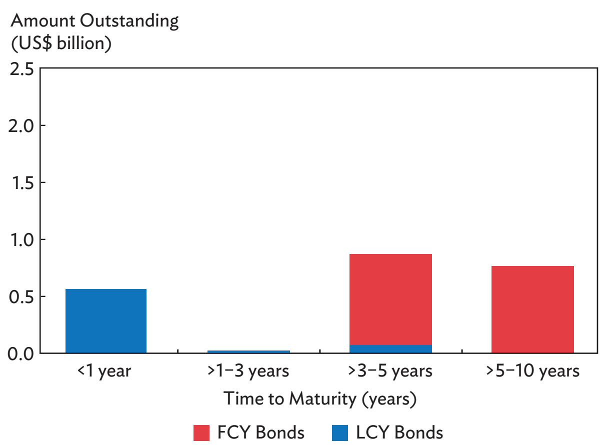
The Philippine oil and gas industry is quite leveraged as the average debt-to-capital ratio is 0.62. One of the obligors also has a high short-term-debt-to-EBITDA ratio.

Figure 28: Philippines Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

Figure 29: Philippines Oil and Gas Bonds by Maturity and Currency



FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Of the oil and gas industry's bonds outstanding, 71% are denominated in US dollars **(Figure 29)**. Nevertheless, the majority of bonds due in less than 1 year are LCY-denominated. Thus, currency risk is reduced, at least in the short-term.

Singapore

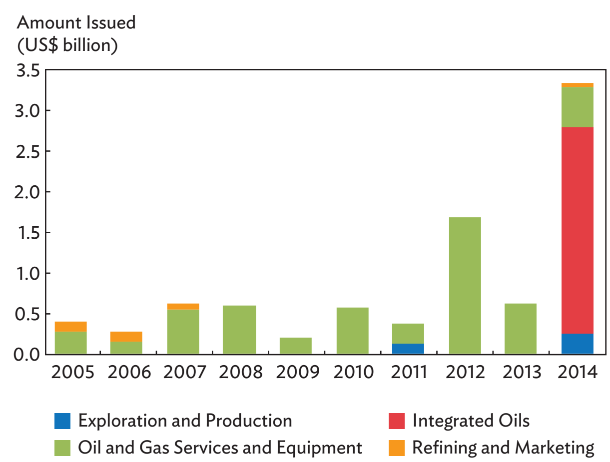
Bond issuances from the oil and gas industry in Singapore totaled a record-setting US$3.3 billion in 2014. The ratio of oil and gas industry bonds to total bonds outstanding was 2.0% as of 28 January 2015, of which the bulk of the exposure was in the oil and gas services and equipment (57%), and integrated oils (38%) subindustries.

Figure 30 illustrates that, in contrast with other economies in the region, bonds from the oil and gas industry in Singapore are heavily concentrated in the oil and gas services and equipment sector. A notable exception occurred in 2014 when there was a sizeable issuance from the integrated oils subindustry.

The industry is not highly leveraged in Singapore but the median debt-to-capital ratio is 0.52. Also, several companies had limited capacity to meet their short-term debt and interest payment obligations even before oil prices started to fall in 2014.

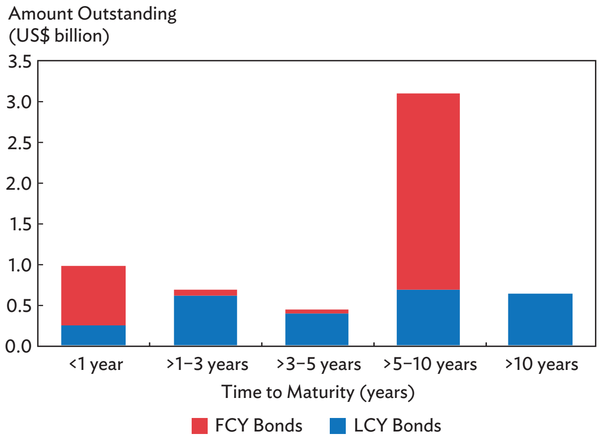
Figure 31 shows that there is high exposure to foreign exchange risk as a large proportion of short- and medium-term bonds are denominated in US dollars.

Figure 30: Singapore Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

Figure 31: Singapore Oil and Gas Bonds by Maturity and Currency

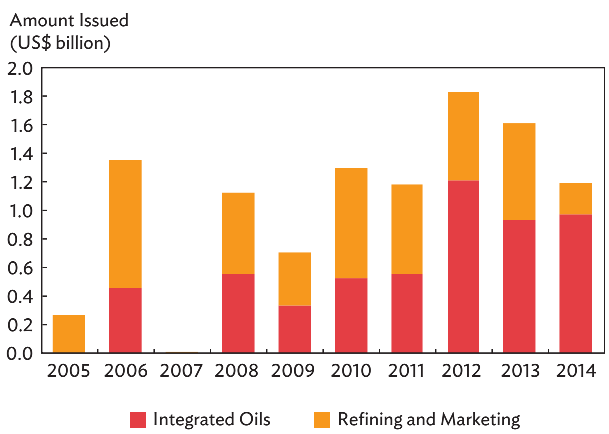


FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

Taipei,China

The highest level of bond issuances from the oil and gas industry in Taipei,China over the past decade (US$1.8 billion) was posted in 2012. As of 28 January 2015, the ratio of oil and gas industry bonds as a share of the total bond market was 2.4%. State-owned CPC Corporation, which accounts for 66% of the industry's bonds outstanding, is active in the integrated oils subindustry, while the rest of the issuers fall under the category of refining and marketing **(Figure 32)**.

Figure 32: Taipei,China Oil and Gas Bonds Issuance by Sector

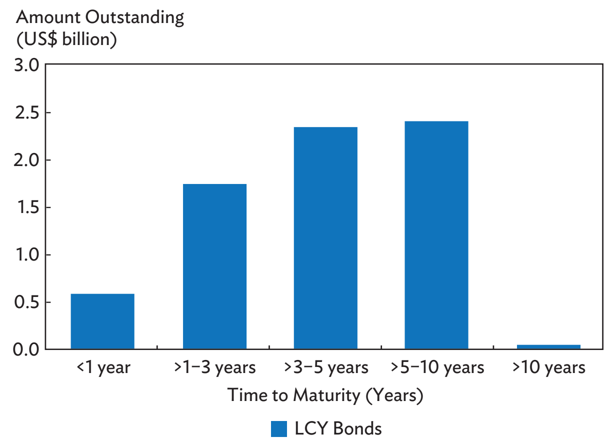


Source: Bloomberg LP.

The oil and gas industry has a median debt-to-capital ratio of 0.37 and a median interest coverage ratio of 3.86. However, there was one major issuer that posted a high leverage ratio, high short-term-debt-to-EBITDA ratio, and low interest coverage ratio in 2013.

Figure 33 shows that all bonds outstanding are LCY-denominated.

Figure 33: Taipei,China Oil and Gas Bonds by Maturity and Currency



FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

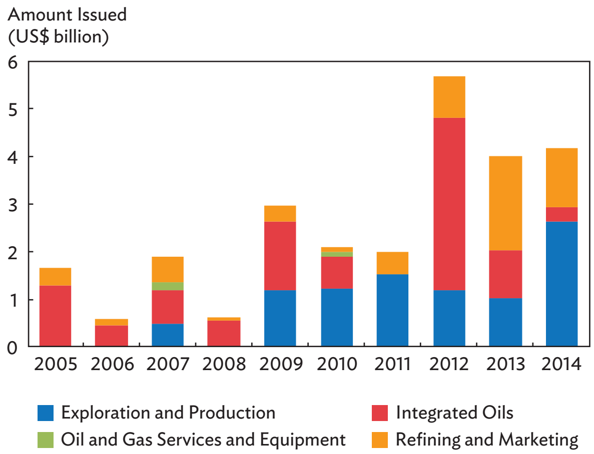
Thailand

In 2012, Thailand logged its highest level of issuance of bonds from the oil and gas industry ($1.8 billion) of the past decade. As of 28 January 2015, the industry's share of total bonds outstanding was 6.5%. Government-owned PTT is involved in the integrated oils subindustry, while the rest of the issuers fall under the refining and marketing, and oil and gas services and equipment subindustries.

The exploration and production subindustry has traditionally accounted for a moderate share of bond issuances. Meanwhile, the integrated oils subindustry's share has fluctuated through the years **(Figure 34)**.

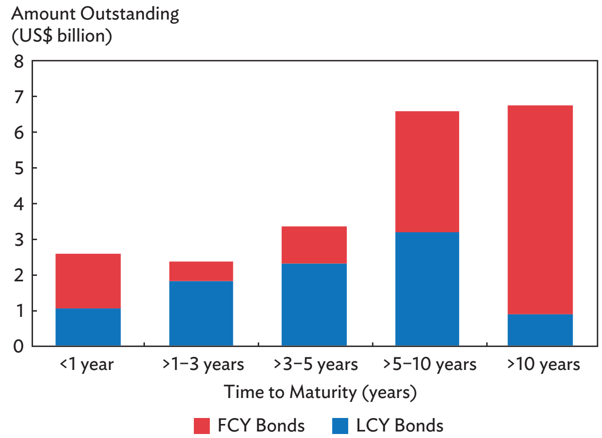
The oil and gas industry in Thailand is not highly leveraged. The average debt-to-capital ratio for the top five issuers, which account for 99% of the industry's bonds outstanding, is below 0.41. Almost all issuers

Figure 34: Thailand Oil and Gas Bonds Issuance by Sector



Source: Bloomberg LP.

Figure 35: Thailand Oil and Gas Bonds by Maturity and Currency



FCY = foreign currency, LCY = local currency.
Source: Bloomberg LP.

have very low short-term-debt-to-EBITDA ratios, which suggests the industry has the capacity to meet short-term obligations. Meanwhile, the median interest coverage ratio is 3.81, signaling the industry's ability to meet interest payments.

Given that a large portion of bonds outstanding with time to maturity of less than 1 year and more than 5 years, were issued in US dollars, currency risk is significant **(Figure 35)**.