

Industry Report

Thursday, 12 January 2017

Industry Report

Exhibit: IGI E&P Universe

| | TP | Rec | Upside | P/E | D/Y |
|------|-------|------|--------|------|-----|
| OGDC | 196 | BUY | 17% | 9.1 | 4% |
| PPL | 218 | BUY | 14% | 10.3 | 4% |
| POL | 544 | HOLD | 1% | 12.7 | 8% |
| MARI | 1,539 | BUY | 13% | 13.0 | 0% |

Exhibit: Pakistan E&P Market Share - Oil

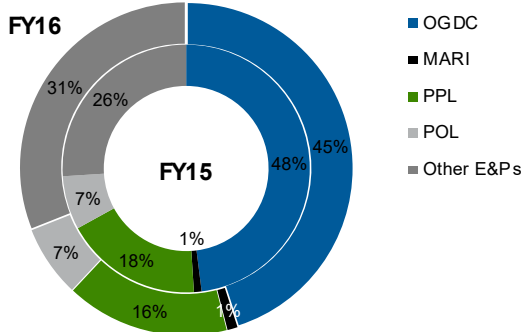


Exhibit: Pakistan E&P Market Share - Gas

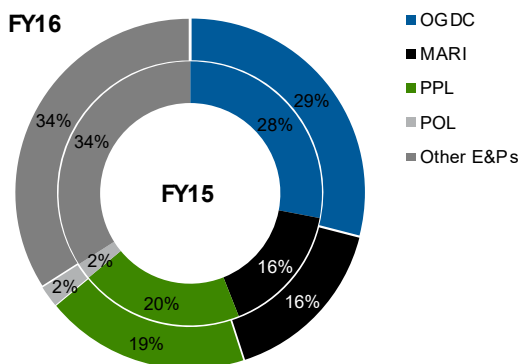
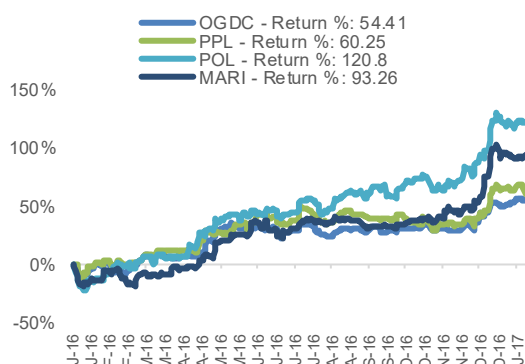


Exhibit: Relative Price Performance IGI E&P Universe



Source: Bloomberg, KSE 100, PPS & IGI Research

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Oil & Gas - Exploration and Production

Resetting Expectations, Inexpensive Valuations; 'Over-Weight' Stance Intact

Sector profitability to improve by massive 44% in FY17

We estimate sector profitability to grow by a massive +44% in FY17 to PKR 138bn in excess of market growth of +2.6% and thereby maintaining a 3Yrs CAGR of +16%. Primarily we say this owing to improve profitability led by stable oil prices, slightly higher than FY16 level and additional production through new discoveries coming online. Sector is currently trading at FY17/FY18 forward P/E multiple of 10.0x/8.8x (~17% discount to market P/E of 12.0x in FY17).

Long term oil price assumption intact at USD 50/bbl, while lifting our price to USD 55/bbl for 2HFY17

For FY17 we have lifted our price assumption for Arab light in 2HFY17 to USD 55/bbl post announcement of production cut by OPEC, meeting held back in Nov-16. As a result, our FY17 price assumption comes at USD 50/bbl. From FY18 onwards we expect limited upside in oil prices on the back of expected rise in shale production and uncertainty looming over OPEC's long term commitment to its production cut. We maintain our long term oil price assumption of USD 50/bbl.

Oil and gas production foreseen to increase by +13% and +15%, respectively in FY17

We expect oil production to rise by +13% on the back of additional production of 6,016 /2,556 /1,063 /391bopd coming from OGDC /PPL /POL /MARI respectively. Whereas, gas production is expected to augment by +15% or by 151 /65 /42 /10mmcf/d owing to incremental production coming from OGDC /PPL /POL /MARI.

Recommendation

Our top picks in Pakistan E&P Sector are OGDC and PPL with Dec-17 target price of PKR 196/share and PKR 218/share offering +17% and +14% upside, respectively from its last closing. OGDC and PPL are currently trading at FY17 P/E of 9.1x and 10.3x, respectively. We have a "BUY" recommendation on MARI with Dec-17 of PKR 1,539/share offering +13% upside. The scrip is trading at FY17 P/E of 13x with highest earnings growth of 39% 3YR CAGR. MARI has more than doubled (+122% return) in past 12M compared to market +44%. However, we maintain a "HOLD" call on POL with our Dec-17 target price of PKR 544/share offering +1% upside from its last closing. The scrip has performed the most amongst the Pakistan E&P sector, registering returns of nearly +150%.

Exhibit:

Valuation Highlight - Pakistan E&P Sector

| SYM | RECOM. | Mkt. Cap. | | P/E x | | D/Y % | | EARNINGS GROWTH % | |
|-----------------|---------|---------------|-------------|-------------|-------------|-------------|-------------|-------------------|--------------|
| | | PKR bn | USD bn | FY17E | FY18E | FY17E | FY18E | FY17E | FY18E |
| OGDC | BUY | 722.30 | 6.89 | 9.09 | 8.04 | 4.17 | 4.76 | 32.49 | 13.14 |
| PPL | BUY | 371.47 | 3.55 | 10.10 | 9.20 | 4.38 | 4.78 | 64.91 | 9.73 |
| POL | NEUTRAL | 127.58 | 1.22 | 12.65 | 10.58 | 7.79 | 8.71 | 39.44 | 19.54 |
| MARI | BUY | 150.83 | 1.44 | 13.09 | 10.25 | 0.42 | 0.43 | 90.41 | 27.72 |
| E&Ps | | 818.46 | 7.81 | 9.95 | 8.74 | 4.53 | 4.87 | 44.25 | 13.91 |

Contents

| | |
|--|----|
| Oil & Gas - Exploration and Production | 1 |
| Resetting Expectations; Inexpensive Valuations; 'Over-Weight' Stance Intact | 1 |
| Pakistan Oil and Gas Exploration | 3 |
| Investment Thesis | 5 |
| Industry profitability to improve significantly in FY17; 3Yrs CAGR estimated at +16% | 5 |
| Stock Selection | 6 |
| OGDC: Inexpensive valuation along with multiple factors, makes OGDC our preferred pick | 6 |
| PPL: Sound earnings growth, with potential of positive surprises | 7 |
| MARI: Exceptional earnings growth of +90% in FY17 in excess of sector growth; but priced in! | 7 |
| POL: It's all about dividends | 7 |
| Regional Comparison | 8 |
| Reserves and Production | 9 |
| Drilling Activity and Production | 11 |
| Wellhead Prices Under Petroleum Policy | 15 |
| Oil Price Outlook | 17 |
| Oil & Gas Development Company | 26 |
| Mari Petroleum Limited | 30 |
| Pakistan Petroleum Limited | 34 |
| Pakistan Oilfields Limited | 38 |
| Price Sensitivity to changes in oil prices | 42 |
| Risk to Our Investment Thesis | 43 |
| Annexures | 44 |
| Important Disclaimer and Disclosures | 51 |

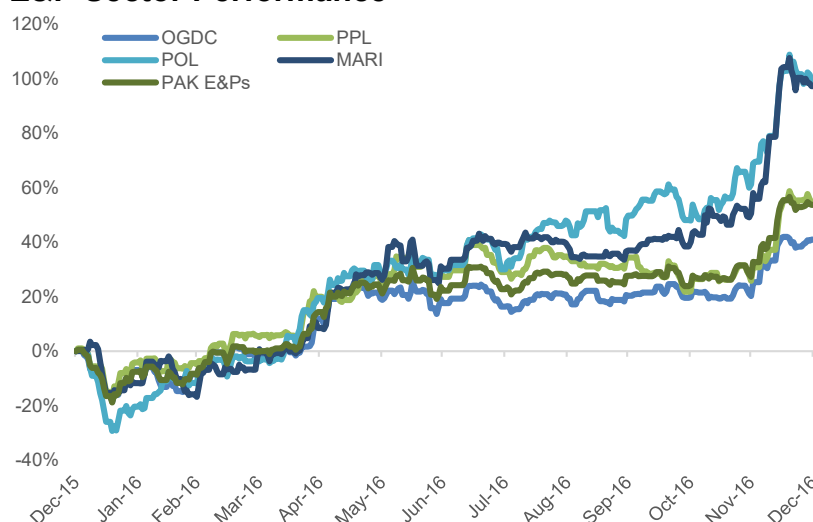
Pakistan Oil and Gas Exploration

FY16: Sector profitability marred by lower oil prices and production

Pakistan E&P sector performance remained weak in FY16 under-performing KSE-100 by 23%. Overall sector profitability declined by 30%YoY, led by a 22% decline in oil prices and 7% in oil production. OGDC /PPL /POL recorded earnings decline of 31% /35% /14%YoY in FY16, while MARI reported a +7%YoY growth.

Exhibit:

E&P Sector Performance



Source: IGI Research, Bloomberg

Oil production declined by 7%YoY while gas production increased by +3%YoY in FY16

Pakistan's oil production during FY16, declined by 7%YoY to 86,341bopd, led by 8% drop in production from Nashpa field (one of the largest oil field in Pakistan, operator OGDC). Gas production inched up during the year to 4,051mmcf (+3%YoY) on account of +5% /4% /2% rise in production from Sui /Uch /Mari field, respectively.

MARI oil production increased by +14%YoY to 1,294bopd as production commenced from Halini Deep-1, while gas production inched up by +3%YoY owing to a +2%YoY rise in production from Mari field.

Oil production from OGDC showed a meagre 1%YoY decline to 40,609bopd owing to 8%YoY drop in production from Nashpa field. However, production increase of +4%/+6%YoY from Pasakhi / Adhi field negated decline in production from Nashpa. Gas production decline from Qadirpur led to overall production contract of 5%YoY to 1,056mmcf.

PPL oil production surged by +1%YoY to 15,115bopd owing to +6%/+27%YoY increase in production from Adhi /Maramzai. Gas production also registered a growth of +1%YoY to 830mmcf on the back +5%YoY rise in production from Sui field.

Oil production for POL dropped by 1%YoY mainly on the back of 18%/5%YoY lower production from Balkassar /Meyal field, while gas production jumped up by +6%YoY to 75mmcf primarily owing to +42% /+32%YoY growth from Maramzai /Makori East.

Investment Thesis

Industry profitability to improve significantly in FY17; 3Yrs CAGR estimated at +16%

Looking ahead, we estimate industry profitability to grow by a massive +44% to PKR 138bn in excess of market growth of +2.6% in FY17 and thereby maintaining a 3Yrs CAGR of +16%. Primarily we say this owing to improve profitability led by stability in oil prices, slightly higher than FY16 level and additional production through new discoveries coming online. E&P industry is currently trading at FY17/FY18 forward P/E multiple of 10.0x/8.8x (~17% discount to market P/E of 12.0x in FY17).

| Sectors | Recom. | Mkt. Cap. | | | P/E | | | D/Y % | | | P/B | | | ROE | | | EARNINGS %YoY | | |
|-----------------|--------|-----------|--------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
| | | PKR bn | USD bn | WT % | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 |
| E&PS | OW | 818 | 7.8 | 14% | 14.4 | 10.0 | 8.8 | 2.9 | 4.1 | 4.6 | 1.9 | 1.7 | 1.5 | 13.1 | 17.2 | 17.5 | (29.5) | 44.3 | 13.9 |
| KSE 100 | | 5,935 | 56.5 | | 12.8 | 11.4 | 10.4 | 4.1 | 4.5 | 4.9 | 2.2 | 2.0 | 1.9 | 17.4 | 17.9 | 18.0 | 4.4 | 12.4 | 9.9 |
| TOTAL (EX- E&P) | | 5,116 | 48.7 | 86% | 12.3 | 12.0 | 11.1 | 4.6 | 4.7 | 4.9 | 2.4 | 2.2 | 2.0 | 19.4 | 18.2 | 18.2 | 22.4 | 2.6 | 8.1 |

Source: IGI Research

We have lifted our oil price assumption for FY17; long term assumption stays intact at USD 50/bbl...

For FY17, we have lifted our price assumption for Arab light in 2HFY17 to USD 55/bbl post announcement of production cut by OPEC, meeting held back in Nov-16. As a result, our FY17 price assumption comes at USD 50/bbl. From FY18 onwards, we expect limited upside in oil prices on the back of expected rise in shale production and uncertainty looming over OPEC's long term commitment to its production cut. We maintain our long term oil price assumption of USD 50/bbl.

...along with increasing Oil and gas production; +13% and +15%, respectively in FY17

Nevertheless, we estimate oil production is expected to rise by +13%yoY in FY17 on the back of additional production of 6,016 /2,556 /1,063 /391bopd coming from OGDC /PPL /POL /MARI respectively. Whereas, gas production is expected to augment by +15%YoY or by 151 /65 /42 /10mmcfcd owing to incremental production coming from OGDC /PPL /POL /MARI.

Stock Selection

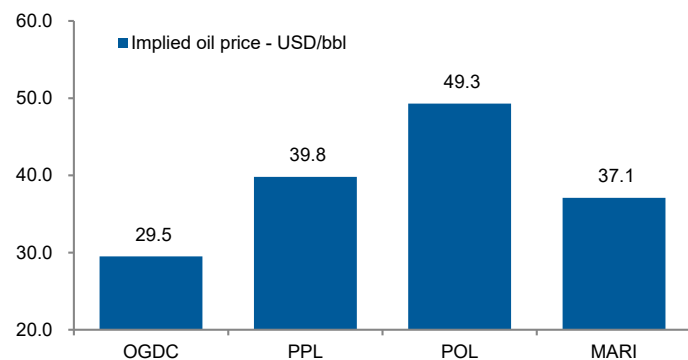
Amongst Pakistan E&P industry, we prefer OGDC and PPL as our preferred picks.

| SYM | Recom. | Mkt. Cap. | | | P/E | | | D/Y % | | | P/B | | | ROE | | | EARNINGS %YoY | | |
|------|---------|-----------|--------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
| | | PKR bn | USD bn | WT % | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 | CY15 / FY16 | CY16 / FY17 | CY17 / FY18 |
| OGDC | BUY | 723.24 | 6.9 | 12% | 12.06 | 9.10 | 8.05 | 3.09 | 4.16 | 4.76 | 1.51 | 1.37 | 1.23 | 12.53 | 15.02 | 15.35 | (31.26) | 32.49 | 13.14 |
| PPL | BUY | 377.70 | 3.6 | 6% | 16.93 | 10.27 | 9.36 | 2.48 | 4.31 | 4.70 | 1.85 | 1.68 | 1.53 | 10.91 | 16.35 | 16.30 | (34.88) | 64.91 | 9.73 |
| POL | NEUTRAL | 127.88 | 1.2 | 2% | 17.68 | 12.68 | 10.61 | 6.47 | 7.77 | 8.69 | 4.24 | 4.22 | 4.09 | 23.99 | 33.29 | 38.59 | (14.48) | 39.44 | 19.54 |
| MARI | BUY | 150.36 | 1.4 | 3% | 24.85 | 13.05 | 10.22 | 0.37 | 0.43 | 0.43 | 8.86 | 8.71 | 4.80 | 35.67 | 66.75 | 46.98 | 7.10 | 90.41 | 27.72 |

Source: IGI Research

Exhibit:

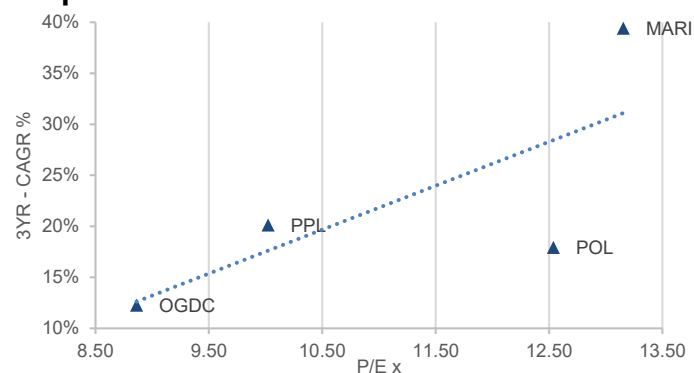
Implied oil price of Pakistan E&P Sector



Source: IGI Research

Exhibit:

E&P Sector 3YR CAGR and FY17 P/E comparison



OGDC: Inexpensive valuation along with multiple factors, makes OGDC our preferred pick

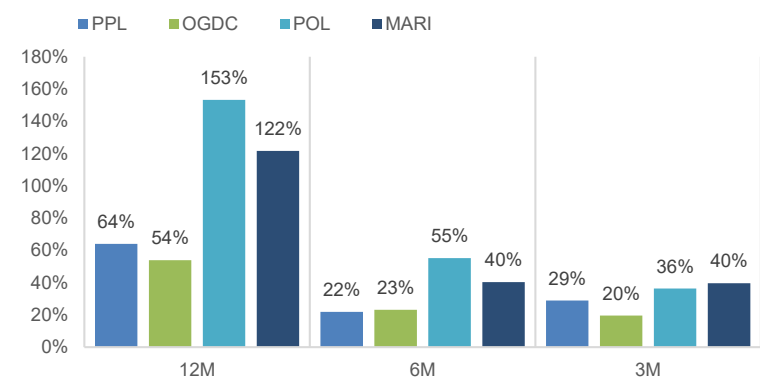
Compared to the rest of Pakistan E&P companies, OGDC currently trade at low FY17 forward P/E multiple of 9.1x (Pakistan E&P currently trades at forward FY17 P/E of 11.2x ex-OGDC), while having 3Yrs CAGR of +12% in earnings. Our Dec-17 based target price for OGDC comes at PKR 196.2/share offering a decent +17% upside. Combined with a dividend yield of 4.2%, total return for OGDC stands at +20.8%. To support our liking for OGDC, we note;

- Inclusion of OGDC in MSCI EM Index; bound to grab the largest piece of the pie:** Pakistan will be classified into MSCI Emerging Markets (EM) index by May-17 from current MSCI Frontier Market (FM) Index. Currently MSCI EM index market captilisation stands at USD 3.9trn representing 23 EM countries. For Pakistan MCB, HBL, OGDC, UBL, FFC and ENGRO with a total free-float market captilisation of USD ~7.5bn would make up 0.2% of the total EM pie. Amongst the candidates, OGDC ranks top in terms of free-float market captilisation above USD 1.0bn. Post MSCI reclassification of Pakistan, we expect overall market to potentially re-rate at higher multiple (forward P/E of MSCI EM stands at 11.9x). Hence we expect similar fate for OGDC.

- **OGDC trading at lower implied oil price of USD 29.5/bbl:** Compared to Pakistan E&P sector, OGDC is trading at an implied oil price of USD 29.5/bbl, which is at nearly 41% discount to our long-term oil price assumption of USD 50/bbl. Whereas, POL is trading at implied oil price of at USD 49.3/bbl at a discount of 1% to our oil price assumption.

Exhibit:

OGDC laggard performance compared Pakistan E&P Sector



Source: IGI Research, Bloomberg

PPL: Sound earnings growth, with potential of positive surprises

Along with OGDC, we highlight PPL as our preferred stock. Having earnings growth of +64% in FY17, the scrip trades at a slightly higher forward P/E of 10.3x compared to OGDC. Based on our Dec-17 target price of PKR 218/share along with a decent dividend yield of 4.3%, PPL offers a total return of +18%.

MARI: Exceptional earnings growth of +90% in FY17 in excess of sector growth; but priced in!

We estimate MARI to register exceptional earnings growth of +90% in excess of sector growth. However, the scrip is trading at a forward P/E of 13.05x and offers a low dividend yield of 0.4%. With our Dec-17 target price of PKR 1,539/share the scrip offers total return of +13%. The stock has more than doubled (+122% return) in past 12 months compared to market return of +44%.

POL: It's all about dividends

Last but not the least, POL ranks lowest in our E&P sector. To our Dec-17 target the scrip offers a negligible upside of +1%, whereas given a higher dividend yield of +8%, POL total returns equate to +9%. The scrip has performed the most amongst the Pakistan E&P sector, registering returns of nearly +150% in past 12 months.

Regional Comparison

Exhibit:

Regional Comparison

| | | | Oil & Gas | | | | | | | | | |
|------------------|------------------------------|-----------------|------------------------|------------------|-----------------------|-----------------|-------------|-------------|--------------|-----------------------|-----------------------|--------------|
| ASIA PACIFIC | Name | Country | Market Cap (USD'mn) | EV (USD'mn) | Production (MBOED) | Reserve Life | EV/BoE | EV/EBITDA | P/E (x) | Dividend Yield (%) | EBITDAX Margin (%) | ROE (%) |
| EMERGING | | | 19,176.56 | 15,997.75 | 557.25 | 8.25 | 9.01 | 5.79 | 15.63 | 2.61 | 52.95 | 6.71 |
| OINL IN Equity | OIL INDIA LTD | India | 3,657 | 3,607 | 112 | - | - | 7.55 | 11.66 | 3.60 | 37.10 | 9.84 |
| CAIR IN Equity | CAIRN INDIA LTD | India | 6,877 | 9,513 | 129 | 3.60 | 10.18 | 6.54 | 26.49 | 1.21 | 42.55 | 3.48 |
| RDGZ KZ Equity | KAZMUNAIGAS EXPLORATION PROD | Kazakhstan | 3,141 | 6,252 | 251 | 7.89 | 8.65 | - | 6.08 | - | (7.94) | 10.67 |
| 883 HK Equity | CNOOC LTD | China | 56,298 | 35,527 | 1,358 | 8.06 | 8.89 | 6.21 | - | 2.71 | 58.84 | 1.45 |
| PTTEP TB Equity | PTT EXPLOR & PROD PUBLIC CO | Thailand | 9,185 | 9,440 | 373 | 5.43 | 12.13 | 3.08 | 20.99 | 2.64 | 78.15 | 4.90 |
| ONGC IN Equity | OIL & NATURAL GAS CORP LTD | India | 35,902 | 31,648 | 1,121 | 16.28 | 5.20 | 5.55 | 12.92 | 2.88 | 48.13 | 9.90 |
| DEVELOPED | | | 4,070.10 | 4,111.58 | 213.19 | 11.62 | 6.58 | 4.86 | 18.45 | 1.32 | 43.70 | 4.90 |
| 1605 JP Equity | INPEX CORP | Japan | 14,767 | 15,027 | 513.80 | 16.09 | 4.98 | 3.32 | 25.39 | 1.51 | 48.52 | 2.13 |
| 1662 JP Equity | JAPAN PETROLEUM EXPLORATION | Japan | 1,296 | 1,244 | 59.88 | 14.34 | 3.97 | 8.97 | 22.79 | 1.12 | 13.29 | 1.82 |
| 2686 HK Equity | AAG ENERGY HOLDINGS LTD | Hong Kong | 549 | 878 | - | - | - | 2.28 | 7.17 | - | 69.30 | 10.73 |
| IOC US Equity | INTEROIL CORP | Papa New Guinea | 2,352 | 2,255 | - | - | - | - | - | - | - | (9.84) |
| 467 HK Equity | UNITED ENERGY GROUP LTD | Hong Kong | 1,386 | 1,154 | 65.90 | 4.44 | 10.79 | - | - | - | (14.46) | - |
| PAKISTAN | | | 3,283.72 | 3,213.76 | 134.95 | 10.92 | 8.10 | 6.34 | 11.27 | 4.17 | 67.70 | 28.62 |
| OGDC PA Equity | OIL & GAS DEVELOPMENT CO LTD | Pakistan | 6,892 | 6,817 | 250.9 | 10.90 | 6.83 | 5.16 | 9.10 | 4.32 | 67.12 | 12.53 |
| PPL PA Equity | PAKISTAN PETROLEUM LTD | Pakistan | 3,584 | 3,488 | 159.4 | 10.85 | 5.55 | 5.72 | 10.32 | 4.33 | 72.56 | 10.91 |
| POL PA Equity | PAKISTAN OILFIELDS LTD | Pakistan | 1,217 | 1,115 | 18.2 | 7.90 | 17.49 | 6.22 | 12.74 | 7.60 | 63.57 | 23.99 |
| MARI PA Equity | MARI PETROLEUM CO LTD | Pakistan | 1,441 | 1,435 | 111.3 | 14.02 | 2.52 | 8.26 | 12.94 | 0.42 | 67.57 | 67.04 |

Last updated: 11-Jan-17

Exhibit:

Pakistan E&Ps trading at low P/E multiple, despite offering a higher ROE

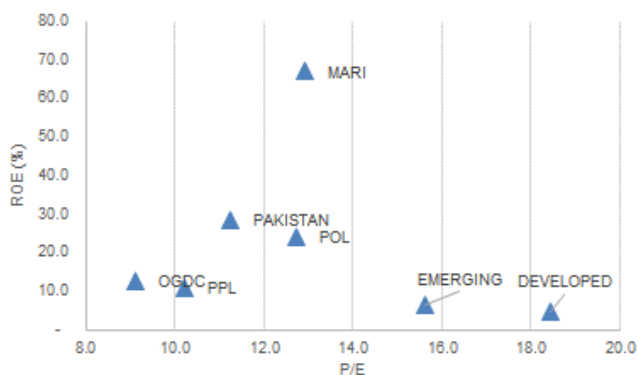
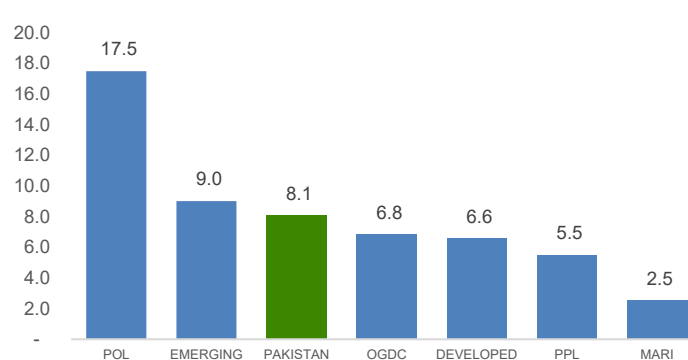


Exhibit:

MARI, PPL trading at a significant discount on EV/boe multiple



Source: IGI Research, Bloomberg

Reserves and Production

Pakistan's oil and gas reserves stand at 351mnbbbl and 19.2tcf by FY16

According to the data published by PPIS, Pakistan's total oil and gas 2P reserves stands at 351mnbbbl and 19.2tcf as of Jun-16. During FY16 Pakistan's oil and gas reserves declined by 9%YoY and 5%YoY from 384mnbbbls and 20.3tcf in FY15. Total oil production declined by 7%YoY to 86,341bopd in FY16 as compared to 92,669bopd in FY15, however total gas production increased by +3%YoY to 4,051mmcf as compared to 3,915mmcf in FY15.

OGDC

OGDC's total oil and gas 2P reserves declined by 8%YoY each to stand at 171mnbbbls and 4.8tcf, translating in to cumulative reserves of 1.0bnBoE. Oil production declined by 1%YoY to 40,609bopd as compared to 40,818bopd in FY15 owing to 8%YoY lower production from Nashpa (28% contribution) while +4%/+6%YoY rise in production from Pasakhi/Adhi Field (17% cumulative contribution). Gas production declined by 5%YoY to 1,056mmcf from 1,107mmcf in FY15 mainly due to 14%YoY decline in production from Qadirpur (23% contribution) while +4%YoY incline in production from Uch (30% contribution). The company's oil and gas reserve life stands at 12.1yrs and 11.1yrs, respectively translating in to total reserve life of 11.3yrs.

MARI

MARI's total oil 2P reserves declined by 14%YoY and 6%YoY to stand at 1.8mnbbbls and 3.5tcf, translating in to a cumulative reserve of 0.61bnBoE. Oil production inclined by +14%YoY to 1,294bopd as compared to 1,135bopd in FY15 owing to commencement of production from Halini Deep-1. Gas production increased by +3%YoY to 636mmcf from 616mmcf in FY15 mainly due to +2%YoY higher production from Mari field. The company's oil and gas reserve life stands at 8.2yrs and 14.1yrs, respectively translating in to total reserve life of 14.0yrs.

PPL

PPL's total oil and gas 2P reserves declined by 7%YoY and 8%YoY to stand at 66mnbbbls and 3.2tcf, translating in to a cumulative reserve of 0.63bnBoE. Oil production surged by +1%YoY to 15,115bopd as compared to 15,019bopd in FY15 owing to +6%/+27%YoY higher production from Adhi/Maramzai (26% cumulative contribution) while 8%YoY decline in production from Nashpa (37% contribution). Gas production increased by +1%YoY to 830mmcf from 825mmcf in FY15 mainly due to +5%YoY higher production from Sui field (47% contribution). Company's oil and gas reserve life stands at 12.4yrs and 10.7yrs, respectively translating in to total reserve life of 10.9yrs.

POL

POL's total oil and gas 2P reserves declined by 11%YoY and 10%YoY to stand at 21mnbbbls and 0.3tcf, translating in to a cumulative reserve of 0.06bnBoE. Oil production declined by 1%YoY to 6,252bopd as compared to 6,300bopd in FY15

owing to lower production from Balkassar (down 18%YoY) and Meyal (down 5%YoY). Gas production augmented by +6%YoY to 75mmcf from 71mmcf in FY15 mainly due to +42%/+32%YoY higher production from Maramzai/Makori East field. The company's oil and gas reserve life stands at 7.5yrs and 8.1yrs, respectively translating in to total reserve life of 7.9yrs.

Exhibit:
Pakistan Reserve life based on Jun-16 2P reserves

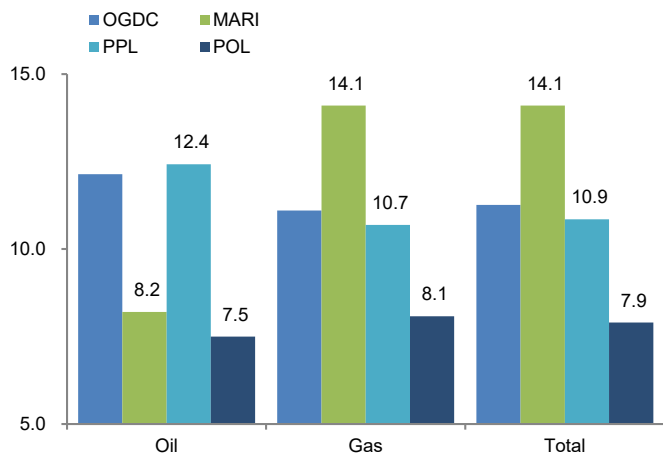


Exhibit:
Pakistan Oil Production (bopd)

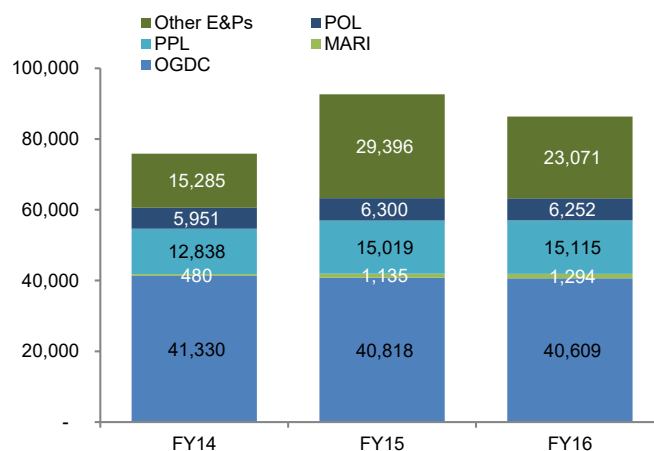


Exhibit:
Pakistan Gas Production (mmcf)

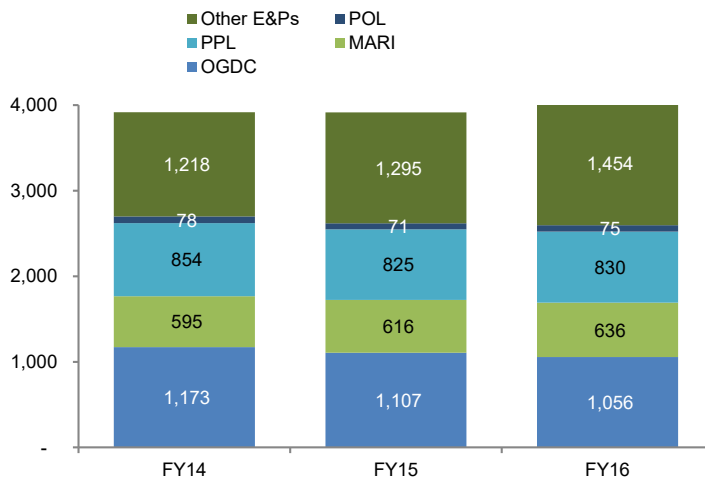
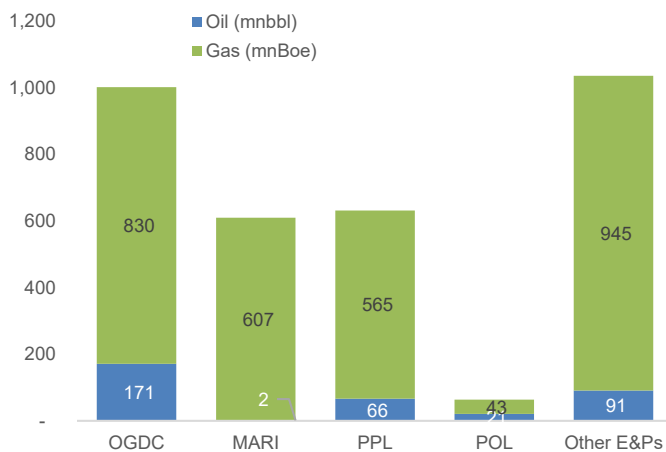


Exhibit:
Pakistan total Oil and Gas Reserves (as of Jun-16)



Source: IGI Research, PPIS, Company Financials

Drilling Activity and Production

Drilling activity and Production to rise...

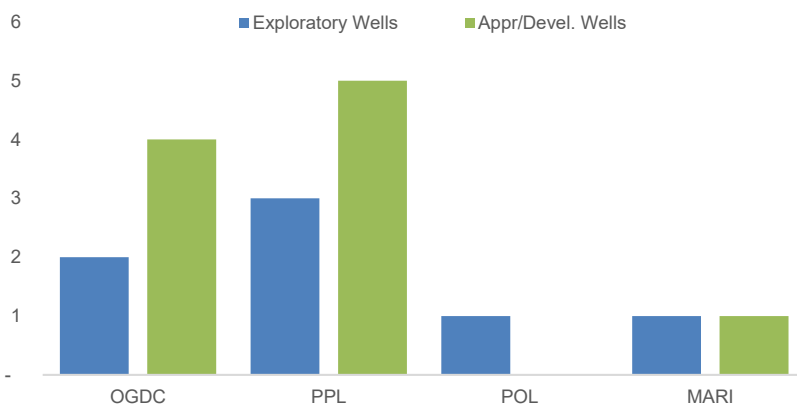
We expect companies to pick up on drilling activity in coming years on the back of improved security situation in the country and depleting reserve base. Production is expected to increase on the back of additional production coming online, however dependence on few major fields for higher proportion of production remains key concern for Pakistan E&P companies.

PPL most aggressive on drilling

In FY17TD, a total of 10 exploratory and 19 development wells have been spudded. PPL is leading the pack with aggressive drilling and has spudded 3 exploratory and 5 development wells in FY17TD against 13 exploratory and 9 development wells planned in FY17, while OGDC has spudded 2 exploratory wells and 4 developments wells in FY17TD against 16 exploratory and 12 development wells planned. POL has drilled 1 exploratory well while MARI has drilled 1 exploratory and 1 development well so far in FY17TD. In Tal Block 2 development wells have been spudded so far of which 1 has been successful at Maramzai-4.

Exhibit:

Wells spudded in FY17TD, PPL leading the pack



Source: IGI Research, PPIS

...with output staying concentrated in few fields

OGDC: Qadirpur and Uch remain key source of gas production

Gas production for OGDC is expected to increase by +13%YoY in FY17 and +9%YoY in FY18 (3yr CAGR of +4%) on the back of 151mmcf and 331mmcf of additional production coming online in FY17 and FY18, respectively. Additional gas production is primarily driven from Uch and KPD-TAY project adding 100mmcf and 125mmcf of gas during latter half of FY17. However, dependence on Qadirpur and Uch is expected to remain dominant for gas production contributing 48% to total gas production in FY17. Production from Qadirpur is expected to decline by 5% annually. Oil production is expected to increase by +15%/+11%YoY in FY17/FY18 on the back

of 6,016bopd/11,309bopd of additional production mainly from KPD-TAY (4,000bopd) and Nashpa-6/7 (2,966bopd). Production from Nashpa is expected to rise by +24%/+12%YoY in FY17/FY18, respectively.

Exhibit:
OGDC Gas Production Field-wise

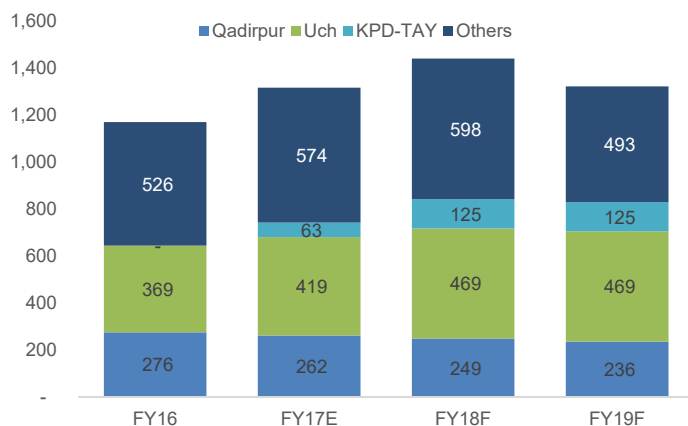
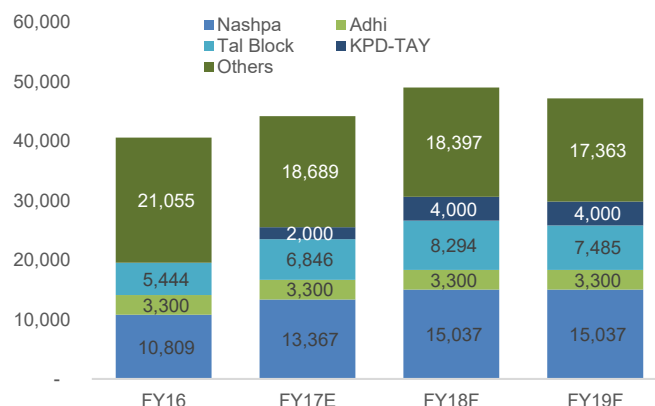


Exhibit:
OGDC Oil Production Field-wise



Source: IGI Research, Company Financials

PPL: Sui to lead gas production while Nashpa driving oil production

Gas production for PPL is expected to increase by +7%YoY in FY17 and +4%YoY in FY18 (3yr CAGR of +2%) on the back of 65mmcf and 109mmcf of additional production coming online in FY17 and FY18, respectively. Additional gas production is primarily driven from Hatim X-1 and Mardankhel adding 37mmcf and 11mmcf of gas during FY17. However, PPL relies heavily on Sui field for 50% of total gas production. Oil production is expected to increase by +17%/+14%YoY in FY17/FY18 on the back of 2,556bopd/5,000bopd of incremental production mainly from Nashpa (2,230bopd), Makori deep (1,182bopd) and Mardankhel (888bopd). Production from Nashpa is expected to rise by +24%/+12%YoY in FY17/FY18, respectively.

Exhibit:
PPL Gas Production Field-wise

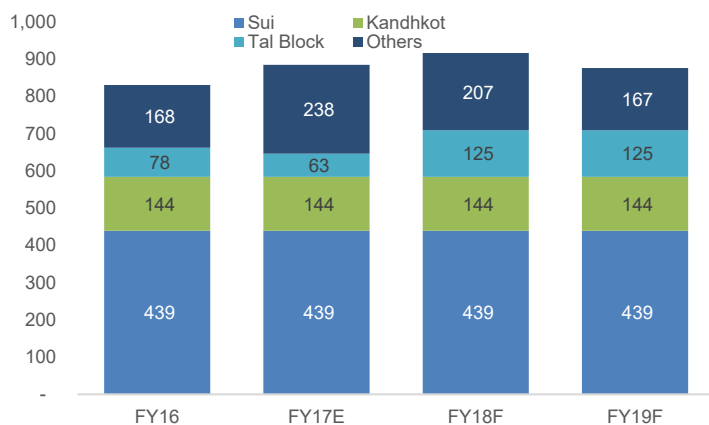
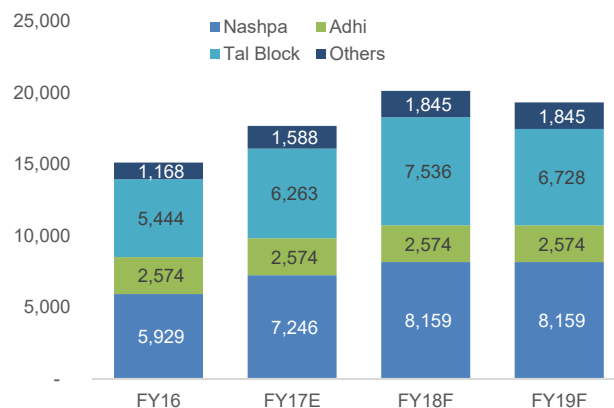


Exhibit:
PPL Oil Production Field-wise



Source: IGI Research, Company Financials, PPIS

MARI: Mari field remains vital with 96% contribution to gas production

Mari field account for nearly 96% of the total gas production for MARI. We expect production from Mari field to rise by +6%/+1%YoY in FY17/FY18 to 652mmcf while total production potential from Mari field stands at 700mmcf. Oil production is expected to increase by +79%/+6%YoY in FY17/FY18 on the back of Halini Deep (855bopd) which came online in May-16 and Kalabagh 1A (300bopd) to come online in FY17.

Exhibit:
MARI Gas Production Field-wise

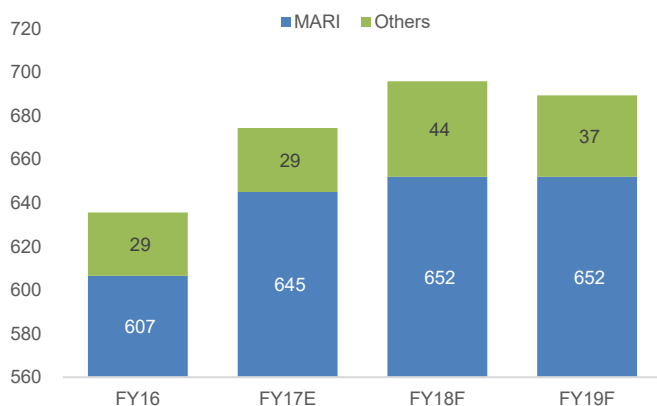
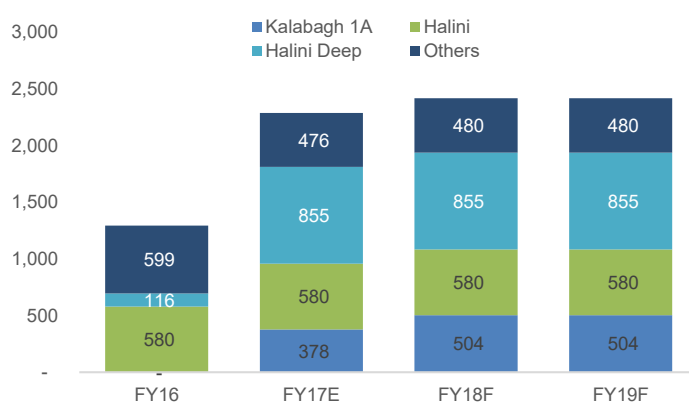


Exhibit:
MARI Oil Production Field-wise



Source: IGI Research, Company Financials

POL: Tal block remains backbone of oil and gas production

POL relies on Tal Block for nearly 70% of gas production which is expected to increase to 82% by FY19 on the back of additional discoveries solely from Tal block. Gas production is expected to increase by +12%/+5%YoY in FY17/FY18 on the back of new discovery from Mardankhel (8.4mmcf), Makori East-5 (4mmcf) and Maramzai-4 (3mmcf) coming online in FY17. Oil production is expected to augment by +15%YoY each in FY17 and FY18 as additional production from Mardankhel (674bopd), Makori East-5 (597bop) and Makori Deep (798bopd) commences production in FY17. Tal block is expected to contribute 74% by FY19 in total oil production as compared to 68% in FY16.

Exhibit:
POL Gas Production Field-wise

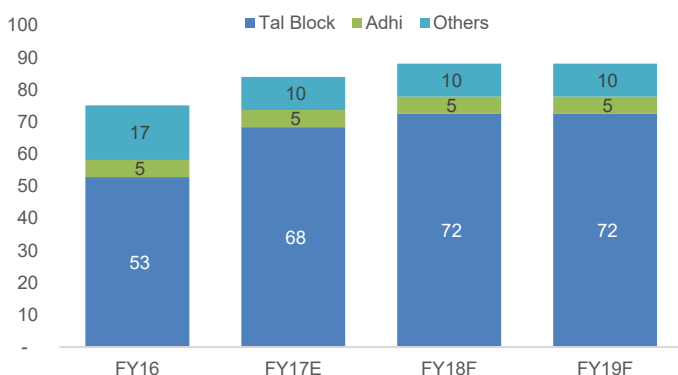
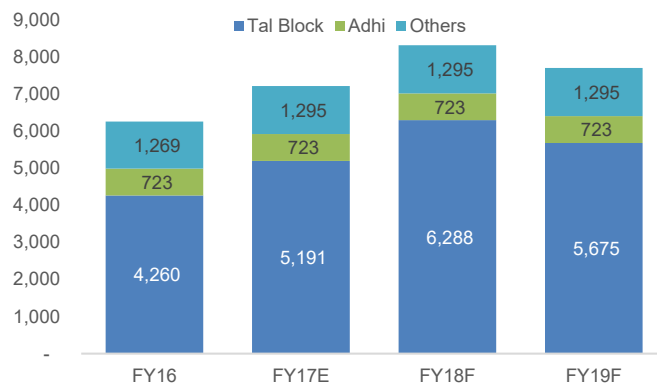


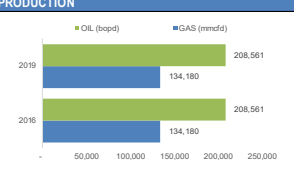
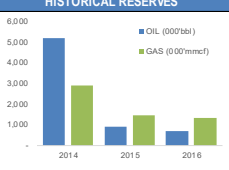
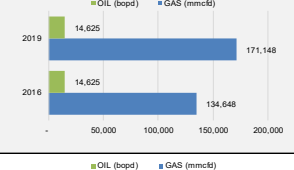
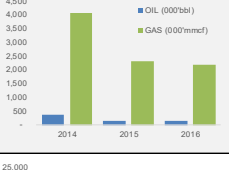
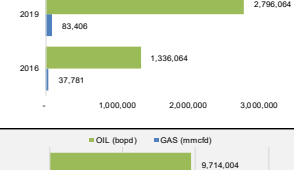
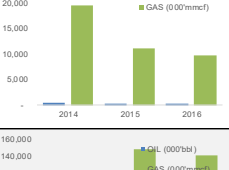
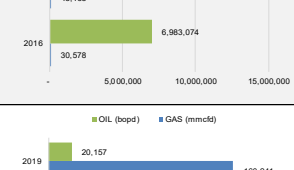
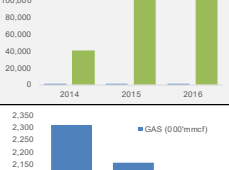
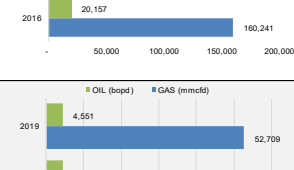
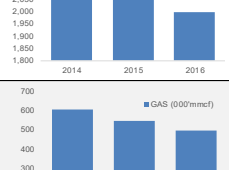
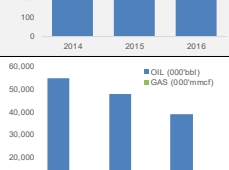
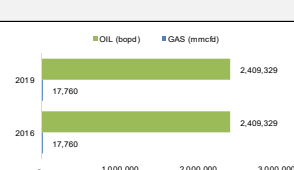
Exhibit:
POL Oil Production Field-wise



Source: IGI Research, Company Financials

Exhibit:

Major Oil and Gas Fields

| CONCESSION | OPERATOR / STAKE | RESERVE | PRODUCTION | PRICING / POLICY | PRODUCTION | HISTORICAL RESERVES | DESCRIPTION |
|------------|------------------|---------|-------------|--|---|--|--|
| QADIRPUR | OPERATOR | OGDC | GAS | |  |  | <p>Qadirpur is OGDC largest producing gas field contributing 24% and 3% of total gas production for OGDC and PPL, respectively. We expect production of 5% annually as despite company's effort to stabilize declining production, output has been declining. Price has been capped at maximum HSFO price of USD 320/mtn.</p> |
| | STAKE | % | 1,341,590 | 134,180 | | | |
| | -OGDC | 75 | OIL | | | | |
| | PPL | 7 | 720,000 | 208,561 | | | |
| OTHER | - | 18 | | | | | |
| | | | | 100% of HSFO Price, grant date 1993 | | | |
| UCH | OPERATOR | PPL | GAS | |  |  | <p>Uch was discovered in 1995 and supplies gas to Uch-I & II power plant and production is effected according to demand from these plants. Production from Uch is expected to increase by 100-130mmcf in FY17 under development project. Uch contributes around 32% of total gas production for OGDC.</p> |
| | STAKE | % | 2,188,830 | 134,648 | | | |
| | PPL | 100 | OIL | | | | |
| | - | - | 140,000 | 14,625 | | | |
| OTHER | - | - | | | | | |
| | | | | Price fixed at USD 3.92/mmbtu, grant date 1996 | | | |
| KPD-TAY | OPERATOR | OGDC | GAS | |  |  | <p>KPD-TAY phase-I & II has been completed and commissioning of the project is expected in latter half of FY17. KPD-TAY is expected to add 4,000bopd of oil, 125mmcf of gas and 410Mtpd of LPG.</p> |
| | STAKE | % | 259,630 | 37,781 | | | |
| | -OGDC | 100 | OIL | | | | |
| | - | - | 9,800,000 | 1,336,064 | | | |
| OTHER | - | - | | | | | |
| | | | | Price fixed at USD 2.55/mmbtu, grant date 1996 | | | |
| NASHPA | OPERATOR | OGDC | GAS | |  |  | <p>Nashpa contributes nearly 27%/39% of total oil production for OGDC/PPL. Oil production from Nashpa field is expected to increase by 24%/12% in FY17 on the back of additional discovery of Nashpa - 6/7 (cumulative 5,250bopd), Nashpa-Mela Project (1,200bopd) and Nashpa X-5 (1,025bopd).</p> |
| | STAKE | % | 461,920 | 30,578 | | | |
| | OGDC | 57 | OIL | | | | |
| | PPL | 28 | 141,450,000 | 6,983,074 | | | |
| OTHER | - | 15 | | | | | |
| | | | | Priced under Petroleum Policy 2009 at Zone I Discount of 22.5% | | | |
| SUI | OPERATOR | PPL | GAS | |  |  | <p>Sui remains largest gas producing field for PPL contributing nearly 53% of total gas production. PPL has been recently engaged in well workover and development projects under sui lease. Sui mining lease has been extended for another 10 years effective from Jun-15 and price is now linked with PP12 (55% of the price).</p> |
| | STAKE | % | 1,997,156 | 160,241 | | | |
| | PPL | 100 | OIL | | | | |
| | - | - | - | 20,157 | | | |
| OTHER | - | - | | | | | |
| | | | | Priced under Petroleum Policy 2012 Discount of 45% | | | |
| KANDHKOT | OPERATOR | PPL | GAS | |  |  | <p>Kandhkot is the second largest gas field for PPL contributing 17% of total gas production. In Dec-16 GoP granted extension of lease for a period of 5 years effective from Jan-17.</p> |
| | STAKE | % | 493,100 | 52,709 | | | |
| | PPL | 100 | OIL | | | | |
| | - | - | 181,000 | 4,551 | | | |
| OTHER | - | - | | | | | |
| | | | | Priced under Petroleum Policy 2001 at Zone I Discount of 50% | | | |
| TAL BLOCK | OPERATOR | MOL | GAS | |  |  | <p>Tal block contributes 14%/36%/68% of total oil production and 6%/9%/70% of total gas production for OGDC/PPL/POL. New addition to come online in FY17 from Tal block include Makori East-5, Makori Deep-1, Maramzai-4 and Tolanj West.</p> |
| | STAKE | % | 656,000 | 102,879 | | | |
| | -OGDC | 28 | OIL | | | | |
| | POL | 21 | 39,000,000 | 7,157,527 | | | |
| PPL | 28 | | | | | | |
| OTHER | - | 23 | | | | | |
| | | | | Priced under Petroleum Policy 2001 at Zone I Discount of 22.5% | | | |
| MARI | OPERATOR | MARI | GAS | |  |  | <p>Mari is one the biggest gas field of Pakistan with max potential of 700mmcf. Mari contributes around 96% of total gas production for MARI. We expect 6% increase in production in FY17 and 1% in FY18.</p> |
| | STAKE | % | 3,204,740 | 221,386 | | | |
| | MARI | 100 | OIL | | | | |
| | - | - | - | 18,614 | | | |
| OTHER | - | - | | | | | |
| | | | | Priced under Petroleum Policy 2001 with discount leading to 100% of wellhead price by 2019 | | | |
| ADHI | OPERATOR | PPL | GAS | |  |  | <p>9%/12%/17% of total oil production for OGDC/POL/PPL. PPL has substantially improved drilling activities in the field. Production enhancements through well workover and additional discoveries in FY15 and FY16 has led to increased flow of nearly 1,000bopd from the well.</p> |
| | STAKE | % | 320,663 | 17,760 | | | |
| | -OGDC | 50 | OIL | | | | |
| | POL | 11 | 29,379,000 | 2,409,329 | | | |
| PPL | 39 | | | | | | |
| OTHER | - | - | | | | | |
| | | | | 66% of HSFO Price, grant date 1986 | | | |

Source: IGI Research, PPIS, Company Financials, Bloomberg

Wellhead Prices Under Petroleum Policy

Wellhead prices under Petroleum Policy (PP) have been linked with crude oil (Benchmark Arab Light) price under a mechanism with a floor and ceiling price. PP01 and PP07 have floor price of USD 10/bbl each while having a ceiling of USD 36/bbl and USD 45/bbl, respectively. PP09 and PP12 have floor price of USD 30/bbl each, while having ceiling price of USD 100/bbl and USD 110/bbl, respectively. Concessions awarded before 1994 Policy were linked with Bunker Fuel price (Furnace Oil). Major gas production for OGDC comes from wells before 1994 Policy, while for PPL and POL most well fall under PPO1 pricing regime. Wellhead price for Mari field (MARI) is similar to PPO1 with floor of USD 15/bbl, no ceiling, Zone-III discount of 67.5% and wellhead discount of 50%.

Exhibit:

Wellhead price under Petroleum Policies

| USD/mmbtu | Floor USD/bbl | Ceiling USD/bbl | USD 20/bbl | USD 30/bbl | USD 40/bbl | USD 50/bbl | USD 60/bb | USD 120/bbl |
|----------------------------------|---------------|-----------------|------------|------------|------------|------------|-----------|-------------|
| Petroleum Policy 2001 | | | | | | | | |
| Zone I | | | 2.45 | 2.83 | 2.99 | 2.99 | 2.99 | 2.99 |
| Zone II | 10.00 | 36.00 | 2.29 | 2.65 | 2.80 | 2.80 | 2.80 | 2.80 |
| Zone II | | | 2.13 | 2.46 | 2.61 | 2.61 | 2.61 | 2.61 |
| Petroleum Policy 2007 | | | | | | | | |
| Gas Price at 0.2 Gradient | | | | | | | | |
| Zone I & Zone 0 | 10.00 | 45.00 | 3.05 | 3.01 | 3.37 | 3.57 | 3.61 | 3.85 |
| Zone II | | | 2.75 | 2.84 | 3.11 | 3.27 | 3.31 | 3.55 |
| Zone II | | | 2.50 | 2.70 | 2.90 | 3.02 | 3.06 | 3.30 |
| Gas Price at 1.0 Gradient | | | | | | | | |
| Zone I & Zone 0 | 10.00 | 45.00 | 3.05 | 3.01 | 3.37 | 3.65 | 3.85 | 5.05 |
| Zone II | | | 2.75 | 2.84 | 3.11 | 3.35 | 3.55 | 4.75 |
| Zone II | | | 2.50 | 2.70 | 2.90 | 3.10 | 3.30 | 4.50 |
| Petroleum Policy 2009 | | | | | | | | |
| Zone 0 (off Shore Deep) | | | 2.89 | 3.62 | 4.05 | 4.34 | 4.63 | 5.36 |
| Zone I & Zone 0 | 30.00 | 100.00 | 2.72 | 3.40 | 3.81 | 4.08 | 4.35 | 5.03 |
| Zone II | | | 2.54 | 3.18 | 3.56 | 3.82 | 4.07 | 4.71 |
| Zone II | | | 2.37 | 2.96 | 3.32 | 3.55 | 3.79 | 4.38 |
| Petroleum Policy 2012 | | | | | | | | |
| Zone 0 (Ultra Deep) | | | 3.33 | 5.00 | 5.83 | 6.67 | 7.17 | 9.00 |
| Zone 0 (Deep) | | | 2.96 | 4.44 | 5.18 | 5.93 | 6.37 | 8.00 |
| Zone 0 (Shallow) | 30.00 | 110.00 | 2.59 | 3.89 | 4.54 | 5.18 | 5.57 | 7.00 |
| Zone 1 | | | 2.44 | 3.67 | 4.28 | 4.89 | 5.26 | 6.60 |
| Zone II | | | 2.33 | 3.50 | 4.08 | 4.67 | 5.02 | 6.30 |
| Zone III | | | 2.22 | 3.33 | 3.89 | 4.44 | 4.78 | 6.00 |

Source: Petroleum Policy 2001-2012, IGI Research

Conversion of Blocks to PP12

New discovery in Converted Blocks to be priced under PP12...

In 2015, Government allowed conversion of certain blocks to PP12 which implied that any new discovery in these concessions would be priced under PP12.

...with POL taking the lead in terms of recent discoveries

Major blocks being converted to PP12 include Tal block, Hala, Gambat South, Dhok Sultan and Britism. It is pertinent to mention here that recent discoveries emanated from Tal block (OGDC/PPL/POL stake of 27.8%/27.8%/21.1%), Britism (OGDC 77.5% stake) and, Hala Block (PPL 65% and MARI 35%) which will be priced under PP12.

Exhibit:

Converted Concessions to Petroleum Policy 2012

| PPL | | | OGDC | | | MARI | | | POL | | |
|---------------|----------|-----------|-----------------|----------|-----------|------------|----------|-----------|-------|----------|-----------|
| Lease | Operator | Stake (%) | Lease | Operator | Stake (%) | Lease | Operator | Stake (%) | Lease | Operator | Stake (%) |
| Gambat South | PPL | 65 | Tando Allah Yar | OGDC | 78 | Ziarat | MPCL | 60 | Tal | MOL | 21 |
| Ghauri | MPCL | 35 | Nim | OGDC | 78 | Karak | MPCL | 60 | | | |
| Digri | UEPL | 25 | Sinjhora | OGDC | 60 | Sukkur | MPCL | 59 | | | |
| Sukhpur | ENI | 30 | Guddu | OGDC | 58 | Sujawal | MPCL | 100 | | | |
| Kuzdar | PPL | 65 | Rachna | OGDC | 100 | Hanna | MPCL | 100 | | | |
| Kalat | PPL | 35 | Samandar | OGDC | 100 | Ghauri | MPCL | 35 | | | |
| Hala | PPL | 65 | Tegani | OGDC | 100 | Khetwaro | MPCL | 51 | | | |
| Barkhan | PPL | 35 | Thal | OGDC | 100 | Hala | PPL | 35 | | | |
| Zamzama South | PPL | 100 | Channi Pull | OGDC | 100 | Kohat | OGDC | 20 | | | |
| Kharan West | PPL | 100 | Mari East | OGDC | 100 | Bannu West | Tullow | 10 | | | |
| Kharan East | PPL | 100 | Lakhi Rud | OGDC | 100 | Kalchas | OGDC | 20 | | | |
| Kharan | PPL | 100 | Jandaran West | OGDC | 100 | Kohlu | OGDC | 30 | | | |
| Dhok Sultan | PPL | 75 | Fateh Jang | OGDC | 100 | Zindan | PPL | 35 | | | |
| Kotri | PPL | 100 | Latambar | OGDC | 100 | | | | | | |
| Zindan | PPL | 35 | Mianwali | OGDC | 100 | | | | | | |
| Sirani | PPL | 75 | Saruna | OGDC | 100 | | | | | | |
| Kotri North | PPL | 90 | Shaan | OGDC | 100 | | | | | | |
| Jungshahi | PPL | 100 | Shahana | OGDC | 100 | | | | | | |
| Kandhkot East | PPL | 100 | Wali | OGDC | 100 | | | | | | |
| Latif | OMV | 33 | Soghri | OGDC | 100 | | | | | | |
| Tal | MOL | 28 | Kohat | OGDC | 30 | | | | | | |
| Jafi | KPBV | 25 | Kalchas | OGDC | 50 | | | | | | |
| | | | Kohlu | OGDC | 40 | | | | | | |
| | | | Bitrisim | OGDC | 78 | | | | | | |
| | | | Khewari | OGDC | 75 | | | | | | |
| | | | Gurgalot | OGDC | 66 | | | | | | |

Source: IGI Research, PPIS, Company Financials, Bloomberg

Oil Price Outlook

Oil price run already in place

Based on a positive outcome of OPEC meeting in Vienna, we expect Arab Light price to augment more compared to WTI and Brent. As the duration of agreement is for six months we expect Arab Light to reach and remain range bound between USD 50-55/bbl. and average USD 50/bbl. for FY17. However, as WTI has crossed USD 50/bbl. mark and US shale oil production is expected to resume we anticipate limited gains in oil price going forward keeping prices in check. Moreover, Saudi Arabia need USD 57/bbl oil price to breakeven its current account balance and may have to ramp up production in long term once US shale oil production starts to rise. (see [Annexure: 2/3](#))

Exhibit:

WTI Crude Oil Price Forecast

| USD/bbl | IMF | World Bank | Average |
|---------|------|------------|---------|
| 2017 | 50.6 | 55.2 | 52.9 |
| 2018 | 53.1 | 59.9 | 56.5 |
| 2019 | 54.4 | 62.7 | 58.5 |
| 2020 | 56.3 | 65.6 | 60.9 |

Source: IGI Research, OPEC, World Bank, EIA

POL remains highly sensitive to oil price movement

With every USD 5/bbl increase in oil price, POL's remain most sensitive with 9% and 5% increase in earnings and target price, respectively. Whereas, OGDC is least sensitive to oil price volatility with 4.7% and 3.2% rise in earnings and target price.

Exhibit:

Oil Price Sensitivity

| PKR | EPS | | | TP | | |
|------|------------|------------|------------|------------|------------|------------|
| | USD 50/bbl | USD 55/bbl | Change (%) | USD 50/bbl | USD 55/bbl | Change (%) |
| OGDC | 18.4 | 19.4 | 5.3% | 196.2 | 202.6 | 3.3% |
| PPL | 18.7 | 20.0 | 6.9% | 218.3 | 229.2 | 5.0% |
| POL | 42.6 | 46.6 | 9.2% | 543.8 | 572.8 | 5.3% |
| MARI | 104.5 | 110.5 | 5.7% | 1,538.8 | 1,591.9 | 3.4% |

Source: IGI Research

Exhibit:

Oil Demand And Supply in 2017 - (OPEC: Nov-16)

| mn 'bopd | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 2016 | 1Q17 | 2Q17 | 3Q17 | 4Q17 | 2017 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| World Demand | | | | | | | | | | |
| OECD | 46.8 | 46.3 | 47.0 | 46.6 | 46.7 | 46.9 | 46.3 | 47.2 | 46.8 | 46.8 |
| Americas | 24.6 | 24.7 | 25.1 | 24.8 | 24.8 | 24.8 | 24.9 | 25.3 | 25.0 | 25.0 |
| Europe | 13.6 | 13.9 | 14.2 | 13.7 | 13.9 | 13.6 | 13.9 | 14.3 | 13.8 | 13.9 |
| Asia Pacific | 8.6 | 7.6 | 7.6 | 8.1 | 8.0 | 8.5 | 7.6 | 7.6 | 8.0 | 7.9 |
| DCs | 30.7 | 31.0 | 31.7 | 31.3 | 31.2 | 31.3 | 31.7 | 32.3 | 32.0 | 31.8 |
| FSU | 4.5 | 4.4 | 4.7 | 5.0 | 4.7 | 4.6 | 4.4 | 4.8 | 5.1 | 4.7 |
| Other Europe | 0.7 | 0.6 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 |
| China | 10.8 | 11.4 | 11.1 | 11.6 | 11.2 | 11.1 | 11.6 | 11.4 | 11.9 | 11.5 |
| Total World demand | 93.5 | 93.7 | 95.1 | 95.3 | 94.4 | 94.6 | 94.7 | 96.4 | 96.5 | 95.5 |
| Non-OPEC Supply | | | | | | | | | | |
| OECD | 25.4 | 24.3 | 24.5 | 24.7 | 24.7 | 24.7 | 24.5 | 24.3 | 24.7 | 24.6 |
| Americas | 21.1 | 20.1 | 20.5 | 20.5 | 20.5 | 20.4 | 20.3 | 20.3 | 20.5 | 20.4 |
| Europe | 3.9 | 3.7 | 3.6 | 3.8 | 3.7 | 3.9 | 3.7 | 3.5 | 3.8 | 3.7 |
| Asia Pacific | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 |
| DCs | 11.1 | 11.1 | 11.3 | 11.4 | 11.2 | 11.4 | 11.5 | 11.5 | 11.6 | 11.5 |
| FSU | 14.0 | 13.7 | 13.7 | 14.0 | 13.9 | 14.1 | 13.9 | 14.0 | 14.1 | 14.0 |
| Other Europe | 0.1 | 0.1 | 0.1 | 0.1 | 1.1 | 1.1 | 1.2 | 0.2 | 0.2 | 0.2 |
| China | 4.2 | 4.1 | 4.0 | 4.0 | 4.1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Processing Gains | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Total Non-OPEC Supply | 55.5 | 55.8 | 56.5 | 56.2 | 56.2 | 56.7 | 56.2 | 56.1 | 56.8 | 56.4 |
| OPEC NGLs + Non-Conventional oil | 6.2 | 6.3 | 6.3 | 6.3 | 6.3 | 6.4 | 6.4 | 6.4 | 6.5 | 6.4 |
| Non-OPEC Supply | 63.2 | 61.8 | 62.1 | 62.8 | 62.5 | 63.0 | 62.6 | 62.5 | 63.3 | 62.9 |
| OPEC Production * | 32.5 | 32.8 | 33.3 | - | 32.5 | 32.5 | 32.5 | 32.5 | 32.5 | 32.5 |
| Total Supply | 95.7 | 94.6 | 95.4 | 62.8 | 95.0 | 95.5 | 95.1 | 95.0 | 95.8 | 95.4 |

Source: OPEC, * IGI Estimate for OPEC production from 4Q16 onwards

Our long term price assumption for Arab Light stays intact at USD 50/bbl

Our long term price assumption remains at USD 50/bbl (see [Annexure:1](#)). Arguably multiple factors seep into oil price forecast, but we highlight factors that could keep price under pressure.

- a. Weaker Global Growth outlook specially declining growth of China and U.S,
- b. Shale oil production would keep oil supply in excess of demand,
- c. Rising U.S rig count, d) Russia able to balance its budget at USD 40/bbl oil price,
- d. Saudi Arab needing USD 57/bbl to breakeven and as a result would have to ramp up its production if output rises elsewhere, and
- e. Potential production increase from Nigeria and Libya.

Inception of Oil Supply Glut in 2014

Oil price declined by nearly 58% since oil supply glut in 2014

Oil prices fell by nearly 58% (WTI) from Jul-14 onwards to reach USD 44/bbl in Jan-15 when OPEC decided to raise its output as a threat to retain its market share from rising U.S shale oil production. Since then prices have been hovering between USD 30-55/bbl while touching a low of USD 26/bbl in Feb-16.

OPEC raised production and started offering price discount to its customers to retain market share, while U.S production on rise since 2008 and sputtering demand from China and Europe triggered the steep price decline.

Recent recovery in Commodity and Oil prices...

However, oil prices have gained nearly 19% to USD 53.8/bbl in Dec-16 since OPEC and Non-OPEC members agreed on a production cut in Nov-16. This stability in oil prices emanated from expected improved demand from China later in 2017.

Exhibit:

Oil prices down by nearly 58% since Jul-14 - (USD/bbl)

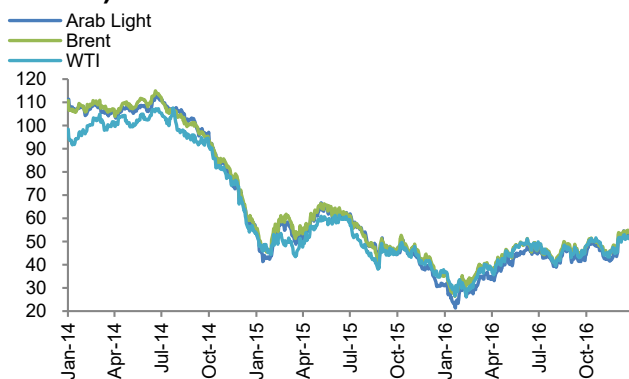
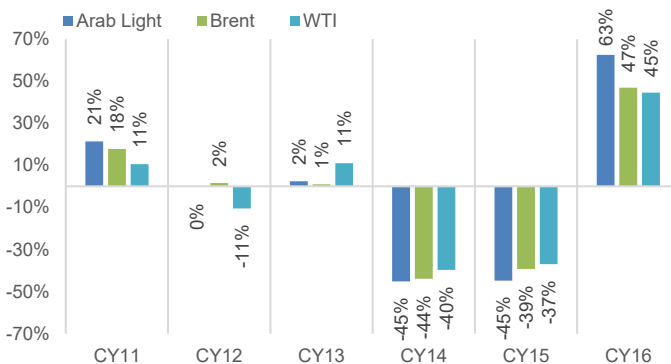


Exhibit:

Oil prices posted highest returns in CY16 in last 6Yrs - (USD/bbl)



Source: IGI Research, Bloomberg

...optimism over fading China headwinds

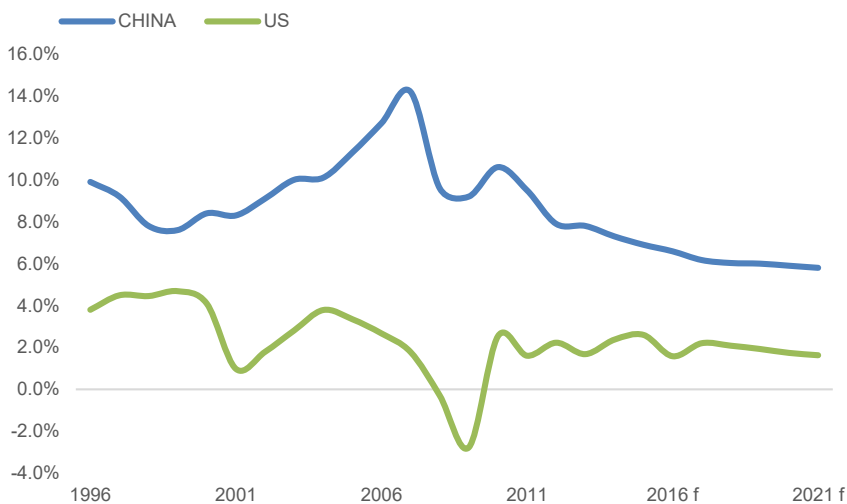
By the end of 2014, global commodity prices plunged as pessimism weighed on China's growth outlook, this was further enforced by slowdown in EU and US economies latter in 2015. However, this pessimism was short-lived, as such by 2016 commodity prices recovered. Improved demand outlook of China and recovery in US and Emerging Market economic outlook.

China demand outlook still stagnant, meaning limited upside for oil prices

China's GDP growth is expected to flatten out to 6.3% by 2018 from 6.9% in 2015 according to World Bank estimates (see Annexure: 4). According to OPEC Monthly Report published in Dec-16, China's GDP growth is expected to drop to 6.2% in 2017. Based on slowdown in China's GDP growth and deteriorating trade account balance, headwinds from China are likely weigh on oil prices going forward, in our view.

Exhibit:

China GDP Growth slowdown



Source: IGI Research, IMF

US oil production stands at all-time high with rig count increasing

Second to China growth is the US oil production. US oil production has been on a consistent rise since 2008 after dropping to as low as 3.8mnbpd in Sep-08. US oil production peaked in Jun-15 to reach 9.6mnbpd and dropped to 8.4mnbpd in Jul-16. Since Jul-16 US oil production has increased steadily by +4% to reach 8.8mnbpd in Dec-16. Furthermore, US oil rig count has been piling up since Jul-16 as well. Given increasing US rig counts, US conventional oil production is expected to rise further in 2017 and beyond, and we believe this to will keep a price lid on oil price run.

Exhibit:
US Production at a nearly all time high level

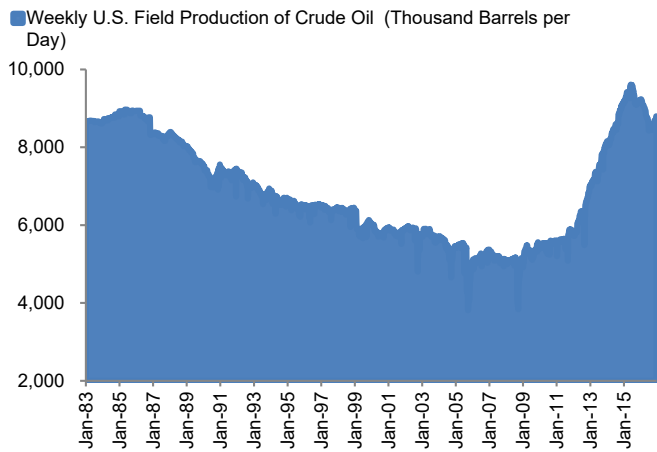


Exhibit:
US Rig count on the rise for over six months

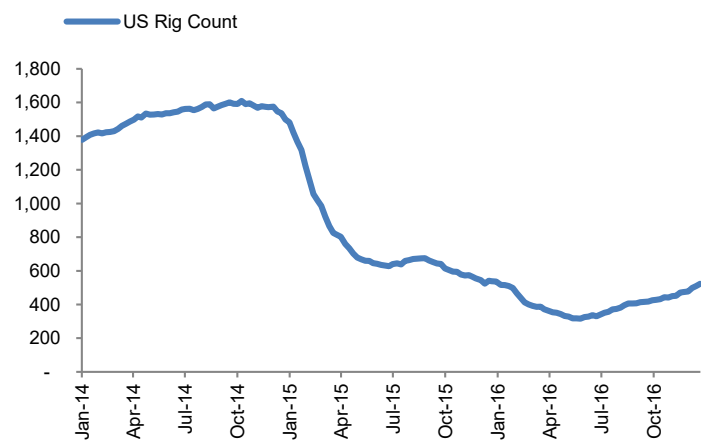
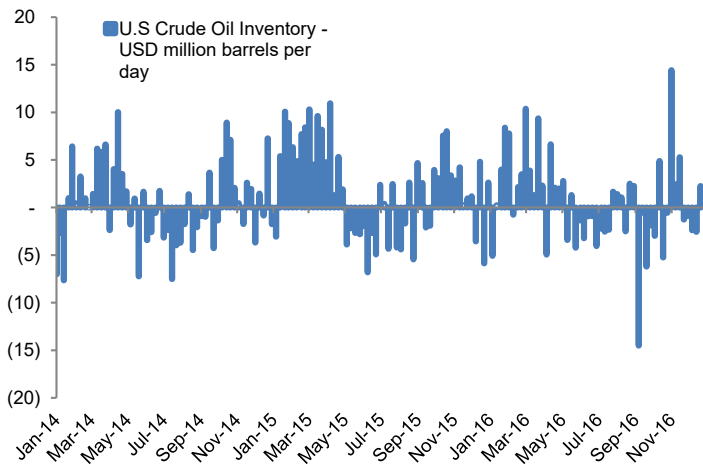


Exhibit:
U.S Crude Oil inventory pile up keeping prices in check



Source: IGI Research, Bloomberg

US Shale Production underway; having a breakeven cost between USD 50-60/bbl

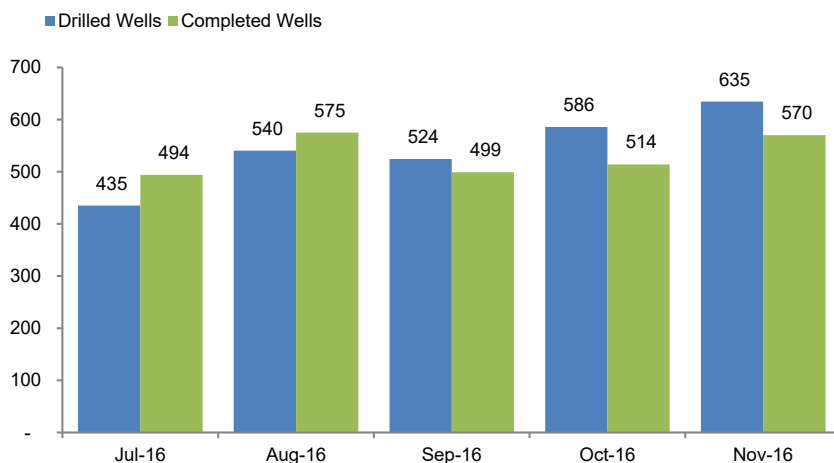
For some shale oil producers, breakeven cost stands as low as USD 30/bbl. The most important shale oil county which comes in to play when oil (WTI) crosses USD 50/bbl mark is Eagle Ford. Breakeven price ranges between USD 45-55/bbl. Therefore, when oil crossed USD 40/bbl, most of the shale oil producers have already initiated drilling in Dec-16 and may well be online within next six months. (see [Annexure:2](#))

Production commencement may take some time

Although when oil price crosses breakeven cost of shale oil producers, production commencement by producers may take from 6 months to 1 year to start production owing to the complex nature of drilling and high cost. We expect oil prices to remain upbeat during CY17 but from CY18 once shale production starts prices may come under pressure.

Exhibit:

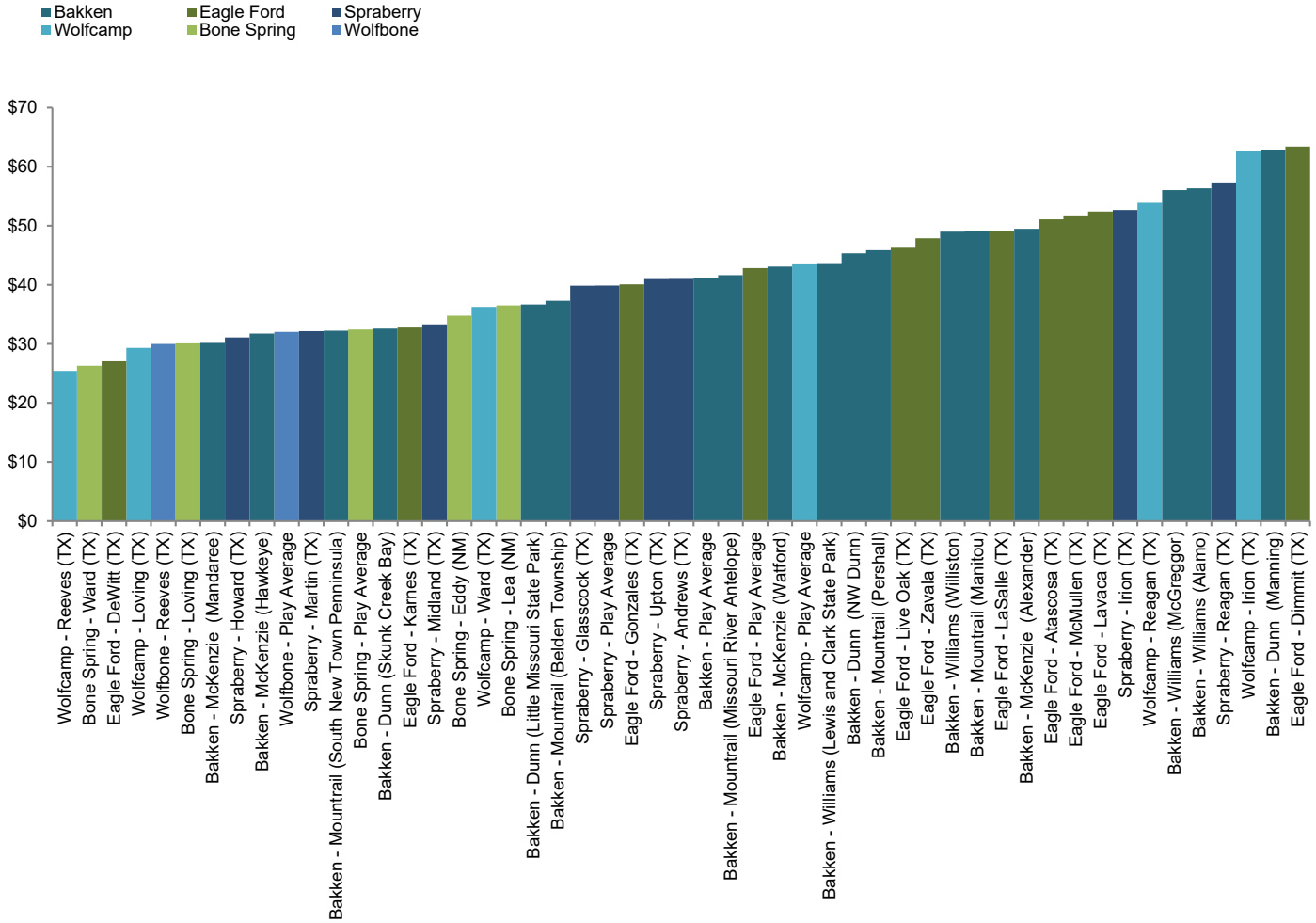
US Shale Drilling activity on a rise since Sep-16



Source: IGI Research, Bloomberg

Exhibit:

Breakeven Oil prices for U.S Shale Producers



Source: IGI Research, Bloomberg

OPEC Vienna meeting end on a mutual consensus to curb production...

Lastly, Organization of the Petroleum Exporting Countries (OPEC) held its meeting on 30th Nov-16 in Vienna (Austria) ended with a mutual agreement between OPEC members to curb production by 1.2mn**bopd** (which is the first production cut since 2008) to 32.5mn**bopd**. In addition, Non-OPEC members including Russia will curb production by 0.56mn **bopd**.

According to OPEC press release major highlights of the meeting were:

- Iran allowed to raise output to 3.9mn**bopd**
- The agreement will be effective from 1st Jan-17 for a period of six months after which agreement will be reviewed and can be extended for further six months
- Indonesia suspended from OPEC membership and its production cut share to be distributed amongst existing members

Exhibit:

OPEC and Non-OPEC Production Cut schedule

| Member | Ref. Prod. | Chg. | Prod. w.e.f 1-Jan-17 |
|--------------|---------------|----------------|----------------------|
| 000'bopd | | | |
| Algeria | 1,089 | (50) | 1,039 |
| Angola | 1,751 | (87) | 1,664 |
| Ecuador | 548 | (26) | 522 |
| Gabon | 202 | (9) | 193 |
| Indonesia* | - | - | - |
| Iran | 3,975 | 90 | 3,797 |
| Iraq | 4,561 | (210) | 4,351 |
| Kuwait | 2,838 | (131) | 2,707 |
| Libya | - | - | - |
| Nigeria | - | - | - |
| Qatar | 648 | (30) | 618 |
| Saudi Arabia | 10,544 | (486) | 10,058 |
| U.A.E | 3,013 | (139) | 2,874 |
| Venezuela | 2,067 | (95) | 1,972 |
| Total | 31,236 | (1,173) | 29,795 |
| Non-OPEC | | (558) | |
| Russia | | (300) | |

* Indonesia suspended from OPEC

** Non-OPEC Oil Production cut agreed at 558,000**bopd** including Russia

Source: IGI Research, OPEC

...but, implementation remains a key concern

Recently, OPEC members and Russia oil producers have started to inform their buyer of potential cut in production in compliance with the agreement. Although, considering OPEC precedent of previous non-compliance with production cut, we believe this time around OPEC and Non-OPEC members will comply with their agreed production cut in short-term. However, we remain skeptic over long-term compliance with agreed production cuts and may see partial observance in the back of a) Nigeria and Libya not included in the agreed production cut and may possibly increase production after overcoming domestic disruptions offsetting the impact of overall production cut, b) oil producers have suffered constrained budgets for the last 2.5yrs and therefore temptation will be strong to open the taps a little to get the money flowing again and, c) commencement of shale oil production to keep prices under pressure.

Key points to monitor in 2017

- a. Compliance within OPEC, which, as former Saudi Arabian oil minister Ali bin Ibrahim Al-Naimi noted after the deal was announced, can be quite poor
- b. Whether non-OPEC producers contribute additional cuts above and beyond what was already expected due to underinvestment (e.g., any cut that includes Mexican production should be discounted)
- c. Rising U.S rig count and how much output the U.S. and other “short cycle” producers bring online, given that higher prices will send investment signals
- d. Whether higher prices dampen future demand growth, given solid year-over-year price gains, particularly when denominated in most non-U.S. dollar currencies
- e. Whether OPEC producers ramp up output at the end of the deal’s term to meet peak summer demand and refinery requirements, reducing the ultimate market impact
- f. Libya and Nigeria ramping up production post domestic disruptions

COMPANY UPDATE

Oil & Gas Dev.Co

Oil & Gas Exploration Companies

| | |
|-----------------------|------------|
| Recommendation | BUY |
| Target Price | 196.2 |
| Last Closing | 168.2 |
| Upside | 17% |

Market Data

| | | | |
|----------------------------|---------|---------|-------|
| Bloomberg Tkr. | OGDC PA | | |
| Shares (mn) | 4,300.9 | | |
| Market Cap (PKRbn USDmn) | 723.2 | 6,888.4 | |
| Exchange | KSE 100 | | |
| Price Info. | 90D | 180D | 365D |
| Abs. Return | 17.9 | 15.6 | 58.4 |
| Low | 140.0 | 134.3 | 95.6 |
| High | 170.7 | 170.7 | 170.7 |

Key Company Financials

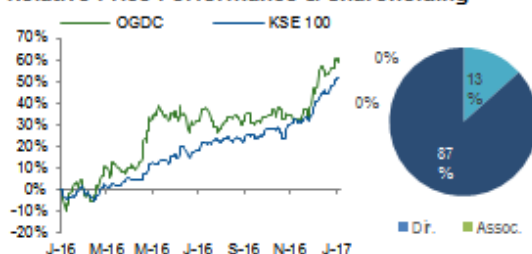
Period End: Jun

| PKRbn | FY16A | FY17E | FY18F | FY19F |
|---------------|-------|-------|-------|-------|
| Total Revenue | 162.9 | 209.0 | 238.7 | 227.8 |
| Net Income | 59.97 | 79.5 | 89.9 | 83.3 |
| EPS (PKR) | 13.9 | 18.5 | 20.9 | 19.4 |
| DPS (PKR) | 5.2 | 7.0 | 8.0 | 7.5 |
| Total Assets | 589.6 | 651.5 | 711.6 | 766.5 |
| Total Equity | 478.6 | 528.9 | 585.7 | 638.3 |

Key Financial Ratios

| | | | | |
|---------|------|------|------|------|
| ROE (%) | 12.5 | 15.0 | 15.3 | 13.0 |
| P/E (x) | 12.1 | 9.1 | 8.0 | 8.7 |
| P/B (x) | 1.5 | 1.4 | 1.2 | 1.1 |
| DY (%) | 3.1 | 4.2 | 4.8 | 4.5 |

Relative Price Performance & Shareholding



About the Company

The Company was incorporated on October 23, 1997 and is engaged in the exploration and development of oil and gas resources, including production and sale of oil and gas and related activities. Its GDS are listed on the London Stock Exchange.

Source: Bloomberg, KSE 100 & IGI Research

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Research Analyst

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Oil & Gas Development Company

Underperformance excessive; production growth still a possibility; up to Buy

Investment Case

We forecast profitability to grow by 3yr CAGR of +12% from FY16-FY19F owing to a) total production to increase by +10%YoY in FY17F, b) Total additional production is estimated to lift earnings by PKR 2.63/share in FY17, and c) inclusion in MSCI EM Index. We estimate +32%YoY jump in earnings in FY17 to the tune of PKR 79.4bn (EPS PKR 18.5).

Inclusion of OGDC in MSCI EM Index; cheaper multiple in comparison

OGDC has been included in MSCI EM index (effective May-17) and categorized under large cap. The company trades at cheaper multiple compared to regional companies with FY17F P/E of 8.6x.

Oil and gas production to augment by +14%YoY and +9%YoY in FY17F

The company's total oil and gas production is expected to rise by +14%YoY and +9%YoY in FY17F to reach total production of 100mnBoE on the back of additional production of 6,016bopd of oil and 151.3mmcf of gas.

Additional Oil & Gas production to jack up earnings in FY17

Total additional production is estimated to lift earnings by PKR 2.63/share in FY17. Expected completion of Kunar Pasakhi Deep-Tando Allah Yar (KPD-TAY) phase-II project in Jan-17 which should lift oil and gas volumes from 2QFY17 onwards. We expect KPD-TAY Phase-II project to contribute additional production of 4,000bbls of oil, 125mmcf of gas and 410 tons of LPG. Nashpa/Mela Development project is estimated to be completed by Jun-17, which would provide incremental production of 10mmcf of gas, 340MTD of LPG and 1,120bopd of crude in FY18. Development project at Uch-II is expected to come online from 3QFY17 providing additional gas production of 100-130mmcf translating in to expected annualized earnings impact of PKR 0.72/share. According to management, production from Mardankhel in Tal block commenced in Nov-16, which is anticipated to contribute additional +2% and +1% to oil and gas production, respectively in FY17.

Recent Discoveries

OGDC has drilled and tested 6 wells in FY17TD and encountered 5 discoveries (company operated) as compared to total 26 wells drilled in FY16 with a total of 6 discoveries. Three new wells have been discovered in FY17TD which include Mithri-1 (Khewari Block, 75% stake), Gundanwari-1 (Britism, 77.5% stake) and Khamiso-1 (Guddu, 57.8% stake) having cumulative annualized earnings impact of PKR 0.41/share. The company plans on drilling 26 new well (16 exploratory and 10 developments well) in FY17.

Recommendation

We maintain our "BUY" call on OGDC with our Dec-17 target price of PKR 196/share, offering +17% upside from its last closing. The company is currently trading at a FY17E P/E of 9.1x and implied oil price of USD 29.5/bbl.

Graphical Snapshot

Exhibit:
Additional oil production to provide support to declining oil output in FY17E

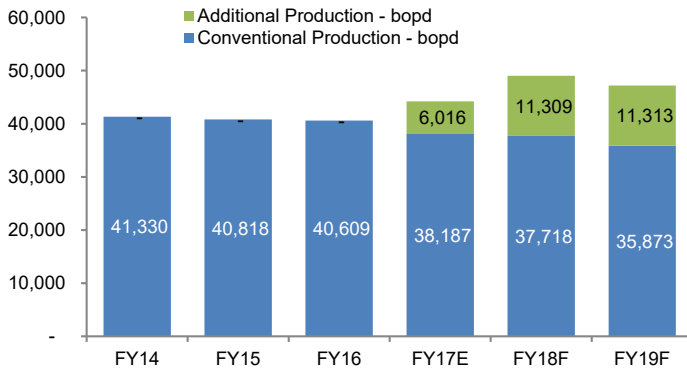


Exhibit:
Gas production to pick up in FY17 primarily owing to Uch and KPD-TAY projects coming online

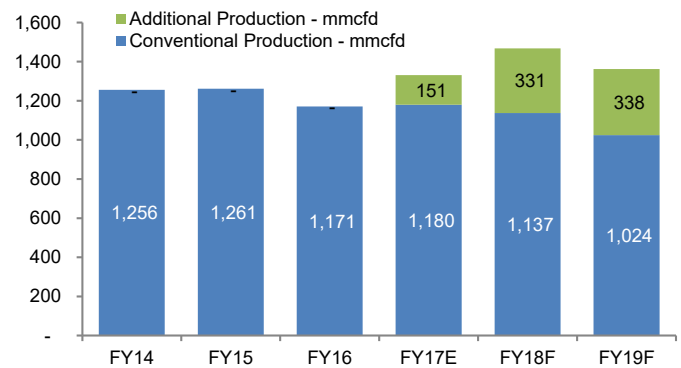


Exhibit:
Revenue contribution of Oil and Gas

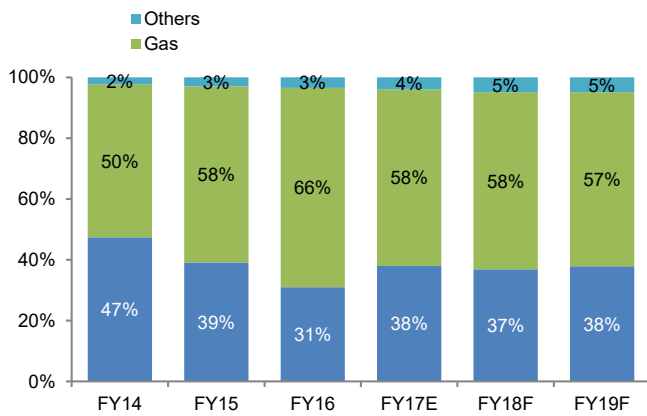
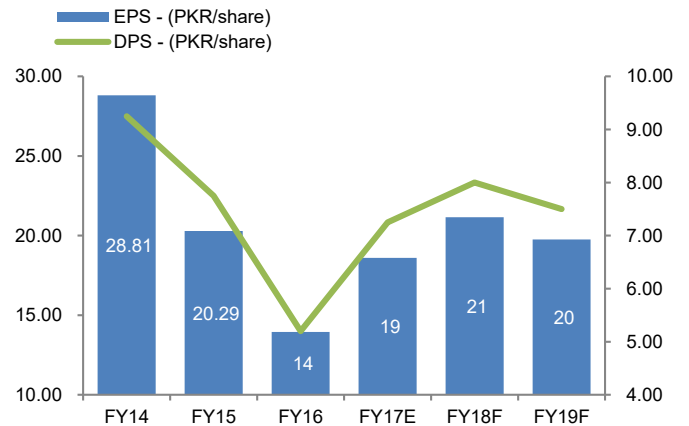


Exhibit:
Earnings and Dividend Forecast



Source: IGI Research, Company Financials.

Valuation

Using Reserve Based Discounted Cash Flow approach, our Dec-17 Target Price of PKR 196/share, with a cost of equity of 13.5% (risk-free rate = 6.25%, beta 1.12 and risk premium 6.50%). The scrip offers +17% return from its last closing price of PKR 168/share.

Valuation Parameters

| | |
|----------------|--------|
| Risk free Rate | 6.25% |
| Beta (3yr) | 1.08 |
| Risk Premium | 6.50% |
| CAPM (CoE) | 13.27% |

| | Jun-17 | Jun-18 | Jun-19 | Jun-20 | Jun-21 | Jun-22 | Jun-23 | Jun-24 | Jun-25 |
|------------------------------------|---------------|------------|------------|------------|------------|------------|------------|-----------|-----------|
| PKRmn | F | F | F | F | F | F | F | F | F |
| Exchange Rate | 105.3 | 108.0 | 110.7 | 113.4 | 116.3 | 119.2 | 122.2 | 125.2 | 128.3 |
| Arab Light (USD/bbl) | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| Total Oil Production (bbl) | 16,133,949 | 17,895,080 | 17,222,799 | 16,542,446 | 16,410,391 | 14,554,136 | 12,620,034 | 6,737,787 | 6,287,834 |
| Total Oil Revenue | 79,878 | 88,880 | 87,680 | 86,322 | 87,773 | 79,791 | 70,917 | 38,809 | 37,123 |
| Total Gas Production (mmcf) | 480,930 | 526,017 | 482,831 | 474,352 | 462,502 | 446,175 | 417,818 | 274,871 | 266,857 |
| Total Gas Revenue | 109,815 | 125,433 | 117,164 | 118,506 | 117,003 | 116,200 | 109,968 | 64,046 | 64,336 |
| LPG & other Revenue | 8,292 | 11,838 | 11,283 | 10,755 | 10,254 | 9,778 | 9,326 | 4,008 | 3,845 |
| Total Revenue | 208,967 | 238,695 | 227,843 | 227,434 | 226,731 | 217,389 | 201,208 | 113,268 | 111,737 |
| Less Royalty | (23,196) | (26,496) | (25,291) | (25,246) | (25,168) | (24,131) | (22,335) | (12,573) | (12,403) |
| Less Operating Expense | (40,463) | (45,519) | (46,568) | (48,597) | (50,885) | (52,645) | (54,095) | (49,654) | (52,962) |
| Less Taxation | (27,975) | (31,715) | (29,386) | (28,789) | (28,056) | (25,761) | (22,333) | (6,872) | (4,275) |
| Other Income | 15,157 | 13,563 | 15,111 | 16,676 | 18,148 | 19,636 | 21,629 | 25,378 | 21,213 |
| Net Cash flow | 132,490 | 148,528 | 141,709 | 141,478 | 140,770 | 134,489 | 124,074 | 69,547 | 63,310 |
| PV of Cash flows | 132,490 | 136,447 | 114,006 | 99,642 | 86,821 | 72,636 | 58,681 | 28,793 | 22,917 |
| Sum of cash flows | 190.22 | | | | | | | | |
| Cash | 1.84 | | | | | | | | |
| Outstanding Shares | 4,300.93 | | | | | | | | |
| Target Price (Dec-17) - PKR | 196.18 | | | | | | | | |

Financial Summary

Oil & Gas Development Company Limited (OGDC)

| Current Price (PKR): | 168 | | Target Price (PKR): | 196 | | Upside | 17% | | Recommendation | BUY | |
|---------------------------------------|----------|----------|---------------------|----------|----------|------------------------------|---------|---------|----------------|---------|---------|
| Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F |
| Income Statement Items (PKRmn) | | | | | | Valuation Ratios | | | | | |
| Net Sales | 210,625 | 162,867 | 208,967 | 238,695 | 227,843 | EPS (PKR) | 20.29 | 13.94 | 18.47 | 20.90 | 19.37 |
| Royalty | 23,737 | 18,079 | 23,196 | 26,496 | 25,291 | DPS (PKR) | 7.75 | 5.20 | 7.02 | 7.94 | 7.36 |
| Operating Costs | 52,935 | 54,986 | 65,465 | 73,610 | 74,831 | BVPS (PKR) | 102.89 | 111.29 | 122.96 | 136.17 | 148.40 |
| Gross Profit | 131,967 | 87,890 | 117,852 | 135,786 | 125,046 | P/E (x) | 8.28 | 12.04 | 9.09 | 8.04 | 8.67 |
| Exploration Costs | 11,628 | 14,548 | 15,276 | 15,734 | 16,206 | P/EBITDA (x) | 4.77 | 6.92 | 5.30 | 4.69 | 4.98 |
| Other Income | 19,186 | 14,703 | 15,157 | 13,563 | 15,111 | D/Y (%) | 4.64 | 3.10 | 4.17 | 4.70 | 4.41 |
| Finance Costs | 2,550 | 1,718 | 1,807 | 1,896 | 1,985 | P/B (x) | 1.63 | 1.51 | 1.37 | 1.23 | 1.13 |
| Pre-tax Profits | 127,025 | 80,507 | 107,430 | 121,607 | 112,677 | Earnings Growth (%) | (29.59) | (31.26) | 32.49 | 13.14 | (7.34) |
| Post-Tax Profits | 87,249 | 59,971 | 79,455 | 89,892 | 83,291 | ROE (%) | 19.72 | 12.53 | 15.02 | 15.35 | 13.05 |
| Balance Sheet Items (PKRmn) | | | | | | ROA (%) | | | | | |
| PPE | 109,984 | 120,542 | 142,796 | 165,804 | 188,419 | ROA (%) | 15.75 | 10.17 | 12.20 | 12.63 | 10.87 |
| D/P Asset | 78,261 | 87,991 | 96,047 | 107,806 | 117,780 | Cash / Share | 3.02 | 1.84 | 3.41 | 2.28 | 8.13 |
| Expl & Eval Assets | 8,139 | 6,834 | 5,972 | 4,843 | 3,848 | Margins | | | | | |
| Non-Current Assets | 137,629 | 119,397 | 118,408 | 140,855 | 134,406 | Gross Margins (%) | 62.65 | 53.96 | 56.40 | 56.89 | 54.88 |
| Trade Debts | 121,411 | 111,204 | 142,681 | 162,979 | 155,570 | EBIT Margin (%) | 61.52 | 50.49 | 52.27 | 51.74 | 50.32 |
| Cash | 13,003 | 7,904 | 14,651 | 9,827 | 34,960 | Net Profit Margins (%) | 41.42 | 36.82 | 38.02 | 37.66 | 36.56 |
| Current Assets | 219,779 | 254,801 | 288,300 | 292,264 | 321,999 | Macro- Assumption | | | | | |
| Total Assets | 553,791 | 589,566 | 651,522 | 711,573 | 766,451 | Oil (USD/bbl) | 72.5 | 40.7 | 50.0 | 50.0 | 50.0 |
| Trade & Other Payables | 61,902 | 58,969 | 61,707 | 58,930 | 59,561 | PKR/USD | 101.4 | 104.3 | 105.3 | 108.0 | 110.7 |
| Current Liabilities | 61,902 | 58,969 | 61,707 | 58,930 | 59,561 | Production (boe) *000 | | | | | |
| Non-current liabilities | 49,368 | 51,964 | 60,961 | 66,974 | 68,630 | Total Production | 87,642 | 82,029 | 99,990 | 109,613 | 101,411 |
| Total Equity | 442,521 | 478,633 | 528,854 | 585,669 | 638,260 | Oil (bbl) | 14,899 | 14,822 | 16,134 | 17,895 | 17,223 |
| Cash Flow Items (PKRmn) | | | | | | Gas (boe) | | | | | |
| Operating CF | 106,304 | 90,273 | 75,440 | 97,459 | 125,316 | | 72,743 | 67,206 | 83,856 | 91,718 | 84,188 |
| Investing CF | (51,756) | (71,035) | (47,497) | (74,138) | (70,188) | | | | | | |
| Financing CF | (36,480) | (19,769) | (21,195) | (28,146) | (29,994) | | | | | | |

Source: IGI Research, Company Financials

Updated as of: 1/10/2017

COMPANY UPDATE

Mari Petroleum Company Limited

Oil & Gas Exploration Companies

| | |
|-----------------------|------------|
| Recommendation | BUY |
| Target Price | 1,538.8 |
| Last Closing | 1,363.8 |
| Upside | 13% |

Market Data

| | | | |
|----------------------------|---------|---------|---------|
| Bloomberg Tkr. | MARI PA | | |
| Shares (mn) | 110.3 | | |
| Market Cap (PKRbn USDmn) | 150.4 | 1,432.1 | |
| Exchange | KSE 100 | | |
| Price Info. | 90D | 180D | 365D |
| Abs. Return | 38.8 | 41.8 | 94.2 |
| Low | 964.9 | 931.1 | 575.8 |
| High | 1,446.9 | 1,446.9 | 1,446.9 |

Key Company Financials

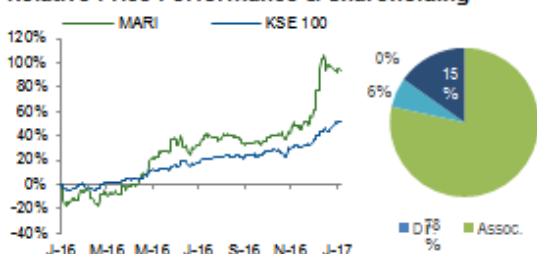
Period End: Jun

| PKRbn | FY16A | FY17E | FY18F | FY19F |
|---------------|-------|-------|-------|-------|
| Total Revenue | 21.7 | 36.7 | 43.5 | 46.8 |
| Net Income | 6.05 | 11.5 | 14.7 | 16.4 |
| EPS (PKR) | 54.9 | 104.5 | 133.5 | 148.8 |
| DPS (PKR) | 5.1 | 5.8 | 5.9 | 5.9 |
| Total Assets | 59.6 | 87.3 | 111.1 | 130.1 |
| Total Equity | 17.0 | 17.3 | 31.3 | 47.1 |

Key Financial Ratios

| | | | | |
|---------|------|------|------|------|
| ROE (%) | 35.7 | 66.8 | 47.0 | 34.8 |
| P/E (x) | 24.8 | 13.0 | 10.2 | 9.2 |
| P/B (x) | 8.9 | 8.7 | 4.8 | 3.2 |
| DY (%) | 0.4 | 0.4 | 0.4 | 0.4 |

Relative Price Performance & Shareholding



About the Company

The Company is a public limited company incorporated in Pakistan in 1984. The principal activity of the company exploration, production and sale of hydrocarbons. The company was listed on all stock exchanges in Pakistan when GoP divested 50% of its stake to Fauji Foundation.

Source: Bloomberg, KSE 100 & IGI Research

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Mari Petroleum Limited

Impressive earning growth still an appeal; albeit priced in

Investment Case

We forecast profitability to grow by 3yr CAGR of +31% from FY17-FY19F owing to a) gradual decline in discount to wellhead price after every six months leading to 100% of wellhead gas price by FY19, b) increase in production from 607mmcf in FY16E to 652mmcf by FY19F and, c) 10% incremental production over 525mmcf (including 10%) to be priced under PP12. We estimate +90%/+20%YoY jump in earnings in FY17/FY18 to the tune of PKR 104.5/ PKR 133.5 per share.

Revised GPA for Mari gas field offers gradual up lift in wellhead price

Under the revised GPA, Mari gas field's cost plus pricing formula has been replaced with international crude price linked formula, at a stated discount to price under Petroleum Policy 2001 (PP01). The discount would gradually decrease every six months to offer higher wellhead gas price. Based on our estimates, this alone will result in incremental earnings of PKR 14.9/share (14% of FY17 EPS).

Incremental production for Mari field to be priced under PP12

Under the agreement, production exceeding by 10% from benchmark of 525mmcf (including 10%) is entitled for higher gas price under Petroleum Policy 2012 (PP12). For FY16, production from Mari gas field stood at 605mmcf, which was ~+15% above benchmark. According to management, the company plans on increasing production from Mari field by 45mmcf in FY17 to reach 650mmcf. Based on our estimates, addition of 45mmcf would augment earnings by PKR 18.7/share in FY17. Production from Mari field in FY17TD stands at 645mmcf.

Additional Production to lift earnings by PKR 3.4/share in FY17

Oil and gas discoveries from Kalabagh 1-A (840bopd of oil and 7.98mmcf of gas) is foreseen to come online in FY17 having earnings impact of PKR 3.4/share, while Shahbaz X-1 and Bashar X-1 are expected to come online in FY18 with a cumulative gas potential of 19.57mmcf having earnings impact of PKR 6.7/share in FY18F. Production from Halini Deep-1 commenced in May-16 which is expected to lift earnings by PKR 6.4/share in FY17.

Dividend payout to remain restricted under covenant binding

We expect the company's dividend payout to remain static as current payout policy is linked with production till FY24. Every 20mmcf increase in production from 425mmcf entitles 1% additional return to shareholders over and above a 30% return on production up to 425mmcf. We expect higher dividends post FY24 to the tune of PKR 63/share in FY25.

Recommendation

We maintain our "BUY" call on MARI with our Dec-17 with target price of PKR 1,539/share, offering +13% upside from its last closing. The company is currently trading at a FY17E P/E of 13.0x and implied oil price of USD 37.1/bbl.

Graphical Snapshot

Exhibit:
MARI Wellhead price discount to gradually increase every six month

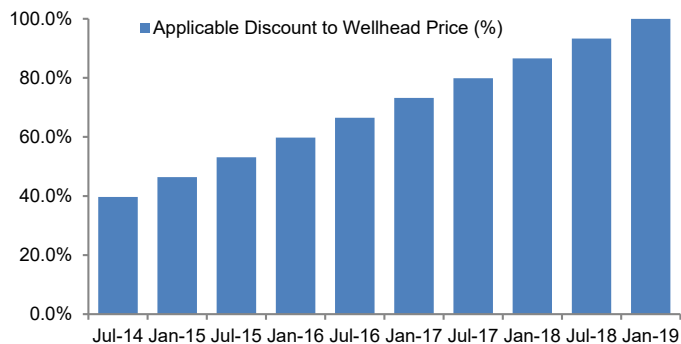


Exhibit:
Gas production increase owing to higher production from Mari Field

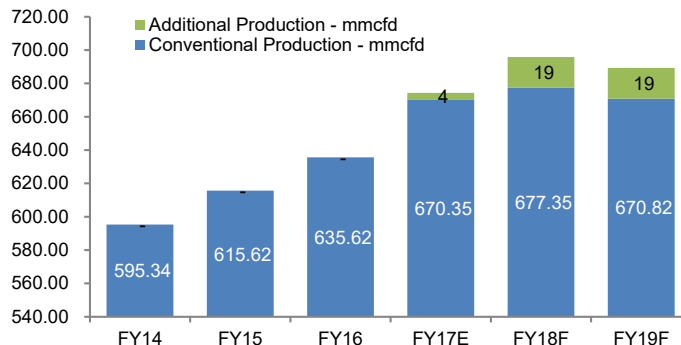


Exhibit:
Gas contributes nearly ~90% tot the company's total revenue mix

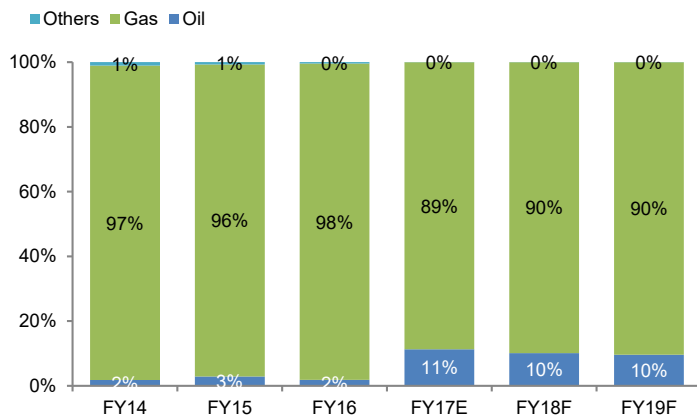
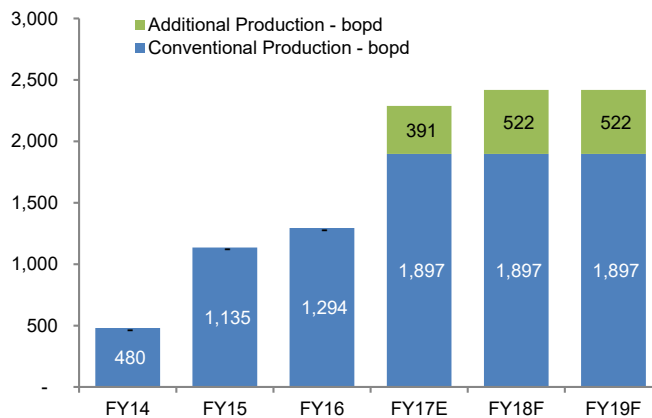


Exhibit:
Oil production is all set to increase as Halini Deep comes online back May-16



Source: IGI Research, Company Financials.

Valuation

Using Reserve based Discounted Cash Flow approach, our Dec-16 Target Price of PKR 1,539/share, with a cost of equity of 14.0% (risk-free rate = 6.25%, beta 1.19 and risk premium 6.50%). The scrip offers +13% return from its last closing price of PKR 1,363/share.

Valuation Parameters

| | |
|----------------|-------|
| WACC | 14.0% |
| Risk free Rate | 6.25% |
| Beta (3yr) | 1.19 |
| Risk Premium | 6.50% |
| CAPM (CoE) | 14.0% |

| | Jun-17 | Jun-18 | Jun-19 | Jun-20 | Jun-21 | Jun-22 | Jun-23 | Jun-24 | Jun-25 |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| PKRmn | F | F | F | F | F | F | F | F | F |
| Exchange Rate | 105.3 | 108.0 | 110.7 | 113.4 | 116.3 | 119.2 | 122.2 | 125.2 | 128.3 |
| Arab Light (USD/bbl) | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| Total Oil Production (bbl) | 835,227 | 882,814 | 882,814 | 882,814 | 882,814 | 882,814 | 807,221 | 610,350 | 9,911 |
| Total Oil Revenue | 4,135 | 4,385 | 4,494 | 4,607 | 4,722 | 4,840 | 4,536 | 3,516 | 59 |
| Total Gas Production (mmcf) | 246,145 | 253,988 | 251,606 | 249,500 | 246,711 | 246,711 | 246,711 | 239,657 | 239,657 |
| Total Gas Revenue | 32,543 | 39,064 | 42,263 | 43,427 | 43,644 | 44,735 | 45,853 | 43,956 | 45,055 |
| Total LPG Revenue | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Total Revenue | 36,680 | 43,450 | 46,759 | 48,035 | 48,367 | 49,577 | 50,391 | 47,473 | 45,115 |
| Less Royalty | 4,646 | 5,503 | 5,922 | 6,084 | 6,126 | 6,279 | 6,382 | 6,013 | 5,714 |
| Less Operating Expense | 8,630 | 10,165 | 10,926 | 11,221 | 11,295 | 11,565 | 11,742 | 11,069 | 10,520 |
| Less Taxation | 4,422 | 5,848 | 6,571 | 6,934 | 7,133 | 7,494 | 7,786 | 7,336 | 6,913 |
| Other Income | 448 | 499 | 364 | 304 | 297 | 240 | 190 | 103 | 226 |
| Net Cash flow | 19,431 | 22,434 | 23,704 | 24,100 | 24,110 | 24,478 | 24,671 | 23,158 | 22,194 |
| PV of Cash flows | 19,431 | 21,016 | 19,482 | 17,371 | 15,246 | 13,579 | 12,008 | 9,885 | 8,311 |
| Sum of cash flows | 163,821 | | | | | | | | |
| Cash | 4,901 | | | | | | | | |
| Sum of Cash flows | 1,533 | | | | | | | | |
| Cash | 5.7 | | | | | | | | |
| Outstanding Shares | 110.3 | | | | | | | | |
| Target Price (Dec-17) - PKR | 1,539 | | | | | | | | |

Financial Summary

Mari Petroleum Limited (MARI)

| Current Price (PKR): | 1,363 | | Target Price (PKR): | 1,539 | | Upside | 13% | | Recommendation | BUY | |
|---------------------------------------|---------|---------|---------------------|---------|---------|------------------------------|----------|----------|----------------|----------|----------|
| Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F |
| Income Statement Items (PKRmn) | | | | | | Valuation Ratios | | | | | |
| Net Sales | 19,376 | 21,713 | 36,680 | 43,450 | 46,759 | EPS (PKR) | 51.25 | 54.89 | 104.52 | 133.49 | 148.78 |
| Royalty | 2,519 | 2,750 | 4,646 | 5,503 | 5,922 | DPS (PKR) | 5.22 | 5.10 | 5.80 | 5.90 | 5.90 |
| Operating Costs | 5,396 | 5,791 | 9,051 | 10,577 | 11,397 | BVPS (PKR) | 104.27 | 153.89 | 156.57 | 284.15 | 427.05 |
| Exploration Costs | 3,194 | 6,462 | 6,623 | 6,791 | 6,901 | P/E (x) | 26.60 | 24.83 | 13.04 | 10.21 | 9.16 |
| Gross Profit | 7,768 | 6,208 | 15,512 | 19,574 | 21,458 | P/EBITDA (x) | 17.39 | 19.10 | 8.72 | 6.99 | 6.43 |
| Other Income | 55 | 587 | 448 | 499 | 364 | D/Y (%) | 0.38 | 0.37 | 0.43 | 0.43 | 0.43 |
| Finance Costs | 1,788 | 574 | 776 | 725 | 751 | P/B (x) | 13.07 | 8.86 | 8.71 | 4.80 | 3.19 |
| Pre-tax Profits | 6,552 | 6,561 | 15,944 | 20,566 | 22,973 | Earnings Growth (%) | 43.29 | 7.10 | 90.41 | 27.72 | 11.45 |
| Post-Tax Profits | 5,650 | 6,051 | 11,523 | 14,717 | 16,403 | ROE (%) | 119.72 | 88.00 | 118.13 | 112.70 | 87.38 |
| Balance Sheet Items (PKRmn) | | | | | | ROA (%) | | | | | |
| PPE | 9,775 | 11,023 | 11,968 | 12,141 | 12,615 | Cash / Share | 44.45 | 5.68 | 32.99 | 146.28 | 252.88 |
| D/P Asset | 2,188 | 3,002 | 3,391 | 3,570 | 3,788 | Margins | | | | | |
| Expl & Eval Assets | 9,400 | 10,084 | 11,364 | 12,997 | 14,954 | Gross Margins (%) | 40.09 | 28.59 | 42.29 | 45.05 | 45.89 |
| Non-Current Assets | 23,786 | 26,832 | 31,532 | 32,726 | 34,856 | EBIT Margin (%) | 40.37 | 31.29 | 43.51 | 46.20 | 46.67 |
| Trade Debts | 32,355 | 26,887 | 44,301 | 52,984 | 57,238 | Net Profit Margins (%) | 29.16 | 27.87 | 31.41 | 33.87 | 35.08 |
| Cash | 4,901 | 626 | 3,637 | 16,127 | 27,880 | Macro- Assumption | | | | | |
| Current Assets | 41,868 | 32,727 | 55,777 | 78,329 | 95,195 | Oil (USD/bbl) | 72.5 | 40.7 | 50.0 | 50.0 | 50.0 |
| Total Assets | 65,654 | 59,560 | 87,309 | 111,055 | 130,051 | PKR/USD | 101.4 | 104.3 | 105.3 | 108.0 | 110.7 |
| Trade & Other Payabl | 36,656 | 34,669 | 55,136 | 65,551 | 70,698 | Production (boe) '000 | | | | | |
| Current Liabilities | 39,399 | 35,017 | 57,030 | 68,239 | 73,280 | Total Production | 39,594 | 40,925 | 43,754 | 45,169 | 44,754 |
| Non current liabilities | 54,158 | 42,594 | 70,047 | 79,728 | 82,969 | Oil (bbl) | 414.4 | 472.4 | 835.2 | 882.8 | 882.8 |
| Total Equity | 11,496 | 16,966 | 17,262 | 31,327 | 47,082 | Gas (boe) | 39,179.4 | 40,452.2 | 42,918.5 | 44,286.2 | 43,870.9 |
| Cash Flow Items (PKRmn) | | | | | | | | | | | |
| Operating CF | 6,805 | 8,183 | 15,252 | 17,843 | 18,491 | | | | | | |
| Investing CF | (5,947) | (4,693) | (6,454) | (3,172) | (4,291) | | | | | | |
| Financing CF | (576) | (6,986) | (5,786) | (2,181) | (2,448) | | | | | | |

Source: IGI Research, Company Financials

Updated as of : 1/10/2017

COMPANY UPDATE

Pak Petroleum Ltd.

Oil & Gas Exploration Companies

| Recommendation | | BUY |
|----------------|-----------|-------|
| Target Price | | 218.3 |
| Last Closing | 11-Jan-17 | 184.4 |
| Upside | | 18.4 |

Market Data

| Bloomberg Tkr. | PPL PA | | |
|----------------------------|--------|---------|---------|
| Shares (mn) | | | 1,971.7 |
| Market Cap (PKRbn USDmn) | 363.6 | | 3,470.0 |
| Exchange | | KSE 100 | |
| Price Info. | 90D | 180D | 365D |
| Abs. Return | 17.6 | 8.9 | 61.7 |
| Low | 148.4 | 148.4 | 101.1 |
| High | 193.3 | 193.3 | 193.3 |

Key Company Financials

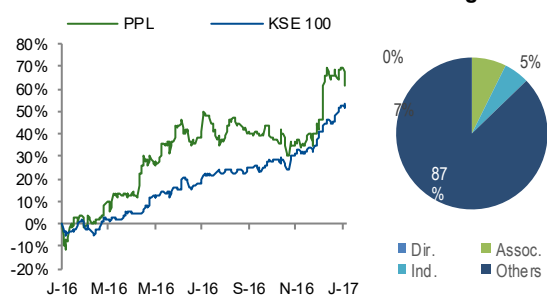
Period End: Jun

| PKRbn | FY16A | FY17E | FY18F | FY19F |
|---------------|-------|-------|-------|-------|
| Total Revenue | 79.9 | 119.2 | 130.1 | 127.1 |
| Net Income | 20.75 | 36.8 | 40.4 | 38.5 |
| EPS (PKR) | 10.5 | 18.7 | 20.5 | 19.5 |
| DPS (PKR) | 4.8 | 8.3 | 9.0 | 8.5 |
| Total Assets | 256.7 | 291.1 | 319.5 | 340.2 |
| Total Equity | 204.4 | 225.1 | 247.7 | 269.2 |

Key Financial Ratios

| | | | | |
|---------|------|------|------|------|
| ROE (%) | 10.2 | 16.3 | 16.3 | 14.3 |
| P/E (x) | 17.5 | 9.9 | 9.0 | 9.4 |
| P/B (x) | 1.8 | 1.6 | 1.5 | 1.4 |
| DY (%) | 2.6 | 4.5 | 4.9 | 4.6 |

Relative Price Performance & Shareholding



About the Company

The Company was incorporated in Pakistan in 1950 with the main objectives of conducting exploration, prospecting, development and production of oil and natural gas resources.

Source: Bloomberg, KSE 100 & IGI Research

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Pakistan Petroleum Limited

When The Going Gets Tough, The Tough Gets Going

Investment Case

We forecast profitability to grow by 3yr CAGR of +19% from FY17E-FY19F owing to a) extension of Sui lease and wellhead price linked with petroleum Policy 2012, b) total production to increase by +8%YoY in FY17F, and c) total additional production is estimated to lift earnings by PKR 2.7/share in FY17. We estimate +65%/+10%YoY jump in earnings in FY17/FY18 to the tune of PKR 18.7/ PKR 20.5 per share.

The Impairment Dilemma

The company financial accounts for FY16 have been delayed due to difference arising in valuation of MND Exploration and production limited (MND) at the date of acquisition conducted by the Consultant and PPL. The management is in discussion with the consultant to assess if any impairment is necessary as of Jun-16. According to the management, impairment amount could range between 0-4bn. Based on impairment of PKR 4bn we expect FY16E earnings to trim down by PKR 2.03/share to PKR 9.28/share. The company is seeking approval from Securities and Exchange Commission of Pakistan (SECP) to adjust impairment charge against FY15 profitability.

Total Production to augment by +8%YoY in FY17F to 63mnBoE

The company's total production is expected to rise by +8%YoY in FY17F to 63mnBoE on the back of additional production of 2,556bopd of oil and 65.2mmcf of gas. Total additional production is expected to add PKR 2.7/share in FY17. Two new wells have been discovered in FY17TD which include Hadi X-1A (Gambat South, 65% stake) and Bashar X-1 St (Hala Block, 65% stake) having cumulative annualized earnings impact of PKR 0.21/share.

Sui Lease extension most likely; New terms of the contract

According to media reports, Federal Government and Government of Baluchistan have agreed to enter in to a new Gas Price agreement (GSA) which expired last year in Jun-15 after which Pakistan Petroleum Limited's (PPL) largest gas producing asset, Sui was granted a provisional extension of 1 year. Federal Government has allowed a further 6-month extension. A memorandum of agreement (MoA) has been signed on May 20, 2016 between MP&NR and the Government of Baluchistan, which is subject to approval of the respective forums. Under the new agreement, Sui will be granted 10-year lease extension which will be effective from Jun-15. One of the key highlights of the lease contract is linking of wellhead gas price of Sui field with Petroleum Policy 2012 (PP12). Based on new pricing policy, we estimate incremental earning impact of PKR 4-5/share. Furthermore, an additional 10% lease extension bonus will be charged as royalty at 55% indexation of the PP12 wellhead price or 12.5% of the total wellhead price under PP12.

Recommendation

We maintain our "BUY" call on PPL with our Dec-17 with target price of PKR 218/share, offering +14% upside from its last closing. The company is currently trading at a FY17E P/E of 10.3x and implied oil price of USD 39.8/bbl.

Graphical Snapshot

Exhibit:
Total Oil production including additional production

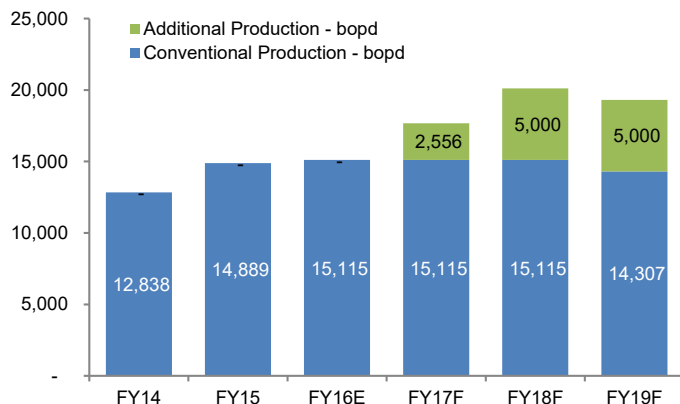


Exhibit:
Total Gas production including additional production

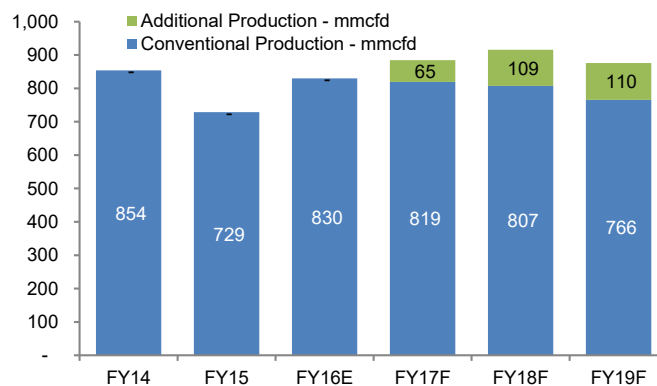


Exhibit:
Gas contribution remains substantial in total revenue mix

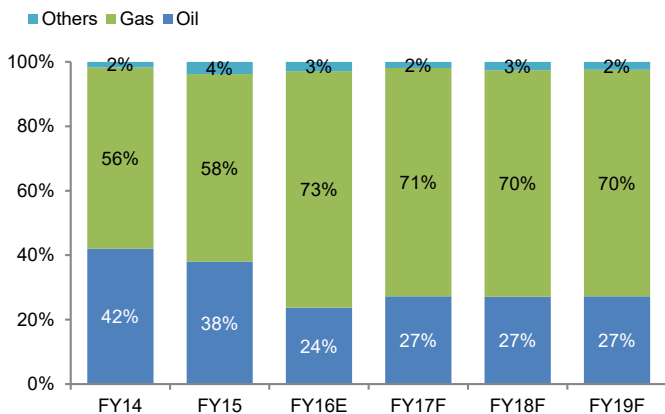
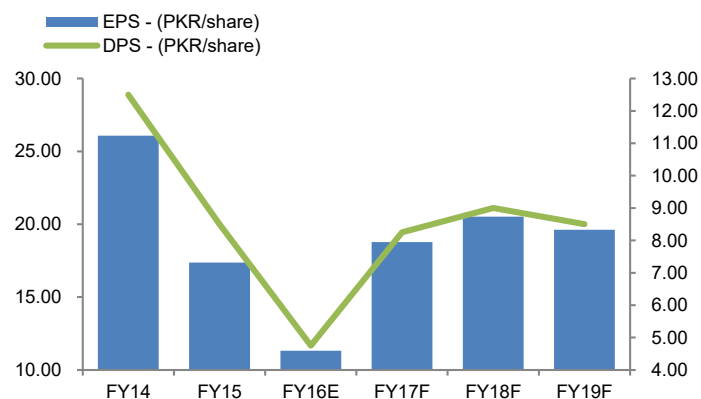


Exhibit:
Earnings to pick up substantially from FY17 onwards



Source: IGI Research, Company Financials.

Valuation

Using Reserve Based Discounted Cash Flow approach, our Dec-17 Target Price of PKR 218/share, with a cost of equity of 13.4% (risk-free rate = 6.25%, beta 1.09 and risk premium 6.50%). The scrip offers +14% return from its last closing price of PKR 191/share.

Valuation Parameters

| | |
|----------------|--------|
| Risk free Rate | 6.25% |
| Beta (3yr) | 1.09 |
| Risk Premium | 6.50% |
| CAPM (CoE) | 13.35% |

Exhibit: Valuation Snapshot

| | Jun-17 | Jun-18 | Jun-19 | Jun-20 | Jun-21 | Jun-22 | Jun-23 | Jun-24 | Jun-25 |
|------------------------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| PKRmn | F | F | F | F | F | F | F | F | F |
| Exchange Rate | 105.3 | 108.0 | 110.7 | 113.4 | 116.3 | 119.2 | 122.2 | 125.2 | 128.3 |
| Arab Light (USD/bbl) | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| Total Oil Production (bbl) | 6,450,089 | 7,341,910 | 7,046,780 | 6,865,363 | 6,826,022 | 5,296,637 | 5,078,168 | 3,253,292 | 3,253,292 |
| Total Oil Revenue | 32,613 | 35,276 | 34,705 | 34,657 | 35,319 | 28,091 | 27,606 | 18,128 | 18,581 |
| Total Gas Production (mmcf) | 298,558 | 293,685 | 278,138 | 269,387 | 255,175 | 248,154 | 248,154 | 242,704 | 240,289 |
| Total Gas Revenue | 78,380 | 80,590 | 78,016 | 77,278 | 74,306 | 72,960 | 73,878 | 69,762 | 70,104 |
| LPG & other Revenue | 2,309 | 3,379 | 3,101 | 2,977 | 1,719 | 1,685 | 603 | 603 | 603 |
| Total Revenue | 119,168 | 130,137 | 127,100 | 126,446 | 123,053 | 114,557 | 114,057 | 88,493 | 89,288 |
| Less Royalty | 26,813 | 29,281 | 28,598 | 28,450 | 27,687 | 25,775 | 25,663 | 19,911 | 20,090 |
| Less Operating Expense | 14,092 | 16,424 | 16,991 | 17,729 | 18,382 | 19,086 | 20,299 | 20,347 | 21,859 |
| Less Taxation | 16,020 | 17,578 | 16,779 | 16,474 | 15,716 | 13,905 | 13,477 | 8,289 | 8,115 |
| Other Income | 4,896 | 5,199 | 5,255 | 5,255 | 5,254 | 5,205 | 4,464 | 3,617 | 3,488 |
| Net Cash flow | 67,139 | 72,052 | 69,987 | 69,048 | 66,522 | 60,995 | 59,082 | 43,562 | 42,713 |
| PV of Cash flows | 67,139 | 67,710 | 58,021 | 50,481 | 42,905 | 34,705 | 29,656 | 19,283 | 16,680 |
| Sum of cash flows | 217.65 | | | | | | | | |
| Cash | 0.64 | | | | | | | | |
| Outstanding Shares | 1,971.73 | | | | | | | | |
| Target Price (Dec-17) - PKR | 218.29 | | | | | | | | |

Financial Summary

Pakistan Petroleum Limited (PPL)

| Current Price (PKR): | 218 | | | | | Upside | 14% | | | | | Recommendation | BUY |
|---------------------------------------|----------|----------|----------|----------|----------|------------------------------|---------|---------|--------|--------|--------|----------------|-----|
| Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | | |
| Income Statement Items (PKRmn) | | | | | | Valuation Ratios | | | | | | | |
| Net Sales | 104,377 | 82,875 | 119,168 | 130,137 | 127,100 | EPS (PKR) | 17.37 | 11.31 | 18.66 | 20.47 | 19.54 | | |
| Field Expenditure | 42,059 | 43,095 | 40,648 | 43,930 | 44,652 | DPS (PKR) | 8.50 | 4.75 | 8.25 | 9.00 | 8.50 | | |
| Royalty | 12,213 | 9,669 | 26,813 | 29,281 | 28,598 | BVPS (PKR) | 97.35 | 103.69 | 114.14 | 125.60 | 136.55 | | |
| Gross Profit | 50,105 | 30,111 | 51,708 | 56,926 | 53,851 | P/E (x) | 10.99 | 16.88 | 10.24 | 9.33 | 9.77 | | |
| Other Income | 7,569 | 5,515 | 5,681 | 6,028 | 6,339 | P/EBITDA (x) | 6.38 | 9.20 | 5.83 | 5.35 | 5.57 | | |
| Oth. Operating Expense | 7,951 | 3,712 | 3,975 | 4,361 | 4,163 | D/Y (%) | 4.45 | 2.62 | 4.29 | 4.71 | 4.50 | | |
| Finance Costs | 554 | 629 | 607 | 648 | 716 | P/B (x) | 1.96 | 1.84 | 1.67 | 1.52 | 1.40 | | |
| Pre-tax Profits | 49,170 | 31,285 | 52,807 | 57,944 | 55,311 | Earnings Growth (%) | (33.38) | (34.88) | 64.91 | 9.73 | (4.54) | | |
| Post- Tax Profits | 34,253 | 22,307 | 36,788 | 40,366 | 38,531 | ROE (%) | 17.84 | 10.91 | 16.35 | 16.30 | 14.31 | | |
| Balance Sheet Items (PKRmn) | | | | | | Macro- Assumption | | | | | | | |
| PPE | 93,774 | 104,909 | 116,043 | 127,294 | 138,545 | ROA (%) | 13.83 | 8.69 | 12.64 | 12.63 | 11.33 | | |
| D/P Asset | 53,701 | 54,032 | 53,843 | 54,194 | 54,555 | Cash / Share | 0.64 | 5.08 | 4.45 | 7.85 | 13.46 | | |
| Expl & Eval Assets | 1,172 | 1,172 | 1,172 | 1,172 | 1,172 | Margins | | | | | | | |
| Non-Current Assets | 149,987 | 161,288 | 172,319 | 183,960 | 195,576 | Gross Margins (%) | 48.00 | 36.33 | 43.39 | 43.74 | 42.37 | | |
| Trade Debts | 58,754 | 53,869 | 67,080 | 73,255 | 71,545 | EBIT Margin (%) | 47.64 | 38.51 | 44.82 | 45.02 | 44.08 | | |
| Cash | 1,267 | 10,021 | 8,768 | 15,482 | 26,542 | Net Profit Margins (%) | 32.82 | 26.92 | 30.87 | 31.02 | 30.32 | | |
| Current Assets | 97,689 | 95,389 | 118,824 | 135,534 | 144,625 | Production (boe) *000 | | | | | | | |
| Total Assets | 247,676 | 256,677 | 291,144 | 319,494 | 340,201 | Oil (USD/bbl) | 72.5 | 40.7 | 50.0 | 50.0 | 50.0 | | |
| Trade & Other Payables | 22,880 | 27,522 | 33,472 | 36,291 | 35,431 | PKR/USD | 101.4 | 104.3 | 105.3 | 108.0 | 110.7 | | |
| Current Liabilities | 22,988 | 28,353 | 34,228 | 37,465 | 36,390 | Production (boe) *000 | | | | | | | |
| Non current liabilities | 32,731 | 23,874 | 31,865 | 34,375 | 34,578 | Total Production | 51,801 | 58,345 | 62,404 | 65,470 | 62,554 | | |
| Total Equity | 247,676 | 256,677 | 291,144 | 319,494 | 340,201 | Oil (bbl) | 5,434 | 5,517 | 6,450 | 7,342 | 7,047 | | |
| Cash Flow Items (PKRmn) | | | | | | Gas (boe) | 46,366 | 52,828 | 55,954 | 58,128 | 55,508 | | |
| Operating CF | 39,175 | 41,111 | 39,408 | 48,279 | 51,106 | | | | | | | | |
| Investing CF | (11,377) | (14,409) | (32,390) | (26,731) | (23,080) | | | | | | | | |
| Financing CF | (20,431) | (17,949) | (8,270) | (14,834) | (16,965) | | | | | | | | |

Source: IGI Research, Company Financials

Updated as of: 1/10/2017

COMPANY UPDATE

Pakistan Oilfields Ltd.

Oil & Gas Exploration Companies

| | |
|-----------------------|----------------|
| Recommendation | NEUTRAL |
| Target Price | 543.8 |
| Last Closing | 540.6 |
| Upside | 1% |

Market Data

| | | | |
|----------------------------|---------|---------|-------|
| Bloomberg Tkr. | POL PA | | |
| Shares (mn) | 236.5 | | |
| Market Cap (PKRbn USDmn) | 127.9 | 1,218.0 | |
| Exchange | KSE 100 | | |
| Price Info. | 90D | 180D | 365D |
| Abs. Return | 30.0 | 43.2 | 127.5 |
| Low | 396.5 | 348.4 | 189.7 |
| High | 559.6 | 559.6 | 559.6 |

Key Company Financials

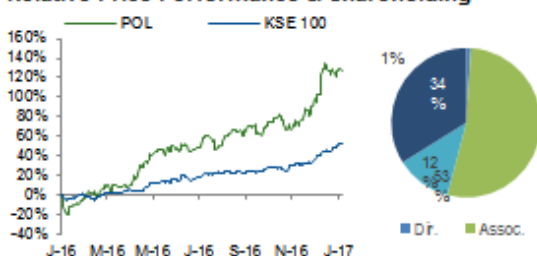
Period End: Jun

| PKRbn | FY16A | FY17E | FY18F | FY19F |
|---------------|-------|-------|-------|-------|
| Total Revenue | 24.8 | 30.5 | 34.0 | 33.1 |
| Net Income | 7.23 | 10.1 | 12.1 | 11.9 |
| EPS (PKR) | 30.6 | 42.6 | 51.0 | 50.2 |
| DPS (PKR) | 35.0 | 42.0 | 47.0 | 49.0 |
| Total Assets | 55.7 | 59.7 | 63.5 | 64.3 |
| Total Equity | 30.2 | 30.3 | 31.2 | 31.5 |

Key Financial Ratios

| | | | | |
|---------|------|------|------|------|
| ROE (%) | 24.0 | 33.3 | 38.6 | 37.6 |
| P/E (x) | 17.7 | 12.7 | 10.6 | 10.8 |
| P/B (x) | 4.2 | 4.2 | 4.1 | 4.1 |
| DY (%) | 6.5 | 7.8 | 8.7 | 9.1 |

Relative Price Performance & Shareholding



About the Company

The Company is incorporated in Pakistan as a public limited company. The Company is principally engaged in exploration, drilling and production of crude oil and gas. The Company is a subsidiary of the Attock Oil Company Limited, UK and its ultimate parent is Bay View International Group, S.A.

Source: Bloomberg, KSE 100 & IGI Research

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Pakistan Oilfields Limited

The Charm of Dividend Yield

Investment Case

We forecast profitability to grow by 3yr CAGR of +18% from FY17E-FY19F. We estimate +39%/+20%YoY jump in earnings in FY17 to the tune of PKR 42.6/ PKR 50.9 per share owing to a) total production to increase by +11%YoY in FY17F, b) POL generates 39% revenue from oil making it more vulnerable to oil price volatility, and c) conversion of Maramzai, Mamikhel and Makori east to Petroleum Policy 2007 and 2009 (PP07, PP09). Moreover, we maintain bearish stance on POL on the back of lowest reserve life, heavy reliance on Tal block for oil and gas production and sluggish exploratory efforts in company operated concessions.

Total Production to augment by +11%YoY in FY17F to 7.4mnBoE

The company's total production is expected to rise by +11%YoY in FY17F to 7.4mnBoE on the back of additional production of 1,063bopd of oil and 9.7mmcf of gas. Total additional production is expected to add PKR 7.2/share in FY17. Cumulative additional production emanates solely from Tal block including Mardankhel-1, Makori Deep-1, Tolanj West-1, Makori East-5 and Maramzai-4.

Conversion of Concessions to PP12 for new discoveries

POL has signed a supplemental agreement with GoP for conversion of concessions to Petroleum Policy 2012, which includes Ikhlas, DG Khan, Kirthar South, Margala, Margala North, Gurgalot and Tal Block. In accordance with Supplemental Agreement signed with Government for conversion to PP12, POL received retrospective incremental income from Maramzai, Mamikhel and Makori East in respect of higher gas price applicable for the period from 1st Jul-15 to 31st Dec-15. As per our estimates, gas price for Mamikhel (PP07) and Maramzai/Makori East (PP09) has elevated by USD 0.12/mmbtu and USD 0.83/mmbtu, respectively. Mardankhel, Tolanj West and Makori Deep will also be priced under PP12. As per management estimates, upon finalization of conversion documentation, the due amount in lieu of Tal Block (Mamikhel, Maramzai and Makori East) and Domial in Ikhlas block, up until 30th Jun-15 accumulates to USD 34.39mn (PKR 3,597mn) having after tax earnings impact of PKR 10/share.

POL offers highest dividend yield of 8% compared to its peers

POL offers highest dividend yield of 7.7% as compared to 4% each of OGDC and PPL.

Low reserve life and heavy reliance on Tal Block

The company relies heavily on Tal block for its oil and gas production contributing 67% and 77% of total oil and gas production. Considering low reserve life of Tal block, company stands at lowest reserve life of 7.9 years as compared to its peers.

Recommendation

We maintain our "HOLD" call on POL with our Dec-17 with target price of PKR 544/share, offering +1% upside from its last closing. The company is currently trading at a FY17E P/E of 12.7x and offers a healthy dividend yield of 7.8%.

Graphical Snapshot

Exhibit:
POL Oil production

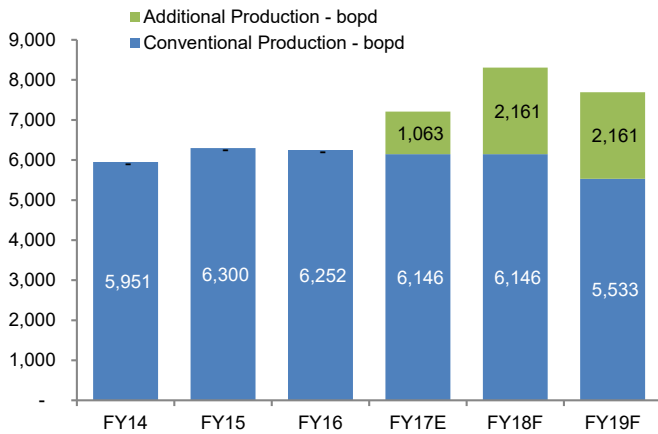


Exhibit:
Gas production

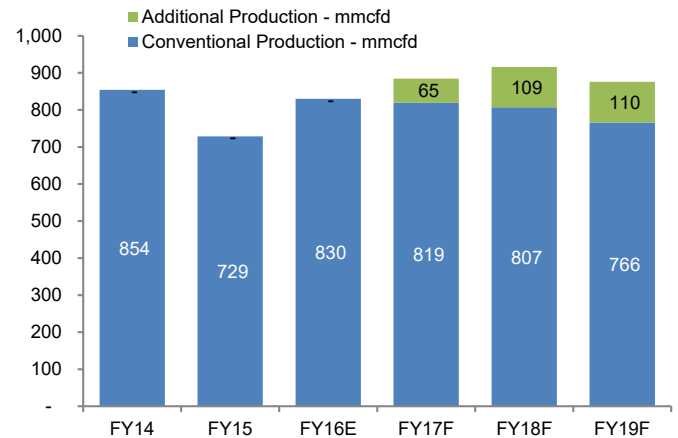


Exhibit:
Oil contribution remains dominant in total revenue mix

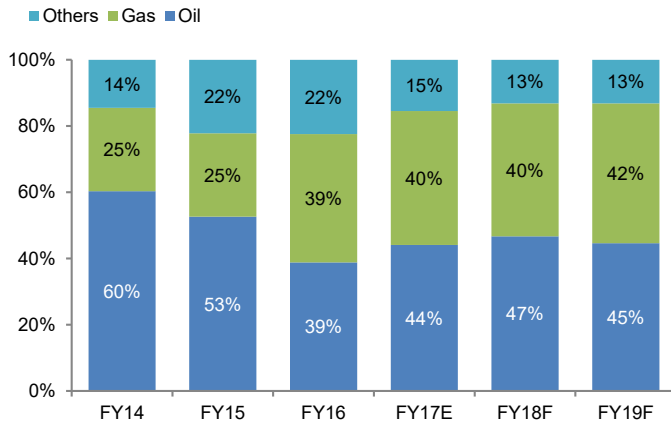
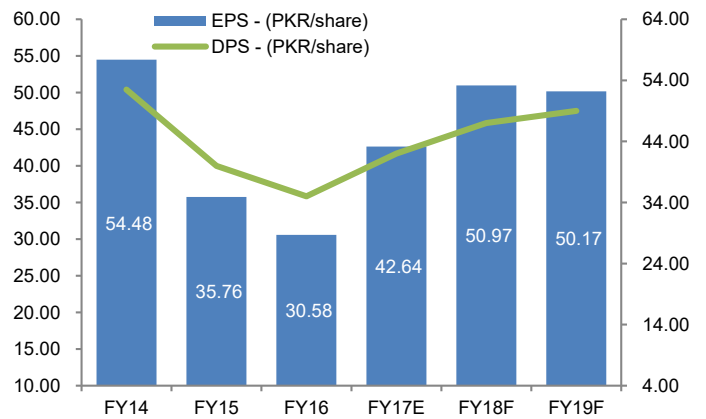


Exhibit:
Earnings to pick up



Source: IGI Research, Company Financials.

Valuation

Using Reserve Based Discounted Cash Flow approach, our Dec-17 Target Price of PKR 544/share, with a cost of equity of 12.8% (risk-free rate 6.25%, beta 1.02 and risk premium 6.50%).

Valuation Parameters

| | |
|----------------|--------|
| Risk free Rate | 6.25% |
| Beta (3yr) | 1.02 |
| Risk Premium | 6.50% |
| CAPM (CoE) | 12.88% |

| | Jun-17 | Jun-18 | Jun-19 | Jun-20 | Jun-21 | Jun-22 | Jun-23 | Jun-24 | Jun-25 |
|------------------------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|
| PKRmn | F | F | F | F | F | F | F | F | F |
| Exchange Rate | 105.3 | 108.0 | 110.7 | 113.4 | 116.3 | 119.2 | 122.2 | 125.2 | 128.3 |
| Arab Light (USD/bbl) | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| Total Oil Production (bbl) | 2,631,419 | 3,031,972 | 2,808,204 | 2,637,182 | 2,605,268 | 1,635,620 | 1,450,833 | 654,299 | 570,748 |
| Total Oil Revenue | 13,444 | 15,877 | 14,763 | 14,210 | 14,389 | 9,259 | 8,419 | 3,892 | 3,480 |
| Total Gas Production (mmcf) | 30,641 | 32,153 | 32,153 | 30,893 | 24,033 | 18,814 | 18,341 | 6,424 | 3,628 |
| Total Gas Revenue | 12,311 | 13,639 | 13,980 | 13,920 | 11,342 | 9,080 | 9,205 | 2,536 | 1,251 |
| LPG & other Revenue | 4,713 | 4,460 | 4,350 | 4,246 | 2,505 | 1,728 | 1,736 | 1,212 | 1,037 |
| Total Revenue | 30,468 | 33,976 | 33,092 | 32,375 | 28,236 | 20,068 | 19,360 | 7,639 | 5,768 |
| Less Royalty | 2,803 | 3,189 | 3,075 | 3,024 | 2,630 | 1,872 | 1,805 | 712 | 538 |
| Less Operating Expense | 7,700 | 7,930 | 7,649 | 6,889 | 5,407 | 3,984 | 3,847 | 1,988 | 1,585 |
| Less Taxation | 3,614 | 4,320 | 4,252 | 4,288 | 3,794 | 2,452 | 2,362 | 508 | 506 |
| Other Income | 1,890 | 2,075 | 2,215 | 2,253 | 2,181 | 2,033 | 1,901 | 1,843 | 1,863 |
| Net Cash flow | 18,242 | 20,612 | 20,331 | 20,427 | 18,586 | 13,793 | 13,248 | 6,274 | 5,001 |
| PV of Cash flows | 19,391 | 19,410 | 16,961 | 15,092 | 12,165 | 7,997 | 6,805 | 2,854 | 2,015 |
| Sum of cash flows | 461.87 | | | | | | | | |
| Cash | 45.50 | | | | | | | | |
| Outstanding Shares | 237 | | | | | | | | |
| Target Price (Dec-17) - PKR | 543.80 | | | | | | | | |

Financial Summary

Pakistan Oilfields Limited (POL)

| Current Price (PKR): | 539 | | | | | Target Price (PKR): | 544 | | | | | Upside | 1% | | | | | Recommendation | HOLD | | | | |
|---------------------------------------|---------|---------|---------|----------|----------|--------------------------------|---------|---------|---------|---------|---------|--------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|
| Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | Jun-end | FY15A | FY16A | FY17E | FY18F | FY19F | | FY15A | FY16A | FY17E | FY18F | FY19F | | FY15A | FY16A | FY17E | FY18F | FY19F |
| Income Statement Items (PKRmn) | | | | | | Valuation Ratios | | | | | | | | | | | | | | | | | |
| Net Sales | 30,881 | 24,848 | 30,468 | 33,976 | 33,092 | EPS (PKR) | 35.76 | 30.58 | 42.64 | 50.97 | 50.17 | | | | | | | | | | | | |
| Royalty | 2,610 | 2,021 | 2,478 | 2,827 | 2,722 | DPS (PKR) | 40.00 | 35.00 | 42.00 | 47.00 | 49.00 | | | | | | | | | | | | |
| Operating Costs | 8,726 | 8,872 | 8,772 | 9,015 | 8,790 | BVPS (PKR) | 136.82 | 127.48 | 128.11 | 132.08 | 133.25 | | | | | | | | | | | | |
| Gross Profit | 16,267 | 11,243 | 15,892 | 18,425 | 17,967 | P/E (x) | 15.08 | 17.64 | 12.65 | 10.58 | 10.75 | | | | | | | | | | | | |
| Exploration Costs | 4,729 | 2,052 | 2,114 | 2,177 | 2,242 | P/EBITDA (x) | 7.61 | 9.28 | 6.76 | 5.87 | 5.98 | | | | | | | | | | | | |
| Other Income | 1,563 | 1,411 | 1,890 | 2,075 | 2,215 | D/Y (%) | 7.42 | 6.49 | 7.79 | 8.71 | 9.09 | | | | | | | | | | | | |
| Finance Costs | 987 | 1,022 | 933 | 711 | 613 | P/B (x) | 3.94 | 4.23 | 4.21 | 4.08 | 4.05 | | | | | | | | | | | | |
| Pre-tax Profits | 11,489 | 8,880 | 13,700 | 16,377 | 16,118 | Earnings Growth (%) | 674.79 | 396.14 | 39.44 | 19.54 | (1.58) | | | | | | | | | | | | |
| Post-Tax Profits | 8,459 | 7,234 | 10,086 | 12,057 | 11,867 | ROE (%) | 26.14 | 23.99 | 33.29 | 38.59 | 37.65 | | | | | | | | | | | | |
| Balance Sheet Items (PKRmn) | | | | | | ROA (%) | | | | | | | | | | | | | | | | | |
| PPE | 10,489 | 10,421 | 10,325 | 10,207 | 10,068 | ROA (%) | 15.26 | 12.98 | 16.91 | 18.98 | 18.44 | | | | | | | | | | | | |
| D/P Asset | 12,412 | 14,585 | 13,311 | 11,731 | 11,387 | Cash / Share | 44.87 | 45.50 | 62.54 | 82.07 | 88.62 | | | | | | | | | | | | |
| Expl & Eval Assets | 2,661 | 901 | 901 | 901 | 901 | Margins | | | | | | | | | | | | | | | | | |
| Non-Current Assets | 25,562 | 25,907 | 24,536 | 22,840 | 22,356 | Gross Margins (%) | 52.68 | 45.25 | 52.16 | 54.23 | 54.29 | | | | | | | | | | | | |
| Trade Debts | 3,477 | 3,336 | 4,090 | 4,561 | 4,443 | EBIT Margin (%) | 40.40 | 39.85 | 48.03 | 50.29 | 50.56 | | | | | | | | | | | | |
| Cash | 10,614 | 10,764 | 14,794 | 19,413 | 20,964 | Net Profit Margins (%) | 27.39 | 29.11 | 33.10 | 35.49 | 35.86 | | | | | | | | | | | | |
| Current Assets | 20,245 | 20,176 | 25,492 | 31,043 | 32,347 | Macro- Assumption | | | | | | | | | | | | | | | | | |
| Total Assets | 55,444 | 55,717 | 59,663 | 63,517 | 64,337 | Oil (USD/bbl) | 72.5 | 40.7 | 50.0 | 50.0 | 50.0 | | | | | | | | | | | | |
| Trade & Other Payables | 4,876 | 5,551 | 6,440 | 7,066 | 7,096 | PKR/USD | 101.4 | 104.3 | 105.3 | 108.0 | 110.7 | | | | | | | | | | | | |
| Current Liabilities | 8,536 | 9,096 | 10,410 | 12,520 | 13,495 | Production (Units) '000 | | | | | | | | | | | | | | | | | |
| Non-current liabilities | 14,544 | 16,468 | 18,950 | 19,754 | 19,324 | Total Production (000'boe) | 6,854 | 7,092 | 8,007 | 8,673 | 8,449 | | | | | | | | | | | | |
| Total Equity | 32,365 | 30,154 | 30,303 | 31,243 | 31,519 | Oil (000'bbl) | 2,299.5 | 2,282.0 | 2,631.4 | 3,032.0 | 2,808.2 | | | | | | | | | | | | |
| Cash Flow Items (PKRmn) | | | | | | Gas (000'boe) | | | | | | | | | | | | | | | | | |
| Operating CF | 13,584 | 11,853 | 14,360 | 17,869 | 17,679 | Gas (000'boe) | 4,554.2 | 4,809.6 | 5,375.7 | 5,640.9 | 5,640.9 | | | | | | | | | | | | |
| Investing CF | (2,711) | (4,183) | (2,874) | (2,937) | (4,108) | | | | | | | | | | | | | | | | | | |
| Financing CF | (9,257) | (6,355) | (7,455) | (10,313) | (12,021) | | | | | | | | | | | | | | | | | | |

Source: IGI Research, Company Financials

Updated as of : 1/10/2017

Price Sensitivity to changes in oil prices

Pakistan Oilfields Limited (POL)

| Scenarios | Oil Assumption (USD/bbl) | | | EPS (PKR) | | | Target Price (PKR) - Dec-17 |
|-----------|--------------------------|------|------|-----------|------|------|-----------------------------|
| | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 | |
| Bear | 45.0 | 45.0 | 45.0 | 38.6 | 46.1 | 45.6 | 513.6 |
| Base | 50.0 | 50.0 | 50.0 | 42.6 | 51.0 | 50.2 | 543.8 |
| Bull 1 | 55.0 | 55.0 | 55.0 | 46.6 | 55.6 | 54.6 | 572.8 |
| Bull 2 | 60.0 | 60.0 | 60.0 | 50.5 | 60.3 | 59.0 | 601.8 |
| Bull 3 | 65.0 | 65.0 | 65.0 | 54.4 | 64.9 | 63.4 | 630.7 |

Oil & Gas Development Company (OGDC)

| Scenarios | Oil Assumption (USD/bbl) | | | EPS (PKR) | | | Target Price (PKR) - Dec-17 |
|-----------|--------------------------|------|------|-----------|------|------|-----------------------------|
| | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 | |
| Bear | 45.0 | 45.0 | 45.0 | 17.6 | 19.8 | 18.4 | 189.6 |
| Base | 50.0 | 50.0 | 50.0 | 18.5 | 20.9 | 19.4 | 196.2 |
| Bull 1 | 55.0 | 55.0 | 55.0 | 19.4 | 21.9 | 20.3 | 202.6 |
| Bull 2 | 60.0 | 60.0 | 60.0 | 20.2 | 22.9 | 21.3 | 209.0 |
| Bull 3 | 65.0 | 65.0 | 65.0 | 21.1 | 23.9 | 22.2 | 215.4 |

Pakistan Petroleum Limited (PPL)

| Scenarios | Oil Assumption (USD/bbl) | | | EPS (PKR) | | | Target Price (PKR) - Dec-17 |
|-----------|--------------------------|------|------|-----------|------|------|-----------------------------|
| | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 | |
| Bear | 45.0 | 45.0 | 45.0 | 17.1 | 18.8 | 17.9 | 204.7 |
| Base | 50.0 | 50.0 | 50.0 | 18.7 | 20.5 | 19.5 | 218.3 |
| Bull 1 | 55.0 | 55.0 | 55.0 | 20.0 | 21.9 | 20.9 | 229.2 |
| Bull 2 | 60.0 | 60.0 | 60.0 | 21.3 | 23.3 | 22.3 | 240.2 |
| Bull 3 | 65.0 | 65.0 | 65.0 | 22.6 | 24.7 | 23.7 | 251.2 |

Mari Petroleum Limited (MARI)

| Scenarios | Oil Assumption (USD/bbl) | | | EPS (PKR) | | | Target Price (PKR) - Dec-17 |
|-----------|--------------------------|------|------|-----------|-------|-------|-----------------------------|
| | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 | |
| Bear | 45.0 | 45.0 | 45.0 | 97.1 | 124.7 | 139.3 | 1,473.1 |
| Base | 50.0 | 50.0 | 50.0 | 104.5 | 133.5 | 148.8 | 1,538.8 |
| Bull 1 | 55.0 | 55.0 | 55.0 | 110.5 | 140.5 | 156.5 | 1,591.9 |
| Bull 2 | 60.0 | 60.0 | 60.0 | 116.5 | 147.6 | 164.1 | 1,644.9 |
| Bull 3 | 65.0 | 65.0 | 65.0 | 122.5 | 154.6 | 171.8 | 1,698.0 |

Source: IGI Research

Risk to Our Investment Thesis

Oil Price Volatility to bring earnings down

Although we believe that oil prices are going to remain steady and a steep drop in oil price is highly unlikely but we highlight that any substantial drop in oil price would adversely affect company earnings. We expect long term oil price of USD 50/bbl.

Hazards during drilling and dry well

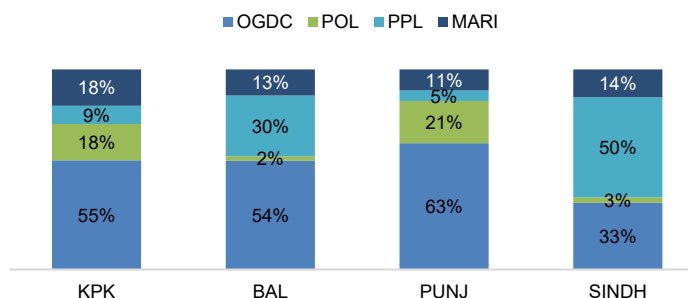
Oil and gas drilling inherently is a high risk activity. Companies are exposed to a number of hazards during drilling of wells including fire hazards and injury. In addition, the risk of not discovering oil/gas as expected would have a negative impact on earnings. These risks can be avoided by selecting efficient and professional teams and also by having strict criterion for selecting rig and other allied services/equipment.

Security Situation in Pakistan, especially Baluchistan

Security situation in Pakistan has improved over the recent years especially Baluchistan where in past security concerns has resulted in lack of exploration and drilling. However, improved security situation in Pakistan should propel exploration in Baluchistan and KPK where security concerns led to lack of new exploration.

Exhibit:

Blocks in Provinces



Source: IGI Research, Company Financials

Wellhead prices for converted blocks

Wellhead prices for converted blocks have yet to be notified formally which is a matter of concern for Pakistan E&P companies and they await retrospective payments in respect of those blocks. Once notified, companies are expected to receive due payments from the time of conversion grant date.

Circular debt

Circular debt has piled up in recent times to level last seen in 2013 when Government intervened and partially cleared the amount through different cash schemes. OGDC and PPL are more effected by circular debt and as a result dividend payout has been restricted as compared to POL. Moreover, PIBs maturity stand in Jul-17 and if rolled over would result in lower mark-up rate for OGDC and PPL.

Annexures

Annexure-1:

Oil (WTI) Futures

Exhibit:

Futures Contract for WTI Crude showing price less than USD 57.2/bbl - (30th Dec-16)

| Contract Month | Last | Change | Open | High | Low | Volumes |
|----------------|--------------|-------------|--------------|--------------|--------------|------------|
| Cash | 53.78s | (0.23) | - | 53.78 | 53.78 | - |
| Feb-17 | 53.95 | 0.18 | 53.87 | 54.01 | 53.77 | 13,832 |
| Mar-17 | 54.90 | 0.18 | 54.81 | 54.96 | 54.69 | 2,791 |
| Apr-17 | 55.67 | 0.18 | 55.53 | 55.71 | 55.46 | 1,035 |
| May-17 | 56.30 | 0.19 | 56.33 | 56.33 | 56.12 | 418 |
| Jun-17 | 56.72 | 0.17 | 56.68 | 56.78 | 56.52 | 301 |
| Jul-17 | 56.89 | 0.07 | 57.02 | 57.02 | 56.89 | 66 |
| Aug-17 | 56.95 | (0.01) | 56.95 | 56.95 | 56.95 | 14 |
| Sep-17 | 57.20 | 0.16 | 57.20 | 57.20 | 57.08 | 66 |
| Oct-17 | 57.08s | (0.01) | 57.23 | 57.27 | 56.95 | 5,112 |
| Nov-17 | 57.05 | (0.05) | 57.16 | 57.16 | 57.05 | 17 |
| Dec-17 | 57.22 | 0.11 | 57.09 | 57.29 | 57.05 | 166 |
| Jan-18 | 57.03s | (0.01) | 57.20 | 57.27 | 57.01 | 1,832 |
| Feb-18 | 56.95s | - | - | 56.95 | 56.89 | 448 |
| Mar-18 | 56.86s | 0.01 | 57.00 | 57.00 | 56.86 | 1,035 |
| Apr-18 | 56.76s | 0.02 | - | 56.76 | 56.76 | 286 |
| May-18 | 56.67s | 0.03 | 56.88 | 56.88 | 56.67 | 191 |
| Jun-18 | 56.61s | 0.03 | 56.34 | 56.84 | 56.30 | 3,314 |
| Jul-18 | 56.52s | 0.03 | - | 56.52 | 56.52 | 467 |
| Aug-18 | 56.46s | 0.03 | - | 56.46 | 56.46 | 259 |
| Sep-18 | 56.43s | 0.03 | - | 56.43 | 56.43 | 78 |
| Oct-18 | 56.40s | 0.03 | - | 56.40 | 56.40 | 35 |
| Nov-18 | 56.39s | 0.03 | - | 56.39 | 56.39 | 45 |
| Dec-18 | 56.57 | 0.18 | 56.56 | 56.57 | 56.55 | 16 |

Source: Bloomberg, Investing, IGI Research

* Volume: one contract = 1,000 barrels

Annexure-2:

Drilling activity and Production increasing substantially in Dec-16 in Permian Basin

Exhibit:

Shale Oil Production and Rig Count - County wise

| | Jan-17 | Dec-16 | Nov-16 | Oct-16 | Sep-16 | Aug-16 | Jul-16 | Jun-16 | May-16 | Apr-16 | Mar-16 | Feb-16 | Jan-16 |
|---|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| WTI Oil (USD/bbl) | - | 52.17 | 45.76 | 49.94 | 45.23 | 44.80 | 44.80 | 48.85 | 46.80 | 41.12 | 37.96 | 30.62 | 31.78 |
| Total Oil Production from Plays below (MBPD) | - | 4,542 | 4,541 | 4,570 | 4,610 | 4,670 | 4,747 | 4,851 | 4,829 | 4,887 | 4,952 | 5,055 | 5,110 |
| Permian | - | 2,127 | 2,089 | 2,063 | 2,042 | 2,030 | 2,034 | 2,037 | 2,004 | 1,991 | 1,989 | 1,980 | 1,964 |
| Eagle Ford | - | 980 | 1,003 | 1,036 | 1,066 | 1,102 | 1,146 | 1,188 | 1,209 | 1,245 | 1,299 | 1,339 | 1,386 |
| Bakken | - | 906 | 918 | 937 | 959 | 984 | 996 | 1,047 | 1,046 | 1,068 | 1,066 | 1,132 | 1,140 |
| DJ Niobrara | - | 406 | 403 | 404 | 409 | 417 | 427 | 432 | 420 | 428 | 438 | 444 | 455 |
| Haynesville | - | 42 | 42 | 43 | 44 | 44 | 45 | 45 | 46 | 47 | 48 | 48 | 49 |
| Marcellus | - | 36 | 36 | 35 | 36 | 36 | 39 | 39 | 39 | 40 | 42 | 39 | 41 |
| Utica - Ohio | - | 46 | 49 | 51 | 54 | 57 | 60 | 63 | 66 | 69 | 71 | 73 | 75 |
| Rig Productivity - New Well Production per Rig | | | | | | | | | | | | | |
| Rig Productivity - Oil Barrels per Rig (New Wells Only) | | | | | | | | | | | | | |
| Permian | 634 | 629 | 621 | 612 | 603 | 594 | 583 | 571 | 558 | 547 | 527 | 503 | 475 |
| Eagle Ford | 1,341 | 1,315 | 1,290 | 1,264 | 1,240 | 1,216 | 1,192 | 1,171 | 1,150 | 1,130 | 1,107 | 1,084 | 1,060 |
| Bakken | 967 | 947 | 927 | 905 | 884 | 861 | 838 | 815 | 792 | 770 | 749 | 730 | 707 |
| DJ Niobrara | 1,218 | 1,182 | 1,148 | 1,113 | 1,080 | 1,046 | 1,013 | 982 | 951 | 922 | 893 | 866 | 836 |
| Haynesville | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| Marcellus | 69 | 69 | 69 | 68 | 68 | 67 | 75 | 71 | 66 | 62 | 57 | 51 | 45 |
| Utica - Ohio | 118 | 127 | 136 | 145 | 154 | 162 | 170 | 176 | 183 | 188 | 193 | 197 | 201 |
| US Wells Inventory | | | | | | | | | | | | | |
| Drilled But Uncompleted Wells (DUC) | - | - | 5,218 | 5,154 | 5,082 | 5,057 | 5,091 | 5,150 | 5,250 | 5,393 | 5,517 | 5,511 | 5,547 |
| Bakken | - | - | 814 | 813 | 809 | 813 | 831 | 841 | 856 | 870 | 867 | 848 | 831 |
| Eagle Ford | - | - | 1,278 | 1,297 | 1,324 | 1,341 | 1,355 | 1,389 | 1,424 | 1,497 | 1,545 | 1,568 | 1,581 |
| Haynesville | - | - | 152 | 153 | 151 | 149 | 157 | 146 | 155 | 150 | 159 | 163 | 168 |
| Marcellus | - | - | 623 | 636 | 643 | 652 | 672 | 696 | 699 | 706 | 715 | 727 | 746 |
| Niobrara | - | - | 675 | 672 | 660 | 670 | 689 | 713 | 737 | 769 | 801 | 799 | 802 |
| Permian | - | - | 1,568 | 1,469 | 1,379 | 1,313 | 1,270 | 1,235 | 1,236 | 1,242 | 1,262 | 1,244 | 1,265 |
| Utica | - | - | 109 | 115 | 116 | 118 | 118 | 130 | 144 | 161 | 168 | 162 | 153 |
| Drilled Wells | - | - | 635 | 586 | 524 | 540 | 435 | 421 | 401 | 399 | 500 | 528 | 667 |
| Completed Wells | - | - | 570 | 514 | 499 | 575 | 494 | 521 | 544 | 522 | 494 | 564 | 617 |
| U.S. Average Rig Count by Play - Oil Rigs | - | 502 | 462 | 436 | 416 | 397 | 359 | 330 | 320 | 348 | 384 | 430 | 515 |

Source: Bloomberg, IGI Research

Annexure-3:

Saudi Arabia Balance of Payment Negative as it needs USD 57.2/bbl Oil Price to Breakeven

Exhibit:

Crude Oil Price Average - Yearly

| USD/bbl | Dec-04 | Dec-05 | Dec-06 | Dec-07 | Dec-08 | Dec-09 | Dec-10 | Dec-11 | Dec-12 | Dec-13 | Dec-14 | Dec-15 | Dec-16 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Arab Light | 34.48 | 50.23 | 61.63 | 69.11 | 94.80 | 62.67 | 78.22 | 108.08 | 111.36 | 107.99 | 98.13 | 50.56 | 40.99 |
| Brent | 38.28 | 54.55 | 65.41 | 72.71 | 97.51 | 61.98 | 79.73 | 111.14 | 111.96 | 108.81 | 98.81 | 52.32 | 44.11 |
| WTI | 41.43 | 56.56 | 66.07 | 72.32 | 99.53 | 61.85 | 79.49 | 95.08 | 94.12 | 97.98 | 93.00 | 48.70 | 43.28 |

Exhibit:

Saudi Arabia Oil production at peak but low oil prices keeping Balance of Payment Negative

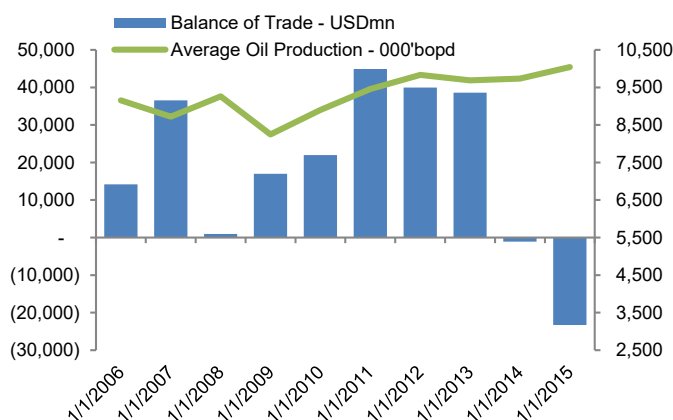


Exhibit:

Russia Balance of Payment in check with rising production amid low oil prices

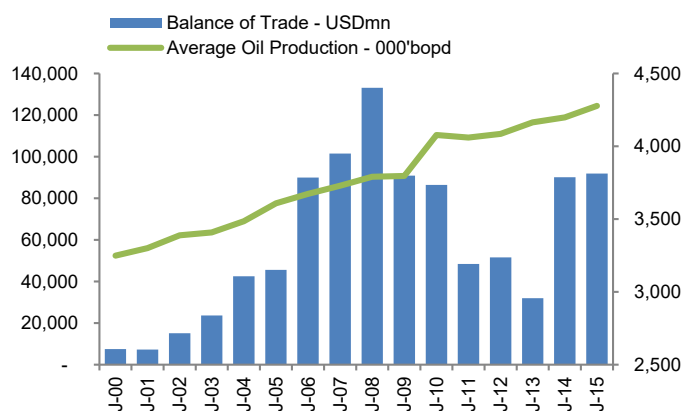


Exhibit:

U.A.E balance of payment in remains positive as required oil price to breakeven stands at USD 40.9/bbl

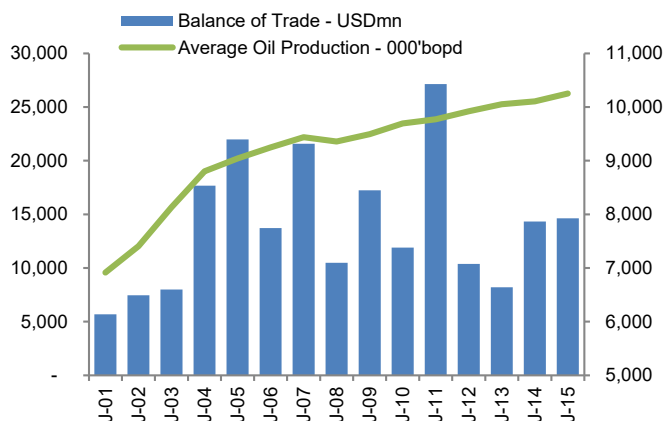
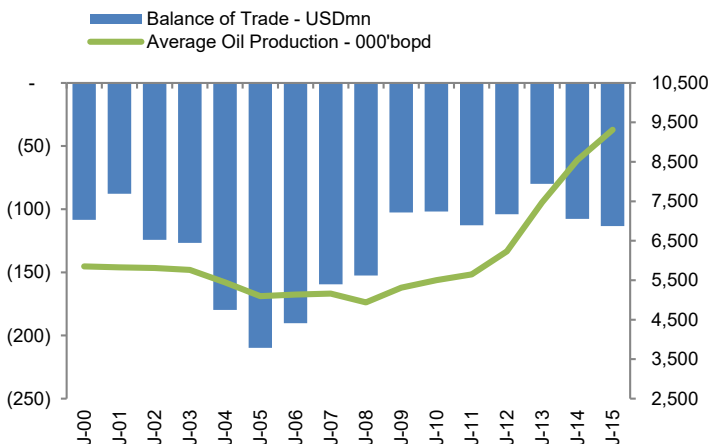


Exhibit:

U.S balance of payment remains negative despite peak production levels owing to deferred payments



Source: IGI Research, Company Financials.

Annexure-4:

Breakeven oil price for Middle East, North Africa and Central Asian oil producers

Exhibit:

Breakeven Prices (\$/bbl)

| | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| Fiscal Breakeven (fiscal balance is zero) | | | | | | | | | | | | |
| Middle East and North Africa | | | | | | | | | | | | |
| Algeria | 90.6 | 111.2 | 135.3 | 108.1 | 122.8 | 109.7 | 85.0 | 79.2 | 77.0 | - | - | - |
| Bahrain | 93.8 | 106.3 | 122.5 | 130.4 | 119.4 | 110.7 | 102.8 | 82.5 | 79.7 | 65.5 | 56.9 | 46.0 |
| Iran | 55.3 | 60.1 | 100.0 | 115.8 | 97.7 | 98.1 | 64.1 | 60.4 | 75.8 | 45.4 | 50.0 | 35.8 |
| Iraq | 58.3 | 64.7 | 113.2 | 114.6 | 102.9 | 101.9 | 94.8 | 89.4 | 108.6 | 65.7 | 59.7 | 59.4 |
| Kuwait | 47.8 | 48.3 | 55.8 | 42.5 | 49.0 | 46.2 | 48.5 | 30.0 | 33.0 | - | - | - |
| Libya | 216.5 | 196.9 | 206.0 | 110.8 | 62.8 | 148.8 | 65.3 | 70.4 | 55.4 | 38.2 | 30.0 | 27.3 |
| Oman | 77.5 | 99.3 | 94.0 | 93.8 | 79.8 | 77.9 | 66.6 | 61.1 | 61.7 | 42.1 | 39.1 | 36.0 |
| Qatar | 62.1 | 58.3 | 57.8 | 62.7 | 66.1 | 62.2 | 64.5 | 59.0 | 51.9 | 47.0 | 42.8 | 34.7 |
| Saudi Arabia | 79.7 | 92.9 | 105.7 | 88.9 | 77.9 | 78.1 | 69.5 | 73.6 | 37.6 | - | - | - |
| United Arab Emirates | 58.6 | 60.1 | 79.0 | 69.4 | 69.9 | 85.1 | 70.1 | 77.4 | 34.4 | 7.7 | 3.0 | 6.8 |
| Yemen | 364.0 | 305.0 | 160.0 | 214.8 | 237.0 | 195.0 | 130.0 | 138.0 | - | - | - | - |
| Central Asia | | | | | | | | | | | | |
| Azerbaijan | 70.0 | 71.9 | 89.6 | 108.2 | 97.2 | 75.6 | 48.4 | 32.7 | 35.2 | 21.1 | 24.9 | 9.1 |
| Kazakhstan | 82.7 | 88.1 | 65.5 | 63.2 | 67.2 | 56.8 | 68.9 | 71.1 | 88.7 | 35.8 | 18.7 | 24.3 |
| Turkmenistan | 47.0 | 50.4 | 81.3 | 77.4 | 76.6 | 90.9 | - | - | - | - | - | - |
| External Breakeven (current account balance is zero) | | | | | | | | | | | | |
| Middle East and North Africa | | | | | | | | | | | | |
| Algeria | 76.9 | 84.9 | 94.8 | 87.5 | 77.0 | 68.1 | 58.9 | 55.6 | 49.3 | - | - | - |
| Bahrain | 65.3 | 65.7 | 75.5 | 67.2 | 61.8 | 71.3 | 66.3 | 54.2 | 63.8 | 29.2 | 31.7 | 31.6 |
| Iran | 31.3 | 36.1 | 56.4 | 59.8 | 60.9 | 51.5 | 60.6 | 57.9 | 60.5 | 47.2 | 39.6 | 34.8 |
| Iraq | 47.4 | 56.0 | 100.0 | 100.8 | 94.7 | 76.6 | 70.0 | 67.4 | 61.6 | 63.5 | 49.7 | 32.9 |
| Kuwait | 40.1 | 45.5 | 43.5 | 38.0 | 32.1 | 32.7 | 31.5 | 25.9 | 24.9 | - | - | - |
| Libya | 207.8 | 179.9 | 184.9 | 83.2 | 63.2 | 86.3 | 53.7 | 45.5 | 37.7 | 26.8 | 21.0 | 24.1 |
| Oman | 78.4 | 86.1 | 84.2 | 89.8 | 69.4 | 57.8 | 57.9 | 59.1 | 78.0 | 54.1 | 37.4 | - |
| Qatar | 46.1 | 40.6 | 54.8 | 53.2 | 52.3 | 54.2 | 49.7 | 49.9 | - | - | - | - |
| Saudi Arabia | 57.2 | 68.8 | 72.2 | 59.3 | 55.3 | 52.9 | 52.6 | 53.8 | 50.5 | - | - | - |
| United Arab Emirates | 40.9 | 41.9 | 59.8 | 47.0 | 46.4 | 66.0 | 68.5 | 75.0 | - | - | - | - |
| Yemen | 95.0 | 203.0 | 120.0 | 168.0 | 218.0 | 172.0 | 109.0 | 83.0 | - | - | - | - |
| Central Asia | | | | | | | | | | | | |
| Azerbaijan | 42.1 | 51.0 | 55.8 | 72.8 | 65.8 | 53.7 | 31.3 | 24.5 | 29.4 | 33.6 | 43.8 | 43.8 |
| Kazakhstan | 86.7 | 84.5 | 105.7 | 108.3 | 83.2 | 77.4 | 73.9 | 71.5 | 82.9 | - | - | - |
| Turkmenistan | 56.3 | 50.9 | 89.7 | 94.3 | 91.9 | 102.0 | - | - | - | - | - | - |

Source: Bloomberg, IMF, IGI Research

Annexure-5:

China Economic Outlook / Global Growth Forecast

Exhibit:

China's GDP Growth rate to slowdown in 2017 and 2018



Exhibit:

China's Trade Account balance



Exhibit:

China's oil imports declining substantially since Jul-14, however picking up towards end of 2016

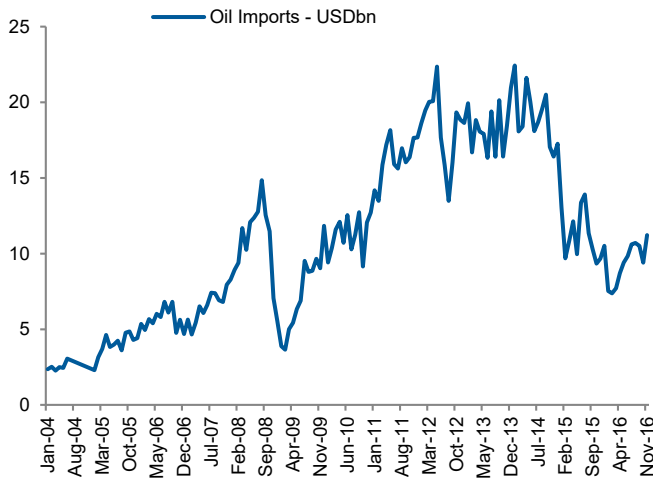
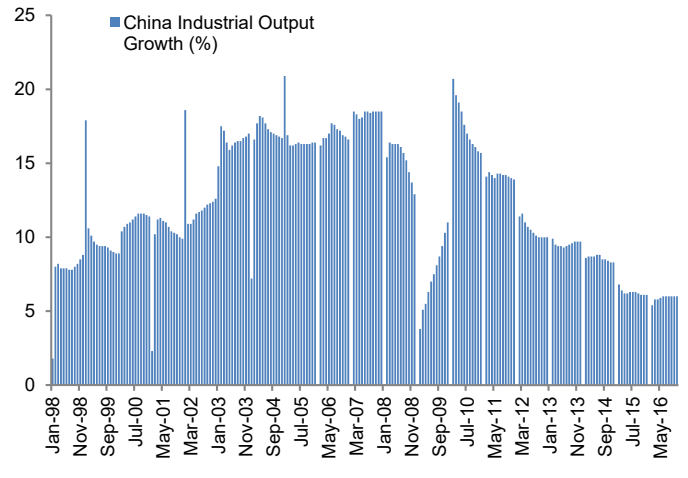


Exhibit:

China's Industrial output growth slowing down since 2010



Source: IGI Research, IMF, World Bank, Bloomberg

Exhibit:

World Bank Global GDP Growth Forecast - (%)

| | 2013 | 2014 | 2015E | 2016F | 2017F | 2018F |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Real GDP | | | | | | |
| World | 2.40 | 2.60 | 2.40 | 2.40 | 2.80 | 3.00 |
| Advanced Economies | 1.10 | 1.70 | 1.80 | 1.70 | 1.90 | 1.90 |
| United States | 1.50 | 2.40 | 2.40 | 1.90 | 2.20 | 2.10 |
| Euro Area | (0.30) | 0.90 | 1.60 | 1.60 | 1.60 | 1.50 |
| Japan | 1.40 | (0.10) | 0.60 | 0.50 | 0.50 | 0.70 |
| EM and DM Economies | 4.70 | 4.20 | 3.40 | 3.50 | 4.40 | 4.70 |
| East Asia and Pacific | 7.10 | 6.80 | 6.50 | 6.30 | 6.20 | 6.10 |
| China | 7.70 | 7.30 | 6.90 | 6.70 | 6.50 | 6.30 |
| Europe and Central Asia | 2.30 | 1.80 | (0.10) | 1.20 | 2.50 | 2.80 |
| Latin America and the Caribbean | 2.90 | 1.00 | (0.70) | (1.30) | 1.20 | 2.10 |
| Middle East and North Africa | 2.00 | 2.90 | 2.60 | 2.90 | 3.50 | 3.60 |
| South Asia | 6.10 | 6.80 | 7.00 | 7.10 | 7.20 | 7.30 |
| India | 6.60 | 7.20 | 7.60 | 7.60 | 7.70 | 7.70 |
| Pakistan | 3.70 | 4.00 | 4.20 | 4.50 | 4.80 | 5.10 |
| Sub-Saharan Africa | 4.80 | 4.50 | 3.00 | 2.50 | 3.90 | 4.40 |

Source: World Bank, IGI Research

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