

- Following strong refining macro in July and August, margins have deteriorated in September.
- We leave our forecasts largely unchanged, expect norm. EBITDA LIFO of PLN4.3bn, down 10% YoY in 2H18 and PLN8.2bn, flat YoY in 2019F.
- PKN trades at EV/EBITDA of 5.5x for 2018F (vs. historical average 5.8x), 18 % discount to European refiners vs. historical 9% premium.

We drove too far. Downgrade to Neutral.

PKN's share price has risen 33% in the last 2M, outperforming the WIG index by 33 ppt mainly on the back of strong refining macro in July and August and speculations about lower probability of the nuclear project. We leave our forecasts largely unchanged and downgrade PKN from Buy to Neutral with a new TP of PLN109 (up from PLN104 mainly due to European refiners re-rating). We believe that 1) it is too early to fully price in the merger with Lotos, 2) the strategy announcement (due in autumn) is likely to have a neutral trading impact, 3) crude oil at US\$80/bbl is a risk to our forecasts and 4) there is still a risk of PKN taking part in the nuclear project (we assume 50% probability). PKN trades at EV/EBITDA of 5.5x for 2018F and 5.9x for 2019F, at a respective 18% and 5% discount to peers, which we find warranted by lower dividend yield and political risk.

Refining macro has deteriorated in September. Refining margins were strong in July and August, but have deteriorated in September with the MTD PKN model ref. margin (incl. B/U differential) of US\$6.3/bbl, down 36% YoY due to end of the driving season, higher crude price and narrow Ural/Brent differential. The hurricane season and autumn shutdowns may support margins, but we leave our macro forecasts largely unchanged with the Brent crude price assumed at US\$76/bbl in 2H18, US\$73/bbl in 2019F and PKN model ref. margin (incl. diff) of US\$6.7/bbl (down 11% YoY) in 2H18 and US\$6.3/bbl (down 6% YoY) in 2019F.

We leave our 2018-19F forecasts largely unchanged, higher crude price is a risk. We expect earnings momentum to slightly improve in 2H (compared with 1H norm. EBITDA LIFO drop of 27% YoY), but results to remain down YoY. We expect PKN norm. EBITDA LIFO of PLN4.3bn, down 10% YoY in 2H18 and PLN8.2bn, flat YoY in 2019F. Brent crude price above US\$80/bbl is the main risk to our forecasts.

Too early to fully price in the merger with Lotos. We expect PKN to file for antimonopoly consent to acquire Lotos in 4Q18. We maintain our view that due to the uncertainty regarding the structure of the merger and EC's approval we think it is too early to incorporate the merger into our model or estimate potential synergies, which are an upside risk to our forecasts. Moreover, we think the potential synergies are to a large extent discounted in the current share price of Lotos (which is above our TP of PLN54).

Discount to peers warranted due to lower dividend yield and political risk. PKN trades at EV/EBITDA of 5.5x for 2018F and 5.9x for 2019F, at a respective 18% and 5% discount to peers vs. historical average 9% premium and vs. historical 1YF EV/EBITDA of 5.8x. We think the discount is warranted due to lower dividend yield and political risk. We continue to include the nuclear power plant project in our valuation (negative NPV of PLN10/share) as we still see a risk that the government may force PKN to finance the project.

PKN: Financial forecasts and valuation

| | 2015 | 2016 | 2017 | 2018F | 2019F | 2020F |
|--------------------------|--------|-------|--------|-------|-------|-------|
| Norm. EBITDA (PLNm) | 8 623 | 8 038 | 10 501 | 8 996 | 8 174 | 8 418 |
| Norm. EBITDA LIFO (PLNm) | 10 033 | 7 953 | 9 702 | 7 916 | 8 174 | 8 418 |
| Net income (PLNm) | 2 837 | 5 261 | 6 655 | 5 193 | 4 497 | 4 687 |
| EV/EBITDA (x) | 6.2 | 6.3 | 4.6 | 5.5 | 5.9 | 5.5 |
| PER (x) | 9.3 | 11.3 | 6.9 | 9.2 | 9.9 | 9.5 |
| Dividend yield | 1.6% | 1.9% | 2.9% | 2.9% | 2.9% | 3.4% |

Source: Bloomberg, Vestor DM estimates

Company data

| | |
|-------------------------|--------|
| Target Price (PLN) | 109.0 |
| Share Price (PLN) | 104.3 |
| Upside | 5% |
| Previous Target Price | 104.0 |
| Min (52W) | 80.2 |
| Max (52W) | 134.5 |
| No. of shares (m) | 427.7 |
| Market cap. (PLNm) | 44 589 |
| Net debt (18F, PLNm) | 4 916 |
| EV (18F, PLNm) | 48 156 |
| Avg. 3M Turnover (PLNm) | 64.9 |

Shareholders

| | % |
|----------------|------|
| State Treasury | 27.5 |
| NN OFE | 7.0 |
| Aviva OFE | 6.6 |
| PERN | 4.9 |
| Others | 54.0 |

Company description

PKN Orlen is a leading refining and petrochemical company operating in the CEE. PKN operates 7 refineries, of which 3 are located in Poland (Plock, Trzebinia and Jedlicze), another 3 in the Czech Republic (Litvinov, Kralupy and Pardubice) and one in Lithuania (Mazeikiu). Total throughput capacity of PKN comes in at 35.2mt. The company's petrochemical assets are fully integrated with refining and have a capacity of 6.2mt. PKN's retail network comprises 2.8k fuel stations in Poland, Germany, the Czech Republic and Lithuania. Since 2013 the company has been developing its Upstream portfolio and currently is involved in projects in Poland and Canada with total 2P reserves of 152mboe.

PKN vs. WIG 1Y price performance



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 - ii. supervising their own transactions made by individuals, periodic inspection and assessment of the effectiveness of implemented by Vestor control systems and procedures; conducting the legally required registers and records, primarily registry conflicts of interest associated with a significant risk of damage to client interests;
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In preparing this document Vestor applied at least two of the following valuation methods:

- 1) Discounted cash flows (DCF),
- 2) Comparative valuation (including ROE-p/BV model),
- 3) Target multiple,
- 4) Scenario analysis,
- 5) Dividend discount model (DDM),
- 6) net asset value (NAV),
- 7) Sum of the parts,
- 8) Discounted residual income model (DRIM),
- 9) Risk-adjusted net present value (rNPV).

The discounted cash flows valuation method (DCF) is based on discounted expected future cash flows. The method includes all cash flows the issuer is expected to generate in a given period and the cost of money over time. However, the DCF valuation method requires a number of assumptions and is very sensitive to changes in parameters used in the model. Small changes in assumptions may result in material changes in the valuation.

The comparative valuation method is based on the rule of "one price". The advantages of the method include 1) a small number of parameters to be estimated, 2) the fact that there is a relatively large number of indicators for companies being compared, 3) The method is well-known among investors, 4) valuation is based on current market conditions. On the other hand, a comparative valuation is strongly sensitive to the valuation of the companies classified as peers and may lead to a simplified picture of the company valued.

The target multiple valuation approach is based on the assumption that the value of the company should be equal to pre-specified values of selected price multiples. The advantage of this method is its simplicity and applicability to almost all of the companies. The target multiple approach is a highly subjective method, though.

The scenario analysis approach is based on the probability weighted valuation for three sets of assumptions: Bear case, base case and bull case with a different probability assigned. The base case is based on the assumptions included in financial forecasts and DCF valuation. The bear/bull case scenarios present a sensitivity towards negative/positive changes in various assumptions including market

size, market shares, profitability, growth, capex, valuation multiples etc. The advantage of this method is presentation of various scenarios and valuation sensitivity. A complexity and sensitivity to probability weights assumption may be found as disadvantages.

The dividend discount model (DDM) valuation is based on discounted future dividends that are expected to be paid out by the company over a period of time. The DDM model includes real cash streams that are expected to be received by shareholders and may be applied to companies with long-term dividend payout history. However, the DDM valuation method requires a number of assumptions.

The net asset value (NAV) approach considers the underlying value of the company's individual assets net of its liabilities. Among the advantages of the NAV approach are its applicability to asset holding companies and the fact that data required are usually easy to reach. On the other hand the NAV approach does not take into account future changes in revenues or income and can underestimate the value of intangible assets.

The sum of the parts approach values a company on the back of valuations of its separate divisions. The method is applicable to companies with very different business profiles, but requires identification of peers for business divisions comparison, what may be difficult to achieve.

The discounted residual income model includes equity at the end of a given financial year, excess equity (return on equity over cost of equity) the company is expected to generate in the estimation period and a discounted residual value post-estimation period. On one hand, the method includes profitability of the company compared to a cost of equity, but on the other hand it is strongly dependent on a number of parameters and assumptions.

The risk-adjusted net present value (rNPV) is a method used to forecast future cash flows in high-risk projects. In biotechnology, rNPV method involves forecasting future cash flows and applying probability rates of different phases of drug development. The main advantage of this method is the fact that it takes into account probability of success. The disadvantage of this method is the large number of assumptions and the high level of computational complexity.

Terminology used in the recommendation:

P/E – price-earnings ratio

PEG - P/E to growth ratio

EPS - earnings per share

P/BV – price-book value

BV – book value

EV/EBITDA – enterprise value to EBITDA

EV – enterprise value (market capitalization plus net debt)

EBITDA – earnings before interest, taxes, depreciation, and amortization

EBIT – earnings before interest and tax

NOPAT – net operational profit after taxation

FCF - free cash flows

ROE – return on equity

WACC - weighted average cost of capital

CAGR – cumulative average annual growth

CPI – consumer price index

COE – cost of equity

L-F-L – like for like

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Buy - indicates a stock's total return to exceed more than 1.5x respective cost of equity over the next twelve months.

Accumulate - indicates a stock's total return to exceed more than respective cost of equity over the next twelve months.

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|---------|------------------|---------------------|---------------------------|--------|--|----------------|--------------|
| 60/2017 | Kruk | 2017-09-14 | Michał Fidelus | 340.0 | 311.0 | Accumulate | 12M |
| 61/2017 | Bogdanka | 2017-09-21 | Marcin Stebakow | 95.0 | 78.0 | Buy | 12M |
| 62/2017 | JSW | 2017-09-28 | Marcin Stebakow | 107 | 93 | Buy | 12M |
| 63/2017 | MZN Property | 2017-10-04 | Aleksandra Jakubowska | 2.0 | 1.45 | Not rated | 12M |
| 64/2017 | Warimpex | 2017-10-11 | Marek Szymański | 7.3 | 6.73 | Not rated | 12M |
| 65/2017 | ATC Cargo | 2017-10-13 | Marcin Stebakow | 3.0 | 2.0 | Not rated | 12M |
| 66/2017 | LPP | 2017-10-19 | Marek Szymański | 6962.0 | 7960.0 | Sell | 12M |
| 67/2017 | CCC | 2017-10-19 | Marek Szymański | 322.0 | 265.3 | Buy | 12M |
| 68/2017 | PKO BP | 2017-10-24 | Michał Fidelus | 35.0 | 36.7 | Reduce | 12M |
| 69/2017 | Pekao | 2017-10-24 | Michał Fidelus | 139 | 125.2 | Accumulate | 12M |
| 70/2017 | BZ WBK | 2017-10-24 | Michał Fidelus | 370 | 356 | Neutral | 12M |
| 71/2017 | mBank | 2017-10-24 | Michał Fidelus | 393 | 452.5 | Reduce | 12M |
| 72/2017 | ING BSK | 2017-10-24 | Michał Fidelus | 193 | 191.2 | Neutral | 12M |
| 73/2017 | Handlowy | 2017-10-24 | Michał Fidelus | 75.0 | 70.0 | Neutral | 12M |
| 74/2017 | Millennium | 2017-10-24 | Michał Fidelus | 7.7 | 7.55 | Neutral | 12M |
| 75/2017 | Alior Bank | 2017-10-24 | Michał Fidelus | 80.0 | 70.2 | Buy | 12M |
| 76/2017 | Getin Noble | 2017-10-24 | Michał Fidelus | 1.40 | 1.53 | Reduce | 12M |
| 77/2017 | Marvipol | 2017-10-24 | Marek Szymański | 19.0 | 13 | Not rated | 12M |
| 78/2017 | KGHM | 2017-11-23 | Marcin Stebakow | 134 | 114.25 | Buy | 12M |
| 79/2017 | JSW | 2017-11-29 | Marcin Stebakow | 86.8 | 90.2 | Reduce | 12M |
| 80/2017 | Vigo System | 2017-12-05 | Beata Szparaga-Waśniewska | 455 | 305 | Not rated | 12M |
| 81/2017 | LW Bogdanka | 2017-12-07 | Marcin Stebakow | 75 | 95 | Accumulate | 12M |
| 82/2017 | Śnieżka | 2017-12-08 | Aleksandra Jakubowska | 63 | 69 | Not rated | 12M |
| 83/2017 | Dom Development | 2017-12-14 | Marek Szymański | 90 | 83.4 | Accumulate | 12M |
| 84/2017 | Atal | 2017-12-14 | Marek Szymański | 43 | 41.0 | Neutral | 12M |
| 85/2017 | LC Corp | 2017-12-14 | Marek Szymański | 3.3 | 2.7 | Buy | 12M |
| 86/2017 | Robyg | 2017-12-14 | Marek Szymański | 4.1 | 3.5 | Accumulate | 12M |
| 87/2017 | Lokum Deweloper | 2017-12-14 | Marek Szymański | 23 | 16.55 | Buy | 12M |
| 88/2017 | Archicom | 2017-12-14 | Marek Szymański | 23 | 15.39 | Not rated | 12M |
| 1/2018 | PKO BP | 2018-01-08 | Michał Fidelus | 45 | 44.3 | Neutral | 12M |
| 2/2018 | Pekao | 2018-01-08 | Michał Fidelus | 152 | 134.3 | Buy | 12M |
| 3/2018 | BZ WBK | 2018-01-08 | Michał Fidelus | 442 | 408.4 | Accumulate | 12M |
| 4/2018 | mBank | 2018-01-08 | Michał Fidelus | 443 | 496 | Sell | 12M |
| 5/2018 | ING BSK | 2018-01-08 | Michał Fidelus | 222 | 215 | Neutral | 12M |
| 6/2018 | Handlowy | 2018-01-08 | Michał Fidelus | 86 | 83 | Neutral | 12M |
| 7/2018 | Millennium | 2018-01-08 | Michał Fidelus | 8.9 | 9.4 | Reduce | 12M |
| 8/2018 | Alior | 2018-01-08 | Michał Fidelus | 87 | 78 | Accumulate | 12M |
| 9/2018 | Getin Noble Bank | 2018-01-08 | Michał Fidelus | 1.55 | 1.71 | Reduce | 12M |
| 10/2018 | PKN | 2018-01-09 | Beata Szparaga-Waśniewska | 117 | 106.7 | Neutral | 12M |
| 11/2018 | Lotos | 2018-01-09 | Beata Szparaga-Waśniewska | 54 | 57.4 | Reduce | 12M |

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|---------|----------------------------|------------|---------------------------|--------|--------|------------|-----|
| 12/2018 | PKP Cargo | 2018-02-14 | Marcin Stebakow | 68 | 58.8 | Buy | 12M |
| 13/2018 | BZ WBK | 2018-02-21 | Michał Fidelus | 436 | 385.8 | Buy | 12M |
| 14/2018 | Wielton | 2018-02-23 | Marcin Górnik | 15.3 | 12.36 | Buy | 12M |
| 15/2018 | Selvita | 2018-03-20 | Beata Szparaga-Waśniewska | 85 | 59 | Not rated | 12M |
| 16/2018 | JSW | 2018-03-22 | Marcin Stebakow | 99 | 95.3 | Neutral | 12M |
| 17/2018 | Marvipol Development | 2018-03-26 | Marek Szymański | 8.9 | 8.7 | Not rated | 12M |
| 18/2018 | Kruk | 2018-03-28 | Michał Fidelus | 286 | 208 | Buy | 12M |
| 19/2018 | British Automotive Holding | 2018-03-28 | Marek Szymański | 10.5 | 8.3 | Not rated | 12M |
| 20/2018 | Aplisens | 2018-04-04 | Michał Wojciechowski | 15.1 | 12.9 | Buy | 12M |
| 21/2018 | Wielton | 2018-04-05 | Marcin Górnik | 16.0 | 13.7 | Buy | 12M |
| 22/2018 | KGHM | 2018-04-16 | Marcin Stebakow | 110.0 | 92.0 | Buy | 12M |
| 23/2018 | LPP | 2018-04-18 | Marek Szymański | 9000 | 8965 | Neutral | 12M |
| 24/2018 | CCC | 2018-04-18 | Marek Szymański | 310 | 272 | Buy | 12M |
| 25/2018 | mBank | 2018-04-19 | Michał Fidelus | 441 | 439 | Neutral | 12M |
| 26/2018 | AC | 2018-04-23 | Marcin Górnik | 38.5 | 40.8 | Reduce | 12M |
| 27/2018 | MZN Property | 2018-05-08 | Aleksandra Jakubowska | 2.2 | 1.9 | Not Rated | 12M |
| 28/2018 | Pekao | 2018-05-16 | Michał Fidelus | 148 | 118.7 | Buy | 12M |
| 29/2018 | Archicom | 2018-05-24 | Marek Szymański | 23.0 | 15.9 | Not Rated | 12M |
| 30/2018 | PKO BP | 2018-05-25 | Michał Fidelus | 42.0 | 38.9 | Neutral | 12M |
| 31/2018 | Warimpex | 2018-05-28 | Marek Szymański | 8.3 | 6.0 | Brak | 12M |
| 32/2018 | Handlowy | 2018-06-20 | Michał Fidelus | 81.0 | 67.0 | Buy | 12M |
| 33/2018 | Dom Development | 2018-06-25 | Marek Szymański | 90.0 | 86.0 | Neutral | 12M |
| 34/2018 | Atal | 2018-06-25 | Marek Szymański | 43.0 | 37.0 | Accumulate | 12M |
| 35/2018 | LC Corp | 2018-06-25 | Marek Szymański | 3.0 | 2.4 | Buy | 12M |
| 36/2018 | Lokum Deweloper | 2018-06-25 | Marek Szymański | 25.0 | 18.8 | Buy | 12M |
| 37/2018 | CCC | 2018-07-16 | Marek Szymański | 280.0 | 204.0 | Buy | 12M |
| 38/2018 | LPP | 2018-07-16 | Marek Szymański | 9200.0 | 9105.0 | Neutral | 12M |
| 39/2018 | PKN | 2018-07-19 | Beata Szparaga-Waśniewska | 104.0 | 81.06 | Buy | 12M |
| 40/2018 | CD Projekt | 2018-07-25 | Maciej Hebda | 231.0 | 208.00 | Accumulate | 12M |
| 41/2018 | 11 bit studios | 2018-07-25 | Michał Wojciechowski | 511.0 | 426.0 | Buy | 12M |
| 42/2018 | PlayWay | 2018-07-25 | Maciej Hebda | 195.0 | 149.0 | Buy | 12M |
| 43/2018 | Millennium | 2018-07-30 | Michał Fidelus | 9.3 | 8.9 | Neutral | 12M |
| 44/2018 | BZ WBK | 2018-08-02 | Michał Fidelus | 410.0 | 378.2 | Accumulate | 12M |
| 45/2018 | Synektik | 2018-08-07 | Beata Szparaga-Waśniewska | 20.0 | 14.9 | Buy | 12M |
| 46/2018 | ML System | 2018-08-28 | Maciej Hebda | 38.6 | 33.3 | Not rated | 12M |
| 47/2018 | CD Projekt | 2018-08-29 | Maciej Hebda | 228.0 | 219.2 | Neutral | 12M |
| 48/2018 | 11 bit studios | 2018-09-03 | Michał Wojciechowski | 386.0 | 380.0 | Neutral | 12M |
| 49/2018 | Alior | 2018-09-05 | Michał Fidelus | 85.0 | 66.9 | Buy | 12M |
| 50/2018 | British Automotive Holding | 2018-09-05 | Marek Szymański | 2.2 | 1.9 | Not rated | 12M |
| 51/2018 | Wielton | 2018-09-12 | Marcin Górnik | 15.5 | 9.7 | Buy | 12M |
| 52/2018 | Atal | 2018-09-13 | Marek Szymański | 41 | 31.5 | Buy | 12M |