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# Morning Comments

## Equity Market, Poland

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|         |          |        |           |          |        |                   |         |        |
|---------|----------|--------|-----------|----------|--------|-------------------|---------|--------|
| DJIA    | 26,252.2 | +0.19% | FTSE 100  | 7,128.2  | -1.05% | Copper (LME)      | 5,683.0 | -0.85% |
| S&P 500 | 2,923.0  | -0.05% | WIG20     | 2,108.1  | +0.10% | Crude Oil (Brent) | 59.62   | -1.13% |
| NASDAQ  | 7,991.4  | -0.36% | BUX       | 39,394.7 | -0.64% | USD/PLN           | 3.9325  | +0.26% |
| DAX     | 11,747.0 | -0.47% | PX        | 1,042.3  | +0.42% | EUR/PLN           | 4.3568  | +0.21% |
| CAC 40  | 5,388.3  | -0.87% | PLBonds10 | 2.035    | +0.082 | EUR/USD           | 1.1080  | -0.05% |

## Company & Sector News

### Handlowy

Accumulate – 2019-07-03

Target price: PLN 59.45

### Highlights from Q2 earnings conference

There were two extraordinary items regarding CoR in corporate loans portfolio, which sum up to PLN 69m gross. Additionally slightly increase of CoR in retail segment can be partially explained by seasonality (lower effectiveness of debt collection in Q2 due to Easter) and higher volumes. Redemption of bonds by two corporate clients was responsible for decrease in corporate loans portfolio. Selling insurance intermediary (Bimmer) won't negatively affect commission income. What is more it is still possible that a few millions PLN from the transaction will be reported in upcoming quarters. Valuation of bonds portfolio went in satisfying direction, however purchases were financed through loans on interbank market, which negatively affected NIM. **Without extraordinary events, Handlowy would show decent numbers, however We still believe there is space for minor negative adjustments in FY consensus.**

### Steel producers / Polish banks

### Sunningwell placed a bid for ISD Częstochowa

According to Puls Biznesu, Sunningwell confirmed that it placed a bid for troubled steel producer ISD Częstochowa. According to press, 4 other companies are interested in taking over steel producer. **This is potentially positive information for Pekao and PKO BP which are rumored to have exposure to troubled company. The current exposure of specific banks to ISD Częstochowa is unknown, however its net debt at the end of 2017 came in at PLN 258m. (M. Konarski, M. Lemańczyk)**

### Asseco SEE

Overweight – 2019-04-11

### Insider buying

Mini Invest, associated with Miljan Malis (Asseco SEE board member) purchased 6200 shares of ASE for the total of PLN 109,7k which implies average price for one share at PLN 17.70. **(P. Szpigiel)**

### Tarczyński

Neutral – 2019-05-29

### Tarczyński submitted a conditional offer to purchase an organized part of the enterprise Zakłady Mięsnych Henryk Kania

Tarczyński announced that he is initially interested in taking over the assets of the restructured company ZM Henryk Kania in a situation where the ongoing restructuring proceedings will not lead to a better solution aimed at satisfying its stakeholders, mainly its employees and creditors. **There is no detail in the announcement in which Kania's part Tarczyński is interested. Both companies have high exposure to similar customers (including Lidl and Biedronka), which will facilitate integration between plants. In addition, the ZM Kania plant is located in the south-central part of Poland, which would allow Tarczyński to expand into the eastern and northern regions of the country. According to our estimates, at the end of 2019 Tarczyński will be indebted 2.4x EBITDA. Perhaps the transaction will require external financing. (J. Szkopek)**

### PKP Cargo

### 2019 Q2 earnings conference highlights

- In Q2'19 results, PKP Cargo recognized the effect of compensation for higher electricity prices in the amount of PLN 34.9m. The financial settlements with the electricity suppliers should be made in the second half of FY2019.
- The Company maintained EBITDA guidance for FY2019 at PLN 1,152.8m (incl. IFRS16 impact of ca. PLN 118m). The forecast was prepared assuming fulfillment of all signed contracts. Considering a slowdown in the freight, we point that some of the agreements may not be executed at the 100% in FY2019 (usually the contracts are signed for a range of freight volume).
- Current CAPEX is in line with market demand, and for now the Company does not expect to restrain it.
- The Board hopes for a rebound in the freight of hard coal and construction materials in Q4'19. Moreover, in at least next 3 years, the freight of aggregates and construction materials should be thriving and be fueled by scheduled investments by GDDKiA's and under the National Railway Program. **(P. Poniąkowski)**

## Quarterly Earnings Results

### JSW

Accumulate – 2019-07-03

Target price: PLN 50.02

### Results beats highest estimates in consensus

- The **revenues** in Q2'19 were 11% higher we estimated and in line with consensus. The highest surprise to our forecast on revenues site was on coking sales volume (we believed the inventories of coking coal will rise in Q2'19 while they dropped and thermal coal stocks increased) and a bit higher coke prices.
- The **EBITDA** in Q2'19 was 39% higher we expected and 23% higher than consensus. There were several reasons for EBITDA beat in Q2'19 but the highest portion was due to staff bonus accounting. The company booked in Q2'19 PLN 136m bonus for staff and further PLN 27m will be booked in Q3'19. We and the market expected the whole portion of bonus will be booked in Q3'19. Worth to mention the EBITDA beat even the higher market forecast, even if we adjust the number by lower bonus accounting. The **Adjusted EBITDA** in Q2'19 was PLN 586m and it was 22% higher we estimated.
- The **Mining Cash Cost** in Q2'19 was **465 PLN/t** (+11% y/y and +3% vs. our forecast), but if we **adjust it by staff bonus it equals 426 PLN/t** and is **lower than in Q1'19 by 1%**. The y/y increase in Mining costs were mostly due to higher methane drainage services costs, higher exploration costs, higher services costs, and higher mining drilling costs. One of the reason for y/y increase was higher electricity costs. Including the bonus payment the mining cost were mostly in line with our forecasts.
- The **Coke Conversion Cost** in Q2'19 was **174.9 PLN/t** (+14% y/y and +3% vs. our forecast). The main reason for y/y increase was higher staff costs, higher coal transport costs, electricity and services costs.
- The **coal inventory** increased in Q2'19 by 300 ths tones q/q, but it is worth to mention the increase was mostly in thermal coal (+380 ths tones), while coking coal stocks decreased by 70 ths tones during the quarter. The coke inventories increased by 120 ths tones, but it was mainly due fact that one sea shipment went out from port in the beginning of July. The inventory level on coking coal surprises positively, because **it seems the company does not have many problems with selling its products amid steel market slowdown**.
- The **OCF** in Q2'19 was PLN 210m vs. PLN 1166m in Q2'18. This was mainly due to working capital increase by about PLN 250m during the quarter. The net debt at the end of quarter was PLN -2.5bn (21 PLN/share net cash). The **net debt** increased during quarter by PLN 550m, mainly due to capex program and PBSz purchase. The Capex in H1'19 was PLN 1.35bn (PLN 1.18bn excluding PBSz purchase). The full year Capex will probably reach PLN 2.0bn (market expected PLN 1.8-2.0bn).
- We believe the market will react positively on Q2'19 results. The Company beat the highest estimates in consensus. The bonus adjusted Mining Cash Cost drops in Q2'19 by 1% q/q, and by higher output expected in H2'19 we believe it could surprise positively. The stocks rise only in regards to thermal coal, cooking coal inventories fall in q/q basis. Today is last day to buy JSW shares with PLN 1.71 DPS (5% DYield). Also Deputy Energy Minister informed today that Company should focus only on output increase which could mean the will be no cash drainage from the company. (J. Szkopek)**

### 2019 Q2 actuals vs. expectations

| (PLN m)       | Q2'19   | Q2'18   | change | Q2'19E  | differ. | consensus | differ. | 2019E   | 2018    | change | YTD   |
|---------------|---------|---------|--------|---------|---------|-----------|---------|---------|---------|--------|-------|
| Revenues      | 2,208.8 | 2,422.9 | -8.8%  | 1,997.2 | 10.6%   | 2,213.1   | -0.2%   | 9,594.3 | 9,809.5 | -2.2%  | 49.0% |
| EBITDA adj.   | 586.3   | 946.5   | -38.1% | 481.7   | 21.7%   | n/a       | n/a     | 2,175.9 | 2,254.1 | -3.5%  | 61.0% |
| EBITDA        | 442.3   | 631.3   | -29.9% | 318.3   | 38.9%   | 360.9     | 22.6%   | 2,175.9 | 3,020.1 | -28.0% | 53.8% |
| EBITDA margin | 20.0%   | 26.1%   | -      | 15.9%   |         | 16.3%     |         | 22.7%   | 30.8%   |        |       |
| EBIT          | 188.2   | 446.0   | -57.8% | 118.3   | 59.0%   | 146.1     | 28.8%   | 1,305.8 | 2,254.1 | -42.1% | 53.3% |
| Net income    | 133.3   | 324.1   | -58.9% | 92.8    | 43.6%   | 110.5     | 20.6%   | 1,046.8 | 1,737.1 | -39.7% | 51.2% |

Source: JSW, E - estimates by Dom Maklerski mBanku, Consensus estimates provided by PAP

**Dom Development**

Hold – 2019-07-03

Target price: PLN 79.80

**Q2'19: Strong financial results; (1) Results significantly above our estimates (+51%) and market expectations on net profit (+153%) due to higher-than-expected average value of apartment handed over and strong improvement of developer's margin. (2) Results lower year-on-year due to lower homes handed over**

- Although nominally Dom Development reported lower financial results year-on-year basis due to lower handovers (vs. a high base in Q2'18), all-in-all financial results was very strong beating market expectations by 153% on net profit due to higher-than-expected average value of apartment handed over and better developer's margin. The figure came also 51% above our forecasts. We expect positive market reaction to company's Q2'19 financial results today.
- In Q2'19 **revenues totaled PLN 238.7m, down 45% y/y** because of lower volume of housing deliveries compared to a high base in the same period year before (440 homes vs. 1,025 in Q2'18). The most impact on figures came from projects in Warsaw: Forma (118 units), Wilno (79 units) and Premium (45 units) as well as in TriCity: Idea (31 units) and Beauforta (26). The reported revenues came 2.3% above our expectations and 15.3% above PAP consensus (a range of PLN 191-233m). In all, in the first half of the year 2019 DOM handed over 1,655 units (+15% y/y), delivering 47% of our full-year forecasts.
- The average value of handed over apartment amounted to a high PLN 542k, up by 28% y/y and by 25% q/q. In particular, we see the quarter-to-quarter increase as a positive news taking into account to a some extent a similar portfolio of completed flats (no new completed projects) and which we attribute to strong market housing prices inflation. The figures were also above our forecasts of PLN 530k per units.
- Gross profit was at PLN 79.4m** (-33% y/y) due to lower top line. Developer's margin increased significantly to a high 33.3% from 27.1% in Q2'18 (the highest margin since Q3'11) and 27.4% in Q1'19 and was better-than-expected margin (of 29.1%).
- EBIT came in at PLN 38.2m** (-48% y/y). SG&A costs decreased by 12.8% y/y mainly due to lower salaries costs and stock option program and was 9% below our estimates. Company reported negative impact on net other operating activity of PLN -4.2m (vs. PLN -1.1m in Q1'18). Together with higher-than-expected average value of home handed over and better margin translates into **a beating our estimates by 51.5% and market consensus by 145%.**
- The result on net financial activities was PLN +0.3m, close to our expectations.
- As a result **net profit was 51% above our estimates and +153% above consensus** (a range of PLN 3.2-20.6m).
- Net debt increased by PLN 93m during Q2, ending the quarter with net debt position of PLN 187m compared to net cash of PLN 184m in Q2'18, implying a net-debt-to-equity-ratio at 20% (vs. 8% at the end of Q1'19). It was a result of dividend payment in the amount of PLN 227m (probably a payments for acquisition of new land plot is another reason of that). The increase of ND/E ratio is expected and in line with management's announcements.
- The earnings conference is today at 12:00 a.m. CET at Warsaw's Radisson Hotel.
- To sum up, Dom Development presented very good financial results with strong margins. After the first half of the year our full-year forecast is delivered in 52% on net profit. Taking into account company's completions pipeline for 2019 we expect more or less similar results in Q3 to the results in Q2'19 and strong Q4'19. The company is on course to meet our FY19 forecasts. If there are no delays of completion housing investments Dom may exceed our FY2019 forecasts of PLN 222m and FY2018 results despite of assumption of 3% drop of volume of handovers. On our forecasts Dom trades at 2019E P/E of 8.7x. (A. Szklarczyk)**

**2019 Q2 actuals vs. expectations**

| (PLN m)                      | Q2'19 | Q2'18 | change | Q2'19E | change | consens. | change | 2019E   | YTD |
|------------------------------|-------|-------|--------|--------|--------|----------|--------|---------|-----|
| Revenues                     | 238.7 | 435.7 | -45.2% | 233.3  | 2.3%   | 207.0    | 15.3%  | 1,688.0 | 45% |
| Gross profit                 | 79.4  | 118.1 | -32.8% | 67.8   | 17.0%  |          |        | 446.4   | 50% |
| margin                       | 33.3% | 27.1% | -      | 29.1%  | -      |          |        | 26.4%   |     |
| SG&A costs                   | -37.0 | -42.4 | -      | -40.6  | -      |          |        | -164.0  |     |
| Net other operating activity | -4.2  | -2.9  | -      | -2.0   | -      |          |        | -5.4    |     |
| EBIT                         | 38.2  | 72.8  | -47.6% | 25.2   | 51.5%  | 15.6     | 144.9% | 277.1   | 52% |
| margin                       | 16.0% | 16.7% | -      | 10.8%  | -      |          |        | 16.4%   |     |
| Net financial results        | 0.3   | 0.0   | -      | 0.2    | -      |          |        | -1.8    |     |
| Profit before tax            | 38.4  | 72.8  | -47.2% | 25.4   | 51.4%  |          |        | 275.3   | 52% |
| Net profit                   | 31.1  | 58.8  | -47.2% | 20.6   | 51.0%  | 12.3     | 153.1% | 222.4   | 52% |
| margin                       | 13.0% | 13.5% | -      | 8.8%   | -      |          |        | 13.2%   |     |

Source: Dom Development, E - estimates by Dom Maklerski mBanku, Consensus estimates provided by PAP

## More News

### **Aplisens**

Listed industrials firm Aplisens expects its 2019 revenues to approach PLN 120 mln, CEO Artur Zurawski told reporters.

### **GTC**

Listed real estate developer GTC is mulling a PLN 220 mln bond issue as one option to refinance the current debt, CFO Erez Boniel told a news conference.

### **Mostostal Zabrze**

Listed builder Mostostal Zabrze expects its 2019 earnings to roughly match those reported last year, but sales are expected to be higher, CEO Dariusz Pietuszyk told a news conference.

### **PGNiG**

PGNiG saw the State Treasury appoint Roman Gabrowski to the company's supervisory board, effective as of August 22, PGNiG said in a filing. Gabrowski served as CEO of power group Tauron's renewables unit Tauron Ekoenergia until June 2019.

PGNiG plans to conduct 15 drillings in Poland to end-2019, CEO Piotr Wozniak told a conference. To end-June, the company performed 16 drillings, 9 of which confirmed the positive deposit potential, mostly with reference to gas, he added.

PGNiG has placed "high hopes" in at least one of the drillings currently conducted in Pakistan, i.e. Rehman-5 and Rehman-6, and hopes to strengthen its position in the country even more once the promised Baron concession, seen as very productive, is received and established, CEO Piotr Wozniak said of foreign upstream ops. In Norway, PGNiG launches its first drilling as an operator on August 28, on the Shrek prospect, CEO also said.

### **Torpol**

Listed builder Torpol in consortium had its PLN 178.8 mln net consortial bid in a tender by Elektrownia Ostrołęka C picked as best again after the investor was obliged by the court to reassess the bids submitted, Torpol said in a market filing.

## Corporate Action Calendar

| Date   | Time  | Company                 | Event  |
|--------|-------|-------------------------|--|
| 23-Aug | 10:00 | <b>Radpol</b>           | Q2'19 earnings conference (ADN, Jana Pawła II 25, Room E, Warsaw)    |
| 23-Aug | 12:00 | <b>Dom Development</b>  | Q2'19 earnings announcement and conference (Westin Radisson, Warsaw) |
| 23-Aug | 12:00 | <b>JSW</b>              | Q2'19 earnings conference (GPW, ul. Książęca 4, Warsaw)              |
| 23-Aug |       | <b>Budimex</b>          | Q2'19 earnings announcement  |
| 26-Aug |       | <b>Asseco Poland</b>    | Q2'19 earnings announcement  |
| 26-Aug |       | <b>Play</b>             | Q2'19 earnings announcement  |
| 27-Aug |       | <b>11 bit studios</b>   | Q2'19 earnings announcement  |
| 27-Aug |       | <b>Wirtualna Polska</b> | Q2'19 earnings announcement  |
| 28-Aug |       | <b>AmRest</b>           | Q2'19 earnings announcement  |
| 28-Aug |       | <b>Eurocash</b>         | Q2'19 earnings announcement  |
| 28-Aug |       | <b>Lokum</b>            | Q2'19 earnings announcement  |
| 28-Aug |       | <b>Neuca</b>            | Q2'19 earnings announcement  |
| 28-Aug |       | <b>VRG</b>              | Q2'19 earnings announcement  |
| 29-Aug |       | <b>BNP Paribas</b>      | Q2'19 earnings announcement  |
| 29-Aug |       | <b>CD Projekt</b>       | Q2'19 earnings announcement  |
| 29-Aug |       | <b>Cyfrowy Polsat</b>   | Q2'19 earnings announcement  |
| 29-Aug |       | <b>JWC</b>              | Q2'19 earnings announcement  |
| 29-Aug |       | <b>PZU</b>              | Q2'19 earnings announcement  |
| 29-Aug |       | <b>Stelmet</b>          | Q3'19 earnings announcement  |
| 29-Aug |       | <b>Trakcja</b>          | Q2'19 earnings announcement  |
| 29-Aug |       | <b>Unibep</b>           | Q2'19 earnings announcement  |
| 30-Aug |       | <b>Capital Park</b>     | Q2'19 earnings announcement  |
| 30-Aug |       | <b>Comarch</b>          | Q2'19 earnings announcement  |
| 30-Aug |       | <b>Pozbud</b>           | Q2'19 earnings announcement  |

## Economic Calendar

| Friday, 23 August 2019    |         |                              |        |          |                        |
|---------------------------|---------|------------------------------|--------|----------|------------------------|
| Time                      | Region  | Data                         | Period | Forecast | Previous               |
| 01:30                     | Japan   | Core CPI                     | July   |          | 0.00% m/m; 0.50% y/y   |
| 01:30                     | Japan   | CPI                          | July   |          | 0.70% y/y              |
| 14:00                     | Poland  | M3 Money Supply              | July   |          | -0.20% m/m; 9.30% y/y  |
| 16:00                     | USA     | New Home Sales               | July   |          | 646 000                |
| 16:30                     | USA     | Natural Gas Inventory        | July   |          | 2569bn                 |
| Monday, 26 August 2019    |         |                              |        |          |                        |
| Time                      | Region  | Data                         | Period | Forecast | Previous               |
| 07:00                     | Japan   | Leading Indicators Index (F) | June   |          | 94.90                  |
| 10:00                     | Germany | IFO Business Climate         | August |          | 95.70                  |
|                           | Poland  | Unemployment Rate            | July   |          | 5.30%                  |
| Tuesday, 27 August 2019   |         |                              |        |          |                        |
| Time                      | Region  | Data                         | Period | Forecast | Previous               |
| 08:45                     | France  | Consumer Confidence Index    | August |          | 102                    |
| 15:00                     | USA     | House Price Index            | June   |          | 0.10% m/m; 1.15% q/q   |
| 16:00                     | USA     | Richmond Fed Index           | August |          | -12                    |
| Wednesday, 28 August 2019 |         |                              |        |          |                        |
| Time                      | Region  | Data                         | Period | Forecast | Previous               |
| 10:00                     | EU      | M3 Money Supply              | July   |          | 4.50% y/y              |
| Thursday, 29 August 2019  |         |                              |        |          |                        |
| Time                      | Region  | Data                         | Period | Forecast | Previous               |
| 07:00                     | Japan   | Industrial Production (P)    | July   |          | -3.30% m/m; -3.80% y/y |
| 08:00                     | Germany | Import Price Index           | July   |          | -1.40% m/m; -2.00% y/y |
| 14:30                     | USA     | GDP Deflator                 | Q2     |          | 0.90% q/q              |
| 14:30                     | USA     | GDP                          | Q2     |          | 3.10% q/q; 3.20% y/y   |
| 14:30                     | USA     | PCE                          | Q2     |          | 0.90% q/q; 2.70% y/y   |
| 14:30                     | USA     | Core PCE                     | Q2     |          | 1.70% y/y              |

## Current Recommendations by Dom Maklerski mBanku

| Company                    | Recommendation | Issued On  | Price At Reco. | Target Price | Current Price | Upside/Downside | P/E         |             | EV/EBITDA  |            |
|----------------------------|----------------|------------|----------------|--------------|---------------|-----------------|-------------|-------------|------------|------------|
|                            |                |            |                |              |               |                 | 2019        | 2020        | 2019       | 2020       |
| <b>Financial Sector</b>    |                |            |                |              |               | <b>+22.7%</b>   | <b>10.2</b> | <b>9.7</b>  |            |            |
| Alior Bank                 | buy            | 2019-07-03 | 51.10          | 72.30        | 42.16         | +71.5%          | 7.6         | 5.9         |            |            |
| Handlowy                   | accumulate     | 2019-07-03 | 53.60          | 59.45        | 51.60         | +15.2%          | 13.0        | 10.7        |            |            |
| ING BSK                    | hold           | 2019-08-02 | 189.80         | 191.80       | 190.00        | +0.9%           | 14.9        | 13.3        |            |            |
| Millennium                 | buy            | 2019-08-02 | 7.51           | 10.00        | 7.15          | +39.9%          | 11.8        | 8.5         |            |            |
| Pekao                      | buy            | 2019-08-02 | 99.88          | 119.75       | 97.54         | +22.8%          | 11.2        | 9.8         |            |            |
| PKO BP                     | buy            | 2019-08-02 | 39.34          | 47.17        | 40.10         | +17.6%          | 11.4        | 11.0        |            |            |
| Santander Bank Polska      | hold           | 2019-08-02 | 319.60         | 337.00       | 307.40        | +9.6%           | 13.3        | 11.0        |            |            |
| Komercni Banka             | accumulate     | 2019-08-02 | 872.00         | 1,000 CZK    | 815.00        | +22.7%          | 10.2        | 9.8         |            |            |
| Erste Bank                 | buy            | 2019-02-04 | 31.00          | 43.72 EUR    | 30.52         | +43.3%          | 8.7         | 8.2         |            |            |
| OTP Bank                   | hold           | 2019-08-02 | 12,080         | 13,046 HUF   | 12,340        | +5.7%           | 10.2        | 9.7         |            |            |
| PZU                        | hold           | 2019-07-03 | 44.35          | 43.38        | 37.22         | +16.6%          | 9.9         | 9.4         |            |            |
| Kruk                       | buy            | 2019-04-02 | 152.30         | 213.65       | 167.40        | +27.6%          | 9.4         | 9.2         |            |            |
| Skarbiec Holding           | buy            | 2019-06-03 | 16.50          | 28.17        | 16.95         | +66.2%          | 5.8         | 5.0         |            |            |
| <b>Chemicals</b>           |                |            |                |              |               | <b>+22.5%</b>   | <b>6.8</b>  | <b>12.0</b> | <b>4.6</b> | <b>6.0</b> |
| Ciech                      | hold           | 2019-07-03 | 41.60          | 41.72        | 34.60         | +20.6%          | 6.8         | 7.2         | 4.8        | 4.8        |
| Grupa Azoty                | hold           | 2019-08-02 | 42.30          | 45.93        | 37.20         | +23.5%          | 6.7         | 16.9        | 4.4        | 7.1        |
| <b>Oil &amp; Gas</b>       |                |            |                |              |               | <b>+14.5%</b>   | <b>10.8</b> | <b>9.5</b>  | <b>4.7</b> | <b>4.7</b> |
| Lotos                      | sell           | 2019-08-02 | 88.66          | 72.31        | 79.72         | -9.3%           | 12.1        | 11.2        | 6.3        | 5.3        |
| MOL                        | accumulate     | 2019-08-02 | 3,004          | 3,258 HUF    | 2,844         | +14.6%          | 10.3        | 9.0         | 4.3        | 4.1        |
| PGNIG                      | accumulate     | 2019-08-02 | 5.62           | 6.33         | 4.70          | +34.8%          | 11.3        | 7.8         | 4.4        | 3.4        |
| PKN Orlen                  | hold           | 2019-08-01 | 97.36          | 92.82        | 89.50         | +3.7%           | 8.5         | 10.0        | 5.1        | 5.3        |
| <b>Power Utilities</b>     |                |            |                |              |               | <b>+41.6%</b>   | <b>3.8</b>  | <b>4.2</b>  | <b>3.7</b> | <b>3.6</b> |
| CEZ                        | accumulate     | 2019-06-25 | 544.00         | 597.80 CZK   | 516.50        | +15.7%          | 15.4        | 13.4        | 7.4        | 6.9        |
| Enea                       | buy            | 2019-06-25 | 8.53           | 12.41        | 8.13          | +52.6%          | 3.0         | 2.8         | 3.1        | 2.9        |
| Energia                    | buy            | 2019-06-25 | 7.33           | 12.67        | 6.68          | +89.8%          | 3.8         | 4.2         | 3.7        | 4.1        |
| PGE                        | buy            | 2019-06-25 | 9.00           | 13.26        | 7.36          | +80.1%          | 4.5         | 5.1         | 3.0        | 3.1        |
| Tauron                     | buy            | 2019-06-25 | 1.57           | 2.52         | 1.46          | +72.5%          | 2.3         | 2.2         | 4.0        | 3.6        |
| <b>Telecoms, Media, IT</b> |                |            |                |              |               | <b>+2.6%</b>    | <b>18.9</b> | <b>15.3</b> | <b>6.1</b> | <b>5.8</b> |
| Netia                      | hold           | 2018-11-26 | 4.66           | 4.70         | 4.57          | +2.8%           | 30.7        | 25.4        | 5.3        | 5.3        |
| Orange Polska              | accumulate     | 2019-08-02 | 6.70           | 7.50         | 6.04          | +24.3%          | 39.0        | 24.5        | 4.8        | 4.6        |
| Play                       | accumulate     | 2019-08-02 | 31.22          | 34.20        | 31.06         | +10.1%          | 9.0         | 8.2         | 6.1        | 6.0        |
| Agora                      | buy            | 2018-11-27 | 9.50           | 16.00        | 11.35         | +41.0%          | 37.7        | 20.0        | 5.2        | 4.8        |
| Cyfrowy Polsat             | reduce         | 2019-05-31 | 26.00          | 24.15        | 28.48         | -15.2%          | 14.9        | 12.7        | 7.1        | 6.9        |
| Wirtualna Polska           | hold           | 2019-07-03 | 61.20          | 61.50        | 60.20         | +2.2%           | 18.9        | 16.1        | 10.0       | 8.9        |
| Asseco Poland              | hold           | 2019-06-03 | 51.10          | 50.80        | 55.70         | -8.8%           | 14.9        | 14.5        | 4.8        | 4.4        |
| Comarch                    | buy            | 2019-07-25 | 178.50         | 231.00       | 171.00        | +35.1%          | 14.8        | 13.4        | 6.2        | 5.6        |
| 11 bit studios             | buy            | 2019-05-20 | 398.00         | 518.00       | 402.00        | +28.9%          | 26.9        | 38.4        | 18.9       | 23.4       |
| CD Projekt                 | accumulate     | 2019-05-09 | 215.00         | 237.50       | 239.40        | -0.8%           | -           | 11.7        | -          | 8.7        |
| <b>Industrials, Mining</b> |                |            |                |              |               | <b>+16.4%</b>   | <b>6.5</b>  | <b>9.5</b>  | <b>4.9</b> | <b>4.8</b> |
| Cognor                     | hold           | 2019-07-25 | 1.75           | 1.84         | 1.66          | -5.4%           | 7.8         | 10.7        | 4.9        | 5.1        |
| Famur                      | buy            | 2019-08-07 | 4.42           | 5.33         | 3.96          | +34.6%          | 5.0         | 9.1         | 4.1        | 4.8        |
| Grupa Kęty                 | hold           | 2019-07-03 | 337.00         | 345.32       | 308.00        | +12.1%          | 11.9        | 11.3        | 8.4        | 8.1        |
| JSW                        | accumulate     | 2019-07-03 | 47.00          | 50.02        | 32.34         | +54.7%          | 3.6         | 9.5         | 0.5        | 1.1        |
| Kernel                     | reduce         | 2019-08-19 | 48.60          | 42.70        | 44.50         | -4.0%           | 4.6         | 8.4         | 5.1        | 5.8        |
| KGHM                       | hold           | 2019-08-22 | 74.90          | 77.51        | 74.78         | +3.7%           | 6.5         | 9.2         | 3.7        | 4.3        |
| Stelmet                    | hold           | 2019-07-03 | 7.00           | 7.95         | 6.10          | +30.3%          | 9.0         | 9.5         | 4.9        | 4.6        |
| <b>Property Developers</b> |                |            |                |              |               | <b>+14.4%</b>   | <b>7.9</b>  | <b>7.6</b>  | <b>7.3</b> | <b>7.1</b> |
| Atal                       | accumulate     | 2019-07-03 | 36.60          | 41.89        | 32.70         | +28.1%          | 7.0         | 7.3         | 6.7        | 7.0        |
| Dom Development            | hold           | 2019-07-03 | 77.40          | 79.80        | 77.20         | +3.4%           | 8.7         | 7.8         | 7.8        | 7.2        |
| <b>Retail</b>              |                |            |                |              |               | <b>+3.7%</b>    | <b>35.2</b> | <b>20.1</b> | <b>9.1</b> | <b>8.3</b> |
| AmRest                     | buy            | 2019-04-02 | 41.20          | 48.00        | 39.70         | +20.9%          | 37.3        | 27.3        | 12.8       | 10.2       |
| CCC                        | hold           | 2019-06-06 | 153.80         | 161.00       | 130.70        | +23.2%          | 48.8        | 20.1        | 6.8        | 5.3        |
| Dino                       | sell           | 2019-08-13 | 135.90         | 111.20       | 149.60        | -25.7%          | 38.4        | 29.3        | 21.8       | 17.1       |
| Eurocash                   | hold           | 2019-08-02 | 18.60          | 18.10        | 18.20         | -0.5%           | 35.2        | 24.9        | 7.6        | 6.7        |
| Jeronimo Martins           | hold           | 2019-05-09 | 13.89          | 14.30 EUR    | 14.67         | -2.5%           | 20.8        | 18.7        | 9.1        | 8.3        |
| LPP                        | accumulate     | 2019-07-03 | 7,745.00       | 8,500.00     | 7,130.00      | +19.2%          | 19.5        | 17.6        | 9.8        | 8.8        |
| VRG                        | buy            | 2019-07-26 | 4.20           | 5.20         | 4.28          | +21.5%          | 13.6        | 11.8        | 8.5        | 7.2        |

## Current Calls by Dom Maklerski mBanku

| Company          | Relative Positioning | Rated On   | Price At Rating | Current Price | Change | P/E  |      | EV/EBITDA |      |
|------------------|----------------------|------------|-----------------|---------------|--------|------|------|-----------|------|
|                  |                      |            |                 |               |        | 2019 | 2020 | 2019      | 2020 |
| IT               |                      |            |                 |               |        | 11.4 | 10.7 | 4.9       | 4.6  |
| Ailleron         | neutral              | 2019-06-28 | 8.40            | 7.60          | -9.5%  | 9.8  | 8.9  | 3.4       | 2.5  |
| Asseco BS        | neutral              | 2019-03-29 | 29.50           | 26.60         | -9.8%  | 13.5 | 12.5 | 9.0       | 8.4  |
| Asseco SEE       | overweight           | 2019-04-11 | 14.20           | 17.90         | +26.1% | 13.1 | 12.5 | 5.4       | 5.0  |
| Atende           | neutral              | 2019-01-31 | 4.40            | 3.66          | -16.8% | 9.2  | 8.6  | 4.4       | 4.3  |
| Industrials      |                      |            |                 |               |        | 9.2  | 9.3  | 6.0       | 6.0  |
| AC               | neutral              | 2019-03-22 | 48.50           | 46.00         | -5.2%  | 10.2 | 9.2  | 7.0       | 6.4  |
| Alumetal         | underweight          | 2019-05-29 | 51.00           | 35.60         | -30.2% | 8.7  | 9.5  | 6.7       | 7.0  |
| Amica            | neutral              | 2019-04-29 | 130.00          | 108.20        | -16.8% | 7.1  | 6.8  | 4.7       | 4.4  |
| Apator           | neutral              | 2019-04-29 | 25.80           | 23.00         | -10.9% | 10.9 | 10.7 | 7.0       | 6.8  |
| Boryszew         | underweight          | 2019-07-26 | 4.49            | 4.49          | +0.0%  | 10.0 | 9.3  | 7.6       | 7.4  |
| Ergis            | neutral              | 2019-05-29 | 3.00            | 2.45          | -18.3% | 6.6  | 7.3  | 4.8       | 4.8  |
| Forte            | neutral              | 2019-04-29 | 40.60           | 25.00         | -38.4% | 12.5 | 10.9 | 8.5       | 7.9  |
| Impexmetal       | underweight          | 2019-04-25 | 4.16            | 4.22          | +1.4%  | 5.6  | 5.8  | 5.9       | 5.7  |
| Kruszwica        | neutral              | 2019-04-02 | 43.90           | 42.80         | -2.5%  | 10.2 | 9.3  | 5.4       | 5.0  |
| Mangata          | neutral              | 2019-05-29 | 69.50           | 68.00         | -2.2%  | 9.1  | 10.4 | 6.2       | 6.7  |
| Pfleiderer Group | underweight          | 2019-07-29 | 28.00           | 25.90         | -7.5%  | 52.9 | 25.0 | 7.0       | 6.5  |
| Pozbud           | overweight           | 2019-04-29 | 2.37            | 2.25          | -5.1%  | 2.7  | 2.9  | 2.5       | 2.0  |
| Tarczyński       | neutral              | 2019-05-29 | 15.40           | 16.40         | +6.5%  | 7.1  | 6.0  | 5.0       | 4.6  |
| TIM              | overweight           | 2019-04-29 | 7.90            | 8.14          | +3.0%  | 9.3  | 8.2  | 5.6       | 5.0  |
| Retail           |                      |            |                 |               |        | 9.5  | 9.4  | 4.6       | 3.8  |
| Monnari          | neutral              | 2019-07-17 | 4.66            | 4.80          | +3.0%  | 9.5  | 9.4  | 4.6       | 3.8  |



## CEE bank valuations

|                                  | Price         | 2019        | P/E<br>2020 | 2021        | 2019       | ROE<br>2020 | 2021       | 2019       | P/BV<br>2020 | 2021       | 2019        | DY<br>2020  | 2021        |
|----------------------------------|---------------|-------------|-------------|-------------|------------|-------------|------------|------------|--------------|------------|-------------|-------------|-------------|
| <b>Polish banks</b>              |               |             |             |             |            |             |            |            |              |            |             |             |             |
| <b>Alior Bank</b>                | <b>42.16</b>  | <b>7.6</b>  | <b>5.9</b>  | <b>5.1</b>  | <b>10%</b> | <b>12%</b>  | <b>12%</b> | <b>0.8</b> | <b>0.7</b>   | <b>0.6</b> | <b>0.0%</b> | <b>0.0%</b> | <b>0.0%</b> |
| <b>Handlowy</b>                  | <b>51.60</b>  | <b>13.0</b> | <b>10.7</b> | <b>10.0</b> | <b>7%</b>  | <b>9%</b>   | <b>9%</b>  | <b>1.0</b> | <b>0.9</b>   | <b>0.9</b> | <b>7.2%</b> | <b>8.2%</b> | <b>7.0%</b> |
| <b>ING BSK</b>                   | <b>190.00</b> | <b>14.9</b> | <b>13.3</b> | <b>12.0</b> | <b>12%</b> | <b>13%</b>  | <b>13%</b> | <b>1.8</b> | <b>1.7</b>   | <b>1.5</b> | <b>1.8%</b> | <b>2.0%</b> | <b>2.3%</b> |
| <b>Millennium</b>                | <b>7.15</b>   | <b>11.8</b> | <b>8.5</b>  | <b>7.6</b>  | <b>8%</b>  | <b>11%</b>  | <b>11%</b> | <b>1.0</b> | <b>0.9</b>   | <b>0.8</b> | <b>0.0%</b> | <b>0.0%</b> | <b>0.0%</b> |
| <b>Pekao</b>                     | <b>97.54</b>  | <b>11.2</b> | <b>9.8</b>  | <b>9.2</b>  | <b>10%</b> | <b>11%</b>  | <b>11%</b> | <b>1.1</b> | <b>1.1</b>   | <b>1.0</b> | <b>6.8%</b> | <b>6.7%</b> | <b>7.6%</b> |
| <b>PKO BP</b>                    | <b>40.10</b>  | <b>11.4</b> | <b>11.0</b> | <b>10.4</b> | <b>11%</b> | <b>11%</b>  | <b>11%</b> | <b>1.2</b> | <b>1.2</b>   | <b>1.1</b> | <b>3.3%</b> | <b>7.7%</b> | <b>9.4%</b> |
| <b>Santander BP</b>              | <b>307.40</b> | <b>13.3</b> | <b>11.0</b> | <b>10.1</b> | <b>9%</b>  | <b>11%</b>  | <b>11%</b> | <b>1.2</b> | <b>1.2</b>   | <b>1.1</b> | <b>6.4%</b> | <b>3.7%</b> | <b>4.6%</b> |
| <b>Median</b>                    |               | <b>11.8</b> | <b>10.7</b> | <b>10.0</b> | <b>10%</b> | <b>11%</b>  | <b>11%</b> | <b>1.1</b> | <b>1.1</b>   | <b>1.0</b> | <b>3.3%</b> | <b>3.7%</b> | <b>4.6%</b> |
| <b>Investors in Polish banks</b> |               |             |             |             |            |             |            |            |              |            |             |             |             |
| BGP                              | 0.208         | 7.2         | 6.1         | 5.0         | 8%         | 9%          | 10%        | 0.5        | 0.5          | 0.5        | 2.4%        | 5.3%        | 6.3%        |
| Citigroup                        | 63.910        | 8.4         | 7.4         | 6.8         | 10%        | 10%         | 10%        | 0.8        | 0.7          | 0.7        | 3.1%        | 3.6%        | 4.1%        |
| Commerzbank                      | 5.044         | 6.7         | 5.2         | 4.7         | 3%         | 4%          | 4%         | 0.2        | 0.2          | 0.2        | 4.6%        | 6.0%        | 7.0%        |
| ING                              | 8.576         | 6.5         | 6.3         | 6.0         | 10%        | 10%         | 10%        | 0.6        | 0.6          | 0.6        | 8.1%        | 8.3%        | 8.7%        |
| UCI                              | 9.755         | 5.2         | 5.0         | 4.7         | 8%         | 8%          | 7%         | 0.4        | 0.4          | 0.3        | 5.9%        | 7.7%        | 9.2%        |
| <b>Median</b>                    |               | <b>6.7</b>  | <b>6.1</b>  | <b>5.0</b>  | <b>8%</b>  | <b>9%</b>   | <b>10%</b> | <b>0.5</b> | <b>0.5</b>   | <b>0.5</b> | <b>4.6%</b> | <b>6.0%</b> | <b>7.0%</b> |
| <b>Foreign banks</b>             |               |             |             |             |            |             |            |            |              |            |             |             |             |
| <b>Erste Bank</b>                | <b>30.52</b>  | <b>8.7</b>  | <b>8.2</b>  | -           | <b>10%</b> | <b>10%</b>  | -          | <b>0.8</b> | <b>0.8</b>   | -          | <b>4.6%</b> | <b>4.8%</b> | -           |
| <b>Komerční Banka</b>            | <b>815.00</b> | <b>10.2</b> | <b>9.8</b>  | -           | <b>14%</b> | <b>14%</b>  | -          | <b>1.4</b> | <b>1.3</b>   | -          | <b>6.4%</b> | <b>6.4%</b> | -           |
| <b>OTP</b>                       | <b>12,340</b> | <b>10.2</b> | <b>9.7</b>  | -           | <b>16%</b> | <b>14%</b>  | -          | <b>1.5</b> | <b>1.3</b>   | -          | <b>1.9%</b> | <b>2.4%</b> | -           |
| Akbank                           | 6.75          | 6.9         | 4.6         | 3.7         | 11%        | 14%         | 15%        | 0.7        | 0.6          | 0.5        | 2.7%        | 4.4%        | 6.1%        |
| Alpha Bank                       | 1.57          | 17.6        | 9.9         | 7.2         | 1%         | 3%          | 4%         | 0.3        | 0.3          | 0.3        | 0.0%        | 0.5%        | 0.0%        |
| Banco Santander                  | 3.53          | 6.9         | 6.5         | 6.2         | 8%         | 8%          | 9%         | 0.6        | 0.6          | 0.5        | 6.5%        | 6.8%        | 7.2%        |
| Deutsche Bank                    | 6.45          | 13.0        | 9.1         | 6.7         | 2%         | 2%          | 3%         | 0.2        | 0.2          | 0.2        | 2.8%        | 3.9%        | 4.9%        |
| Eurobank Ergasias                | 0.72          | 9.5         | 6.7         | 5.5         | 4%         | 7%          | 8%         | 0.5        | 0.5          | 0.4        | 0.0%        | 0.0%        | 0.0%        |
| National Bank of Greece          | 2.32          | 16.6        | 10.5        | 8.5         | 2%         | 4%          | 5%         | 0.4        | 0.4          | 0.4        | 0.0%        | 0.4%        | 0.0%        |
| Piraeus Bank                     | 2.79          | 17.4        | 10.5        | 7.7         | 2%         | 3%          | 4%         | 0.2        | 0.2          | 0.2        | 0.0%        | 1.1%        | 0.0%        |
| Sberbank                         | 219.50        | 5.3         | 4.7         | 4.2         | 22%        | 22%         | 21%        | 1.1        | 1.0          | 0.9        | 9.1%        | 10.6%       | 12.3%       |
| Türkiye Garanti Bank             | 8.74          | 5.4         | 3.9         | 3.2         | 12%        | 16%         | 18%        | 0.7        | 0.6          | 0.5        | 3.9%        | 5.1%        | 5.5%        |
| Türkiye Halk Bank                | 5.44          | 2.5         | 2.1         | 1.6         | 9%         | 9%          | 9%         | 0.2        | 0.2          | 0.2        | 2.9%        | 2.1%        | 2.3%        |
| Türkiye Vakıflar Bankası         | 4.39          | 3.2         | 2.5         | 1.8         | 13%        | 12%         | 15%        | 0.3        | 0.3          | 0.3        | 0.9%        | 1.0%        | 1.1%        |
| VTB Bank                         | 0.04          | 3.9         | 3.9         | 3.0         | 12%        | 12%         | 13%        | 0.4        | 0.4          | 0.3        | 7.8%        | 7.8%        | 10.4%       |
| Yapi ve Kredi Bankası            | 2.44          | 5.2         | 3.8         | 3.5         | 10%        | 13%         | 12%        | 0.5        | 0.4          | 0.4        | 0.0%        | 1.2%        | -           |
| <b>Median</b>                    |               | <b>7.8</b>  | <b>6.6</b>  | <b>4.2</b>  | <b>10%</b> | <b>11%</b>  | <b>9%</b>  | <b>0.5</b> | <b>0.4</b>   | <b>0.4</b> | <b>2.8%</b> | <b>3.2%</b> | <b>3.6%</b> |

## Insurance company valuations

|                        | Price        | 2019        | P/E<br>2020 | 2021       | 2019       | ROE<br>2020 | 2021       | 2019       | P/BV<br>2020 | 2021       | 2019        | DY<br>2020  | 2021        |
|------------------------|--------------|-------------|-------------|------------|------------|-------------|------------|------------|--------------|------------|-------------|-------------|-------------|
| <b>Insurers</b>        |              |             |             |            |            |             |            |            |              |            |             |             |             |
| <b>PZU</b>             | <b>37.22</b> | <b>9.9</b>  | <b>9.4</b>  | <b>9.2</b> | <b>22%</b> | <b>23%</b>  | <b>23%</b> | <b>2.1</b> | <b>2.1</b>   | <b>2.1</b> | <b>8.0%</b> | <b>8.1%</b> | <b>8.5%</b> |
| Aegon                  | 3.60         | 5.1         | 5.0         | 4.8        | 8%         | 7%          | 8%         | 0.4        | 0.3          | 0.3        | 8.5%        | 8.9%        | 9.4%        |
| Allianz                | 201.20       | 10.6        | 10.0        | 9.3        | 13%        | 12%         | 13%        | 1.3        | 1.2          | 1.1        | 4.7%        | 5.1%        | 5.4%        |
| Assicurazioni Generali | 16.32        | 10.0        | 9.7         | 9.2        | 11%        | 11%         | 11%        | 1.0        | 1.0          | 0.9        | 5.9%        | 6.2%        | 6.6%        |
| Aviva                  | 3.62         | 5.8         | 5.7         | 5.6        | 13%        | 13%         | 14%        | 0.8        | 0.8          | 0.8        | 8.9%        | 9.2%        | 9.4%        |
| AXA                    | 21.58        | 7.9         | 7.5         | 7.3        | 11%        | 11%         | 11%        | 0.9        | 0.8          | 0.8        | 6.8%        | 7.1%        | 7.5%        |
| Baloise                | 180.80       | 13.9        | 12.7        | 11.7       | 9%         | 10%         | 10%        | 1.3        | 1.2          | 1.2        | 3.5%        | 3.8%        | 4.1%        |
| Helvetia               | 127.70       | 12.6        | 12.1        | 11.5       | 11%        | 10%         | 12%        | 1.2        | 1.1          | 1.1        | 3.9%        | 4.1%        | 7.1%        |
| Mapfre                 | 2.39         | 9.0         | 8.4         | 8.1        | 10%        | 10%         | 10%        | 0.9        | 0.9          | 0.8        | 6.5%        | 6.9%        | 7.2%        |
| RSA Insurance          | 5.34         | 11.7        | 10.8        | 10.3       | 12%        | 13%         | 12%        | 1.4        | 1.3          | 1.3        | 5.2%        | 5.9%        | 6.6%        |
| Uniq                   | 8.26         | 11.5        | 10.9        | 10.0       | 7%         | 7%          | 8%         | 0.9        | 0.9          | 0.8        | 6.8%        | 6.9%        | 7.1%        |
| Vienna Insurance G.    | 23.35        | 9.5         | 8.9         | 8.3        | 7%         | 7%          | 7%         | 0.6        | 0.6          | 0.6        | 4.5%        | 4.8%        | 5.2%        |
| Zurich Financial       | 350.30       | 12.8        | 11.8        | 11.2       | 13%        | 14%         | 14%        | 1.7        | 1.6          | 1.5        | 5.7%        | 6.0%        | 6.4%        |
| <b>Median</b>          |              | <b>10.0</b> | <b>9.7</b>  | <b>9.2</b> | <b>11%</b> | <b>11%</b>  | <b>11%</b> | <b>1.0</b> | <b>1.0</b>   | <b>0.9</b> | <b>5.9%</b> | <b>6.2%</b> | <b>7.1%</b> |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg



## Gas &amp; Oil valuations

|                    | Price   | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |       |       |
|--------------------|---------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|-------|-------|
|                    |         | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020  | 2021  |
| Oil companies      |         |           |      |      |      |      |      |      |      |      |               |      |      |      |       |       |
| Lotos              | 79.72   | 6.3       | 5.3  | 4.6  | 0.6  | 0.6  | 0.5  | 12.1 | 11.2 | 10.2 | 10%           | 11%  | 12%  | 3.8% | 2.5%  | 2.7%  |
| MOL                | 2844.00 | 4.3       | 4.1  | 3.7  | 0.6  | 0.6  | 0.5  | 10.3 | 9.0  | 7.8  | 15%           | 15%  | 15%  | 5.0% | 5.3%  | 5.5%  |
| PKN Orlen          | 89.50   | 5.1       | 5.3  | 5.2  | 0.4  | 0.4  | 0.4  | 8.5  | 10.0 | 10.2 | 9%            | 8%   | 7%   | 3.9% | 3.4%  | 3.4%  |
| Hellenic Petroleum | 9.32    | 6.2       | 5.4  | 5.5  | 0.5  | 0.5  | 0.5  | 10.9 | 8.4  | 8.1  | 8%            | 9%   | 8%   | 5.3% | 5.6%  | 6.7%  |
| HollyFrontier      | 45.62   | 6.0       | 5.3  | 5.7  | 0.6  | 0.6  | 0.6  | 10.1 | 8.0  | 8.9  | 11%           | 12%  | 11%  | 2.9% | 3.0%  | 3.1%  |
| Marathon Petroleum | 46.89   | 6.3       | 5.0  | 4.8  | 0.5  | 0.5  | 0.5  | 9.2  | 5.7  | 5.5  | 8%            | 10%  | 11%  | 4.6% | 5.1%  | 5.7%  |
| Motor Oil          | 21.26   | 4.5       | 4.1  | 4.3  | 0.3  | 0.3  | 0.3  | 7.6  | 7.0  | 6.8  | 6%            | 7%   | 7%   | 6.4% | 6.8%  | 7.4%  |
| Neste Oil          | 29.24   | 10.6      | 10.0 | 9.5  | 1.4  | 1.5  | 1.4  | 16.8 | 15.4 | 14.6 | 14%           | 15%  | 15%  | 3.0% | 3.3%  | 3.5%  |
| OMV                | 46.76   | 3.8       | 3.5  | 3.5  | 0.9  | 0.9  | 0.9  | 8.9  | 7.8  | 7.4  | 24%           | 26%  | 26%  | 4.1% | 4.5%  | 4.8%  |
| Phillips 66        | 98.46   | 8.1       | 6.6  | 7.0  | 0.5  | 0.5  | 0.6  | 13.2 | 9.3  | 9.9  | 7%            | 8%   | 8%   | 3.5% | 3.7%  | 4.0%  |
| Saras SpA          | 1.38    | 3.2       | 2.2  | 3.1  | 0.1  | 0.1  | 0.1  | 9.0  | 4.4  | 7.5  | 4%            | 6%   | 4%   | 6.2% | 10.4% | 7.2%  |
| Tupras             | 134.00  | 6.5       | 4.8  | 4.6  | 0.4  | 0.4  | 0.4  | 9.3  | 5.7  | 5.2  | 7%            | 8%   | 8%   | 9.1% | 15.1% | 16.2% |
| Valero Energy      | 77.42   | 6.4       | 4.8  | 5.2  | 0.4  | 0.3  | 0.3  | 11.5 | 7.0  | 7.8  | 6%            | 7%   | 7%   | 4.6% | 5.0%  | 5.3%  |
| Median             |         | 6.2       | 5.0  | 4.8  | 0.5  | 0.5  | 0.5  | 10.1 | 8.0  | 7.8  | 8%            | 9%   | 8%   | 4.6% | 5.0%  | 5.3%  |
| Gas companies      |         |           |      |      |      |      |      |      |      |      |               |      |      |      |       |       |
| PGNiG              | 4.70    | 4.4       | 3.4  | 2.8  | 0.8  | 0.7  | 0.6  | 11.3 | 7.8  | 6.5  | 18%           | 22%  | 22%  | 2.3% | 3.5%  | 5.1%  |
| A2A SpA            | 1.58    | 7.2       | 6.7  | 6.5  | 1.4  | 1.3  | 1.3  | 15.5 | 13.4 | 13.1 | 19%           | 19%  | 19%  | 5.0% | 5.1%  | 5.2%  |
| BP                 | 494.45  | 4.3       | 4.0  | 4.1  | 0.6  | 0.6  | 0.6  | 11.0 | 9.5  | 9.2  | 14%           | 15%  | 15%  | 0.0% | 0.0%  | 0.0%  |
| Centrica           | 65.12   | 3.4       | 3.3  | 3.2  | 0.3  | 0.3  | 0.3  | 7.2  | 5.9  | 5.6  | 8%            | 8%   | 8%   | 0.0% | 0.0%  | 0.0%  |
| Enagas             | 19.92   | 9.4       | 9.0  | 9.7  | 7.6  | 7.6  | 7.9  | 11.3 | 10.4 | 11.1 | 81%           | 84%  | 82%  | 8.0% | 8.4%  | 8.5%  |
| Endesa             | 22.97   | 8.5       | 8.4  | 8.2  | 1.5  | 1.5  | 1.4  | 16.1 | 15.8 | 15.4 | 18%           | 17%  | 17%  | 6.2% | 6.3%  | 5.6%  |
| Engie              | 13.45   | 6.2       | 5.9  | 5.6  | 0.9  | 0.9  | 0.9  | 12.8 | 11.4 | 10.4 | 15%           | 15%  | 16%  | 5.8% | 6.2%  | 6.8%  |
| Eni                | 13.31   | 3.3       | 3.1  | 3.0  | 0.8  | 0.8  | 0.9  | 10.4 | 9.3  | 8.8  | 24%           | 26%  | 28%  | 6.4% | 6.6%  | 6.8%  |
| Equinor            | 154.15  | 2.6       | 2.3  | 2.2  | 1.0  | 0.9  | 0.9  | 9.0  | 8.0  | 7.6  | 37%           | 38%  | 40%  | 0.1% | 0.1%  | 0.1%  |
| Gas Natural SDG    | 23.47   | 9.3       | 8.9  | 8.7  | 1.7  | 1.6  | 1.5  | 16.5 | 15.2 | 14.6 | 18%           | 18%  | 18%  | 5.8% | 6.1%  | 6.4%  |
| Gazprom            | 232.06  | 3.6       | 3.5  | 3.3  | 1.0  | 1.0  | 0.9  | 5.0  | 4.6  | 3.7  | 27%           | 28%  | 28%  | 5.3% | 5.9%  | 7.4%  |
| Hera SpA           | 3.51    | 7.5       | 7.4  | 7.3  | 1.3  | 1.2  | 1.2  | 18.0 | 17.6 | 16.9 | 17%           | 17%  | 17%  | 3.0% | 3.1%  | 3.1%  |
| NovaTek            | 1280.80 | 14.1      | 13.2 | 13.2 | 4.8  | 4.5  | 4.2  | 12.2 | 12.5 | 11.5 | 34%           | 34%  | 32%  | 2.1% | 2.6%  | 3.0%  |
| ROMGAZ             | 33.75   | 6.1       | 5.5  | 5.1  | 2.8  | 2.6  | 2.4  | 10.2 | 9.3  | 8.7  | 46%           | 48%  | 47%  | 9.3% | 9.7%  | 9.5%  |
| Shell              | 25.29   | 3.2       | 2.9  | 2.7  | 0.5  | 0.5  | 0.5  | 10.2 | 8.9  | 8.6  | 16%           | 17%  | 18%  | 8.3% | 8.3%  | 8.4%  |
| Snam SpA           | 4.51    | 12.6      | 12.3 | 11.9 | 10.2 | 10.0 | 9.7  | 14.5 | 14.1 | 13.5 | 81%           | 81%  | 81%  | 5.3% | 5.6%  | 5.8%  |
| Total              | 44.40   | 4.8       | 4.5  | 4.4  | 0.8  | 0.9  | 0.8  | 10.3 | 9.2  | 8.9  | 18%           | 19%  | 19%  | 6.6% | 6.8%  | 7.0%  |
| Median             |         | 6.1       | 5.5  | 5.1  | 1.0  | 1.0  | 0.9  | 11.3 | 9.5  | 9.2  | 18%           | 19%  | 19%  | 5.3% | 5.9%  | 5.8%  |

## Power generation company valuations

|                  | Price   | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|------------------|---------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                  |         | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| Power generation |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| CEZ              | 516.50  | 7.4       | 6.9  | 6.7  | 2.1  | 1.9  | 1.8  | 15.4 | 13.4 | 13.5 | 29%           | 28%  | 27%  | 4.6% | 5.8% | 6.7% |
| Enea             | 8.13    | 3.1       | 2.9  | 2.7  | 0.6  | 0.6  | 0.6  | 3.0  | 2.8  | 2.3  | 20%           | 19%  | 22%  | 0.0% | 0.0% | 3.6% |
| Energa           | 6.68    | 3.7       | 4.1  | 4.3  | 0.7  | 0.7  | 0.8  | 3.8  | 4.2  | 4.2  | 18%           | 17%  | 18%  | 0.0% | 0.0% | 0.0% |
| PGE              | 7.36    | 3.0       | 3.1  | 2.3  | 0.6  | 0.6  | 0.5  | 4.5  | 5.1  | 3.5  | 21%           | 18%  | 22%  | 0.0% | 5.5% | 4.9% |
| Tauron           | 1.46    | 4.0       | 3.6  | 3.1  | 0.7  | 0.6  | 0.6  | 2.3  | 2.2  | 1.9  | 17%           | 17%  | 19%  | 0.0% | 0.0% | 0.0% |
| EDF              | 10.44   | 4.8       | 4.4  | 4.2  | 1.1  | 1.1  | 1.0  | 14.8 | 11.2 | 9.9  | 23%           | 24%  | 25%  | 3.4% | 4.4% | 4.7% |
| EDP              | 3.37    | 8.5       | 8.2  | 7.9  | 2.1  | 2.0  | 1.8  | 14.9 | 13.9 | 13.3 | 24%           | 25%  | 23%  | 5.7% | 5.8% | 6.0% |
| Endesa           | 22.97   | 8.5       | 8.4  | 8.2  | 1.5  | 1.5  | 1.4  | 16.1 | 15.8 | 15.4 | 18%           | 17%  | 17%  | 6.2% | 6.3% | 5.6% |
| Enel             | 6.28    | 7.1       | 6.8  | 6.5  | 1.6  | 1.5  | 1.5  | 13.5 | 12.4 | 11.8 | 22%           | 23%  | 23%  | 5.2% | 5.6% | 6.0% |
| EON              | 8.11    | 7.1       | 5.4  | 4.8  | 1.1  | 0.6  | 0.5  | 11.8 | 11.3 | 10.6 | 16%           | 11%  | 10%  | 5.7% | 6.1% | 6.6% |
| Fortum           | 20.32   | 14.2      | 13.1 | 12.6 | 4.3  | 4.2  | 4.1  | 16.1 | 13.9 | 12.7 | 30%           | 32%  | 32%  | 5.4% | 5.4% | 5.4% |
| Iberdola         | 9.31    | 10.4      | 9.7  | 9.1  | 2.8  | 2.6  | 2.5  | 18.2 | 16.8 | 15.8 | 27%           | 27%  | 28%  | 3.9% | 4.2% | 4.5% |
| National Grid    | 847.80  | 11.1      | 10.6 | 10.1 | 3.6  | 3.5  | 3.4  | 14.6 | 14.6 | 13.7 | 32%           | 33%  | 34%  | 0.0% | 0.0% | 0.0% |
| Red Electrica    | 17.50   | 9.1       | 9.2  | 9.3  | 7.1  | 7.1  | 7.2  | 13.0 | 13.5 | 13.9 | 78%           | 78%  | 77%  | 6.0% | 6.1% | 6.0% |
| RWE              | 25.40   | 15.4      | 8.0  | 6.8  | 1.8  | 1.6  | 1.5  | 24.3 | 14.4 | 10.8 | 12%           | 20%  | 22%  | 3.2% | 3.7% | 4.2% |
| SSE              | 1095.50 | 10.4      | 9.0  | 8.3  | 0.7  | 0.7  | 0.7  | 16.3 | 11.5 | 10.2 | 7%            | 8%   | 8%   | 0.0% | 0.0% | 0.0% |
| Verbund          | 54.25   | 10.2      | 8.3  | 7.8  | 3.7  | 3.3  | 3.2  | 35.1 | 26.5 | 24.8 | 36%           | 40%  | 41%  | 1.2% | 1.7% | 2.0% |
| Median           |         | 8.5       | 8.0  | 6.8  | 1.6  | 1.5  | 1.5  | 14.8 | 13.4 | 11.8 | 22%           | 23%  | 23%  | 3.4% | 4.4% | 4.7% |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

## Fertilizer producers and chemical companies

|                             | Price        | EV/EBITDA  |            |            | EV/S       |            |            | P/E         |             |             | EBITDA margin |            |            | DY          |             |             |
|-----------------------------|--------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|---------------|------------|------------|-------------|-------------|-------------|
|                             |              | 2019       | 2020       | 2021       | 2019       | 2020       | 2021       | 2019        | 2020        | 2021        | 2019          | 2020       | 2021       | 2019        | 2020        | 2021        |
| <b>Fertilizer producers</b> |              |            |            |            |            |            |            |             |             |             |               |            |            |             |             |             |
| <b>Grupa Azoty</b>          | <b>37.20</b> | <b>4.4</b> | <b>7.1</b> | <b>8.2</b> | <b>0.6</b> | <b>0.6</b> | <b>0.7</b> | <b>6.7</b>  | <b>16.9</b> | <b>17.0</b> | <b>13%</b>    | <b>9%</b>  | <b>9%</b>  | <b>0.0%</b> | <b>0.0%</b> | <b>1.8%</b> |
| Acron                       | 4682.00      | 6.7        | 6.5        | 6.2        | 2.2        | 2.1        | 2.0        | 9.3         | 8.9         | 8.2         | 33%           | 32%        | 32%        | 7.0%        | 7.2%        | 8.5%        |
| CF Industries               | 48.54        | 10.4       | 9.3        | 8.9        | 3.7        | 3.5        | 3.5        | 24.3        | 17.9        | 15.4        | 35%           | 38%        | 39%        | 2.5%        | 2.5%        | 2.5%        |
| Israel Chemicals            | 1647.00      | 6.9        | 6.6        | 6.4        | 1.5        | 1.4        | 1.3        | 12.0        | 10.9        | 10.5        | 21%           | 21%        | 21%        | 0.0%        | 0.0%        | 0.0%        |
| K+S                         | 14.25        | 7.7        | 6.7        | 6.2        | 1.5        | 1.4        | 1.4        | 11.8        | 9.0         | 7.6         | 19%           | 21%        | 22%        | 3.1%        | 4.2%        | 4.9%        |
| Phosagro                    | 2427.00      | 5.8        | 5.5        | 5.3        | 1.8        | 1.7        | 1.6        | 9.1         | 9.4         | 5.6         | 31%           | 32%        | 30%        | 6.3%        | 6.0%        | 7.7%        |
| The Mosaic Company          | 19.07        | 5.4        | 4.8        | 4.5        | 1.1        | 1.1        | 1.1        | 11.0        | 8.1         | 6.9         | 21%           | 23%        | 24%        | 1.0%        | 1.2%        | 1.5%        |
| Yara International          | 377.40       | 53.9       | 46.4       | 42.1       | 8.3        | 7.7        | 7.2        | -           | -           | -           | 15%           | 17%        | 17%        | 0.3%        | 0.4%        | 0.5%        |
| ZA Police                   | 14.20        | 5.2        | 4.7        | 4.7        | 1.2        | 1.2        | 1.2        | 1.3         | 1.2         | 1.1         | 23%           | 24%        | 24%        | 58.5%       | 63.4%       | 70.4%       |
| ZCh Pulawy                  | 87.20        | 1.8        | 1.9        | 1.9        | 0.3        | 0.3        | 0.3        | 5.4         | 5.6         | -           | 15%           | 14%        | 14%        | 5.7%        | 5.7%        | -           |
| <b>Median</b>               |              | <b>6.3</b> | <b>6.5</b> | <b>6.2</b> | <b>1.5</b> | <b>1.4</b> | <b>1.3</b> | <b>9.3</b>  | <b>9.0</b>  | <b>7.9</b>  | <b>21%</b>    | <b>22%</b> | <b>23%</b> | <b>2.8%</b> | <b>3.4%</b> | <b>2.5%</b> |
| <b>Chemical companies</b>   |              |            |            |            |            |            |            |             |             |             |               |            |            |             |             |             |
| <b>Ciech</b>                | <b>34.60</b> | <b>4.8</b> | <b>4.8</b> | <b>4.7</b> | <b>0.9</b> | <b>0.9</b> | <b>0.8</b> | <b>6.8</b>  | <b>7.2</b>  | <b>7.5</b>  | <b>18%</b>    | <b>19%</b> | <b>17%</b> | <b>0.0%</b> | <b>2.9%</b> | <b>7.0%</b> |
| Akzo Nobel                  | 81.48        | 15.1       | 13.1       | 12.0       | 2.0        | 1.9        | 1.9        | 27.0        | 19.9        | 17.6        | 13%           | 15%        | 16%        | 2.3%        | 2.5%        | 3.0%        |
| BASF                        | 59.06        | 7.6        | 6.9        | 6.5        | 1.1        | 1.1        | 1.1        | 10.9        | 9.9         | 9.2         | 15%           | 16%        | 16%        | 5.5%        | 5.7%        | 5.9%        |
| Croda                       | 4616.00      | 15.0       | 14.1       | 13.3       | 4.7        | 4.6        | 4.4        | 22.2        | 20.7        | 19.7        | 32%           | 32%        | 33%        | 0.0%        | 0.0%        | 0.0%        |
| Sisecam                     | 4.14         | 3.3        | 2.8        | 2.5        | 0.7        | 0.6        | 0.5        | 4.4         | 3.8         | 3.7         | 21%           | 22%        | 22%        | 5.6%        | 6.2%        | 7.3%        |
| Soda Sanayii                | 5.63         | 3.0        | 2.4        | 2.0        | 0.8        | 0.7        | 0.7        | 4.1         | 3.6         | 3.3         | 27%           | 29%        | 34%        | 10.7%       | 13.3%       | 18.3%       |
| Solvay                      | 90.20        | 5.0        | 4.7        | 4.5        | 1.1        | 1.1        | 1.0        | 10.4        | 9.8         | 8.7         | 22%           | 22%        | 22%        | 4.3%        | 4.4%        | 4.6%        |
| Tata Chemicals              | 550.55       | 7.8        | 7.0        | 6.4        | 1.4        | 1.3        | 1.2        | 13.4        | 11.5        | 10.6        | 18%           | 19%        | 19%        | 2.2%        | 2.5%        | 2.4%        |
| Tessenderlo Chemie          | 26.00        | 5.2        | 4.9        | 4.4        | 0.7        | 0.7        | 0.6        | 11.1        | 9.8         | 9.0         | 13%           | 14%        | 14%        | -           | -           | -           |
| Wacker Chemie               | 68.98        | 5.6        | 5.3        | 4.8        | 0.9        | 0.9        | 0.9        | 17.2        | 14.0        | 11.3        | 17%           | 17%        | 18%        | 3.6%        | 3.8%        | 4.5%        |
| <b>Median</b>               |              | <b>5.4</b> | <b>5.1</b> | <b>4.8</b> | <b>1.0</b> | <b>1.0</b> | <b>0.9</b> | <b>11.0</b> | <b>9.9</b>  | <b>9.1</b>  | <b>18%</b>    | <b>19%</b> | <b>19%</b> | <b>3.6%</b> | <b>3.8%</b> | <b>4.6%</b> |

## Machine and equipment manufacturers

|                    | Price       | EV/EBITDA  |            |            | EV/S       |            |            | P/E        |            |             | EBITDA margin |            |            | DY           |             |             |
|--------------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|---------------|------------|------------|--------------|-------------|-------------|
|                    |             | 2019       | 2020       | 2021       | 2019       | 2020       | 2021       | 2019       | 2020       | 2021        | 2019          | 2020       | 2021       | 2019         | 2020        | 2021        |
| <b>Industrials</b> |             |            |            |            |            |            |            |            |            |             |               |            |            |              |             |             |
| <b>Famur</b>       | <b>3.96</b> | <b>4.1</b> | <b>4.8</b> | <b>5.5</b> | <b>1.1</b> | <b>1.3</b> | <b>1.3</b> | <b>5.0</b> | <b>9.1</b> | <b>11.6</b> | <b>26%</b>    | <b>27%</b> | <b>24%</b> | <b>13.4%</b> | <b>9.9%</b> | <b>8.2%</b> |
| Caterpillar        | 117.89      | 7.4        | 7.3        | 7.4        | 1.6        | 1.6        | 1.5        | 9.5        | 9.0        | 8.6         | 21%           | 21%        | 21%        | 3.2%         | 3.5%        | 3.4%        |
| Epiroc             | 100.40      | 8.2        | 7.0        | 6.7        | 2.0        | 1.9        | 1.8        | 19.0       | 17.7       | 16.8        | 24%           | 27%        | 27%        | 2.5%         | 2.7%        | 2.8%        |
| Komatsu            | 2251.50     | 5.4        | 5.3        | 5.3        | 1.0        | 1.0        | 1.0        | 8.5        | 8.3        | 8.2         | 19%           | 19%        | 19%        | 4.7%         | 5.0%        | 5.1%        |
| Sandvig AG         | 138.75      | 7.4        | 7.2        | 6.9        | 1.7        | 1.7        | 1.6        | 12.6       | 11.9       | 11.3        | 23%           | 23%        | 23%        | 3.3%         | 3.6%        | 3.8%        |
| <b>Median</b>      |             | <b>7.4</b> | <b>7.0</b> | <b>6.7</b> | <b>1.6</b> | <b>1.6</b> | <b>1.5</b> | <b>9.5</b> | <b>9.1</b> | <b>11.3</b> | <b>23%</b>    | <b>22%</b> | <b>22%</b> | <b>3.3%</b>  | <b>3.6%</b> | <b>3.8%</b> |

## Mining company valuations

|                    | Price        | EV/EBITDA  |            |            | EV/S       |            |            | P/E         |             |            | EBITDA margin |            |            | DY          |             |             |
|--------------------|--------------|------------|------------|------------|------------|------------|------------|-------------|-------------|------------|---------------|------------|------------|-------------|-------------|-------------|
|                    |              | 2019       | 2020       | 2021       | 2019       | 2020       | 2021       | 2019        | 2020        | 2021       | 2019          | 2020       | 2021       | 2019        | 2020        | 2021        |
| <b>Metals</b>      |              |            |            |            |            |            |            |             |             |            |               |            |            |             |             |             |
| <b>KGHM</b>        | <b>74.78</b> | <b>3.7</b> | <b>4.3</b> | <b>3.7</b> | <b>0.9</b> | <b>0.9</b> | <b>0.8</b> | <b>6.5</b>  | <b>9.2</b>  | <b>7.8</b> | <b>23%</b>    | <b>20%</b> | <b>21%</b> | <b>0.0%</b> | <b>2.0%</b> | <b>3.2%</b> |
| Anglo American     | 1680.60      | 3.5        | 3.8        | 4.0        | 1.2        | 1.2        | 1.2        | 7.0         | 7.8         | 8.2        | 36%           | 33%        | 31%        | 0.0%        | 0.0%        | 0.0%        |
| Antofagasta        | 816.80       | 4.8        | 4.8        | 4.4        | 2.4        | 2.4        | 2.3        | 14.3        | 14.1        | 11.8       | 50%           | 49%        | 52%        | 0.0%        | 0.0%        | 0.0%        |
| BHP Group LTD      | 35.20        | 3.6        | 3.4        | 3.7        | 1.9        | 1.9        | 1.9        | 12.6        | 11.5        | 13.0       | 54%           | 54%        | 52%        | 4.4%        | 3.0%        | 2.4%        |
| Boliden            | 199.02       | 4.1        | 4.2        | 4.2        | 1.1        | 1.0        | 1.0        | 8.3         | 8.5         | 8.4        | 26%           | 25%        | 25%        | 6.2%        | 6.2%        | 6.6%        |
| First Quantum      | 8.80         | 6.4        | 4.4        | 4.0        | 2.8        | 2.1        | 2.0        | 9.1         | 5.5         | 4.4        | 44%           | 48%        | 50%        | 0.1%        | 0.2%        | 0.7%        |
| Freeport-McMoRan   | 9.13         | 7.8        | 6.1        | 4.0        | 1.9        | 1.8        | 1.5        | 19.4        | 10.6        | 5.6        | 24%           | 29%        | 38%        | 2.2%        | 4.0%        | 5.1%        |
| Fresnillo          | 665.20       | 6.5        | 5.4        | 4.6        | 2.9        | 2.7        | 2.4        | 18.6        | 14.9        | 11.1       | 45%           | 49%        | 53%        | 0.0%        | 0.0%        | 0.0%        |
| Gold Fields        | 8704.00      | 5.3        | 4.7        | 4.6        | 2.2        | 2.1        | 2.0        | 31.4        | 21.1        | 20.2       | 42%           | 44%        | 44%        | 0.0%        | 0.0%        | 0.0%        |
| Hudbay Min         | 4.22         | 2.6        | 2.4        | 2.3        | 1.0        | 1.0        | 0.9        | 12.4        | 9.8         | 7.3        | 39%           | 42%        | 41%        | 0.3%        | 0.3%        | 0.3%        |
| KAZ Minerals       | 397.80       | 4.0        | 3.9        | 3.7        | 2.2        | 2.1        | 2.0        | 4.5         | 4.2         | 3.8        | 54%           | 54%        | 55%        | 0.0%        | 0.0%        | 0.0%        |
| Lundin Min         | 6.02         | 4.8        | 3.3        | 3.0        | 1.9        | 1.5        | 1.4        | 12.3        | 7.3         | 6.5        | 39%           | 45%        | 48%        | 1.1%        | 1.2%        | 1.6%        |
| MMC Norilsk Nickel | 23.68        | 6.7        | 6.5        | 6.4        | 3.7        | 3.6        | 3.5        | 9.1         | 9.0         | 9.4        | 55%           | 54%        | 55%        | 9.3%        | 10.3%       | 11.5%       |
| OZ Minerals        | 9.08         | 5.6        | 4.6        | 3.7        | 2.4        | 2.1        | 1.8        | 17.5        | 12.7        | 9.0        | 44%           | 45%        | 48%        | 2.3%        | 2.5%        | 2.8%        |
| Polymetal Intl     | 1107.50      | 8.2        | 7.8        | 7.6        | 3.8        | 3.7        | 3.6        | 11.9        | 11.1        | 10.6       | 46%           | 47%        | 47%        | 0.0%        | 0.0%        | 0.0%        |
| Polyus             | 7236.00      | 7.8        | 7.6        | 7.6        | 5.0        | 4.8        | 4.8        | 12.1        | 11.4        | 10.6       | 64%           | 64%        | 63%        | 4.0%        | 4.5%        | 4.9%        |
| Sandfire Resources | 5.83         | 2.3        | 1.6        | 1.8        | 1.2        | 0.9        | 1.0        | 8.0         | 4.8         | 4.8        | 51%           | 58%        | 57%        | 4.6%        | 6.9%        | 6.4%        |
| Southern CC        | 30.17        | 7.1        | 6.6        | 6.3        | 3.7        | 3.5        | 3.3        | 12.5        | 11.6        | 10.6       | 52%           | 53%        | 52%        | 3.7%        | 5.2%        | 6.4%        |
| <b>Median</b>      |              | <b>5.1</b> | <b>4.5</b> | <b>4.0</b> | <b>2.2</b> | <b>2.1</b> | <b>2.0</b> | <b>12.2</b> | <b>10.2</b> | <b>8.7</b> | <b>44%</b>    | <b>47%</b> | <b>49%</b> | <b>0.7%</b> | <b>1.6%</b> | <b>2.0%</b> |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

## Mining company valuations

| Coal                   | Price        | EV/EBITDA  |            |            | EV/S       |            |            | P/E        |            |             | EBITDA margin |            |            | DY          |             |             |
|------------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|---------------|------------|------------|-------------|-------------|-------------|
|                        |              | 2019       | 2020       | 2021       | 2019       | 2020       | 2021       | 2019       | 2020       | 2021        | 2019          | 2020       | 2021       | 2019        | 2020        | 2021        |
| <b>JSW</b>             | <b>32.34</b> | <b>0.5</b> | <b>1.1</b> | <b>1.5</b> | <b>0.1</b> | <b>0.2</b> | <b>0.2</b> | <b>3.6</b> | <b>9.5</b> | <b>22.3</b> | <b>23%</b>    | <b>17%</b> | <b>15%</b> | <b>5.3%</b> | <b>5.5%</b> | <b>5.3%</b> |
| Alliance Res Partners  | 15.47        | 3.3        | 3.5        | 3.9        | 1.1        | 1.1        | 1.2        | 4.0        | 6.1        | 7.5         | 34%           | 33%        | 31%        | 13.9%       | 14.3%       | 14.1%       |
| Arch Coal              | 75.08        | 2.4        | 3.0        | 3.1        | 0.5        | 0.5        | 0.5        | 4.3        | 5.7        | 6.4         | 20%           | 17%        | 16%        | 2.4%        | 2.4%        | 2.4%        |
| Banpu                  | 11.50        | 7.5        | 7.5        | 7.4        | 1.8        | 1.8        | 1.8        | 6.0        | 5.7        | 6.0         | 24%           | 23%        | 25%        | 6.5%        | 6.9%        | 5.8%        |
| BHP Group              | 47.30        | 3.5        | 3.4        | 3.7        | 1.9        | 1.9        | 1.9        | 12.5       | 11.5       | 12.9        | 54%           | 54%        | 52%        | 9.8%        | 6.5%        | 5.2%        |
| China Coal Energy      | 2.80         | 5.1        | 5.1        | 4.9        | 1.0        | 1.0        | 0.9        | 7.1        | 7.2        | 6.3         | 19%           | 19%        | 19%        | 3.0%        | 2.8%        | 3.0%        |
| Cloud Peak Energy      | 0.06         | 8.8        | 9.6        | 11.6       | 0.5        | 0.4        | 0.4        | -          | -          | -           | 6%            | 4%         | 3%         | -           | -           | -           |
| LW Bogdanka            | 36.00        | 1.4        | 1.4        | 1.4        | 0.5        | 0.4        | 0.4        | 5.9        | 5.7        | 6.1         | 33%           | 33%        | 31%        | 6.7%        | 8.5%        | 6.0%        |
| Natural Res Partners   | 27.50        | 1.7        | 1.7        | 1.7        | 1.3        | 1.3        | 1.3        | 4.8        | 4.5        | 4.3         | 79%           | 80%        | 80%        | 6.5%        | 6.5%        | 6.5%        |
| Peabody Energy Corp    | 18.19        | 2.1        | 2.3        | 2.6        | 0.4        | 0.4        | 0.4        | 8.5        | 15.0       | 41.3        | 20%           | 19%        | 17%        | 12.4%       | 3.3%        | 2.9%        |
| PT Bukit Asam Tbk      | 2420.00      | 3.6        | 3.3        | 3.2        | 1.1        | 1.0        | 0.9        | 5.1        | 5.4        | 4.9         | 30%           | 31%        | 30%        | 11.6%       | 12.6%       | 12.7%       |
| Rio Tinto              | 3946.00      | 3.5        | 3.7        | 3.9        | 1.6        | 1.7        | 1.8        | 8.0        | 8.9        | 9.8         | 48%           | 46%        | 46%        | 0.0%        | 0.0%        | 0.0%        |
| Semirara Mining&Power  | 22.80        | 5.1        | 4.5        | 4.2        | 2.4        | 2.1        | 2.1        | 7.8        | 7.0        | 7.1         | 48%           | 48%        | 49%        | 6.4%        | 6.8%        | 8.2%        |
| Shaanxi Heima Coking   | 3.47         | -          | -          | -          | 0.7        | 0.6        | 0.6        | 9.9        | 9.4        | 11.2        | -             | -          | -          | -           | -           | -           |
| Shanxi Xishan Coal&Ele | 6.03         | 5.5        | 5.6        | 5.3        | 1.0        | 1.0        | 1.0        | 10.4       | 10.8       | -           | 19%           | 18%        | 19%        | 0.8%        | 0.7%        | 0.9%        |
| Shougang Fushan Res    | 1.58         | 2.4        | 2.4        | 2.5        | 1.3        | 1.2        | 1.2        | 6.9        | 6.5        | 7.1         | 52%           | 49%        | 47%        | 8.7%        | 9.2%        | 7.2%        |
| Stanmore Coal          | 1.45         | 2.1        | 2.7        | 4.0        | 0.8        | 0.9        | 0.9        | 4.4        | 5.8        | 9.7         | 37%           | 33%        | 23%        | 5.0%        | 4.1%        | 3.5%        |
| Teck Resources         | 16.35        | 2.8        | 3.1        | 3.3        | 1.2        | 1.2        | 1.2        | 5.6        | 6.5        | 7.6         | 41%           | 39%        | 38%        | 1.8%        | 1.7%        | 2.3%        |
| Terracom               | 0.43         | 1.5        | 1.3        | 1.4        | 0.5        | 0.4        | 0.4        | 3.9        | 2.3        | 2.7         | 30%           | 27%        | 26%        | -           | -           | -           |
| Warrior Met Coal       | 21.24        | 2.2        | 3.0        | 3.3        | 0.9        | 1.0        | 1.0        | 3.4        | 5.0        | 6.0         | 41%           | 33%        | 32%        | 12.1%       | 8.1%        | 8.0%        |
| Yanzhou Coal Mining    | 6.47         | 4.0        | 4.1        | 3.8        | 1.1        | 1.1        | 1.1        | 4.0        | 4.1        | 3.9         | 28%           | 27%        | 29%        | 6.5%        | 6.2%        | 6.7%        |
| <b>Median</b>          |              | <b>3.1</b> | <b>3.2</b> | <b>3.5</b> | <b>1.0</b> | <b>1.0</b> | <b>1.0</b> | <b>5.8</b> | <b>6.3</b> | <b>7.1</b>  | <b>31%</b>    | <b>32%</b> | <b>29%</b> | <b>6.5%</b> | <b>6.4%</b> | <b>5.5%</b> |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

## European telecom valuations

|                         | Price  | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|-------------------------|--------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                         |        | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Polish companies</b> |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Netia                   | 4.57   | 5.3       | 5.3  | 5.1  | 1.3  | 1.4  | 1.4  | 30.7 | 25.4 | 21.7 | 26%           | 26%  | 27%  | 0.0% | 0.0% | 8.8% |
| Orange Polska           | 6.04   | 4.8       | 4.6  | 4.3  | 1.4  | 1.3  | 1.3  | 39.0 | 24.5 | 17.5 | 29%           | 29%  | 29%  | 0.0% | 0.0% | 4.1% |
| Play                    | 31.06  | 6.1       | 6.0  | 5.6  | 2.0  | 2.1  | 1.9  | 9.0  | 8.2  | 8.1  | 33%           | 34%  | 35%  | 4.7% | 4.2% | 4.7% |
| Median                  |        | 5.3       | 5.3  | 5.1  | 1.4  | 1.4  | 1.4  | 30.7 | 24.5 | 17.5 | 29%           | 29%  | 29%  | 0%   | 0.0% | 4.7% |
| <b>Mid Caps</b>         |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Proximus                | 26.08  | 5.9       | 5.9  | 5.9  | 1.9  | 1.9  | 1.9  | 15.3 | 14.8 | 15.0 | 32%           | 33%  | 33%  | 5.8% | 5.8% | 5.8% |
| Telefonica CP           | 218.00 | 7.0       | 7.1  | 7.2  | 2.0  | 2.0  | 2.0  | 13.0 | 13.2 | 13.4 | 28%           | 28%  | 28%  | 9.4% | 9.0% | 8.8% |
| Hellenic Telekom        | 12.00  | 5.0       | 4.9  | 4.8  | 1.8  | 1.7  | 1.7  | 17.1 | 14.9 | 13.3 | 35%           | 36%  | 36%  | 4.6% | 5.0% | 5.5% |
| Matav                   | 425.00 | 4.1       | 4.0  | 4.0  | 1.2  | 1.2  | 1.2  | 9.1  | 8.9  | 8.4  | 30%           | 30%  | 30%  | 6.2% | 6.6% | 7.2% |
| Telecom Austria         | 6.63   | 5.1       | 5.0  | 4.8  | 1.6  | 1.6  | 1.6  | 10.7 | 10.0 | 9.6  | 32%           | 32%  | 33%  | 3.2% | 3.8% | 4.1% |
| Median                  |        | 5.1       | 5.0  | 4.8  | 1.8  | 1.7  | 1.7  | 13.0 | 13.2 | 13.3 | 32%           | 32%  | 33%  | 5.8% | 5.8% | 5.8% |
| <b>Big Caps</b>         |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| BT                      | 161.40 | 3.6       | 3.7  | 3.6  | 1.2  | 1.2  | 1.2  | 6.2  | 6.4  | 6.1  | 32%           | 32%  | 32%  | 0.0% | 0.0% | 0.0% |
| DT                      | 14.83  | 5.5       | 5.3  | 5.0  | 1.7  | 1.7  | 1.6  | 14.1 | 12.7 | 11.4 | 32%           | 32%  | 33%  | 5.1% | 5.4% | 5.8% |
| KPN                     | 2.72   | 7.5       | 7.3  | 6.9  | 3.1  | 3.1  | 3.2  | 24.3 | 20.3 | 17.6 | 41%           | 43%  | 46%  | 4.9% | 5.2% | 5.5% |
| Orange France           | 13.47  | 4.9       | 4.9  | 4.8  | 1.5  | 1.5  | 1.5  | 12.9 | 11.8 | 11.1 | 31%           | 32%  | 32%  | 5.3% | 5.6% | 5.9% |
| Swisscom                | 482.60 | 7.7       | 7.7  | 7.6  | 2.8  | 2.9  | 2.9  | 16.6 | 16.8 | 16.7 | 37%           | 37%  | 38%  | 4.6% | 4.6% | 4.6% |
| Telefonica S.A.         | 5.99   | 5.2       | 5.1  | 5.0  | 1.7  | 1.7  | 1.7  | 8.3  | 7.4  | 7.2  | 32%           | 33%  | 33%  | 6.7% | 6.8% | 7.0% |
| Telia Company           | 40.90  | 8.6       | 8.5  | 8.3  | 2.9  | 2.9  | 2.8  | 16.1 | 15.0 | 14.0 | 34%           | 34%  | 34%  | 6.0% | 6.2% | 6.3% |
| TI                      | 0.46   | 4.4       | 4.3  | 4.3  | 1.8  | 1.8  | 1.8  | 7.1  | 7.1  | 7.1  | 41%           | 41%  | 42%  | 0.0% | 0.0% | 0.2% |
| Median                  |        | 5.4       | 5.2  | 5.0  | 1.8  | 1.7  | 1.7  | 13.5 | 12.3 | 11.2 | 33%           | 33%  | 34%  | 5.0% | 5.3% | 5.7% |

## Media company valuations

|                         | Price  | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY    |       |       |
|-------------------------|--------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|-------|-------|-------|
|                         |        | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019  | 2020  | 2021  |
| <b>Polish companies</b> |        |           |      |      |      |      |      |      |      |      |               |      |      |       |       |       |
| Agora                   | 11.35  | 5.2       | 4.8  | 4.2  | 0.5  | 0.5  | 0.4  | 37.7 | 20.0 | 12.4 | 9%            | 10%  | 11%  | 4.4%  | 4.4%  | 4.4%  |
| Wirtualna Polska        | 60.20  | 10.0      | 8.9  | 8.0  | 3.2  | 2.8  | 2.6  | 18.9 | 16.1 | 14.7 | 31%           | 32%  | 32%  | 1.7%  | 2.8%  | 3.2%  |
| Median                  |        | 7.6       | 6.8  | 6.1  | 1.8  | 1.6  | 1.5  | 28.3 | 18.1 | 13.6 | 20%           | 21%  | 21%  | 3.0%  | 3.6%  | 3.8%  |
| <b>Daily Mail</b>       |        |           |      |      |      |      |      |      |      |      |               |      |      |       |       |       |
| Amolgo Mondadori        | 1.44   | 5.5       | 5.4  | 5.6  | 0.6  | 0.6  | 0.6  | 10.1 | 9.3  | 9.4  | 10%           | 11%  | 10%  | 3.0%  | 3.7%  | 3.2%  |
| Axel Springer           | 63.00  | 11.3      | 10.4 | 9.5  | 2.6  | 2.5  | 2.4  | 23.3 | 20.9 | 19.1 | 23%           | 24%  | 25%  | 3.4%  | 3.6%  | 3.8%  |
| Daily Mail              | 774.00 | 8.4       | 8.2  | 7.8  | 1.1  | 1.1  | 1.1  | 20.9 | 19.2 | 17.7 | 14%           | 14%  | 14%  | 0.0%  | 0.0%  | 0.0%  |
| Gruppo Editoriale       | 0.26   | 5.1       | 5.1  | 5.4  | 0.4  | 0.4  | 0.4  | 11.0 | 10.1 | 9.1  | 7%            | 8%   | 7%   | 2.7%  | 4.6%  | 2.7%  |
| New York Times          | 29.05  | 18.1      | 16.9 | 13.5 | 2.5  | 2.4  | 2.2  | 34.3 | 31.0 | 24.3 | 14%           | 14%  | 16%  | 0.7%  | 0.7%  | 0.8%  |
| Promotora de Inform     | 1.31   | 7.8       | 6.8  | 6.3  | 1.7  | 1.6  | 1.6  | 11.7 | 9.6  | 8.3  | 21%           | 24%  | 25%  | 0.0%  | 0.0%  | -     |
| Median                  |        | 8.1       | 7.5  | 7.1  | 1.4  | 1.4  | 1.3  | 16.3 | 14.6 | 13.5 | 14%           | 14%  | 15%  | 1.7%  | 2.2%  | 2.7%  |
| <b>TV</b>               |        |           |      |      |      |      |      |      |      |      |               |      |      |       |       |       |
| Atresmedia Corp         | 3.43   | 5.3       | 5.4  | 5.6  | 0.9  | 0.9  | 0.9  | 6.0  | 6.3  | 6.5  | 18%           | 17%  | 17%  | 13.5% | 13.0% | 12.1% |
| Gestevisión Telecinco   | 6.01   | 7.3       | 7.6  | 7.7  | 1.9  | 1.9  | 1.9  | 9.9  | 10.0 | 9.9  | 26%           | 26%  | 25%  | 7.8%  | 8.0%  | 7.8%  |
| ITV PLC                 | 114.65 | 7.8       | 7.6  | 7.2  | 1.7  | 1.7  | 1.6  | 8.9  | 8.5  | 8.2  | 22%           | 22%  | 22%  | 0.0%  | 0.0%  | 0.0%  |
| M6-Metropole Tel        | 16.51  | 5.3       | 5.3  | 5.0  | 1.4  | 1.4  | 1.4  | 11.9 | 11.5 | 12.5 | 26%           | 26%  | 27%  | 5.8%  | 6.0%  | 6.6%  |
| Mediaset SPA            | 2.95   | 4.6       | 4.5  | 4.3  | 1.5  | 1.5  | 1.5  | 13.1 | 11.6 | 10.8 | 33%           | 34%  | 36%  | 5.8%  | 6.7%  | 6.8%  |
| ProSieben               | 11.50  | 5.4       | 5.3  | 5.0  | 1.2  | 1.2  | 1.1  | 5.8  | 5.5  | 5.2  | 23%           | 23%  | 23%  | 9.1%  | 9.3%  | 9.6%  |
| RTL Group               | 47.98  | 6.3       | 6.3  | 6.1  | 1.3  | 1.2  | 1.2  | 10.7 | 10.6 | 10.4 | 20%           | 20%  | 20%  | 8.3%  | 8.4%  | 8.9%  |
| TF1-TV Francaise        | 9.01   | 3.6       | 3.6  | 3.3  | 0.8  | 0.7  | 0.7  | 10.4 | 9.8  | 8.6  | 21%           | 21%  | 22%  | 4.9%  | 5.2%  | 6.8%  |
| Median                  |        | 5.4       | 5.3  | 5.0  | 1.4  | 1.4  | 1.4  | 10.4 | 10.0 | 9.9  | 23%           | 23%  | 23%  | 5.8%  | 6.7%  | 6.8%  |
| <b>Pay TV</b>           |        |           |      |      |      |      |      |      |      |      |               |      |      |       |       |       |
| Cogeco                  | 106.00 | 6.2       | 6.1  | 6.1  | 3.0  | 2.9  | 2.9  | 16.3 | 14.5 | 14.9 | 48%           | 48%  | 48%  | 2.0%  | 2.2%  | 2.3%  |
| Comcast                 | 43.77  | 8.6       | 8.1  | 7.8  | 2.7  | 2.5  | 2.5  | 14.6 | 13.1 | 12.0 | 31%           | 31%  | 32%  | 1.9%  | 2.1%  | 2.3%  |
| Dish Network            | 31.72  | 8.7       | 10.2 | 11.8 | 1.7  | 1.8  | 1.9  | 12.9 | 17.7 | 22.0 | 19%           | 18%  | 16%  | 0.0%  | 0.0%  | 0.0%  |
| Liberty Global          | 26.14  | 4.9       | 4.8  | 5.1  | 2.1  | 2.1  | 2.1  | -    | -    | 31.9 | 43%           | 43%  | 41%  | 0.0%  | 0.0%  | -     |
| Shaw Communications     | 19.20  | 7.6       | 7.3  | 7.0  | 3.2  | 3.0  | 2.9  | 19.7 | 17.6 | 15.7 | 41%           | 42%  | 42%  | 8.3%  | 8.3%  | 8.5%  |
| Median                  |        | 7.6       | 7.3  | 7.0  | 2.7  | 2.5  | 2.5  | 15.4 | 16.1 | 15.7 | 41%           | 42%  | 41%  | 1.9%  | 2.1%  | 2.3%  |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

## IT company valuations

|                          | Price  | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|--------------------------|--------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                          |        | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Polish companies</b>  |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Asseco Poland            | 55.70  | 4.8       | 4.4  | 4.2  | 0.7  | 0.7  | 0.6  | 14.9 | 14.5 | 14.3 | 15%           | 15%  | 15%  | 5.5% | 4.1% | 4.1% |
| Comarch                  | 171.00 | 6.2       | 5.6  | 5.2  | 0.9  | 0.8  | 0.8  | 14.8 | 13.4 | 12.6 | 15%           | 15%  | 15%  | 0.9% | 0.9% | 0.9% |
| Median                   |        | 5.5       | 5.0  | 4.7  | 0.8  | 0.8  | 0.7  | 14.9 | 14.0 | 13.5 | 15%           | 15%  | 15%  | 3.2% | 2.5% | 2.5% |
| <b>Foreign companies</b> |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Atos Origin              | 68.14  | 6.7       | 6.4  | 6.2  | 0.9  | 0.9  | 0.9  | 7.7  | 7.2  | 6.9  | 13%           | 14%  | 14%  | 2.5% | 2.8% | 2.9% |
| CapGemini                | 106.90 | 9.0       | 8.4  | 8.0  | 1.3  | 1.2  | 1.2  | 16.4 | 14.9 | 13.8 | 14%           | 15%  | 15%  | 1.7% | 1.9% | 2.1% |
| IBM                      | 134.32 | 8.0       | 7.9  | 8.0  | 1.9  | 1.9  | 1.9  | 9.7  | 9.5  | 9.2  | 24%           | 24%  | 24%  | 4.8% | 5.0% | 5.1% |
| Indra Sistemas           | 6.87   | 4.9       | 4.6  | 4.3  | 0.5  | 0.5  | 0.5  | 8.6  | 7.6  | 6.9  | 11%           | 11%  | 11%  | 1.8% | 2.9% | 3.8% |
| Microsoft                | 137.78 | 18.6      | 16.6 | 14.6 | 8.0  | 7.2  | 6.5  | 30.0 | 27.0 | 23.3 | 43%           | 43%  | 44%  | 1.3% | 1.4% | 1.6% |
| Oracle                   | 53.19  | 10.7      | 10.2 | 9.9  | 5.0  | 4.9  | 4.7  | 15.5 | 14.1 | 13.2 | 47%           | 48%  | 48%  | 1.6% | 1.7% | 1.9% |
| SAP                      | 107.98 | 16.5      | 14.2 | 12.8 | 5.1  | 4.8  | 4.4  | 22.4 | 20.0 | 17.9 | 31%           | 34%  | 35%  | 1.5% | 1.6% | 1.8% |
| TietoEnator              | 22.54  | 7.4       | 7.1  | 6.9  | 1.1  | 1.1  | 1.1  | 12.1 | 11.5 | 11.1 | 15%           | 15%  | 15%  | 6.5% | 6.7% | 6.9% |
| Median                   |        | 8.5       | 8.2  | 8.0  | 1.6  | 1.6  | 1.5  | 13.8 | 12.8 | 12.1 | 20%           | 20%  | 20%  | 1.8% | 2.3% | 2.5% |

## Gaming company valuations

|                      | Price   | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|----------------------|---------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                      |         | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Gaming</b>        |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| 11 bit studios       | 402.00  | 18.9      | 23.4 | 6.0  | 10.9 | 9.7  | 3.9  | 26.9 | 38.4 | 9.5  | 58%           | 42%  | 66%  | 0.0% | 0.0% | 0.0% |
| CD Projekt           | 239.40  | -         | 8.7  | 8.7  | 73.1 | 6.6  | 7.1  | -    | 11.7 | 12.1 | 14%           | 76%  | 82%  | 0.0% | 0.0% | 0.0% |
| Activision Blizzards | 49.08   | 15.2      | 12.8 | 12.1 | 5.4  | 4.9  | 4.6  | 22.7 | 19.1 | 16.9 | 36%           | 38%  | 38%  | 0.8% | 0.8% | 0.9% |
| Capcom               | 2870.00 | 14.5      | 13.2 | 11.9 | 3.5  | 3.8  | 3.5  | 23.4 | 21.4 | 20.0 | 24%           | 29%  | 29%  | 1.2% | 1.4% | 1.5% |
| Take Two             | 132.39  | 18.1      | 20.3 | 18.4 | 4.4  | 4.8  | 4.5  | 28.0 | 30.3 | 27.3 | 24%           | 24%  | 24%  | -    | -    | -    |
| Ubisoft              | 72.50   | 8.1       | 8.3  | 7.6  | 4.0  | 3.7  | 3.4  | 24.3 | 24.0 | 20.4 | 49%           | 44%  | 45%  | 0.0% | -    | -    |
| Electronic Arts      | 94.62   | 16.4      | 14.1 | 12.9 | 5.2  | 4.8  | 4.6  | 24.1 | 20.9 | 18.6 | 32%           | 34%  | 35%  | -    | -    | -    |
| Paradox Interactive  | 133.80  | 16.3      | 12.8 | 10.5 | 9.8  | 8.1  | 7.0  | 31.0 | 24.0 | 20.2 | 60%           | 63%  | 66%  | 1.0% | 1.2% | 1.6% |
| Mediana              |         | 16.3      | 13.0 | 11.2 | 5.3  | 4.9  | 4.5  | 24.3 | 22.7 | 19.3 | 34%           | 40%  | 42%  | 0.4% | 0.8% | 0.9% |

## Construction company valuations

|                     | Price  | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|---------------------|--------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                     |        | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Construction</b> |        |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Acciona             | 95.85  | 8.4       | 7.9  | 7.7  | 1.4  | 1.4  | 1.4  | 20.3 | 18.3 | 17.1 | 17%           | 18%  | 18%  | 3.7% | 3.9% | 4.2% |
| Astaldi             | 0.66   | 4.5       | 4.4  | 4.4  | 0.5  | 0.5  | 0.5  | 1.1  | 1.0  | 0.8  | 10%           | 10%  | 11%  | -    | -    | -    |
| Budimex             | 132.00 | 7.3       | 7.2  | 6.8  | 0.3  | 0.4  | 0.4  | 16.8 | 16.2 | 14.0 | 5%            | 5%   | 5%   | 6.2% | 4.6% | 4.9% |
| Ferrovial           | 25.48  | 52.7      | 35.2 | 35.3 | 3.9  | 3.8  | 3.7  | 65.8 | 42.3 | 35.1 | 7%            | 11%  | 10%  | 2.9% | 3.0% | 3.1% |
| Hochtief            | 98.10  | 3.5       | 3.4  | 3.2  | 0.2  | 0.2  | 0.2  | 10.3 | 9.7  | 9.3  | 6%            | 6%   | 6%   | 6.3% | 6.6% | 6.9% |
| Mota Engil          | 1.93   | 4.0       | 3.7  | 3.4  | 0.6  | 0.5  | 0.5  | 12.1 | 8.2  | 6.9  | 15%           | 15%  | 15%  | 2.2% | 4.3% | 7.3% |
| NCC                 | 149.05 | 6.3       | 5.4  | 5.1  | 0.3  | 0.3  | 0.3  | 14.6 | 10.8 | 9.9  | 4%            | 5%   | 5%   | 4.0% | 5.0% | 5.2% |
| Skanska             | 177.35 | 9.6       | 8.5  | 8.1  | 0.4  | 0.4  | 0.4  | 14.8 | 13.5 | 12.7 | 5%            | 5%   | 5%   | 3.9% | 4.1% | 4.5% |
| Strabag             | 29.50  | 2.5       | 2.5  | 2.5  | 0.2  | 0.2  | 0.1  | 9.9  | 9.8  | 9.5  | 6%            | 6%   | 6%   | 4.5% | 4.6% | 4.4% |
| Median              |        | 6.3       | 5.4  | 5.1  | 0.4  | 0.4  | 0.4  | 14.6 | 10.8 | 9.9  | 6%            | 6%   | 6%   | 4.0% | 4.4% | 4.7% |

## Real-estate developers

|                       | Price  | EV/EBITDA |      |      | P/BV |      |      | P/E  |      |      | EBITDA margin |      |      | DY    |       |       |
|-----------------------|--------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|-------|-------|-------|
|                       |        | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019  | 2020  | 2021  |
| <b>RE Developers</b>  |        |           |      |      |      |      |      |      |      |      |               |      |      |       |       |       |
| Atal                  | 32.70  | 6.7       | 7.0  | 6.4  | 1.5  | 1.5  | 1.4  | 7.0  | 7.3  | 6.6  | 24%           | 23%  | 23%  | 14.4% | 13.0% | 12.4% |
| Dom Development       | 77.20  | 7.8       | 7.2  | 8.1  | 1.9  | 1.8  | 1.8  | 8.7  | 7.8  | 8.6  | 17%           | 18%  | 17%  | 11.7% | 11.5% | 12.8% |
| Echo Investment       | 4.26   | 15.0      | 12.0 | 16.1 | 1.2  | 1.1  | 1.0  | 7.4  | 6.9  | 7.3  | 35%           | 42%  | 29%  | 9.4%  | 9.1%  | 5.9%  |
| GTC                   | 9.26   | 14.7      | 12.8 | 10.6 | 1.0  | 0.9  | 0.9  | 10.1 | 9.8  | 7.1  | 86%           | 90%  | 100% | 0.2%  | 0.2%  | 0.2%  |
| LC Corp               | 2.30   | 7.3       | 10.0 | 9.0  | 0.6  | 0.6  | 0.6  | -    | -    | -    | 32%           | 28%  | 27%  | 13.0% | 10.9% | 7.0%  |
| CA Immobilien Anlagen | 31.30  | 25.5      | 23.2 | 21.4 | 1.0  | 1.0  | 0.8  | 23.6 | 20.8 | 15.7 | 76%           | 68%  | 50%  | 3.1%  | 3.4%  | 3.9%  |
| Deutsche Euroshop AG  | 23.20  | 14.5      | 14.5 | 14.5 | 0.7  | 0.7  | 0.7  | 10.1 | 10.2 | 10.0 | 88%           | 88%  | 88%  | 6.7%  | 6.8%  | 6.9%  |
| Immofinanz AG         | 24.25  | 29.2      | 27.4 | 24.9 | 0.9  | 0.9  | 0.9  | 19.9 | 19.7 | 15.2 | 49%           | 53%  | 48%  | 3.5%  | 3.7%  | 4.2%  |
| Klepierre             | 27.41  | 18.2      | 18.1 | 17.8 | 0.7  | 0.8  | 0.8  | 10.3 | 10.0 | 10.1 | 88%           | 87%  | 87%  | 7.9%  | 8.2%  | 8.2%  |
| Segro                 | 768.00 | 34.4      | 31.1 | 28.3 | 1.1  | 1.0  | 1.0  | 31.9 | 29.5 | 28.7 | 76%           | 78%  | 81%  | 0.0%  | 0.0%  | 0.0%  |
| Median                |        | 14.8      | 13.6 | 15.3 | 1.0  | 0.9  | 0.9  | 10.1 | 10.0 | 10.0 | 63%           | 60%  | 49%  | 7.3%  | 7.5%  | 6.4%  |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

## Clothing and footwear company valuations

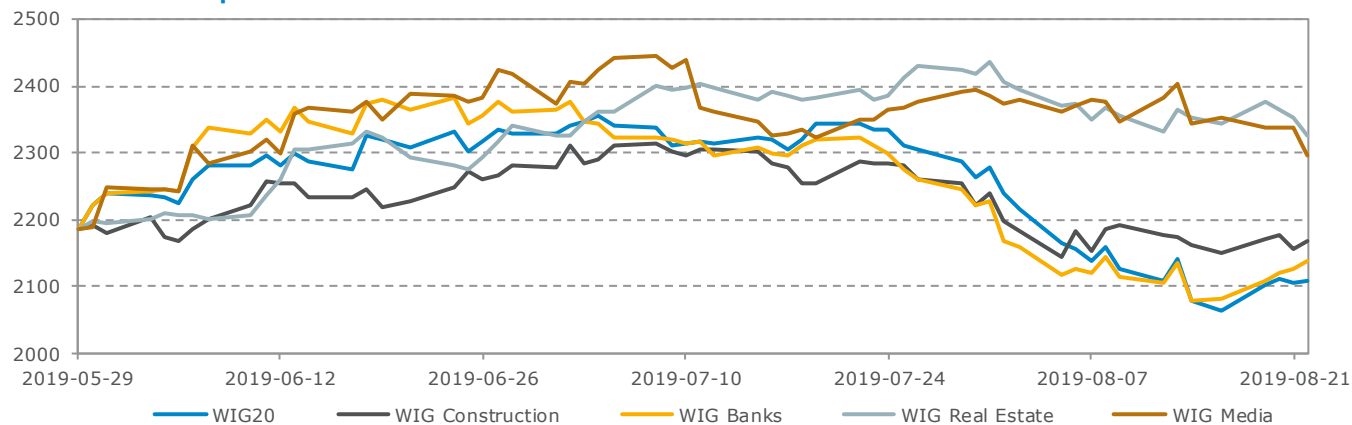
|                          | Price   | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|--------------------------|---------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                          |         | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Polish companies</b>  |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| CCC                      | 130.70  | 6.8       | 5.3  | 5.2  | 1.1  | 0.9  | 0.8  | 48.8 | 20.1 | 17.8 | 16%           | 18%  | 16%  | 0.4% | 1.5% | 1.5% |
| LPP                      | 7130.00 | 9.8       | 8.8  | 7.7  | 1.4  | 1.2  | 1.0  | 19.5 | 17.6 | 16.1 | 14%           | 14%  | 14%  | 0.8% | 1.1% | 0.9% |
| Monnari                  | 4.80    | 4.6       | 3.8  | 2.5  | 0.3  | 0.2  | 0.2  | 9.5  | 9.4  | 8.1  | 7%            | 7%   | 7%   | 0.0% | 0.0% | 0.0% |
| VRG                      | 4.28    | 8.5       | 7.2  | 6.4  | 1.0  | 0.9  | 0.8  | 13.6 | 11.8 | 10.7 | 12%           | 12%  | 12%  | 0.0% | 0.0% | 0.0% |
| Median                   |         | 7.6       | 6.3  | 5.8  | 1.1  | 0.9  | 0.8  | 16.5 | 14.7 | 13.4 | 13%           | 13%  | 13%  | 0.2% | 0.5% | 0.4% |
| <b>Foreign companies</b> |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| ABC Mart                 | 6680.00 | 8.8       | 8.4  | 8.1  | 1.6  | 1.5  | 1.5  | 18.1 | 17.5 | 16.9 | 18%           | 18%  | 18%  | 2.4% | 2.6% | 2.5% |
| Adidas                   | 262.55  | 15.3      | 13.9 | 12.7 | 2.2  | 2.0  | 1.9  | 26.9 | 23.9 | 21.1 | 14%           | 15%  | 15%  | 1.4% | 1.7% | 1.9% |
| Assoc Brit Foods         | 2263.00 | 8.5       | 7.9  | 7.4  | 1.1  | 1.0  | 1.0  | 16.6 | 14.8 | 13.8 | 13%           | 13%  | 13%  | 0.0% | 0.0% | 0.0% |
| Caleries                 | 16.00   | 3.8       | 3.4  | 3.3  | 0.3  | 0.2  | 0.2  | 7.0  | 6.4  | 5.9  | 7%            | 7%   | 7%   | 1.8% | 1.8% | 1.8% |
| Crocs                    | 24.55   | 12.4      | 10.4 | 8.6  | 1.5  | 1.4  | 1.4  | 22.5 | 18.0 | -    | 12%           | 14%  | 16%  | -    | -    | -    |
| Foot Locker              | 41.93   | 4.5       | 4.2  | 4.0  | 0.5  | 0.5  | 0.5  | 9.2  | 8.1  | 7.4  | 11%           | 11%  | 12%  | 3.3% | 3.7% | 4.0% |
| Geox                     | 1.25    | 6.0       | 4.8  | 3.9  | 0.4  | 0.4  | 0.3  | 31.3 | 16.9 | 11.0 | 6%            | 8%   | 9%   | 2.4% | 3.2% | 4.7% |
| H&M                      | 178.66  | 10.0      | 9.5  | 9.1  | 1.2  | 1.2  | 1.1  | 23.3 | 21.8 | 20.7 | 12%           | 12%  | 12%  | 5.2% | 5.0% | 5.0% |
| Hugo Boss                | 50.58   | 6.4       | 6.0  | 5.5  | 1.2  | 1.1  | 1.1  | 13.4 | 12.0 | 10.9 | 19%           | 19%  | 20%  | 5.7% | 6.3% | 7.0% |
| Inditex                  | 27.22   | 14.0      | 13.1 | 12.3 | 2.9  | 2.8  | 2.6  | 24.3 | 22.4 | 20.9 | 21%           | 21%  | 21%  | 2.9% | 3.8% | 4.1% |
| KappAhl                  | 19.85   | 5.0       | 4.7  | 4.8  | 0.4  | 0.4  | 0.4  | 8.5  | 8.0  | 8.3  | 8%            | 8%   | 8%   | 7.2% | 7.9% | 6.8% |
| Lululemon                | 183.97  | 26.2      | 22.3 | 19.3 | 6.6  | 5.7  | 5.0  | 49.1 | 39.9 | 33.6 | 25%           | 26%  | 26%  | 0.0% | 0.0% | 0.0% |
| Nike                     | 83.31   | 18.0      | 15.7 | 13.9 | 2.6  | 2.4  | 2.2  | 32.4 | 27.6 | 23.5 | 15%           | 15%  | 16%  | 1.0% | 1.1% | 1.2% |
| Under Armour             | 18.98   | 9.0       | 7.3  | 6.0  | 0.7  | 0.7  | 0.6  | 54.7 | 39.0 | 26.7 | 8%            | 9%   | 10%  | 0.0% | 0.0% | 0.0% |
| Median                   |         | 8.9       | 8.2  | 7.8  | 1.2  | 1.2  | 1.1  | 22.9 | 17.8 | 16.9 | 12%           | 13%  | 14%  | 2.4% | 2.6% | 2.5% |

## Luxury, e-commerce, and food retail company valuations

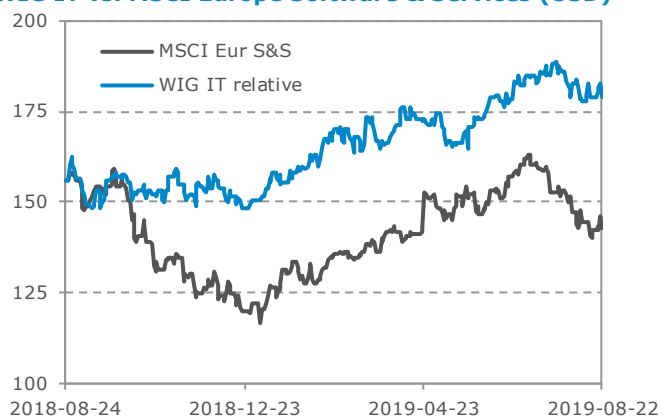
|                      | Price   | EV/EBITDA |      |      | EV/S |      |      | P/E  |      |      | EBITDA margin |      |      | DY   |      |      |
|----------------------|---------|-----------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|
|                      |         | 2019      | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019          | 2020 | 2021 | 2019 | 2020 | 2021 |
| <b>Luxury goods</b>  |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Estee Lauder         | 202.56  | 14.6      | 13.3 | 12.3 | 3.1  | 2.9  | 2.7  | 38.9 | 35.1 | 32.1 | 21%           | 21%  | 22%  | 0.8% | 0.9% | 1.0% |
| Hermes International | 618.00  | 24.3      | 22.4 | 20.5 | 9.2  | 8.5  | 7.8  | 42.9 | 39.1 | 35.6 | 38%           | 38%  | 38%  | 0.9% | 1.1% | 1.1% |
| Kering               | 430.80  | 10.5      | 9.6  | 8.8  | 3.5  | 3.2  | 3.0  | 16.4 | 14.4 | 13.3 | 33%           | 34%  | 34%  | 2.7% | 3.1% | 3.5% |
| LVMH                 | 361.10  | 13.9      | 12.9 | 12.0 | 3.6  | 3.4  | 3.2  | 24.9 | 22.8 | 20.9 | 26%           | 26%  | 27%  | 1.9% | 2.1% | 2.3% |
| Moncler              | 34.70   | 14.7      | 12.9 | 11.6 | 5.1  | 4.5  | 4.1  | 23.8 | 22.1 | 19.8 | 35%           | 35%  | 35%  | 1.3% | 1.5% | 1.8% |
| Median               |         | 14.6      | 12.9 | 12.0 | 3.6  | 3.4  | 3.2  | 24.9 | 22.8 | 20.9 | 33%           | 34%  | 34%  | 1.3% | 1.5% | 1.8% |
| <b>E-commerce</b>    |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Asos                 | 2268.00 | 14.5      | 10.5 | 8.0  | 0.7  | 0.6  | 0.5  | 44.8 | 28.8 | 20.1 | 5%            | 6%   | 6%   | 0.0% | 0.0% | 0.0% |
| boohoo.com           | 229.90  | 31.1      | 23.2 | 18.5 | 3.0  | 2.3  | 1.8  | 57.5 | 46.0 | 36.5 | 10%           | 10%  | 10%  | 0.0% | 0.0% | 0.0% |
| Zalando              | 42.86   | 33.6      | 26.2 | 19.5 | 1.5  | 1.3  | 1.1  | -    | -    | 68.0 | 5%            | 5%   | 6%   | 0.0% | 0.0% | 0.0% |
| Median               |         | 31.1      | 23.2 | 18.5 | 1.5  | 1.3  | 1.1  | 51.1 | 37.4 | 36.5 | 5%            | 6%   | 6%   | 0.0% | 0.0% | 0.0% |
| <b>Retail</b>        |         |           |      |      |      |      |      |      |      |      |               |      |      |      |      |      |
| Dino                 | 149.60  | 21.8      | 17.1 | 13.6 | 2.0  | 1.5  | 1.2  | 38.4 | 29.3 | 23.4 | 9%            | 9%   | 9%   | 0.0% | 0.0% | 0.0% |
| Eurocash             | 18.20   | 7.6       | 6.7  | 5.7  | 0.1  | 0.1  | 0.1  | 35.2 | 24.9 | 17.6 | 2%            | 2%   | 2%   | 5.5% | 1.4% | 2.0% |
| Jeronimo Martins     | 14.67   | 9.1       | 8.3  | 7.8  | 0.5  | 0.5  | 0.4  | 20.8 | 18.7 | 17.8 | 6%            | 6%   | 6%   | 1.9% | 2.0% | 2.0% |
| Carrefour            | 15.64   | 4.9       | 4.6  | 4.3  | 0.2  | 0.2  | 0.2  | 13.5 | 11.7 | 10.8 | 5%            | 5%   | 5%   | 3.2% | 3.5% | 3.9% |
| AXFood               | 205.70  | 12.1      | 11.8 | 11.6 | 1.0  | 0.9  | 0.9  | 26.6 | 26.4 | 26.4 | 8%            | 8%   | 8%   | 3.4% | 3.4% | 3.2% |
| Tesco                | 213.50  | 6.9       | 5.8  | 5.5  | 0.4  | 0.4  | 0.4  | 15.0 | 12.5 | 11.2 | 5%            | 6%   | 6%   | 0.0% | 0.0% | 0.0% |
| Ahold                | 20.83   | 6.1       | 6.0  | 5.9  | 0.5  | 0.4  | 0.4  | 12.7 | 12.0 | 11.6 | 8%            | 7%   | 7%   | 3.6% | 3.9% | 4.1% |
| X 5 Retail           | 2194.50 | 6.4       | 5.8  | 5.4  | 0.5  | 0.4  | 0.4  | 16.1 | 14.2 | 13.4 | 7%            | 7%   | 7%   | 4.8% | 5.6% | 6.3% |
| Magnit               | 3535.00 | 5.1       | 4.5  | 4.0  | 0.4  | 0.3  | 0.3  | 10.2 | 9.5  | 8.5  | 7%            | 7%   | 7%   | 6.7% | 6.2% | 6.5% |
| Sonae                | 0.84    | 9.6       | 9.1  | 8.2  | 0.6  | 0.6  | 0.6  | 8.2  | 8.4  | 9.3  | 7%            | 7%   | 7%   | 5.4% | 5.8% | 6.0% |
| Median               |         | 7.3       | 6.4  | 5.8  | 0.5  | 0.4  | 0.4  | 15.6 | 13.4 | 12.5 | 7%            | 7%   | 7%   | 3.5% | 3.5% | 3.6% |

Source: Dom Maklerski mBanku (stocks marked with bold), Bloomberg

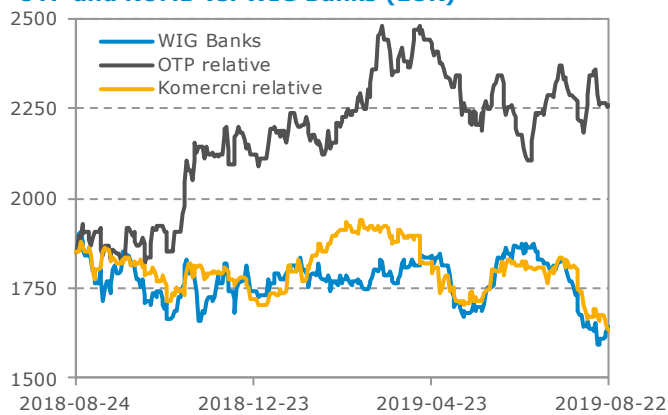
## WIG sector index performance



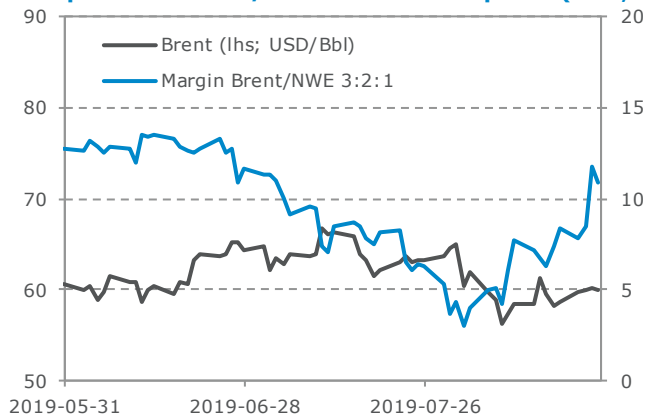
## WIG IT vs. MSCI Europe Software &amp; Services (USD)



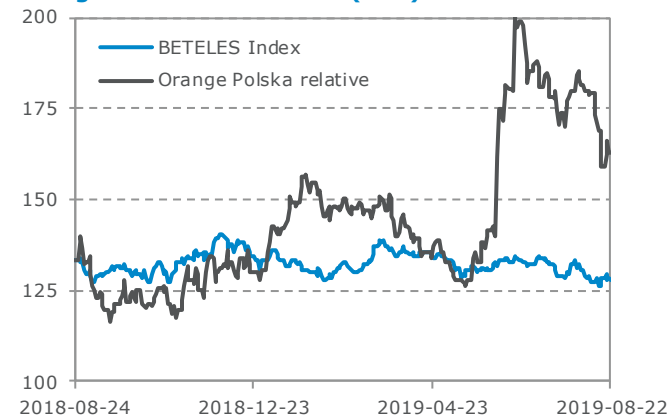
## OTP and KOMB vs. WIG Banks (EUR)



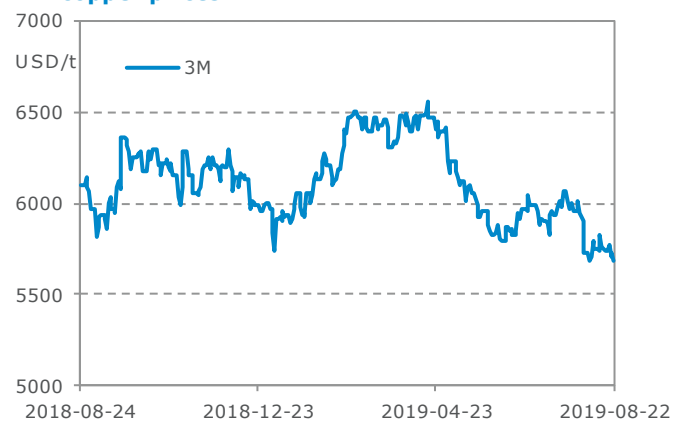
## Brent price and Brent/NWE 3:2:1 crack spread (USD, rhs)



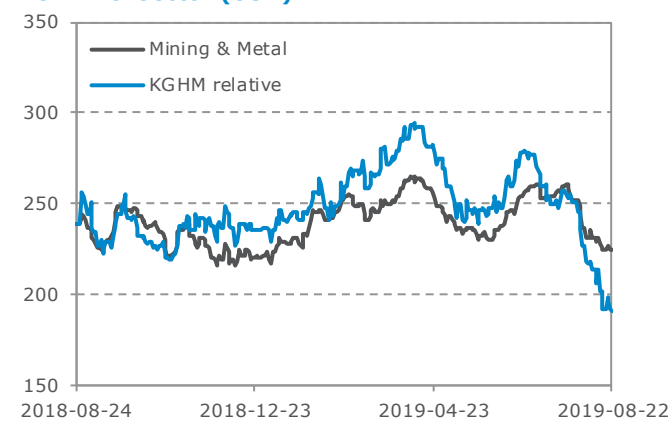
## Orange Polska vs. BETELES (EUR)



## LME copper prices



## KGHM vs. sector (USD)



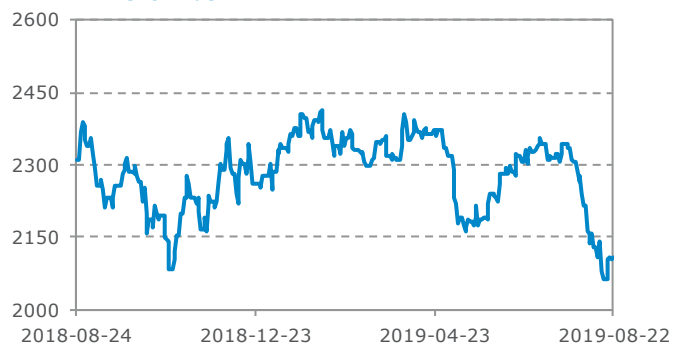
Source: Bloomberg



## Global Market Overview

| Index             | Date       | Open      | Maximum   | Minimum   | Close     | Change  |
|-------------------|------------|-----------|-----------|-----------|-----------|---------|
| DJIA              | 2019-08-22 | 26,271.64 | 26,388.78 | 26,099.01 | 26,252.24 | +0.19%  |
| S&P 500           | 2019-08-22 | 2,930.94  | 2,939.08  | 2,904.51  | 2,922.95  | -0.05%  |
| NASDAQ            | 2019-08-22 | 8,038.79  | 8,048.58  | 7,937.13  | 7,991.39  | -0.36%  |
| DAX               | 2019-08-22 | 11,756.21 | 11,853.14 | 11,715.26 | 11,747.04 | -0.47%  |
| CAC 40            | 2019-08-22 | 5,414.81  | 5,439.64  | 5,378.25  | 5,388.25  | -0.87%  |
| FTSE 100          | 2019-08-22 | 7,203.97  | 7,203.97  | 7,103.67  | 7,128.18  | -1.05%  |
| WIG20             | 2019-08-22 | 2,108.88  | 2,126.87  | 2,097.00  | 2,108.05  | +0.10%  |
| BUX               | 2019-08-22 | 39,645.28 | 39,882.60 | 39,271.43 | 39,394.71 | -0.64%  |
| PX                | 2019-08-22 | 1,038.00  | 1,044.43  | 1,038.00  | 1,042.32  | +0.42%  |
| RTS               | 2019-08-22 | 1,887.92  | 1,904.49  | 1,882.92  | 1,894.66  | +0.45%  |
| SOFIX             | 2019-08-22 | 579.56    | 579.56    | 573.86    | 574.70    | -0.84%  |
| BET               | 2019-08-22 | 9,144.96  | 9,150.27  | 9,119.36  | 9,119.36  | -0.27%  |
| XU100             | 2019-08-22 | 95,730.34 | 96,117.11 | 94,349.28 | 95,394.24 | -0.13%  |
| BETELES           | 2019-08-22 | 128.33    | 128.65    | 127.50    | 127.70    | -0.40%  |
| NIKKEI            | 2019-08-22 | 20,706.07 | 20,731.19 | 20,584.29 | 20,628.01 | +0.05%  |
| SHCOMP            | 2019-08-22 | 2,887.67  | 2,888.50  | 2,867.55  | 2,883.44  | +0.11%  |
| Copper (LME)      | 2019-08-22 | 5,731.00  | 5,736.00  | 5,671.00  | 5,683.00  | -0.85%  |
| Crude Oil (Brent) | 2019-08-22 | 60.05     | 60.58     | 59.11     | 59.62     | -1.13%  |
| USD/PLN           | 2019-08-22 | 3.9223    | 3.9499    | 3.9160    | 3.9325    | +0.26%  |
| EUR/PLN           | 2019-08-22 | 4.3475    | 4.3787    | 4.3472    | 4.3568    | +0.21%  |
| EUR/USD           | 2019-08-22 | 1.1085    | 1.1113    | 1.1064    | 1.1080    | -0.05%  |
| USBonds10         | 2019-08-22 | 1.5876    | 1.6267    | 1.5520    | 1.6131    | +0.0238 |
| GRBonds10         | 2019-08-22 | -0.6810   | -0.6170   | -0.6960   | -0.6440   | +0.0260 |
| PLBonds10         | 2019-08-22 | 1.9900    | 2.0490    | 1.9460    | 2.0350    | +0.0820 |

WIG20 Index

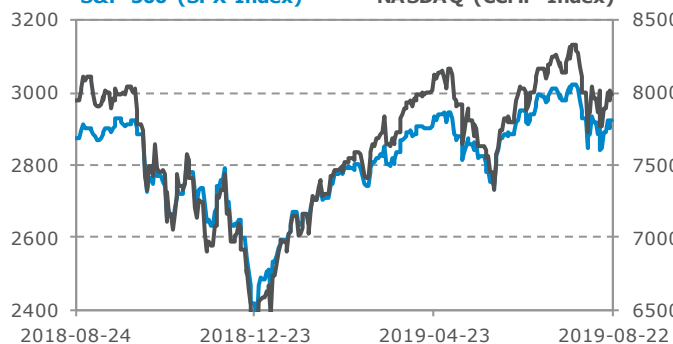


BUX Index



PX Index

S&P 500 (SPX Index)



NASDAQ (CCMP Index)

DOW JONES (INDU Index)



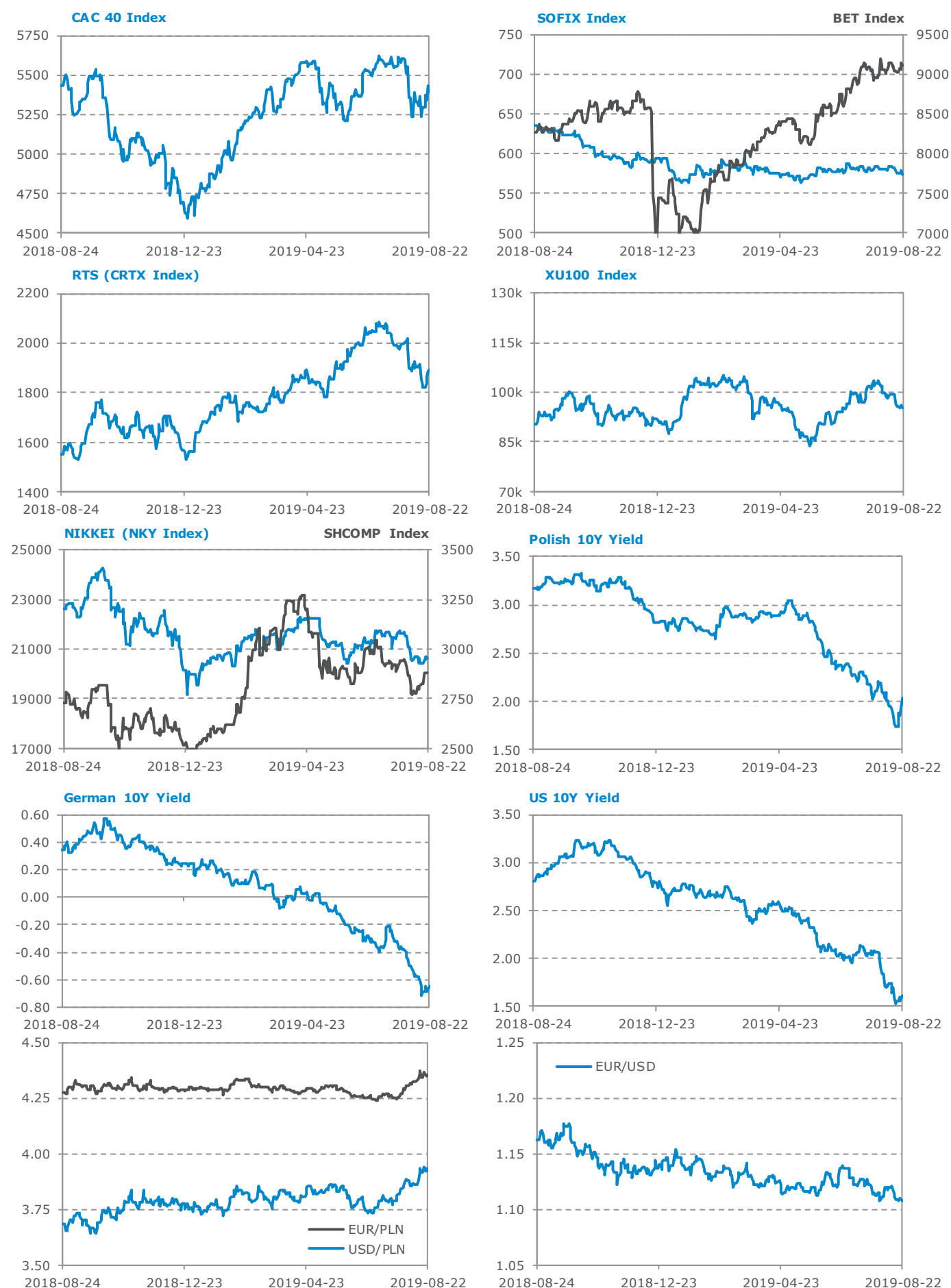
DAX Index



FTSE 100 (UKX Index)



Source: Bloomberg



Source: Bloomberg

## List of abbreviations and ratios contained in the report.

**EV** – net debt + market value (EV – economic value)  
**EBIT** – Earnings Before Interest and Taxes  
**EBITDA** – EBIT + Depreciation and Amortisation  
**PBA** – Profit on Banking Activity  
**P/CE** – price to earnings with amortisation  
**MC/S** – market capitalisation to sales  
**EBIT/ EV** – operating profit to economic value  
**P/E** – (Price/Earnings) – price divided by annual net profit per share  
**ROE** – (Return on Equity) – annual net profit divided by average equity  
**P/BV** – (Price/Book Value) – price divided by book value per share  
**Net debt** – credits + debt papers + interest bearing loans – cash and cash equivalents  
**EBITDA margin** – EBITDA/Sales

**OVERWEIGHT (OW)** – a rating which indicates that we expect a stock to outperform the broad market  
**NEUTRAL (N)** – a rating which indicates that we expect the stock to perform in line with the broad market  
**UNDERWEIGHT (UW)** – a rating which indicates that we expect the stock to underperform the broad market

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A recommendation is valid for a period of 9 months, unless a subsequent recommendation is issued within this period. Expected returns from individual recommendations are as follows:

**BUY** – we expect that the rate of return from an investment will be at least 15%  
**ACCUMULATE** – we expect that the rate of return from an investment will range from 5% to 15%  
**HOLD** – we expect that the rate of return from an investment will range from -5% to +5%  
**REDUCE** – we expect that the rate of return from an investment will range from -5% to -15%  
**SELL** – we expect that an investment will bear a loss greater than 15%  
Recommendations are updated at least once every nine months.

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**DCF** – acknowledged as the most methodologically correct method of valuation; it consists in discounting financial flows generated by a company; its weak point is the significant susceptibility to a change of forecast assumptions in the model.

**Relative** – based on a comparison of valuation multipliers of companies from a given sector; simple in construction, reflects the current state of the market better than DCF; weak points include substantial variability (fluctuations together with market indices) as well as difficulty in the selection of the group of comparable companies.

**Economic profits** – discounting of future economic profits; the weak point is high sensitivity to changes in the assumptions made in the valuation model.

**Discounted Dividends (DDM)** – discounting of future dividends; the weak point is high sensitivity to changes in the assumptions as to future dividends made in the valuation model.

**NAV** – valuation based on equity value, one of the most frequently used method in case of developing companies; the weak point of the method is that it does not factor in future changes in revenue/profits of a company.

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