

Tuesday, June 07, 2016 | update

## Grupa Azoty: buy (reiterated)

ATT PW; ATT.WA | Chemicals, Poland

### Fertilizer Prices Set To Bounce Back From Slump

A downward shift in fertilizer prices has tightened the margins of European producers to levels 10-36% below their three-year averages, and narrowed the fertilizer-to-crops price ratios 20-40% below the 3y averages. At this point we believe fertilizer prices have bottomed out and are poised for an impending rebound. For Grupa Azoty, the Q2 earnings outlook is supported by low gas prices (-28% y/y, -8% q/q) and the fact that in Poland prices of fertilizers have fallen less year to date than in the rest of the world (where the total ytd drop in dollar prices amounted to 7%-34% y/y). On a yearly basis, we expect the Company to achieve stable 2016 EBITDA in the Fertilizer segment and register a boost of 80% in the EBITDA in Chemicals thanks to record melamine margins. On our forecasts, ATT is currently trading at discounts to peers of 15% on 2016E P/E and 23% on 2016E EV/EBITDA. Meanwhile, according to our calculations the Company is set to report earnings growth in Q2 2016 supported by higher sales volumes. After updating our outlook for the fertilizer market, we are reducing our price target for ATT from PLN 100.2 to PLN 86.1 per share, with the investment rating maintained at buy.

### Volumes posed for Q2 recovery

Grupa Azoty reported sales volume contraction at an annual rate of 6-7% in Q1 2016, consistent with the downturn registered by most global major players including Acron, Mosaic, Uralkali, and Yara. The slowdown in Poland was due to delays in EU farm subsidy appropriations, coupled with this year's earlier timing of the Easter Holidays. In Q2 2016 sales at Grupa Azoty are expected to accelerate to a projected year-over-year rate of 2%, driven by lower fertilizer prices and improved fertilizer-to-crops price ratios.

### Improved Q2 outlook

Thanks to an 8% q/q drop in the costs of natural gas inputs, coupled with a slower rate of fertilizer price declines observed in the local market compared to the global price slump, the Q2 2016 EBITDA of Grupa Azoty's fertilizer business is expected to show year-on-year growth of about 5%. At the same time, we anticipate a 92% y/y surge in the EBITDA of the Chemicals segment driven by record-high margins earned on melamine. In total, on 6% lower revenue, we believe Grupa Azoty is set to deliver 11% EBITDA growth in Q2 2016.

### CAPEX revision

Grupa Azoty's new Management Board has put under review the capital projects of the old Management. As a result, relative to the original target of PLN 2 billion, we expect Grupa Azoty to spend only about PLN 1.7 billion this year on capacity upgrades, resulting in a 2016 year-end net debt/EBITDA ratio of 0.4x.

(PLN m)	2014	2015*	2016E	2017E	2018E
Revenue	9,898.5	10,024.4	9,776.4	9,910.9	10,124.0
EBITDA	822.4	1,309.3	1,432.2	1,319.2	1,434.5
EBITDA margin	8.3%	13.1%	14.6%	13.3%	14.2%
EBIT	302.2	830.0	915.0	773.9	844.4
Net profit	231.4	609.5	649.7	537.0	580.1
DPS	0.42	0.00	0.84	1.96	3.25
P/E	30.9	11.7	11.0	13.3	12.3
P/CE	9.5	6.6	6.1	6.6	6.1
P/BV	1.2	1.1	1.0	1.0	0.9
EV/EBITDA	10.1	6.0	5.9	6.6	6.0
Dyield	0.6%	0.0%	1.2%	2.7%	4.5%

\*Ex. for possible impairment losses on Senegal phosphate rock mine

Current Price	PLN 72.00
Target Price	PLN 86.10
MCap	PLN 7.1bn
Free Float	PLN 1.6bn
ADTV (3M)	PLN 10.01m

### Ownership

Polish Government	33.00%
Viatcheslav Kantor (Acron)	19.70%
NN OFE	9.96%
TFI PZU AM	8.60%
EBRD	5.75%

Others 22.99%

### Business Profile

Grupa Azoty is a fertilizer producer with a portfolio consisting among others of nitrogen fertilizers (with annual maximum production at 2.0-2.1mmt of nitrate fertilizer, 0.7mmt of ammonium nitrate, 0.7mmt of ammonium sulfate, 1.2mmt of UAN, and 0.2mmt of "AdBlue" technical urea), compound fertilizers (1.8mmt max), caprolactam (170kt), PA6 (92kt), melamine (96kt), plasticizers (83.5kt), OXO alcohols (205kt), and titanium white (40kt). Grupa Azoty is a top-two fertilizer producer in Poland alongside Anwil.

### ATT vs. WIG



Company	Target Price		Rating	
	new	old	new	old
Grupa Azoty	86.10	100.20	buy	buy

Company	Current Price	Target Price	Upside
Grupa Azoty	72.00	86.10	+19.6%

Forecast change since last update	2016E	2017E	2018E
Revenue	-1.5%	-3.6%	-3.9%
EBITDA	-3.7%	-17.5%	-6.1%
Net profit	-12.9%	-33.7%	-17.2%

### Analyst:

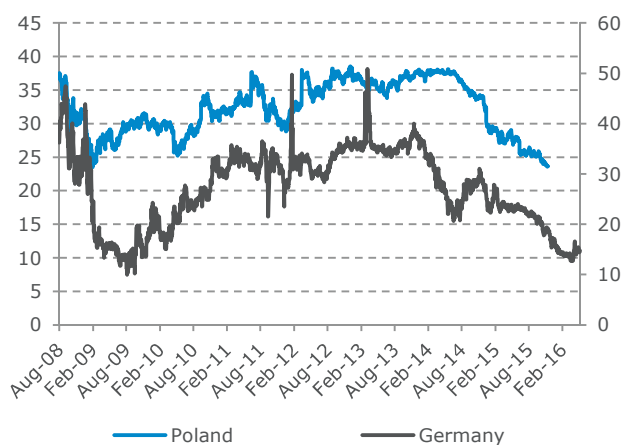
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## Market Outlook

### Fertilizers

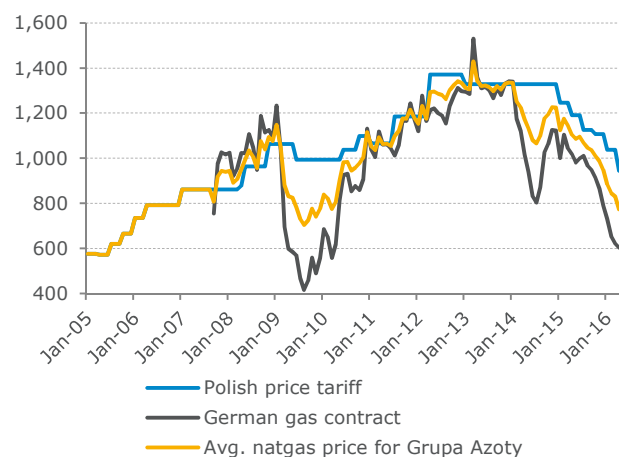
Prices of natural gas for industrial customers fell in April and May of 2016, with the quarter-to-date price per 1000 cubic meters registering drops of 20.7% y/y and 9% q/q to PLN 944 in Poland and 36.7% y/y and 5.4% q/q in Germany. As a result, **the average qtd cost of natgas for Grupa Azoty at an estimated PLN 788/1000 m<sup>3</sup> was 28.0% lower than in the same period last year and 7.6% lower than in Q1 2016**, and based on this we estimate the Company's **total 2016 second-quarter gas feedstock savings at PLN 150m**.

#### Natural gas prices in Poland and Germany (2008-2016) (US\$/MWh)



Source: Bloomberg, Dom Maklerski mBanku

#### Grupa Azoty natgas costs in 2005-2016 (PLN/1000m<sup>3</sup>)

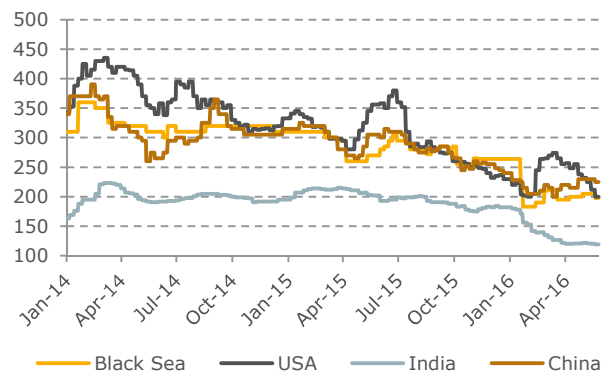


Source: Bloomberg, Dom Maklerski mBanku

On the heels of the natgas price downtrend, we have observed a **downward shift in the prices of synthetic fertilizers** since the beginning of the year, with the prices of **ammonia and urea** falling 31% and 34%, respectively, in the five months to May compared to the same period a year ago, prices of **ammonium nitrate (AN)** plummeting 30%, **calcium ammonium nitrate (CAN)** down 21%, and UAN down 24%. Compound fertilizers have been affected as well, with **DAP** prices down 25% and **NPK** posting a decline of 7%.

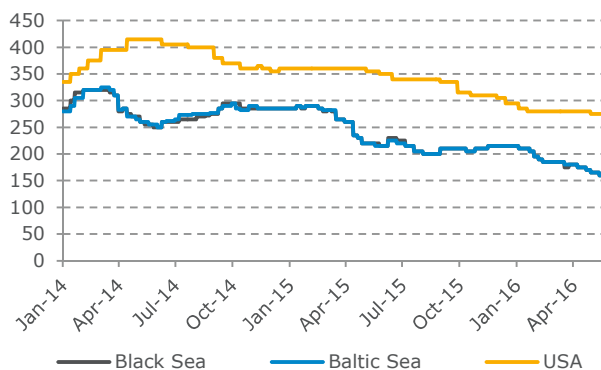
Note that the benchmark **margins** for European fertilizer producers (calculated as the difference between the selling price and the cost of gas inputs) have tightened below their three-year averages, with the discounts currently at 16% for **ammonia from urea**, 28% for **ammonium nitrate**, 33% for **CAN**, 36% for **DAP**, and 10% for **NPK** fertilizers.

#### 2014-2016 urea prices by geographic region (USD/t)



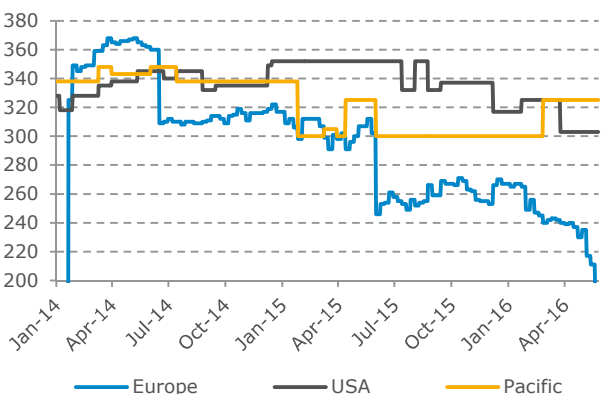
Source: Bloomberg, Dom Maklerski mBanku

#### 2014-2016 ammonium nitrate prices by region (USD/t)



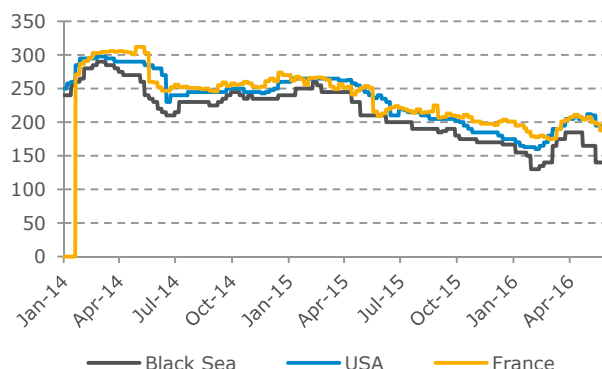
Source: Bloomberg, Dom Maklerski mBanku

#### 2014-2016 CAN prices by region (USD/t)



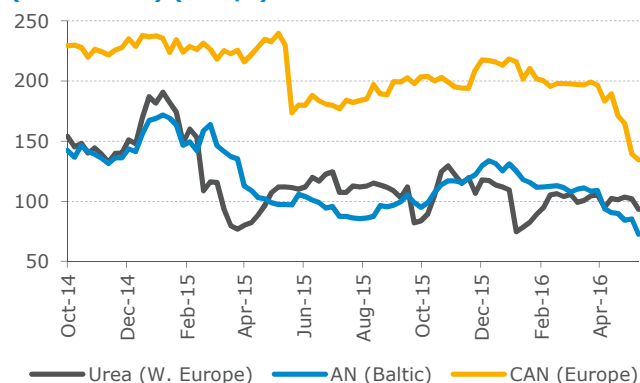
Source: Bloomberg, Dom Maklerski mBanku

### 2014-2016 UAN prices by region (USD/t)



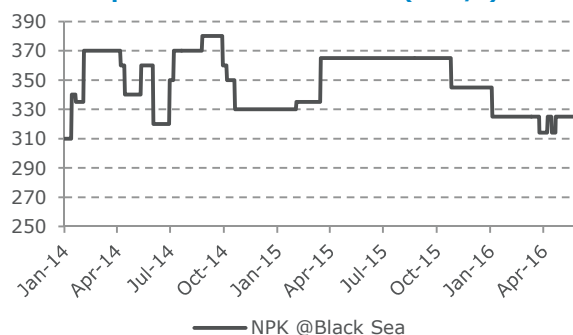
Source: Bloomberg, Dom Maklerski mBanku

### Benchmark European margins for urea, ammonium nitrate, and calcium ammonium nitrate (CAN) (2014-2016) (USD/t)



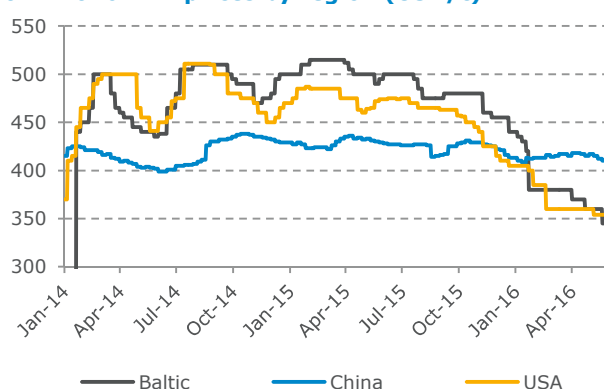
Source: Bloomberg, Dom Maklerski mBanku

### 2014-2016 prices of NPK fertilizers (USD/t)



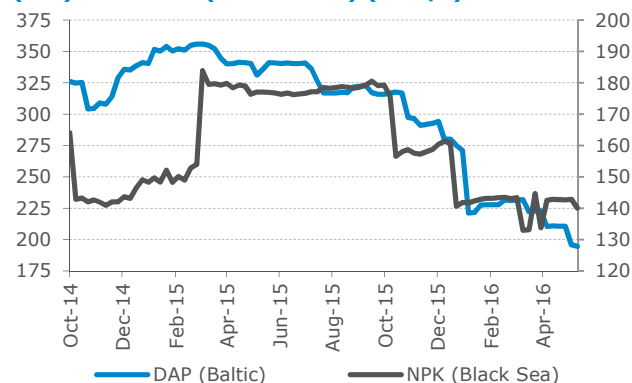
Source: Bloomberg, Dom Maklerski mBanku

### 2014-2016 DAP prices by region (USD/t)



Source: Bloomberg, Dom Maklerski mBanku

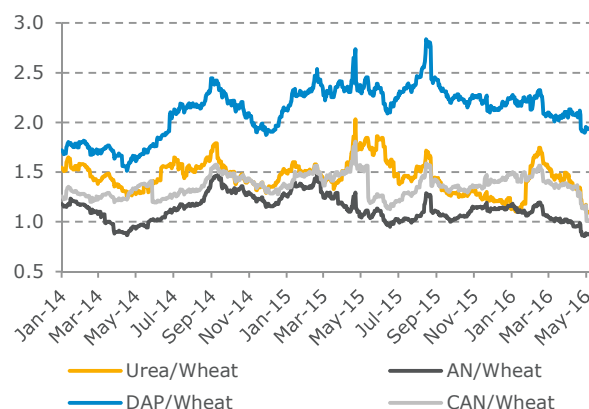
### Benchmark European margins on DAP (lhs) and NPK (rhs) fertilizers (2014-2016) (USD/t)



Source: Bloomberg, Dom Maklerski mBanku

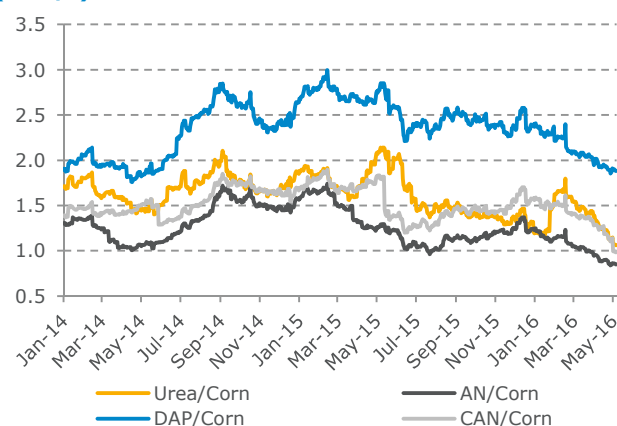
At the same time, as the prices of synthetic fertilizers in the five months to May traded at levels 20-30% lower than in the same period in 2015 compared to year-over-year declines of 16% in the prices of wheat and 2% in corn, **the fertilizer-to-cereal price ratios today are 20-40% below their three-year averages.** This, combined with the **low producer margins**, in our view indicates an **upcoming rebound in the prices of fertilizers**, resulting in a **turnaround in market sentiment** to the sector.

### Fertilizer-to-wheat price ratios in Europe (2014-2016) (USD/t)



Source: Bloomberg, Dom Maklerski mBanku

### Fertilizer-to-corn price ratios in Europe (2014-2016) (USD/t)

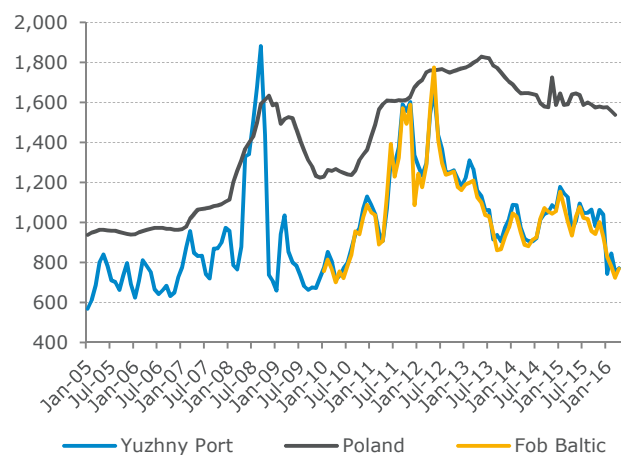


Source: Bloomberg, Dom Maklerski mBanku

While global dollar prices of fertilizers sank at fast rates, **prices in Poland have shown much more stable performance**, with urea down 3.1%, AN down 3.0%, CAN down 2.1%, and NPK down 1.7% in the first four months of 2016 relative to the same period a year ago. The stability is owed to the **zloty's depreciation versus the dollar** (+6.2% in 4M 2016) coupled with the Polish market's **high degree of concentration**, with 80-90% of the existing capacity controlled by just two players, Grupa Azoty and Anwil.

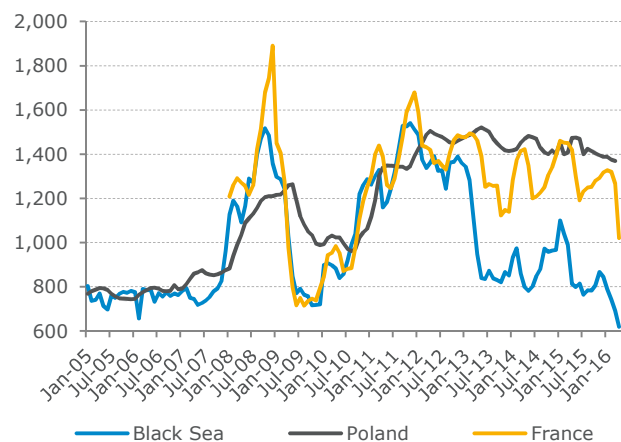
Thanks to stable prices, the **benchmark margins** (selling price vs. natags cost) achievable on the production of urea, AN, and CAN, as well as on compound fertilizers like DAP, **are currently at all-time highs**.

#### Urea prices in the Black Sea region (Yuzhny Port), the Baltic region, and Poland\* (2005-2016) (PLN/t)



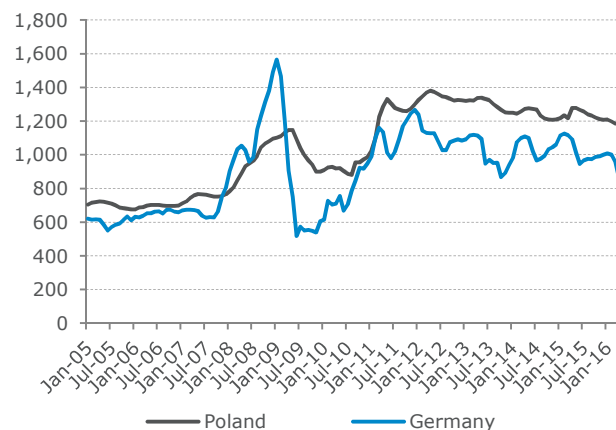
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGŻ)

#### Ammonium nitrate prices in the Black Sea region, France, and Poland\* (2005-2016) (PLN/t)



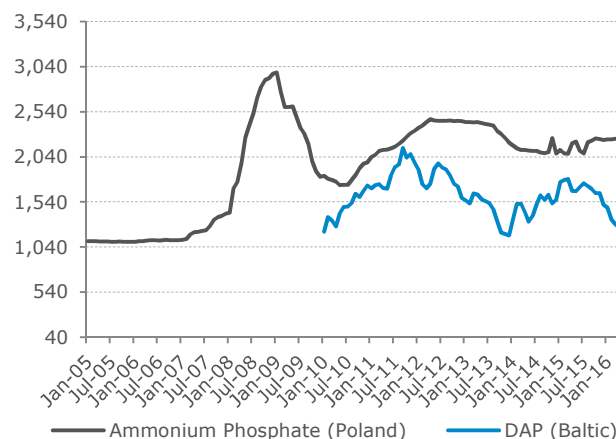
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGŻ)

#### CAN prices in Germany and Poland (2005-2016) (PLN/t)



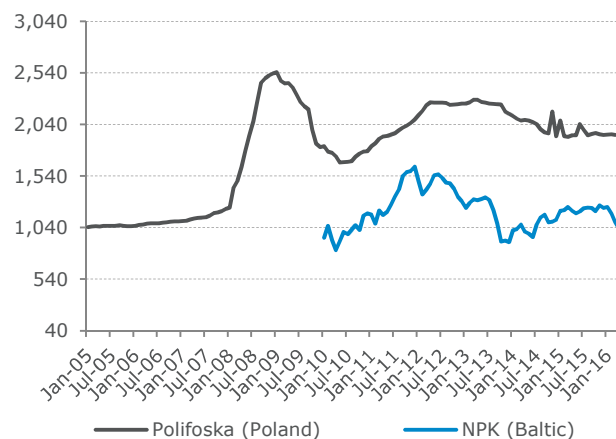
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGŻ)

#### DAP prices in the Baltic region and prices of ammonium phosphate in Poland (2005-2016) (PLN/t)



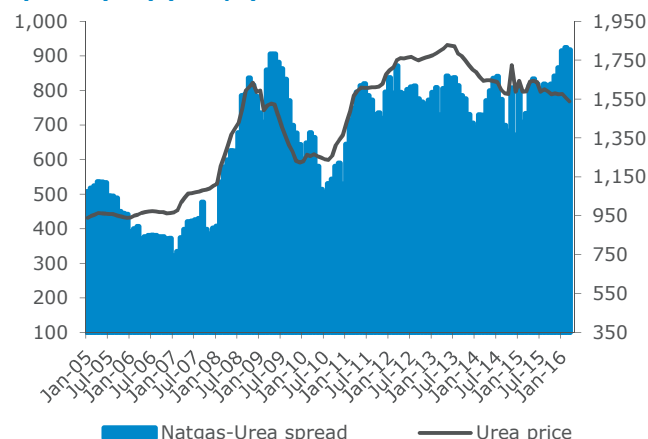
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGŻ)

#### Prices of NPK fertilizers in the Baltic region and prices of Polifoska® NPKS fertilizer in Poland (2005-2016) (PLN/t)



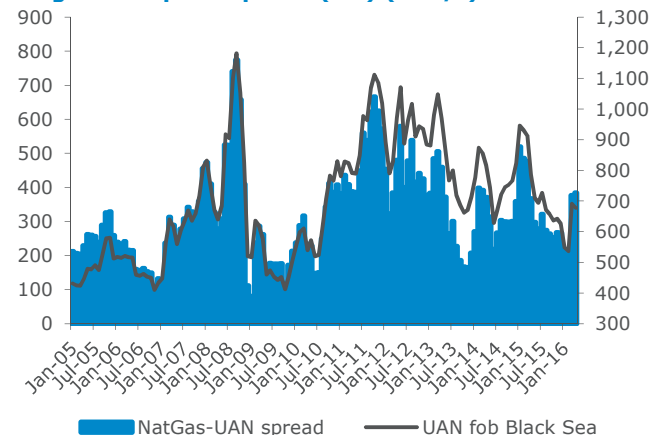
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGŻ)

**Urea prices in Poland (rhs) and natgas-urea price spread (lhs) (PLN/t)**



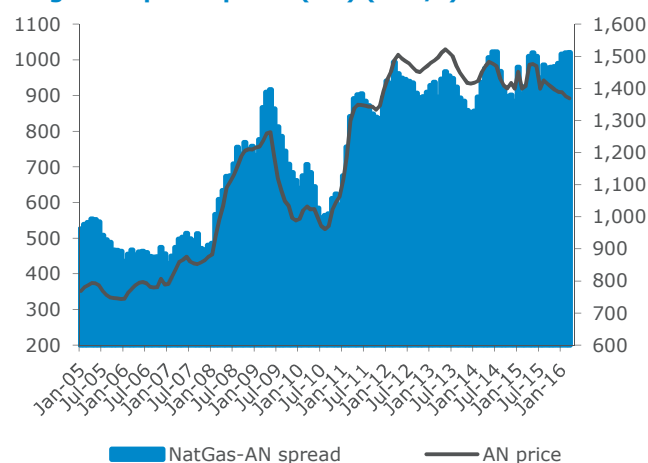
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

**UAN prices in the Black Sea region (rhs) and Polish natgas-UAN price spread (lhs) (PLN/t)**



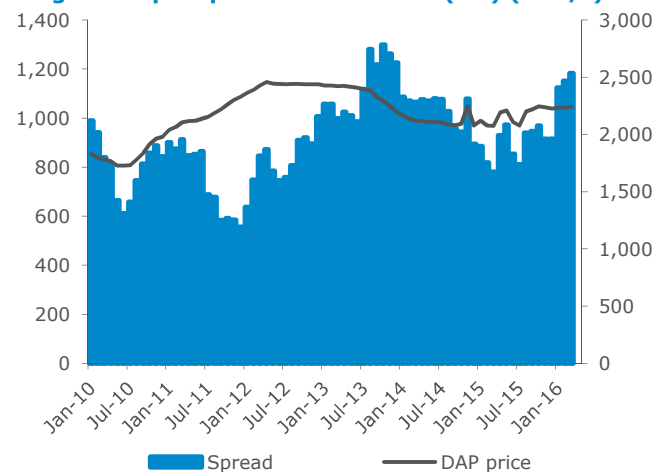
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

**Ammonium nitrate prices in Poland (rhs) and natgas-AN price spread (lhs) (PLN/t)**



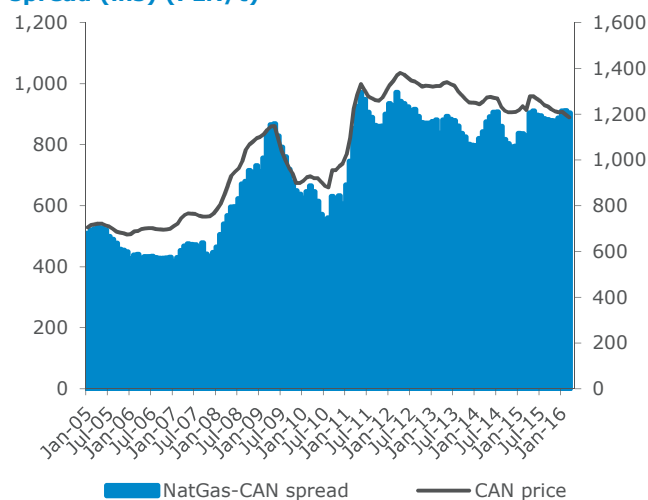
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

**DAP prices in Poland (rhs) and price spread between natgas and phosphate rock vs. DAP (lhs) (PLN/t)**



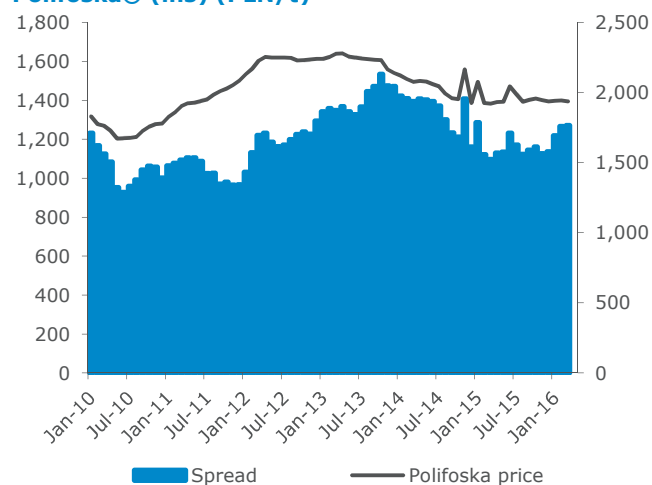
Source: Bloomberg, Dom Maklerski mBanku

**CAN prices in Poland (rhs) and natgas-CAN price spread (lhs) (PLN/t)**



Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

**Prices of Polifoska® compound fertilizer in Poland (rhs) and Price Spread between natural gas, phosphate rock, and potassium chloride vs. Polifoska® (lhs) (PLN/t)**



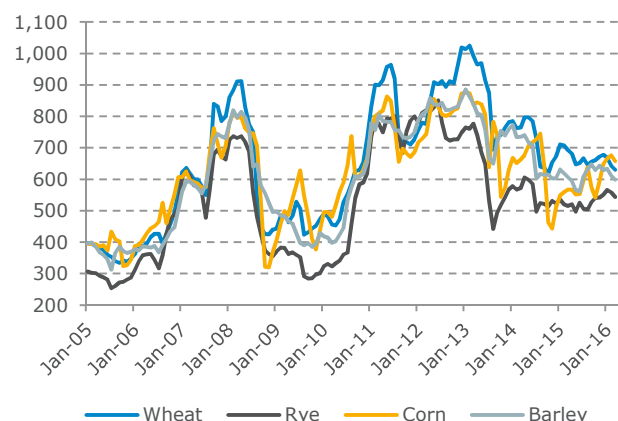
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

**Prices of cereals remained stable in Poland in the four months to April 2016** (wheat -8.0% y/y, rye +6.2%, corn +19.5%, barley -0.8%) while global prices of corn in the first half of the year increased due to sowing delays in the US and Canada, and wheat has been trading low on expectations of a bumper harvest in Russia. Looking at net CBOT positions, traders have an optimistic outlook on the corn market and a pessimistic outlook on the wheat market.

**The US Department of Agriculture projects a 4.45% decrease in the global corn supply in the 2015/16 season** as the average yield per hectare is expected to tighten to 5.47 tons (the lowest level since 2012/13, representing the first shortage since 2010/11). For wheat, the USDA predicts a **1.0% uptick in production, resulting in a global oversupply at a similar level as recorded in the last two years.**

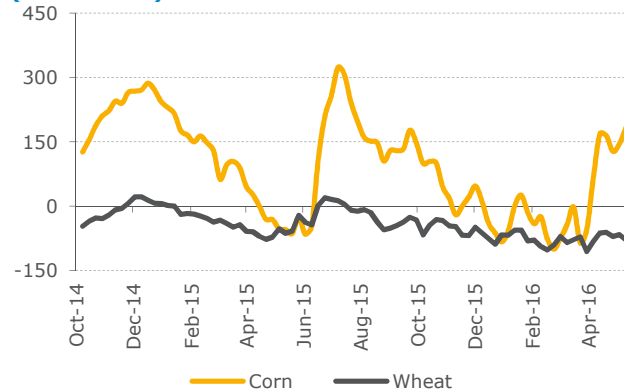
For the **2016/17 season, the USDA forecasts put corn production 4.4% higher than in the previous season, supported by record yields per hectare.** As a result the global market for corn is expected to be **balanced** with stable inventories. In **wheat**, the Agency also predicts a **demand-supply balance** assuming **record yields**. The ending global wheat inventory for the season is expected to be 5.9% higher than in the previous season.

#### Cereal prices in Poland (2005-2016) (PLN/t)



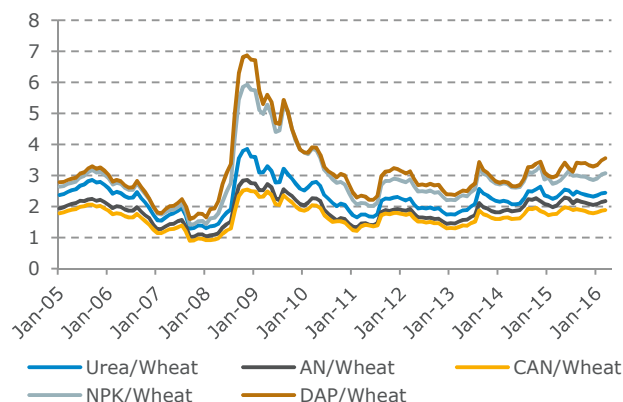
Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

#### CBOT net speculative positions in wheat and corn (2014-2016)



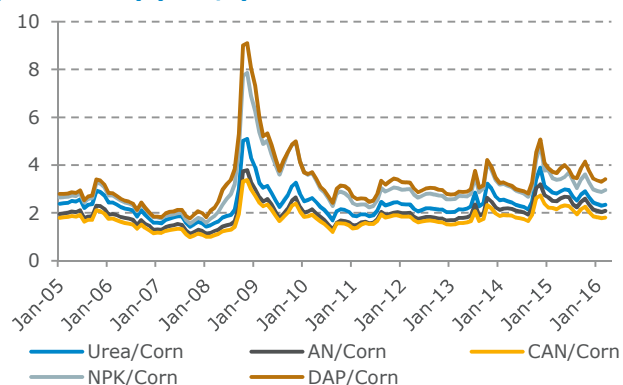
Source: Bloomberg, Dom Maklerski mBanku

#### Fertilizer-to-wheat price ratios in Poland (2005-2016) (USD/t)



Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

#### Fertilizer-to-corn price ratios in Poland (2005-2016) (USD/t)

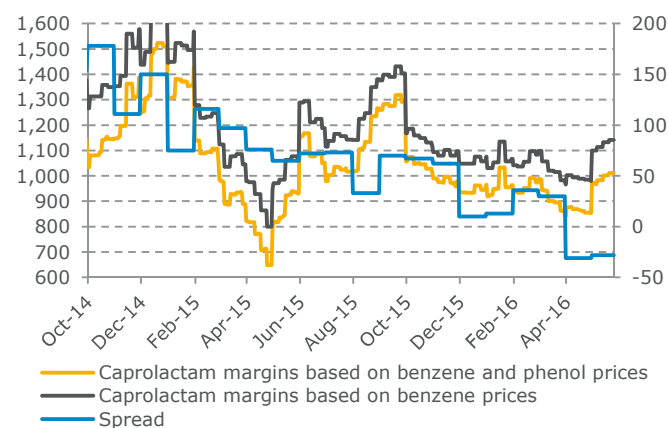


Source: Bloomberg, Dom Maklerski mBanku, National Institute for Agricultural and Food Economics (IERiGZ)

#### Plastics

The market for plastics has been under pressure from the economic slowdown in China. **due to high prices of benzene and low prices of polyamide 6, producer margins have tightened.** The margin on caprolactam has recovered slightly in the second quarter of 2016 in line with the strong momentum in the automotive market, but the overall qtd margin contraction indicates weaker Q2 2016 profits for Grupa Azoty's plastics business.

#### Polyamide 6 - Caprolactam price spread (rhs), Margins on caprolactam production depending on input prices (lhs) (USD/t)

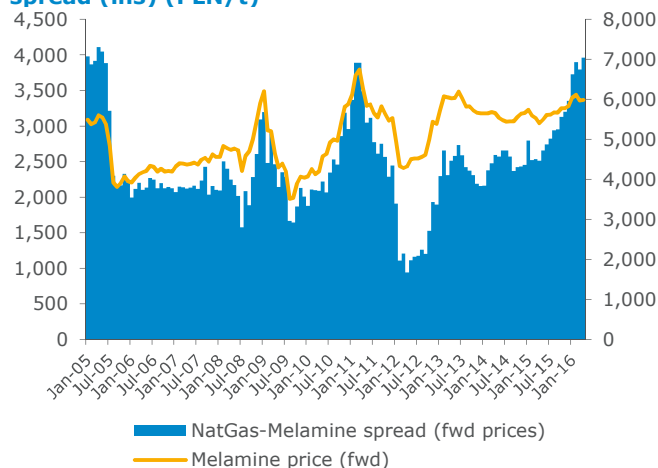


Source: Bloomberg, Dom Maklerski mBanku

## Chemicals

Grupa Azoty's Chemicals business is **benefitting from the low gas prices, as reflected in the widening margins on melamine and process urea** which have been at record levels for a while now. In melamine this is supported by high prices driven high demand from the furniture industry. In urea, margins are shaped by similar forces, though here the selling prices tend to adjust to natgas prices.

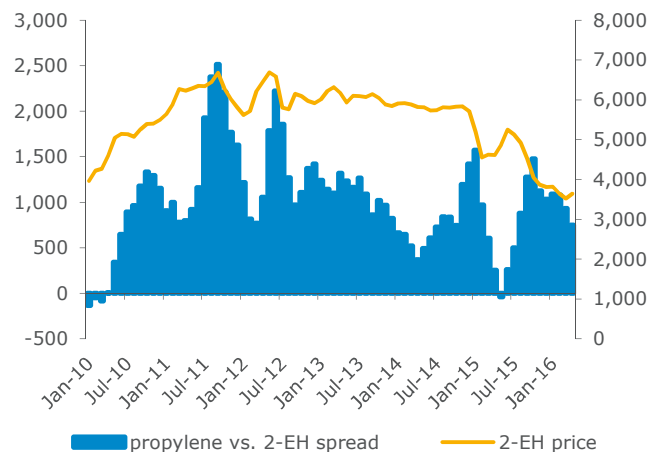
### Melamine prices (rhs) and natgas - melamine price spread (lhs) (PLN/t)



Source: Bloomberg, Dom Maklerski mBanku

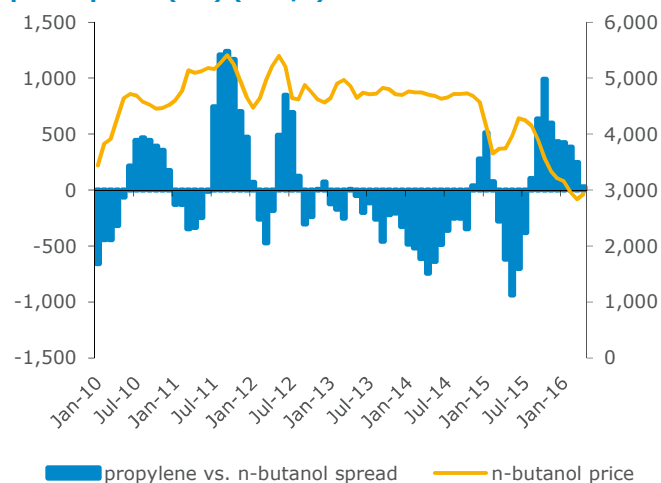
In turn, **prices of OXO alcohols and plasticizers have been on a decline** due to the upward shift in **propylene** prices observed at the beginning of the year.

### Prices of 2-ethylhexanol (rhs) and propylene v. 2-ethylhexanol price spread (lhs) (PLN/t)



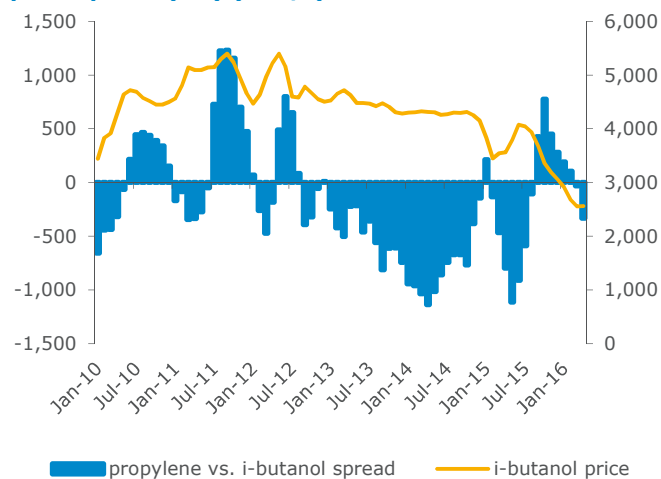
Source: Bloomberg, Dom Maklerski mBanku

### Prices of n-butanol (rhs) and propylene v. n-butanol price spread (lhs) (PLN/t)



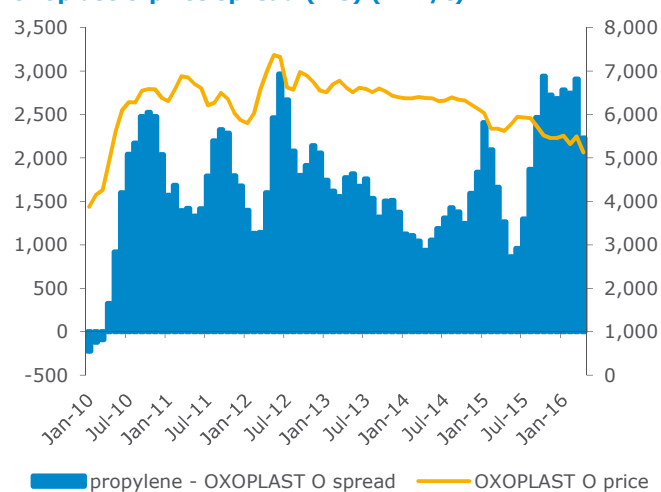
Source: Bloomberg, Dom Maklerski mBanku

### Prices of i-butanol (rhs) and propylene v. i-butanol price spread (lhs) (PLN/t)



Source: Bloomberg, Dom Maklerski mBanku

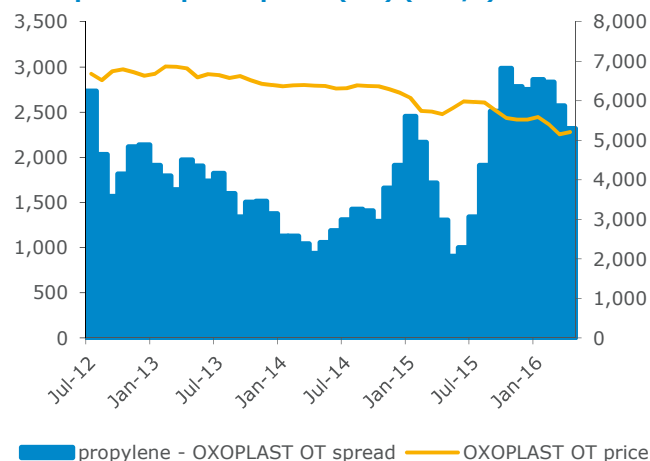
### Prices of Oxoplast O plasticizer (rhs) and propylene - Oxoplast O price spread (lhs) (PLN/t)



Source: Bloomberg, Dom Maklerski mBanku

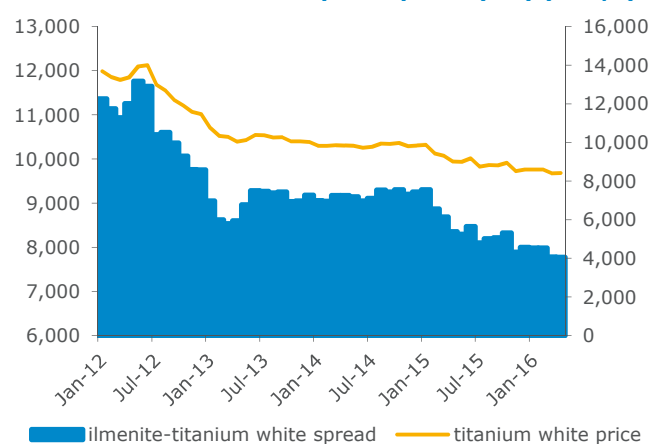


Prices of Oxoplast OT plasticizer (rhs) and propylene - Oxoplast OT price spread (lhs) (PLN/t)



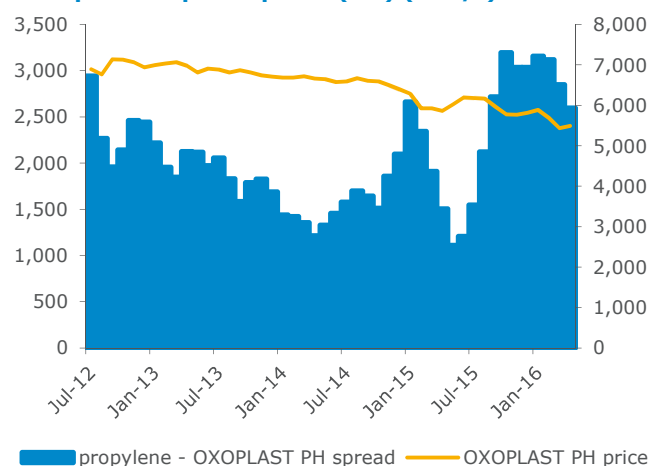
Source: Bloomberg, Dom Maklerski mBanku

Prices of titanium white (rhs) and ilmenite - titanium white price spread (lhs) (PLN/t)



Source: Bloomberg, Dom Maklerski mBanku

Prices of Oxoplast PH plasticizer (rhs) and propylene - Oxoplast PH price spread (lhs) (PLN/t)



Source: Bloomberg, Dom Maklerski mBanku

## Valuation

We used DCF analysis and relative valuation to assess the value of Grupa Azoty. The DCF model yielded per-share valuation of PLN 87.6, and multiples comparison indicates a value of PLN 74.4.

(PLN)	weight	value per share
Relative Valuation	74.4	74.0
DCF Valuation	87.6	87.6
	81.0	80.8
<b>9m target price</b>		<b>86.1</b>

## Relative Valuation

We compared Grupa Azoty with a group of international fertilizer producers: Acron, Agrium, CF Industries, Israel Chemicals, K+S, Mosaic, Phosagro, Potash, Uralkali, and Yara.

### Multiples Comparison

	P/E				EV/EBITDA			
	2015	2016E	2017E	2018E	2015	2016E	2017E	2018E
ACRON	7.8	5.6	4.7	4.6	5.2	5.0	4.4	4.0
AGRIUM INC	13.3	16.5	14.6	13.0	8.5	9.8	8.9	8.1
CF INDUSTRIES HOLDINGS INC	8.0	16.3	13.4	10.2	6.7	7.7	6.6	5.6
ISRAEL CHEMICALS LTD	9.6	11.6	10.3	9.4	7.2	7.7	7.1	6.7
K+S AG-REG	8.1	13.0	11.4	9.6	5.5	7.8	6.6	6.0
MOSAIC CO/THE	10.1	29.0	17.7	14.3	6.1	9.7	8.2	7.6
PHOSAGRO OAO-GDR REG S	11.2	8.7	7.2	6.5	6.0	6.4	5.9	5.1
POTASH CORP OF SASKATCHEWAN	11.4	24.9	18.7	17.0	7.2	11.0	9.7	9.5
URALKALI PJSC-SPON GDR-REG S	-	-	-	-	-	-	-	-
YARA INTERNATIONAL ASA	8.5	10.3	9.7	9.1	4.7	5.7	5.6	5.2
Maximum	13.3	29.0	18.7	17.0	8.5	11.0	9.7	9.5
Minimum	7.8	5.6	4.7	4.6	4.7	5.0	4.4	4.0
<b>Median</b>	<b>9.6</b>	<b>13.0</b>	<b>11.4</b>	<b>9.6</b>	<b>6.1</b>	<b>7.7</b>	<b>6.6</b>	<b>6.0</b>
Grupa Azoty	11.7	11.0	13.3	12.3	6.0	5.9	6.6	6.0
premium (discount)	22.4%	-15.5%	16.4%	28.4%	-1.0%	-23.3%	-1.2%	-0.2%
<b>Implied valuation</b>								
Median	9.6	13.0	11.4	9.6	6.1	7.7	6.6	6.0
Discount	0%	0%	0%	0%	0%	0%	0%	0%
Multiple weight		50%				50%		
Year weight	0%	33%	33%	33%		33%	33%	33%
<b>Value per share (PLN))</b>	<b>74.4</b>							

**ACRON JSC** is a vertically integrated Russian mineral fertilizer producer with a diversified product portfolio consisting of multi-nutrient fertilizers such as NPK and bulk blends, as well as straight nitrogen-based products such as urea, ammonium nitrate, and UAN.

**AGRIUM INC.** supplies nitrogen, potash and phosphate for agricultural, industrial, and specialty use. The Company operates throughout the Americas while it markets its products globally.

**CF INDUSTRIES HOLDINGS, INC.** manufactures and distributes nitrogen and phosphate fertilizer products globally. The Company's principal products in the nitrogen segment are ammonia, urea, urea-ammonium nitrate solution, ammonium nitrate, diesel exhaust fluid, and aqua ammonia. The principal products in the phosphate segment are diammonium phosphate and monoammonium phosphate.

**ISRAEL CHEMICALS LIMITED** through its subsidiaries, develops, manufactures, and markets chemical and fertilizer products in Israel, Europe, and the Americas.

Products include bromine specialty chemicals, potash, phosphate fertilizers, and specialty performance and industrial products.

**K+S AG** manufactures and markets within the fertilizer division standard and specialty fertilizers to the agricultural and industrial industries worldwide. In its salt business, the company produces de-icing salt, food grade salt, industrial salt and salt for chemical use.

**THE MOSAIC COMPANY** produces and distributes crop nutrients to the agricultural communities located in North America and other countries. The Company's principal products include concentrated phosphates and potash.

**PHOSAGRO OAO** is a global vertically integrated phosphate-based fertilizer producer. The Company focuses on the production of phosphate-based fertilizers, feed phosphate and high-grade phosphate rock, as well as ammonia and nitrogen-based fertilizers.

**POTASH CORPORATION OF SASKATCHEWAN INC.** produces potash, phosphate, and nitrogen to the

agricultural and industrial industries worldwide. The Company conducts operations in Canada, Chile, the United States, Brazil, and Trinidad.

**URALKALI PJSC** produces potash and operates mines and ore-treatment mills in the Perm Territory, Russia. The Company extracts and processes potassium ore and sells standard and granular muriate of potash for the agriculture and chemical industries. Uralkali's main markets include Brazil, India, China, Southeast Asia, Russia, the United States and Europe.

**YARA INTERNATIONAL ASA** produces, distributes, and sells nitrogen-based mineral fertilizers and related industrial products. The Company also distributes and sells a range of phosphate and potash-based mineral fertilizers, as well as complex and specialty mineral fertilizer products. Yara is the largest producer of mineral fertilizers in Europe.

## Additional Assumptions

### Cost and Price Projection: Fertilizer Segment

	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Ammonium sulfate (AS) (USD/t)	161	139	131	115	120	120	120	120	119
Ammonium sulfate (AS) (PLN/t)	508	452	502	454	445	445	445	443	441
Urea (EUR/t)	425	391	373	351	371	371	371	369	367
Urea (PLN/t)	1781	1636	1583	1525	1538	1538	1538	1530	1523
Ammonium nitrate (AN) (EUR/t)	351	343	332	312	324	324	324	322	321
Ammonium nitrate (AN) (PLN/t)	1474	1437	1405	1355	1344	1344	1344	1338	1331
Calcium ammonium nitrate CAN (EUR/t)	311	297	288	267	281	281	281	279	278
Calcium ammonium nitrate CAN (PLN/t)	1304	1243	1219	1160	1165	1165	1165	1159	1153
NPK (Polifoska) (EUR/t)	533	489	460	439	458	458	458	456	454
NPK (Polifoska) (PLN/t)	2234	2046	1949	1905	1901	1901	1901	1892	1882
Diammonium phosphate (NP) (EUR/t)	564	507	516	512	534	534	534	531	529
Diammonium phosphate (NP) (PLN/t)	2364	2121	2187	2220	2216	2216	2216	2204	2193
UAN (EUR/t)	194	204	196	181	189	189	189	188	187
UAN (PLN/t)	814	853	829	785	783	783	783	779	776
What, Poland (USD/t)	276	221	176	170	189	199	199	199	199
Wheat (PLN/t)	872	720	703	672	700	737	737	737	737
Corn, Poland (USD/t)	269	207	162	175	185	194	194	194	194
Corn (PLN/t)	851	674	654	691	683	719	719	719	719
Urea/Wheat	2.0	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1
Urea/Corn	2.1	2.4	2.4	2.2	2.2	2.1	2.1	2.1	2.1
AN/Wheat	1.7	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8
AN/Corn	1.7	2.1	2.1	2.0	1.9	1.8	1.8	1.8	1.8
CAN/Wheat	1.5	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6
CAN/Corn	1.5	1.8	1.9	1.7	1.7	1.6	1.6	1.6	1.6
UAN/Wheat	0.9	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
UAN/Corn	1.0	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1
Polifoska/Wheat	2.6	2.8	2.8	2.8	2.8	2.7	2.7	2.6	2.6
Polifoska/Corn	2.6	3.0	3.0	2.8	2.7	2.6	2.6	2.6	2.5
Natural gas (PGNiG tariff + transmission) (PLN/1000m3)	1328	1328	1108	991	1006	1012	1018	1016	1023
Natural gas (German contract) USD/1000m3	420	327	227	180	200	200	250	250	250
Natural gas (German contract) PLN/1000m3	1328	1067	868	711	740	740	925	925	925
Average cost of gas (PLN/1000m3)	1328	1221	1004	851	873	876	972	971	974
Non-PGNiG gas purchases as pct.. of total	16%	41%	44%	50%	50%	50%	50%	50%	50%
Sulfur (USD/t)	155	160	153	130	131	131	132	133	133
Sulfur (PLN/t)	488	523	586	514	483	486	488	491	493
Potassium chloride (USD/t)	370	292	282	240	241	242	244	245	246
Potassium chloride (PLN/t)	1168	951	1078	948	892	897	901	906	910
Phosphorites (USD/t)	140	123	121	110	111	111	112	112	113
Phosphorites (PLN/t)	443	401	462	435	409	411	413	415	417
EUR/PLN	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.2	6.2
USD/PLN	5.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Source: Dom Maklerski mBanku

**Cost and Price Projection: Plastics Segment**

	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Polyoxymethylene (POM) (EUR/t)	2250	2250	2087	1870	1898	1927	1955	1985	2015
Polyoxymethylene (POM) (PLN/t)	9439	9414	8844	8116	7877	7995	8115	8237	8360
Polyamide 6 (EUR/t)	2000	2021	1610	1490	1684	1794	1750	1750	1750
Polyamide 6 (PLN/t)	8390	8456	6824	6467	6990	7447	7264	7264	7264
Caprolactam (EUR/t)	1886	1900	1576	1510	1635	1742	1699	1699	1699
Caprolactam (PLN/t)	7911	7950	6681	6553	6787	7230	7052	7052	7052
Benzene (EUR/t)	998	995	617	620	660	726	704	704	704
Benzene (PLN/t)	4188	4164	2617	2691	2739	3013	2922	2922	2922
Cyclohexane (USD/t)	1521	1557	836	747	933	1013	985	985	985
Cyclohexane (PLN/t)	4806	5080	3194	2950	3454	3747	3646	3646	3646
Phenol (EUR/t)	1582	1576	1186	1129	1268	1305	1286	1286	1286
Phenol (PLN/t)	6635	6596	5025	4900	5264	5417	5338	5338	5338
Brent crude (USD/bbl)	109	101	48	50	65	75	75	75	75
Naphtha (USD/t)	900	774	428	429	557	643	643	643	643
Caprolactam / Cyclohexane	1.6	1.6	2.1	2.2	2.0	2.0	2.0	2.0	2.0
Caprolactam / Phenol	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Polyamide / Caprolactam	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Naphtha / Brent	1.0	0.9	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Benzene / Naphtha	1.5	1.6	1.6	1.6	1.3	1.3	1.2	1.2	1.2
Cyclohexane / Benzene	1.1	1.2	1.2	1.1	1.2	1.2	1.2	1.2	1.2
Cyclohexane / Phenol	0.7	0.8	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Phenol / Propylene	1.5	1.5	1.6	1.3	1.5	1.5	1.5	1.5	1.5
Phenol / Benzene	1.6	1.6	1.9	1.8	1.8	1.8	1.8	1.8	1.8

**Cost and Price Projection: Chemicals Segment**

	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Melamine (EUR/t)	1408	1331	1360	1370	1333	1341	1350	1347	1356
Melamine (PLN/t)	5905	5570	5764	5948	5533	5565	5601	5589	5627
Oxoplast Plasticizer (EUR/t)	1565	1512	1333	1424	1548	1501	1501	1501	1501
Oxoplast Plasticizer (PLN/t)	6562	6326	6177	6179	6423	6230	6230	6230	6230
Titanium white (EUR/t)	2442	2353	2090	2029	1947	1957	1967	1977	1987
Titanium white (PLN/t)	10243	9843	8858	8805	8081	8122	8162	8203	8244
OXO alcohol (2-Ethylhexanol) (EUR/t)	1446	1390	1018	1214	1271	1233	1233	1233	1233
OXO alcohol (2-Ethylhexanol) (PLN/t)	6067	5814	4315	5270	5276	5118	5118	5118	5118
OXO alcohol (n-butanol) (EUR/t)	1137	1122	838	999	1046	1015	1015	1015	1015
OXO alcohol (n-butanol) (PLN/t)	4768	4694	3551	4337	4342	4212	4212	4212	4212
OXO alcohol (i-butanol) (EUR/t)	1069	1023	782	933	976	947	947	947	947
OXO alcohol (i-butanol) (PLN/t)	4485	4281	3314	4047	4052	3930	3930	3930	3930
Propylene (EUR/t)	1057	1080	733	837	921	894	894	894	894
Propylene (PLN/t)	4433	4517	3107	3635	3823	3709	3709	3709	3709
Methanol (EUR/t)	390	383	304	220	223	227	230	233	237
Methanol (PLN/t)	1634	1604	1289	955	927	941	955	969	984
Ilmenite (USD/t)	207	113	87	87	87	88	88	89	89
Ilmenite (PLN/t)	653	368	331	343	323	325	326	328	330
Propylene / Naphtha	1.6	1.8	1.9	2.1	1.9	1.6	1.6	1.6	1.6
Ilmenite / Titanium white	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Ethylhexanol / Propylene	1.4	1.3	1.4	1.5	1.4	1.4	1.4	1.4	1.4
OXO Alcohols / Propylene	1.2	1.1	1.2	1.3	1.2	1.2	1.2	1.2	1.2
POM / Methanol	5.8	5.9	5.9	8.5	8.5	8.5	8.5	8.5	8.5
Plasticizers / Propylene	1.5	1.4	2.0	1.7	1.7	1.7	1.7	1.7	1.7
Melamine / Natgas	4.4	4.2	5.2	6.0	5.5	5.5	5.5	5.5	5.5

Source: Dom Maklerski mBanku

## Sales volume projection

1000 tons	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
POM	8.3	9.5	9.4	9.6	9.8	10.0	10.2	10.4	10.6
PA6	90.2	94.8	105.5	103.4	121.6	134.9	145.9	149.4	151.4
Caprolactam	77.9	74.7	66.4	62.0	43.3	29.6	18.3	14.7	12.7
Nitrogen fertilizers:	4,116.9	4,298.5	4,354.2	4,275.6	4,310.7	4,347.5	4,385.6	4,425.9	4,467.2
Urea and AdBlue	1,082.2	1,249.9	1,276.0	1,259.6	1,268.5	1,277.5	1,286.6	1,295.8	1,305.1
Ammonium nitrate	1,076.2	1,094.1	1,102.4	1,080.3	1,096.7	1,113.3	1,130.2	1,147.5	1,165.2
CAN	577.1	639.7	647.5	634.5	636.3	638.2	640.0	641.8	643.7
UAN	671.4	568.7	613.5	601.3	613.3	625.5	638.1	650.8	663.8
Granulates (new facilities)	0.0	0.0	0.0	0.0	0.0	164.5	246.4	328.3	410.3
NPK fertilizers	988.6	1,089.9	1,338.5	1,318.4	1,331.6	1,344.9	1,358.4	1,372.0	1,385.7
Melamine	80.3	78.7	83.0	85.5	86.8	88.1	89.4	90.7	92.1
OXO alcohols	143.9	152.2	118.3	118.9	119.5	120.1	120.7	121.3	121.9
Plasticizers	28.1	24.0	33.2	34.9	40.1	44.1	47.7	49.1	50.6
Titanium white	36.6	34.8	33.6	33.9	34.4	34.9	35.5	36.0	36.5

Source: Dom Maklerski mBanku

## Sales growth volume projection

Y/Y pct. change	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
POM	13.8%	-0.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
PA6	5.1%	11.3%	-2.0%	17.6%	11.0%	8.1%	2.4%	1.3%
Caprolactam	-4.1%	-11.2%	-6.7%	-30.1%	-31.6%	-38.1%	-19.5%	-13.9%
Nitrogen fertilizers:	4.4%	1.3%	-1.8%	0.8%	0.9%	0.9%	0.9%	0.9%
Urea and AdBlue	15.5%	2.1%	-1.3%	0.7%	0.7%	0.7%	0.7%	0.7%
Ammonium nitrate	1.7%	0.8%	-2.0%	1.5%	1.5%	1.5%	1.5%	1.5%
CAN	10.8%	1.2%	-2.0%	0.3%	0.3%	0.3%	0.3%	0.3%
UAN	-15.3%	7.9%	-2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
NPK fertilizers	10.2%	22.8%	-1.5%	1.0%	1.0%	1.0%	1.0%	1.0%
Melamine								
OXO alcohols	-2.0%	5.5%	3.0%	1.5%	1.5%	1.5%	1.5%	1.5%
Plasticizers	5.8%	-22.3%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Titanium white	-14.5%	38.2%	5.0%	15.0%	10.0%	8.0%	3.0%	3.0%

Source: Dom Maklerski mBanku

## CAPEX Projection

PLN m	2016P	2017P	2018P	2019P	2020P	2021P
Elektrownia Puławy power plant	450.0	281.3	250.0	87.5	0.0	0.0
Nitric acid plant extensions (GA Puławy)	231.7	173.8	139.0	77.2	34.8	10.8
AN mechanical granulation plant (1)	91.7	4.6	0.0	0.0	0.0	0.0
AN mechanical granulation plant (2)	96.3	64.2	32.1	0.0	0.0	0.0
EC Kędzierzyn CHP	200.0	133.3	85.7	9.5	0.0	0.0
UAN unit (GA Kędzierzyn)	0.0	0.0	0.0	0.0	0.0	0.0
Polyamide plant (GA Tarnów)	97.5	0.0	0.0	0.0	0.0	0.0
Fertilizer granulation plant (GA Tarnów)	46.7	0.0	0.0	0.0	0.0	0.0
Other	142.9	0.0	0.0	0.0	0.0	0.0
Replacements	383.4	362.0	218.1	354.1	452.5	535.5
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>1,740.1</b>	<b>1,019.1</b>	<b>724.9</b>	<b>528.3</b>	<b>487.3</b>	<b>546.3</b>

Source: Dom Maklerski mBanku

#### EBITDA projection by operating segment

(PLN m)	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Agro Fertilizers	632.5	594.4	998.1	989.7	951.4	1,024.9	941.0	986.8	1,020.7
Plastics	-109.1	-33.5	-10.4	-22.7	-13.8	28.7	23.9	22.8	19.6
Chemicals	71.3	45.6	134.7	239.9	152.0	146.6	124.7	119.9	119.9
Energy	69.2	80.0	77.9	68.4	63.6	55.1	53.5	150.4	166.7
Other	59.3	77.9	114.5	157.0	166.0	179.2	194.5	207.1	207.0
<b>Total</b>	<b>723.0</b>	<b>764.4</b>	<b>1,314.8</b>	<b>1,432.2</b>	<b>1,319.2</b>	<b>1,434.5</b>	<b>1,337.6</b>	<b>1,486.8</b>	<b>1,533.9</b>

Source: Dom Maklerski mBanku

#### Per-ton EBITDA projection by operating segment

(PLN/t)	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Agro Fertilizers	0.122	0.115	0.182	0.186	0.177	0.189	0.172	0.179	0.183
Plastics	-0.360	-0.245	0.008	-0.130	-0.079	0.165	0.137	0.130	0.112
Chemicals	0.132	0.168	0.314	0.446	0.277	0.262	0.219	0.207	0.205

Source: Dom Maklerski mBanku

## DCF Valuation

The DCF model is based on the following underlying assumptions:

- Risk-free rate: 3.5% (10Y Treasury bond yield).
- FCF growth rate after FY2024: 2%.

- Beta = 1.0.
- Future cash flows are discounted to their present value as of the end of May 2016.

### DCF Model

(PLN m)	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	+
Revenue	9,776.4	9,910.9	10,124.0	10,259.4	10,397.7	10,538.9	10,685.9	10,820.6	10,953.3	11,095.5	11,271.3
change	-2.5%	1.4%	2.2%	1.3%	1.3%	1.4%	1.4%	1.3%	1.2%	1.3%	1.6%
EBITDA	1,432.2	1,319.2	1,434.5	1,337.6	1,486.8	1,533.9	1,537.6	1,535.2	1,540.5	1,544.2	1,585.4
EBITDA margin	14.6%	13.3%	14.2%	13.0%	14.3%	14.6%	14.4%	14.2%	14.1%	13.9%	14.1%
D&A	517.2	545.4	590.1	646.5	691.0	682.8	661.4	643.1	635.2	618.7	618.7
EBIT	915.0	773.9	844.4	691.2	795.8	851.1	876.2	892.1	905.4	925.5	966.8
EBIT margin	9.4%	7.8%	8.3%	6.7%	7.7%	8.1%	8.2%	8.2%	8.3%	8.3%	8.6%
Tax on EBIT	147.7	130.8	151.2	122.7	143.2	154.2	159.6	156.5	159.1	166.5	170.7
NOPLAT	767.3	643.0	693.2	568.4	652.6	696.8	716.7	735.6	746.3	759.1	796.0
CAPEX	-1740.1	-1019.1	-724.9	-528.3	-487.3	-546.3	-580.4	-595.2	-610.9	-603.4	-618.7
Working capital	21.2	-11.5	-18.2	-11.5	-11.8	-12.0	-12.5	-11.5	-11.3	-12.1	-15.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF	-434.4	157.8	540.2	675.0	844.6	821.2	785.1	771.9	759.2	762.2	781.0
WACC	8.2%	8.2%	8.2%	8.3%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
Discount factor	0.95	0.88	0.82	0.75	0.69	0.63	0.58	0.54	0.50	0.46	0.42
PV FCF	-414.9	139.4	440.5	507.0	581.1	520.8	458.9	415.8	376.9	348.8	329.4

WACC	8.2%	8.2%	8.2%	8.3%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
Cost of debt	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Risk-free rate	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Risk premium	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Effective tax rate	17.0%	18.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%
Net debt / EV	7.1%	8.5%	6.9%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of equity	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
Risk premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Beta	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

FCF growth after the forecast period	2.0%
Terminal value	12,016.1
Present value of terminal value	5,498.3
Present value of FCF in the forecast period	3,374.3
Enterprise value	8,872.6
Net debt	-51.1
Other noncore assets	538.1
Minority interests	768.9
Equity value	8,692.8
Number of shares (millions)	99.2
NAV per share (PLN)	87.6
9M cost of equity	6.3%
<b>9M target price (PLN)</b>	<b>93.2</b>

EV/EBITDA ('16) at target price	7.4
P/E ('16) at target price	14.2
TV / EV	62.0%

### Sensitivity Analysis

FCF growth in perpetuity					
	0.0%	1.0%	2.0%	3.0%	5.0%
WACC +1.0p.p.	69.1	73.5	79.0	86.2	110.2
WACC +0.5p.p.	73.9	79.0	85.6	94.3	124.8
WACC	79.3	85.3	<b>93.2</b>	103.9	143.7
WACC -0.5p.p.	85.3	92.5	102.0	115.4	168.8
WACC -1.0p.p.	92.2	100.8	112.5	129.4	203.8

**Income Statement**

(PLN m)	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Revenue	9,821.0	9,898.5	10,024.4	9,776.4	9,910.9	10,124.0	10,259.4	10,397.7	10,538.9
change	38.3%	0.8%	1.3%	-2.5%	1.4%	2.2%	1.3%	1.3%	1.4%
Agro Fertilizers	5,565.1	5,580.4	6,057.9	5,686.5	5,732.3	5,819.5	5,890.6	5,933.2	5,976.2
Plastics	1,466.5	1,460.2	1,248.0	1,152.7	1,221.1	1,299.0	1,272.2	1,275.2	1,278.3
Chemicals	2,385.3	2,505.6	2,302.2	2,496.0	2,500.6	2,532.4	2,593.7	2,629.7	2,672.9
Energy	265.5	194.6	209.2	213.4	217.7	222.0	244.2	293.1	337.1
Other	138.6	157.7	207.1	227.8	239.2	251.1	258.6	266.4	274.4
COGS	8,441.8	8,231.6	7,760.2	7,450.2	7,735.5	7,874.0	8,159.3	8,189.3	8,257.5
Selling expenses	447.8	581.1	633.3	643.7	648.4	625.5	615.9	605.3	594.7
Administrative expenses	707.8	740.0	736.5	749.6	762.7	776.0	789.7	803.7	817.9
Other operating gains / losses	474.1	-43.6	-64.3	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	697.9	302.2	830.0	915.0	773.9	844.4	691.2	795.8	851.1
change	87.7%	-56.7%	174.6%	10.2%	-15.4%	9.1%	-18.2%	15.1%	6.9%
EBIT margin	7.1%	3.1%	8.3%	9.4%	7.8%	8.3%	6.7%	7.7%	8.1%
Financing gains / losses	17.5	-12.6	-4.7	-46.3	-46.9	-48.7	-45.2	-42.2	-39.2
Other	12.4	13.9	13.7	15.0	13.8	15.1	14.0	15.6	16.1
Pre-tax profit	727.8	303.5	839.1	868.7	726.9	795.7	645.9	753.7	811.8
Tax	18.4	37.7	147.2	147.7	130.8	151.2	122.7	143.2	154.2
Minority interests	26.5	33.7	82.3	71.3	59.1	64.4	55.8	59.9	64.1
Net profit	639.0	231.4	609.5	649.7	537.0	580.1	467.4	550.6	593.5
change	117.1%	-63.8%	163.5%	6.6%	-17.3%	8.0%	-19.4%	17.8%	7.8%
margin	6.5%	2.3%	6.1%	6.6%	5.4%	5.7%	4.6%	5.3%	5.6%
D&A	548.1	520.2	479.3	517.2	545.4	590.1	646.5	691.0	682.8
EBITDA	1,246.0	822.4	1,309.3	1,432.2	1,319.2	1,434.5	1,337.6	1,486.8	1,533.9
change	103.8%	-34.0%	59.2%	9.4%	-7.9%	8.7%	-6.8%	11.2%	3.2%
EBITDA margin	12.7%	8.3%	13.1%	14.6%	13.3%	14.2%	13.0%	14.3%	14.6%
Shares at year-end (millions)	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
EPS	6.4	2.3	6.1	6.5	5.4	5.8	4.7	5.6	6.0
CEPS	12.0	7.6	11.0	11.8	10.9	11.8	11.2	12.5	12.9
ROAE	11.5%	4.0%	9.6%	9.4%	7.4%	7.7%	6.2%	7.1%	7.4%
ROAA	6.4%	2.3%	5.7%	5.7%	4.6%	4.8%	3.8%	4.4%	4.7%

## Balance Sheet

(PLN m)	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
ASSETS	9,950.8	9,948.3	10,777.2	11,372.0	11,769.0	12,092.1	12,197.2	12,436.2	12,653.7
Fixed assets	6,629.9	6,781.1	7,224.9	8,452.2	8,932.8	9,077.2	8,972.1	8,790.9	8,679.6
Intangible assets	519.6	510.4	532.8	672.9	742.2	783.4	806.3	826.2	853.1
Property, plant and equipment	5,780.9	5,966.3	6,429.8	7,516.9	7,928.2	8,031.4	7,903.5	7,702.4	7,564.1
Equity value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term receivables	3.4	2.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Long-term investment	210.8	201.9	185.2	185.2	185.2	185.2	185.2	185.2	185.2
Long-term prepayments	103.5	86.9	62.8	62.8	62.8	62.8	62.8	62.8	62.8
Current assets	3,320.8	3,167.2	3,552.2	2,919.8	2,836.2	3,014.9	3,225.1	3,645.3	3,974.0
Inventory	1,165.5	1,347.8	1,180.6	1,151.4	1,167.2	1,192.3	1,208.3	1,224.6	1,241.2
Current receivables	1,273.1	1,161.4	1,078.3	1,051.6	1,066.1	1,089.0	1,103.6	1,118.4	1,133.6
Trade receivables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short-term investment	128.6	92.7	538.1	538.1	538.1	538.1	538.1	538.1	538.1
Cash	713.0	558.6	753.1	176.7	62.7	193.3	373.0	762.0	1,058.9
Short-term prepayments	40.6	6.7	2.2	2.1	2.1	2.2	2.2	2.2	2.3
EQUITY AND LIABILITIES	9,950.8	9,948.3	10,777.2	11,372.0	11,769.0	12,092.1	12,197.2	12,436.2	12,653.7
Equity	5,562.7	5,759.0	6,367.3	6,933.7	7,275.7	7,533.6	7,595.0	7,795.0	7,975.5
Share capital	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
Supplementary capital	2,418.3	2,418.3	2,418.3	2,418.3	2,418.3	2,418.3	2,418.3	2,418.3	2,418.3
Retained earnings	2,649.8	2,843.4	3,452.2	4,018.6	4,360.7	4,618.5	4,679.9	4,879.9	5,060.5
Minority interests	707.8	729.1	768.9	832.2	868.2	903.6	928.3	947.9	965.0
Long-term liabilities	998.5	849.5	1,437.6	1,437.6	1,437.6	1,437.6	1,437.6	1,437.6	1,437.6
Debt	657.2	497.1	1,063.6	1,063.6	1,063.6	1,063.6	1,063.6	1,063.6	1,063.6
Current liabilities	2,033.6	2,047.7	1,575.9	1,541.3	1,560.1	1,589.8	1,608.7	1,628.0	1,647.7
Trade creditors	1,350.5	1,459.0	1,399.4	1,364.8	1,383.5	1,413.3	1,432.2	1,451.5	1,471.2
Debt	683.1	588.6	176.5	176.5	176.5	176.5	176.5	176.5	176.5
Provisions	622.2	557.7	621.0	621.0	621.0	621.0	621.0	621.0	621.0
Other	25.9	5.3	6.4	6.3	6.4	6.5	6.6	6.7	6.8
Debt	1,340.3	1,085.8	1,240.1	1,240.1	1,240.1	1,240.1	1,240.1	1,240.1	1,240.1
Net debt	498.7	434.5	-51.1	525.4	639.4	508.7	329.1	-60.0	-356.8
(Net debt / Equity)	9.0%	7.5%	-0.8%	7.6%	8.8%	6.8%	4.3%	-0.8%	-4.5%
(Net debt / EBITDA)	0.4	0.5	0.0	0.4	0.5	0.4	0.2	0.0	-0.2
BVPS	56.1	58.1	64.2	69.9	73.3	75.9	76.6	78.6	80.4



## Cash Flow

(PLN m)	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
Cash flow from operating activities	990.5	819.8	1,630.2	1,301.3	1,170.0	1,255.6	1,190.3	1,309.3	1,342.3
Net profit	639.0	231.4	609.5	649.7	537.0	580.1	467.4	550.6	593.5
D&A	548.1	520.2	479.3	517.2	545.4	590.1	646.5	691.0	682.8
Working capital	328.2	-35.9	299.5	21.2	-11.5	-18.2	-11.5	-11.8	-12.0
Other	-524.9	104.2	241.9	113.3	99.1	103.6	88.0	79.6	78.1
Cash flow from investing activities	-688.5	-648.1	-1,503.4	-1,740.1	-1,019.1	-724.9	-528.3	-487.3	-546.3
CAPEX	-675.5	-675.5	-1,054.7	-1,740.1	-1,019.1	-724.9	-528.3	-487.3	-546.3
Equity investment	-13.0	76.2	-448.7	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow from financing activities	167.6	-326.1	67.7	-137.7	-264.9	-400.0	-482.3	-433.0	-499.2
Debt	695.7	-253.1	165.6	0.0	0.0	0.0	0.0	0.0	0.0
Dividend/buyback	-170.8	-41.8	0.0	-83.3	-194.9	-322.2	-406.0	-350.6	-412.9
Dividends in consolidated subsidiaries	0.0	0.0	-25.5	-8.1	-23.1	-29.1	-31.0	-40.3	-47.0
Other	-357.2	-31.3	-72.4	-46.3	-46.9	-48.7	-45.2	-42.2	-39.2
Change in cash	469.6	-154.4	194.5	-576.5	-114.0	130.6	179.7	389.0	296.8
Cash at period-end	713.0	558.6	753.1	176.7	62.7	193.3	373.0	762.0	1,058.9
DPS (PLN)	1.72	0.42	0.00	0.84	1.96	3.25	4.09	3.53	4.16
FCF	881.7	77.7	404.8	-434.4	157.8	540.2	675.0	844.6	821.2
(CAPEX/Sales)	-6.9%	-6.8%	-10.5%	-17.8%	-10.3%	-7.2%	-5.1%	-4.7%	-5.2%

## Trading Multiples

	2013	2014	2015	2016P	2017P	2018P	2019P	2020P	2021P
P/E	11.2	30.9	11.7	11.0	13.3	12.3	15.3	13.0	12.0
P/CE	6.0	9.5	6.6	6.1	6.6	6.1	6.4	5.8	5.6
P/B	1.3	1.2	1.1	1.0	1.0	0.9	0.9	0.9	0.9
P/S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
FCF/EV	11.5%	1.0%	5.7%	-5.7%	2.0%	7.1%	9.0%	11.9%	12.1%
EV/EBITDA	6.7	10.1	6.0	5.9	6.6	6.0	6.3	5.4	5.1
EV/EBIT	12.0	27.5	9.5	9.3	11.2	10.1	12.2	10.1	9.1
EV/S	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7
CFO/EBITDA	79%	100%	125%	91%	89%	88%	89%	88%	88%
DYield	2.4%	0.6%	0.0%	1.2%	2.7%	4.5%	5.7%	4.9%	5.8%
Price (PLN)	72.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00	72.00
Shares at year-end (millions)	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
MC (PLN m)	7,142.1	7,142.1	7,142.1	7,142.1	7,142.1	7,142.1	7,142.1	7,142.1	7,142.1
Minority interests (PLN m)	707.8	729.1	768.9	832.2	868.2	903.6	928.3	947.9	965.0
EV (PLN m)	8,348.6	8,305.6	7,859.9	8,499.6	8,649.7	8,554.4	8,399.5	8,030.0	7,750.3

**List of abbreviations and ratios contained in the report:**

**EV** – net debt + market value  
**EBIT** – Earnings Before Interest and Taxes  
**EBITDA** – EBIT + Depreciation and Amortisation  
**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

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**HOLD** – we expect that the rate of return from an investment will range from -5% to +5%  
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**Previous ratings issued for Grupa Azoty**

rating	Hold	Hold	Buy
rating day	2016-01-05	2016-02-02	2016-06-02
price on rating day	96.30	104.00	68.20
WIG on rating day	45356.65	44294.89	44700.67

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