

## Bid Terms

1 AKZA NA = €61.50 + 0.357 PPG US

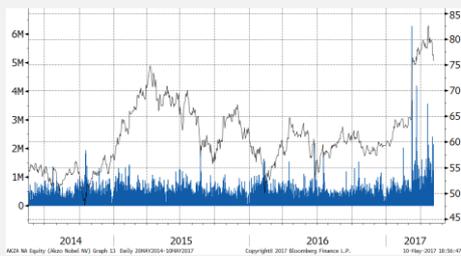
### Target: Akzo Nobel N.V.

Country	The Netherlands
Bloomberg	AKZA NA
Sector	Chemicals
Share price (€)	75.77
Market cap (€ m)	19,138
Free float (%)	~100

### Acquirer: PPG Industries, Inc.

Country	United States
Bloomberg	PPG US
Sector	Chemicals
Share price (\$)	107.73
Market cap (\$m)	27,650
Free float (%)	~100

### Akzo Nobel Price Chart



**Status:** PPG statement on AKZA rejection: 10 May 2017

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## Akzo Nobel (AKZA NA) / PPG (PPG US)

### Unsolicited Offer

**PPG does not appear to have a clear legal path to control Akzo.**

**CBR view:** We believe that PPG does not appear to have a clear legal path to control Akzo. We also note that the Dutch government appears to be supporting Akzo. We assign a less than 25% chance of PPG succeeding with its current offer. However, from a risk-reward perspective, we would consider a small starting position long Akzo at the current price.

- We estimate a downside to €73 per Akzo share on a deal break, and we see upside to €80 to €85 per share if Akzo goes ahead with the spin-off. Consequently, we believe that the downside is likely to be limited over the medium term.
- Even if PPG walks away by June 1, a positive decision by the Dutch courts in favour of Elliott could potentially bring the companies back to the table. On this basis, even after a potential collapse of the current PPG offer, there remains further takeover optionality.
- We estimate that a fair price for Akzo is in the range of €95 to €100 per Akzo share assuming the currently indicated cost savings. However, PPG may offer a premium to its current offer if it can justify a higher level of cost savings (however, this may be difficult given an increased synergy level could imply a higher level of job losses, so communicating a higher offer based on higher synergies seems to be somewhat of a Catch 22 situation for PPG).

**Stichting:** “In relation to the right of the Meeting of Holders of Priority Shares to make binding nominations for appointments to the Board of Management and the Supervisory Board, the Foundation Akzo Nobel has confirmed that it intends to make use of such rights in exceptional circumstances only.”

- “These circumstances include situations where, in the opinion of the Board of the Foundation, the continuity of the company’s management and policies is at stake. This may be the case if a public bid for the common shares of the company has been announced, or has been made, or the justified expectation exists that such a bid will be made, without any agreement having been reached in relation to such a bid with the company.”
- “In the event of a hostile takeover bid, or other action which the Board of Management and Supervisory Board consider to be adverse to the company’s interests, the two Boards reserve the right to use all available powers (including the right to invoke a response time in accordance with provisions IV.4.4 and II.1.9 of the Code), while taking into account the relevant interests of the company and its affiliate enterprise and stakeholders.”

**Legal path to control:** It appears that PPG’s current offer has the support of a significant % of Akzo shareholders. Consequently, PPG could potentially acquire more than 50% of Akzo shares through a hostile tender offer. However, we believe that PPG is unlikely to pursue Akzo through a hostile tender offer.

- PPG would have to gain control of the board to acquire 100% of Akzo and control Akzo’s strategic decisions.
- Even though Akzo’s Stichting cannot dilute other Akzo shareholders, it has ample power to control Akzo’s Board of Management and Supervisory Board.
- We believe that banks would likely be more comfortable funding the transaction if PPG had a clear path to Akzo’s cash flows (even though PPG is not a PE firm).
- We believe that it may make sense for PPG to walk away at this stage and see how Dutch courts rule on the Elliott litigation. A favourable outcome for Elliott could potentially prompt the Akzo board to engage with PPG.
  - We note that the AFM may grant dispensation from the 6 month Shut Up Prohibition. The AFM can do so if the circumstances have changed significantly (for example, when the target company consents to the Shut-Up Prohibition no longer being applicable)
- We believe that Elliott’s litigation is not without merit and this is why we believe that the risk-reward at the current Akzo share price is not unattractive.

**Valuation:** Based on SOTP peer valuation of Akzo we conservatively estimated base case standalone value of €73 per share.

- We estimate that Akzo could be worth €80 to €85 per share in a spin-off scenario.
  - However, the holding period for Akzo unlocking further value to its business would take time and would imply a longer holding period.

## Key data

### Deal Details

Confirmation of offer	<a href="#">9 March 2017</a>
Offer terms	1 AKZA NA = €61.50 + 0.357 PPG US.
AKZA Incorporation	The Netherlands
PPG Incorporation	United States
AKZA Board Recommendation	No.
Synergies	PPG's revised proposal reflects annual run rate synergies of at least \$750 million (equivalent to <b>5.9% of AKZA's cost base</b> ), which could be achieved from a combination of the two companies. A substantial portion of these synergies relate to raw material purchasing, supply-chain management and optimizing distribution networks based upon PPG's experience in acquiring AkzoNobel's North American Decorative Coatings business.  <b>NPV of cost savings:</b> The indicated annual cost savings of €750m are equivalent to <b>NPV of €19.3 per AKZA share</b> assuming: <ul style="list-style-type: none"> <li>■ Annual cost savings of €750m;</li> <li>■ Capitalization at 10x;</li> <li>■ Tax rate at 25%.</li> </ul>

### Dividends

**AKZA dvd:** AKZA's total dividend proposed for 2016 is up 6.5% at €1.65 per share. The last dvd pd for AKZA's final dvd of €1.28 per share was April 27, 2017.

- AKZA's "dividend policy remain to pay a stable to rising dividend."

#### AKZA dividends

##### Dividends € per share



Source: AKZA

**PPG dvd:** PPG has been paying quarterly dividends of \$0.40 per share. PPG "remains committed to sustainable dividend increases as part of our capital allocation strategy."

**DVD differential:** Based on annual AKZA dividends of €1.65 per share and annual PPG dvd of \$1.60 per share, we estimate a dvd differential of €1.025 per AKZA share in favor of AKZA shareholders at the current exchange rate.

### AKZA stichting

- **AKZA share classes**

AKZA has three classes of shares: common shares, cumulative preferred shares and priority shares. Common shares are traded on the Euronext Amsterdam stock exchange.

  - On December 31, 2016, a total of 252,176,412 common shares and 48 priority shares had been issued.
- **Priority shares**

**48 priority shares** have been issued and are held by **Stichting Akzo Nobel (the Foundation)**.

  - Priority shares, and the special rights attached to such shares, were introduced in AkzoNobel's Articles of Association in 1927 and have remained unchanged ever since.
- **Shares and votes**

Each common share and each preferred share shall entitle its holder to one vote and **each priority share to two hundred votes**.

  - CBR comment: assuming 48 priority shares, Stichting has 9,600 votes altogether.
    - As at Dec 31, 2016 there were 252,176,412 AKZA common shares (equivalent to 252,176,412 AKZA votes) outstanding.
- **Board**

The board of the Foundation consists of four members, being the members of the AkzoNobel Supervisory Board who are not members of the Audit Committee.
- **Binding nominations to the Board of Management and Supervisory Board**
  - Supervisory board: Appointment shall be made from a binding list of at least two nominees for each vacancy to be filled, such list to be drawn up by the meeting of holders of priority shares within three

months of the date that the Board of Management shall by registered letter have invited the holders of priority shares to do so.

- If the General Meeting of Shareholders has not appointed a person on the basis of a nomination referred to in paragraph 5 and no other person has been appointed with due observance of these Articles, a second General Meeting of Shareholders shall be convened within three months after the date of the original General Meeting of Shareholders.
- The General Meeting of Shareholders can only adopt a resolution to remove a member of the Supervisory Board from office by a two-thirds majority of the votes cast, in the event that less than half of the issued capital is represented, unless the Supervisory Board itself proposes the removal
- Board of Management: Appointment shall be made from a binding list of at least two nominees for each vacancy to be filled, such list to be drawn up by the meeting of holders of priority shares within three months of the date that the Board of Management shall by registered letter have invited the holders of priority shares to do so.
  - The General Meeting of Shareholders can only adopt a resolution to remove a member of the Board of Management from office by a two-thirds majority of the votes cast, in the event that less than half the issued capital is represented, unless the Supervisory Board itself proposes the removal.
  - *“In relation to the right of the Meeting of Holders of Priority Shares to make binding nominations for appointments to the Board of Management and the Supervisory Board, the Foundation Akzo Nobel has confirmed that it intends to make use of such rights in exceptional circumstances only.”*
    - *“These circumstances include situations where, in the opinion of the Board of the Foundation, the continuity of the company’s management and policies is at stake. This may be the case if a public bid for the common shares of the company has been announced, or has been made, or the justified expectation exists that such a bid will be made, without any agreement having been reached in relation to such a bid with the company.”*
    - *“In the event of a hostile takeover bid, or other action which the Board of Management and Supervisory Board consider to be adverse to the company’s interests, the two Boards reserve the right to use all available powers (including the right to invoke a response time in accordance with provisions IV.4.4 and II.1.9 of the Code), while taking into account the relevant interests of the company and its affiliate enterprise and stakeholders.”*
- Approval of any amendment to the
  - A proposal to amend the Articles shall require the prior approval of the meeting of holders of priority shares.
    - The General Meeting of Shareholders may only resolve upon an amendment of the Articles which changes the special rights enjoyed by holders of priority shares if such change has been approved by a meeting of holders of priority shares. A resolution to give such approval must be adopted by a majority of at least three-fourths of the outstanding priority shares.

## Takeover defenses

- Board duties
 

Directors must act for the benefit of the company and its business, strategy and mission, taking into account the interests of all stakeholders, such as shareholders, creditors, employees, customers, suppliers, relevant patient populations and communities in which AKZA operates, and the importance of the sustainable success of the company’s business. Directors may not engage in self-dealing, take actions that are devoid of any business rationale or violate a company’s governing documents.
- Shareholder meeting by shareholders
 

Dutch law provides that one or more shareholders representing at least one-tenth of AKZA’s issued share capital may request the Dutch courts to order that a General Meeting be held and may, on their application, be authorized by the court to convene a General Meeting.

  - The court will disallow the application if the applicants have not previously requested the board to convene a General Meeting and the board has taken the necessary steps so that the General Meeting could be held within six weeks after the request.
- Removal of directors
 

Under Dutch law, Directors may be suspended or removed by the General Meeting, with or without cause, at any time.

  - Under AKZA’s Articles of Association, the “members of the Supervisory Board shall be appointed to and removed from office by the General Meeting of Shareholders.”
  - Under AKZA’s Articles of Association, the “members of the Board of Management shall be appointed to and removed from office by the General Meeting of Shareholders”
- Shareholder vote requirements for business restructurings
 

Under Dutch law, resolutions of a company’s board of directors regarding a significant change in the identity or nature of the company or its business must be approved at a General Meeting.

  - Such resolutions include in any event the transfer of the business or a substantial part thereof, entering into or terminating a long-lasting cooperation agreement with a third party, and the **sale or purchase of a**

company or a stake in a company with a value of one-third of the assets of the company (according to the most recently adopted annual accounts plus the explanatory notes to that balance sheet).

#### ■ Shut Up Prohibition

If the potential offeror announces that it has no intention of making a public offer, the potential offeror and any person(s) acting in concert with it are prevented from announcing or making a public offer for the target company (the “Shut Up Prohibition”) for a period of six months following such announcement. If the potential offeror does not comply with the AFM order to clarify its intentions, the Shut Up Prohibition applies for a period of nine months, commencing six weeks after the potential offeror received such an order from the AFM.

- The six month Shut Up Prohibition also applies to any (potential) offeror who has announced its intention to make or has made an offer, but ultimately decides not to pursue the offer. For example, this would apply where a potential offeror has announced its intention to make an offer and subsequently decides not to submit an offer document to the AFM

#### ■ End of Shut Up Prohibition

The Shut Up Prohibition will no longer apply if:

- an independent third party announces a public offer for the target company; or
- the AFM grants dispensation from the Shut Up Prohibition. The AFM can do so if the circumstances have changed significantly (for example, when the target company consents to the Shut Up Prohibition no longer being applicable)

### Next steps

- Amsterdam Enterprise Chamber hearing 22 May 2017
- Deadline for PPG submitting offer memorandum to AFM 1 June 2017

Key AKZA shareholders	%	Key PPG shareholders	%
■ Blackrock	3.8%	Vanguard	7.4%
■ Sun Life Financial	3.7%	Sun Life Financial	7.2%
■ Elliott	3.2%	Blackrock	5.8%
■ Dodge & Cox	2.9%	State Street Corp	4.9%
■ Norges Bank	2.9%	FMR	3.7%
■ Franklin Resources	2.3%	Clearbridge	1.9%
■ Vanguard	2.3%	JPMorgan	1.6%
■ Capital Group	1.4%	Boston Partners	1.2%
■ BNP Paribas	1.2%	Wellington Mgt	1.2%
■ Fiduciary Mgt	1.0%	BNY Mellon	1.2%
■ Others	75.3%	Others	63.9%

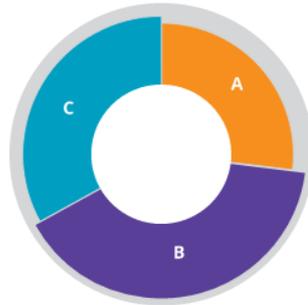
## Description of the companies

### AkzoNobel

#### AkzoNobel at a Glance

- It's a global paints and coatings company and producer of specialty chemicals.
- It has three business divisions:
  - **Decorative Paints**
  - **Performance Coatings and**
  - **Specialty Chemicals**

#### Revenue breakdown by Business Area in %

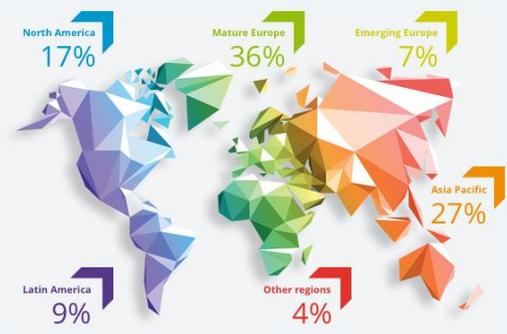


A Decorative Paints	27
B Performance Coatings	40
C Specialty Chemicals	33

Source: AkzoNobel, CBR

**€14.2 billion revenue**  
**€1,502 million EBIT**  
**€3.87 earnings per share**  
**80+ countries**  
**46,000 employees**

#### Key regions (by 2016 revenue)



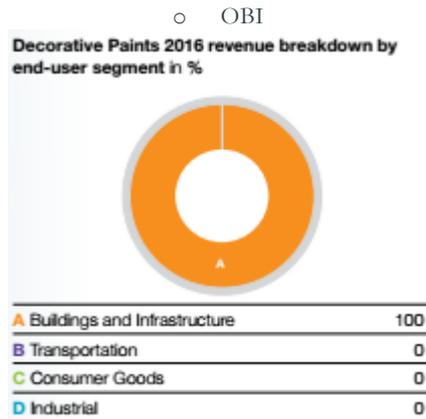
Source: AkzoNobel, CBR

#### Decorative Paints

##### Overview

It supplies a large variety of products, including paints, lacquers and varnishes.

- Decorative Paints represents 27% of the group revenue. Decorative paints are primarily used in maintenance, renovation & repair and new build projects but Akzo drives the majority of its sales (c.80%) from renovation, maintenance and improvement (RMI).
- RMI segment is less cyclical than new build, but also with a lower over the cycle growth trend.
  - Key raw materials for the division include binders/resins, titanium dioxide and packaging materials with titanium dioxide alone accounting for 20% of the total raw material spend.
  - Decorative paints in particular has been impacted by weak construction and housing markets in Europe over the past decade, although more recently the market has been showing some nascent signs of improvement.
- The company has strong global brands:
  - Coral
  - Dulux
  - Flexa
  - Hammerite
  - Sadolin and
  - Sikkens
- Some customers:
  - B&Q
  - Leroy Merlin and



Source: AkzoNobel, CBR

### Market Position Overall

AkzoNobel is a clear market leader in Europe and Latin America.

- The company holds a #2 position in Asia (including China) and Middle East.
  - Post divestment of North American Decorative Paints to PPG in 2013, the company does not have decorative coatings activities in this region.

### Market Position - EMEA

Decorative Paints has a strong focus on Europe, with 46% of sales from developed Europe but a slightly bigger exposure to higher growth emerging markets with 54% of sales and 57% of EBITDA from these regions.

- The size of Decorative Paints market in EMEA is estimated at €12bn by AkzoNobel with the company the market leader in EMEA with approximately 19% market share, more than double that of the nearest competitor.
  - However, the market is still fragmented (barring UK, France and Germany where the top three players account for more than 40% of the market) with close to 60% comprising small national/regional players implying further growth opportunities for leading players.
    - **Main competitors in Europe:** PPG, DAW, Tikkurila, Juton, Materis and Sherwin-Williams

### Market Position - Emerging Markets

Within Emerging Markets, Asia accounts for 28% of sales, followed by Latam (14%), Emerging Europe (8%) and the Rest of World (4%).

- While Decorative Paints has been weak in Western Europe the past few years, Akzo has continued to do well in Eastern/Emerging Europe, especially Turkey and Russia.
- The group has a strong position in emerging markets such as China, Indonesia, Vietnam, Brazil, Argentina, Russia and Turkey where per capita paint consumption is much lower than developed countries in Europe and US.
  - The company generates 54% of its Decorative paints sales from emerging markets. This is a higher proportion compared with global competitors as competition in emerging markets comes largely from regional or national players.
    - **LatAm:** Akzo has a strong position in Latin America albeit a difficult market currently. The company has strong presence in Brazil, Argentina and Uruguay. Key Brands in the region includes Coral, Alba and Inca. In Brazil, the company has #2 position, behind BASF.
      - **Main competitor in LatAm:** BASF
    - **China:** Akzo Holds #2 position in Decorative Paints in China. The company operates five factories with four in China and one in Taiwan with leading brands like Dulux and Levis. We estimate the market for Decorative Coatings in China at E4.4bn in
      - **Main competitor in Asia Pacific:** Nippon, TOA, Asian Paints, Berger, Nerolac, Kansai



Source: AkzoNobel, CBR

### Construction Outlook

European construction markets have been weak for the past decade with declines in residential as well as non-residential construction. However since 2013 the market has shown signs of improvement, albeit slow and gradual.

- Outlook for building and construction looks positive:
  - Strong growth is forecast in both maintenance and repair and new build across all the key regions.
  - In both segments, strongest growth is expected from India, followed by China, North America and Europe.
  - The expected growth rates in Europe are encouraging given that this is the largest market for Akzo (46% of Decorative Paints sales) and now showing signs of improvement.

### Decorative Paints Growth Rate

The growth rate for Decorative Paints varies depending on geography.

- Western Europe and US are mature markets with a high spend on decorative coatings per household already, giving relatively low growth rates of 2-3% p.a.
- In emerging economies growth rates are more attractive, potentially double digit because of higher economic growth in general and also increasing penetration of decorative coatings with spend per household below that in the developed markets of Western Europe and the US.

### Performance Coatings

#### Overview

It's a supplier of performance coatings.

- Decorative Paints represents 27% of the group revenue.
- Its products are used to protect and enhance everything from ships, cars, aircraft, yachts and architectural components (structural steel, building products, flooring) to consumer goods (mobile devices, appliances, beverage cans, furniture) and oil and gas facilities.
- It has a strong focus on emerging markets with more than 50% of sales coming from these regions.
- It consists of three business units:
  - **Automotive and Specialty Coatings**
  - **Marine and Protective Coatings**
  - **Industrial and Powder Coatings**
- Brands include
  - Awlgrip
  - International
  - Interpon and
  - Sikkens
- Some customers:
  - Airbus
  - Boeing
  - Bosch
  - Dell
  - IKEA
  - Mercedes-Benz
  - Philips
  - Samsung
  - Shell and
  - Whirlpool

Performance Coatings 2016 revenue breakdown  
by end-user segment in %



A Buildings and Infrastructure	25
B Transportation	39
C Consumer Goods	21
D Industrial	15

Source: AkzoNobel, CBR

### Market Position Overall

AkzoNobel has strong positions across all Performance Coating segments.

- The company is a global leader in protective, powder, marine, coil and specialty plastics.

	Market size € billion, 2016	Market position by value, 2016	Market growth %, 2016-20
Powder	6.2	1	↗
Marine	2.6	1	↔
Protective	6.2	1	↔
Coil	2.9	1	↗
Specialty Plastics	2.8	1	↗
Aerospace	0.6	2	↗
Packaging	2.2	2	↔
Wood Finishes	6.6	2	↔
Vehicle Refinish	6.5	3	↔
			↗ 2-3%*

International

Interpon  
POWDER COATINGS

WANDA

Clear aim to grow  
faster than relevant  
markets: 4%

\*Total market growth (revenue weighted)

SOURCE: Orr & Boss base data for segment sizes, excluding <€19 billion segments where we are not present

### Industrial and Powder Coatings – 48% of Performance Coatings Sales

Industrial coatings comprises, packaging coatings, coil & extrusion coatings, powder coatings, aerospace coatings, specialty finishes, yacht coatings, vehicle refinishes and wood coatings.

- These activities are mostly focused on developed markets with 43% in EMEA, 32% in Americas with Asia Pacific at 25% becoming increasingly important.
- Key customers in these markets include
  - ArcelorMittal, Armstrong, Ardagh, Bosch, Lacquer Craft Furniture, Masterbrand Cabinets Inc., Bluescope Steel, Philips, Ball/Rexam, Whirlpool, IKEA, Crown, Tata, and Mercedes-Benz.
- Main competitors include
  - Valspar, Axalta, PPG, Beckers, and Nippon Paint.
- Leading brands in this segment include
  - Sikkens, Interpon, Cromadex and Resicoat.
  - **Powder coatings:**
    - The end markets for these coatings include architectural (extrusions, curtain walls, windows), furniture, appliances (washing machines, fridges, dryers, air conditioning units), automotive (alloys wheels, underbody/hood) and general industry (pipes, fences, agriculture) and IT (desktops, laptops, telecommunications, ATMs).
    - **Market Position:** AkzoNobel has No1 positions in Europe, Asia, the Americas and Africa and the No 2 position in the Middle East (with an estimated global market share of 18%).
    - **Key customers for these coatings include:** Mercedes-Benz, Tata, Bosch, Whirlpool and Philips
    - **Main competitors in powder coatings include:** Axalta, Protech, Tiger, Valspar (USA), Inver (Europe), Nippon (Asia) and Juton (Eastern Europe and Middle East)
    - **Leading brands in this segment include:** Interpon, Cromadex and Resicot

- **Wood coatings:**
  - It focuses on wood finishes, adhesives and board resins.
  - **Key customers include:** IKEA, Masco, Jeld-Wen, Stora Enso Timber, Tarkett and Lacquercraft.
  - **The main competitors include:** Valspar, PPG, Sherwin-Williams, Becker, Dynea, Jowat and a number of local/regional players.
- **Coil and extrusion coatings:**
  - **Market Position:** AkzoNobel has a global #1 position (with 25% market share including the acquisition of BASF's industrial coatings business) in coil coatings with a good presence in Asia and China.
  - **Other competitors in this market include:** Valspar/Sherwin Williams, Beckers and PPG
- **Packaging coatings:**
  - **Market Position:** AkzoNobel has a global #2 position in Packaging coatings (23% market share) with Valspar no 1 with 35% market share.

#### Marine and Protective Coatings – 26% of Performance Coatings Sales

Marine & Protective coatings is a small volume but high value business.

- **Akzo brands:** International and Devoe
- **Sales:** 50% of marine and protective coatings sales are from Asia Pacific, 28% from EMEA and the remaining 22% from Americas with the split between Marine and Protective Coatings being 45:55.
- **Market Position:** Akzo is the market leader in marine coatings.
- **Key Competitors:** Juton, Hempel, Chugoku and PPG
- **Key Customers:** APM Maersk, Bechtel, Brunswik, Shell, ExxonMobil, GE, Hapag Llyod, Hyundai Heavy Industries, Rio Tinto, Sandvik and Siemens.

- **Protective coatings:**
  - The protective coatings market is largely dependent on GDP and infrastructure spend.
  - **Market Position:** AkzoNobel has global #1 position
  - **Key Competitors:** Hempel, PPG, Juton, Sherwin-Williams and RPM
  - **Key Customers:** Shell, ExxonMobil, Bechtel, GE & Siemens, Rio Tinto and Hyundai Heavy Industries
  - **Akzo's Protective coatings brands:** Chartek, International and Interchar.

#### Automotive and Specialty Coatings – 26% of Performance Coatings Sales

**Market Position:** AkzoNobel has global #3/4 position in Vehicle Refinish with Axalta holding the No1 in this market (25% market share) followed by PPG (20% market share).

- **Yacht Coatings:**
  - **Market Position:** AkzoNobel holds No1 positions in this market.
  - **Key competitors include:** Mankiewicz, RPM (Petit), Juton, and Hempel
  - **Key customers include:** Brunswick, West Marine, Lurssen Yacht, Sunseeker and Beneteau

Specialty	Overview
Chemicals	<p>It produces specialty chemicals for markets such as surfactants, polymer chemistry, pulp processing and chlor-alkali.</p> <ul style="list-style-type: none"> <li>■ It consists of four business units: <ul style="list-style-type: none"> <li>○ <b>Functional Chemicals (including Ethylene and Sulfur Derivatives and Polymer Chemistry)</b></li> <li>○ <b>Industrial Chemicals</b></li> <li>○ <b>Pulp and Performance Chemicals</b></li> <li>○ <b>Surface Chemistry</b></li> </ul> </li> <li>■ Most businesses hold leadership positions in their local geographies or in their market segments. <ul style="list-style-type: none"> <li>○ This has led to good pricing power and reasonable margin stability.</li> <li>○ There is good exposure to emerging markets with 35% of divisional sales coming from these regions.</li> </ul> </li> </ul>

- EBITDA margins are higher than the group average due to strong market positions in niche markets conferring some degree of pricing power, operational efficiencies (such as centralized purchasing, sales force training) and innovation.

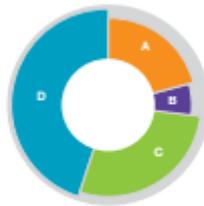
■ Brands include

- AkzoNobel
- Biostyle
- Dissolvine
- Ecosel
- Eka
- Expancel
- Jozo
- Kromasil and
- Levasil.

■ Some customers:

- BASF
- Bayer
- Dow
- GE
- Huntsman
- Momentive
- Monsanto
- P&G
- Shin-Etsu
- Stora Enso and
- Unilever.

**Specialty Chemicals 2016 revenue breakdown by end-user segment in %**



A Buildings and Infrastructure	21
B Transportation	6
C Consumer Goods	28
D Industrial	45

Source: AkzoNobel, CBR

**Functional Chemicals – 36% of Specialty Chemical Sales**

Products include chelates, cross-linking peroxides, thermoset chemicals and polymers additives, performance additives, ethylene amines, polysulphides, redispersible polymer powder, salt specialties and sulfur derivatives which are used in everyday items such as detergents, vinyl, automotive parts, agricultural products, pharmaceutical products, food products, wallpaper adhesives, plastic bags and cosmetics.

- By region, the majority of sales come from developed markets (EMEA-38%, Americas-34%) with an increasing presence in Asia Pacific (28%).
  - **Key customers** in these markets include Air Products, Fenzi, Proctor and Gamble, FMC, Yara, Formosa, Sabic and Henkel.
  - **Leading brands** include Akucell, Elotex, Dissolvine and Thioplast.

**Industrial Chemicals – 24% of Specialty Chemical Sales**

Industrial Chemicals produces a wide range of chemicals including chlorine, caustic, chloromethanes, monochloroacetic acid, vacuum salt used in manufacturing of vehicles, glass, pharmaceutical, textiles, construction, food, pulp & paper, plastics and disinfectants.

- The majority of sales are from EMEA (89%) with Americas and Asia only 5% and 6% respectively.
  - **Competitors** include Dow, Occidental, Formosa, Solvay, Olin, China Salt Ind, PPG, Bayer, Ineos, Yantai Wanhua and Shanghai Tian Yuan.
  - **Customers** include Covestro, Huntsman and Shin-Etsu.

- **Market Position:** Akzo holds the market leading position globally in monochloroacetic acid and the market leading position in caustic lye (merchant), chlorine (merchant), chloromethanes (merchant), and salt (chemical transformation) in Europe.

#### Pulp & Performance Chemicals – 19% of Specialty Chemical Sales

Pulp & Performance chemicals produce bleaching chemicals used in pulp manufacturing.

- The segment also produces colloidal silica and separation products (e.g. kromasil – used in purifying of pharmaceuticals), specialty products like expandable microspheres and fine chemicals.
- Growth rates on average are in the range of 1-2% pa.
  - The company drives 49% of its pulp and performance chemicals sales from America, 37% from EMEA and the remaining 14% from Asia Pacific.
    - **Market Position:** AkzoNobel has market leading positions in bleaching chemicals and colloidal silica dispersions.
    - **Key brands** include Eka, Expancel, Levasil and Kromasil.
    - **Competitors** include Dupont, BASF, Ecolab, Evonik and Kemira.
    - **Key customers** include Cabot, Kemira, Diam, Sanofi, Domtar, Fibria, Fujimi, Georgia Pacific, StoraEnso, SCA, and Suzano.

#### Surface Chemistry – 21% of Specialty Chemical Sales

Surface chemistry produces additives for adjuvants, dispersants, solvents and polymers used in agrochemicals, active ingredients for fabric care, hard surface cleaning, disinfectants, carpet cleaners, ingredients for hairspray, hair styling, skin care, sun care and cleansing, functional additives for oil field drilling, fuel and lubricant additives and water conditioning, process aids for mining, textiles, coatings and chemical intermediates.

- Akzo's **main customers** include Baker Hughes, BYK Additives, Ferrexpo Poltava, Lubrizol, Monsanto and Procter & Gamble.
  - **Market Position:** The company has strong market positions in most surfactants and specialty polymer end markets it operates. The company holds global #1 position in industrial and agrochemical applications and global #3 position in home and personal care surfactants.

## Valuation

### Part 3: Valuation

#### PEER VALUATION

Based on SOTP peer valuation of Akzo we conservatively estimated base case standalone value of €73 per share.

- Akzo Paints & Coatings has low margins relative to its peers.
  - However, we believe Paints & Coatings margins could be improved which would result in higher value.
    - In this case Akzo could have a standalone value range of €80 - €85 per share.
- EBITDA multiple of 10x (due to lower margins relative to peers) is conservatively assigned to value Paints & Coatings business.
  - Average EBITDA multiple Akzo's Paints & Coatings peers: 12.4x
  - Average EBITDA multiple Akzo's Paints & Coatings non-US peers: 12.8x
- EBITDA multiple of 7x (in line with Solvay) is conservatively assigned to value Chemicals business.
  - Average EBITDA multiple Akzo's Chemicals peers: 9.0x
  - Average EBITDA multiple Akzo's Chemicals European peers: 7.5x

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<b>Paints &amp; Coatings</b>	
EBITDA (2017 Est.)	1.45
EBITDA Multiple (x)	10.00
EV	14.48
Net Debt	0.83
Eq. Value	13.65
Outstanding Shares (bn)	0.25
FV/share	54

€ bn	
<b>Chemicals</b>	
EBITDA (2017 Est.)	0.73
EBITDA Multiple (x)	7.00
EV	5.12
Net Debt	0.28
Eq. Value	4.84
Outstanding Shares (bn)	0.25
FV/share	19

<b>Fair Value (Paints/Coatings + Chemicals)</b>	<b>73</b>
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Source: CBR, Bloomberg

## Sensitivity table: peer valuation Fair Value (Paints &amp; Coatings and Chemicals - EBITDA multiple)

Chemicals multiple	Paints & Coatings multiple					
	8	9	10	11	12	
5	56	62	67	73	79	
6	59	65	70	76	82	
7	62	67	73	79	85	
8	65	70	76	82	88	
9	68	73	79	85	90	

Source: CBR, Bloomberg

## Assumptions:

- Net Debt based on EBITDA.
- Both the businesses (Paints & Coatings and Chemicals) will have the same number of outstanding shares.

## Peers (Paints &amp; Coatings)

Company	Ticker	FY1 EV/EBITDA	EBITDA CAGR (E17-E20)	EBITDA Margin (E17)
Akzo Paints & Coatings	-	-	-4.2%	~13.9%
PPG	PPG US	11.3x	4.0%	18.0%
Sherwin-Williams Co.	SHW US	14.3x	6.8%	17.5%
RPM International Inc.	RPM US	12.9x	8.6%	13.7%
Axalta Coating Systems.	AXTA US	11.0x	5.2%	22.9%
<b>Average EV/EBITDA</b>		<b>12.4x</b>		

Source: Bloomberg, CBR

## Peers (Paints &amp; Coatings) – Non US

Company	Ticker	FY1 EV/EBITDA	EBITDA CAGR (E17-E20)	EBITDA Margin (E17)
Akzo Paints & Coatings	-	-	-4.2%	~13.9%
Kansai Paint	4613 JT	14.7x	13.8%	14.3%
Tikkurila	TIK1V FH	11.0x	5.4%	12.8%
Nippon Paint	4612 JT	12.9x	9.2%	15.2%
<b>Average EV/EBITDA</b>		<b>12.8x</b>		

Source: Bloomberg, CBR

## Peers (Chemicals)

Company	Ticker	FY1 EV/EBITDA	EBITDA CAGR (E17-E20)	EBITDA Margin (E17)
Akzo Chemicals	-	-	-3.4%	~19.4%
Dow Chemical Co	DOW US	8.6x	7.3%	20.8%
BASF	BAS GY	8.6x	5.0%	18.6%
Solvay	SOLB BB	7.0x	3.7%	21.0%
Du Pont	DD US	12.0x	6.0%	23.1%
<b>Average EV/EBITDA</b>		<b>9.0x</b>		

Source: Bloomberg, CBR

## Peers (Chemicals) - European

Company	Ticker	FY1 EV/EBITDA	EBITDA CAGR (E17-E20)	EBITDA Margin (E17)
Akzo Chemicals	-	-	-3.4%	~19.4%
Clariant	CLN SW	9.0x	5.2%	15.0%
BASF	BAS GY	8.6x	5.0%	18.6%
Evonik	EVK GY	5.8x	5.4%	16.2%
Solvay	SOLB BB	7.0x	3.7%	21.0%
Kemira	KEMIRA FH	7.3x	5.8%	12.7%
<b>Average EV/EBITDA</b>		<b>7.5x</b>		

Source: Bloomberg, CBR

## Valuation based on different scenarios

Valuation Scenarios	Valuation	Approx. Per Share Value Range Full Akzo
<b>Scenario 1:</b> PPG fully acquires Akzo	We believe in this case Akzo could be valued at a 30%-35% premium (based on ROIC below) to <b>estimated base case standalone value of ~€73 per share</b> . Although, if bidder sees potential for additional synergies then the premium to standalone value would be higher.	€95 - €100
<b>Scenario 2:</b> PPG doesn't acquire Akzo and Chemicals carve out	We believe in this case Akzo should be valued at standalone value of individual businesses (Paints & Coatings and Chemicals). - <b>Paints &amp; Coatings:</b> Standalone value based on peer valuation - ~€54 per share - <b>Chemicals:</b> Standalone value based on peer valuation - ~€19 per share However, we believe Chemicals spin will trade at a premium as it has decent margins and it could be a potential acquisition target. <b>Chemicals Standalone value</b> based on peer valuation plus premium - ~€25 per share	€80 - €85
<b>Scenario 3:</b> PPG doesn't acquire Akzo and Chemicals sold to 3rd party	We believe in this case Chemicals could be conservatively valued at a <b>25%-30% premium (based on precedent transactions below) to estimated standalone value of ~€19 per share</b> .	€80 - €85

Source: CBR

## Scenario 1: PPG fully acquires Akzo

- We believe in this case Akzo could be valued at a 30%-35% premium (based on ROIC below) to estimated base case standalone value of ~€73 per share. Although, if bidder sees potential for additional synergies then the premium to standalone value would be higher.
  - **Akzo per share value range:** €95 - €100

- **ROIC:** We assumed bid price at €97, net debt as per consensus, BEST operating profit for FY1, FY2 and FY3, synergies of €750 mn, tax rate of 20%, WACC of 8%

Deal value (€m)	2017	2018	2019
Bid price (€/sh.)	97.00	97.00	97.00
O/S (m)	253	253	253
<b>Market value (€m)</b>	<b>24500</b>	<b>24500</b>	<b>24500</b>
Net Debt (€m)	1329	1329	1329
<b>Deal value (€m)</b>	<b>25829</b>	<b>25829</b>	<b>25829</b>
<b>ROIC calculation</b>			
<b>BEST Operating Profit</b>	<b>1608</b>	<b>1703</b>	<b>1844</b>
Synergies	750	750	750
<b>Adj. Operating Profit</b>	<b>2358</b>	<b>2453</b>	<b>2594</b>
Tax (20%)	472	491	519
<b>NOPAT</b>	<b>1886</b>	<b>1962</b>	<b>2075</b>
<b>ROIC</b>	<b>7.3%</b>	<b>7.6%</b>	<b>8.0%</b>
<b>WACC</b>	<b>8.0%</b>	<b>8.0%</b>	<b>8.0%</b>

## ROIC Sensitivity Tables

		Bid price (€/share)				
		87.00	92.00	97.00	102.00	107.00
2019 Op. Profit (€m)	1644.0	8.2%	7.8%	7.4%	7.1%	6.8%
	1744.0	8.6%	8.1%	7.7%	7.4%	7.0%
	1844.0	8.9%	8.4%	8.0%	7.7%	7.3%
	1944.0	9.2%	8.8%	8.3%	8.0%	7.6%
	2044.0	9.6%	9.1%	8.7%	8.3%	7.9%
		Bid price (€/share)				
		87.00	92.00	97.00	102.00	107.00
Ann. Cost Syn. (€m)	550.0	8.2%	7.8%	7.4%	7.1%	6.8%
	650.0	8.6%	8.1%	7.7%	7.4%	7.0%
	750.0	8.9%	8.4%	8.0%	7.7%	7.3%
	850.0	9.2%	8.8%	8.3%	8.0%	7.6%
	950.0	9.6%	9.1%	8.7%	8.3%	7.9%

Source: CBR

- **EPS Accretion:**

Earnings Accretion / Dilution		FY1	FY2	FY3
million				
<b># of shares (m)</b>				
Target shares acquired (O/S)		253	253	253
Bidder (O/S)		257	257	257
<b>Bidder shares issued to target shareholders</b>		<b>90</b>	<b>90</b>	<b>90</b>
<b>Total Bidder shares post-merger</b>		<b>347</b>	<b>347</b>	<b>347</b>
<b>EPS</b>				
Target EPS		4.680	4.920	5.340
Bidder EPS		6.259	6.923	7.556
<b>MergedCo</b>		<b>8.040</b>	<b>8.707</b>	<b>9.481</b>
Annual synergies (\$m)		750	750	750
Tax rate		25%	25%	25%
% of synergies realised		0%	50%	100.0%
Annual synergies post tax (m)		-	281	563
Syn/share (post tax)		-	0.810	1.620
Interest cost (\$m)		480.00	480.00	480.00
Interest cost post tax (\$m)		360.00	360.00	360.00
<b>Interest cost per share</b>		<b>1.40</b>	<b>1.40</b>	<b>1.40</b>
<b>Adjusted MergedCo EPS</b>		<b>6.640</b>	<b>8.116</b>	<b>9.700</b>
<b>Earnings accretion/dilution</b>				
<b>Bidder</b>		<b>6.1%</b>	<b>17.2%</b>	<b>28.4%</b>
<b>Target</b>		<b>-49.4%</b>	<b>-41.1%</b>	<b>-35.2%</b>
<b>Shareholding</b>				
Target shareholding		26%	26%	26%
Bidder shareholding		74%	74%	74%

Source: CBR, Bloomberg

- **Precedent Transactions:**

## Paints &amp; Coatings

- The mean LTM EBITDA Multiple for the below selected transactions was approximately 11.0x.
  - However, Sherwin acquired Valspar at EV/EBITDA multiple of 15.2x (LTM).

- PPG's latest offer values Akzo at an implied EV/EBITDA multiple of 12.8x for 2016 (based on 2016 reported financials).

Date Announced	Target	Acquirer
Jun-14	Consortio Comex, S.A. de C.V.	PPG Industries, Inc.
Nov-12	Consortio Comex, S.A. de C.V.	The Sherwin-Williams Company
Oct-12	Cytec Coatings Resins	Advent International Corporation
Aug-12	DuPont Performance Coatings	The Carlyle Group
Aug-07	Imperial Chemical Industries PLC	Akzo Nobel N.V.
Jul-07	SigmaKalon Group	PPG Industries, Inc.
Feb-06	Materis SAS	Wendel Investissement
Oct-04	UCB Surface Specialties	Cytec Industries Inc.
Nov-00	Benjamin Moore & Co.	Berkshire Hathaway Inc.

Source: SEC Filing Valspar

**Scenario 2:** PPG doesn't acquire Akzo and Chemicals carve out

- We believe in this case Akzo could be valued at standalone value of individual businesses (Paints & Coatings and Chemicals).
  - **Paints & Coatings:** Standalone value based on peer valuation - ~€54 per share
  - **Chemicals:** Standalone value based on peer valuation - ~€19 per share
    - However, we believe Chemicals spin will trade at a premium as it has decent margins and it could be a potential acquisition target.
    - Standalone value based on peer valuation plus premium - ~€25 per share

○ Akzo per share value range: €80 - €85

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Paints & Coatings	
EBITDA (2017 Est.)	1.45
EBITDA Multiple (x)	10.00
EV	14.48
Net Debt	0.83
Eq. Value	13.65
Outstanding Shares (bn)	0.25
FV/share	54

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Chemicals	
EBITDA (2017 Est.)	0.73
EBITDA Multiple (x)	7.00
EV	5.12
Net Debt	0.28
Eq. Value	4.84
Outstanding Shares (bn)	0.25
FV/share	19
FV/share + 30% premium	25

Fair Value (Paints/Coatings + Chemicals) 79

Source: CBR, Bloomberg

**Scenario 3:** PPG doesn't acquire Akzo and Chemicals sold to 3<sup>rd</sup> party

- We believe in this case Chemicals could be conservatively valued at a 25%-30% premium (based on precedent transactions below) to estimated standalone value of ~€19 per share.
  - Akzo per share value range: €80 - €85

• Precedent transactions

Date Announced	Target	Acquirer	AV/LTM EBITDA	1-Day Premium
May 6, 2016	Air Products—Perf Materials	Evonik Industries	15.7x	N/A
September 28, 2015	Arizona Chemical Company	Kraton Performance Polymers	7.4x	N/A
June 1, 2015	OM Group	Apollo	10.7x	28.1%
September 11, 2014	Taminco	Eastman	9.5x	8.9%
July 15, 2014	Rockwood	Albemarle	15.9x	13.0%
June 4, 2014	Emerald Performance	American Securities	9.2x	N/A
March 10, 2014	Amcol	Minerals Technologies	11.1x	24.6%
October 10, 2013	MacDermid	Platform Acquisition Holdings	10.0x	N/A
November 7, 2012	Houghton International	Gulf Oil Corporation	7.9x	N/A
January 27, 2012	Solutia	Eastman	9.0x	41.7%
May 31, 2011	International Specialty Products	Ashland	8.9x	N/A
March 13, 2011	Lubrizol	Berkshire Hathaway	7.7x	28.0%
<b>Median</b>			<b>9.4x</b>	<b>26.3%</b>
<b>Mean</b>			<b>10.3x</b>	<b>24.1%</b>

Source: CBR, Bloomberg

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<b>Paints &amp; Coatings</b>	
EBITDA (2017 Est.)	1.45
EBITDA Multiple (x)	10.00
EV	14.48
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<b>Chemicals</b>	
EBITDA (2017 Est.)	0.73
EBITDA Multiple (x)	7.00
EV	5.12
Net Debt	0.28
Eq. Value	4.84
Outstanding Shares (bn)	0.25
FV/share	19
<b>FV/share + 30% premium</b>	<b>25</b>

<b>Fair Value (Paints/Coatings + Chemicals)</b>	<b>79</b>
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Source: CBR, Bloomberg

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