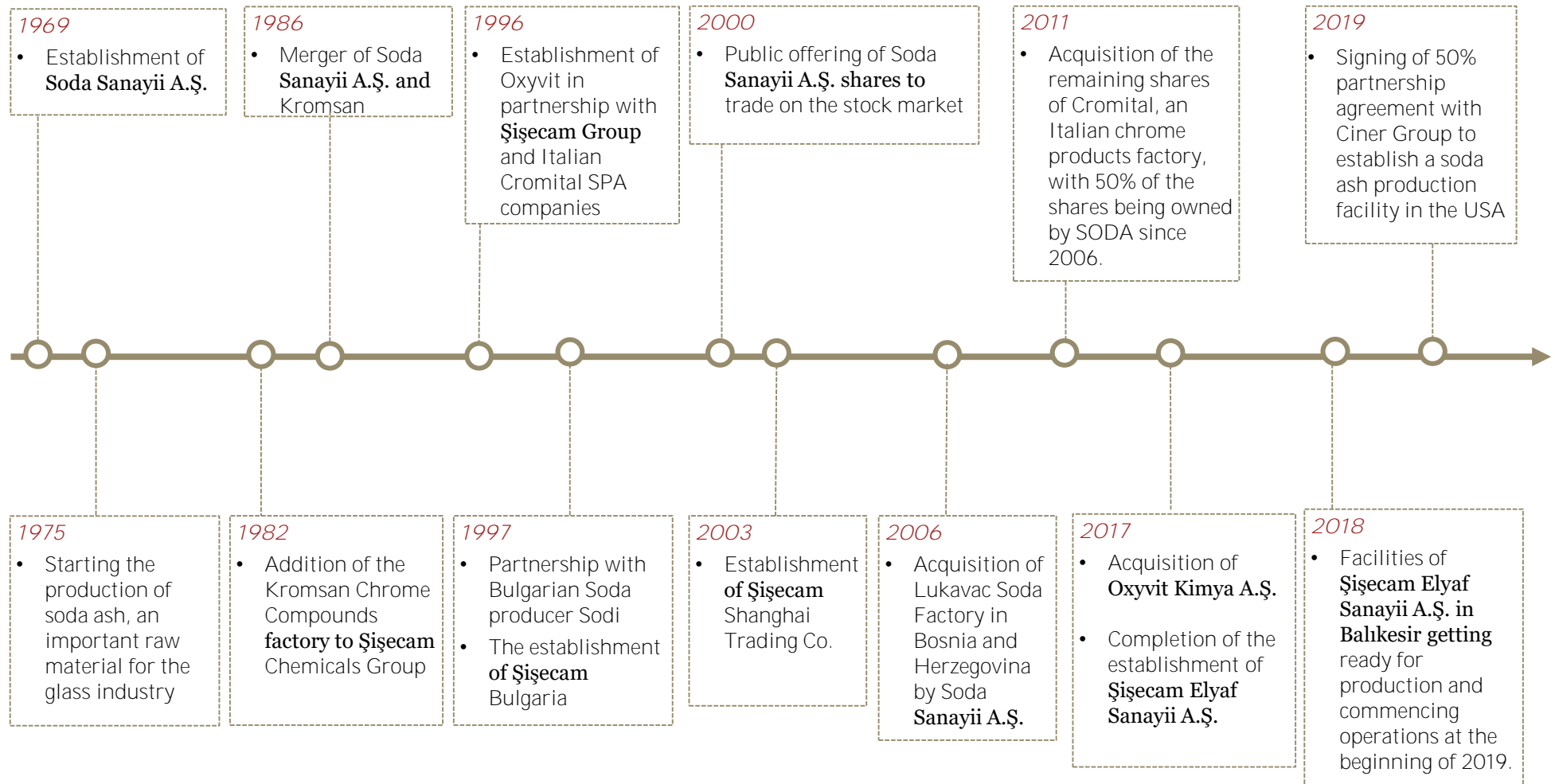


## SODA

### Important Historical Milestones



## SODA

### Fields of Activity and Products

*Soda comprises the largest business segment among chemicals group, with its products mostly being used in the flat glass, glass packaging and detergent sectors. Chrome, which represents the second largest business segment, has its products mainly used in leather, automotive and construction sectors. In addition to these, glass fiber, vitamin K3 and SMBS products supply various sectors as production inputs.*

#### Soda

- Heavy Soda: It is used in the production of glass, detergent, chemical industry and other sodium compounds.
- Light Soda: It is used in the production of detergent, chemical industry, soap, textile, paper, food and other sodium compounds.
- Sodium Bicarbonate: It is used in the fields of textile, detergent, chemical industry, water treatment and electrolytic coating as well as in the food and feed industries.
- Sodium Sulphate: It is used in the glass, paper and chemical industries, especially in detergents as well as dyestuff in the textile industry.

Capacity

2,4m

tons  
#4

in Europe

#8

in the  
world

#### Chrome Chemicals

- Sodium Bichromate: It is the main chemical used in the production of chromium chemicals. It is used in textile dyes, chrome pigments, pharmaceuticals, etc..
- Chromic Acid: It is used for the production of metal coating, wood protection etc..
- Leather Chemicals: Basic chromium sulfate (BCS) is used in leather tanning process.

Capacity  
(BCS)

127

thousand  
ton



The Biggest  
BCS  
producer

#### Glass Fiber

- Trimming: Trimming products are used in the automotive industry as engineering plastics.
- Multi-End Wick: Transparent plate, cold storage panels are used in the production of automotive, GRP pipes, acrylic bathtubs, rail systems, aircraft interior design parts.
- Single End Roving: It is used in pultritional and weaving processes, GRP pipes, tanks, profiles, wind plant wings and marine vehicles sectors.
- Felt: It is used in the interior of the tank, watercraft and automotive by molding method.

Capacity

70

thousand  
tons

#### Vitamin K3 ve SMBS

- Launched as a joint venture with Italian Cromital, Oxyvit produces high value-added Vitamin K3 and derivatives used in the feed industry and premix production, as well as sodium metabisulfite products used in the food and textile industries.
- Vitamin K3, which is important for the prevention of bleeding in farm animals, is one of the necessary vitamin premix for animal feed. It is added to the feeds of farm animals as veterinary medicine.

Europe's  
only  
Vitamin K3  
producer

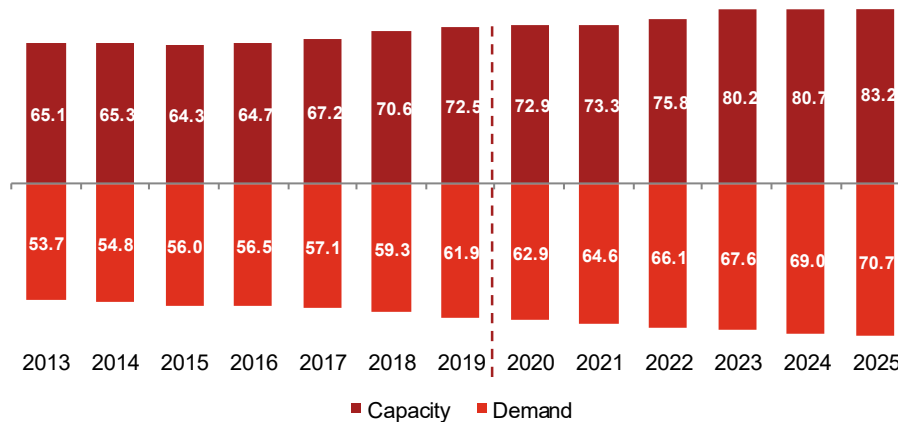


Source: Company Management

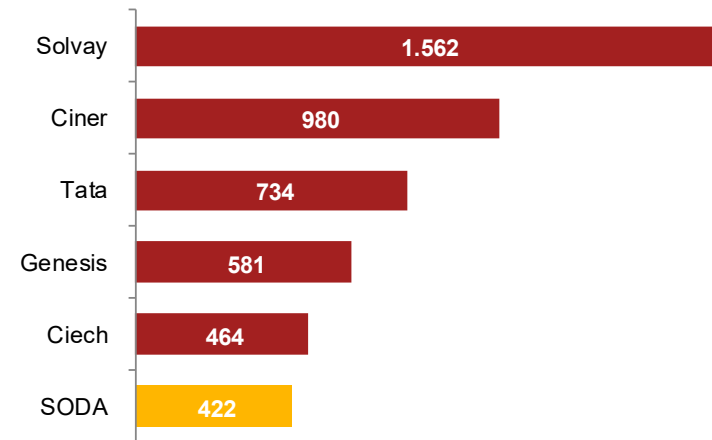
## Global Soda Market

The global soda sector and the industries that use soda run in parallel with economic, demographic, political and environmental developments, and the growth rate of soda chemicals in the world is approximately 2% per year. As of the end of 2019, Global soda sector has a production capacity of approximately 72.5 million tons, compared to 61.9 million tons of soda demand.

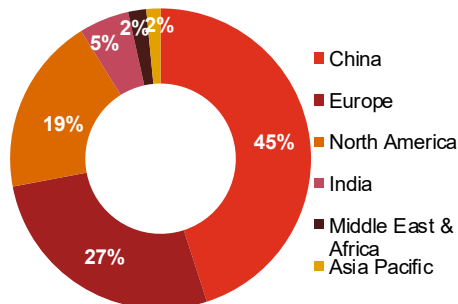
Global Soda Ash Capacity and Demand (m ton)



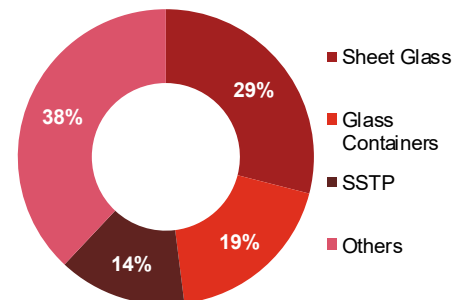
2018 Soda Revenues (m EUR)



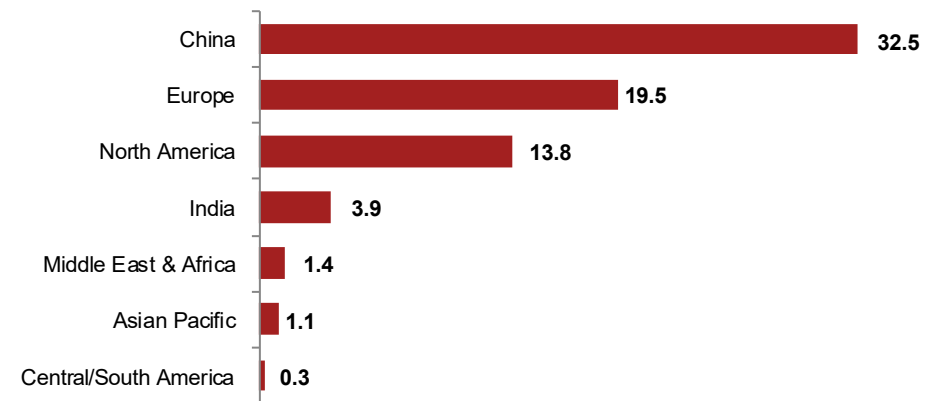
Regional Capacity Distribution, 2019



Industrial Distribution, 2019



Regional Production Capacity 2019 (m ton)



Source: Company Management

## Global and Regional Competitors

Operating in various different business lines under chemicals other than soda, Solvay and Tata have closed some of their facilities within the scope of capacity optimization in previous years. Ciner has become the second largest producer of soda and the largest producer of natural soda after the increase of its capacity. On the other hand, SODA is the 8th largest producer in the world with 2.4m ton capacity.

Companies	Solvay SA	Ciner Resources	Tata Chemicals	Genesis Alkali	Ciech S.A.	SODA*
2018 Revenues	EUR 1.562 m	EUR 980 m	EUR 734 m	EUR 581 m	EUR 464 m	EUR 422 m
EBIT Margin %	20%	31%	20%	22%	14%	27%
Share of Soda Business in Consolidated Income%	15%	100%	53%	23%	54%	60%
Production Capacity - 2019	7,9m ton	6,6m ton	4,4m ton	3,7m ton	2,5m ton	2,4m ton
Capacity Expansion Plans	1,1m tons soda – 300 k tons s.bicarbonate	1.1m tons soda – 2,7m tons new investment 1,35m tons USA natural soda ash investment	700 k tons soda – 35 k tons s.bicarbonate	750 k tons soda	50 k tons s.bicarbonate	140 k tons soda (MSF + SSL) 1,35m tons USA natural soda ash investment
Other Competitors	Tangshan Sanyou Chemical Industries, Shandong Jinjing Science and Technology Stock Co. Ltd., Chengdu Wintrue Holding Co. Ltd., GHCL Limited					

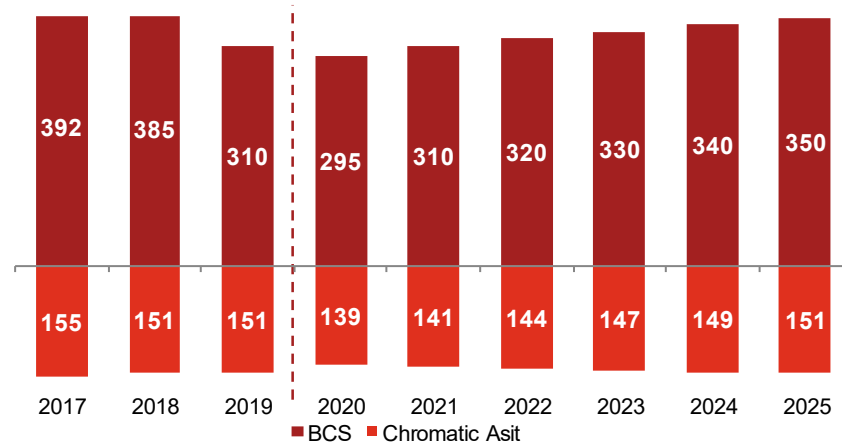
\* Figures represent soda business.

Source: Company Management

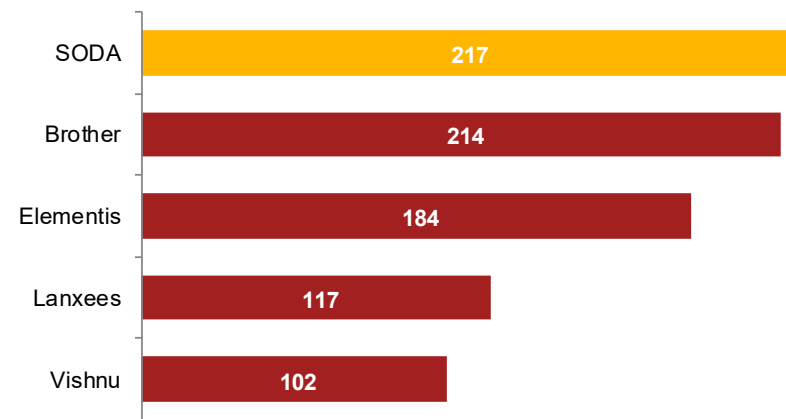
## Global Chrome Market

The global market demand for chrome products has been 310k tons and approximately 150k tons for basic chromium sulfate and chromic acid as of the end of 2019. China stands out as the biggest chrome chemicals producer and consumer in the global market.

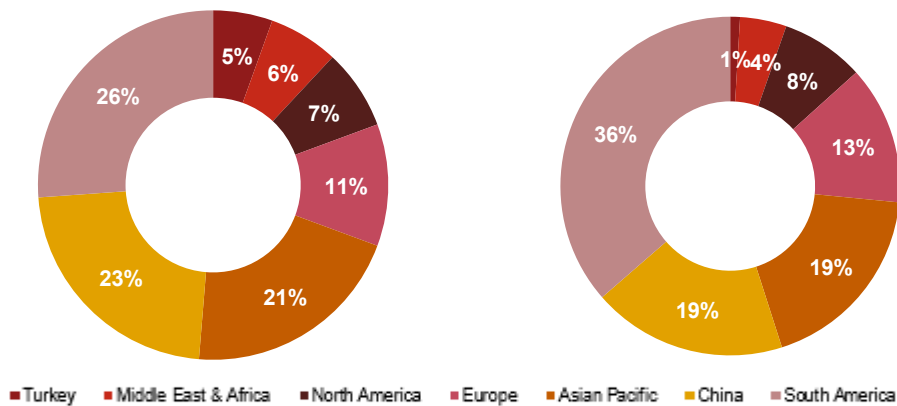
BCS and Chromic Acid Market Sizes (k tons)



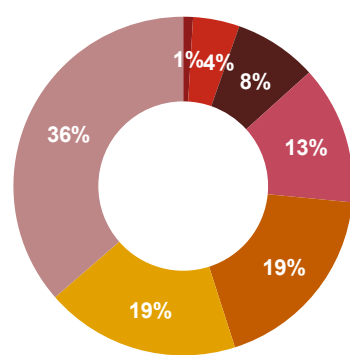
Chrome Revenue of Regional Competitors 2018 (m \$)



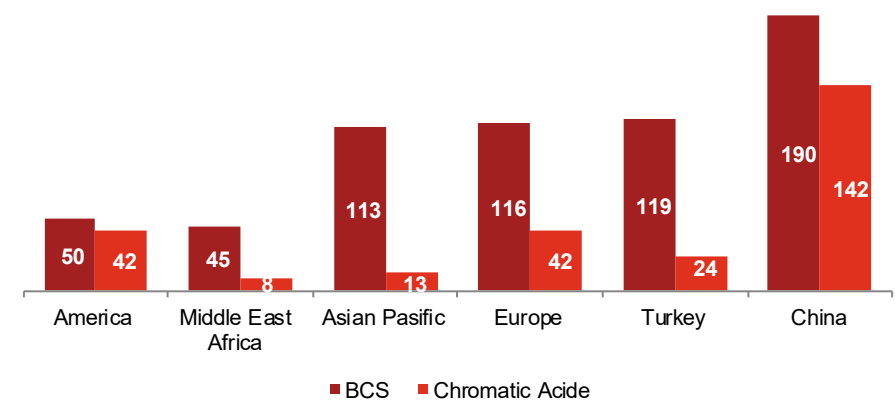
BCS Regional Demand Distribution, 2019



C. Acid Regional Demand Distribution, 2019



BCS and Chromic Acid Regional Production Capacity 2019 (thousand tons)



Source: Company Management

## Global and Local Competitors

*From a financial perspective, it is observed that the chromium business of SODA has a more profitable structure compared to its competitors, and it is aimed to maintain the strong position in BCS and chromic acid products.*

Companies	SODA <sup>1</sup>	Brother <sup>2</sup>	Elementis	Lanxess <sup>4</sup>	Vishnu
2018 Revenues	\$ 217m	\$ 214m	\$ 184m	\$ 1.148m	\$ 102m
EBIT Margin %	37%	7%	18%	10%	7%
Bichromate Production	✓	✗	✓	✓	✓
Bichromate Capacity (k ton)	105	✗	110	70	70
BCS Capacity (k ton)	127	50	20	45	80
Chromic Acid Capacity (k ton)	24	✗	42	8	7
Number of Facilities	2	1	4 <sup>3</sup>	2	2

<sup>1</sup> Figures represent Chrome business

<sup>2</sup> Brother, who bought Lanxess in 2019, has inorganic BCS and sodium bichromate production since 2020.

<sup>3</sup> Elementis has 4 separate facilities allocated to Chrome Chemicals business. However, only 2 of those are production facilities.

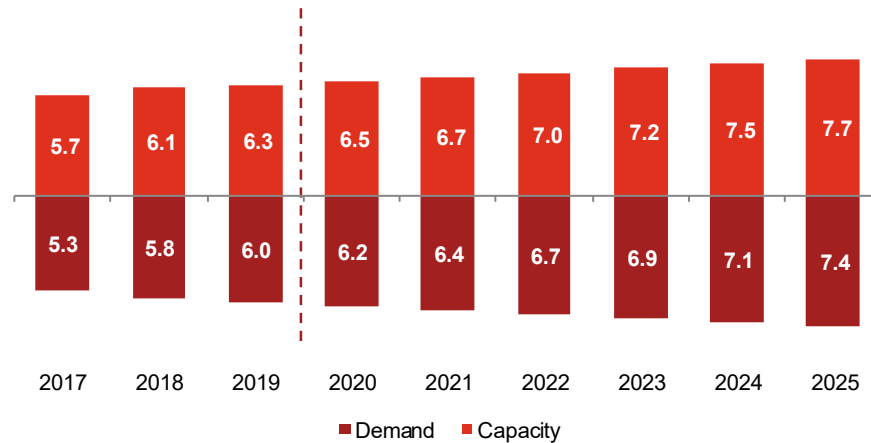
<sup>4</sup> Figures represent the financial results of the "Performance Chemicals" segment.

Source: Company Management

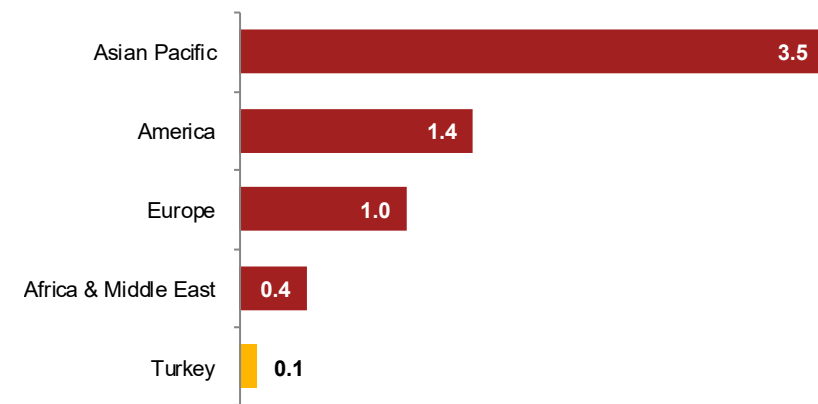
## Global Fiber Glass Market

As of the end of 2019, global capacity and demand were 6.3m tons and 6.0m tons, respectively. The global demand / capacity ratio was around 90-95% on average as of 2017-2019, and it is anticipated that this ratio will be maintained in the coming periods. In terms of capacity, it is known that the top 5 producers make up 80% of the total global capacity.

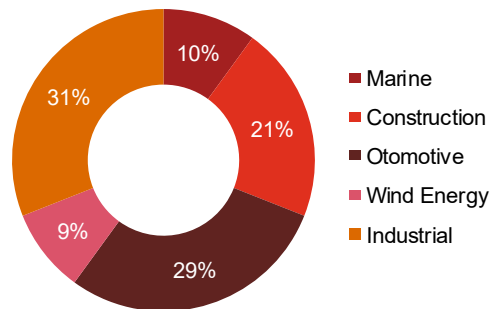
Glass Fiber Capacity and Demand (m ton)



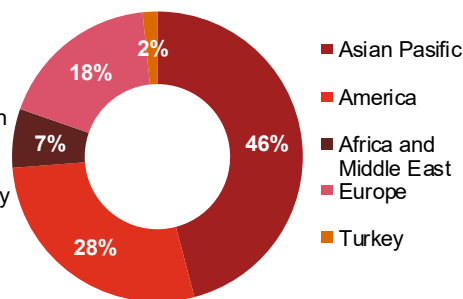
Regional Capacity Distribution - 2019 (m ton)



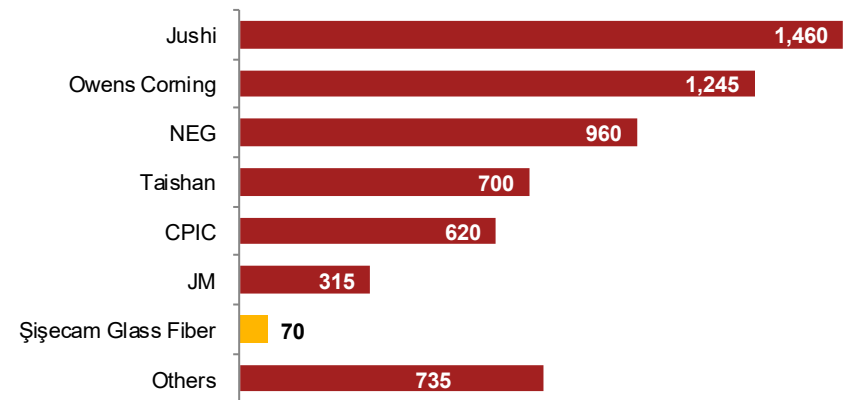
Industrial Distribution, 2019



Regional Capacity Distribution, 2019



Regional Competitor Capacity (k ton)



Source: Company Management

# SODA

## Historical Financial Statements

### (1/3)

The consolidated financial statements of SODA have been prepared in accordance with the provisions of the CMB's "Communiqué on Principles Regarding Financial Reporting in the Capital Markets" and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş.

#### Audited Historical Balance Sheet

TL m	31.12.2017	31.12.2018	31.12.2019
1 Cash and Cash Equivalents	783	1,193	2,300
Financial Investments	28	66	93
2 Trade Receivables	480	736	902
3 Inventories	240	320	553
Prepaid Expenses	17	73	30
Other Current Assets	83	224	176
<b>Current Assets</b>	<b>1,631</b>	<b>2,612</b>	<b>4,053</b>
Financial Investments	524	684	731
Investments Valued by Equity Method	328	413	460
4 Tangible Fixed Assets	1,295	2,094	2,250
Intangible Assets	32	152	152
Deferred Tax Assets	5	358	475
5 Other Fixed Assets	66	54	473
<b>Long Term Assets</b>	<b>2,250</b>	<b>3,757</b>	<b>4,574</b>
<b>Total Assets</b>	<b>3,881</b>	<b>6,369</b>	<b>8,627</b>
Short Term Borrowing	49	221	411
Short Term Portion of Long Term Borrowings	45	221	341
Trade Payables	276	447	506
6 Other Payables	9	363	501
7 Other Short-Term Liabilities	45	56	107
<b>Short-Term Liabilities</b>	<b>379</b>	<b>1,087</b>	<b>1,525</b>
Long Term Borrowings	265	321	1,309
Other Payables	2	1	1
Long Term Expenses	33	38	43
Deferred Tax	10	53	8
<b>Long-Term Liabilities</b>	<b>309</b>	<b>413</b>	<b>1,361</b>
<b>Equity</b>	<b>3,192</b>	<b>4,869</b>	<b>5,742</b>
<b>Total Liabilities and Shareholders Equity</b>	<b>3,881</b>	<b>6,369</b>	<b>8,627</b>

- 1 Şişecam Holding transferred \$ 47m of its \$ 750m bond issued in 2019 to SODA. The total bond balance is \$ 77m along with the remaining \$ 30m balance from the bond issued in 2013. Cash and cash equivalents increased to TL 2.3bn following the funding from issued bond, additional bank loans and cash generated from operations. While part of this amount corresponding to TL 2,260m is stored as deposit accounts with a maturity of less than 3 months, the remaining amount is kept as demand deposit notes.
- 2 Most of the group's trade receivables consist of customers' current accounts (31.12.2019 - 766m TL). The remaining part consists of notes receivables and receivables from related parties. The group collected TL 631m of collaterals in the form of letter of guarantees, pledges etc. as of the end of 2019.
- 3 Şişecam Elyaf, which started its production activities in the first quarter of 2019, produced 46 k tons of glass fiber until the end of the year and accumulated 19 thousand tons of inventory (31.12.2019 - 137m TL). Due to this, an increase in consolidated stock level is observed as of 31.12.2019.
- 4 In 2019, the Group made significant investments for Soda Sanayii and 100k tons of capacity increase and new salt field investments were held for Soda Sanayii and new production facility investment was made for Şişecam Elyaf, classified as construction in progress.
- 5 An agreement has been signed on between Şişecam and Ciner Group, in the context of a partnership with equal ownership to produce 2.7m tons of natural soda annually, using solution mining method, in the Green River region of Wyoming, USA. TL 440m (TL equivalent of \$ 75m) was paid by Şişecam to Ciner Group as business development fee. This fee is classified under other non-current assets in the consolidated financial statements.

Source: Company Management

# SODA

## Historical Financial Statements

### (2/3)

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<b>Total Liabilities and Shareholders Equity</b>	<b>3,881</b>	<b>6,369</b>	<b>8,627</b>

6 The majority of the group's trade payables consist of suppliers' current accounts (31.12.2019 - 304m TL). The remaining portion consists of payables to related parties.

7 Almost all of the short-term other payables are related to non-operational payables to related parties. The group borrowed TL 407m from its subsidiaries to finance the investment for Şişecam Elyaf. The amount and the capitalized interest expense of it are classified as part of the short-term other payables.

Source: Company Management, PwC analysis

## SODA

### Historical Financial Statements (3/3)

*The consolidated financial statements of SODA have been prepared in accordance with the provisions of the CMB's "Communiqué on Principles Regarding Financial Reporting in the Capital Markets" and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş.*

#### Audited Historical Income Statement

TL m	FY17	FY18	FY19
1 Net Sales	2,451	3,430	4,182
Cost of Sales	(1,597)	(2,114)	(2,750)
<b>Gross Profit</b>	<b>854</b>	<b>1,316</b>	<b>1,432</b>
2 General Administration Expenses	(80)	(107)	(139)
Marketing Expenditures	(291)	(398)	(474)
Research and Development Expense:	(3)	(4)	(6)
3 Other Operating Real Income	100	267	190
Other Real Operating Expenses	(72)	(158)	(135)
(+) Depreciation	136	151	204
<b>EBITDA</b>	<b>644</b>	<b>1,067</b>	<b>1,073</b>
(-) Depreciation	(136)	(151)	(204)
<b>Gross Real Operating Profit/Loss</b>	<b>508</b>	<b>917</b>	<b>868</b>
Income from Investment Activities	76	448	214
Expense from Investment Activities	(34)	(201)	(68)
Financing Income	270	734	594
Financing Expense	(182)	(503)	(606)
<b>Profit Before Tax</b>	<b>639</b>	<b>1,395</b>	<b>1,002</b>
Period Tax (Expense) Income	(57)	(229)	(132)
Deferred Tax (Expense) Income	(12)	318	164
<b>Profit for the Period (Loss)</b>	<b>570</b>	<b>1,485</b>	<b>1,034</b>

1 SODA increased its consolidated net sales by 31% annually between 2017 and 2019. Revenue reached TL 4.2bn in 2019 due to increase in soda product sales both in Turkey and at abroad, increase in soda ash prices and the addition of new Şişecam Elyaf facility.





2 General administrative expenses and marketing expenses as % of revenues remained stable in 2018 and 2019 at around 14-15%. Transportation and personnel expenses comprise the main expense items.

3 Other income / expenses mainly consist of FX gains / losses from trade receivables/payable scrap sales profit / (loss) and provision expenses.

Source: Company Management, PwC analysis

## SODA Valuation Results

Valuation results of SODA obtained with 4 different valuation approaches (Income Approach, Market Approach, Net Asset Approach and Stock Market Value) are summarized in the table below.

Valuation Method	Equity Value	Explanation
<b>Income Approach</b> 	TL <b>12,074</b> m	Consolidated equity value was calculated based on the stand-alone equity values of the subsidiaries and associates, using “Sum of the Parts” method. “DCF” method was applied to production companies, while “NAA” method was applied for holding companies and non-operational companies. The projections were prepared for each company in its own functional currency for the years 2020-2025.
<b>Market Approach</b> 	TL <b>11,158</b> m	Comparable companies with similar operational and financial structure have been identified. The average 5-year EV / EBITDA multiple covering the 2015-2019 periods obtained from these companies has been taken into account. The relevant multiple was applied to the 4-year average EBITDA (indexed to 2019) covering the period 2019-2022.
<b>Net Asset Approach</b> 	TL <b>5,497</b> m	Net asset value have been estimated based on the consolidated equity amounts presented in the audited financial statements dated 31 December 2019 and prepared accordance with the TAS / TFRS with certain adjustments made if deemed necessary.
<b>Stock Market Value</b> 	TL <b>6,294</b> m	The Stock Market Value for SODA has been calculated based on the weighted average stock market price of the trailing 12 months going back from the merger announcement date, 30.01.2020. Dividends planned to be distributed / collected as of the valuation date have also been considered within the scope of the Stock Market Value.

Source: Company Management, PwC analysis

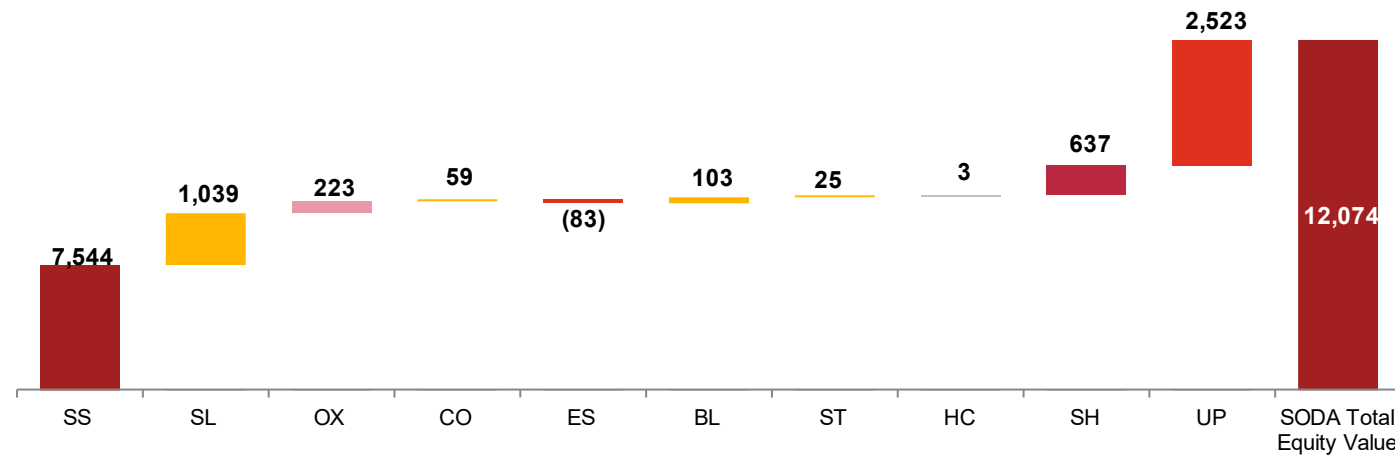
\* Total effective company values of companies included in the revenue approach

## SODA

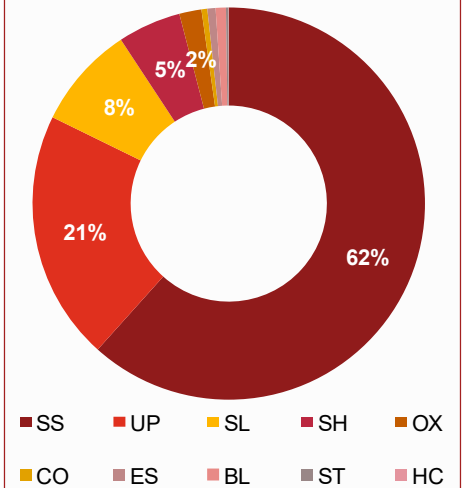
### Income Approach

Based on the Income Approach, the total equity value of SODA is estimated to be TL 12.1bn as of the valuation date.

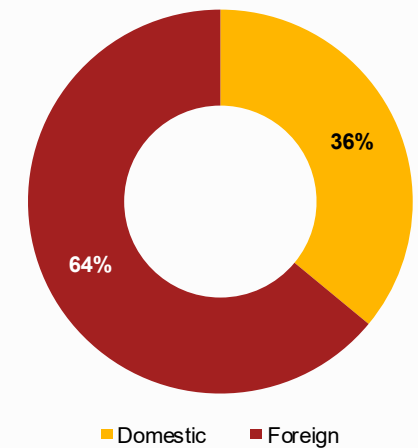
Total Equity Value (TL m)



Equity Value Breakdown



TL m	SS	SL	OX	CO	ES	BL	ST	HC	SH	UP	Total SODA
<b>Enterprise Value</b>	<b>5,967</b>	<b>1,115</b>	<b>212</b>	<b>51</b>	<b>736</b>	<b>92</b>	<b>16</b>	-	-	-	<b>8,190</b>
Net Cash/(Debt)	1,788	(76)	36	8	(907)	19	8	-	-	-	876
Tax Related Assets	1	-	-	-	88	-	-	-	-	-	89
Dividend Payment (-)	(245)	-	(25)	-	-	(7)	-	-	-	-	(277)
Dividend Income (+)	32	-	-	-	-	-	-	-	-	-	32
<b>Equity Value</b>	<b>7,544</b>	<b>1,039</b>	<b>223</b>	<b>59</b>	<b>(83)</b>	<b>103</b>	<b>25</b>	<b>3</b>	<b>2,548</b>	<b>5,046</b>	<b>16,508</b>
Effective Shareholding Percentage	%100	%100	%100	%100	%100	%100	%100	%100	%25	%50	
<b>Equity Value- SODA</b>	<b>7,544</b>	<b>1,039</b>	<b>223</b>	<b>59</b>	<b>(83)</b>	<b>103</b>	<b>25</b>	<b>3</b>	<b>637</b>	<b>2,523</b>	<b>12,074</b>

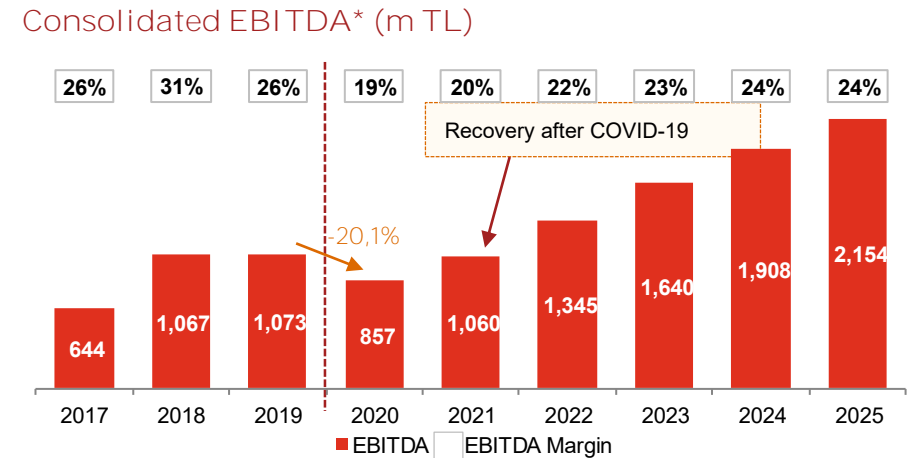
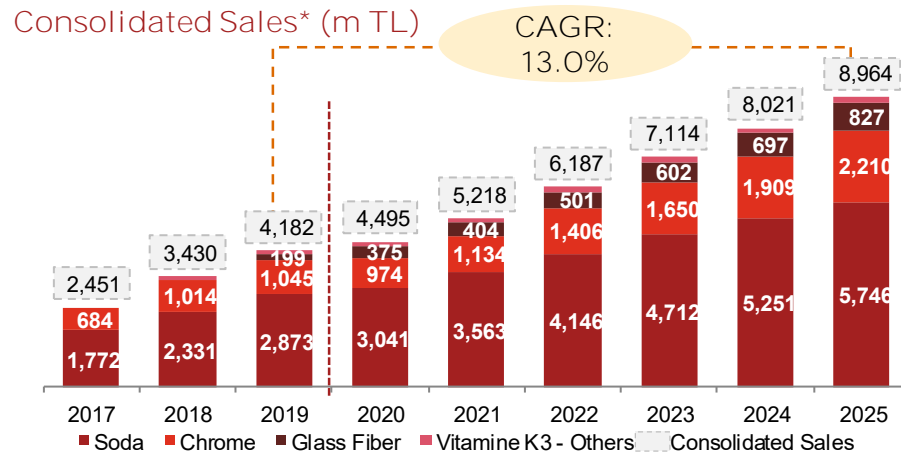


Source: Holding Management, PwC Analysis

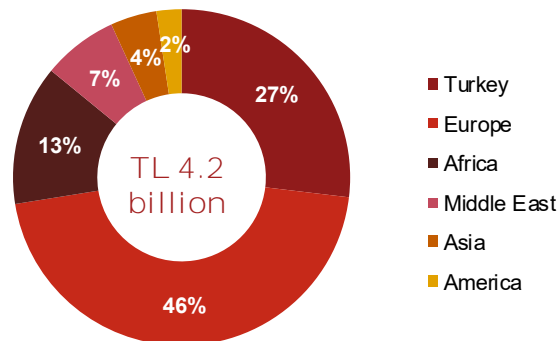
## SODA

### Income Approach

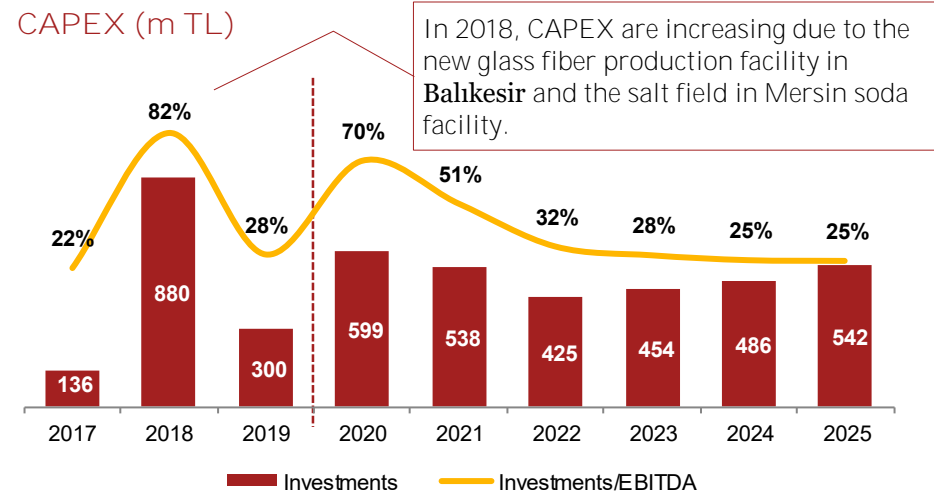
Consolidated revenue is expected to grow by 13.0% CAGR, with planned capacity increases in Mersin and Bosnia and Herzegovina and with the introduction of glass fiber sales. The consolidated EBITDA margin is expected to decrease to 19.1% in 2020 with the effect of COVID-19. In the subsequent projection period, it is expected to gradually recover back to the levels in the past.



### Geographical Distribution of Revenues - 2019



### CAPEX (m TL)



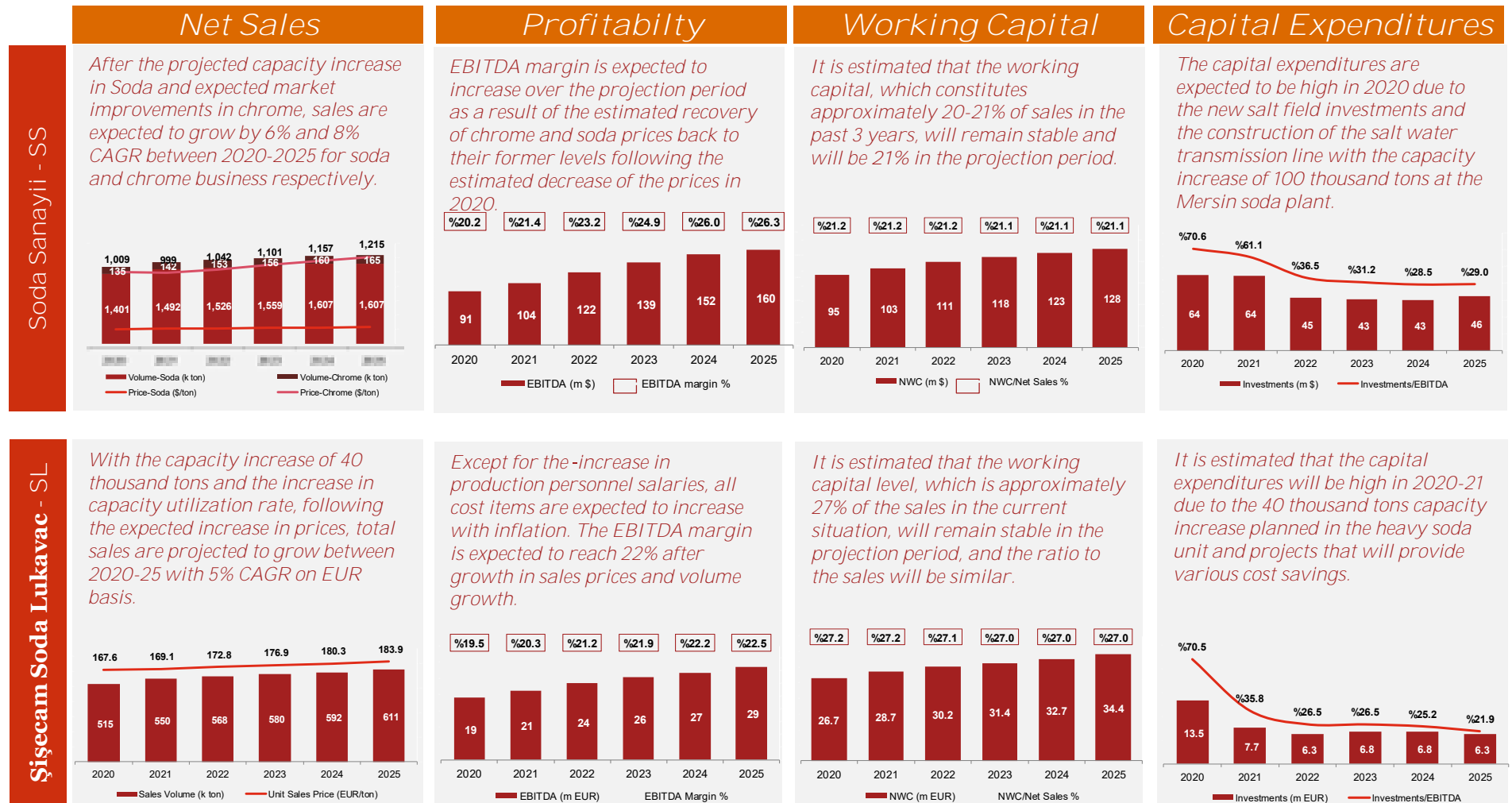
\* Consolidated amounts presented in TAS / TFRS reports for 2017-2019 periods are presented.

Source: Company Management, PwC analysis

## SODA

### Main Assumptions as the Basis of Valuation (1/3)

The table below presents the main assumptions for the companies subject to valuation with the discounted cash flow method.

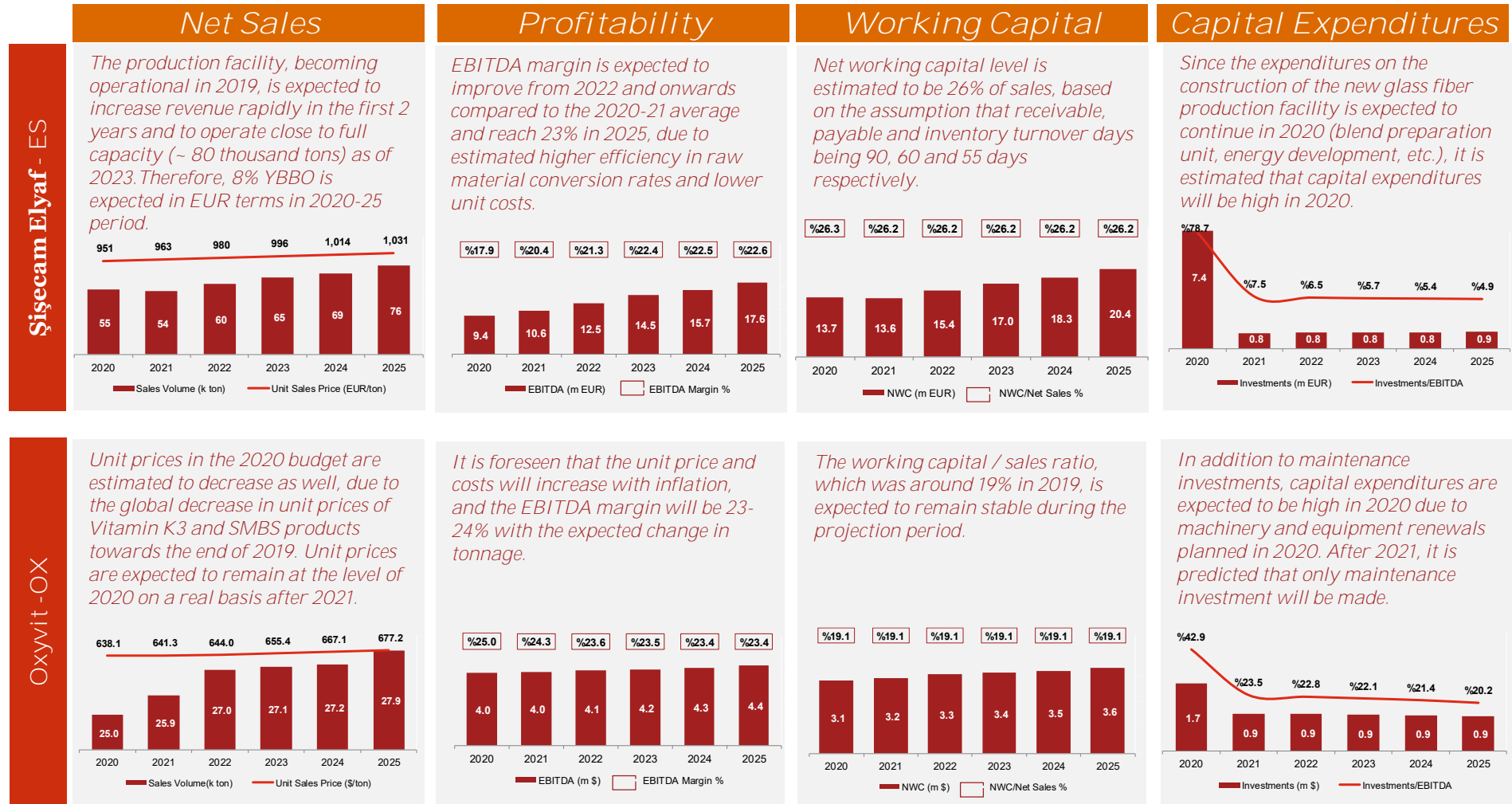


Source: Company Management, PwC analysis

## SODA

### Main Assumptions as the Basis of Valuation (2/3)

The table below presents the main assumptions for the companies subject to valuation with the discounted cash flow method.

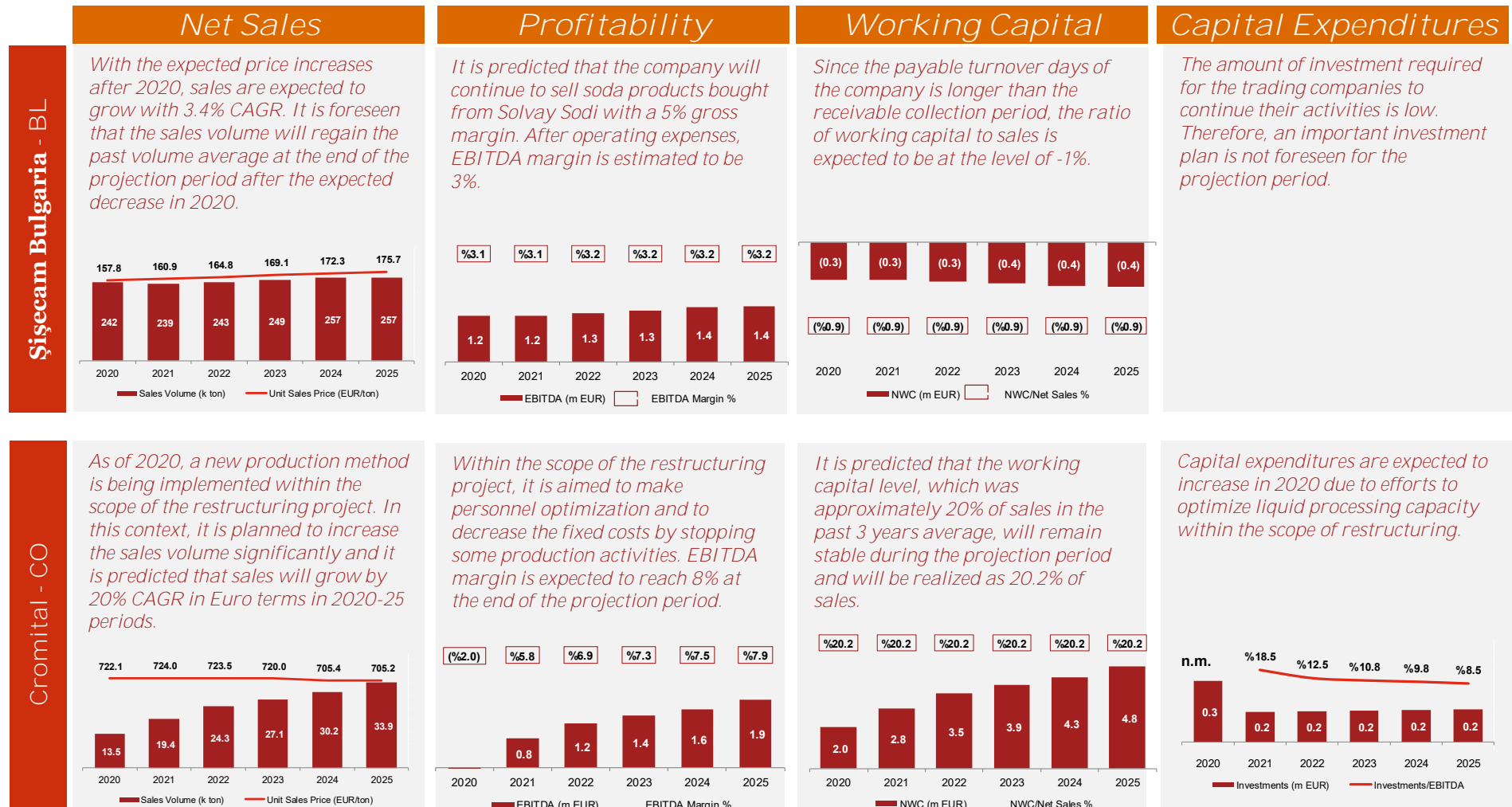


Source: Company Management, PwC analysis

## SODA

### Main Assumptions as the Basis of Valuation (3/3)

The table below presents the main assumptions for the companies subject to valuation with the discounted cash flow method.



Source: Company Management, PwC analysis

## SODA

### Market Approach (1/3)

Based on the Market Approach, the total equity value of SODA is estimated to be 11.2 bn TL as of the valuation date.

m TL	MY19	MY20	MY21	MY22	Average*
EBITDA	1,071	857	1,060	1,345	
1 Effective EBITDA	1,071	857	1,060	1,345	
Inflation Indexiation	1.00	1.12	1.25	1.40	
2 EBITDA (Discounted 2019 Figures )	1,071	765	845	961	911
EV / EBITDA (x)					8.0x
3 Enterprise Value					7,274
Net Cash/(Debt)					876
Tax Related Asset					89
Dividend Adjustment, net					(245)
5 Investment Accounted for using Equity Method					3,160
Solvay Şişecam Holding AG					637
Pacific Soda LLC					2,523
6 Other Companies					3
Şişecam Chem Investment B.V.					3
Equity Value					11,158

\* EBITDA figure represents the average of FY19-FY22. Adjustment figures that are included in the EV-Equity bridge is year-end figures for the calendar year 2019.

\*\* Consists of EBITDA figures of companies that are included in the Enterprise Value calculation through the Income Approach, which are multiplied by their effective ownership percentages.

Several steps have been taken into consideration for the derivation of the Market Approach:

- 1 Actual and forecasted consolidated FY19-FY22 EBITDA figures for SODA are taken into consideration after multiplying the respected figures with effective ownership percentages.
- 2 The respective forecasted EBITDA figures have been discounted with TL inflation to 2019.
- 3 Relevant EV/EBITDA multiples derived from the comparable company analysis is applied to the average of discounted FY19-FY22 EBITDA figures to come up with the enterprise value.
- 4 In order to derive the equity value, net cash/debt, investment properties, tax related assets and planned dividend income and expenses of operational companies that are included in the Market Approach calculation through EBITDA are taken into consideration. The figures are weighted by the effective ownership of the relevant entities at the SODA level.
- 5 The equity values of investments accounted for using the equity method as of 31.12.2019 is taken into consideration. Income Approach has been considered for Solvay Şişecam Holding AG and Pacific Soda LLC.
- 6 Other non-operational companies have been included in the equity value derivation based on their respective values calculated by the Net Asset Approach as of 31.12.2019.

Source: CapitalIQ, PwC Analysis

# SODA

## Market Approach (2/3)

Based on the Market Approach, the total equity value of SODA is estimated to be 11.2 bn TL as of the valuation date.

### Comparable Companies and Multiple Analysis

Soda \$ m	Enterprise Value					Net Sales					EBITDA					EBITDA %				
	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19
Solvay SA	15,141	14,659	16,932	15,780	14,291	10,443	10,100	13,189	12,937	12,599	1,815	1,997	2,580	2,449	2,491	17.4%	19.8%	19.6%	18.9%	19.8%
Tangshan Sanyou Chemical Ind.	3,904	3,247	4,031	3,478	2,651	2,065	2,224	3,104	2,933	2,898	310	371	603	531	341	15.0%	16.7%	19.4%	18.1%	11.8%
Genesis Energy, L.P.	6,874	6,493	6,861	5,802	5,988	2,247	1,712	2,028	2,913	2,481	316	425	443	568	591	14.1%	24.8%	21.9%	19.5%	23.8%
Chengdu Wintree Holding Co., Ltd.	2,059	2,607	1,696	1,165	1,080	863	833	1,190	1,144	1,208	130	119	137	137	128	15.0%	14.3%	11.5%	12.0%	10.6%
Ciech S.A.	1,210	1,157	1,172	1,176	989	829	828	1,029	979	937	183	209	236	171	157	22.0%	25.2%	23.0%	17.4%	16.7%
Shandong Jinjing Science and Tech.	1,450	1,091	1,088	761	540	506	476	669	745	726	83	115	169	141	112	16.4%	24.2%	25.2%	18.9%	15.4%
Ciner Resources LP	672	748	768	727	648	486	475	497	487	523	134	117	119	107	134	27.5%	24.6%	23.8%	22.0%	25.6%
Tata Chemicals Limited	2,859	2,923	3,271	2,878	2,088	2,752	2,244	1,597	1,578	1,638	376	328	327	340	321	13.7%	14.6%	20.5%	21.6%	19.6%
Average																				
Chrome \$ m	Enterprise Value					Net Sales					EBITDA					EBITDA %				
	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19
Elementis plc	1,799	1,322	1,994	2,180	1,684	677	617	783	822	874	147	120	150	175	167	21.6%	19.4%	19.2%	21.3%	19.2%
Nippon Chemical Industrial Co., Ltd.	186	160	165	271	193	307	292	314	333	335	51	49	48	56	44	16.6%	16.6%	15.2%	16.8%	13.1%
Hubei Zhenhua Chemical Co., Ltd.	m.d.	698	607	432	349	119	125	182	204	199	22	23	27	36	33	18.8%	18.4%	15.1%	17.7%	16.5%
Brother Enterprises Holding Co., Ltd.	485	895	1,101	832	656	139	153	239	206	173	25	39	91	29	20	18.1%	25.4%	38.1%	14.2%	11.5%
Vishnu Chemicals Limited	82	78	103	104	61	67	72	78	99	105	12	13	10	12	14	18.0%	17.5%	12.6%	12.2%	13.2%
Wata Chemicals Limited	20	19	25	45	90	4	4	5	5	11	1	1	1	1	4	31.2%	29.2%	18.8%	28.7%	34.1%
Average																				
Fiber Glass \$ m	Enterprise Value					Net Sales					EBITDA					EBITDA %				
	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19
LANXESS Aktiengesellschaft	6,150	8,283	10,867	8,484	7,162	8,582	8,127	7,841	7,813	7,633	925	1,016	1,081	1,095	1,056	10.8%	12.5%	13.8%	14.0%	13.8%
Owens Corning	6,776	7,732	9,822	10,625	9,067	5,350	5,677	6,384	7,057	7,160	841	1,072	1,134	1,276	1,216	15.7%	18.9%	17.8%	18.1%	17.0%
Nippon Electric Glass Co., Ltd.	1,766	1,742	2,911	2,471	1,864	2,090	2,051	2,508	2,737	2,367	475	424	533	498	404	22.7%	20.7%	21.3%	18.2%	17.1%
China Jushi Co., Ltd.	4,330	4,646	5,540	7,388	6,315	1,074	1,062	1,330	1,459	1,507	437	473	581	557	568	40.7%	44.5%	43.7%	38.2%	37.7%
Taiwan Glass Ind. Corp.	2,219	1,811	2,147	2,322	1,907	1,252	1,330	1,512	1,506	1,396	89	203	267	244	138	7.1%	15.3%	17.7%	16.2%	9.9%
Jiangsu Changhai Composite Materials Co.	921	1,025	869	604	494	232	253	312	320	319	54	60	53	57	63	23.2%	23.8%	17.1%	17.8%	19.9%
Average																				
Vitamin K3 \$ m	Enterprise Value					Net Sales					EBITDA					EBITDA %				
	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19	FY15	FY16	FY17	FY18	FY19
Bluestar Adiseo Company	7,311	5,373	4,438	4,781	4,055	2,310	1,539	1,598	1,660	1,599	799	578	468	389	347	34.6%	37.6%	29.3%	23.4%	21.7%
China Chemical & Pharmaceutical Co., Ltd.	209	206	215	234	232	171	178	211	248	266	15	17	18	19	22	8.8%	9.3%	8.5%	7.8%	8.1%
Hubei Zhenhua Chemical Co., Ltd.	m.d.	698	607	432	349	119	125	182	204	199	22	23	27	36	33	18.8%	18.4%	15.1%	17.7%	16.5%
Brother Enterprises Holding Co., Ltd.	485	895	1,101	832	656	139	153	240	206	173	25	39	91	29	20	18.1%	25.4%	37.9%	14.2%	11.5%
Genebiotech Co., Ltd.	26	35	28	25	26	44	46	52	56	50	2	4	4	7	2	4.9%	8.9%	6.9%	12.4%	4.3%
Eagle Veterinary Technology Co., Ltd.	60	67	64	57	65	21	24	32	27	30	3	2	4	3	3	12.5%	9.7%	13.4%	9.7%	10.9%
Average																				

Source: Company Management, Capital IQ, PwC analysis

## SODA

### Market Approach (3/3)

Based on the Market Approach, the total equity value of SODA is estimated to be 11.2 bn TL as of the valuation date.

Soda \$ m	Enterprise Value / EBITDA (x)					
	FY15	FY16	FY17	FY18	FY19	Average
Solvay SA	8.3x	7.3x	6.6x	6.4x	5.7x	6.9x
Tangshan Sanyou Chemical Ind.	12.6x	8.7x	6.7x	6.6x	7.8x	8.5x
Genesis Energy, L.P.	n.m	n.m	n.m	10.2x	10.1x	10.2x
Chengdu Wintrue Holding Co., Ltd.	n.m	n.m	12.4x	8.5x	8.4x	9.8x
Ciech S.A.	6.6x	5.5x	5.0x	6.9x	6.3x	6.1x
Shandong Jinjing Science and Tech.	n.m	9.5x	6.4x	5.4x	4.8x	6.5x
Ciner Resources LP	5.0x	6.4x	6.5x	6.8x	4.8x	5.9x
Tata Chemicals Limited	7.6x	8.9x	10.0x	8.5x	6.5x	8.3x
<b>Average</b>	<b>8.0x</b>	<b>7.7x</b>	<b>7.7x</b>	<b>7.4x</b>	<b>6.8x</b>	<b>7.5x</b>
Chrome \$ m	Enterprise Value / EBITDA (x)					
	FY15	FY16	FY17	FY18	FY19	Average
Elementis plc	12.3x	11.0x	n.m	12.5x	10.1x	11.5x
Nippon Chemical Industrial Co., Ltd.	n.m	n.m	n.m	4.9x	4.4x	4.6x
Hubei Zhenhua Chemical Co.,Ltd.	n.m	n.m	n.m	12.0x	10.6x	11.3x
Brother Enterprises Holding Co.,Ltd.	n.m	n.m	12.1x	n.m	n.m	12.1x
Vishnu Chemicals Limited	6.8x	6.2x	10.4x	8.6x	4.4x	7.3x
Wata Chemicals Limited	n.m	n.m	n.m	n.m	n.m	n.m
<b>Average</b>	<b>9.5x</b>	<b>8.6x</b>	<b>11.2x</b>	<b>9.5x</b>	<b>7.4x</b>	<b>9.2x</b>
Glass Fiber \$ m	Enterprise Value / EBITDA (x)					
	FY15	FY16	FY17	FY18	FY19	Average
LANXESS Aktiengesellschaft	6.6x	8.2x	10.1x	7.8x	6.8x	7.9x
Owens Corning	8.1x	7.2x	8.7x	8.3x	7.5x	7.9x
Nippon Electric Glass Co., Ltd.	n.m	4.1x	5.5x	5.0x	4.6x	4.8x
China Jushi Co., Ltd.	9.9x	9.8x	9.5x	n.m	11.1x	10.1x
Taiwan Glass Ind. Corp.	n.m	8.9x	8.0x	9.5x	n.m	8.8x
Jiangsu Changhai Composite Materials Co., Ltd	n.m	n.m	n.m	10.6x	7.8x	9.2x
<b>Average</b>	<b>8.2x</b>	<b>7.6x</b>	<b>8.3x</b>	<b>8.2x</b>	<b>7.6x</b>	<b>8.0x</b>
Vitamin K3 \$ m	Enterprise Value / EBITDA (x)					
	FY15	FY16	FY17	FY18	FY19	Average
Bluestar Adisseo Company	9.1x	9.3x	9.5x	12.3x	11.7x	10.4x
China Chemical & Pharmaceutical Co., Ltd.	n.m	12.4x	12.0x	12.1x	10.8x	11.8x
Hubei Zhenhua Chemical Co.,Ltd.	n.m	n.m	n.m	12.0x	10.6x	11.3x
Brother Enterprises Holding Co.,Ltd.	n.m	n.m	12.1x	n.m	n.m	12.1x
Genebiotech Co., Ltd.	11.8x	8.5x	7.8x	a.d.	11.9x	10.0x
Eagle Veterinary Technology Co.,Ltd	n.m	n.m	n.m	n.m	n.m	n.m
<b>Average</b>	<b>10.5x</b>	<b>10.1x</b>	<b>10.3x</b>	<b>12.1x</b>	<b>11.3x</b>	<b>10.9x</b>

Business Segment	Gross Profit Distribution (2019-2025 avr.)	Gross Profit Distribution				
		FY15	FY16	FY17	FY18	FY19
Soda	69.9%	5.6x	5.4x	5.3x	5.2x	4.8x
Chrome	20.4%	1.9x	1.8x	2.3x	1.9x	1.5x
Glass Fiber	7.4%	0.6x	0.6x	0.6x	0.6x	0.6x
Vitamin K3 and Others	2.3%	0.2x	0.2x	0.2x	0.3x	0.3x
<b>Total</b>	<b>100.0%</b>	<b>8.4x</b>	<b>8.0x</b>	<b>8.5x</b>	<b>8.0x</b>	<b>7.1x</b>
<b>Average (2015-2019)</b>		<b>8.0x</b>				

While determining comparable companies within the scope of the market approach, the fields of activity, profitability, indebtedness and operational structures of the selected companies were taken into consideration. Considering the current global market share and sales volume of SODA, 8 companies producing soda globally, 6 companies producing chrome globally, 6 companies producing glass fiber globally and 6 companies producing vitamin K3 globally were used in the multiple analysis. When choosing companies, market size, product range, sales volume, EBITDA rate, indebtedness ratio, profitability level and similar financial metrics were taken into consideration.

The EV / EBITDA multiples of the selected 26 publicly listed companies between 2015-2019 were analyzed. The enterprise values shown in the table above are the average enterprise values of the selected companies during the relevant year.

The average multiples of the 26 selected companies for the 2015-2019 periods are between 7.5x - 10.9x as shown in the table above. The average multiples found for each business segment were taken into consideration by weighting the multiples according to the distribution of the 2019-2025 average gross profit of SODA by business segments.

8.0x, which is calculated as the average of the 2015-2019 period, is taken into account under market approach.

Source: Company Management, Capital IQ, PwC analysis

## SODA

### Net Asset Approach

Based on the Net Asset Approach, the total equity value of SODA is estimated to be 5.5 bn TL as of the valuation date.

TL m	31.12.2019
Paid Capital	1,000
Accumulated Other Comprehensive Income/(Expense)	951
Currency Translation Difference	760
Hedge Reserves	7
Tangible Asset Revaluation Increases (Decreases)	184
Gains (Losses) on Remeasurements of Defined Benefit Plans	0
Restricted Reserves	230
Retained Earnings	2,452
Net Profit or (Loss) for the Period	1,109
Non Controlling Interests	-
<b>Total Equity</b>	<b>5,742</b>
<b>1 Dividend Adjustment, net*</b>	<b>(245)</b>
<b>Net Asset Value</b>	<b>5,497</b>

\* Represents the net effect of dividend adjustments at the consolidated level for SODA The dividend payments made to SS by the subsidiaries are netted off at the SODA level The resulting 245m TL consists of the dividend payment that will be made by SODA to non-group companies and Şişecam

The breakdown of the consolidated shareholders equity for SODA, which is prepared in accordance with the CMB's "Principles of Financial Reporting in Capital Markets<sup>1</sup>", in line with Turkish Accounting Standards and Turkey Financial Reporting Standards and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. is presented in the adjacent table.

It has been assumed that the shareholders equity that is present in the consolidated 31.12.2019 balance sheet of SODA, that has been prepared in accordance with TMS/IFRS is an accurate representation of the equity value of the company.

The consolidated shareholders equity of SODA as of 31.12.2019 is 5,742m TL, the Net Asset Value is calculated as 5.497m TL after the adjustments considered.

#### 1 Dividend Adjustment:

The figure represents the net dividend payment of SODA that is due after 31.12.2019. Net dividend adjustment is included in our assessment with respect to its effect on the net asset value of SODA.

Source: Holding Management, PwC Analysis

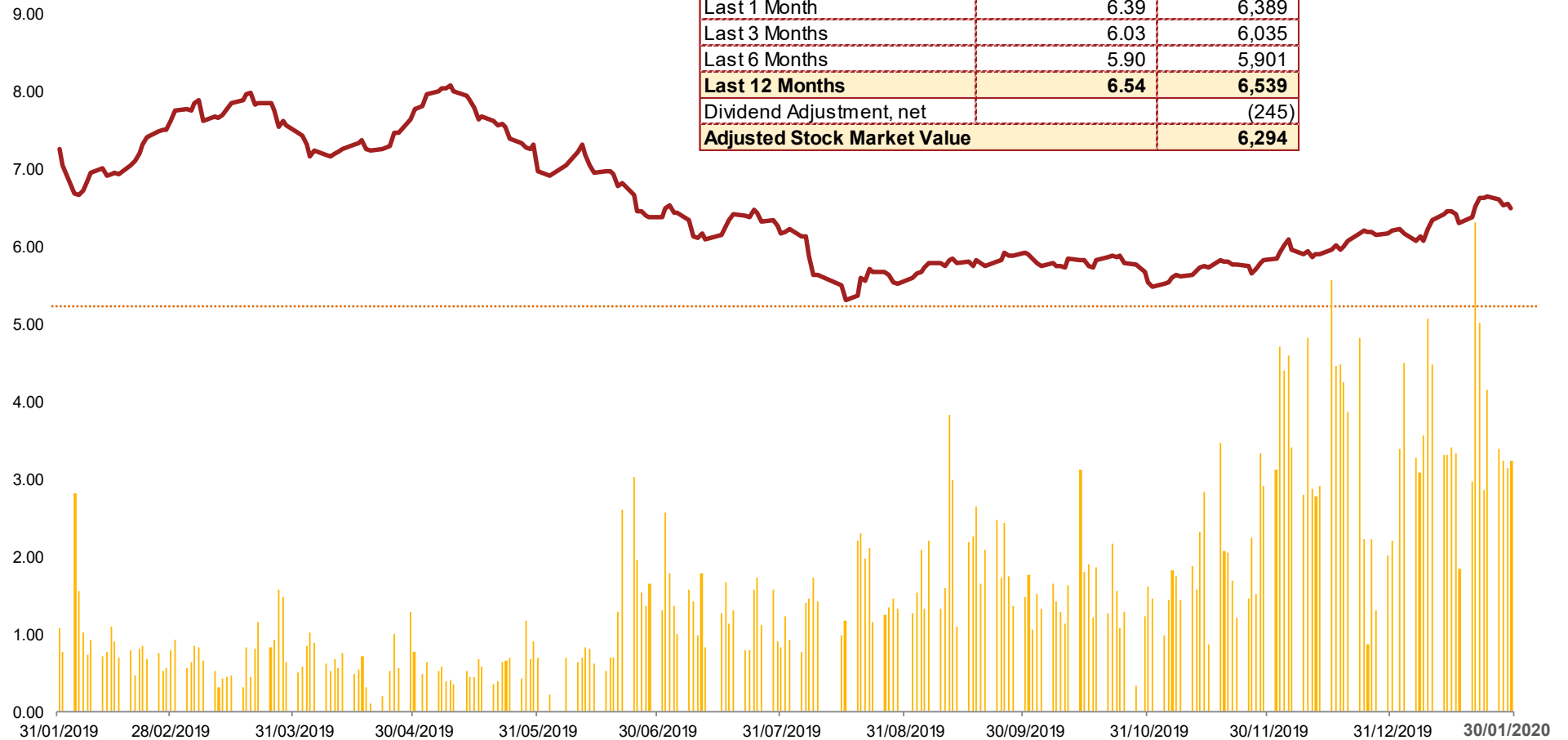
1 Sermaye Piyasasında Finansal Raporlamaya İlişkin Esaslar Tebliği

## SODA Stock Market Value

The Stock Market Value for SODA has been based on the weighted average stock market price of the trailing 12 months going back from the merger announcement date, 30.01.2020. The total equity value of SODA derived from this method is 6.3 bn TL.

### Stock Price and Transaction Volume

#### Stock Price (TL/lot)



Source: CapitalIQ, PwC Analysis

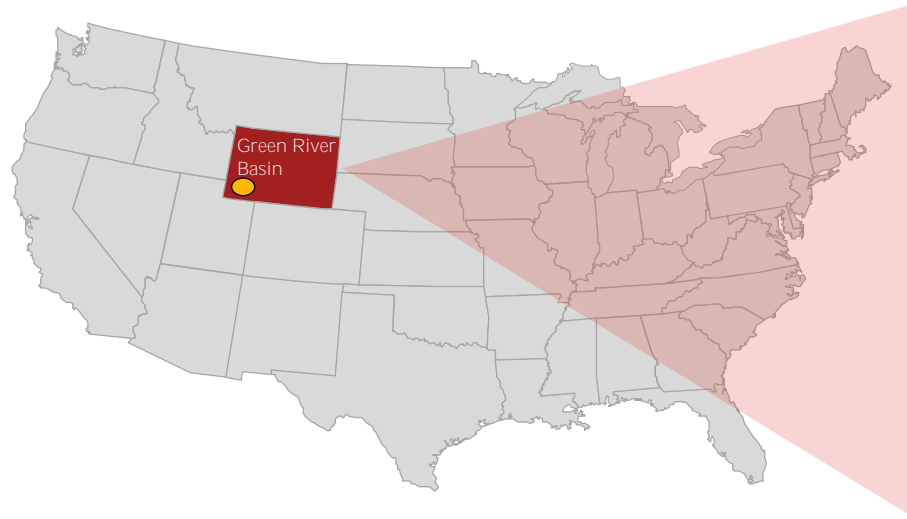
Transaction Volume (m TL) Weighted Avg.Price (TL/lot)

## Natural Soda Ash Investment

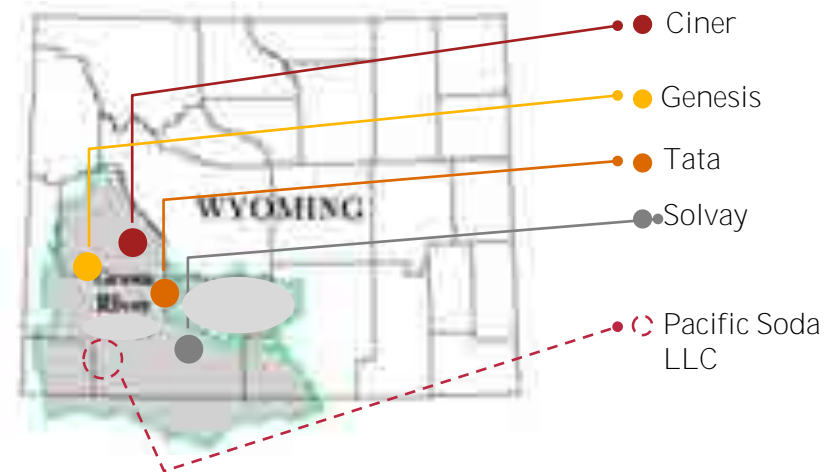
### General Information about the Investment

A joint venture agreement has been signed to invest in a natural soda ash production facility using the solution mining method, with an annual production capacity of 2.7m tons, divided as 2.5m tons of soda and 200k tons of sodium bicarbonate, in the Green River region of Wyoming, USA.

#### Investment Area



#### Wyoming – Green River Basin



#### General Information

Investment area	USA – Wyoming
Sponsors	Şişecam & Ciner
Description	Natural Soda Ash Investment
Investment Start/ End	2020 / 2026
Start of operations	2026 - 2028 (partial) – 2029 (full c.)
Total production capacity	2,500k tons of Soda 200k tons of sodium bicarbonate
Total investment amount	\$ 1.6 billion

#### Investment motives

It is believed that this investment project will be a significant growth project from the perspective of strengthening the global position of the Group in the soda sector, introduction of a more profitable production method in comparison to synthetic soda production, and an opportunity to sell more to the markets with limited market presence.

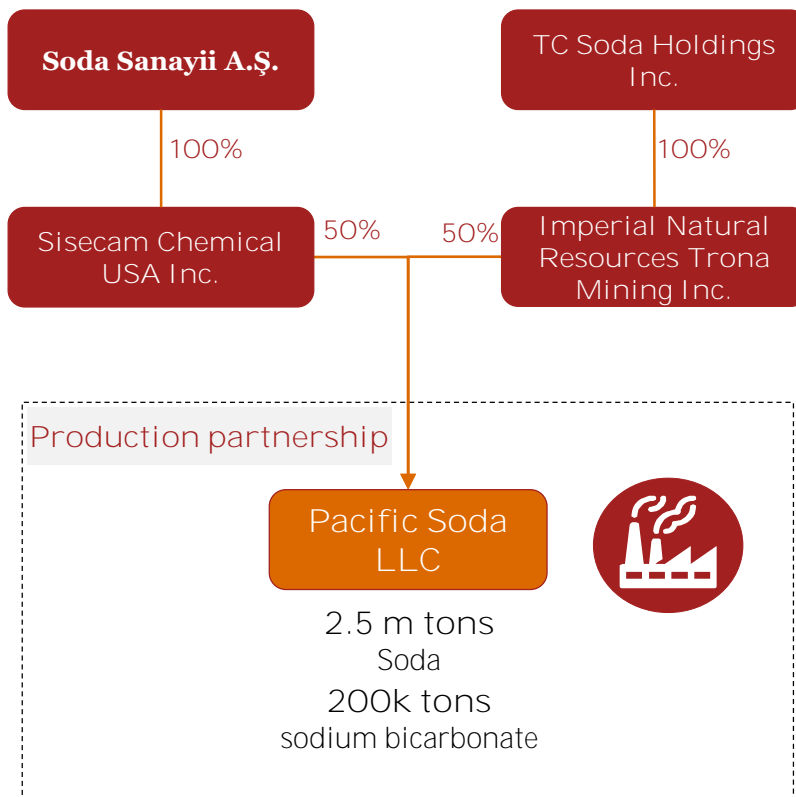
- **Global position:** The target of becoming the 5th largest soda producer in the world
- **Cost advantage:** The opportunity to perform production with solution mining method which has the lowest cost of soda production
- **New markets:** An easier access to the markets with lower sales opportunities currently, such as North, Central and South America
- **Environmental impacts:** The production of natural soda being environmentally friendlier than production of synthetic soda

Source: Comoany Management

## Natural Soda Ash Investment Shareholding Structure

*Production and marketing operations of the joint venture project with Ciner Group with equal production partnership, will be undertaken by separate companies. The partnership will be initiated in a production company, in which the parties will hold an equal amount of shares.*

### Shareholding structure

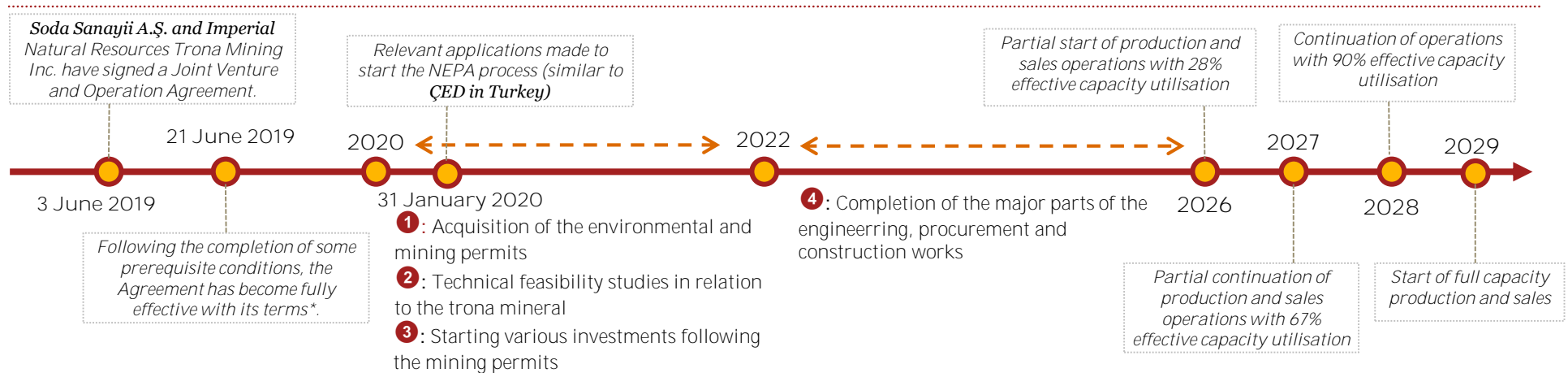


- Soda Sanayii A.Ş. and Imperial Natural Resources Trona Mining Inc. have signed a Joint Venture and Operation Agreement on 3 June 2019.
- On the same date, a Business Development Contract has been signed between Soda Sanayii and Park Holding A.Ş.. Under the scope of the Business Development Contract, Soda Sanayii has paid \$ 75m (+VAT) as a business development fee in return for the invoice from Park Holding A.Ş.. The aforementioned cost has been classified as a tangible asset in the SODA's consolidated audited financial statements as at 31.12.2019.
- Following the completion of some prerequisite conditions, the Joint Venture and Operation Agreement has become effective with all its clauses on 21 June 2019 and has been transferred to Şişecam Chemicals US Inc., which is a 100% subsidiary of Soda Sanayii A.Ş.. As of closing, Imperial has transferred the existing licences to Pacific Soda LLC and since Şişecam Chemicals has gained 50% of the Pacific's shares, a joint venture has been established.

Source: Company Management

## Natural Soda Ash Investment Project Timeline

A total of 6.5 years of investment period are foreseen with the first 2 years spent on completion of relevant permits and tests, followed by the next 4.5 years of construction. The investment is aimed to be started in 2020 and completed at the beginning of 2026.



**1**: The list of the permits required to be obtained is listed below. In case of any unexpected situation during the acquisition of the permits, the \$ 75m shareholder fee will be returned to Soda Sanayi A.Ş.

1-Competitive Rental Period	5-Water Supply Feasibility	9-Well Construction Test	13-Gas Pipeline Design	17-Commercial Air Emission Right
2-Private Lease Negotiations	6-Mining Planning and NI	10-Engineering Facility Road	14-BLM Extensive NEPA_EIS	18-WY Industrial Settlement
3-Ground Water Monitoring	7-Pilot Well Water Provision	11-Railway Route Selection	15-Commercial Water Rights	
4-Search – Section 25 and 27	8-DEQ In - Situ R&D Licence	12-Water Line Route Selection	16-Commercial Mining Rights	

**2**: The technical studies related to the concentration of trona in the planned geographical location of the project (Green River Basin at Wyoming, USA) will be made and completed in September/October 2020. Based on the results, if the concentration of trona turns out lower than the optimal 16% level, then the project profitability is expected to be lower. On the contrary, if the concentration turns out higher than 16%, it is expected to significantly increase the project profitability.

**3**: Following the mining permits, basic and detailed engineering and design studies are expected to start and costs relating to project management, as well as transportation, insurance and financing expenses are expected to occur.

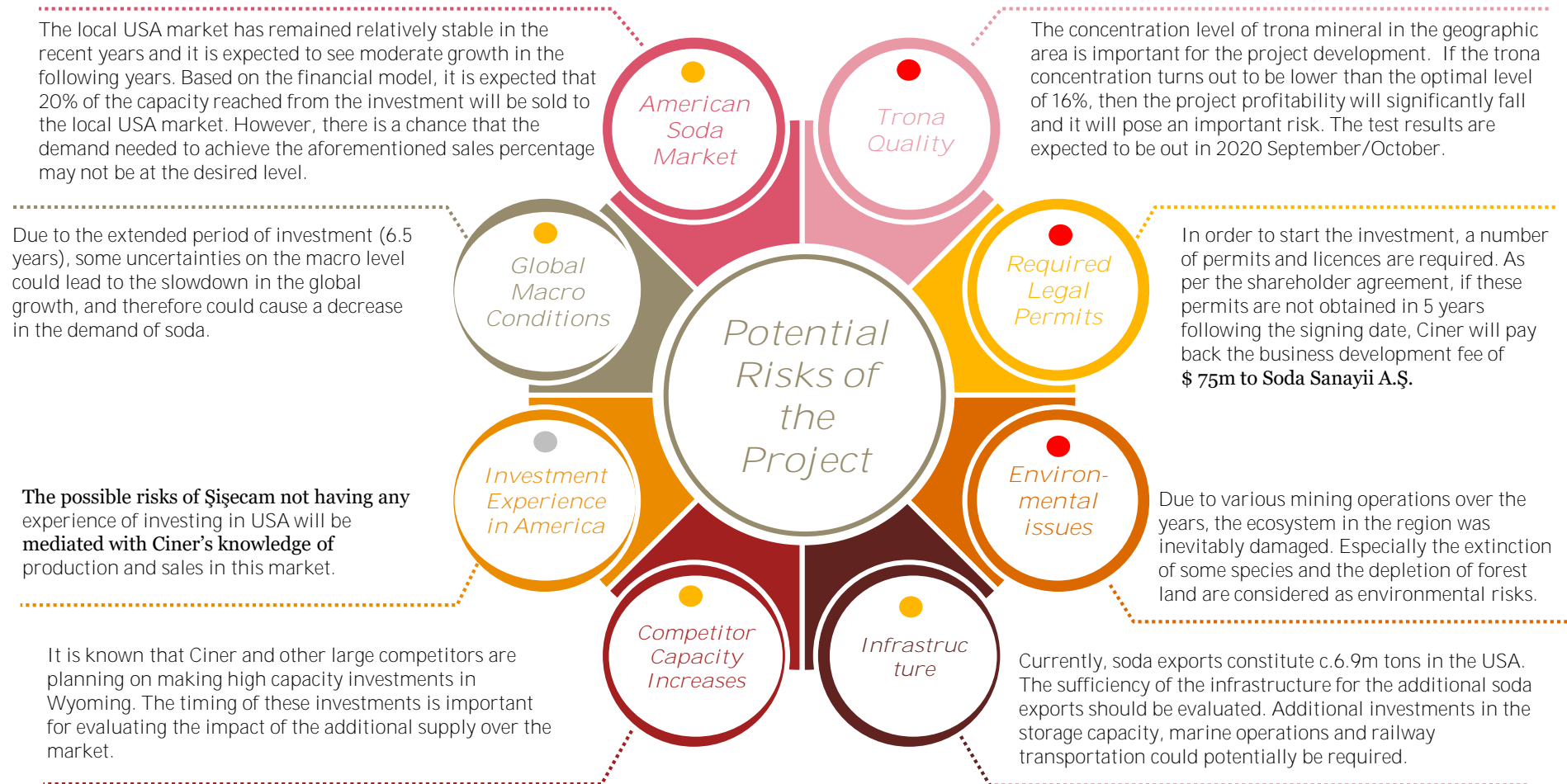
**4**: Major part of the engineering, procurement and construction works is expected to be completed from 2022 onwards. Details are presented on the capital expenditures page.

\*: There is an addendum to the agreement which states that if the agreement becomes effective after 31 July 2019, the \$ 75m business development fee paid to Park Holding A.Ş. will be returned to Soda Sanayi A.Ş.

Source: Company Management

## Natural Soda Ash Investment Risks of the Project

The potential risks of the planned natural soda ash investment by Şişecam and Ciner partnership in USA are stated below.



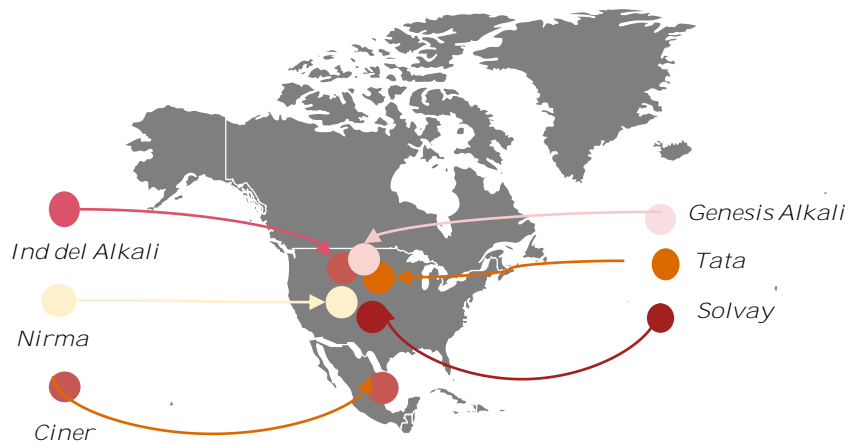
Risk Level	High
	Medium
	Low

Source: Compnay Management

## Natural Soda Ash Investment American Soda Market

There are plans of new investments to increase capacity in Wyoming, which holds the largest trona reserve in the world. Considering the growth of global soda sector, there is a potential for increase in exports from USA, which currently exports 59% of its production.

### Market Capacity and Competitors



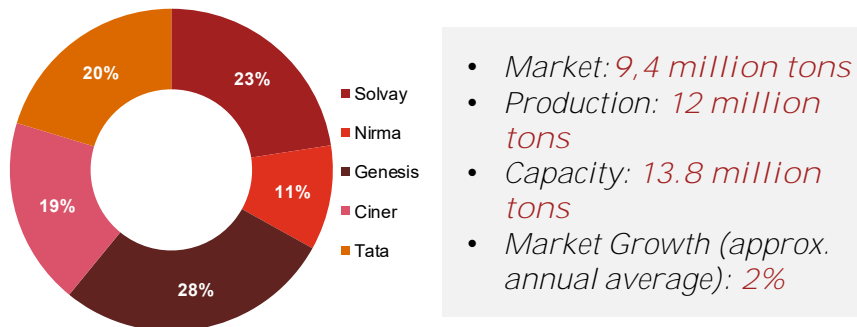
In 2018, USA has produced 12m tons of soda and had an export market of c. 7m tons (Mexico, Brazil, Indonesia, Chili and Malaysia).

### Developments in the market

Competitor	Developments and increases in capacity
Solvay <sup>1</sup>	<ul style="list-style-type: none"> <li>Capacity increase of 1m tons of soda ash and 300k tons of sodium bicarbonate in the existing plants</li> </ul>
Ciner	<ul style="list-style-type: none"> <li>Capacity increase of c. 1m tons in the existing plants</li> <li><b>New investment: 2.7m tons (Şişecam %50)</b></li> <li>New investment: 2.7m tons (a possibility of partnership with another producer)</li> </ul>
Genesis Alkali	<ul style="list-style-type: none"> <li>Plan of an increase in capacity of 750k tons</li> <li>Organic and inorganic growth plans</li> </ul>
Tata	<ul style="list-style-type: none"> <li>Capacity increase of 750k tons</li> <li>Capacity increase of 200k tons in soda and 35k tons in sodium bicarbonate on the Mithapur plant</li> <li>Capacity increase of 400k tons in the salt production</li> </ul>

### Capacity Breakdown, 2018 USA General Information, 2018

<sup>1</sup> Also includes capacity increases outside of the American market.



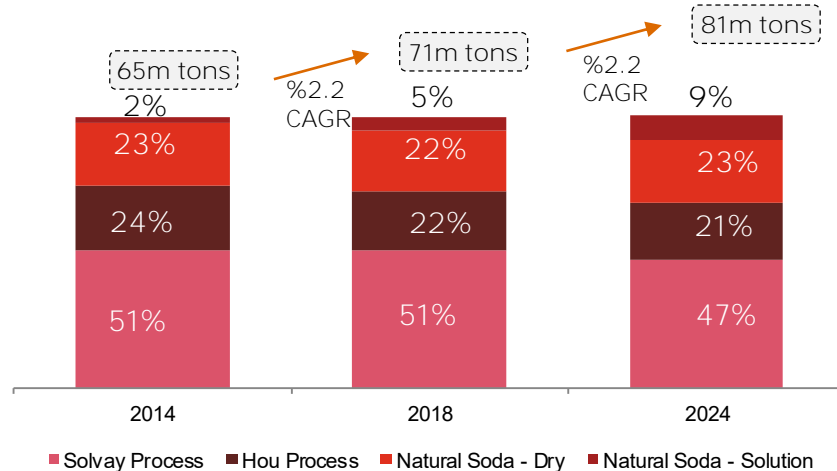
- Market: 9,4 million tons
- Production: 12 million tons
- Capacity: 13.8 million tons
- Market Growth (approx. annual average): 2%

Source: Company Management

## Natural Soda Ash Investment Natural Soda/ Synthetic Soda

Global soda production's breakdown is as follows: 75% is synthetic and 25% is natural. There is natural soda production especially in the USA (12m tons) and Turkey (4m tons). It is predicted that as the natural soda production (which has lower production costs than the synthetic soda) capacity increases, the competition will also increase.

### Global Soda Capacity Based on the Production Method



Most of the capacity increases planned in the period between 2018-2024 are from natural soda. Therefore, it is expected for the natural soda share to increase to 32% with the upcoming projects.

The production of natural soda with solution mining which has the lowest cost of production is expected to reach and exceed the capacity of 3m tons.

As a result of the aforementioned capacity increases, it is expected for Hou and Solvay methods to lose share in production due to their high cost structure.

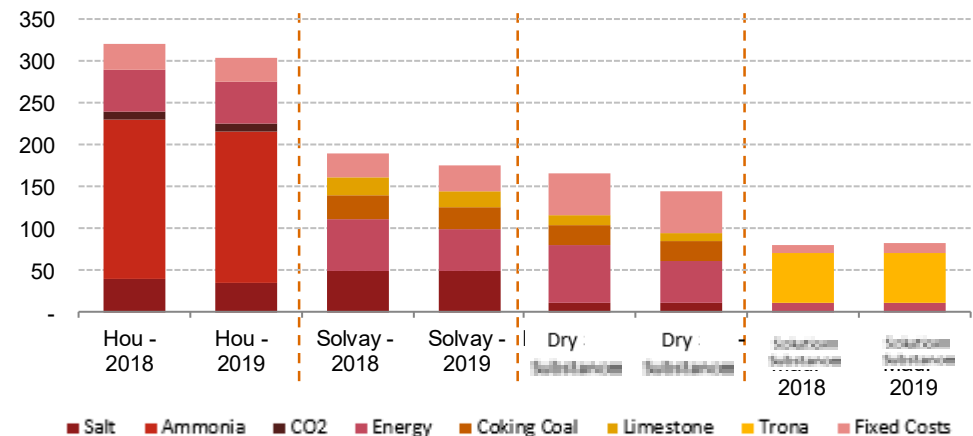
#### Synthetic Soda

- Production is conducted through Hou Proses and Solvay Proses methods
- The raw material used is salt and limestone
- High energy utilisation (10-14 MMBtu/ton)
- High production cost

#### Natural Soda

- The methods used in production are dry mining and solution mining
- Trona mineral is used as a raw material
- Low energy utilisation (4-6 MMBtu/ton)
- Low production cost

### Costs of production of natural and synthetic soda (\$ / ton)



Source: Management's information

## Natural Soda Ash Investment Capital Expenditures

The engineering, construction and other operations within the scope of the investment are expected to take 6.5 years in total (with the assumption that the necessary legal permits will be obtained by the first half of 2022). Total cost of investment, excluding VAT and financing costs, is expected to be \$ 1,583m.

m \$	2020	2021	2022	2023	2024	2025	2026	Total
<b>Anadarko Rent Payments</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>27</b>
<b>Soda Plant</b>	-	-	-	<b>144</b>	<b>289</b>	<b>289</b>	-	<b>722</b>
Equipment	-	-	-	46	93	93	-	232
Supply Equipment	-	-	-	70	140	140	-	350
Construction	-	-	-	28	56	56	-	140
<b>Cogeneration Unit</b>	-	-	-	<b>34</b>	<b>68</b>	<b>68</b>	-	<b>171</b>
Equipment	-	-	-	16	32	32	-	80
Construction and Supply Equipment	-	-	-	18	36	36	-	91
<b>Well Drilling</b>	-	-	-	<b>82</b>	<b>110</b>	<b>82</b>	-	<b>274</b>
Equipment	-	-	-	26	34	26	-	85
Construction and Supply Equipment	-	-	-	57	76	57	-	189
<b>Indirect Cost</b>	<b>42</b>	<b>42</b>	<b>24</b>	<b>17</b>	<b>17</b>	<b>10</b>	<b>44</b>	<b>198</b>
Basic Detailed Engineering Design	26	26	-	-	-	-	-	52
Project Management Expenses	5	5	5	5	5	5	5	35
Establishment Costs	-	-	-	-	-	-	21	21
Audit and Surveillance Costs	3	3	3	3	3	-	-	15
Transport & Shipping	4	4	4	4	4	-	-	22
Insurance	0	0	0	1	1	1	1	5
Finance	0	0	8	0	0	0	0	9
Spare part	-	-	-	-	-	-	14	14
Prudence Costs	4	4	4	4	4	4	4	27
<b>Surface Preparation</b>	-	-	-	<b>12</b>	<b>16</b>	<b>12</b>	-	<b>40</b>
<b>Water Pipeline (20 miles)</b>	-	-	-	-	-	<b>23</b>	<b>23</b>	<b>46</b>
<b>Electric Transmission Line</b>	-	-	-	-	-	<b>9</b>	<b>9</b>	<b>18</b>
<b>Railway and Transportation</b>	-	-	-	-	-	<b>25</b>	<b>25</b>	<b>50</b>
<b>Natural Gas Pipeline</b>	-	-	-	-	-	<b>9</b>	<b>9</b>	<b>18</b>
<b>Other</b>	-	-	-	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>20</b>
<b>Total</b>	<b>51</b>	<b>46</b>	<b>29</b>	<b>299</b>	<b>510</b>	<b>533</b>	<b>115</b>	<b>1,583</b>

Total investment cost of the project is estimated as \$ 1,583m. Under the partnership agreement, this amount will be shared equally between the two groups.

It is forecasted that the processes related to soda plant, cogeneration plant and well digging, which are the most important elements of the investment, will start in 2023.

These 3 important investment items are expected to realize at \$ 1,167m and constitute approximately 73% of the total investment amount.

According to the information provided by **Şişecam management**, there is no VAT obligation for capital expenditures in the State of Wyoming, USA. For this reason, capital expenditures are taken into account excluding VAT in our studies.

\* In the event that there is a delay in obtaining the necessary legal permits and resulting in the main investment items being postponed, an increase in the estimated investment amounts (especially related to construction and equipment expenditures) can be observed.

Source: Company Management

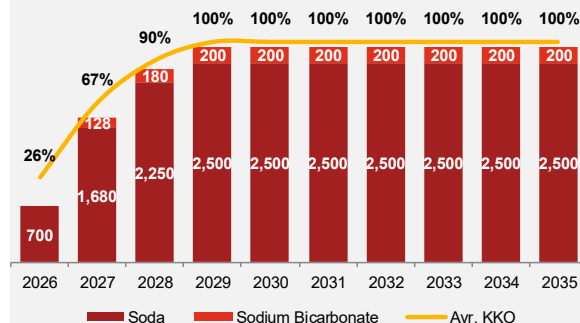
## Natural Soda Ash Investment Basic Assumptions (1/3)

Sales

### Sales Volume

- Production and sales activities are expected to start partially in 2026. While sodium bicarbonate sales are not expected, soda sales are expected to be around 700 thousand tons (26% avg. CUR).
- In 2027 and 2028, with the commissioning of other production lines, 67% and 90% CUR is targeted to be achieved respectively.
- In 2029 and the following years, it is assumed that the production will be at full capacity (2,500 thousand tons of soda and 200 thousand tons of sodium bicarbonate).

Total Sales Volume (k ton)



### Sales Price

- While determining the sales prices, ex-factory prices were estimated first and calculations were made by adding the domestic transportation and packaging expenses on top of ex-factory prices.
- Factory prices (ex-works) were provided by SODA management. The provided management price data was based on the soda price estimates of a market research firm called IHS until 2024. After 2024, soda prices are projected to grow with \$ inflation (2%).
- While determining the prices, the distinction of soda and sodium bicarbonate, domestic and international sales prices have also been taken into consideration.

Sales Price (\$/ton)

\$ / ton	2026	2027	2028	2029	2030
Soda - America	210	214	219	223	227
Soda - International	190	194	198	202	206
Sodium Bicarbonate - America	258	263	268	274	279
Sodium Bicarbonate - International	190	194	198	202	206

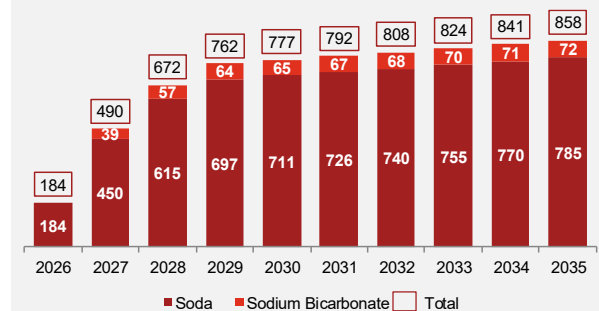
  

\$ / ton	2031	2032	2033	2034	2035
Soda - America	232	237	241	246	251
Soda - International	210	214	219	223	228
Sodium Bicarbonate - America	285	290	296	302	308
Sodium Bicarbonate - International	210	214	218	223	227

### Sales Revenues

- The estimated distribution of sales based on volume, location and packaging were provided by the Company management.
- 20% of soda sales are sold to America and the rest to international customers; In sodium bicarbonate, domestic and international sales are projected to be distributed equally (50% - 50%).
- It is assumed that 25% of Soda's domestic sales and 15% of international sales; and 60% of sodium and bicarbonate sales of America will be packaged.

Total Sales Revenues (\$ m)



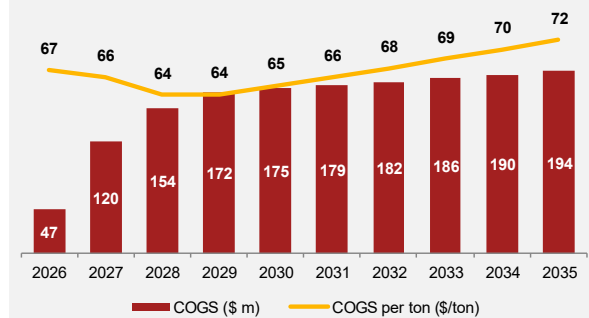
Source: Company Management

## Natural Soda Ash Investment Basic Assumptions (2/3)

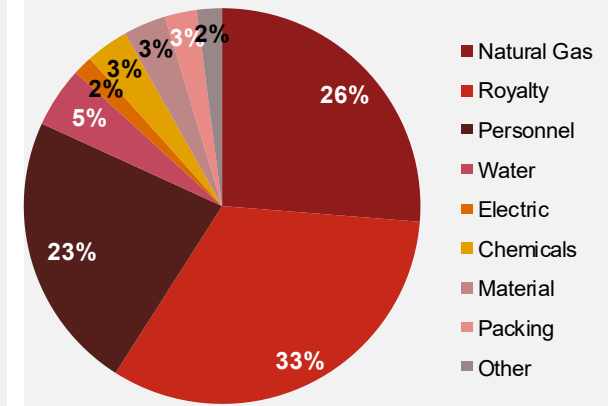
### Cost of Sales

- Technical cost projections for the investment were prepared by discussing with SODA management and technical teams responsible. The cogeneration plant, which is planned to be built next to the soda production facility, will be established mainly to meet some of the facility's electricity needs. For the electricity to be produced, one of the largest cost items will be natural gas. After taking the amount of electricity taken from outside into account, the total natural gas need of the facilities is foreseen to be 345 million m3 per year.
- In addition, the abundance of rock gas as a reserve in North America, and the fact that it is difficult to transmit it to the geographies outside the USA by pipeline, creates an abundance of supply in the region. For this reason, natural gas, which is the main input in energy, is used as a cheaper energy source compared to other continents.
- With the planned water pipe infrastructure and pumping station, it is planned to draw water from the water beds in the Green River basin. Hourly water demand for the whole production is expected to be approximately 700 m3.
- The installed power of the cogeneration plant, which is planned to be established, will be 110 MW. However, it is expected that this capacity will not be sufficient for the whole facility and 5% of the total electricity need is estimated to be procured from outside.
- While the whole facility is operating at full capacity, it is expected to have approximately 215 personnel to work in production.
- Packaging expenses for packaged sales were followed separately for soda and sodium bicarbonate products. For the packaging costs, assumptions were made by discussing with the SODA management and sales team, comparing current operations and considering the dynamics of the American market. The unit cost, which is expected to be \$ 7 per ton for today's packaged soda sales, is estimated at \$ 9 for sodium bicarbonate.
- State Right (royalty) expense is estimated as 8% of the total sales income.
- Material and maintenance and repair costs are projected as \$ 2 per ton with 2020 prices, and various other chemicals planned to enter into production process are estimated the same at \$ 2 per ton.

Cost of Sales (\$ m)



Breakdown of Cost of Sales



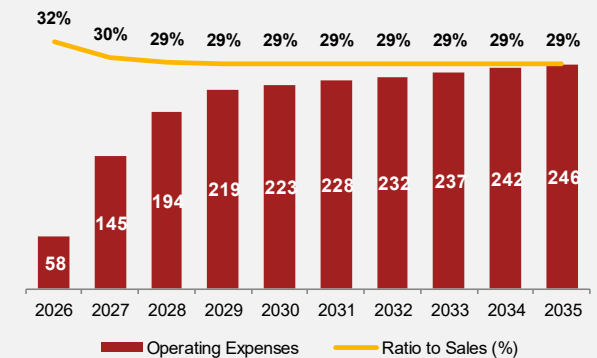
Source: Company Management

## Natural Soda Ash Investment Basic Assumptions (3/3)

### Operating Expenses

- Cost items that may arise from sales activities and basic assumptions were provided by SODA management and sales team. Domestic transportation expenses are calculated separately for American and international sales of soda and sodium bicarbonate products. The domestic transportation costs of the Soda product per ton in the USA and internationally are determined as \$ 85 and \$ 53, respectively, at 2020 real prices. The same prices for sodium bicarbonate product are set at \$ 75 and \$ 53, respectively.
- For the periods with the production activities at full capacity, the number of personnel in sales marketing department was determined as 51, while the number of personnel in the general management department was determined as 25.
- It is foreseen that 75% of the sales will be made directly or through the distributor and no commission will be paid for this portion of the sales. For the remaining 25%, it is foreseen that 4% broker commission will be paid. In addition, a \$ 0.25 customs clearance expense per ton was estimated to cover declaration and port charges for international sales.
- In addition, bank expenses and other expenses are estimated to be 0.1% and 0.5% of total sales, respectively.

Operating Expenses (\$ m)



### Tax

- According to the information provided by the company management, it is understood that there will be no corporate tax at Pacific Soda LLC level, rather the corporate tax will be paid by the holding companies over the income generated from their shares in Pacific Soda LLC.
- Considering the possible changes and uncertainties in this structure until 2026, which is projected to be the first year of corporate tax payments, it is deemed more appropriate to assume that the corporate tax to be paid by Soda Pacific LLC instead of holding companies. In this context, 21% corporate tax on operating profit is calculated.

### NWC

- In line with the information received from SODA management, the ratio of net working capital to sales revenues was taken into account as 14% during the projection period.

### Reserve

- According to the information provided by SODA management, it is assumed that the mineral reserve will last 60 years from 2026 with an annual production of 2.5 m tons. As a result, projections were made until 2085 within the scope of the valuation study.

Source: Company Management

# Appendix

7	Letter of Engagement	233
8	Contacts	238
9	Information Sources	244
10	Macroeconomic Assumptions	251
11	Discounted Cash Flows	254
12	Investment Properties	301
13	Comparable Companies	302
14	Beta and WACC Analysis	348
15	Glossary	390

## Letter of Engagement (1/5)



## Letter of Engagement (2/5)



## Letter of Engagement (3/5)



## Letter of Engagement (4/5)



## Letter of Engagement (5/5)



## Contacts (1/6)

### SISE

Contact person	Company name	Position
<b>Görkem ELVERİCİ</b>	SISE	Chairman, Financial Affairs
<b>Gökhan GÜRALP</b>	SISE	Financial Control and Reporting Director
Tolga <b>İŞMEN</b>	SISE	Chief Legal Counsel
<b>Özlem</b> VERGON	SISE	Chairman, Strategy
<b>Başak ÖGE</b>	SISE	Coordinator, Corporate Governance & Compliance
Murat <b>Ardıç</b> YILMAZ	SISE	Strategic Planning and Portfolio Management Director

## Contacts (2/6)

### SISE – Other Companies

Contact person	Company name	Position
Ahmet <b>ÇELİK</b>	Şişecam Holding	Financial Control and Statutory Reporting Executive
<b>İlker</b> ALBAYRAK	Şişecam Dış Ticaret	General Accounting Chief
Nihal <b>TOPÇUOĞLU</b>	Çayırova Cam Sanayii	Accounting Manager
Hasan <b>SAÇAN</b>	Şişecam Sigorta	Accounting Chief
<b>Namık</b> BAYDEMİR	Şişecam Enerji / Camış Elektrik	CEO of Şişecam Enerji A.Ş.
Batu <b>BİLGE</b>	Şişecam Enerji / Camış Elektrik	Energy Trading Manager
<b>Güler</b> GÜRSES	Şişecam Enerji / Camış Elektrik	Accounting Director
Osman KORALAY	Şişecam Çevre Sistemleri	CEO
<b>Pınar</b> ÜNAL	Şişecam Çevre Sistemleri	Financial Affairs Executive
Tarkan <b>ÜZMEZ</b>	Camış Ambalaj	Accounting Manager
Mutlu <b>YÜKSEL</b>	Camış Ambalaj	Factory Manager
Mehmet <b>AKGÜN</b>	Camış Madencilik	Mine Search and Development Manager
Burak EKER	Camış Madencilik	Production Planning Chief
<b>Özgür</b> BALCI	Camış Madencilik	Business Development Chief
<b>Tarık</b> ELMALI	Camış Madencilik	Health, Safety and Environment Manager
Burcu <b>ÖNER</b>	Camış Madencilik	Accounting Manager
<b>İlknur</b> KOZCAZ	Soda	Strategic Planning Specialist
Saynur <b>DAĞLI</b>	Soda	Budget and Financial Controlling Specialist

## Contacts (3/6)

### TRKCM

Contact person	Company name	Position
Ebru <b>ŞAPOĞLU</b>	TRKCM	Sales and Marketing Vice President
<b>Bülent</b> AYDIN	TRKCM	Strategic Planning Director
<b>Bünyamin</b> ARSLAN	TRKCM	Budget and Financial Controlling Manager – Architectural Glass
Ufuk YAMAK	TRKCM	Budget and Financial Controlling Manager – Automotive Glass
Ahmet <b>DERVİŞ</b>	TRKCM	Business Development Director
Ege <b>ÖZGÜVEN</b>	TRKCM	Senior Strategic Planning Specialist
<b>Orçun</b> KAHYAOĞLU	TRKCM	Senior Strategic Planning Specialist
Tansu AKALIN	TRKCM	Senior Budget and Financial Controlling Specialist
Ahmet <b>ÖZTÜRK</b>	TRKCM	Budget and Financial Controlling Specialist
Ezgi <b>UÇAR</b>	TRKCM	Strategic Planning Assistant Specialist
Fatih TAVMAN	TRKCM	Strategic Planning Assistant Specialist
Melek AK	TRKCM	Business Development Assistant Specialist

## Contacts (4/6)

### ANACM

Contact person	Company name	Position
Sibel <b>KOÇ KARACAOĞLU</b>	ANACM	Financial Affairs Director
Selim KALKAN	ANACM	Strategic Planning Director
<b>İlker GÜVEN</b>	ANACM	Budget and Financial Controlling Manager
Hasan <b>TUNÇ</b>	ANACM	Strategic Planning Specialist
Sibel TEMURLENK	ANACM	Strategic Planning Assistant Specialist

## Contacts (5/6)

### PASAB & DENCM

Contact person	Company name	Position
<b>Başar TIRPanci</b>	PASAB	Strategic Planning Director
<b>Erkan TAŞDEMİRCİ</b>	PASAB	Budget and Financial Controlling Manager
<b>Deniz KILIÇDERE</b>	PASAB	Business Development Manager
Burak DURMAZ	PASAB	Strategic Planning Assistant Specialist
<b>Serpil BEŞBAŞ</b>	PASAB	Financial Affairs Manager - <b>Paşabahçe</b> Stores
Semra YAZKAN	PASAB	Budget Control Executive - <b>Paşabahçe</b> Stores

## Contacts (6/6)

### SODA

Contact person	Company name	Position
Fehmi ALANLI	SODA	Sales and Marketing- Vice President
Hidayet <b>ÖZDEMİR</b>	SODA	Production Vice President - Advisor
Umut <b>Barış DÖNMEZ</b>	SODA	Financial Affairs Director
Selma AKYOL	SODA	Supply Chain Director
Nedim <b>KULAKSIZOĞLU</b>	SODA	Financial Affairs Director- Pacific LLC
<b>Tuğrul</b> ERHAN	SODA	Sales and Marketing Group Manager - Soda
Aylin <b>ERENTÜRK</b>	SODA	Foreign Sales Manager
<b>Gülray</b> TEZCAN	SODA	Budget and Financial Controlling Specialist
Ece Keklik <b>ÖLMEZ</b>	SODA	Strategic Planning Specialist
Serra NEMUTLU	SODA	Strategic Planning Specialist
Azize <b>DEMİR</b>	SODA	Strategic Planning Assistant Specialist

## Information Sources (1/7)

### TRKCM

Financial information	Company name	Description
Consolidated Financial Statements	TRKCM	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	TRKCM	Financial reporting packages of solo, company-based TMS/TFRS financial statements for <b>all the companies under the Flat Glass Group, undergone independent auditing by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019</b> , which serve as a basis for the consolidated financial statements preparation
Business Plans	TRKCM	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the TRKCM Management for all of the Companies in the Flat Glass Group for the period between 2020-2025
Corporate Income Tax Returns and Tax Incentive Certificates	TRKCM	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base</b>
Strategic Plan Presentation and Other Key Information	TRKCM	<ul style="list-style-type: none"> <li>• Production capacity, furnace count, personnel count, brands</li> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Historical developments and current state of TRKCM and solo companies</li> <li>• Key information and forecasts in relation to the architectural glass and automotive glass markets</li> <li>• Details on the receivables and payables of a financing nature for the companies within the Flat Glass Group</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Flat Glass Group</li> </ul>

## Information Sources (2/7)

### ANACM

Financial information	Company name	Description
Consolidated Financial Statements	ANACM	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	ANACM	Financial reporting packages of solo, company-based TMS/TFRS financial statements for all the companies under the Glass Packaging Group, undergone independent auditing by <b>Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019</b> , which serve as a basis for the consolidated financial statements preparation
Business Plans	ANACM	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the ANACM Management for all of the Companies in the Glass Packaging Group for the period between 2020-2025
Corporate Tax Returns and Tax Incentive Certificates	ANACM	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base.</b>
Strategic Plan Presentation and Other Key Information	ANACM	<ul style="list-style-type: none"> <li>• Production capacity, furnace count, personnel count</li> <li>• Income and cost calculations related to the 2020 budget</li> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Historical developments and current state of the Glass Packaging Group and solo companies</li> <li>• Key information and forecasts in relation to the glass packaging market</li> <li>• Key information, presentations and detailed feasibility works in relation to the Eastern Europe investments</li> <li>• Details on the receivables and payables of a financing nature for the companies within the Glass Packaging Group</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Glass Packaging Group</li> </ul>

## Information Sources (3/7)

### PASAB

Financial information	Company name	Description
Consolidated Financial Statements	PASAB	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	PASAB	Financial reporting packages of solo, company-based TMS/TFRS financial statements for <b>all the companies under the Glassware Group, undergone independent auditing by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019, which</b> serve as a basis for the consolidated financial statements preparation
Business Plans	PASAB	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the PASAB Management for all of the Companies in the Glassware Group for the period between 2020-2025
Corporate Tax Returns and Tax Incentive Certificates	PASAB	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base.</b>
Strategic Plan Presentation and Other Key Information	PASAB	<ul style="list-style-type: none"> <li>• Production capacity, furnace count, personnel count</li> <li>• Income and cost calculations related to the 2020 budget</li> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Historical developments and current state of the Glassware Group and solo companies</li> <li>• Key information and forecasts in relation to the glassware market</li> <li>• Details on the receivables and payables of a financing nature for the companies within the Glassware Group</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Glassware Group</li> </ul>

## Information Sources (4/7)

### DENCM

Financial information	Company name	Description
Consolidated Financial Statements	DENCM	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	DENCM	Financial reporting packages of solo, company-based TMS/TFRS financial statements for <b>DENCM, undergone independent auditing by Güney Bağımsız Denetim ve S.M.M.M. A.Ş.</b> dated 31.12.2017, 31.12.2018 and 31.12.2019, which serve as a basis for the consolidated financial statements preparation
Business Plans	DENCM	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the DENCM Management for DENCM for the period between 2020-2025
Corporate Tax Returns and Tax Incentive Certificates	DENCM	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base.</b>
Strategic Plan Presentation and Other Key Information	DENCM	<ul style="list-style-type: none"> <li>• Production capacity, furnace count, personnel count</li> <li>• Income and cost calculations related to the 2020 budget</li> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Historical developments and current state of DENCM</li> <li>• Key information and forecasts in relation to the glassware market</li> <li>• Details on the receivables and payables of a financing nature of DENCM</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses of DENCM</li> </ul>

## Information Sources (5/7)

### SODA

Financial information	Company name	Description
Consolidated Financial Statements	SODA	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	SODA	Financial reporting packages of solo, company-based TMS/TFRS financial statements for <b>all the companies under the Chemicals Group, undergone independent auditing by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019, which</b> serve as a basis for the consolidated financial statements preparation
Business Plans	SODA	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the SODA Management for all of the Companies in the Chemicals Group for the period between 2020-2025
Corporate Tax Returns and Tax Incentive Certificates	SODA	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base.</b>
Strategic Plan Presentation and Other Key Information	SODA	<ul style="list-style-type: none"> <li>• Production capacity, furnace count, personnel count</li> <li>• Income and cost calculations related to the 2020 budget</li> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Historical developments and current state of the Chemicals Group and solo companies</li> <li>• Key information and forecasts in relation to the chemicals market</li> <li>• Key information, presentations and detailed feasibility works in relation to the USA investment</li> <li>• Details on the receivables and payables of a financing nature for the companies within the Chemicals Group</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Chemicals Group</li> </ul>

## Information Sources (6/7)

### SISE – Consolidated

Financial information	Company name	Description
Consolidated Financial Statements	SISE	Consolidated financial statements, relevant consolidation work and audit reports prepared <b>and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS</b> , dated 31.12.2017, 31.12.2018 and 31.12.2019
Solo Financial Statements	SISE	Financial reporting packages of solo, company-based TMS/TFRS financial statements for <b>the Other Companies with SISE shareholding, undergone independent auditing by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019, which</b> serve as a basis for the consolidated financial statements preparation
Business Plans	SISE	Detailed business plans including information regarding price, volume, sales, cost, investment spending, capacity and working capital prepared by the SISE Management for all the Other Companies, including SC for the period between 2020-2025
Corporate Tax Returns and Tax Incentive Certificates	SISE	Corporate Income Tax returns and tax incentive certificates have been obtained in order to determine the deductible tax incentives from the Corporate Income Tax and the previous <b>years' losses deductible from the tax base.</b>
Dividend Distribution Table	SISE	The exercises related to the details of dividend distributions of the Group Companies that will take place after 31.12.2019, prepared by the SISE Management
Other Key Information	SISE	<ul style="list-style-type: none"> <li>• Current shareholding structure</li> <li>• Fixed asset movement tables</li> <li>• Appraisal reports for the Investment Properties</li> <li>• Copyright and central services income works and detailed investment plans for SC</li> <li>• R&amp;D centre spending briefing for SC</li> <li>• Aging table for the investment credit of CV</li> <li>• Details on the receivables and payables of a financing nature for all Other Companies</li> <li>• Non-operational assets and liabilities and information on one-off income and expenses for all Other Companies</li> <li>• The documentation prepared for the existing land and the land sold in 2020 for CY</li> <li>• The amount of precious metal owned by CE and the valuation works</li> </ul>

## *Information Sources (7/7)*

### *Publicly Available Sources*

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- IMF World Economic Outlook
- Bloomberg
- PDP
- Capital IQ
- CBRT (TCMB)
- Automotive Industry Association (Otomotiv Sanayii Derneği)

## Macroeconomic Assumptions

### Inflation

#### Year-end inflation

Country/Region	Currency	2017	2018	2019	2020	2021	2022	2023	2024	2025
Turkey	TL	11.92%	20.30%	13.50%	12.00%	12.00%	11.00%	10.00%	9.00%	8.00%
USA	\$	2.17%	1.92%	2.18%	0.78%	2.42%	2.00%	2.00%	2.00%	2.00%
Euro Zone	EUR	1.35%	1.52%	1.41%	-0.08%	1.28%	1.50%	1.75%	2.00%	2.00%
Russia	RUB	2.52%	4.27%	4.85%	3.79%	2.89%	3.00%	3.50%	4.00%	4.00%
China	CNY	1.80%	1.90%	2.20%	0.95%	2.98%	2.90%	3.00%	3.00%	3.00%
Bulgaria	BGN	1.80%	2.31%	2.20%	1.00%	2.40%	2.30%	2.30%	2.30%	2.30%
Georgia	GEL	6.72%	1.52%	3.02%	3.50%	3.04%	3.02%	2.98%	3.02%	3.02%
Bosnia-Herzegovina	BAM	1.62%	1.64%	1.61%	-0.64%	1.24%	1.58%	1.71%	3.83%	3.83%
Romania	RON	3.32%	3.26%	3.53%	1.39%	1.94%	2.55%	2.55%	2.55%	2.55%
India	INR	4.59%	2.67%	4.09%	2.73%	3.85%	4.00%	4.00%	4.00%	4.00%

#### Average inflation

Country/Region	Currency	2017	2018	2019	2020	2021	2022	2023	2024	2025
Turkey	TL	11.14%	16.33%	15.68%	12.00%	12.00%	11.50%	10.50%	9.50%	8.50%
USA	\$	2.14%	2.44%	1.82%	0.62%	2.24%	2.21%	2.00%	2.00%	2.00%
Euro Zone	EUR	1.54%	1.76%	1.31%	0.23%	0.98%	1.39%	1.63%	1.88%	2.00%
Russia	RUB	3.67%	2.88%	4.99%	3.09%	2.99%	2.94%	3.25%	3.75%	4.00%
China	CNY	1.56%	2.10%	2.28%	3.05%	2.55%	2.94%	2.95%	3.00%	3.00%
Bulgaria	BGN	1.19%	2.63%	2.42%	1.03%	1.95%	2.35%	2.30%	2.30%	2.30%
Georgia	GEL	6.04%	2.62%	2.51%	4.64%	3.69%	3.03%	3.00%	3.00%	3.02%
Bosnia-Herzegovina	BAM	1.25%	1.37%	1.47%	-0.64%	1.37%	1.41%	1.64%	2.77%	3.83%
Romania	RON	1.34%	4.63%	3.28%	2.25%	1.46%	2.24%	2.55%	2.55%	2.55%
India	INR	3.60%	3.48%	3.88%	3.34%	3.62%	3.92%	4.00%	4.00%	4.00%

Source: IMF, PwC Analysis, Publicly Available Sources

## Macroeconomic Assumptions

### Foreign Exchange Rates (1/2)

Recent developments, which occurred within the first 4 months of 2020, have been taken into account in the assumptions made for the year 2020. For the other years, the exchange rate differences have been estimated based on the expected inflation difference (Fisher method).

#### Year-end Foreign Exchange Rates

Parity	2017	2018	2019	2020	2021	2022	2023	2024	2025
USD/TL	3.77	5.26	5.94	6.95	7.60	8.27	8.92	9.53	10.09
EUR/TL	4.52	6.03	6.65	7.54	8.34	9.12	9.85	10.53	11.15
EUR/RUB	69.39	80.01	69.63	83.51	84.83	86.09	87.57	89.28	91.03
EUR/CNY	7.84	7.91	7.87	7.70	7.83	7.94	8.04	8.11	8.19
EUR/BGN	1.96	1.96	1.96	1.98	2.00	2.01	2.03	2.03	2.04
EUR/GEL	3.10	3.07	3.21	3.50	3.56	3.61	3.66	3.69	3.73
EUR/BAM	1.96	1.96	1.96	1.94	1.94	1.95	1.94	1.98	2.02
EUR/RON	4.69	4.69	4.81	4.88	4.91	4.96	5.00	5.03	5.05
EUR/INR	76.53	79.97	79.80	83.51	85.63	87.73	89.68	91.43	93.23
TL/RUB	15.37	13.27	10.47	11.08	10.18	9.44	8.89	8.48	8.16
TL/CNY	1.74	1.31	1.18	1.02	0.94	0.87	0.82	0.77	0.73
BGN/TL	2.31	3.08	3.40	3.81	4.17	4.52	4.87	5.18	5.47
GEL/TL	1.46	1.97	2.07	2.15	2.34	2.52	2.69	2.85	2.99
BAM/TL	2.31	3.08	3.40	3.88	4.29	4.69	5.07	5.32	5.53
RON/TL	0.96	1.29	1.38	1.54	1.70	1.84	1.97	2.09	2.21
TL/INR	16.95	13.27	12.00	11.08	10.27	9.62	9.10	8.68	8.36
EUR/EGP	21.17	20.47	17.91	The companies operating under these currencies are not considered under Income Approach. Accordingly, forward looking projections were not required.					
EUR/UAH	33.60	31.73	26.52						
TL/EGP	4.69	3.40	2.69						
TL/UAH	7.44	5.26	3.99						

Source: IMF, PwC Analysis, Publicly Available Sources

## Macroeconomic Assumptions

### Foreign Exchange Rates (2/2)

Recent developments, which occurred within the first 4 months of 2020, have been taken into account in the assumptions made for the year 2020. For the other years, the exchange rate differences have been estimated based on the expected inflation difference (Fisher method).

#### Average Foreign Exchange Rates

	2017	2018	2019	2020	2021	2022	2023	2024	2025
\$/TL	3.64	4.83	5.67	6.74	7.28	7.94	8.60	9.23	9.81
EUR/TL	4.12	5.68	6.35	7.33	7.94	8.73	9.48	10.19	10.84
EUR/RUB	66.28	74.66	72.81	80.98	84.17	85.46	86.83	88.43	90.16
EUR/CNY	7.67	7.86	7.78	7.70	7.76	7.88	7.99	8.07	8.15
EUR/BGN	1.96	1.96	1.96	1.97	1.99	2.01	2.02	2.03	2.03
EUR/GEL	2.83	2.98	3.16	3.44	3.53	3.59	3.64	3.68	3.71
EUR/BAM	1.96	1.96	1.96	1.95	1.94	1.94	1.95	1.96	2.00
EUR/RON	4.60	4.68	4.77	4.84	4.89	4.94	4.98	5.01	5.04
EUR/INR	73.54	80.42	78.81	82.60	84.57	86.68	88.71	90.55	92.33
TL/RUB	16.10	13.15	11.47	11.04	10.61	9.79	9.15	8.68	8.32
TL/CNY	1.86	1.38	1.22	1.05	0.98	0.90	0.84	0.79	0.75
TL/BGN	0.48	0.34	0.31	0.27	0.25	0.23	0.21	0.20	0.19
TL/GEL	0.69	0.52	0.50	0.47	0.44	0.41	0.38	0.36	0.34
TL/BAM	0.48	0.34	0.31	0.27	0.25	0.22	0.21	0.19	0.18
TL/RON	1.12	0.82	0.75	0.66	0.62	0.57	0.53	0.49	0.46
TL/INR	17.87	14.16	12.41	11.26	10.66	9.93	9.35	8.88	8.52
EUR/EGP	20.09	20.89	18.77	The companies operating under these currencies are not considered under Income Approach. Accordingly, forward looking projections were not required.					
EUR/UAH	30.03	31.98	28.92						
TL/EGP	4.88	3.68	2.96						
TL/UAH	7.30	5.63	4.56						

Source: IMF, PwC Analysis, Publicly Available Sources

# *Discounted Cash Flows*

## Discounted Cash Flows

### Trakya Cam Sanayii A.Ş. (Solo)

Sensitivity  
Analysis (TL m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	4,967	4,967	4,967	4,967	4,967
	-25 bp	5,089	5,089	5,089	5,089	5,089
	-	5,218	5,218	5,218	5,218	5,218
	+25 bp	5,355	5,355	5,355	5,355	5,355
	+50 bp	5,502	5,502	5,502	5,502	5,502

m TL	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	2,004	2,364	2,883	2,750	3,319	4,088	4,861	5,530	6,203	6,699
Change (%)		18.0%	21.9%	-4.6%	20.7%	23.2%	18.9%	13.8%	12.2%	8.0%
Cost of Sales	(1,162)	(1,372)	(1,648)	(1,641)	(1,947)	(2,339)	(2,737)	(3,099)	(3,459)	(3,736)
<b>Gross Profit</b>	<b>843</b>	<b>992</b>	<b>1,235</b>	<b>1,109</b>	<b>1,371</b>	<b>1,749</b>	<b>2,124</b>	<b>2,431</b>	<b>2,744</b>	<b>2,963</b>
GP Margin (%)	42.0%	42.0%	42.8%	40.3%	41.3%	42.8%	43.7%	44.0%	44.2%	44.2%
Operating Expenses	(358)	(433)	(569)	(608)	(656)	(798)	(946)	(1,070)	(1,206)	(1,303)
Other Operating Income / Ex	75	143	178	154	196	243	290	302	341	368
<b>EBITDA</b>	<b>560</b>	<b>703</b>	<b>843</b>	<b>654</b>	<b>912</b>	<b>1,194</b>	<b>1,468</b>	<b>1,664</b>	<b>1,878</b>	<b>2,028</b>
EBITDA Margin (%)	27.9%	29.7%	29.2%	23.8%	27.5%	29.2%	30.2%	30.1%	30.3%	30.3%
Depreciation and Amortizatic	(58)	(60)	(116)	(193)	(218)	(274)	(296)	(329)	(371)	(752)
<b>EBIT</b>	<b>502</b>	<b>643</b>	<b>727</b>	<b>461</b>	<b>694</b>	<b>920</b>	<b>1,171</b>	<b>1,334</b>	<b>1,507</b>	<b>1,276</b>
EBIT Margin (%)	25.0%	27.2%	25.2%	16.8%	20.9%	22.5%	24.1%	24.1%	24.3%	19.0%
Tax				(101)	(139)	(184)	(234)	(267)	(301)	(255)
Tax Rate (%)				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Depreciation and Amortization (+)				193	218	274	296	329	371	752
<b>Operational Cash Flows</b>				<b>553</b>	<b>773</b>	<b>1,010</b>	<b>1,233</b>	<b>1,397</b>	<b>1,577</b>	<b>1,773</b>
Change in NWC				68	(114)	(156)	(156)	(135)	(135)	(99)
Capex				(810)	(710)	(938)	(479)	(657)	(450)	(752)
<b>Free Cash Flows</b>				<b>(190)</b>	<b>(52)</b>	<b>(84)</b>	<b>598</b>	<b>605</b>	<b>991</b>	<b>921</b>
Discount Rate				21.5%	19.9%	19.4%	18.7%	17.7%	16.7%	16.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.91	0.75	0.63	0.53	0.45	0.38	0.38
<b>Discounted Cash Flows</b>				<b>(172)</b>	<b>(39)</b>	<b>(53)</b>	<b>316</b>	<b>270</b>	<b>378</b>	<b>4,278</b>

TL m	
DCF (2020-25)	700
Terminal Value (>2025)	4,278
<b>Enterprise Value</b>	<b>4,977</b>
Net Cash/(Debt)	121
Other Adjustments	120
<b>Adjusted Equity Value</b>	<b>5,218</b>
<b>Other Adjustments</b>	
Investment Property	1
Tax Incentive Assets	119
<b>Total</b>	<b>120</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Trakya Glass Bulgaria EAD

Sensitivity  
Analysis (BGN m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	222	208	195	182	171
-25 bp	232	217	203	190	178
-	243	227	212	198	185
+25 bp	254	237	221	207	193
+50 bp	267	249	232	216	202

BGN m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	233	218	205	228	240	265	271	278	284	290
Change (%)		-6.7%	-5.9%	11.3%	5.3%	10.4%	2.3%	2.3%	2.3%	2.3%
Cost of Sales	(136)	(121)	(118)	(139)	(141)	(153)	(157)	(160)	(164)	(168)
<b>Gross Profit</b>	<b>98</b>	<b>97</b>	<b>87</b>	<b>89</b>	<b>99</b>	<b>112</b>	<b>115</b>	<b>117</b>	<b>120</b>	<b>123</b>
GP Margin (%)	41.9%	44.4%	42.2%	39.1%	41.4%	42.3%	42.3%	42.3%	42.3%	42.3%
Operating Expenses	(49)	(51)	(53)	(51)	(55)	(56)	(60)	(61)	(63)	(64)
Other Operating Income / Ex	1	3	4	2	3	3	3	3	3	3
<b>EBITDA</b>	<b>50</b>	<b>49</b>	<b>37</b>	<b>40</b>	<b>47</b>	<b>59</b>	<b>57</b>	<b>59</b>	<b>60</b>	<b>62</b>
EBITDA Margin (%)	21.5%	22.3%	18.2%	17.7%	19.7%	22.1%	21.2%	21.2%	21.2%	21.2%
Depreciation and Amortization	(27)	(27)	(32)	(36)	(36)	(36)	(36)	(36)	(36)	(27)
<b>EBIT</b>	<b>23</b>	<b>22</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>22</b>	<b>21</b>	<b>22</b>	<b>24</b>	<b>34</b>
EBIT Margin (%)	10.0%	10.0%	2.8%	1.8%	4.6%	8.4%	7.8%	8.1%	8.4%	11.8%
Tax				(0)	(1)	(2)	(2)	(2)	(2)	(3)
Tax Rate (%)				10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Depreciation and Amortization (+)				36	36	36	36	36	36	27
<b>Operational Cash Flows</b>				<b>40</b>	<b>46</b>	<b>56</b>	<b>55</b>	<b>57</b>	<b>58</b>	<b>58</b>
Change in NWC				(9)	(3)	(7)	(2)	(2)	(2)	(2)
Capex				(22)	(28)	(16)	(16)	(16)	(16)	(27)
<b>Free Cash Flows</b>				<b>9</b>	<b>15</b>	<b>33</b>	<b>37</b>	<b>39</b>	<b>40</b>	<b>29</b>
Discount Rate				9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.96	0.88	0.81	0.74	0.68	0.62	0.62
<b>Discounted Cash Flows</b>				<b>9</b>	<b>13</b>	<b>27</b>	<b>28</b>	<b>26</b>	<b>25</b>	<b>267</b>

	m BGN	m TL
DCF (2020-25)	128	434
Terminal Value (>2025)	267	907
<b>Enterprise Value</b>	<b>394</b>	<b>1,341</b>
Net Cash/(Debt)	(182)	(620)
<b>Adjusted Equity Value</b>	<b>212</b>	<b>720</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Trakya Glass Rus AO

Sensitivity  
Analysis (RUB m)

		WACC				
LGTR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	11,360	11,106	10,867	10,642	10,429
	-25 bp	11,551	11,283	11,031	10,795	10,572
	-	11,755	11,472	11,206	10,957	10,724
	+25 bp	11,974	11,673	11,393	11,131	10,884
	+50 bp	12,208	11,890	11,593	11,315	11,056

RUB m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	4,454	4,515	3,915	3,626	3,884	4,356	4,484	4,653	4,839	5,033
Change (%)		1.4%	-13.3%	-7.4%	7.1%	12.1%	2.9%	3.8%	4.0%	4.0%
Cost of Sales	(2,208)	(2,369)	(2,218)	(2,161)	(2,297)	(2,537)	(2,610)	(2,709)	(2,817)	(2,930)
<b>Gross Profit</b>	<b>2,246</b>	<b>2,146</b>	<b>1,697</b>	<b>1,464</b>	<b>1,588</b>	<b>1,819</b>	<b>1,874</b>	<b>1,944</b>	<b>2,022</b>	<b>2,103</b>
GP Margin (%)	50.4%	47.5%	43.4%	40.4%	40.9%	41.7%	41.8%	41.8%	41.8%	41.8%
Operating Expenses	(656)	(713)	(657)	(647)	(636)	(703)	(725)	(751)	(781)	(813)
Other Operating Income / Ex	7	40	11	9	9	10	11	11	11	12
<b>EBITDA</b>	<b>1,597</b>	<b>1,473</b>	<b>1,051</b>	<b>826</b>	<b>961</b>	<b>1,126</b>	<b>1,159</b>	<b>1,204</b>	<b>1,252</b>	<b>1,302</b>
EBITDA Margin (%)	35.9%	32.6%	26.9%	22.8%	24.7%	25.8%	25.9%	25.9%	25.9%	25.9%
Depreciation and Amortization	(242)	(208)	(247)	(429)	(422)	(416)	(412)	(427)	(441)	(523)
<b>EBIT</b>	<b>1,355</b>	<b>1,265</b>	<b>805</b>	<b>397</b>	<b>539</b>	<b>710</b>	<b>747</b>	<b>777</b>	<b>811</b>	<b>779</b>
EBIT Margin (%)	30.4%	28.0%	20.5%	10.9%	13.9%	16.3%	16.7%	16.7%	16.7%	15.5%
Tax				(8)	(11)	(14)	(15)	(16)	(16)	(16)
Tax Rate (%)				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Depreciation and Amortization (+)				429	422	416	412	427	441	523
<b>Operational Cash Flows</b>				<b>818</b>	<b>950</b>	<b>1,112</b>	<b>1,144</b>	<b>1,188</b>	<b>1,236</b>	<b>1,287</b>
Change in NWC				87	(30)	(53)	(16)	(22)	(24)	(25)
Capex				(121)	(253)	(256)	(260)	(265)	(270)	(523)
<b>Free Cash Flows</b>				<b>784</b>	<b>668</b>	<b>802</b>	<b>868</b>	<b>901</b>	<b>942</b>	<b>739</b>
Discount Rate				11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.85	0.76	0.68	0.61	0.54	0.54
<b>Discounted Cash Flows</b>				<b>742</b>	<b>566</b>	<b>608</b>	<b>589</b>	<b>548</b>	<b>513</b>	<b>5,227</b>

	RUB m	TL m
DCF (2020-25)	3,565	341
Terminal Value (>2025)	5,227	499
<b>Enterprise Value</b>	<b>8,792</b>	<b>840</b>
Net Cash/(Debt)	2,390	228
Tax Incentive Assets	24	2
<b>Adjusted Equity Value</b>	<b>11,206</b>	<b>1,070</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### HNG Float Glass Limited

Sensitivity  
Analysis (INR m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LGTR	-50 bp	4,101	3,504	2,951	2,438	1,961
	-25 bp	4,611	3,971	3,381	2,835	2,328
	-	5,162	4,475	3,843	3,260	2,721
	+25 bp	5,759	5,020	4,341	3,717	3,141
	+50 bp	6,408	5,610	4,880	4,210	3,593

INR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	5,618	4,962	5,193	5,461	6,198	10,368	12,189	13,182	13,709
Change (%)			-11.7%	4.7%	5.2%	13.5%	67.3%	17.6%	8.1%	4.0%
Cost of Sales	-	(3,923)	(3,443)	(3,473)	(3,584)	(3,877)	(6,489)	(6,999)	(7,548)	(7,850)
<b>Gross Profit</b>	-	<b>1,695</b>	<b>1,519</b>	<b>1,720</b>	<b>1,876</b>	<b>2,322</b>	<b>3,878</b>	<b>5,189</b>	<b>5,634</b>	<b>5,859</b>
GP Margin (%)		30.2%	30.6%	33.1%	34.4%	37.5%	37.4%	42.6%	42.7%	42.7%
Operating Expenses	-	(1,033)	(1,065)	(1,370)	(1,437)	(1,468)	(1,950)	(2,180)	(2,323)	(2,416)
Other Operating Income / Ex	-	28	32	35	28	58	68	73	77	80
<b>EBITDA</b>	-	<b>691</b>	<b>485</b>	<b>385</b>	<b>467</b>	<b>913</b>	<b>1,996</b>	<b>3,083</b>	<b>3,387</b>	<b>3,523</b>
EBITDA Margin (%)		12.3%	9.8%	7.4%	8.6%	14.7%	19.3%	25.3%	25.7%	25.7%
Depreciation and Amortization	-	(442)	(487)	(441)	(1,599)	(1,705)	(1,755)	(1,805)	(1,857)	(1,477)
<b>EBIT</b>	-	<b>249</b>	<b>(2)</b>	<b>(56)</b>	<b>(1,132)</b>	<b>(793)</b>	<b>241</b>	<b>1,277</b>	<b>1,530</b>	<b>2,045</b>
EBIT Margin (%)		4.4%	0.0%	-1.1%	-20.7%	-12.8%	2.3%	10.5%	11.6%	14.9%
Tax				-	-	-	(61)	(321)	(385)	(515)
Tax Rate (%)				0.0%			25.2%	25.2%	25.2%	25.2%
Depreciation and Amortization (+)				441	1,599	1,705	1,755	1,805	1,857	1,477
<b>Operational Cash Flows</b>				<b>385</b>	<b>467</b>	<b>913</b>	<b>1,935</b>	<b>2,761</b>	<b>3,002</b>	<b>3,008</b>
Change in NWC				(1)	(33)	(89)	(608)	(196)	(137)	(74)
Capex				(76)	(15,047)	(1,386)	(643)	(656)	(669)	(1,477)
<b>Free Cash Flows</b>				<b>308</b>	<b>(14,612)</b>	<b>(562)</b>	<b>684</b>	<b>1,909</b>	<b>2,197</b>	<b>1,457</b>
Discount Rate				10.7%	10.7%	10.7%	10.7%	10.7%	10.7%	10.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.70	0.63	0.57	0.57
<b>Discounted Cash Flows</b>				<b>293</b>	<b>(12,547)</b>	<b>(436)</b>	<b>479</b>	<b>1,209</b>	<b>1,256</b>	<b>12,447</b>

	INR m	TL m
DCF (2020-25)	(9,746)	(812)
Terminal Value (>2025)	12,447	1,037
<b>Enterprise Value</b>	<b>2,701</b>	<b>225</b>
Net Cash/(Debt)	1,071	89
Tax Incentive Assets	71	6
<b>Adjusted Equity Value</b>	<b>3,843</b>	<b>320</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Sisecam Flat Glass Italy S.R.L

Sensitivity  
Analysis (EUR m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LGTR	(39)	(39)	(40)	(41)	(42)
-50 bp	(38)	(39)	(40)	(40)	(41)
-25 bp	(37)	(38)	(39)	(40)	(41)
-	(36)	(37)	(38)	(39)	(40)
+25 bp	(35)	(36)	(37)	(38)	(39)
+50 bp					

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	87	95	88	59	63	77	82	57	85	87
Change (%)		9.6%	-8.0%	-32.5%	7.2%	21.7%	6.8%	-31.2%	50.0%	2.0%
Cost of Sales	(55)	(60)	(60)	(49)	(44)	(52)	(55)	(46)	(56)	(57)
<b>Gross Profit</b>	<b>32</b>	<b>35</b>	<b>28</b>	<b>10</b>	<b>20</b>	<b>25</b>	<b>28</b>	<b>10</b>	<b>29</b>	<b>29</b>
GP Margin (%)	37.0%	37.0%	31.9%	17.1%	31.1%	33.0%	33.8%	18.0%	33.7%	33.7%
Operating Expenses	(15)	(17)	(21)	(16)	(16)	(18)	(19)	(17)	(20)	(20)
Other Operating Income / Ex	(0)	-	2	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>18</b>	<b>18</b>	<b>9</b>	<b>(5)</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>(6)</b>	<b>9</b>	<b>9</b>
EBITDA Margin (%)	20.3%	18.8%	9.9%	-9.0%	6.4%	9.5%	10.7%	-11.4%	10.6%	10.6%
Depreciation and Amortization	(6)	(6)	(6)	(7)	(7)	(7)	(8)	(10)	(11)	(6)
<b>EBIT</b>	<b>11</b>	<b>12</b>	<b>2</b>	<b>(12)</b>	<b>(3)</b>	<b>(0)</b>	<b>1</b>	<b>(17)</b>	<b>(2)</b>	<b>3</b>
EBIT Margin (%)	12.9%	12.1%	2.6%	-20.4%	-5.1%	-0.2%	1.0%	-29.6%	-2.2%	4.0%
Tax				-	-	-	(0)	-	-	(1)
Tax Rate (%)				0.0%	0.0%	0.0%	27.9%		0.0%	27.9%
Depreciation and Amortization (+)				7	7	7	8	10	11	6
<b>Operational Cash Flows</b>				<b>(5)</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>(6)</b>	<b>9</b>	<b>8</b>
Change in NWC				(4)	0	(2)	(1)	2	(3)	(0)
Capex				(4)	(7)	(3)	(7)	(30)	(7)	(6)
<b>Free Cash Flows</b>				<b>(13)</b>	<b>(3)</b>	<b>3</b>	<b>1</b>	<b>(34)</b>	<b>(1)</b>	<b>2</b>
Discount Rate				8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.96	0.89	0.82	0.75	0.70	0.64	0.64
<b>Discounted Cash Flows</b>				<b>(12)</b>	<b>(2)</b>	<b>2</b>	<b>1</b>	<b>(24)</b>	<b>(1)</b>	<b>23</b>

	EUR m	TL m
DCF (2020-25)	(36)	(238)
Terminal Value (>2025)	23	153
<b>Enterprise Value</b>	<b>(13)</b>	<b>(85)</b>
Net Cash/(Debt)	(26)	(174)
<b>Adjusted Equity Value</b>	<b>(39)</b>	<b>(258)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Sisecam Flat Glass South Italy S.R.L.

Sensitivity  
Analysis (EUR m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LGTR	-50 bp	10	9	8	7	6
	-25 bp	11	10	8	7	6
	-	12	10	9	8	7
	+25 bp	12	11	10	9	8
	+50 bp	13	12	11	9	8

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	1	8	46	56	63	68	77	71	72
Change (%)			504.9%	492.2%	21.2%	13.6%	7.2%	13.9%	-8.6%	2.0%
Cost of Sales	-	(1)	(6)	(38)	(33)	(36)	(38)	(46)	(40)	(41)
<b>Gross Profit</b>	-	-	<b>2</b>	<b>8</b>	<b>23</b>	<b>27</b>	<b>30</b>	<b>31</b>	<b>31</b>	<b>32</b>
GP Margin (%)		0.0%	21.1%	17.6%	40.8%	43.0%	43.8%	40.5%	43.9%	43.9%
Operating Expenses	-	(4)	(7)	(14)	(16)	(17)	(18)	(19)	(19)	(19)
Other Operating Income / Ex	-	-	(0)	-	-	-	-	-	-	-
<b>EBITDA</b>	-	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>7</b>	<b>10</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13</b>
EBITDA Margin (%)		-276.1%	-63.1%	-13.3%	12.8%	16.2%	17.6%	16.1%	17.6%	17.6%
Depreciation and Amortizatic	-	-	(1)	(4)	(4)	(4)	(5)	(5)	(4)	(6)
<b>EBIT</b>	-	<b>(4)</b>	<b>(6)</b>	<b>(10)</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>7</b>
EBIT Margin (%)		-276.1%	-71.5%	-21.2%	5.3%	9.2%	10.8%	10.3%	11.9%	9.7%
Tax				-	(1)	(2)	(2)	(2)	(2)	(2)
Tax Rate (%)				0.0%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%
Depreciation and Amortization (+)				4	4	4	5	5	4	6
<b>Operational Cash Flows</b>				<b>(6)</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>11</b>
Change in NWC				0	(0)	(1)	(0)	(1)	1	(0)
Capex				(3)	(8)	(3)	(3)	(3)	(3)	(6)
<b>Free Cash Flows</b>				<b>(9)</b>	<b>(2)</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>5</b>
Discount Rate				11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.85	0.76	0.68	0.61	0.55	0.55
<b>Discounted Cash Flows</b>				<b>(8)</b>	<b>(2)</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>28</b>

	EUR m	TL m
DCF (2020-25)	6	42
Terminal Value (>2025)	28	184
<b>Enterprise Value</b>	<b>34</b>	<b>226</b>
Net Cash/(Debt)	(26)	(174)
Tax Incentive Assets	1	9
<b>Adjusted Equity Value</b>	<b>9</b>	<b>61</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Otomotiv A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LGTR	-50 bp	1,450	1,397	1,348	1,302	1,260
	-25 bp	1,487	1,431	1,379	1,331	1,286
	-	1,526	1,467	1,412	1,361	1,313
	+25 bp	1,569	1,506	1,447	1,393	1,343
	+50 bp	1,616	1,548	1,485	1,428	1,375

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	558	706	840	757	984	1,120	1,389	1,745	1,914	2,067
Change (%)		26.4%	19.1%	-9.9%	29.9%	13.8%	24.0%	25.6%	9.7%	8.0%
Cost of Sales	(420)	(479)	(623)	(592)	(775)	(870)	(1,076)	(1,314)	(1,414)	(1,527)
<b>Gross Profit</b>	<b>139</b>	<b>227</b>	<b>218</b>	<b>165</b>	<b>209</b>	<b>250</b>	<b>312</b>	<b>431</b>	<b>499</b>	<b>539</b>
GP Margin (%)	24.8%	32.1%	25.9%	21.8%	21.2%	22.3%	22.5%	24.7%	26.1%	26.1%
Operating Expenses	(72)	(76)	(99)	(106)	(124)	(141)	(164)	(189)	(205)	(222)
Other Operating Income / Expense	6	19	52	37	43	51	61	72	76	82
<b>EBITDA</b>	<b>72</b>	<b>170</b>	<b>170</b>	<b>96</b>	<b>127</b>	<b>159</b>	<b>209</b>	<b>314</b>	<b>370</b>	<b>400</b>
EBITDA Margin (%)	12.9%	24.0%	20.3%	12.7%	12.9%	14.2%	15.1%	18.0%	19.3%	19.3%
Depreciation and Amortization	(19)	(18)	(19)	(22)	(26)	(30)	(35)	(41)	(48)	(124)
<b>EBIT</b>	<b>53</b>	<b>151</b>	<b>152</b>	<b>73</b>	<b>101</b>	<b>129</b>	<b>174</b>	<b>272</b>	<b>322</b>	<b>276</b>
EBIT Margin (%)	9.6%	21.5%	18.0%	9.7%	10.2%	11.5%	12.5%	15.6%	16.9%	13.3%
Tax				(16)	(20)	(26)	(35)	(54)	(64)	(55)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				22	26	30	35	41	48	124
<b>Operational Cash Flows</b>				<b>80</b>	<b>107</b>	<b>133</b>	<b>175</b>	<b>259</b>	<b>306</b>	<b>345</b>
Change in NWC				23	(68)	(40)	(80)	(104)	(49)	(45)
Capex				(71)	(75)	(79)	(100)	(121)	(127)	(124)
<b>Free Cash Flows</b>				<b>31</b>	<b>(36)</b>	<b>14</b>	<b>(6)</b>	<b>34</b>	<b>129</b>	<b>175</b>
Discount Rate				18.8%	18.2%	18.0%	17.2%	16.2%	15.2%	14.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.92	0.77	0.66	0.56	0.48	0.41	0.41
<b>Discounted Cash Flows</b>				<b>29</b>	<b>(28)</b>	<b>9</b>	<b>(3)</b>	<b>16</b>	<b>53</b>	<b>1,071</b>

	TL m
DCF (2020-25)	76
Terminal Value (>2025)	1,071
<b>Enterprise Value</b>	<b>1,147</b>
Net Cash/(Debt)	264
Tax Incentive Assets	0
<b>Adjusted Equity Value</b>	<b>1,412</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Automotive Bulgaria EAD

Sensitivity  
Analysis (BGN m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	4	(1)	(5)	(9)	(13)
-25 bp	7	2	(3)	(7)	(11)
-	10	5	(0)	(5)	(9)
+25 bp	13	8	3	(2)	(6)
+50 bp	17	11	6	1	(4)

BGN m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	110	101	88	92	94	111	125	128	131	134
Change (%)		-8.1%	-12.9%	4.6%	2.1%	18.3%	12.7%	2.3%	2.3%	2.3%
Cost of Sales	(81)	(79)	(75)	(74)	(77)	(88)	(97)	(99)	(100)	(102)
<b>Gross Profit</b>	<b>29</b>	<b>22</b>	<b>13</b>	<b>18</b>	<b>17</b>	<b>23</b>	<b>28</b>	<b>30</b>	<b>31</b>	<b>32</b>
GP Margin (%)	26.1%	21.3%	15.2%	19.2%	18.5%	20.6%	22.7%	23.1%	24.0%	24.0%
Operating Expenses	(13)	(14)	(11)	(12)	(12)	(13)	(14)	(14)	(14)	(15)
Other Operating Income / Ex	1	1	3	1	1	1	1	1	1	1
<b>EBITDA</b>	<b>16</b>	<b>9</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>
EBITDA Margin (%)	14.8%	9.1%	5.5%	6.9%	6.7%	9.7%	12.4%	12.9%	14.0%	14.0%
Depreciation and Amortizatic	(7)	(9)	(7)	(8)	(8)	(9)	(9)	(9)	(10)	(8)
<b>EBIT</b>	<b>9</b>	<b>0</b>	<b>(2)</b>	<b>(1)</b>	<b>(2)</b>	<b>2</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>11</b>
EBIT Margin (%)	8.3%	0.4%	-2.4%	-1.5%	-2.1%	2.0%	5.3%	5.7%	6.7%	8.0%
Tax				-	-	(0)	(1)	(1)	(1)	(1)
Tax Rate (%)				0.0%	0.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Depreciation and Amortization (+)				8	8	9	9	9	10	8
<b>Operational Cash Flows</b>				<b>6</b>	<b>6</b>	<b>11</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
Change in NWC				(1)	(1)	(5)	(4)	(1)	(1)	(1)
Capex				(15)	(10)	(7)	(7)	(7)	(7)	(8)
<b>Free Cash Flows</b>				<b>(9)</b>	<b>(4)</b>	<b>(1)</b>	<b>4</b>	<b>8</b>	<b>10</b>	<b>9</b>
Discount Rate				8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.96	0.88	0.81	0.75	0.69	0.63	0.63
<b>Discounted Cash Flows</b>				<b>(9)</b>	<b>(4)</b>	<b>(1)</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>86</b>

	BGN m	TL m
DCF (2020-25)	2	6
Terminal Value (>2025)	86	293
<b>Enterprise Value</b>	<b>88</b>	<b>299</b>
Net Cash/(Debt)	(88)	(301)
Tax Incentive Assets	0	1
<b>Adjusted Equity Value</b>	<b>(0)</b>	<b>(1)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Automotive Glass Alliance Rus AO

Sensitivity  
Analysis (RUB m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	1,003	943	888	835	785
-25 bp	1,035	973	915	860	808
-	1,068	1,004	943	886	833
+25 bp	1,105	1,037	974	914	858
+50 bp	1,143	1,072	1,006	944	886

RUB m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	1,131	1,299	1,603	1,363	1,984	2,492	2,788	2,937	2,943	3,061
Change (%)		14.9%	23.4%	-15.0%	45.5%	25.6%	11.9%	5.4%	0.2%	4.0%
Cost of Sales	(933)	(1,086)	(1,236)	(1,076)	(1,503)	(1,849)	(2,070)	(2,157)	(2,150)	(2,236)
<b>Gross Profit</b>	<b>198</b>	<b>213</b>	<b>368</b>	<b>287</b>	<b>481</b>	<b>643</b>	<b>718</b>	<b>780</b>	<b>793</b>	<b>825</b>
GP Margin (%)	17.5%	16.4%	22.9%	21.1%	24.3%	25.8%	25.8%	26.6%	27.0%	27.0%
Operating Expenses	(148)	(176)	(232)	(244)	(328)	(375)	(411)	(430)	(440)	(457)
Other Operating Income / Ex	(11)	(3)	20	25	35	44	49	51	51	53
<b>EBITDA</b>	<b>39</b>	<b>34</b>	<b>156</b>	<b>68</b>	<b>188</b>	<b>311</b>	<b>355</b>	<b>401</b>	<b>405</b>	<b>421</b>
EBITDA Margin (%)	3.5%	2.6%	9.7%	5.0%	9.5%	12.5%	12.7%	13.7%	13.8%	13.8%
Depreciation and Amortization	(242)	(238)	(247)	(251)	(255)	(259)	(266)	(273)	(282)	(184)
<b>EBIT</b>	<b>(203)</b>	<b>(204)</b>	<b>(91)</b>	<b>(183)</b>	<b>(67)</b>	<b>52</b>	<b>90</b>	<b>128</b>	<b>122</b>	<b>237</b>
EBIT Margin (%)	-18.0%	-15.7%	-5.7%	-13.4%	-3.4%	2.1%	3.2%	4.3%	4.2%	7.8%
Tax				-	-	(1)	(2)	(3)	(2)	(5)
Tax Rate (%)					0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Depreciation and Amortization (+)				251	255	259	266	273	282	184
<b>Operational Cash Flows</b>				<b>68</b>	<b>188</b>	<b>310</b>	<b>354</b>	<b>398</b>	<b>402</b>	<b>416</b>
Change in NWC				74	(118)	(140)	(83)	(40)	(1)	(33)
Capex				(75)	(84)	(85)	(130)	(155)	(180)	(184)
<b>Free Cash Flows</b>				<b>66</b>	<b>(14)</b>	<b>85</b>	<b>140</b>	<b>204</b>	<b>221</b>	<b>200</b>
Discount Rate				12.2%	12.2%	12.2%	12.2%	12.2%	12.2%	12.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.94	0.84	0.75	0.67	0.60	0.53	0.53
<b>Discounted Cash Flows</b>				<b>63</b>	<b>(12)</b>	<b>64</b>	<b>94</b>	<b>121</b>	<b>117</b>	<b>1,288</b>

	RUB m	TL m
DCF (2020-25)	447	43
Terminal Value (>2025)	1,288	123
<b>Enterprise Value</b>	<b>1,735</b>	<b>166</b>
Net Cash/(Debt)	(793)	(76)
Tax Incentive Assets	1	0
<b>Adjusted Equity Value</b>	<b>943</b>	<b>90</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Glass Corp S.A.

Sensitivity  
Analysis (RON m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	(176)	(184)	(192)	(199)	(205)
-25 bp	(170)	(179)	(187)	(194)	(201)
-	(164)	(173)	(182)	(190)	(197)
+25 bp	(157)	(167)	(176)	(185)	(192)
+50 bp	(150)	(160)	(170)	(179)	(188)

RON m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	135	219	242	265	244	239	274	285	300	307
Change (%)		62.5%	10.3%	9.7%	-7.9%	-2.2%	14.9%	3.8%	5.2%	2.5%
Cost of Sales	(104)	(190)	(226)	(241)	(204)	(196)	(209)	(212)	(219)	(224)
<b>Gross Profit</b>	<b>31</b>	<b>29</b>	<b>16</b>	<b>24</b>	<b>41</b>	<b>43</b>	<b>65</b>	<b>73</b>	<b>81</b>	<b>83</b>
GP Margin (%)	23.2%	13.5%	6.7%	9.1%	16.6%	18.0%	23.7%	25.5%	27.0%	27.0%
Operating Expenses	(18)	(33)	(37)	(41)	(39)	(39)	(43)	(44)	(45)	(47)
Other Operating Income / Ex	-	(2)	10	2	2	2	2	2	2	2
<b>EBITDA</b>	<b>13</b>	<b>(5)</b>	<b>(10)</b>	<b>(14)</b>	<b>3</b>	<b>6</b>	<b>25</b>	<b>31</b>	<b>38</b>	<b>39</b>
EBITDA Margin (%)	9.7%	-2.4%	-4.1%	-5.4%	1.4%	2.5%	9.0%	10.8%	12.7%	12.7%
Depreciation and Amortization	(19)	(20)	(22)	(23)	(23)	(25)	(26)	(26)	(27)	(18)
<b>EBIT</b>	<b>(6)</b>	<b>(26)</b>	<b>(32)</b>	<b>(37)</b>	<b>(20)</b>	<b>(19)</b>	<b>(1)</b>	<b>4</b>	<b>11</b>	<b>20</b>
EBIT Margin (%)	-4.7%	-11.7%	-13.2%	-14.0%	-8.1%	-7.8%	-0.4%	1.5%	3.5%	6.7%
Tax				-	-	-	-	(1)	(2)	(3)
Tax Rate (%)						0.0%	0.0%	16.0%	16.0%	16.0%
Depreciation and Amortization (+)				23	23	25	26	26	27	18
<b>Operational Cash Flows</b>				<b>(14)</b>	<b>3</b>	<b>6</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>36</b>
Change in NWC				(4)	5	1	(6)	(2)	(2)	(1)
Capex				(14)	(10)	(27)	(22)	(15)	(18)	(18)
<b>Free Cash Flows</b>				<b>(33)</b>	<b>(2)</b>	<b>(20)</b>	<b>(3)</b>	<b>13</b>	<b>16</b>	<b>16</b>
Discount Rate				8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.96	0.88	0.81	0.74	0.68	0.63	0.63
<b>Discounted Cash Flows</b>				<b>(31)</b>	<b>(1)</b>	<b>(16)</b>	<b>(3)</b>	<b>9</b>	<b>10</b>	<b>157</b>

	RON m	TL m
DCF (2020-25)	(32)	(45)
Terminal Value (>2025)	157	217
<b>Enterprise Value</b>	<b>125</b>	<b>172</b>
Net Cash/(Debt)	(306)	(424)
Tax Incentive Assets	-	-
<b>Adjusted Equity Value</b>	<b>(182)</b>	<b>(251)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Richard Fritz Holding GmbH\*

Sensitivity  
Analysis (EUR m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LGTR	(37)	(38)	(39)	(40)	(41)
-50 bp	(37)	(38)	(39)	(40)	(41)
-25 bp	(37)	(38)	(39)	(40)	(41)
-	(36)	(37)	(39)	(40)	(40)
+25 bp	(36)	(37)	(38)	(39)	(40)
+50 bp	(35)	(37)	(38)	(39)	(40)

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	172	181	156	125	132	137	161	168	180	184
Change (%)		5.2%	-14.0%	-20.0%	5.9%	3.4%	17.7%	4.8%	7.2%	2.0%
Cost of Sales	(159)	(154)	(136)	(103)	(109)	(111)	(131)	(137)	(146)	(149)
<b>Gross Profit</b>	<b>13</b>	<b>27</b>	<b>20</b>	<b>21</b>	<b>24</b>	<b>26</b>	<b>30</b>	<b>32</b>	<b>34</b>	<b>35</b>
GP Margin (%)	7.8%	15.2%	13.0%	17.1%	17.8%	18.7%	18.5%	18.8%	18.9%	18.9%
Operating Expenses	(26)	(25)	(23)	(21)	(20)	(19)	(20)	(21)	(21)	(22)
Other Operating Income / Expense	4	3	3	2	2	2	2	2	3	3
<b>EBITDA</b>	<b>(8)</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>15</b>
EBITDA Margin (%)	-4.8%	3.2%	0.5%	1.6%	4.2%	5.9%	7.4%	7.9%	8.4%	8.4%
Depreciation and Amortization	(6)	(5)	(5)	(5)	(5)	(6)	(6)	(7)	(7)	(10)
<b>EBIT</b>	<b>(14)</b>	<b>1</b>	<b>(4)</b>	<b>(3)</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>6</b>
EBIT Margin (%)	-8.3%	0.5%	-2.5%	-2.4%	0.1%	1.8%	3.6%	4.0%	4.5%	3.1%
Tax				(0)	(0)	(1)	(2)	(2)	(2)	(2)
Tax Rate (%)						55.9%	38.1%	31.7%	27.4%	27.4%
Depreciation and Amortization (+)				5	5	6	6	7	7	10
<b>Operational Cash Flows</b>				<b>2</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
Change in NWC				5	(1)	(1)	(4)	(1)	(2)	(1)
Capex				(7)	(6)	(7)	(9)	(9)	(10)	(10)
<b>Free Cash Flows</b>				<b>0</b>	<b>(2)</b>	<b>(1)</b>	<b>(3)</b>	<b>1</b>	<b>1</b>	<b>4</b>
Discount Rate				10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.71	0.64	0.58	0.58
<b>Discounted Cash Flows</b>				<b>0</b>	<b>(2)</b>	<b>(1)</b>	<b>(2)</b>	<b>1</b>	<b>1</b>	<b>25</b>

\* Richard Fritz Holding GmbH includes the consolidated results of the 4 Companies beneath the Holding. Due to the various profitability levels and differing tax rates in the locations that they are present in, the total tax rate differs from year to year.

	EUR m	TL m
DCF (2020-25)	(3)	(19)
Terminal Value (>2025)	25	164
<b>Enterprise Value</b>	<b>22</b>	<b>145</b>
Net Cash/(Debt)	(65)	(430)
Other Adjustments	4	28
<b>Adjusted Equity Value</b>	<b>(39)</b>	<b>(256)</b>
<b>Other Adjustments</b>	<b>EUR m</b>	<b>TL m</b>
Tax Incentive Assets	0	0
Investment Property	4	28
<b>Total</b>	<b>4</b>	<b>28</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Anadolu Cam Sanayii A.Ş.

Sensitivity  
Analysis (TL m)

WACC					
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTCR	4,868	4,636	4,421	4,222	4,037
-50 bp	5,046	4,798	4,569	4,358	4,161
-25 bp	5,239	4,973	4,729	4,503	4,295
-	5,450	5,164	4,902	4,661	4,439
+25 bp	5,681	5,372	5,090	4,831	4,594
+50 bp					

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	1,392	1,798	2,495	3,190	3,768	4,329	4,778	5,420	6,183	6,678
Change (%)		29.1%	38.8%	27.9%	18.1%	14.9%	10.4%	13.4%	14.1%	8.0%
Cost of Sales	(852)	(1,113)	(1,460)	(1,799)	(2,129)	(2,445)	(2,716)	(3,081)	(3,504)	(3,784)
<b>Gross Profit</b>	<b>540</b>	<b>685</b>	<b>1,035</b>	<b>1,391</b>	<b>1,639</b>	<b>1,885</b>	<b>2,062</b>	<b>2,339</b>	<b>2,679</b>	<b>2,894</b>
GP Margin (%)	38.8%	38.1%	41.5%	43.6%	43.5%	43.5%	43.1%	43.2%	43.3%	43.3%
Operating Expenses	(216)	(282)	(425)	(636)	(718)	(811)	(872)	(972)	(1,096)	(1,184)
Other Operating Income / Expenses	(16)	49	49	30	35	38	44	49	54	59
<b>EBITDA</b>	<b>308</b>	<b>452</b>	<b>659</b>	<b>786</b>	<b>956</b>	<b>1,112</b>	<b>1,234</b>	<b>1,416</b>	<b>1,638</b>	<b>1,769</b>
EBITDA Margin (%)	22.1%	25.2%	26.4%	24.6%	25.4%	25.7%	25.8%	26.1%	26.5%	26.5%
Depreciation and Amortization (-)	(148)	(175)	(247)	(313)	(399)	(488)	(540)	(633)	(710)	(782)
<b>EBIT</b>	<b>160</b>	<b>277</b>	<b>411</b>	<b>473</b>	<b>557</b>	<b>624</b>	<b>694</b>	<b>783</b>	<b>928</b>	<b>987</b>
EBIT Margin (%)	11.5%	15.4%	16.5%	14.8%	14.8%	14.4%	14.5%	14.4%	15.0%	14.8%
Tax				(104)	(111)	(125)	(139)	(157)	(186)	(197)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				313	399	488	540	633	710	782
<b>Operational Cash Flows</b>				<b>682</b>	<b>845</b>	<b>987</b>	<b>1,095</b>	<b>1,259</b>	<b>1,452</b>	<b>1,572</b>
Change in NWC				(119)	(146)	(142)	(113)	(162)	(193)	(125)
Capex				(521)	(464)	(583)	(1,023)	(833)	(618)	(782)
<b>Free Cash Flows</b>				<b>43</b>	<b>235</b>	<b>263</b>	<b>(42)</b>	<b>264</b>	<b>642</b>	<b>664</b>
Discount Rate				18.7%	17.7%	17.3%	16.7%	15.7%	14.8%	14.3%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.92	0.78	0.66	0.56	0.49	0.42	0.42
<b>Discounted Cash Flows</b>				<b>39</b>	<b>182</b>	<b>173</b>	<b>(24)</b>	<b>129</b>	<b>271</b>	<b>4,448</b>

TL m	
DCF (2020-25)	770
Terminal Value (>2025)	4,448
<b>Enterprise Value</b>	<b>5,218</b>
Net Cash/(Debt)	(694)
Tax Incentive Asset	205
<b>Adjusted Equity Value</b>	<b>4,729</b>
<b>Other Adjustments</b>	
Investment Property	74
Tax Incentive Assets	273
Dividend Payments	(142)
<b>Total</b>	<b>205</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## OOO Ruscam Glass Packaging Holding

Sensitivity  
Analysis (RUB m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	24,304	22,704	21,236	19,882	18,632
	-25 bp	25,499	23,778	22,205	20,761	19,430
	-	26,812	24,954	23,262	21,714	20,293
	+25 bp	28,261	26,245	24,418	22,754	21,232
	+50 bp	29,869	27,671	25,688	23,891	22,254

RUB m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	15,218	17,758	19,131	21,754	22,770	23,955	24,752	25,915	27,330	28,423
Change (%)		16.7%	7.7%	13.7%	4.7%	5.2%	3.3%	4.7%	5.5%	4.0%
Cost of Sales	(8,963)	(10,143)	(10,651)	(12,204)	(12,600)	(13,267)	(13,702)	(14,351)	(15,143)	(15,749)
<b>Gross Profit</b>	<b>6,255</b>	<b>7,614</b>	<b>8,480</b>	<b>9,549</b>	<b>10,169</b>	<b>10,688</b>	<b>11,050</b>	<b>11,565</b>	<b>12,187</b>	<b>12,675</b>
GP Margin (%)	41.1%	42.9%	44.3%	43.9%	44.7%	44.6%	44.6%	44.6%	44.6%	44.6%
Operating Expenses	(2,895)	(3,192)	(3,653)	(4,151)	(4,627)	(4,839)	(5,006)	(5,209)	(5,463)	(5,681)
Other Operating Income / Expenses	98	75	59	18	19	20	21	22	23	24
<b>EBITDA</b>	<b>3,457</b>	<b>4,496</b>	<b>4,886</b>	<b>5,416</b>	<b>5,561</b>	<b>5,869</b>	<b>6,064</b>	<b>6,377</b>	<b>6,748</b>	<b>7,018</b>
EBITDA Margin (%)	22.7%	25.3%	25.5%	24.9%	24.4%	24.5%	24.5%	24.6%	24.7%	24.7%
Depreciation and Amortization (-)	(2,052)	(2,006)	(1,962)	(3,086)	(2,781)	(3,241)	(3,425)	(3,525)	(2,491)	(3,550)
<b>EBIT</b>	<b>1,405</b>	<b>2,491</b>	<b>2,924</b>	<b>2,330</b>	<b>2,781</b>	<b>2,627</b>	<b>2,639</b>	<b>2,852</b>	<b>4,257</b>	<b>3,467</b>
EBIT Margin (%)	9.2%	14.0%	15.3%	10.7%	12.2%	11.0%	10.7%	11.0%	15.6%	12.2%
Tax				(466)	(556)	(525)	(528)	(570)	(851)	(693)
Tax Rate (%)				20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				3,086	2,781	3,241	3,425	3,525	2,491	3,550
<b>Operational Cash Flows</b>				<b>4,950</b>	<b>5,005</b>	<b>5,343</b>	<b>5,536</b>	<b>5,807</b>	<b>5,896</b>	<b>6,324</b>
Change in NWC				(1,267)	(747)	(335)	(225)	(329)	(400)	(309)
Capex				(4,961)	(3,626)	(3,575)	(2,479)	(1,594)	(1,642)	(3,550)
<b>Free Cash Flows</b>				<b>(1,278)</b>	<b>631</b>	<b>1,433</b>	<b>2,833</b>	<b>3,884</b>	<b>3,855</b>	<b>2,465</b>
Discount Rate				9.8%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.87	0.79	0.72	0.66	0.60	0.60
<b>Discounted Cash Flows</b>				<b>(1,220)</b>	<b>549</b>	<b>1,138</b>	<b>2,053</b>	<b>2,569</b>	<b>2,327</b>	<b>26,749</b>

	RUB m	TL m
DCF (2020-25)	7,415	708
Terminal Value (>2025)	26,749	2,555
<b>Enterprise Value</b>	<b>34,164</b>	<b>3,263</b>
Net Cash/(Debt)	(11,847)	(1,132)
Tax Incentive Asset	945	90
<b>Adjusted Equity Value</b>	<b>23,262</b>	<b>2,222</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## JSC Mina

Sensitivity  
Analysis (GEL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	79	76	73	70	68
	-25 bp	81	78	75	72	69
	-	83	80	76	73	70
	+25 bp	85	81	78	75	72
	+50 bp	87	84	80	77	74

GEL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	60	60	73	74	77	64	82	84	87	89
Change (%)		-0.6%	22.2%	1.3%	3.7%	-16.7%	27.4%	3.0%	3.0%	3.0%
Cost of Sales	(44)	(42)	(48)	(51)	(53)	(44)	(56)	(58)	(59)	(61)
<b>Gross Profit</b>	<b>17</b>	<b>18</b>	<b>25</b>	<b>23</b>	<b>24</b>	<b>20</b>	<b>26</b>	<b>27</b>	<b>27</b>	<b>28</b>
GP Margin (%)	27.4%	29.9%	34.7%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%
Operating Expenses	(6)	(6)	(9)	(9)	(10)	(9)	(10)	(11)	(11)	(11)
Other Operating Income / Expenses	1	(0)	(0)	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>11</b>	<b>12</b>	<b>16</b>	<b>14</b>	<b>15</b>	<b>11</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>17</b>
EBITDA Margin (%)	18.2%	19.2%	22.5%	19.1%	19.1%	17.6%	19.1%	19.1%	19.1%	19.1%
Depreciation and Amortization (-)	(10)	(5)	(9)	(8)	(8)	(13)	(13)	(14)	(7)	(7)
<b>EBIT</b>	<b>1</b>	<b>7</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>(2)</b>	<b>2</b>	<b>3</b>	<b>10</b>	<b>10</b>
EBIT Margin (%)	1.6%	11.0%	10.7%	8.3%	8.1%	-2.4%	2.9%	3.0%	11.2%	11.5%
Tax				-	-	-	-	-	-	-
Tax Rate (%)				0%	0%	0%	0%	0%	0%	
Depreciation and Amortization (+)				8	8	13	13	14	7	7
<b>Operational Cash Flows</b>				<b>14</b>	<b>15</b>	<b>11</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>17</b>
Change in NWC				(1)	(1)	5	(6)	(1)	(1)	(1)
Capex				(6)	(4)	(29)	(4)	(4)	(4)	(7)
<b>Free Cash Flows</b>				<b>7</b>	<b>9</b>	<b>(13)</b>	<b>5</b>	<b>11</b>	<b>11</b>	<b>9</b>
Discount Rate				10.9%	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.77	0.70	0.63	0.57	0.57
<b>Discounted Cash Flows</b>				<b>6</b>	<b>8</b>	<b>(10)</b>	<b>3</b>	<b>7</b>	<b>6</b>	<b>67</b>

	GEL m	TL m
DCF (2020-25)	21	43
Terminal Value (>2025)	67	139
<b>Enterprise Value</b>	<b>88</b>	<b>182</b>
Net Cash/(Debt)	(12)	(24)
<b>Adjusted Equity Value</b>	<b>76</b>	<b>158</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Investment Project

Sensitivity  
Analysis (EUR m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	19	13	7	1	(4)
	-25 bp	21	15	9	3	(2)
	-	24	17	11	5	(0)
	+25 bp	27	20	13	7	2
	+50 bp	29	22	16	9	4

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	2033	2034	TV
Revenue	-	-	-	-	-	63	106	117	122	101	153	156
Change (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.8%	10.3%	4.4%	-27.1%	8.4%	2.0%
Cost of Sales	-	-	-	-	-	(41)	(67)	(73)	(75)	(64)	(92)	(94)
<b>Gross Profit</b>	-	-	-	-	-	<b>22</b>	<b>40</b>	<b>45</b>	<b>47</b>	<b>37</b>	<b>61</b>	<b>62</b>
GP Margin (%)	0.0%	0.0%	0.0%	0.0%	0.0%	34.5%	37.3%	38.2%	38.5%	36.6%	39.9%	39.9%
Operating Expenses	-	-	-	-	-	(10)	(15)	(15)	(15)	(15)	(18)	(19)
<b>EBITDA</b>	-	-	-	-	-	<b>12</b>	<b>25</b>	<b>30</b>	<b>32</b>	<b>22</b>	<b>42</b>	<b>43</b>
EBITDA Margin (%)	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	23.1%	25.6%	26.1%	21.4%	27.8%	27.8%
Depreciation and Amortization (-)	-	-	-	-	-	(10)	(14)	(15)	(14)	(17)	(20)	(11)
<b>EBIT</b>	-	-	-	-	-	<b>2</b>	<b>10</b>	<b>15</b>	<b>18</b>	<b>5</b>	<b>22</b>	<b>32</b>
EBIT Margin (%)	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	9.9%	12.9%	14.4%	4.7%	14.7%	20.6%
Tax	-	-	-	-	-	(2)	(2)	(3)	(3)	(2)	(4)	(5)
Tax Rate (%)	0.0%	0.0%	0.0%	0.0%	0.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Depreciation and Amortization (+)	-	-	-	-	-	10	14	15	14	17	20	11
<b>Operational Cash Flows</b>	-	-	-	-	-	<b>10</b>	<b>22</b>	<b>27</b>	<b>29</b>	<b>19</b>	<b>39</b>	<b>39</b>
Change in NWC	-	-	-	-	-	(14)	(15)	(8)	(2)	6	(7)	(1)
Capex	-	-	-	-	-	(177)	(2)	(6)	(6)	(48)	(8)	(11)
<b>Free Cash Flows</b>	-	-	-	-	-	<b>(177)</b>	<b>(5)</b>	<b>1</b>	<b>13</b>	<b>(23)</b>	<b>24</b>	<b>27</b>
Discount Rate				10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.71	0.64	0.58	0.26	0.24	2.88
<b>Discounted Cash Flows</b>						<b>(152)</b>	<b>(4)</b>	<b>1</b>	<b>8</b>	<b>(6)</b>	<b>6</b>	<b>77</b>

	EUR m	TL m
DCF (2020-25)	(66)	(437)
Terminal Value (>2025)	77	510
<b>Enterprise Value</b>	<b>11</b>	<b>73</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Cam Sanayii ve Tic. A.Ş. (Solo)

Sensitivity  
Analysis (TL m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	244	196	151	109	70
	-25 bp	258	208	161	118	78
	-	274	221	173	128	86
	+25 bp	291	236	185	138	94
	+50 bp	309	251	198	149	104

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	1,247	1,569	1,763	1,900	2,281	2,744	3,012	3,262	3,613	3,902
Change (%)	8.7%	25.8%	12.3%	7.8%	20.1%	20.3%	9.8%	8.3%	10.8%	8.0%
Cost of Sales	(846)	(1,067)	(1,264)	(1,380)	(1,609)	(1,879)	(2,061)	(2,234)	(2,450)	(2,646)
<b>Gross Profit</b>	<b>401</b>	<b>502</b>	<b>499</b>	<b>520</b>	<b>672</b>	<b>865</b>	<b>951</b>	<b>1,027</b>	<b>1,164</b>	<b>1,257</b>
GP Margin (%)	32.2%	32.0%	28.3%	27.4%	29.5%	31.5%	31.6%	31.5%	32.2%	32.2%
Operating Expenses	(320)	(362)	(415)	(438)	(508)	(596)	(656)	(713)	(779)	(841)
Other Operating Income / Expens	59	144	115	71	81	90	101	113	121	131
<b>EBITDA</b>	<b>140</b>	<b>284</b>	<b>198</b>	<b>153</b>	<b>245</b>	<b>359</b>	<b>396</b>	<b>427</b>	<b>506</b>	<b>547</b>
EBITDA Margin (%)	11.3%	18.1%	11.2%	8.1%	10.7%	13.1%	13.1%	13.1%	14.0%	14.0%
Depreciation and Amortization (-)	(75)	(47)	(52)	(72)	(92)	(103)	(114)	(135)	(148)	(174)
<b>EBIT</b>	<b>65</b>	<b>237</b>	<b>146</b>	<b>81</b>	<b>152</b>	<b>256</b>	<b>282</b>	<b>293</b>	<b>359</b>	<b>373</b>
EBIT Margin (%)	5.2%	15.1%	8.3%	4.3%	6.7%	9.3%	9.4%	9.0%	9.9%	9.6%
Tax				(18)	(30)	(51)	(56)	(59)	(72)	(75)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				72	92	103	114	135	148	174
<b>Operational Cash Flows</b>				<b>135</b>	<b>214</b>	<b>308</b>	<b>340</b>	<b>369</b>	<b>435</b>	<b>472</b>
Change in NWC				(48)	(114)	(213)	(139)	(126)	(187)	(151)
Capex				(277)	(191)	(90)	(97)	(186)	(111)	(174)
<b>Free Cash Flows</b>				<b>(190)</b>	<b>(91)</b>	<b>5</b>	<b>103</b>	<b>56</b>	<b>137</b>	<b>147</b>
Discount Rate				19.2%	18.2%	17.9%	17.1%	16.1%	15.1%	14.6%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.92	0.77	0.65	0.56	0.48	0.41	0.41
<b>Discounted Cash Flows</b>				<b>(174)</b>	<b>(70)</b>	<b>3</b>	<b>58</b>	<b>27</b>	<b>57</b>	<b>924</b>

	TL m
DCF (2020-25)	(100)
Terminal Value (>2025)	924
<b>Enterprise Value</b>	<b>823</b>
Net Cash/(Debt)	(712)
Other Adjustments	62
<b>Adjusted Equity Value</b>	<b>173</b>

Other Adjustments	m TL
Investment Property	8
Tax Incentive Assets	53
<b>Total</b>	<b>62</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Bulgaria EAD

Sensitivity  
Analysis (EUR m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	14	11	9	6	4
	-25 bp	15	12	10	7	5
	-	16	13	11	8	6
	+25 bp	18	15	12	9	7
	+50 bp	19	16	13	10	7

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	88	100	109	93	105	106	111	119	119	121
Change (%)	-1.3%	13.0%	9.7%	-14.7%	12.1%	0.9%	4.7%	7.2%	0.3%	2.0%
Cost of Sales	(53)	(68)	(77)	(67)	(73)	(74)	(77)	(81)	(82)	(84)
<b>Gross Profit</b>	<b>35</b>	<b>31</b>	<b>32</b>	<b>26</b>	<b>31</b>	<b>32</b>	<b>34</b>	<b>37</b>	<b>37</b>	<b>38</b>
GP Margin (%)	40.2%	31.6%	29.6%	27.8%	29.9%	29.8%	30.4%	31.4%	31.1%	31.1%
Operating Expenses	(19)	(20)	(24)	(22)	(23)	(23)	(24)	(26)	(26)	(26)
Other Operating Income / Expens	2	2	1	0	0	0	0	1	1	1
<b>EBITDA</b>	<b>19</b>	<b>14</b>	<b>10</b>	<b>5</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>12</b>	<b>12</b>
EBITDA Margin (%)	21.5%	13.8%	8.9%	5.2%	8.2%	8.1%	8.9%	10.2%	9.8%	9.8%
Depreciation and Amortization (-)	(13)	(7)	(7)	(7)	(8)	(10)	(11)	(11)	(12)	(7)
<b>EBIT</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>(3)</b>	<b>0</b>	<b>(2)</b>	<b>(1)</b>	<b>1</b>	<b>(0)</b>	<b>5</b>
EBIT Margin (%)	7.1%	6.9%	2.6%	-2.7%	0.2%	-1.5%	-0.7%	0.8%	0.0%	4.3%
Tax				-	(0)	-	-	(0)	-	(1)
Tax Rate (%)				10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Depreciation and Amortization (+)				7	8	10	11	11	12	7
<b>Operational Cash Flows</b>				<b>5</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>12</b>	<b>11</b>
Change in NWC				4	(3)	(1)	(3)	(4)	(2)	(1)
Capex				(9)	(9)	(16)	(4)	(4)	(4)	(7)
<b>Free Cash Flows</b>				<b>(1)</b>	<b>(4)</b>	<b>(9)</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>4</b>
Discount Rate				7.8%	7.7%	7.6%	7.6%	7.6%	7.6%	7.6%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.96	0.89	0.83	0.77	0.72	0.67	0.67
<b>Discounted Cash Flows</b>				<b>(1)</b>	<b>(3)</b>	<b>(7)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>45</b>

	EUR m	TL m
DCF (2020-25)	(3)	(18)
Terminal Value (>2025)	45	301
<b>Enterprise Value</b>	<b>42</b>	<b>282</b>
Net Cash/(Debt)	(32)	(212)
<b>Adjusted Equity Value</b>	<b>11</b>	<b>71</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### OOO Posuda Limited

Sensitivity  
Analysis (RUB m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	1,145	1,014	892	778	673
-50 bp	1,222	1,083	955	835	724
-25 bp	1,305	1,158	1,023	897	780
-	1,396	1,240	1,096	963	840
+25 bp	1,495	1,328	1,175	1,034	904
+50 bp					

RUB m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	3,188	4,013	3,850	4,182	4,381	4,076	4,492	4,680	4,793	4,985
Change (%)	-11.3%	25.9%	-4.1%	8.6%	4.8%	-7.0%	10.2%	4.2%	2.4%	4.0%
Cost of Sales	(1,975)	(2,684)	(2,549)	(2,780)	(2,877)	(2,766)	(2,984)	(3,104)	(3,195)	(3,323)
<b>Gross Profit</b>	<b>1,213</b>	<b>1,329</b>	<b>1,301</b>	<b>1,402</b>	<b>1,504</b>	<b>1,310</b>	<b>1,508</b>	<b>1,575</b>	<b>1,598</b>	<b>1,662</b>
GP Margin (%)	38.0%	33.1%	33.8%	33.5%	34.3%	32.1%	33.6%	33.7%	33.3%	33.3%
Operating Expenses	(489)	(604)	(675)	(714)	(741)	(728)	(774)	(805)	(831)	(865)
Other Operating Income / Expens	(39)	(40)	(64)	(28)	(29)	(27)	(30)	(31)	(32)	(33)
<b>EBITDA</b>	<b>685</b>	<b>685</b>	<b>562</b>	<b>660</b>	<b>734</b>	<b>555</b>	<b>704</b>	<b>739</b>	<b>735</b>	<b>764</b>
EBITDA Margin (%)	21.5%	17.1%	14.6%	15.8%	16.8%	13.6%	15.7%	15.8%	15.3%	15.3%
Depreciation and Amortization (-)	(436)	(235)	(252)	(299)	(349)	(425)	(453)	(481)	(511)	(353)
<b>EBIT</b>	<b>248</b>	<b>450</b>	<b>310</b>	<b>362</b>	<b>385</b>	<b>130</b>	<b>251</b>	<b>258</b>	<b>225</b>	<b>411</b>
EBIT Margin (%)	7.8%	11.2%	8.1%	8.6%	8.8%	3.2%	5.6%	5.5%	4.7%	8.3%
Tax				(72)	(77)	(26)	(50)	(52)	(45)	(82)
Tax Rate (%)				20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				299	349	425	453	481	511	353
<b>Operational Cash Flows</b>				<b>588</b>	<b>657</b>	<b>529</b>	<b>654</b>	<b>688</b>	<b>690</b>	<b>682</b>
Change in NWC				(58)	35	127	(91)	(28)	(38)	(63)
Capex				(147)	(456)	(720)	(237)	(241)	(246)	(353)
<b>Free Cash Flows</b>				<b>383</b>	<b>236</b>	<b>(64)</b>	<b>326</b>	<b>419</b>	<b>406</b>	<b>266</b>
Discount Rate				10.7%	10.6%	10.4%	10.4%	10.4%	10.4%	10.4%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.70	0.64	0.58	0.58
<b>Discounted Cash Flows</b>				<b>364</b>	<b>203</b>	<b>(50)</b>	<b>229</b>	<b>267</b>	<b>234</b>	<b>2,385</b>

	RUB m	TL m
DCF (2020-25)	1,249	119
Terminal Value (>2025)	2,385	228
<b>Enterprise Value</b>	<b>3,633</b>	<b>347</b>
Net Cash/(Debt)	(2,787)	(266)
Tax Incentive Assets	176	17
<b>Adjusted Equity Value</b>	<b>1,023</b>	<b>98</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Egypt Glass

### Manufacturing S.A.E.

Sensitivity  
Analysis (\$ m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	(30)	(31)	(32)	(33)	(34)
	(30)	(31)	(32)	(33)	(33)
	(29)	(30)	(31)	(32)	(33)
	(28)	(29)	(30)	(31)	(32)
	(27)	(29)	(30)	(31)	(32)

USD m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	0	17	23	24	25	34	34	35	36	37
Change (%)	0.0%	11670.5%	37.7%	0.8%	5.9%	37.3%	-1.2%	4.3%	3.1%	2.0%
Cost of Sales	(0)	(11)	(18)	(18)	(19)	(24)	(23)	(24)	(24)	(25)
<b>Gross Profit</b>	<b>(0)</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>12</b>
GP Margin (%)	-198.4%	33.8%	21.4%	23.2%	25.2%	30.3%	31.1%	32.4%	33.7%	33.7%
Operating Expenses	(0)	(6)	(5)	(6)	(6)	(7)	(7)	(7)	(7)	(7)
Other Operating Income / Expens	-	-	5	2	2	2	2	2	2	2
<b>EBITDA</b>	<b>(0)</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>
EBITDA Margin (%)	-235.8%	1.2%	21.8%	8.1%	10.1%	16.8%	17.3%	18.7%	19.9%	19.9%
Depreciation and Amortization (-)	(0)	(2)	(3)	(4)	(5)	(6)	(6)	(7)	(7)	(4)
<b>EBIT</b>	<b>(1)</b>	<b>(1)</b>	<b>2</b>	<b>(2)</b>	<b>(3)</b>	<b>(0)</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>3</b>
EBIT Margin (%)	-422.8%	-8.0%	8.8%	-10.2%	-11.2%	0.0%	-0.9%	0.1%	0.8%	7.9%
Tax				-	-	-	-	(0)	(0)	(1)
Tax Rate (%)				22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Depreciation and Amortization (+)				4	5	6	6	7	7	4
<b>Operational Cash Flows</b>				<b>2</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>
Change in NWC				(0)	(0)	(2)	0	(0)	(0)	(0)
Capex				(4)	(10)	(3)	(3)	(3)	(3)	(4)
<b>Free Cash Flows</b>				<b>(3)</b>	<b>(7)</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>
Discount Rate				9.7%	9.1%	8.7%	8.7%	8.7%	8.7%	8.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.87	0.80	0.74	0.68	0.62	0.62
<b>Discounted Cash Flows</b>				<b>(3)</b>	<b>(6)</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>19</b>

	USD m	TL m
DCF (2020-25)	(3)	(16)
Terminal Value (>2025)	19	115
<b>Enterprise Value</b>	<b>17</b>	<b>99</b>
Net Cash/(Debt)	(48)	(284)
<b>Adjusted Equity Value</b>	<b>(31)</b>	<b>(185)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Denizli Cam Sanayii ve Tic. A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	13	11	8	6	3
	-25 bp	15	12	9	7	4
	-	17	14	11	8	6
	+25 bp	19	15	12	10	7
	+50 bp	20	17	14	11	8

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	82	107	132	104	166	193	223	246	270	292
Change (%)	27.5%	30.2%	24.2%	-21.2%	59.3%	16.4%	15.2%	10.6%	9.6%	8.0%
Cost of Sales	(61)	(87)	(111)	(99)	(136)	(154)	(174)	(192)	(209)	(226)
<b>Gross Profit</b>	<b>21</b>	<b>20</b>	<b>21</b>	<b>5</b>	<b>30</b>	<b>39</b>	<b>49</b>	<b>55</b>	<b>61</b>	<b>66</b>
GP Margin (%)	25.5%	18.4%	15.8%	4.7%	18.2%	20.1%	21.9%	22.2%	22.6%	22.6%
Operating Expenses	(15)	(12)	(14)	(14)	(17)	(19)	(21)	(23)	(25)	(27)
Other Operating Income / Expens	(0)	1	0	-	-	-	-	-	-	-
<b>EBITDA</b>	<b>5</b>	<b>9</b>	<b>7</b>	<b>(9)</b>	<b>13</b>	<b>20</b>	<b>28</b>	<b>32</b>	<b>36</b>	<b>39</b>
EBITDA Margin (%)	6.6%	8.6%	5.5%	-8.8%	8.1%	10.4%	12.6%	13.0%	13.4%	13.4%
Depreciation and Amortization (-)	(4)	(4)	(4)	(7)	(8)	(9)	(10)	(11)	(13)	(18)
<b>EBIT</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>(17)</b>	<b>5</b>	<b>11</b>	<b>18</b>	<b>21</b>	<b>23</b>	<b>21</b>
EBIT Margin (%)	1.7%	4.9%	2.7%	-15.9%	3.1%	5.6%	8.0%	8.4%	8.7%	7.4%
Tax				-	(1)	(2)	(4)	(4)	(5)	(4)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				7	8	9	10	11	13	18
<b>Operational Cash Flows</b>				<b>(9)</b>	<b>12</b>	<b>18</b>	<b>24</b>	<b>28</b>	<b>31</b>	<b>35</b>
Change in NWC				6	(14)	(6)	(7)	(6)	(6)	(5)
Capex				(39)	(8)	(9)	(10)	(11)	(12)	(18)
<b>Free Cash Flows</b>				<b>(42)</b>	<b>(10)</b>	<b>3</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>12</b>
Discount Rate				21.0%	19.5%	19.0%	18.2%	17.2%	16.2%	15.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.91	0.76	0.63	0.53	0.45	0.39	0.39
<b>Discounted Cash Flows</b>				<b>(38)</b>	<b>(7)</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>60</b>

	TL m
DCF (2020-25)	(29)
Terminal Value (>2025)	60
<b>Enterprise Value</b>	<b>31</b>
Net Cash/(Debt)	(20)
<b>Adjusted Equity Value</b>	<b>11</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Mağazaları A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	70	64	59	55	50
	-25 bp	72	66	61	56	51
	-	74	68	63	58	53
	+25 bp	76	70	64	59	54
	+50 bp	78	72	66	61	56

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	201	247	302	279	371	474	568	670	778	840
Change (%)	18.5%	23.1%	22.3%	-7.5%	32.9%	27.8%	19.8%	17.8%	16.2%	8.0%
Cost of Sales	(89)	(115)	(137)	(124)	(166)	(214)	(258)	(305)	(356)	(384)
<b>Gross Profit</b>	<b>112</b>	<b>132</b>	<b>165</b>	<b>155</b>	<b>205</b>	<b>261</b>	<b>311</b>	<b>365</b>	<b>422</b>	<b>456</b>
GP Margin (%)	55.8%	53.6%	54.7%	55.6%	55.4%	54.9%	54.6%	54.5%	54.3%	54.3%
Operating Expenses	(101)	(122)	(146)	(149)	(189)	(230)	(272)	(317)	(365)	(394)
Other Operating Income / Expens	1	1	2	(0)	1	2	3	4	5	6
<b>EBITDA</b>	<b>11</b>	<b>11</b>	<b>22</b>	<b>6</b>	<b>17</b>	<b>32</b>	<b>41</b>	<b>52</b>	<b>63</b>	<b>68</b>
EBITDA Margin (%)	5.6%	4.5%	7.1%	2.2%	4.7%	6.8%	7.2%	7.7%	8.1%	8.1%
Depreciation and Amortization (-)	(5)	(4)	(5)	(9)	(11)	(13)	(16)	(19)	(21)	(8)
<b>EBIT</b>	<b>6</b>	<b>7</b>	<b>16</b>	<b>(3)</b>	<b>6</b>	<b>19</b>	<b>25</b>	<b>33</b>	<b>42</b>	<b>60</b>
EBIT Margin (%)	3.1%	2.7%	5.5%	-1.2%	1.6%	4.0%	4.4%	4.9%	5.4%	7.1%
Tax				-	(1)	(4)	(5)	(7)	(8)	(12)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				9	11	13	16	19	21	8
<b>Operational Cash Flows</b>				<b>6</b>	<b>16</b>	<b>29</b>	<b>36</b>	<b>45</b>	<b>55</b>	<b>56</b>
Change in NWC				10	(28)	(32)	(29)	(31)	(34)	(19)
Capex				(32)	(12)	(13)	(15)	(16)	(17)	(8)
<b>Free Cash Flows</b>				<b>(16)</b>	<b>(24)</b>	<b>(17)</b>	<b>(8)</b>	<b>(2)</b>	<b>4</b>	<b>29</b>
Discount Rate				21.7%	20.2%	19.7%	18.9%	17.9%	16.9%	16.4%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.91	0.75	0.62	0.52	0.44	0.38	0.38
<b>Discounted Cash Flows</b>				<b>(14)</b>	<b>(18)</b>	<b>(10)</b>	<b>(4)</b>	<b>(1)</b>	<b>2</b>	<b>129</b>

	TL m
DCF (2020-25)	(46)
Terminal Value (>2025)	129
<b>Enterprise Value</b>	<b>84</b>
Net Cash/(Debt)	(21)
<b>Adjusted Equity Value</b>	<b>63</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe SRL

Sensitivity  
Analysis (EUR m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	7	7	7	7	6
-50 bp	7	7	7	7	7
-25 bp	7	7	7	7	7
-	7	7	7	7	7
+25 bp	7	7	7	7	7
+50 bp	7	7	7	7	7

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	14	14	14	13	14	14	15	15	15	16
Change (%)	18.5%	-3.1%	2.6%	-9.8%	6.3%	6.7%	1.6%	1.9%	2.0%	2.0%
Cost of Sales	(11)	(10)	(10)	(9)	(9)	(10)	(10)	(10)	(10)	(11)
<b>Gross Profit</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
GP Margin (%)	25.4%	28.4%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%	31.6%
Operating Expenses	(3)	(3)	(4)	(3)	(3)	(4)	(4)	(4)	(4)	(4)
Other Operating Income / Expens	(0)	(0)	(0)	-	-	-	-	-	-	-
<b>EBITDA</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBITDA Margin (%)	1.0%	2.6%	5.9%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBIT Margin (%)	0.2%	1.7%	5.0%	5.7%	5.9%	6.5%	6.5%	6.5%	6.5%	6.5%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Discount Rate				14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.94	0.82	0.72	0.63	0.55	0.48	0.48
<b>Discounted Cash Flows</b>				<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

	EUR m	TL m
DCF (2020-25)	3	18
Terminal Value (>2025)	3	19
<b>Enterprise Value</b>	<b>6</b>	<b>37</b>
Net Cash/(Debt)	1	6
Tax Incentive Assets	0	2
<b>Adjusted Equity Value</b>	<b>7</b>	<b>45</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe (Shangai) Trading Co. Ltd.

Sensitivity  
Analysis (CNY m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	2	2	2	1
	-25 bp	2	2	2	1
	-	2	2	2	1
	+25 bp	2	2	2	1
	+50 bp	2	2	2	1

CNY m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	23	22	25	23	25	27	28	29	30	31
Change (%)	4.0%	-3.6%	11.4%	-7.3%	7.9%	8.4%	3.0%	3.0%	3.0%	3.0%
Cost of Sales	(20)	(12)	(15)	(14)	(15)	(16)	(17)	(17)	(18)	(18)
<b>Gross Profit</b>	<b>4</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>13</b>
GP Margin (%)	15.5%	45.8%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%
Operating Expenses	(8)	(10)	(9)	(9)	(9)	(10)	(10)	(11)	(11)	(11)
Other Operating Income / Expens	(1)	(1)	(0)	-	-	-	-	-	-	-
<b>EBITDA</b>	<b>(5)</b>	<b>(1)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBITDA Margin (%)	-22.6%	-3.9%	2.3%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>(5)</b>	<b>(1)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBIT Margin (%)	-22.7%	-4.0%	2.1%	4.1%	4.1%	4.1%	4.2%	4.2%	4.2%	4.2%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Change in NWC				(2)	(2)	(2)	(2)	(2)	(2)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>1</b>
Discount Rate				14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.94	0.82	0.72	0.63	0.55	0.48	0.48
<b>Discounted Cash Flows</b>				<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>(1)</b>	<b>3</b>

	CNY m	TL m
DCF (2020-25)	(5)	(4)
Terminal Value (>2025)	3	3
<b>Enterprise Value</b>	<b>(1)</b>	<b>(1)</b>
Net Cash/(Debt)	2	2
Tax Incentive Assets	1	1
<b>Adjusted Equity Value</b>	<b>2</b>	<b>1</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe USA Inc.

Sensitivity  
Analysis (\$ m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	1	1	1	1
	-25 bp	1	1	1	1
	-	1	1	1	1
	+25 bp	1	1	1	1
	+50 bp	1	1	1	1

USD m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	3	2	2	2	3	3	3	3	3
Change (%)	0.0%	0.0%	-19.3%	-9.4%	7.6%	7.6%	2.0%	2.0%	2.0%	2.0%
Cost of Sales	-	(2)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)
<b>Gross Profit</b>	-	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
GP Margin (%)	0.0%	38.2%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%	39.1%
Operating Expenses	-	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other Operating Income / Expens	-	0	(0)	-	-	-	-	-	-	-
<b>EBITDA</b>	-	<b>0</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBITDA Margin (%)	0.0%	2.8%	-1.3%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
Depreciation and Amortization (-)	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	-
<b>EBIT</b>	-	<b>(0)</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBIT Margin (%)	0.0%	-0.3%	-2.0%	4.8%	4.8%	4.8%	4.8%	4.8%	4.9%	5.1%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	-
<b>Operational Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Capex				-	-	-	-	-	-	-
<b>Free Cash Flows</b>				<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>0</b>
Discount Rate				10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.71	0.64	0.58	0.58
<b>Discounted Cash Flows</b>				<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>	<b>1</b>

	USD m	TL m
DCF (2020-25)	(0)	(1)
Terminal Value (>2025)	1	4
<b>Enterprise Value</b>	<b>1</b>	<b>4</b>
Net Cash/(Debt)	0	2
Tax Incentive Assets	0	0
<b>Adjusted Equity Value</b>	<b>1</b>	<b>6</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Spain SL

Sensitivity  
Analysis (EUR m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	2	2	2	2
	-25 bp	2	2	2	2
	-	2	2	2	2
	+25 bp	2	2	2	2
	+50 bp	2	2	2	2

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	1	1	1	1	1	1	1	1	1
Change (%)	0.0%	0.0%	8.4%	-9.8%	6.3%	6.7%	1.6%	1.9%	2.0%	2.0%
Cost of Sales	-	-	-	-	-	-	-	-	-	-
<b>Gross Profit</b>	-	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
GP Margin (%)	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Operating Expenses	-	(0)	(0)	(0)	(0)	(0)	(0)	(1)	(1)	(1)
Other Operating Income / Expens	-	(0)	-	-	-	-	-	-	-	-
<b>EBITDA</b>	-	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBITDA Margin (%)	0.0%	7.5%	19.6%	19.6%	19.6%	19.6%	19.6%	19.6%	19.6%	19.6%
Depreciation and Amortization (-)	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	-
<b>EBIT</b>	-	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBIT Margin (%)	0.0%	7.1%	19.3%	19.5%	19.5%	19.5%	19.5%	19.5%	19.5%	19.6%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	-
<b>Operational Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				-	-	-	-	-	-	-
<b>Free Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Discount Rate				10.4%	10.2%	10.0%	10.0%	10.0%	10.0%	10.0%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.86	0.78	0.71	0.65	0.59	0.59
<b>Discounted Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

	EUR m	TL m
DCF (2020-25)	0	3
Terminal Value (>2025)	1	5
<b>Enterprise Value</b>	<b>1</b>	<b>7</b>
Net Cash/(Debt)	1	5
<b>Adjusted Equity Value</b>	<b>2</b>	<b>12</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Paşabahçe Glass GmbH

Sensitivity  
Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	1	1	1	1
	-25 bp	1	1	1	1
	-	1	1	1	1
	+25 bp	1	1	1	1
	+50 bp	1	1	1	1

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	1	1	1	1	1	1	1	1	1
Change (%)	0.0%	0.0%	7.8%	-9.8%	6.3%	6.7%	1.6%	1.9%	2.0%	2.0%
Cost of Sales	-	(0)	-	-	-	-	-	-	-	-
<b>Gross Profit</b>	-	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
GP Margin (%)	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Operating Expenses	-	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other Operating Income / Expens	-	0	(0)	-	-	-	-	-	-	-
<b>EBITDA</b>	-	<b>0</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBITDA Margin (%)	0.0%	11.1%	-12.1%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%	16.6%
Depreciation and Amortization (-)	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	-	<b>0</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBIT Margin (%)	0.0%	3.8%	-16.9%	7.4%	7.4%	7.6%	14.8%	14.4%	14.0%	14.2%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				29.8%	29.8%	29.8%	29.8%	29.8%	29.8%	29.8%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Discount Rate				9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.87	0.79	0.72	0.66	0.60	0.60
<b>Discounted Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

	EUR m	TL m
DCF (2020-25)	0	3
Terminal Value (>2025)	1	5
<b>Enterprise Value</b>	<b>1</b>	<b>7</b>
Net Cash/(Debt)	0	1
<b>Adjusted Equity Value</b>	<b>1</b>	<b>9</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Soda Sanayii A.Ş. (Solo)

Sensitivity  
Analysis (\$ m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	1,295	1,258	1,223	1,191	1,161
-25 bp	1,321	1,282	1,246	1,212	1,180
-	1,349	1,308	1,270	1,234	1,201
+25 bp	1,379	1,336	1,296	1,258	1,223
+50 bp	1,412	1,366	1,323	1,283	1,246

USD m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	483	512	520	449	486	527	557	584	608	620
Change (%)	0.0%	6.2%	1.5%	-13.6%	8.1%	8.5%	5.7%	4.7%	4.1%	2.0%
Cost of Sales	(287)	(278)	(305)	(292)	(310)	(330)	(341)	(351)	(365)	(365)
<b>Gross Profit</b>	<b>196</b>	<b>234</b>	<b>215</b>	<b>158</b>	<b>175</b>	<b>197</b>	<b>217</b>	<b>233</b>	<b>243</b>	<b>255</b>
GP Margin (%)	40.6%	45.7%	41.3%	35.1%	36.1%	37.4%	38.9%	39.9%	40.0%	41.2%
Operating Expenses	(71)	(70)	(72)	(68)	(73)	(77)	(80)	(83)	(85)	(87)
Other Operating Income / Expense	7	20	8	2	2	2	2	2	2	2
<b>EBITDA</b>	<b>132</b>	<b>184</b>	<b>151</b>	<b>91</b>	<b>104</b>	<b>122</b>	<b>139</b>	<b>152</b>	<b>160</b>	<b>170</b>
EBITDA Margin (%)	27.3%	35.8%	29.0%	20.2%	21.4%	23.2%	24.9%	26.0%	26.3%	27.5%
Depreciation and Amortization (-)	(23)	(17)	(15)	(16)	(23)	(25)	(26)	(27)	(34)	(42)
<b>EBIT</b>	<b>109</b>	<b>167</b>	<b>136</b>	<b>75</b>	<b>81</b>	<b>98</b>	<b>113</b>	<b>125</b>	<b>126</b>	<b>128</b>
EBIT Margin (%)	22.6%	32.5%	26.1%	16.7%	16.7%	18.5%	20.3%	21.4%	20.7%	20.6%
Tax				(17)	(16)	(20)	(23)	(25)	(25)	(26)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				16	23	25	26	27	34	42
<b>Operational Cash Flows</b>				<b>74</b>	<b>88</b>	<b>103</b>	<b>116</b>	<b>127</b>	<b>135</b>	<b>145</b>
Change in NWC				15	(8)	(9)	(6)	(6)	(5)	(3)
Capex				(64)	(64)	(45)	(43)	(43)	(46)	(42)
<b>Free Cash Flows</b>				<b>25</b>	<b>17</b>	<b>50</b>	<b>67</b>	<b>78</b>	<b>83</b>	<b>100</b>
Discount Rate				10.0%	9.9%	9.7%	9.7%	9.7%	9.7%	9.7%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.87	0.79	0.72	0.66	0.60	0.60
<b>Discounted Cash Flows</b>				<b>24</b>	<b>14</b>	<b>39</b>	<b>48</b>	<b>51</b>	<b>50</b>	<b>778</b>

	USD m	TL m
DCF (2020-25)	226	1,345
Terminal Value (>2025)	778	4,623
<b>Enterprise Value</b>	<b>1,005</b>	<b>5,967</b>
Net Cash/(Debt)	301	1,788
Other Adjustments	(36)	(212)
<b>Adjusted Equity Value</b>	<b>1,270</b>	<b>7,544</b>
<b>Other Adjustments</b>	<b>USD m</b>	<b>TL m</b>
Dividend Payments	(41)	(245)
Investment Tax Incentives	0	1
Dividend Income	5	32
<b>Total</b>	<b>(36)</b>	<b>(212)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Elyaf Sanayii A.Ş.

Sensitivity  
Analysis (EUR m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	(10)	(13)	(15)	(18)	(20)
	-25 bp	(8)	(11)	(14)	(16)	(19)
	-	(7)	(10)	(12)	(15)	(17)
	+25 bp	(5)	(8)	(11)	(14)	(16)
	+50 bp	(3)	(6)	(9)	(12)	(15)

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	-	-	31	52	52	59	65	70	78	79
Change (%)	0.0%	0.0%	0.0%	66.8%	-0.6%	12.8%	10.6%	7.7%	11.5%	2.0%
Cost of Sales	-	(2)	(25)	(35)	(34)	(38)	(42)	(45)	(50)	(54)
<b>Gross Profit</b>	-	(2)	7	17	18	21	23	25	28	25
GP Margin (%)	0.0%	0.0%	20.9%	32.3%	34.8%	35.2%	35.9%	35.8%	35.5%	31.4%
Operating Expenses	(0)	(2)	(6)	(8)	(8)	(8)	(9)	(10)	(10)	(11)
Other Operating Income / Expenses	-	0	0	0	0	0	0	0	0	0
<b>EBITDA</b>	(0)	(4)	1	9	11	12	14	16	18	15
EBITDA Margin (%)	0.0%	0.0%	2.9%	17.9%	20.4%	21.3%	22.4%	22.5%	22.6%	18.5%
Depreciation and Amortization (-)	-	-	(7)	(5)	(5)	(5)	(5)	(4)	(4)	(2)
<b>EBIT</b>	(0)	(4)	(6)	4	5	8	10	11	13	12
EBIT Margin (%)	0.0%	0.0%	-18.5%	7.4%	10.1%	12.9%	15.2%	16.2%	17.2%	15.6%
Tax				(1)	(1)	(2)	(2)	(2)	(3)	(2)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				5	5	5	5	4	4	2
<b>Operational Cash Flows</b>				9	10	11	13	13	15	12
Change in NWC				11	3	2	(2)	(1)	(2)	(0)
Capex				(7)	(1)	(1)	(1)	(1)	(1)	(2)
<b>Free Cash Flows</b>				12	12	12	10	11	12	10
Discount Rate				11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.85	0.77	0.69	0.62	0.56	0.56
<b>Discounted Cash Flows</b>				12	10	9	7	7	7	59

	EUR m	TL m
DCF (2020-25)	52	345
Terminal Value (>2025)	59	391
<b>Enterprise Value</b>	<b>111</b>	<b>736</b>
Net Cash/(Debt)	(136)	(907)
Investment Tax Incentives	13	88
<b>Adjusted Equity Value</b>	<b>(12)</b>	<b>(83)</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Oxyvit Kimya Sanayii Ve Tic. A.Ş.

Sensitivity  
Analysis (\$ m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	38	37	36	35	34
	-25 bp	39	38	37	36	34
	-	40	39	38	36	35
	+25 bp	41	40	39	37	36
	+50 bp	43	41	39	38	37

USD m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	18	18	16	17	17	18	18	19	19	19
Change (%)	0.0%	-2.1%	-9.7%	4.0%	4.7%	2.2%	2.2%	3.8%	2.0%	2.0%
Cost of Sales	(8)	(9)	(10)	(11)	(11)	(12)	(12)	(12)	(12)	(13)
<b>Gross Profit</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>
GP Margin (%)	53.8%	46.8%	36.6%	35.8%	35.0%	34.9%	34.7%	34.5%	34.5%	34.5%
Operating Expenses	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Other Operating Income / Expenses	1	0	0	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>9</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
EBITDA Margin (%)	48.7%	37.9%	25.0%	24.3%	23.6%	23.5%	23.4%	23.4%	23.4%	23.4%
Depreciation and Amortization (-)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
<b>EBIT</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
EBIT Margin (%)	47.0%	36.1%	22.1%	21.2%	20.4%	20.0%	19.7%	19.6%	18.6%	18.6%
Tax			(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax Rate (%)			22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)			0	1	1	1	1	1	1	1
<b>Operational Cash Flows</b>			<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Change in NWC			0	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Capex			(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
<b>Free Cash Flows</b>			<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Discount Rate			9.1%	9.1%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Partial Period Factor			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period			0.50	1.50	2.50	3.50	4.50	5.50		
Cumulative Discount Factor			0.96	0.88	0.80	0.74	0.68	0.62	0.62	
<b>Discounted Cash Flows</b>			<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>25</b>	<b>25</b>

	USD m	TL m
DCF (2020-25)	11	64
Terminal Value (>2025)	25	148
<b>Enterprise Value</b>	<b>36</b>	<b>212</b>
Net Cash/(Debt)	6	36
Dividend Payments	(4)	(25)
<b>Adjusted Equity Value</b>	<b>38</b>	<b>223</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Cromital S.p.A

Sensitivity  
Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	9	9	9	8
	-25 bp	9	9	9	8
	-	9	9	9	9
	+25 bp	9	9	9	9
	+50 bp	9	9	9	9

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	19	18	16	10	14	18	20	21	24	24
Change (%)	6.8%	-5.8%	-13.7%	-38.1%	43.7%	25.2%	11.3%	8.9%	12.4%	2.0%
Cost of Sales	(15)	(15)	(13)	(8)	(11)	(14)	(16)	(17)	(19)	(20)
<b>Gross Profit</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>
GP Margin (%)	20.9%	18.6%	14.5%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%
Operating Expenses	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)
Other Operating Income / Expenses	(0)	0	0	(1)	-	-	-	-	-	-
<b>EBITDA</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>
EBITDA Margin (%)	9.0%	6.8%	2.5%	-2.0%	5.8%	6.9%	7.3%	7.5%	7.9%	7.9%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>
EBIT Margin (%)	7.6%	5.4%	1.3%	-4.2%	4.1%	5.5%	6.0%	6.2%	6.6%	6.9%
Tax	-	-	-	-	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%
Depreciation and Amortization (+)	0	0	0	0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>(0)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>
Change in NWC				2	(1)	(1)	(0)	(0)	(1)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>1</b>	<b>(0)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Discount Rate				13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.94	0.83	0.73	0.65	0.57	0.51	0.51
<b>Discounted Cash Flows</b>				<b>1</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>

	EUR m	TL m
DCF (2020-25)	2	15
Terminal Value (>2025)	5	36
<b>Enterprise Value</b>	<b>8</b>	<b>51</b>
Net Cash/(Debt)	1	8
<b>Adjusted Equity Value</b>	<b>9</b>	<b>59</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Soda Lukavac D.O.O.

Sensitivity  
Analysis (EUR m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	160	156	151	147	143
	-25 bp	163	158	154	149	145
	-	166	161	156	152	147
	+25 bp	169	164	159	154	150
	+50 bp	173	167	162	157	152

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	106	105	107	98	105	111	116	121	127	130
Change (%)	18.2%	-1.4%	2.6%	-8.7%	7.7%	5.5%	4.5%	4.0%	5.2%	2.0%
Cost of Sales	(53)	(60)	(62)	(59)	(63)	(66)	(68)	(71)	(74)	(76)
<b>Gross Profit</b>	<b>53</b>	<b>45</b>	<b>45</b>	<b>39</b>	<b>43</b>	<b>46</b>	<b>48</b>	<b>50</b>	<b>53</b>	<b>54</b>
GP Margin (%)	50.3%	42.9%	42.4%	40.3%	40.6%	41.1%	41.6%	41.6%	41.7%	41.7%
Operating Expenses	(22)	(21)	(21)	(20)	(22)	(22)	(23)	(24)	(25)	(25)
Other Operating Income / Expenses	0	1	0	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>31</b>	<b>24</b>	<b>25</b>	<b>19</b>	<b>21</b>	<b>24</b>	<b>26</b>	<b>27</b>	<b>29</b>	<b>29</b>
EBITDA Margin (%)	29.4%	23.0%	22.9%	19.5%	20.3%	21.2%	21.9%	22.2%	22.5%	22.5%
Depreciation and Amortization (-)	(12)	(12)	(11)	(12)	(13)	(14)	(14)	(15)	(16)	(9)
<b>EBIT</b>	<b>19</b>	<b>12</b>	<b>13</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>20</b>
EBIT Margin (%)	17.7%	11.7%	12.3%	7.0%	7.7%	8.9%	9.8%	10.1%	9.6%	15.6%
Tax				(1)	(1)	(1)	(1)	(1)	(1)	(2)
Tax Rate (%)				10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Depreciation and Amortization (+)				12	13	14	14	15	16	9
<b>Operational Cash Flows</b>				<b>18</b>	<b>21</b>	<b>23</b>	<b>24</b>	<b>26</b>	<b>27</b>	<b>27</b>
Change in NWC				3	(2)	(1)	(1)	(1)	(2)	(1)
Capex				(13)	(8)	(6)	(7)	(7)	(6)	(9)
<b>Free Cash Flows</b>				<b>8</b>	<b>11</b>	<b>15</b>	<b>16</b>	<b>18</b>	<b>19</b>	<b>18</b>
Discount Rate				11.4%	11.3%	11.2%	11.2%	11.2%	11.2%	11.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.85	0.77	0.69	0.62	0.56	0.56
<b>Discounted Cash Flows</b>				<b>7</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>107</b>

	EUR m	TL m
DCF (2020-25)	61	406
Terminal Value (>2025)	107	709
<b>Enterprise Value</b>	<b>168</b>	<b>1,115</b>
Net Cash/(Debt)	(11)	(76)
<b>Adjusted Equity Value</b>	<b>156</b>	<b>1,039</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Solvay Şişecam Holding AG

Sensitivity  
Analysis (EUR m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	97	96	94	93	91
	-25 bp	98	97	95	93	92
	-	99	97	96	94	93
	+25 bp	100	98	97	95	94
	+50 bp	101	99	98	96	94

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Dividend Payments	21	21	17	13	13	13	13	13	13	13
<b>Free Cash Flows</b>	<b>21</b>	<b>21</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
Discount Rate				15.1%	14.6%	14.4%	14.4%	14.4%	14.4%	14.4%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.93	0.81	0.71	0.62	0.54	0.47	0.47
<b>Discounted Cash Flows</b>				<b>12</b>	<b>11</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>43</b>

	EUR m	TL m
DCF (2020-25)	53	353
Terminal Value (>2025)	43	284
<b>Enterprise Value</b>	<b>96</b>	<b>637</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Bulgaria EOOD

Sensitivity  
Analysis (EUR m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	16	15	15	15	14
	-25 bp	16	16	15	15	15
	-	16	16	16	15	15
	+25 bp	17	16	16	15	15
	+50 bp	17	17	16	16	15

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	47	45	40	38	38	40	42	44	45	46
Change (%)	38.9%	-5.3%	-11.2%	-3.5%	0.5%	4.4%	5.0%	4.9%	2.0%	2.0%
Cost of Sales	(45)	(42)	(37)	(36)	(36)	(38)	(40)	(42)	(43)	(44)
<b>Gross Profit</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
GP Margin (%)	5.2%	6.7%	5.6%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
Operating Expenses	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other Operating Income / Expenses	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBITDA</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBITDA Margin (%)	2.8%	3.7%	3.6%	3.1%	3.1%	3.2%	3.2%	3.2%	3.2%	3.2%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	-
<b>EBIT</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
EBIT Margin (%)	2.8%	3.7%	3.6%	3.1%	3.1%	3.2%	3.2%	3.2%	3.2%	3.2%
Tax				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Tax Rate (%)				10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	-
<b>Operational Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Change in NWC				0	0	0	0	0	0	0
Capex				-	-	-	-	-	-	-
<b>Free Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Discount Rate				11.5%	11.0%	10.8%	10.8%	10.8%	10.8%	10.8%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.85	0.77	0.69	0.63	0.56	0.56
<b>Discounted Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9</b>

	EUR m	TL m
DCF (2020-25)	5	35
Terminal Value (>2025)	9	57
<b>Enterprise Value</b>	<b>14</b>	<b>92</b>
Net Cash/(Debt)	3	19
Dividend Payments	(1)	(7)
<b>Adjusted Equity Value</b>	<b>16</b>	<b>103</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Şişecam Trading Co.

Sensitivity Analysis (CNY m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	29	29	29	28	28
	30	29	29	28	28
	30	29	29	29	28
	30	30	29	29	29
	30	30	30	29	29

CNY m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	18	17	10	14	17	19	20	21	21	21
Change (%)	0.0%	-5.3%	-43.6%	40.2%	23.5%	8.7%	5.2%	6.2%	3.0%	3.0%
Cost of Sales	(16)	(16)	(9)	(13)	(16)	(17)	(18)	(19)	(20)	(20)
<b>Gross Profit</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>
GP Margin (%)	11.4%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
Operating Expenses	(4)	(4)	(2)	(3)	(4)	(4)	(4)	(4)	(4)	(5)
Other Operating Income / Expenses	6	6	3	5	6	6	7	7	7	7
<b>EBITDA</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
EBITDA Margin (%)	23.4%	19.1%	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	-	-	-	-
<b>EBIT</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
EBIT Margin (%)	22.9%	18.6%	18.5%	18.7%	18.8%	19.0%	19.2%	19.2%	19.2%	19.2%
Tax	-	-	(0)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax Rate (%)	0.0%	0.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Depreciation and Amortization (+)	-	-	0	0	0	0	-	-	-	-
<b>Operational Cash Flows</b>			<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Change in NWC			(0)	0	0	0	0	0	0	0
Capex			-	-	-	-	-	-	-	-
<b>Free Cash Flows</b>			<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Discount Rate			16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%
Partial Period Factor			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period			0.50	1.50	2.50	3.50	4.50	5.50		
Cumulative Discount Factor			0.93	0.80	0.69	0.59	0.51	0.44	0.44	
<b>Discounted Cash Flows</b>			<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>10</b>

	CNY m	TL m
DCF (2020-25)	9	8
Terminal Value (>2025)	10	9
<b>Enterprise Value</b>	<b>19</b>	<b>16</b>
Net Cash/(Debt)	10	8
<b>Adjusted Equity Value</b>	<b>29</b>	<b>25</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Pacific Soda LLC

Sensitivity  
Analysis (\$ m)

	WACC				
	- 50 bp	- 25 bp	-	+ 25 bp	+ 50 bp
LTGR	436	398	362	328	297
- 50 bp	471	430	392	357	324
- 25 bp	508	465	425	387	352
-	548	502	459	419	382
+ 25 bp	590	541	495	453	414
+ 50 bp					

USD m	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	...	2085
Revenue	-	-	-	-	-	-	184	490	672	762	777	792	808	824	841	858		2,309
Change (%)	-	-	-	-	-	-	0.0%	166.3%	37.2%	13.3%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%		2.0%
Cost of Sales	-	-	-	-	-	(4)	(47)	(120)	(154)	(172)	(175)	(179)	(182)	(186)	(190)	(194)		(521)
<b>Gross Profit</b>	-	-	-	-	-	(4)	137	370	518	590	601	614	626	638	651	664		1,787
GP Margin (%)	-	-	-	-	-	-	74.4%	75.6%	77.0%	77.4%	77.4%	77.4%	77.4%	77.4%	77.4%	77.4%		77.4%
Operating Expenses	(2)	(2)	(3)	(3)	(4)	(4)	(58)	(145)	(194)	(219)	(223)	(228)	(232)	(237)	(242)	(246)		(663)
<b>EBITDA</b>	(2)	(2)	(3)	(3)	(4)	(8)	79	226	323	371	378	386	394	401	409	418		1,124
EBITDA Margin (%)	-	-	-	-	-	-	42.8%	46.0%	48.1%	48.7%	48.7%	48.7%	48.7%	48.7%	48.7%	48.7%		48.7%
Depreciation and Amortization (-)	(5)	(10)	(12)	(27)	(49)	(68)	(75)	(75)	(75)	(70)	(65)	(63)	(52)	(37)	(27)	(22)		-
<b>EBIT</b>	(6)	(12)	(15)	(30)	(53)	(76)	4	151	249	301	313	323	342	364	382	395		1,124
EBIT Margin (%)	-	-	-	-	-	-	2.2%	30.8%	37.0%	39.5%	40.3%	40.8%	42.3%	44.2%	45.5%	46.1%		48.7%
Tax	-	-	-	-	-	-	(1)	(32)	(52)	(63)	(66)	(68)	(72)	(76)	(80)	(83)		(236)
Depreciation and Amortization (+)	5	10	12	27	49	68	75	75	75	70	65	63	52	37	27	22		-
<b>Operational Cash Flows</b>	(2)	(2)	(3)	(3)	(4)	(8)	78	194	271	308	313	318	322	325	329	335		888
Change in NWC	-	-	-	-	-	-	(26)	(43)	(25)	(13)	(2)	(2)	(2)	(2)	(2)	(2)		(6)
Capex	(51)	(46)	(29)	(299)	(510)	(533)	(115)	(0)	(0)	(0)	(0)	-	-	-	-	-		-
<b>Free Cash Flows</b>	(52)	(49)	(32)	(302)	(513)	(541)	(63)	151	245	295	310	316	320	323	327	332		882
Discount Rate	10.0%	10.3%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	9.7%		9.7%
Partial Period Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0
Discount Period	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5		65.5
Cumulative Discount Factor	0.95	0.86	0.78	0.71	0.64	0.58	0.52	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.24	0.24		0.00
<b>Discounted Cash Flows</b>	(50)	(42)	(25)	(214)	(329)	(313)	(33)	72	106	115	110	101	93	85	78	79		2

	USD m	TL m
Net Present Value (100%)	850	5,046
<b>Net Present Value (50%)</b>	<b>425</b>	<b>2,523</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Türkiye Şişe ve Cam Fabrikaları A.Ş.

### (Solo)

Sensitivity  
Analysis (TL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	192	171	151	132	114
	-25 bp	203	181	160	141	122
	-	214	192	170	150	131
	+25 bp	226	203	181	160	140
	+50 bp	239	214	191	170	149

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	196	258	477	521	590	682	774	848	930	1,005
Change (%)		31.7%	85.2%	9.3%	13.3%	15.5%	13.5%	9.6%	9.7%	8.0%
Cost of Sales & OPEX	(177)	(248)	(341)	(415)	(377)	(420)	(464)	(509)	(552)	(596)
Other Operating Income / Expenses	0	0	5	18	20	22	25	27	29	32
<b>EBITDA</b>	<b>20</b>	<b>10</b>	<b>140</b>	<b>124</b>	<b>234</b>	<b>284</b>	<b>335</b>	<b>367</b>	<b>408</b>	<b>441</b>
EBITDA Margin (%)	10.0%	4.0%	29.4%	23.8%	39.6%	41.7%	43.2%	43.2%	43.9%	43.9%
Depreciation and Amortization (-)	(36)	(42)	(49)	(67)	(143)	(164)	(180)	(178)	(173)	(188)
<b>EBIT</b>	<b>(17)</b>	<b>(32)</b>	<b>91</b>	<b>57</b>	<b>90</b>	<b>120</b>	<b>154</b>	<b>189</b>	<b>235</b>	<b>253</b>
EBIT Margin (%)	-8.6%	-12.5%	19.0%	11.0%	15.3%	17.6%	19.9%	22.3%	25.3%	25.1%
Tax				(13)	(18)	(24)	(31)	(38)	(47)	(51)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				67	143	164	180	178	173	188
<b>Operational Cash Flows</b>				<b>112</b>	<b>216</b>	<b>260</b>	<b>304</b>	<b>329</b>	<b>361</b>	<b>390</b>
Change in NWC				(50)	(63)	(59)	(65)	(55)	(66)	(46)
Capex				(196)	(194)	(134)	(147)	(160)	(174)	(188)
<b>Free Cash Flows</b>				<b>(135)</b>	<b>(41)</b>	<b>67</b>	<b>92</b>	<b>114</b>	<b>121</b>	<b>156</b>
Discount Rate				23.3%	21.9%	21.4%	20.7%	19.6%	18.6%	18.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.90	0.73	0.60	0.50	0.41	0.35	0.35
<b>Discounted Cash Flows</b>				<b>(121)</b>	<b>(30)</b>	<b>40</b>	<b>46</b>	<b>47</b>	<b>42</b>	<b>541</b>

		TL m
DCF (2020-25)		24
Terminal Value (>2025)		541
<b>Enterprise Value</b>		<b>565</b>
Net Cash/(Debt)		(807)
Other Adjustments		412
<b>Adjusted Equity Value</b>		<b>170</b>

Other Adjustments	TL m
Tax Incentive Assets	302
Dividend Payments	(320)
Dividend Income	386
Tax Incentive Assets (R&D)	43
<b>Total</b>	<b>412</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Camiş Madencilik A.Ş.

Sensitivity  
Analysis (TL m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	565	548	532	517	502
-50 bp	577	559	542	526	511
-25 bp	589	571	553	536	521
-	602	583	564	547	531
+25 bp	615	595	576	558	541
+50 bp					

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	2080
Revenue	246	333	412	452	578	718	845	950	1,046	56,572
Change (%)		35.2%	23.7%	9.7%	27.8%	24.2%	17.7%	12.4%	10.2%	8.2%
Cost of Sales	(175)	(231)	(288)	(315)	(400)	(489)	(571)	(643)	(708)	(41,420)
<b>Gross Profit</b>	<b>72</b>	<b>102</b>	<b>124</b>	<b>138</b>	<b>177</b>	<b>229</b>	<b>274</b>	<b>307</b>	<b>338</b>	<b>15,151</b>
GP Margin (%)	29.1%	30.6%	30.1%	30.4%	30.7%	31.9%	32.4%	32.3%	32.3%	26.8%
Operating Expenses	(41)	(52)	(60)	(74)	(87)	(102)	(116)	(128)	(141)	(7,115)
Other Operating Income / Expenses	4	2	0	(11)	(13)	(17)	(20)	(22)	(25)	(1,498)
<b>EBITDA</b>	<b>35</b>	<b>51</b>	<b>65</b>	<b>53</b>	<b>78</b>	<b>111</b>	<b>138</b>	<b>157</b>	<b>173</b>	<b>6,538</b>
EBITDA Margin (%)	14.1%	15.4%	15.7%	11.6%	13.4%	15.5%	16.4%	16.5%	16.5%	11.6%
Depreciation and Amortization (-)	(11)	(11)	(14)	(14)	(21)	(40)	(51)	(55)	(59)	(788)
<b>EBIT</b>	<b>24</b>	<b>40</b>	<b>51</b>	<b>39</b>	<b>56</b>	<b>71</b>	<b>88</b>	<b>103</b>	<b>114</b>	<b>5,750</b>
EBIT Margin (%)	9.6%	12.0%	12.4%	8.6%	9.7%	9.9%	10.4%	10.8%	10.9%	10.2%
Tax				(9)	(11)	(14)	(18)	(21)	(23)	(1,150)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				14	21	40	51	55	59	788
<b>Operational Cash Flows</b>				<b>44</b>	<b>66</b>	<b>97</b>	<b>121</b>	<b>137</b>	<b>150</b>	<b>5,388</b>
Change in NWC				(3)	(9)	(10)	(9)	(7)	(7)	(301)
Capex				(122)	(113)	(96)	(38)	(41)	(43)	(1,006)
<b>Free Cash Flows</b>				<b>(81)</b>	<b>(55)</b>	<b>(9)</b>	<b>74</b>	<b>89</b>	<b>100</b>	<b>4,081</b>
Discount Rate				20.5%	19.2%	18.8%	18.0%	17.0%	16.0%	15.5%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	60.50
Cumulative Discount Factor				0.91	0.76	0.64	0.54	0.46	0.39	0.00
<b>Discounted Cash Flows</b>				<b>(74)</b>	<b>(42)</b>	<b>(6)</b>	<b>40</b>	<b>41</b>	<b>39</b>	<b>1</b>

	TL m
DCF (2020-80)	433
Terminal Value (>2080)	-
<b>Enterprise Value</b>	<b>433</b>
Net Cash/(Debt)	107
Tax Incentive Assets	14
<b>Adjusted Equity Value</b>	<b>553</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Camiş Ambalaj Sanayii A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	143	137	131	126	121
	-25 bp	146	140	134	128	123
	-	150	143	137	131	126
	+25 bp	154	146	140	134	128
	+50 bp	158	150	143	137	131

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	107	158	173	174	224	271	317	361	412	445
Change (%)		47.6%	9.9%	0.4%	29.0%	20.7%	17.1%	14.0%	14.2%	8.0%
Cost of Sales	(80)	(121)	(129)	(132)	(170)	(206)	(241)	(275)	(315)	(340)
<b>Gross Profit</b>	<b>27</b>	<b>37</b>	<b>45</b>	<b>42</b>	<b>54</b>	<b>65</b>	<b>76</b>	<b>86</b>	<b>98</b>	<b>106</b>
GP Margin (%)	24.8%	23.6%	25.8%	24.2%	24.1%	24.0%	23.9%	23.8%	23.7%	23.7%
Operating Expenses	(13)	(16)	(17)	(17)	(22)	(27)	(32)	(38)	(44)	(47)
Other Operating Income / Expenses	1	2	3	1	2	2	3	3	3	4
<b>EBITDA</b>	<b>15</b>	<b>22</b>	<b>30</b>	<b>26</b>	<b>34</b>	<b>40</b>	<b>46</b>	<b>51</b>	<b>58</b>	<b>62</b>
EBITDA Margin (%)	14.2%	14.1%	17.5%	15.0%	15.1%	14.8%	14.5%	14.2%	14.0%	14.0%
Depreciation and Amortization (-)	(3)	(3)	(4)	(5)	(6)	(7)	(9)	(9)	(9)	(16)
<b>EBIT</b>	<b>12</b>	<b>19</b>	<b>26</b>	<b>21</b>	<b>27</b>	<b>33</b>	<b>37</b>	<b>42</b>	<b>48</b>	<b>46</b>
EBIT Margin (%)	11.3%	12.2%	15.1%	12.2%	12.2%	12.2%	11.8%	11.7%	11.7%	10.3%
Tax				(5)	(5)	(7)	(7)	(8)	(10)	(9)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				5	6	7	9	9	9	16
<b>Operational Cash Flows</b>				<b>21</b>	<b>28</b>	<b>33</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>53</b>
Change in NWC				1	(17)	(16)	(16)	(15)	(18)	(11)
Capex				(16)	(29)	(14)	(29)	(9)	(10)	(16)
<b>Free Cash Flows</b>				<b>7</b>	<b>(18)</b>	<b>3</b>	<b>(6)</b>	<b>19</b>	<b>21</b>	<b>26</b>
Discount Rate				20.6%	19.3%	18.9%	18.1%	17.1%	16.1%	15.6%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.91	0.76	0.64	0.54	0.46	0.39	0.39
<b>Discounted Cash Flows</b>				<b>6</b>	<b>(14)</b>	<b>2</b>	<b>(3)</b>	<b>9</b>	<b>8</b>	<b>133</b>

	TL m
DCF (2020-25)	8
Terminal Value (>2025)	133
<b>Enterprise Value</b>	<b>141</b>
Net Cash/(Debt)	(4)
<b>Adjusted Equity Value</b>	<b>137</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Enerji A.Ş.

Sensitivity  
Analysis (TL m)

		WACC					
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp	
	-50 bp	74	72	71	69	68	
	-25 bp	74	72	71	69	68	
	-	74	73	71	69	68	
	+25 bp	75	73	71	70	68	
	+50 bp	75	73	71	70	68	

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	728	729	897	1,213	1,524	1,709	1,887	2,045	2,177	2,351
Change (%)		0.1%	23.0%	35.3%	25.6%	12.1%	10.4%	8.4%	6.4%	8.0%
Cost of Sales	(715)	(704)	(873)	(1,190)	(1,494)	(1,675)	(1,850)	(2,005)	(2,134)	(2,305)
<b>Gross Profit</b>	<b>14</b>	<b>26</b>	<b>24</b>	<b>24</b>	<b>30</b>	<b>34</b>	<b>38</b>	<b>41</b>	<b>43</b>	<b>46</b>
GP Margin (%)	1.9%	3.5%	2.7%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Operating Expenses	(5)	(4)	(7)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Other Operating Income / Expenses	2	2	3	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>11</b>	<b>23</b>	<b>20</b>	<b>15</b>	<b>21</b>	<b>23</b>	<b>26</b>	<b>28</b>	<b>29</b>	<b>31</b>
EBITDA Margin (%)	1.5%	3.2%	2.2%	1.3%	1.4%	1.4%	1.4%	1.4%	1.3%	1.3%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>11</b>	<b>23</b>	<b>20</b>	<b>15</b>	<b>21</b>	<b>23</b>	<b>26</b>	<b>27</b>	<b>29</b>	<b>31</b>
EBIT Margin (%)	1.5%	3.2%	2.2%	1.2%	1.3%	1.4%	1.4%	1.3%	1.3%	1.3%
Tax				(3)	(4)	(5)	(5)	(5)	(6)	(6)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>12</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>25</b>
Change in NWC				1	(23)	(12)	(11)	(8)	(4)	(10)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>13</b>	<b>(6)</b>	<b>6</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>14</b>
Discount Rate				24.8%	23.1%	22.5%	21.7%	20.6%	19.6%	19.0%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.90	0.72	0.59	0.48	0.40	0.33	0.39
<b>Discounted Cash Flows</b>				<b>11</b>	<b>(5)</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>43</b>

	TL m
DCF (2020-25)	27
Terminal Value (>2025)	43
<b>Enterprise Value</b>	<b>70</b>
Net Cash/(Debt)	1
<b>Adjusted Equity Value</b>	<b>71</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Çevre Sistemleri A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
LTGR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	51	50	49	47	46
	-25 bp	52	51	49	48	47
	-	53	52	50	49	47
	+25 bp	54	53	51	49	48
	+50 bp	55	54	52	50	49

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	22	36	62	116	176	196	216	236	256	276
Change (%)		68.3%	70.3%	87.7%	51.6%	11.2%	10.3%	9.3%	8.3%	8.0%
Cost of Sales & OPEX	(21)	(34)	(58)	(110)	(169)	(189)	(208)	(228)	(247)	(267)
Other Operating Income / Expenses	5	(1)	2	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>9</b>
EBITDA Margin (%)	22.1%	2.4%	10.3%	5.5%	4.0%	3.7%	3.5%	3.3%	3.2%	3.2%
Depreciation and Amortization (-)	(1)	(1)	(2)	(5)	(5)	(5)	(5)	(5)	(5)	(3)
<b>EBIT</b>	<b>4</b>	<b>(1)</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>6</b>
EBIT Margin (%)	17.2%	-1.5%	7.2%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%	2.3%
Tax				(0)	(0)	(0)	(0)	(1)	(1)	(1)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				5	5	5	5	5	5	3
<b>Operational Cash Flows</b>				<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>
Change in NWC				(12)	(3)	(1)	(1)	(1)	(1)	(1)
Capex				(11)	(1)	(1)	(1)	(1)	(1)	(3)
<b>Free Cash Flows</b>				<b>(17)</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>4</b>
Discount Rate				18.7%	17.7%	17.3%	16.7%	15.7%	14.8%	14.3%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.92	0.78	0.66	0.56	0.49	0.42	0.42
<b>Discounted Cash Flows</b>				<b>(16)</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>25</b>

TL m	
DCF (2020-25)	(2)
Terminal Value (>2025)	25
<b>Enterprise Value</b>	<b>22</b>
Net Cash/(Debt)	26
Tax Incentive Assets	2
<b>Adjusted Equity Value</b>	<b>50</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Şişecam Dış Ticaret A.Ş.

Sensitivity  
Analysis (TL m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	-50 bp	74	72	70	68	66
	-25 bp	74	72	70	68	67
	-	75	73	71	69	67
	+25 bp	75	73	71	69	67
	+50 bp	76	74	72	70	68

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	2,861	3,789	4,674	5,198	6,253	7,393	8,189	9,121	10,192	11,007
Change (%)		32.5%	23.3%	11.2%	20.3%	18.2%	10.8%	11.4%	11.7%	8.0%
Cost of Sales & OPEX	(2,853)	(3,780)	(4,663)	(5,187)	(6,239)	(7,377)	(8,170)	(9,100)	(10,168)	(10,981)
Other Operating Income / Expenses	(1)	6	(4)	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>7</b>	<b>15</b>	<b>6</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>24</b>	<b>26</b>
EBITDA Margin (%)			0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>7</b>	<b>15</b>	<b>6</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>24</b>	<b>26</b>
EBIT Margin (%)	0.3%	0.4%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Tax				(2)	(3)	(3)	(4)	(4)	(5)	(5)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>9</b>	<b>11</b>	<b>14</b>	<b>15</b>	<b>17</b>	<b>19</b>	<b>21</b>
Change in NWC				(18)	(11)	(12)	(8)	(10)	(11)	(9)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>(9)</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>12</b>
Discount Rate				21.2%	20.7%	20.5%	19.7%	18.7%	17.6%	17.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.91	0.75	0.62	0.52	0.44	0.37	0.37
<b>Discounted Cash Flows</b>				<b>(8)</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>48</b>

	TL m
DCF (2020-25)	2
Terminal Value (>2025)	48
<b>Enterprise Value</b>	<b>51</b>
Net Cash/(Debt)	16
Tax Assets (Accumulated Loss)	4
<b>Adjusted Equity Value</b>	<b>71</b>

Source: Management, PwC Analysis

# Discounted Cash Flows

## Şişecam Sigorta Aracılık Hizmetleri A.Ş.

Sensitivity  
Analysis (TL m)

	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
LTGR	18	17	17	17	16
-50 bp	18	17	17	17	16
-25 bp	18	18	17	17	17
-	18	18	17	17	17
+25 bp	18	18	18	17	17
+50 bp	19	18	18	17	17

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	4	4	4	4	4	5	5	6	6	6
Change (%)		0.1%	18.2%	-14.3%	12.0%	11.5%	10.5%	9.5%	8.5%	8.0%
Cost of Sales & OPEX	(1)	(1)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(3)
Other Operating Income / Expenses	0	-	-	-	-	-	-	-	-	-
<b>EBITDA</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
EBITDA Margin (%)	71.9%	61.6%	59.8%	49.3%	49.3%	49.3%	49.3%	49.3%	49.3%	49.3%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
EBIT Margin (%)	69.4%	60.2%	59.0%	48.3%	48.1%	48.0%	47.9%	48.1%	48.1%	47.9%
Tax				(0)	(0)	(0)	(0)	(1)	(1)	(1)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
Discount Rate				23.9%	22.2%	21.6%	20.8%	19.7%	18.7%	18.1%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.90	0.73	0.60	0.49	0.41	0.35	0.35
<b>Discounted Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>

	TL m
DCF (2020-25)	6
Terminal Value (>2025)	8
<b>Enterprise Value</b>	<b>14</b>
Net Cash/(Debt)	6
Dividend Payments	(3)
<b>Adjusted Equity Value</b>	<b>17</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Camiş Elektrik Üretim A.Ş.

Sensitivity  
Analysis (TL m)

WACC				
-50 bp	-25 bp	-	+25 bp	+50 bp
86	85	85	85	84

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	54	68	74	92	127	141	156	171	14
Change (%)		24.8%	9.5%	24.8%	37.1%	11.5%	10.5%	9.5%	-92.0%
Cost of Sales	(49)	(59)	(70)	(83)	(113)	(126)	(139)	(152)	(12)
<b>Gross Profit</b>	<b>5</b>	<b>9</b>	<b>4</b>	<b>9</b>	<b>14</b>	<b>15</b>	<b>17</b>	<b>19</b>	<b>2</b>
GP Margin (%)	10.1%	13.2%	4.8%	9.6%	11.0%	11.0%	11.0%	11.0%	11.0%
Operating Expenses	(1)	(2)	(1)	(2)	(2)	(2)	(2)	(3)	(0)
Other Operating Income / Expenses	(0)	(1)	0	0	0	0	0	0	-
<b>EBITDA</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>7</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>16</b>	<b>1</b>
EBITDA Margin (%)	8.4%	9.9%	3.0%	7.6%	9.4%	9.4%	9.4%	9.4%	9.4%
Depreciation and Amortization (-)	(2)	(2)	(2)	(5)	(5)	(5)	(5)	(5)	(2)
<b>EBIT</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>(1)</b>
EBIT Margin (%)	4.1%	6.4%	0.8%	1.9%	5.2%	5.6%	6.0%	6.3%	-4.4%
Tax				(0)	(1)	(2)	(2)	(2)	-
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	0.0%
Depreciation and Amortization (+)				5	5	5	5	5	2
<b>Operational Cash Flows</b>				<b>7</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>1</b>
Change in NWC				3	0	(0)	(0)	(0)	3
Capex				(13)	-	-	-	-	-
<b>Free Cash Flows</b>				<b>(4)</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>4</b>
Discount Rate				21.5%	19.7%	19.2%	18.4%	17.3%	16.2%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	0.07
Discount Period				0.50	1.50	2.50	3.50	4.50	4.57
Cumulative Discount Factor				0.91	0.75	0.63	0.53	0.45	0.41
<b>Discounted Cash Flows</b>				<b>(4)</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>2</b>

	TL m
DCF (2020-25)	26
Terminal Value (>2025)	-
End of Operation Equipment Sales Value	17
<b>Enterprise Value</b>	<b>43</b>
Net Cash/(Debt)	42
<b>Adjusted Equity Value</b>	<b>85</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Madencilik Sanayii ve Tic. A.Ş.

Sensitivity  
Analysis (TL m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	18	17	17	16
	-25 bp	18	17	17	16
	-	18	17	17	16
	+25 bp	18	17	17	16
	+50 bp	18	17	17	16

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	2080
Revenue	6	6	8	8	13	20	25	31	34	782
Change (%)		-0.1%	32.1%	8.7%	60.6%	51.3%	25.3%	26.0%	8.5%	8.0%
Cost of Sales	(4)	(5)	(6)	(7)	(11)	(16)	(20)	(26)	(28)	(639)
<b>Gross Profit</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>143</b>
GP Margin (%)	22.1%	14.7%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%
Operating Expenses	(0)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(51)
Other Operating Income / Expenses	(0)	0	(0)	(0)	(0)	(1)	(2)	(2)	(3)	(39)
<b>EBITDA</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>53</b>
EBITDA Margin (%)	7.5%	10.5%	12.9%	9.8%	12.1%	9.8%	9.0%	8.3%	8.3%	6.7%
Depreciation and Amortization (-)				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>53</b>
EBIT Margin (%)	7.5%	10.5%	12.9%	9.8%	12.1%	9.8%	9.0%	8.3%	8.3%	6.7%
Tax				(0)	(0)	(0)	(0)	(1)	(1)	(11)
Tax Rate (%)				22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>42</b>
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(1)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>41</b>
Discount Rate				21.0%	19.6%	19.1%	18.3%	17.3%	16.3%	15.9%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	60.50
Cumulative Discount Factor				0.91	0.76	0.63	0.53	0.45	0.39	0.00
<b>Discounted Cash Flows</b>				<b>0.56</b>	<b>0.91</b>	<b>0.93</b>	<b>0.92</b>	<b>0.90</b>	<b>0.86</b>	<b>0</b>

	TL m
DCF (2020-80)	15
Terminal Value (>2080)	-
<b>Enterprise Value</b>	<b>15</b>
Net Cash/(Debt)	2
<b>Adjusted Equity Value</b>	<b>17</b>

Source: Management, PwC Analysis

## Discounted Cash Flows

### Camiş Egypt Mining Ltd. Co.

Sensitivity  
Analysis (\$ m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	1	1	1	1
	-25 bp	1	1	1	1
	-	1	1	1	1
	+25 bp	1	1	1	1
	+50 bp	1	1	1	1

USD m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV
Revenue	6	5	7	5	3	1	3	3	3	3
Change (%)		-16.2%	34.2%	-26.7%	-45.5%	-56.4%	117.3%	2.4%	2.0%	2.0%
Cost of Sales	(3)	(3)	(5)	(3)	(2)	(1)	(2)	(2)	(2)	(2)
<b>Gross Profit</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
GP Margin (%)	56.8%	37.0%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Operating Expenses	(3)	(2)	(2)	(2)	(1)	(0)	(1)	(1)	(1)	(1)
Other Operating Income / Expenses	0	-	0	-	-	-	-	-	-	-
<b>EBITDA</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBITDA Margin (%)	5.1%	2.7%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>(0)</b>	<b>(0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EBIT Margin (%)	4.5%	1.6%	1.3%	0.9%	-0.5%	-2.4%	2.0%	2.0%	1.9%	1.6%
Tax				(0)	-	-	(0)	(0)	(0)	(0)
Tax Rate (%)				22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Depreciation and Amortization (+)				0	0	0	0	0	0	0
<b>Operational Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Change in NWC				0	0	0	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Free Cash Flows</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Discount Rate				9.9%	9.9%	9.8%	9.8%	9.8%	9.8%	9.8%
Partial Period Factor				1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period				0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor				0.95	0.87	0.79	0.72	0.66	0.60	0.60
<b>Discounted Cash Flows</b>				<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.3</b>

	USD m	TL m
DCF (2020-25)	0	1
Terminal Value (>2025)	0	2
<b>Enterprise Value</b>	<b>1</b>	<b>3</b>
Net Cash/(Debt)	0	1
<b>Adjusted Equity Value</b>	<b>1</b>	<b>4</b>

Source: Management, PwC Analysis

Discounted Cash Flows  
Rudnik Kretnjaka Vijenac D.O.O.

Sensitivity  
Analysis (BAM m)

		WACC				
LTCR		-50 bp	-25 bp	-	+25 bp	+50 bp
	-50 bp	1	1	1	1	1
	-25 bp	1	1	1	1	1
	-	1	1	1	1	1
	+25 bp	1	1	1	1	1
	+50 bp	1	1	1	1	1

BAM m	2020	2021	2022	2023	2024	2025	TV
Dividend (50% Camiř Madencilik A.ř. Share)	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Discount Rate	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
Partial Period Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	
Cumulative Discount Factor	0.93	0.81	0.70	0.61	0.53	0.46	0.46
Discounted Dividend	0.2	0.2	0.1	0.1	0.1	0.1	0.6

	BAM m	TL m
Discounted Dividend (2020-25)	1	3
Discounted Dividend (>2025)	1	2
Adjusted Enterprise Value	1	5

Source: Management, PwC Analysis

## Investment Properties

The total appraisal value of the investment properties of all the companies located in Turkey as at 31 December 2019 is TL 772m.

Consolidated Company Name	Solo Company Name	Company Code	City	District	Total Appraisal Value (TL m)*
SISE	Türkiye Şişe ve Cam Fab. A.Ş.	SC	Istanbul	Beykoz	302.4
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	187.5
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	64.7
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	37.2
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	11.9
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	11.7
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	8.9
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	6.4
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	5.6
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	4.8
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	3.9
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	3.2
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	2.6
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	1.9
SISE	Çayırova Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	0.5
SISE	Cam Elyaf Sanayii A.Ş.	CE	Kocaeli	Gebze	32.4
SISE	Cam Elyaf Sanayii A.Ş.	CE	Kocaeli	Gebze	4.2
SISE	Camış Ambalaj Sanayii A.Ş.	CA	Istanbul	Tuzla	0.2
SISE	Camış Madencilik A.Ş.	MD	Tekirdağ	Saray	0.1
TRKCM	Trakya Cam Sanayii A.Ş.	TR	Kocaeli	Gebze	0.6
ANACM	Anadolu Cam Sanayii A.Ş.	AC	Kocaeli	Gebze	73.7
PASAB	Paşabahçe Cam San. ve Tic. A.Ş.	PB	Adana	Seyhan	7.9
PASAB	Paşabahçe Cam San. ve Tic. A.Ş.	PB	Istanbul	Tuzla	0.2
PASAB	Paşabahçe Cam San. ve Tic. A.Ş.	PB	Istanbul	Fatih	0.1
<b>Total - Turkey</b>					<b>772.4</b>
TRKCM	Richard Fritz Kft	FO	Besigheim - Germany		27.9
<b>Total</b>					<b>800.3</b>

Fair values of the investment properties as at 31 December 2019 evaluated by "Harmoni Gayrimenkul ve Danışmanlık A.Ş." have been utilised for the purposes of this work.  
Source: Company Management, PwC Analysis

# *Comparable Companies*

## Compagnie de Saint-Gobain S.A.

*Saint-Gobain develops various products to be utilised in the construction industry. The headquarters of Saint Gobain, that has been established in 1665, are located in Courbevoie, France. 47% of the Company's sales consist of construction material distributions.*

### FLAT GLASS

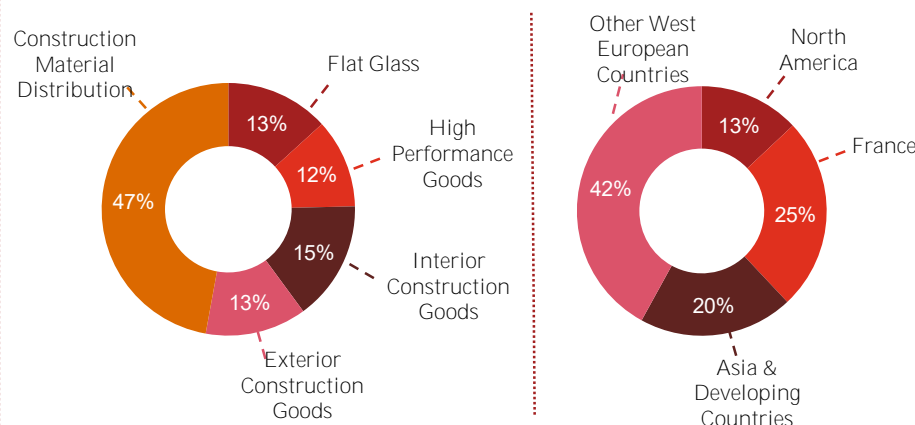
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	49,003	47,829	47,776
Cost of Goods Sold	(36,527)	(35,673)	(35,593)
<b>Gross Profit</b>	<b>12,476</b>	<b>12,156</b>	<b>12,183</b>
General, Administrative & Selling Expenses	(8,976)	(8,628)	(8,561)
<b>Operating Income</b>	<b>3,500</b>	<b>3,528</b>	<b>3,621</b>
Financial Income/Loss	(330)	(403)	(355)
Other Income/Loss	(693)	(2,019)	(927)
<b>Earnings Before Tax</b>	<b>2,477</b>	<b>1,106</b>	<b>2,340</b>
Provision for Income Tax	(526)	(563)	(708)
<b>Net Income</b>	<b>1,951</b>	<b>543</b>	<b>1,632</b>
<b>EBITDA</b>	<b>4,947</b>	<b>5,761</b>	<b>5,087</b>
EBITDA Margin (%)	10.1%	12.0%	10.6%

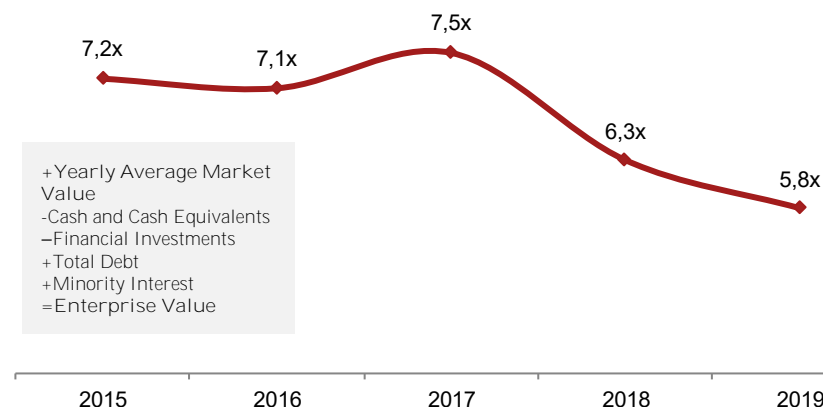
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>19,282</b>	<b>18,797</b>	<b>19,979</b>
Cash and Cash Equivalents	3,943	3,078	5,596
Account Receivables	6,165	5,688	5,401
Other Receivables	678	856	1,283
Inventory	7,254	7,158	6,958
Other Current Assets	1,242	2,016	741
<b>Fixed Assets</b>	<b>32,251</b>	<b>31,629</b>	<b>36,113</b>
Long-term Investments	576	2,434	3,473
Property, Plant & Equipment	13,917	12,978	16,453
Intangible Assets	15,787	14,300	14,274
Other Fixed Assets	1,972	1,917	1,912
<b>Total Assets</b>	<b>51,533</b>	<b>50,426</b>	<b>56,091</b>
<b>Current Liabilities</b>	<b>14,413</b>	<b>14,345</b>	<b>14,749</b>
Accounts Payable	7,237	7,003	6,733
Short-term Borrowings	624	548	251
Current Portion of Long-term Debt	1,278	1,356	2,711
Other Short-term liabilities	5,274	5,439	5,053
<b>Long-term Liabilities</b>	<b>14,484</b>	<b>15,172</b>	<b>19,145</b>
Long-term Financial Liabilities	9,192	10,554	14,407
Other non-current Liabilities	5,292	4,618	4,738
<b>Total Equity</b>	<b>22,637</b>	<b>20,909</b>	<b>22,197</b>
<b>Total Liabilities and Equity</b>	<b>51,533</b>	<b>50,426</b>	<b>56,091</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## AGC Inc.

AGC supplies the glass demand that is used in the production of Companies in various sectors, from construction to electronics. The Company, establishment of which dates back to 1907, has a head office located in Tokyo, Japan. 48% of Company's sales are glass and 31% of them are chemicals.

## FLAT GLASS

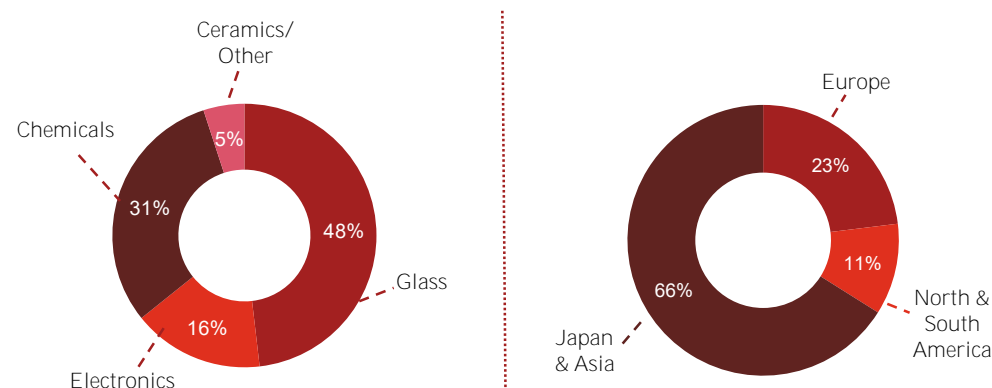
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	12,994	13,881	13,968
Cost of Goods Sold	(9,416)	(10,054)	(10,263)
<b>Gross Profit</b>	<b>3,577</b>	<b>3,826</b>	<b>3,706</b>
General, Administrative & Selling Expenses	(2,531)	(2,741)	(2,781)
Other Operating Income/Loss	27	9	(236)
<b>Operating Income</b>	<b>1,073</b>	<b>1,094</b>	<b>689</b>
Financial Income/Loss	8	20	2
Other Income/Loss	(66)	56	10
<b>Earnings Before Tax</b>	<b>1,016</b>	<b>1,170</b>	<b>701</b>
Provision for Income Tax	(312)	(241)	(190)
<b>Net Income</b>	<b>704</b>	<b>930</b>	<b>511</b>
<b>EBITDA</b>	<b>2,212</b>	<b>2,203</b>	<b>2,008</b>
EBITDA Margin (%)	17.0%	15.9%	14.4%

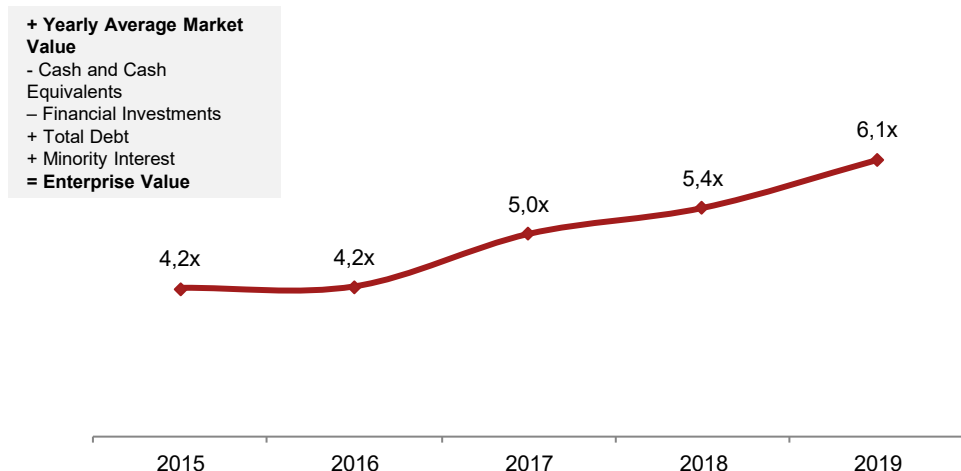
### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>6,415</b>	<b>6,683</b>	<b>6,833</b>
Cash and Cash Equivalents	1,122	1,126	1,047
Account Receivables	2,313	2,371	2,430
Other Receivables	247	247	63
Inventory	2,324	2,525	2,680
Other Current Assets	409	414	613
<b>Fixed Assets</b>	<b>13,371</b>	<b>13,695</b>	<b>14,656</b>
Long-term Investments	2,535	2,076	2,023
Property, Plant & Equipment	9,416	10,107	10,837
Intangible Assets	1,214	1,328	1,600
Other Fixed Assets	206	184	196
<b>Total Assets</b>	<b>19,786</b>	<b>20,378</b>	<b>21,490</b>
<b>Current Liabilities</b>	<b>4,042</b>	<b>4,221</b>	<b>4,440</b>
Accounts Payable	1,416	1,427	1,403
Short-term Borrowings	898	882	2,017
Current Portion of Long-term Debt	565	655	737
Other Short-term liabilities	1,163	1,256	283
<b>Long-term Liabilities</b>	<b>4,292</b>	<b>4,731</b>	<b>5,248</b>
Long-term Financial Liabilities	3,123	3,670	4,088
Other non-current Liabilities	1,168	1,062	1,159
<b>Total Equity</b>	<b>11,452</b>	<b>11,426</b>	<b>11,802</b>
<b>Total Liabilities and Equity</b>	<b>19,786</b>	<b>20,378</b>	<b>21,490</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Fuyao Glass

*Fuyao produces automotive glasses for various vehicles along with its' subsidiaries. The Company has been established in 1987 and its' headquarters are located in China's Fujiyan area. 78% of the Company's sales belong to automotive glass and 14% to flat glass.*

### FLAT GLASS

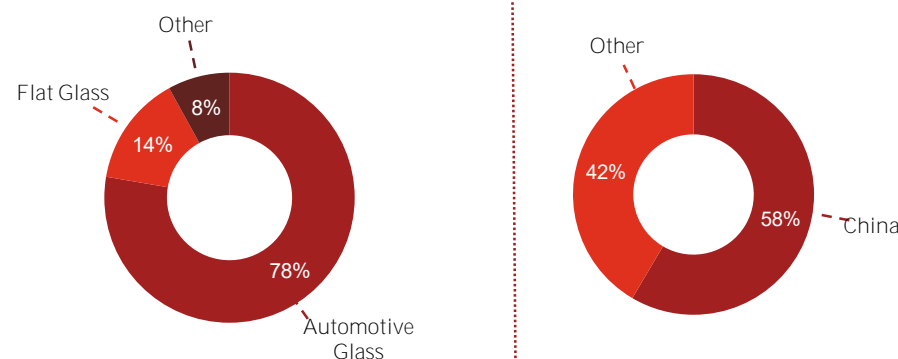
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	2,876	2,941	3,031
Cost of Goods Sold	(1,685)	(1,726)	(1,924)
<b>Gross Profit</b>	<b>1,191</b>	<b>1,214</b>	<b>1,107</b>
General, Administrative & Selling Expenses	(434)	(477)	(528)
Research and Development Expenses	(123)	(129)	(117)
Other Operating Income/Loss	(30)	(30)	27
<b>Operating Income</b>	<b>603</b>	<b>578</b>	<b>489</b>
Financial Income/Loss	(0)	82	(62)
Other Income/Loss	(37)	62	37
<b>Earnings Before Tax</b>	<b>566</b>	<b>722</b>	<b>464</b>
Provision for Income Tax	(82)	(124)	(48)
<b>Net Income</b>	<b>484</b>	<b>597</b>	<b>416</b>
<b>EBITDA</b>	<b>790</b>	<b>785</b>	<b>694</b>
EBITDA Margin (%)	27.5%	26.7%	22.9%

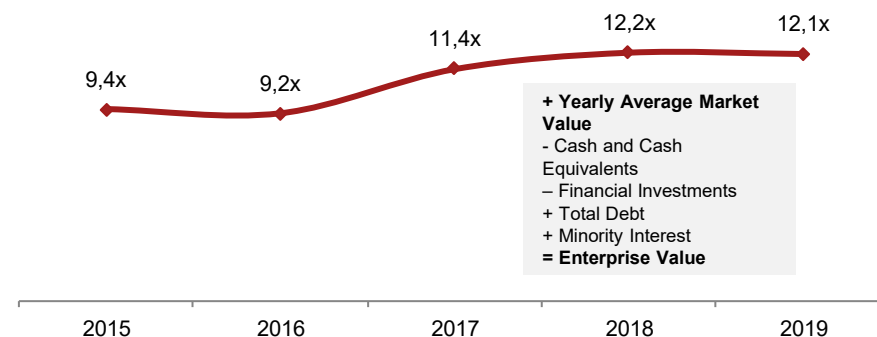
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>2,306</b>	<b>2,265</b>	<b>2,553</b>
Cash and Cash Equivalents	1,052	984	1,438
Account Receivables	713	626	644
Other Receivables	11	97	-
Inventory	457	471	471
Other Current Assets	73	87	1
<b>Fixed Assets</b>	<b>2,566</b>	<b>2,749</b>	<b>3,025</b>
Long-term Investments	15	30	29
Property, Plant & Equipment	2,231	2,409	2,691
Intangible Assets	180	200	205
Other Fixed Assets	140	111	100
<b>Total Assets</b>	<b>4,873</b>	<b>5,015</b>	<b>5,578</b>
<b>Current Liabilities</b>	<b>1,483</b>	<b>1,797</b>	<b>2,124</b>
Accounts Payable	369	358	604
Short-term Borrowings	827	851	1,368
Current Portion of Long-term Debt	1	190	12
Other Short-term liabilities	286	398	139
<b>Long-term Liabilities</b>	<b>468</b>	<b>283</b>	<b>384</b>
Long-term Financial Liabilities	386	181	253
Other non-current Liabilities	83	101	130
<b>Total Equity</b>	<b>2,921</b>	<b>2,936</b>	<b>3,071</b>
<b>Total Liabilities and Equity</b>	<b>4,873</b>	<b>5,015</b>	<b>5,578</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Vitro S.A.B. de C.V.

Vitro operates in the business segments of flat glass and glass packaging. It operates with 2 types of goods – flat glass and glass storage containers. Flat Glass segment produces flat glass for the construction and automotive sectors, as well as carbonate and sodium bicarbonate. Vitro has been established in 1909 and the head office is located in San Pedro Garza García, Mexico. 90% of sales of the Company are flat glass sales.

### FLAT GLASS

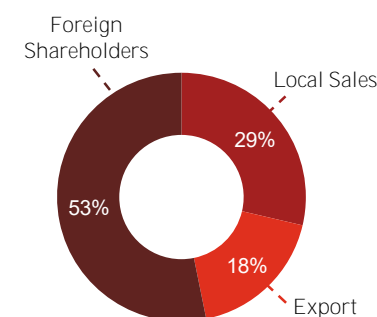
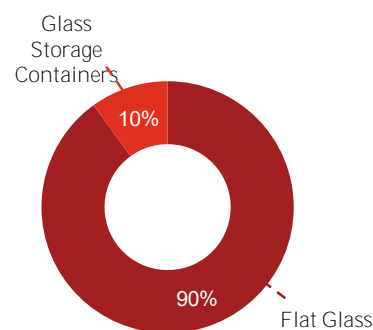
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	2,075	2,238	2,180
Cost of Goods Sold	(1,446)	(1,615)	(1,655)
<b>Gross Profit</b>	<b>629</b>	<b>624</b>	<b>525</b>
General, Administrative & Selling Expenses	(351)	(374)	(370)
Other Operating Income/Loss	32	3	(11)
<b>Operating Income</b>	<b>310</b>	<b>253</b>	<b>144</b>
Financial Income/Loss	(37)	(37)	(33)
Other Income/Loss	(11)	(8)	(34)
<b>Earnings Before Tax</b>	<b>262</b>	<b>208</b>	<b>77</b>
Provision for Income Tax	(68)	(46)	(13)
<b>Net Income</b>	<b>194</b>	<b>162</b>	<b>64</b>
<b>EBITDA</b>	<b>418</b>	<b>370</b>	<b>282</b>
EBITDA Margin (%)	20.2%	16.5%	12.9%

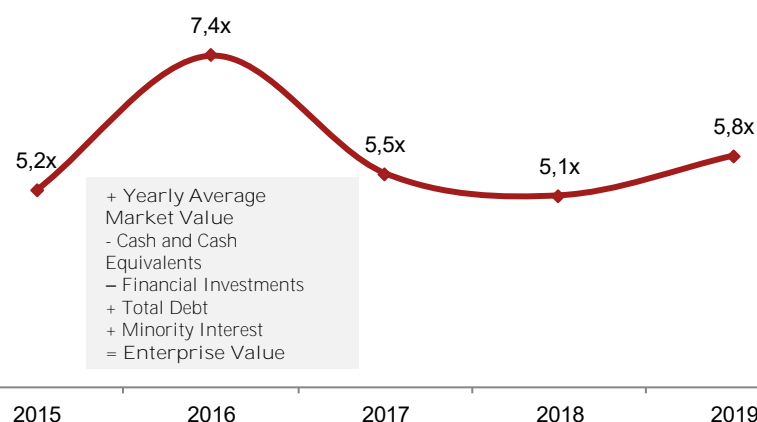
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>887</b>	<b>1,051</b>	<b>944</b>
Cash and Cash Equivalents	180	291	230
Account Receivables	295	301	221
Other Receivables	60	58	70
Inventory	338	389	420
Other Current Assets	14	12	3
<b>Fixed Assets</b>	<b>1,788</b>	<b>1,719</b>	<b>1,850</b>
Long-term Investments	90	8	15
Property, Plant & Equipment	1,173	1,226	1,338
Intangible Assets	348	337	323
Other Fixed Assets	176	149	174
<b>Total Assets</b>	<b>2,675</b>	<b>2,771</b>	<b>2,794</b>
<b>Current Liabilities</b>	<b>393</b>	<b>397</b>	<b>418</b>
Accounts Payable	231	205	235
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	5	3	16
Other Short-term liabilities	157	189	167
<b>Long-term Liabilities</b>	<b>898</b>	<b>905</b>	<b>945</b>
Long-term Financial Liabilities	685	718	700
Other non-current Liabilities	213	187	245
<b>Total Equity</b>	<b>1,385</b>	<b>1,468</b>	<b>1,430</b>
<b>Total Liabilities and Equity</b>	<b>2,675</b>	<b>2,771</b>	<b>2,794</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Xinyi Glass Holdings Limited

## FLAT GLASS

Xinyi Glass produces and sells glass products utilised for trading and industrial purposes in automotive, construction and other industries. The Company operates in three business segments such as: float glass, automotive glass and architectural glass. Xinyi Glass has been established in 1988 and the head office is located in Kwun Tong, Hong Kong. Flat glass sales contribute to 53% of Company's total sales and automotive glass sales contribute to 26% of sales.

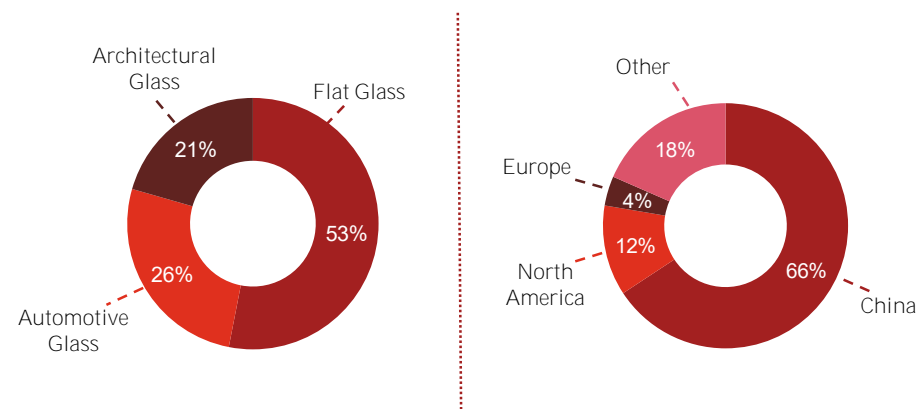
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	1,885	2,045	2,087
Cost of Goods Sold	(1,188)	(1,295)	(1,332)
<b>Gross Profit</b>	<b>697</b>	<b>750</b>	<b>755</b>
General, Administrative & Selling Expenses	(262)	(307)	(338)
Other Operating Income/Loss	46	56	168
<b>Operating Income</b>	<b>481</b>	<b>498</b>	<b>585</b>
Financial Income/Loss	(14)	(18)	(23)
Other Income/Loss	134	154	82
<b>Earnings Before Tax</b>	<b>601</b>	<b>635</b>	<b>644</b>
Provision for Income Tax	(87)	(92)	(68)
<b>Net Income</b>	<b>514</b>	<b>542</b>	<b>576</b>
<b>EBITDA</b>	<b>589</b>	<b>616</b>	<b>703</b>
EBITDA Margin (%)	31.3%	30.1%	33.7%

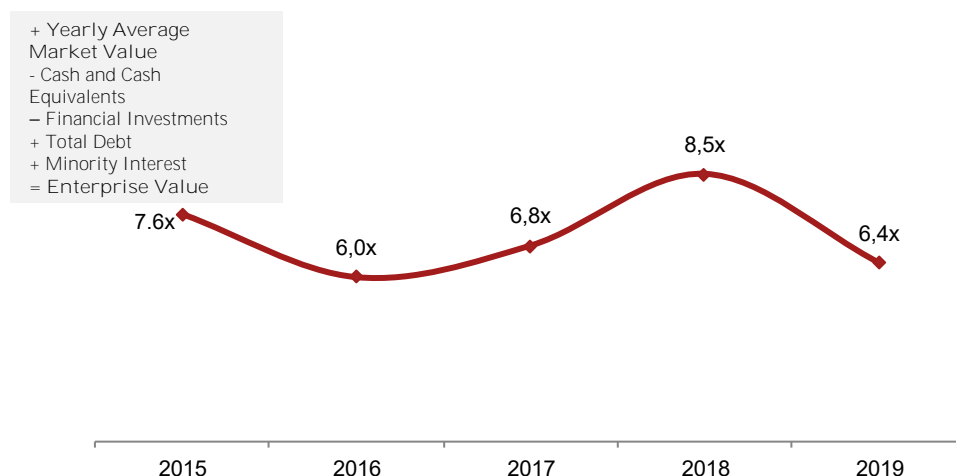
### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>1,015</b>	<b>1,175</b>	<b>1,323</b>
Cash and Cash Equivalents	398	603	654
Account Receivables	285	207	220
Other Receivables	7	5	4
Inventory	217	224	262
Other Current Assets	109	137	182
<b>Fixed Assets</b>	<b>2,863</b>	<b>2,998</b>	<b>3,331</b>
Long-term Investments	565	603	720
Property, Plant & Equipment	1,655	1,670	2,285
Intangible Assets	9	9	8
Other Fixed Assets	635	717	319
<b>Total Assets</b>	<b>3,879</b>	<b>4,173</b>	<b>4,654</b>
<b>Current Liabilities</b>	<b>660</b>	<b>843</b>	<b>1,081</b>
Accounts Payable	131	163	198
Short-term Borrowings	-	26	-
Current Portion of Long-term Debt	265	370	573
Other Short-term liabilities	265	285	310
<b>Long-term Liabilities</b>	<b>876</b>	<b>942</b>	<b>887</b>
Long-term Financial Liabilities	819	878	816
Other non-current Liabilities	57	64	71
<b>Total Equity</b>	<b>2,343</b>	<b>2,388</b>	<b>2,687</b>
<b>Total Liabilities and Equity</b>	<b>3,879</b>	<b>4,173</b>	<b>4,654</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## CSG Holding Co. Ltd.

CSG Holding Co., Ltd. has been established in 1984 and its' main office is located in Shenzhen region of China. The segments that make the most production and sales are as follows: glass, solar energy, electronic glass and screens.

### FLAT GLASS

#### Income Statement

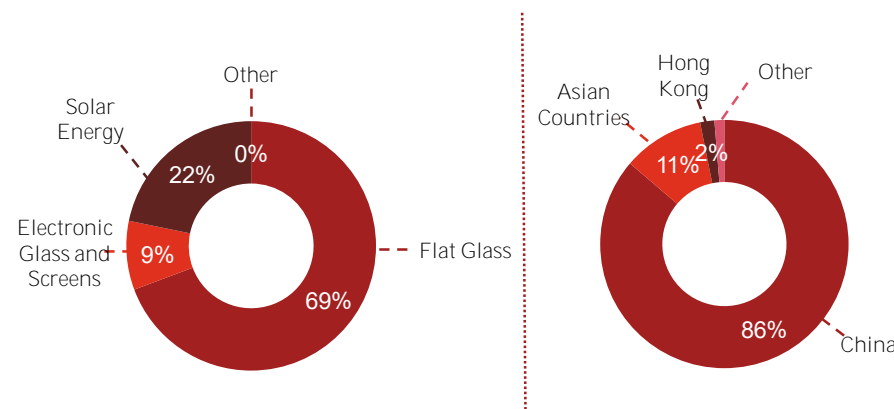
(\$ m)	FY17	FY18	FY19
Net Sales	1,672	1,543	1,416
Cost of Goods Sold	(1,263)	(1,181)	(1,067)
<b>Gross Profit</b>	<b>409</b>	<b>362</b>	<b>348</b>
General, Administrative & Selling Expenses	(143)	(158)	(141)
Research and Development Expenses	(51)	(49)	(46)
Other Operating Income/Loss	(19)	(20)	(24)
<b>Operating Income</b>	<b>196</b>	<b>134</b>	<b>137</b>
Financial Income/Loss	(46)	(49)	(42)
Other Income/Loss	3	(6)	(5)
<b>Earnings Before Tax</b>	<b>153</b>	<b>79</b>	<b>90</b>
Provision for Income Tax	(26)	(11)	(13)
<b>Net Income</b>	<b>127</b>	<b>69</b>	<b>77</b>
<b>EBITDA</b>	<b>350</b>	<b>282</b>	<b>281</b>
EBITDA Margin (%)	20.9%	18.3%	19.8%

\*Last 12 months - September

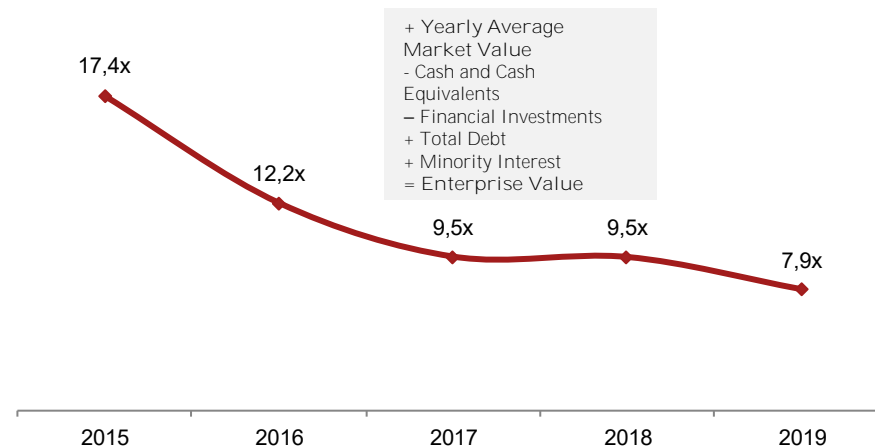
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	30.09.201
<b>Current Assets</b>	<b>759</b>	<b>717</b>	<b>657</b>
Cash and Cash Equivalents	379	324	261
Account Receivables	183	191	178
Other Receivables	26	68	29
Inventory	105	87	114
Other Current Assets	66	46	76
<b>Fixed Assets</b>	<b>2,244</b>	<b>2,063</b>	<b>1,920</b>
Long-term Investments	-	-	-
Property, Plant & Equipment	1,992	1,816	1,677
Intangible Assets	223	206	198
Other Fixed Assets	29	40	45
<b>Total Assets</b>	<b>3,002</b>	<b>2,779</b>	<b>2,577</b>
<b>Current Liabilities</b>	<b>1,146</b>	<b>901</b>	<b>936</b>
Accounts Payable	157	125	171
Short-term Borrowings	569	425	400
Current Portion of Long-term Debt	139	119	234
Other Short-term liabilities	281	231	130
<b>Long-term Liabilities</b>	<b>507</b>	<b>504</b>	<b>255</b>
Long-term Financial Liabilities	417	414	178
Other non-current Liabilities	90	91	77
<b>Total Equity</b>	<b>1,349</b>	<b>1,374</b>	<b>1,387</b>
<b>Total Liabilities and Equity</b>	<b>3,002</b>	<b>2,779</b>	<b>2,577</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Zhuzhou Kibing Group Co. Ltd

Zhuzhou Kibing produces and sells glass products. The head office of Zhuzhou Kibing, the Company that has been operating since 1988, is located in Shenzhen, China. 89% of Company's sales are associated with glass production and processing.

## FLAT GLASS

### Income Statement

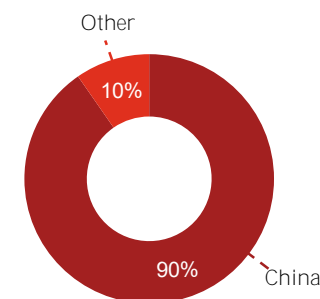
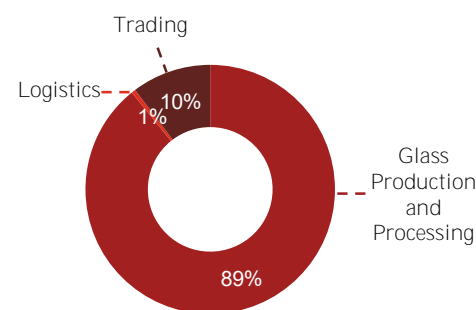
(\$ m)	FY17	FY18	FY19
Net Sales	1,166	1,218	1,238
Cost of Goods Sold	(792)	(868)	(900)
<b>Gross Profit</b>	<b>373</b>	<b>350</b>	<b>338</b>
General, Administrative & Selling Expenses	(90)	(90)	(75)
Research and Development Expenses	(39)	(45)	(54)
Other Operating Income/Loss	(22)	(17)	(25)
<b>Operating Income</b>	<b>222</b>	<b>198</b>	<b>183</b>
Financial Income/Loss	(21)	(11)	(17)
Other Income/Loss	6	9	18
<b>Earnings Before Tax</b>	<b>208</b>	<b>196</b>	<b>185</b>
Provision for Income Tax	(32)	(20)	(20)
<b>Net Income</b>	<b>175</b>	<b>176</b>	<b>164</b>
<b>EBITDA</b>	<b>345</b>	<b>324</b>	<b>312</b>
EBITDA Margin (%)	29.6%	26.6%	25.2%

### Balance Sheet

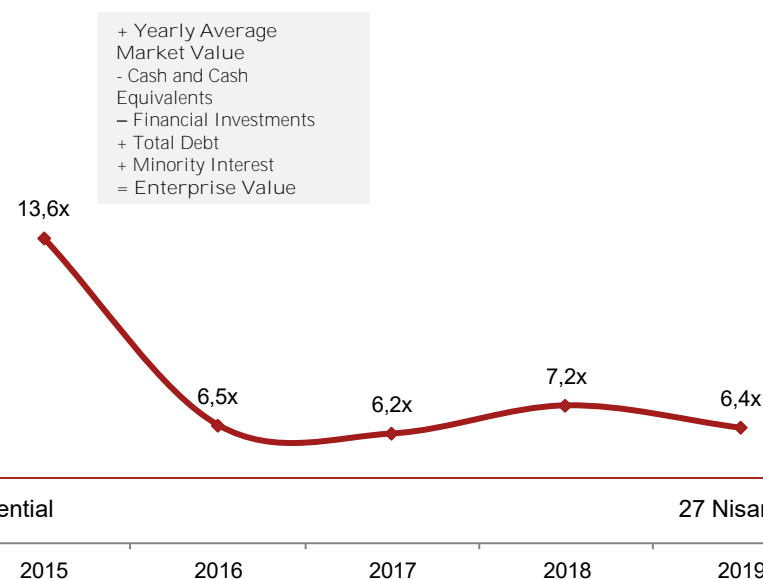
(\$ m)	31.12.2017	31.12.2018	30.09.2019
<b>Current Assets</b>	<b>323</b>	<b>303</b>	<b>343</b>
Cash and Cash Equivalents	105	63	37
Account Receivables	13	20	29
Other Receivables	21	21	3
Inventory	180	192	149
Other Current Assets	4	8	125
<b>Fixed Assets</b>	<b>1,632</b>	<b>1,564</b>	<b>1,494</b>
Long-term Investments	9	5	5
Property, Plant & Equipment	1,383	1,338	1,277
Intangible Assets	130	120	118
Other Fixed Assets	110	100	93
<b>Total Assets</b>	<b>1,954</b>	<b>1,867</b>	<b>1,836</b>
<b>Current Liabilities</b>	<b>306</b>	<b>377</b>	<b>478</b>
Accounts Payable	100	123	137
Short-term Borrowings	43	71	162
Current Portion of Long-term Debt	6	67	107
Other Short-term liabilities	157	116	72
<b>Long-term Liabilities</b>	<b>561</b>	<b>389</b>	<b>268</b>
Long-term Financial Liabilities	294	216	181
Other non-current Liabilities	266	173	87
<b>Total Equity</b>	<b>1,088</b>	<b>1,101</b>	<b>1,090</b>
<b>Total Liabilities and Equity</b>	<b>1,954</b>	<b>1,867</b>	<b>1,836</b>

\* Last 12 months - September

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Owens-Illinois, Inc.

Owens-Illinois Inc, produces and sells glass packaging to the producers of food and beverage in America, Europe and Asia Pacific via the channels of its' subsidiaries. The Company produces glass packaging for beer, aromatic malt drinks, alcoholic beverages, non-alcoholic beverages and pharmaceutical goods. 67% of sales are alcoholic beverage bottles and 19% of sales are food and other packaging.

## GLASS PACKAGING

### Income Statement

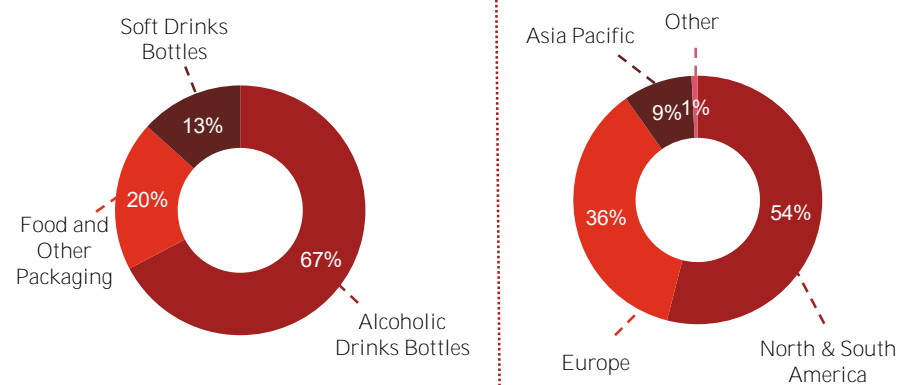
(\$ m)	FY17	FY18	FY19
Net Sales	6,869	6,877	6,691
Cost of Goods Sold	(5,536)	(5,589)	(5,482)
<b>Gross Profit</b>	<b>1,333</b>	<b>1,288</b>	<b>1,209</b>
General, Administrative & Selling Expenses	(702)	(557)	(463)
Research and Development Expenses	(60)	(70)	(68)
Other Operating Income/Loss	(23)	(1)	(86)
<b>Operating Income</b>	<b>548</b>	<b>661</b>	<b>592</b>
Financial Income/Loss	(250)	(250)	(246)
Other Income/Loss	(26)	(32)	(610)
<b>Earnings Before Tax</b>	<b>272</b>	<b>379</b>	<b>(264)</b>
Provision for Income Tax	(70)	(96)	(118)
<b>Net Income</b>	<b>202</b>	<b>283</b>	<b>(382)</b>
<b>EBITDA</b>	<b>976</b>	<b>1,090</b>	<b>1,054</b>
EBITDA Margin (%)	14.2%	15.8%	15.8%

### Balance Sheet

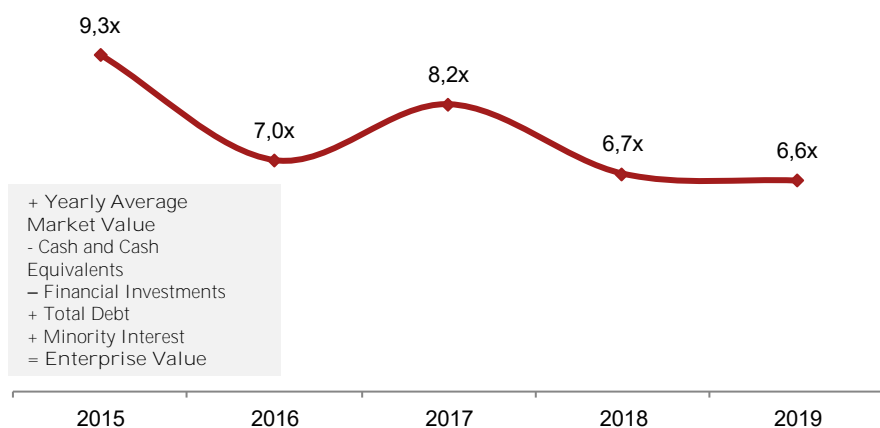
(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>2,420</b>	<b>2,357</b>	<b>2,488</b>
Cash and Cash Equivalents	492	512	551
Account Receivables	663	549	621
Other Receivables	-	-	-
Inventory	1,036	1,018	1,045
Other Current Assets	229	278	271
<b>Fixed Assets</b>	<b>7,336</b>	<b>7,342</b>	<b>7,122</b>
Long-term Investments	525	698	694
Property, Plant & Equipment	3,131	3,085	3,476
Intangible Assets	3,111	2,992	2,379
Other Fixed Assets	569	567	573
<b>Total Assets</b>	<b>9,756</b>	<b>9,699</b>	<b>9,610</b>
<b>Current Liabilities</b>	<b>2,280</b>	<b>2,207</b>	<b>1,995</b>
Accounts Payable	1,324	1,321	1,276
Short-term Borrowings	151	127	75
Current Portion of Long-term Debt	11	33	114
Other Short-term liabilities	794	726	530
<b>Long-term Liabilities</b>	<b>6,549</b>	<b>6,592</b>	<b>7,051</b>
Long-term Financial Liabilities	5,121	5,181	5,573
Other non-current Liabilities	1,428	1,411	1,478
<b>Total Equity</b>	<b>927</b>	<b>900</b>	<b>564</b>
<b>Total Liabilities and Equity</b>	<b>9,756</b>	<b>9,699</b>	<b>9,610</b>

Source: Company's Activity and Audit Reports, Capital IQ

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



## Ardagh Group S.A.

Ardagh Group produces and supplies firm packaging solutions to the food and beverage markets. The Company operates under two segments: metallic packaging and glass packaging. The glass and metal segment sales hold an equal percentage.

## GLASS PACKAGING

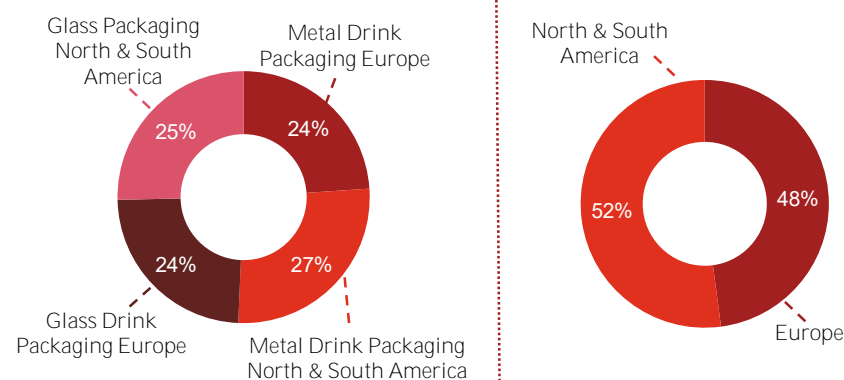
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	6,390	6,676	6,660
Cost of Goods Sold	(5,309)	(5,623)	(5,610)
<b>Gross Profit</b>	<b>1,081</b>	<b>1,053</b>	<b>1,050</b>
General, Administrative & Selling Expenses	(304)	(316)	(329)
Amortization of Goodwill and Intangibles	(237)	(237)	(233)
<b>Operating Income</b>	<b>540</b>	<b>500</b>	<b>488</b>
Financial Income/Loss	(441)	(443)	(407)
Other Income/Loss	(113)	(133)	1,421
Provision for Income Tax	77	(18)	(44)
<b>Net Income</b>	<b>63</b>	<b>(94)</b>	<b>1,458</b>
<b>EBITDA</b>	<b>1,123</b>	<b>1,099</b>	<b>1,155</b>
EBITDA Margin (%)	17.6%	16.5%	17.3%

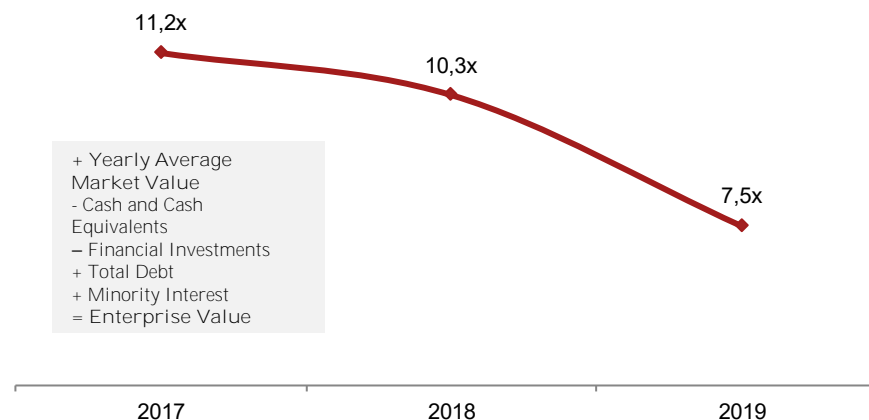
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>3,427</b>	<b>3,036</b>	<b>2,466</b>
Cash and Cash Equivalents	784	530	617
Account Receivables	1,015	983	667
Other Receivables	259	230	218
Inventory	1,353	1,284	964
Other Current Assets	16	9	-
<b>Fixed Assets</b>	<b>7,725</b>	<b>7,278</b>	<b>6,212</b>
Long-term Investments	10	-	381
Property, Plant & Equipment	3,368	3,388	2,677
Intangible Assets	4,104	3,601	2,884
Other Fixed Assets	243	289	270
<b>Total Assets</b>	<b>11,152</b>	<b>10,314</b>	<b>8,678</b>
<b>Current Liabilities</b>	<b>2,295</b>	<b>2,417</b>	<b>1,945</b>
Accounts Payable	1,469	1,517	1,166
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	2	118	95
Other Short-term liabilities	824	782	684
<b>Long-term Liabilities</b>	<b>10,231</b>	<b>9,406</b>	<b>6,948</b>
Long-term Financial Liabilities	8,306	7,761	5,815
Other non-current Liabilities	1,925	1,645	1,133
<b>Total Equity</b>	<b>(1,374)</b>	<b>(1,509)</b>	<b>(215)</b>
<b>Total Liabilities and Equity</b>	<b>11,152</b>	<b>10,314</b>	<b>8,678</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Verallia Société Anonyme

Verallia Société Anonyme has been established in 1827 and the head office is located in Courbevoie, France. The Company produces and sells glass packaging goods for the food and beverage industries. The Company operates in the following segments: wines and sparkling wines, alcoholic drinks, food products, beers and non-alcoholic drinks.

### GLASS PACKAGING

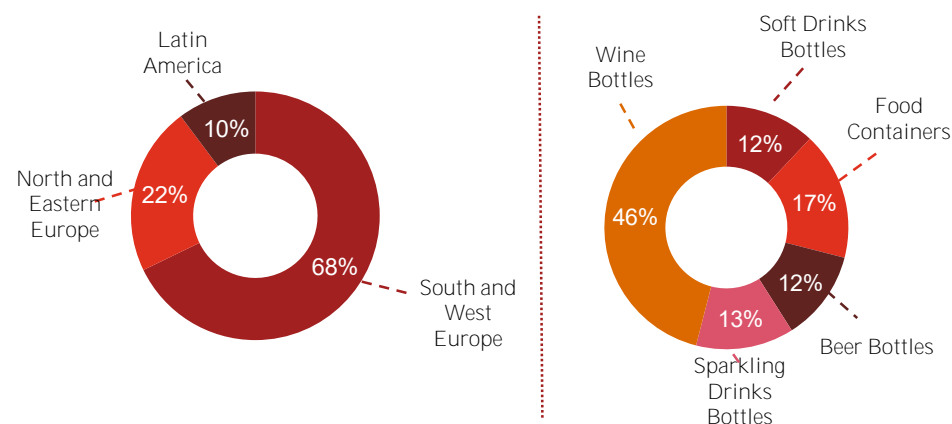
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	2,877	2,766	2,902
Cost of Goods Sold	(2,380)	(2,259)	(2,293)
<b>Gross Profit</b>	<b>497</b>	<b>507</b>	<b>609</b>
General, Administrative & Selling Expenses	(176)	(168)	(192)
Other Operating Income/Loss	(1)	15	(19)
<b>Operating Income</b>	<b>320</b>	<b>354</b>	<b>398</b>
Financial Income/Loss	(155)	(124)	(130)
Other Income/Loss	(132)	(147)	(68)
<b>Earnings Before Tax</b>	<b>33</b>	<b>83</b>	<b>200</b>
Provision for Income Tax	(18)	(28)	(60)
<b>Net Income</b>	<b>15</b>	<b>56</b>	<b>140</b>
<b>EBITDA</b>	<b>708</b>	<b>695</b>	<b>716</b>
EBITDA Margin (%)	24.6%	25.1%	24.7%

#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>1,111</b>	<b>1,083</b>	<b>981</b>
Cash and Cash Equivalents	264	300	246
Account Receivables	165	137	201
Other Receivables	69	51	24
Inventory	560	547	511
Other Current Assets	54	48	-
<b>Fixed Assets</b>	<b>2,978</b>	<b>2,749</b>	<b>2,727</b>
Long-term Investments	10	3	1
Property, Plant & Equipment	1,451	1,373	1,458
Intangible Assets	1,423	1,272	1,178
Other Fixed Assets	93	100	90
<b>Total Assets</b>	<b>4,089</b>	<b>3,833</b>	<b>3,708</b>
<b>Current Liabilities</b>	<b>878</b>	<b>910</b>	<b>1,075</b>
Accounts Payable	508	468	430
Short-term Borrowings	35	107	-
Current Portion of Long-term Debt	44	14	254
Other Short-term liabilities	290	322	391
<b>Long-term Liabilities</b>	<b>3,183</b>	<b>2,865</b>	<b>2,162</b>
Long-term Financial Liabilities	2,709	2,449	1,778
Other non-current Liabilities	473	415	385
<b>Total Equity</b>	<b>28</b>	<b>58</b>	<b>471</b>
<b>Total Liabilities and Equity</b>	<b>4,089</b>	<b>3,833</b>	<b>3,708</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)

+ Yearly Average Market Value  
- Cash and Cash Equivalents  
- Financial Investments  
+ Total Debt  
+ Minority Interest  
= Enterprise Value

7,8x

2019

The Company's shares have been publicly listed in October 2019. Therefore, the multiple that could be used in the market approach could only be calculated for 2019. Verallia Société Anonyme has not been taken into consideration in the beta analysis of ANACM.

Source: Company's Activity and Audit Reports, Capital IQ

## Gerresheimer AG

Gerresheimer, produces special glass and plastic goods for the pharmaceutical and health sector. The Company operates in 3 business segments: plastic products and devices, primary packaging glass and cutting-edge technologies.

### GLASS PACKAGING

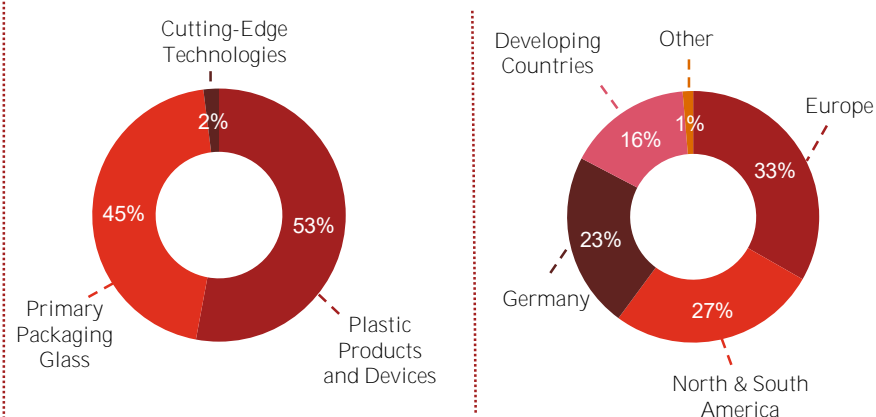
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	1,606	1,549	1,534
Cost of Goods Sold	(1,113)	(1,096)	(1,106)
<b>Gross Profit</b>	<b>493</b>	<b>453</b>	<b>428</b>
General, Administrative & Selling Expenses	(308)	(294)	(301)
Other Operating Income/Loss	24	1	0
<b>Operating Income</b>	<b>208</b>	<b>160</b>	<b>127</b>
Financial Income/Loss	(33)	(31)	(24)
Other Income/Loss	(2)	(8)	6
Provision for Income Tax	(51)	27	(17)
<b>Net Income</b>	<b>123</b>	<b>148</b>	<b>91</b>
<b>EBITDA</b>	<b>357</b>	<b>312</b>	<b>293</b>
EBITDA Margin (%)	22.2%	20.2%	19.1%

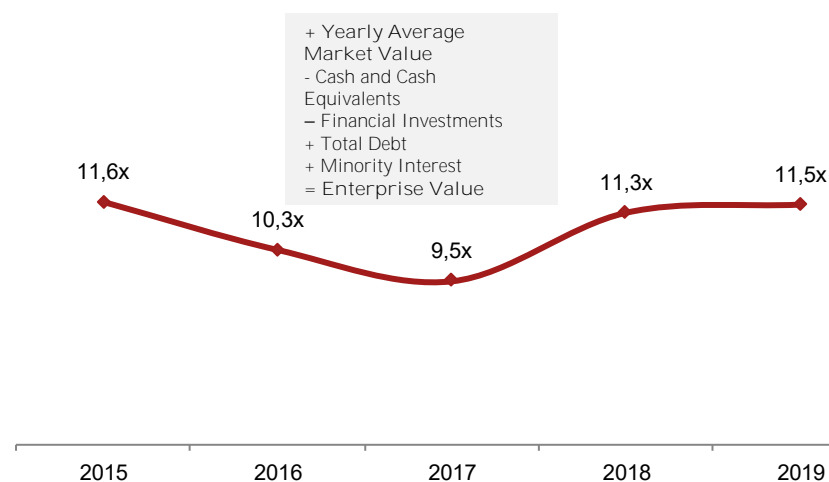
#### Balance Sheet

(\$ m)	30.11.201	30.11.201	30.11.201
<b>Current Assets</b>	<b>852</b>	<b>647</b>	<b>600</b>
Cash and Cash Equivalents	350	98	104
Account Receivables	289	310	253
Other Receivables	30	39	34
Inventory	177	194	204
Other Current Assets	5	7	6
<b>Fixed Assets</b>	<b>2,059</b>	<b>2,445</b>	<b>2,310</b>
Long-term Investments	1	1	4
Property, Plant & Equipment	616	577	589
Intangible Assets	1,304	1,676	1,473
Other Fixed Assets	139	191	244
<b>Total Assets</b>	<b>2,911</b>	<b>3,092</b>	<b>2,910</b>
<b>Current Liabilities</b>	<b>802</b>	<b>870</b>	<b>981</b>
Accounts Payable	210	235	244
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	377	325	581
Other Short-term liabilities	215	310	156
<b>Long-term Liabilities</b>	<b>1,169</b>	<b>1,214</b>	<b>891</b>
Long-term Financial Liabilities	811	767	548
Other non-current Liabilities	357	447	344
<b>Total Equity</b>	<b>940</b>	<b>1,008</b>	<b>1,037</b>
<b>Total Liabilities and Equity</b>	<b>2,911</b>	<b>3,092</b>	<b>2,910</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Vidrala S.A.

*Vidrala produces glass containers, packaging and bottles. The Company has been established in 1965 and its' head office is located in Llodio, Spain.*

## GLASS PACKAGING

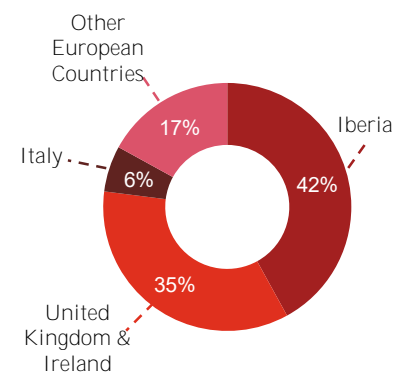
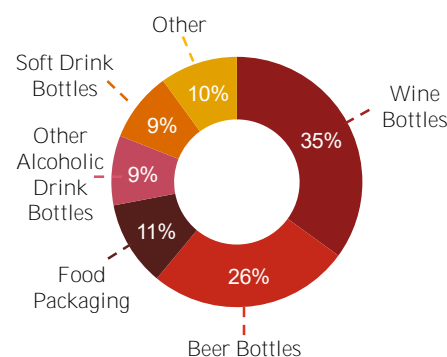
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	992	1,107	1,134
Cost of Goods Sold	(332)	(373)	(400)
<b>Gross Profit</b>	<b>659</b>	<b>734</b>	<b>735</b>
General, Administrative & Selling Expenses	(210)	(218)	(222)
Amortization of Goodwill and Intangibles	(92)	(101)	(102)
Other Operating Income/Loss	(219)	(247)	(209)
<b>Operating Income</b>	<b>138</b>	<b>168</b>	<b>202</b>
Financial Income/Loss	(6)	(8)	(5)
Other Income/Loss	(0)	0	(10)
Provision for Income Tax	(25)	(28)	(25)
<b>Net Income</b>	<b>107</b>	<b>133</b>	<b>161</b>
<b>EBITDA</b>	<b>229</b>	<b>268</b>	<b>302</b>
EBITDA Margin (%)	23.1%	24.2%	26.6%

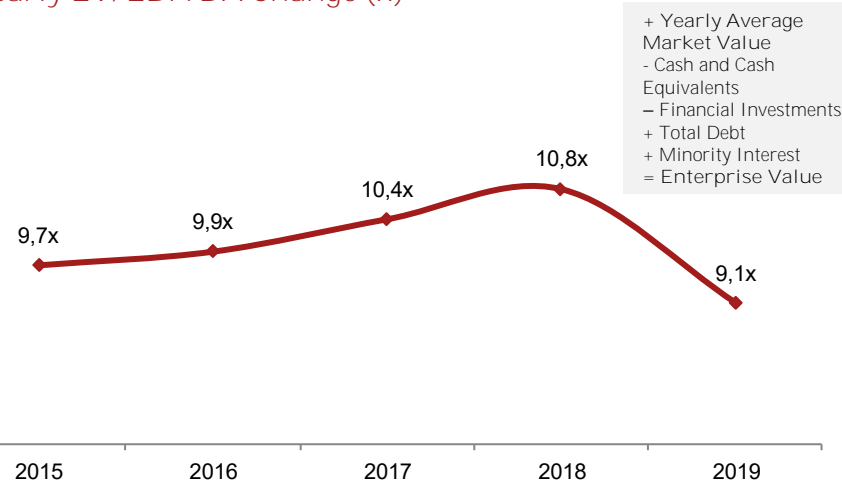
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>542</b>	<b>514</b>	<b>549</b>
Cash and Cash Equivalents	50	26	32
Account Receivables	238	248	275
Other Receivables	21	18	16
Inventory	228	212	218
Other Current Assets	4	10	6
<b>Fixed Assets</b>	<b>1,145</b>	<b>1,097</b>	<b>1,087</b>
Long-term Investments	0	0	0
Property, Plant & Equipment	820	783	779
Intangible Assets	279	268	266
Other Fixed Assets	45	46	42
<b>Total Assets</b>	<b>1,687</b>	<b>1,611</b>	<b>1,636</b>
<b>Current Liabilities</b>	<b>349</b>	<b>345</b>	<b>453</b>
Accounts Payable	202	188	205
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	50	45	148
Other Short-term liabilities	97	113	99
<b>Long-term Liabilities</b>	<b>704</b>	<b>567</b>	<b>372</b>
Long-term Financial Liabilities	589	452	260
Other non-current Liabilities	115	115	112
<b>Total Equity</b>	<b>634</b>	<b>698</b>	<b>812</b>
<b>Total Liabilities and Equity</b>	<b>1,687</b>	<b>1,611</b>	<b>1,636</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Vetropack Holding AG

*Vetropack Holding produces glass packaging in Switzerland, Austria, Czech Republic, Croatia, Slovenia, Ukraine and Italy along with its' subsidiaries. The Company does not only provide service to the food, beverage, pharmaceutical and cosmetics industry, but also provides services to the retail trading sector.*

## GLASS PACKAGING

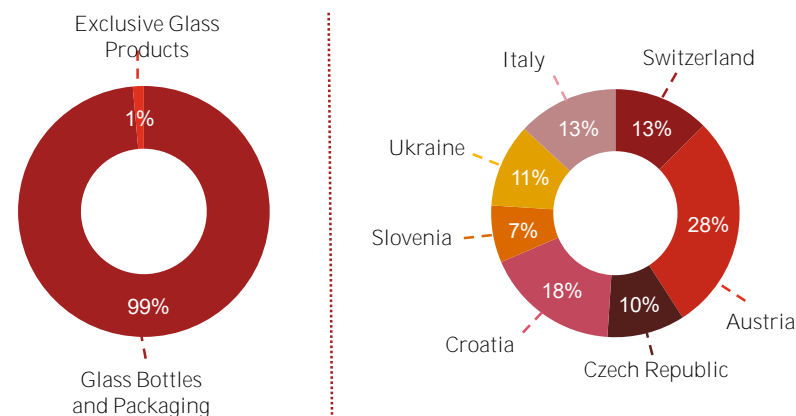
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	652	708	745
Cost of Goods Sold	(235)	(246)	(249)
<b>Gross Profit</b>	<b>418</b>	<b>462</b>	<b>496</b>
General, Administrative & Selling Expenses	(154)	(163)	(175)
Depreciation	(69)	(74)	(79)
Other Operating Income/Loss	(128)	(146)	(148)
<b>Operating Income</b>	<b>66</b>	<b>80</b>	<b>93</b>
Financial Income/Loss	0	0	1
Other Income/Loss	8	(5)	(3)
<b>Earnings Before Tax</b>	<b>74</b>	<b>75</b>	<b>91</b>
Provision for Income Tax	(15)	(14)	(15)
<b>Net Income</b>	<b>59</b>	<b>61</b>	<b>76</b>
<b>EBITDA</b>	<b>130</b>	<b>151</b>	<b>171</b>
EBITDA Margin (%)	19.9%	21.4%	22.9%

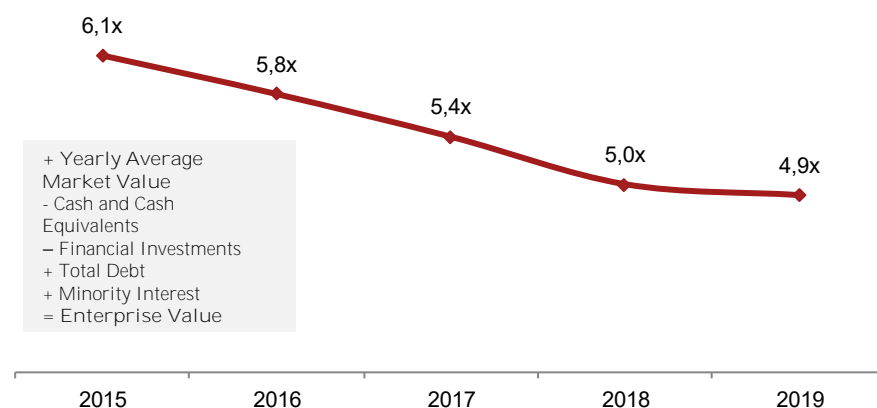
### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>419</b>	<b>406</b>	<b>377</b>
Cash and Cash Equivalents	148	134	104
Account Receivables	120	128	119
Other Receivables	13	13	9
Inventory	134	128	141
Other Current Assets	3	2	3
<b>Fixed Assets</b>	<b>538</b>	<b>557</b>	<b>603</b>
Long-term Investments	2	3	3
Property, Plant & Equipment	498	513	533
Intangible Assets	8	6	7
Other Fixed Assets	30	35	61
<b>Total Assets</b>	<b>957</b>	<b>963</b>	<b>980</b>
<b>Current Liabilities</b>	<b>141</b>	<b>190</b>	<b>142</b>
Accounts Payable	80	89	90
Short-term Borrowings	13	55	0
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	48	47	52
<b>Long-term Liabilities</b>	<b>109</b>	<b>49</b>	<b>61</b>
Long-term Financial Liabilities	66	9	22
Other non-current Liabilities	44	41	39
<b>Total Equity</b>	<b>706</b>	<b>723</b>	<b>777</b>
<b>Total Liabilities and Equity</b>	<b>957</b>	<b>963</b>	<b>980</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Verallia Deutschland AG

Verallia Deutschland produces and sells glass bottles and jars for the food and beverage producers in Europe. The Company has been incorporated in 1946 and its' headquarters are located in Bad Wurzach, Germany.

### GLASS PACKAGING

#### Income Statement

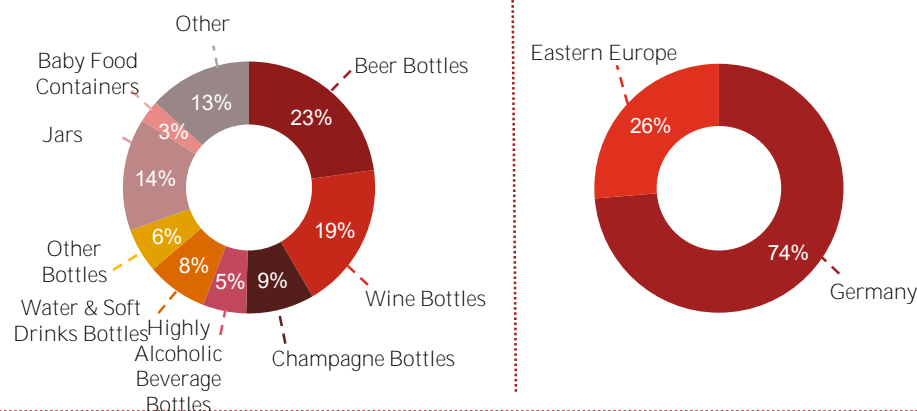
(\$ m)	FY17	FY18	FY19
Net Sales	605	599	640
Cost of Goods Sold	(508)	(489)	(518)
<b>Gross Profit</b>	<b>98</b>	<b>109</b>	<b>122</b>
General, Administrative & Selling Expenses	(30)	(27)	(29)
Research and Development Expenses	(0)	(0)	(0)
Other Operating Income/Loss	(4)	(8)	(8)
<b>Operating Income</b>	<b>64</b>	<b>75</b>	<b>85</b>
Financial Income/Loss	(11)	(11)	(10)
Other Income/Loss	(9)	(5)	(2)
<b>Earnings Before Tax</b>	<b>44</b>	<b>60</b>	<b>73</b>
Provision for Income Tax	(14)	(16)	(16)
<b>Net Income</b>	<b>30</b>	<b>43</b>	<b>57</b>
<b>EBITDA</b>	<b>113</b>	<b>119</b>	<b>131</b>
EBITDA Margin (%)	18.7%	19.9%	20.5%

#### Balance Sheet

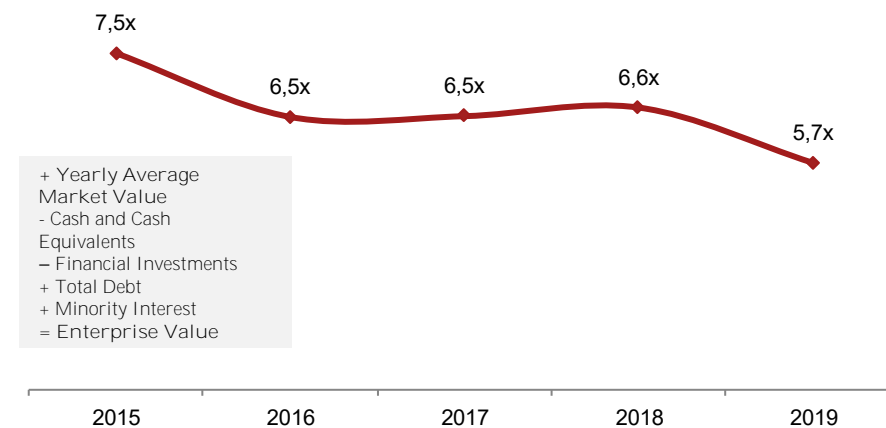
(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>216</b>	<b>221</b>	<b>230</b>
Cash and Cash Equivalents	68	88	102
Account Receivables	36	34	36
Other Receivables	6	5	6
Inventory	107	94	86
Other Current Assets	-	-	-
<b>Fixed Assets</b>	<b>308</b>	<b>281</b>	<b>290</b>
Long-term Investments	2	2	2
Property, Plant & Equipment	299	273	279
Intangible Assets	6	5	5
Other Fixed Assets	2	2	4
<b>Total Assets</b>	<b>524</b>	<b>503</b>	<b>521</b>
<b>Current Liabilities</b>	<b>169</b>	<b>180</b>	<b>213</b>
Accounts Payable	104	90	77
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	7	5	103
Other Short-term liabilities	58	85	33
<b>Long-term Liabilities</b>	<b>290</b>	<b>277</b>	<b>281</b>
Long-term Financial Liabilities	265	256	266
Other non-current Liabilities	25	21	15
<b>Total Equity</b>	<b>66</b>	<b>46</b>	<b>27</b>
<b>Total Liabilities and Equity</b>	<b>524</b>	<b>503</b>	<b>521</b>

Source: Company's Activity and Audit Reports, Capital IQ

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



## Cristalerías de Chile S.A.

*Cristalerías de Chile produces wine bottles and glass packaging. The Company presents products in the beer, liquor, food, oil and soft drinks segments. Cristalerías de Chile has been established in 1904 and the centre of operations is in Padre Hurtado, Chile.*

## GLASS PACKAGING

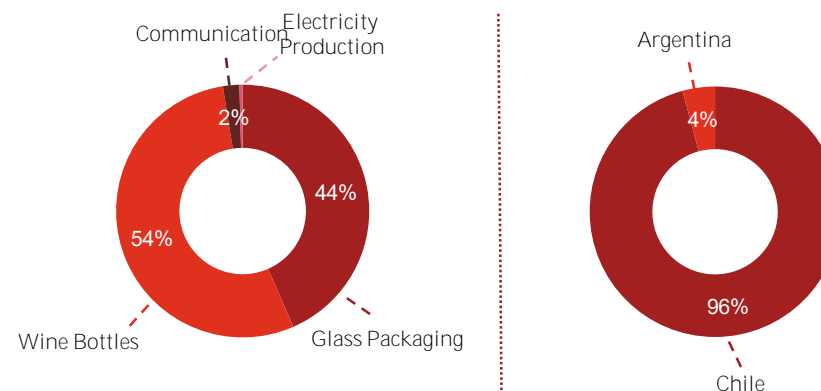
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	472	438	392
Cost of Goods Sold	(301)	(284)	(256)
<b>Gross Profit</b>	<b>171</b>	<b>154</b>	<b>136</b>
General, Administrative & Selling Expenses	(104)	(97)	(88)
Other Operating Income/Loss	3	2	1
<b>Operating Income</b>	<b>70</b>	<b>59</b>	<b>49</b>
Financial Income/Loss	(6)	(6)	(6)
Other Income/Loss	8	7	(3)
<b>Earnings Before Tax</b>	<b>72</b>	<b>60</b>	<b>41</b>
Provision for Income Tax	(16)	(15)	(11)
<b>Net Income</b>	<b>56</b>	<b>45</b>	<b>30</b>
<b>EBITDA</b>	<b>99</b>	<b>86</b>	<b>74</b>
EBITDA Margin (%)	21.0%	19.7%	18.9%

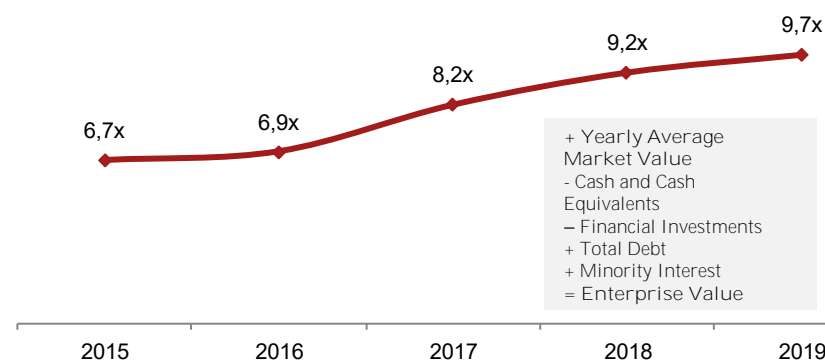
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>377</b>	<b>329</b>	<b>326</b>
Cash and Cash Equivalents	56	19	39
Account Receivables	150	149	125
Other Receivables	15	13	14
Inventory	134	131	122
Other Current Assets	22	17	26
<b>Fixed Assets</b>	<b>464</b>	<b>487</b>	<b>532</b>
Long-term Investments	54	63	63
Property, Plant & Equipment	381	394	440
Intangible Assets	19	17	15
Other Fixed Assets	9	14	14
<b>Total Assets</b>	<b>841</b>	<b>816</b>	<b>857</b>
<b>Current Liabilities</b>	<b>107</b>	<b>127</b>	<b>120</b>
Accounts Payable	55	64	61
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	17	30	39
Other Short-term liabilities	35	33	20
<b>Long-term Liabilities</b>	<b>214</b>	<b>192</b>	<b>260</b>
Long-term Financial Liabilities	151	132	202
Other non-current Liabilities	63	61	58
<b>Total Equity</b>	<b>520</b>	<b>497</b>	<b>477</b>
<b>Total Liabilities and Equity</b>	<b>841</b>	<b>816</b>	<b>857</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## BG Container Glass Public Company Limited

BG Container Glass produces glass packaging goods together with its' subsidiaries. The Company has been established in 2016 and its' head office is located in Thailand, Thanyaburi.

### GLASS PACKAGING

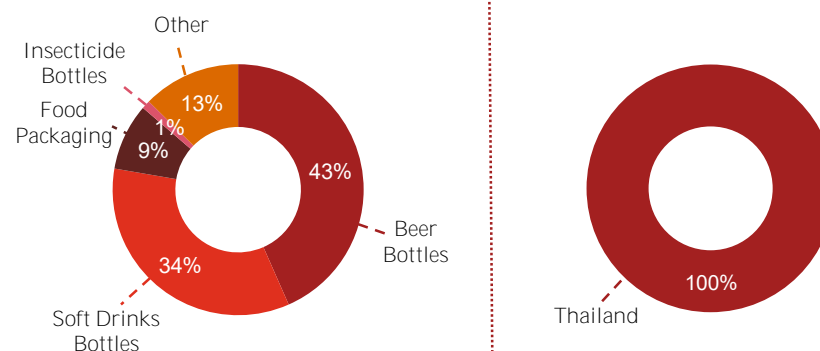
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	344	325	380
Cost of Goods Sold	(297)	(269)	(320)
<b>Gross Profit</b>	<b>47</b>	<b>56</b>	<b>60</b>
General, Administrative & Selling Expenses	(33)	(30)	(33)
<b>Operating Income</b>	<b>15</b>	<b>26</b>	<b>27</b>
Financial Income/Loss	(6)	(6)	(6)
Other Income/Loss	(1)	(2)	(1)
<b>Earnings Before Tax</b>	<b>8</b>	<b>19</b>	<b>20</b>
Provision for Income Tax	(0)	(3)	(2)
<b>Net Income</b>	<b>8</b>	<b>16</b>	<b>18</b>
<b>EBITDA</b>	<b>57</b>	<b>67</b>	<b>74</b>
EBITDA Margin (%)	16.5%	20.6%	19.4%

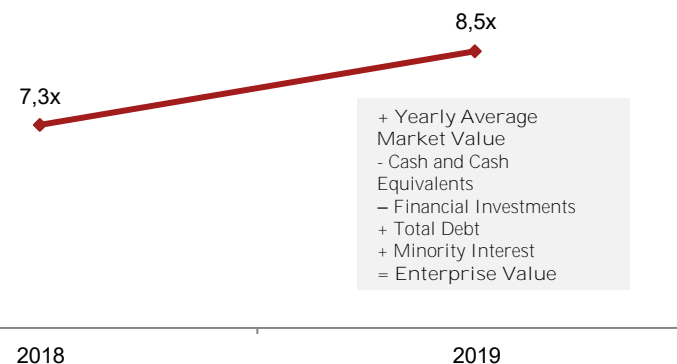
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>116</b>	<b>117</b>	<b>125</b>
Cash and Cash Equivalents	3	4	9
Account Receivables	41	41	45
Other Receivables	9	3	7
Inventory	61	65	62
Other Current Assets	2	2	3
<b>Fixed Assets</b>	<b>282</b>	<b>339</b>	<b>459</b>
Long-term Investments	-	-	4
Property, Plant & Equipment	276	336	433
Intangible Assets	0	0	1
Other Fixed Assets	6	3	21
<b>Total Assets</b>	<b>398</b>	<b>456</b>	<b>584</b>
<b>Current Liabilities</b>	<b>236</b>	<b>221</b>	<b>219</b>
Accounts Payable	30	24	32
Short-term Borrowings	161	156	137
Current Portion of Long-term Debt	38	30	37
Other Short-term liabilities	7	10	13
<b>Long-term Liabilities</b>	<b>69</b>	<b>75</b>	<b>176</b>
Long-term Financial Liabilities	54	61	155
Other non-current Liabilities	15	15	21
<b>Total Equity</b>	<b>93</b>	<b>160</b>	<b>189</b>
<b>Total Liabilities and Equity</b>	<b>398</b>	<b>456</b>	<b>584</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Zignago Vetro S.p.A.

Zignago Vetro produces glass packaging for the food, beverage, cosmetics, perfumery and private glass industries. In addition, it also has recycling operations as scrap glass recycling, processing and sales. The Company's head office is in Fossalta di Portogruaro, Italy.

### GLASS PACKAGING

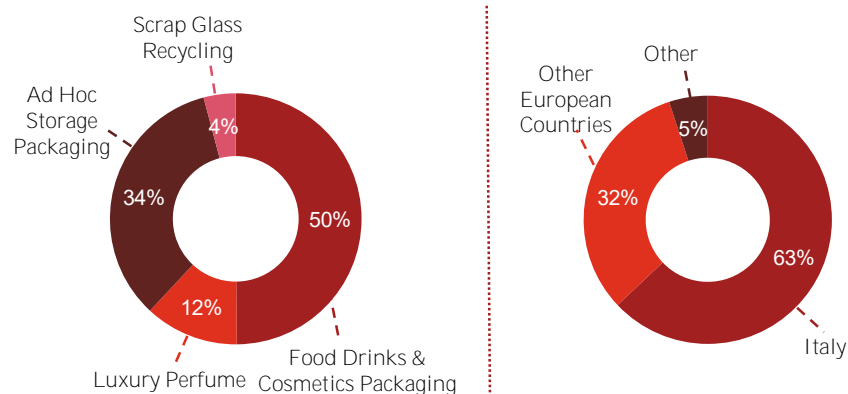
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	314	332	363
Cost of Goods Sold	(160)	(169)	(186)
<b>Gross Profit</b>	<b>153</b>	<b>163</b>	<b>178</b>
General, Administrative & Selling Expenses	(77)	(77)	(81)
Depreciation	(37)	(36)	(45)
Other Operating Income/Loss	2	(1)	(0)
<b>Operating Income</b>	<b>42</b>	<b>49</b>	<b>52</b>
Financial Income/Loss	(3)	(3)	(2)
Other Income/Loss	18	16	21
<b>Earnings Before Tax</b>	<b>57</b>	<b>62</b>	<b>70</b>
Provision for Income Tax	(9)	(11)	(11)
<b>Net Income</b>	<b>48</b>	<b>50</b>	<b>60</b>
<b>EBITDA</b>	<b>79</b>	<b>84</b>	<b>97</b>
EBITDA Margin (%)	25.0%	25.4%	26.6%

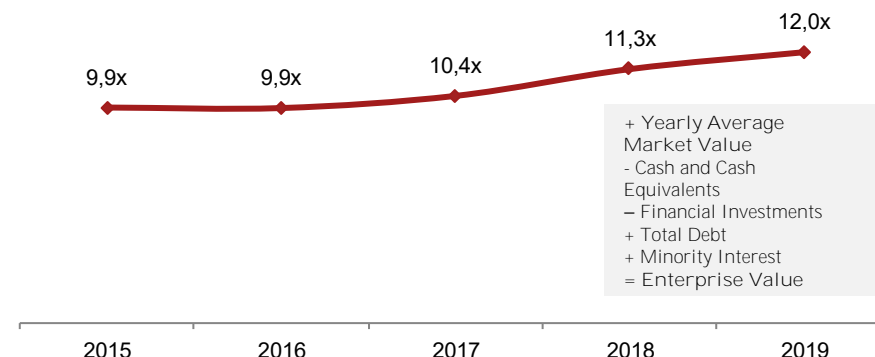
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>232</b>	<b>226</b>	<b>261</b>
Cash and Cash Equivalents	38	37	50
Account Receivables	81	74	88
Other Receivables	21	23	6
Inventory	92	91	101
Other Current Assets	1	1	17
<b>Fixed Assets</b>	<b>312</b>	<b>358</b>	<b>377</b>
Long-term Investments	84	86	94
Property, Plant & Equipment	220	263	272
Intangible Assets	4	3	6
Other Fixed Assets	5	6	5
<b>Total Assets</b>	<b>544</b>	<b>584</b>	<b>638</b>
<b>Current Liabilities</b>	<b>164</b>	<b>204</b>	<b>236</b>
Accounts Payable	68	83	67
Short-term Borrowings	34	47	144
Current Portion of Long-term Debt	39	47	-
Other Short-term liabilities	23	27	25
<b>Long-term Liabilities</b>	<b>168</b>	<b>150</b>	<b>153</b>
Long-term Financial Liabilities	150	135	139
Other non-current Liabilities	18	15	14
<b>Total Equity</b>	<b>213</b>	<b>229</b>	<b>249</b>
<b>Total Liabilities and Equity</b>	<b>544</b>	<b>584</b>	<b>638</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Libbey Inc.

*Libbey produces tableware and other kitchen products. The Company has been established in 1818 and its' headquarters are located in Ohio, USA.*

## GLASSWARE

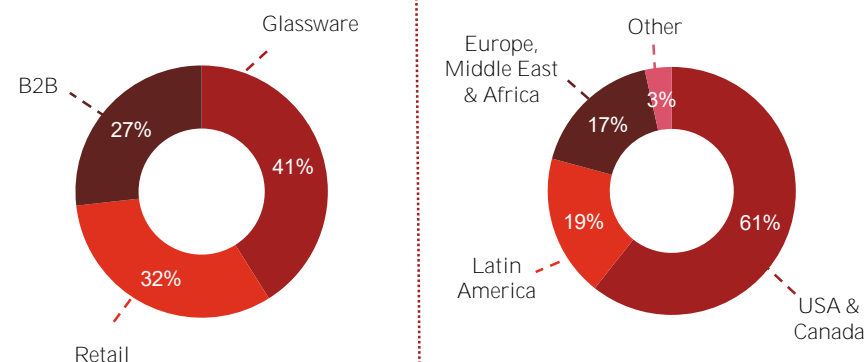
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	785	801	786
Cost of Goods Sold	(631)	(646)	(630)
<b>Gross Profit</b>	<b>154</b>	<b>155</b>	<b>156</b>
General, Administrative & Selling Expenses	(123)	(123)	(119)
Research and Development Expenses	(3)	(4)	(3)
<b>Operating Income</b>	<b>29</b>	<b>29</b>	<b>34</b>
Financial Income/Loss	(20)	(22)	(23)
Other Income/Loss	(86)	(5)	(71)
<b>Earnings Before Tax</b>	<b>(78)</b>	<b>2</b>	<b>(60)</b>
Provision for Income Tax	(16)	(10)	(9)
<b>Net Income</b>	<b>(93)</b>	<b>(8)</b>	<b>(69)</b>
<b>EBITDA</b>	<b>74</b>	<b>72</b>	<b>73</b>
EBITDA Margin (%)	9.4%	9.0%	9.3%

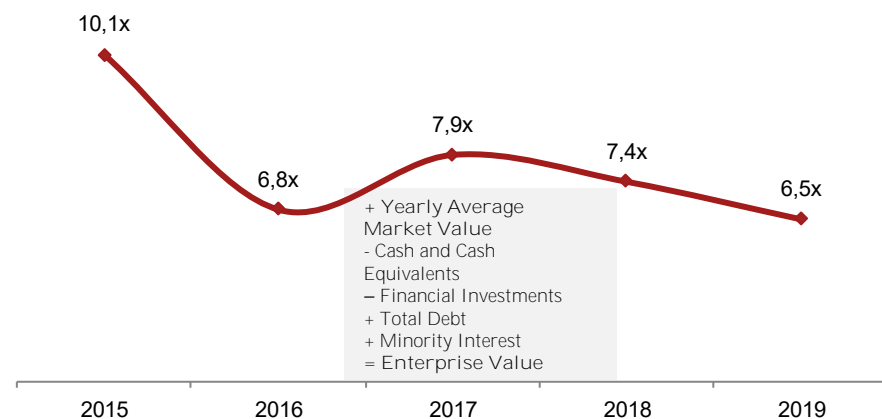
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>315</b>	<b>318</b>	<b>323</b>
Cash and Cash Equivalents	25	26	49
Account Receivables	89	83	80
Other Receivables	1	1	1
Inventory	188	192	175
Other Current Assets	13	15	18
<b>Fixed Assets</b>	<b>402</b>	<b>397</b>	<b>384</b>
Long-term Investments	1	-	-
Property, Plant & Equipment	266	265	289
Intangible Assets	99	98	57
Other Fixed Assets	37	34	39
<b>Total Assets</b>	<b>717</b>	<b>714</b>	<b>707</b>
<b>Current Liabilities</b>	<b>165</b>	<b>162</b>	<b>196</b>
Accounts Payable	78	75	79
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	7	4	32
Other Short-term liabilities	80	83	85
<b>Long-term Liabilities</b>	<b>485</b>	<b>503</b>	<b>537</b>
Long-term Financial Liabilities	377	399	436
Other non-current Liabilities	108	104	101
<b>Total Equity</b>	<b>67</b>	<b>50</b>	<b>(26)</b>
<b>Total Liabilities and Equity</b>	<b>717</b>	<b>714</b>	<b>707</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Nadir Figueiredo Ind. e Com. S.A.

*Nadir Figueiredo Indústria e Comércio S.A. has been established in 1912 and the centre of operations is in São Paulo, Brazil. The Company produces glasses, dessert containers, jars, jugs, saucepans and coffee cups for the purpose of using at home and in the restaurants and bars.*

### GLASSWARE

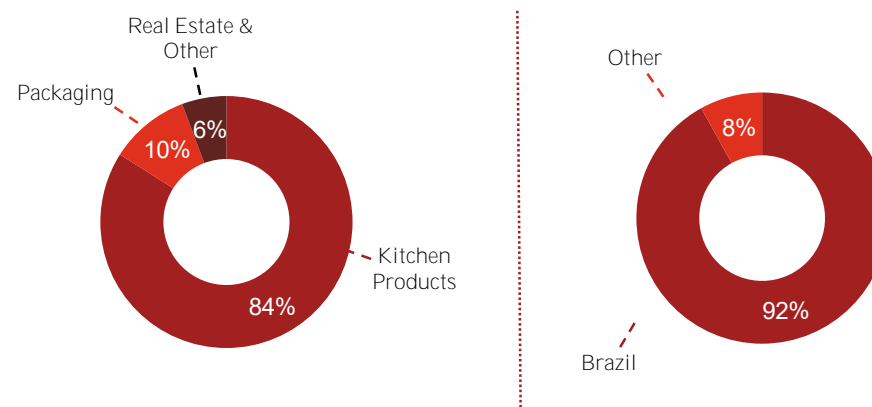
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	200	198	197
Cost of Goods Sold	(106)	(108)	(116)
<b>Gross Profit</b>	<b>94</b>	<b>90</b>	<b>81</b>
General, Administrative & Selling Expenses	(64)	(55)	(52)
Research and Development Expenses	1	1	3
<b>Operating Income</b>	<b>31</b>	<b>36</b>	<b>33</b>
Financial Income/Loss	(6)	(2)	(2)
Other Income/Loss	-	(3)	(2)
<b>Earnings Before Tax</b>	<b>25</b>	<b>32</b>	<b>28</b>
Provision for Income Tax	(8)	(10)	(10)
<b>Net Income</b>	<b>17</b>	<b>22</b>	<b>18</b>
<b>EBITDA</b>	<b>41</b>	<b>45</b>	<b>41</b>
EBITDA Margin (%)	20.3%	22.8%	20.8%

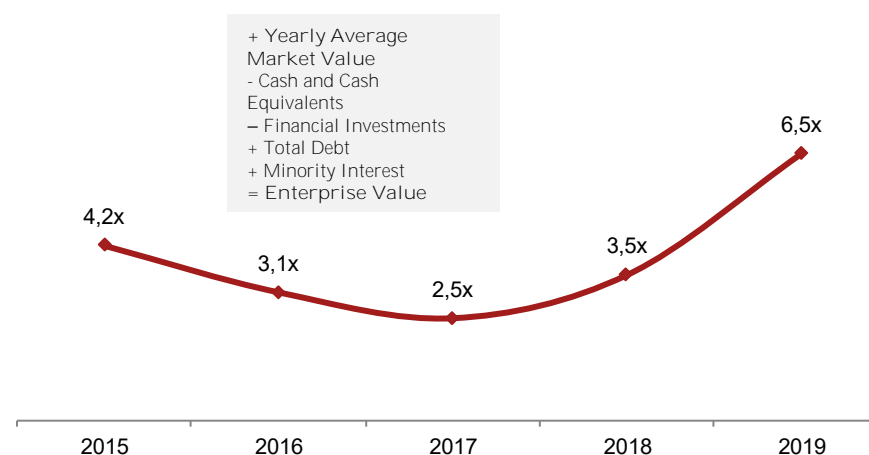
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>88</b>	<b>94</b>	<b>113</b>
Cash and Cash Equivalents	8	16	25
Account Receivables	44	41	54
Other Receivables	2	2	2
Inventory	32	34	30
Other Current Assets	2	1	1
<b>Fixed Assets</b>	<b>101</b>	<b>91</b>	<b>76</b>
Long-term Investments	-	-	-
Property, Plant & Equipment	68	62	70
Intangible Assets	0	0	0
Other Fixed Assets	33	28	5
<b>Total Assets</b>	<b>190</b>	<b>185</b>	<b>189</b>
<b>Current Liabilities</b>	<b>64</b>	<b>57</b>	<b>45</b>
Accounts Payable	13	14	15
Short-term Borrowings	-	5	6
Current Portion of Long-term Debt	30	17	5
Other Short-term liabilities	20	21	19
<b>Long-term Liabilities</b>	<b>22</b>	<b>25</b>	<b>64</b>
Long-term Financial Liabilities	10	14	55
Other non-current Liabilities	12	11	9
<b>Total Equity</b>	<b>104</b>	<b>103</b>	<b>79</b>
<b>Total Liabilities and Equity</b>	<b>190</b>	<b>185</b>	<b>189</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Solvay SA

*Solvay operates in the field of equipment and special chemicals. The Company consists of four segments: advanced equipment, advanced formulations, performance chemicals and corporate and trading services. Solvay has been established in 1863 and its' base is located in Brussels, Belgium.*

## SODA

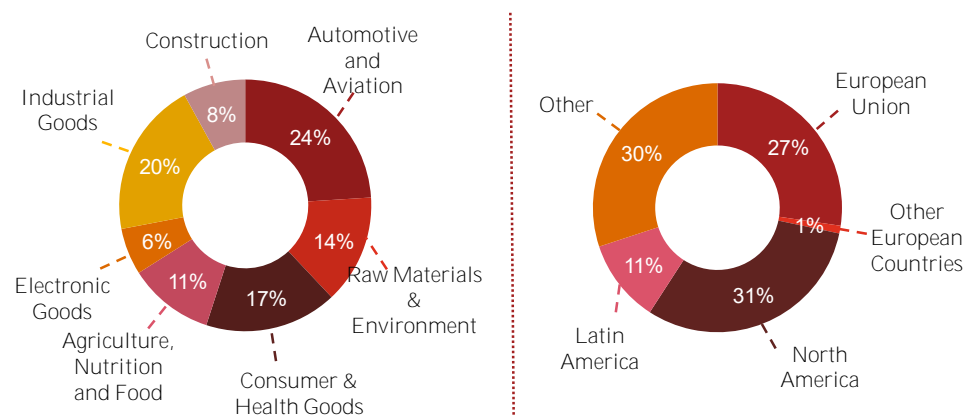
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	13,189	12,937	12,599
Cost of Goods Sold	(9,484)	(9,462)	(9,251)
<b>Gross Profit</b>	<b>3,706</b>	<b>3,475</b>	<b>3,348</b>
General, Administrative & Selling Expenses	(1,726)	(1,579)	(1,494)
Research and Development Expenses	(348)	(340)	(362)
Other Operating Income/Loss	(197)	(161)	(159)
<b>Operating Income</b>	<b>1,435</b>	<b>1,395</b>	<b>1,332</b>
Financial Income/Loss	(213)	(129)	(127)
Other Income/Loss	(118)	(131)	(859)
<b>Earnings Before Tax</b>	<b>1,105</b>	<b>1,135</b>	<b>347</b>
Provision for Income Tax	237	(86)	(172)
<b>Net Income</b>	<b>1,341</b>	<b>1,049</b>	<b>175</b>
<b>EBITDA</b>	<b>2,580</b>	<b>2,449</b>	<b>2,491</b>
EBITDA Margin (%)	19.6%	18.9%	19.8%

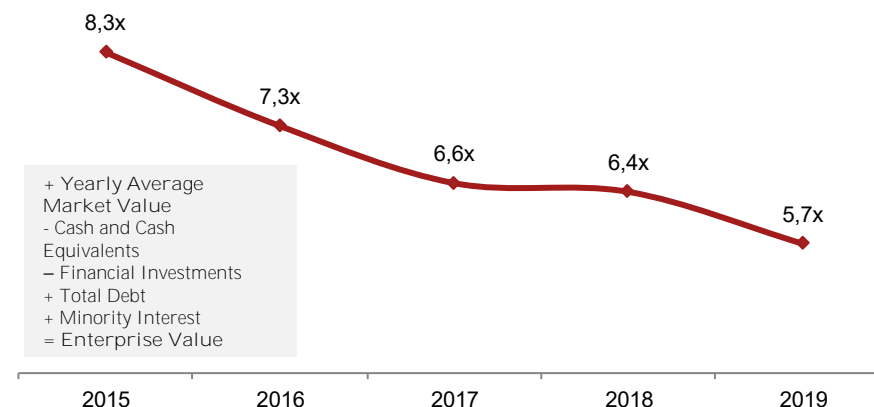
### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>7,273</b>	<b>7,527</b>	<b>7,038</b>
Cash and Cash Equivalents	1,477	1,563	1,225
Account Receivables	1,756	1,642	1,587
Other Receivables	578	622	554
Inventory	1,806	1,929	1,781
Other Current Assets	1,657	1,771	1,891
<b>Fixed Assets</b>	<b>18,485</b>	<b>17,662</b>	<b>16,872</b>
Long-term Investments	669	610	728
Property, Plant & Equipment	6,524	6,245	6,642
Intangible Assets	9,331	8,893	7,651
Other Fixed Assets	1,961	1,914	1,851
<b>Total Assets</b>	<b>25,758</b>	<b>25,189</b>	<b>23,911</b>
<b>Current Liabilities</b>	<b>4,957</b>	<b>4,468</b>	<b>4,591</b>
Accounts Payable	1,597	1,648	1,433
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	1,254	721	1,270
Other Short-term liabilities	2,106	2,099	1,888
<b>Long-term Liabilities</b>	<b>9,091</b>	<b>8,556</b>	<b>8,519</b>
Long-term Financial Liabilities	3,821	3,641	3,795
Other non-current Liabilities	5,270	4,915	4,723
<b>Total Equity</b>	<b>11,710</b>	<b>12,165</b>	<b>10,801</b>
<b>Total Liabilities and Equity</b>	<b>25,758</b>	<b>25,189</b>	<b>23,911</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Tangshan Sanyou Chemical Ind.

Tangshan Sanyou Chemical Industries produces chemical goods. The Company presents soda ash, adhesives, polyvinyl chloride resin, caustic soda, silicone and salt products alongside with the chemical fibre. The Company has been established in 1999 and is based in Tangshan, China.

### SODA

#### Income Statement

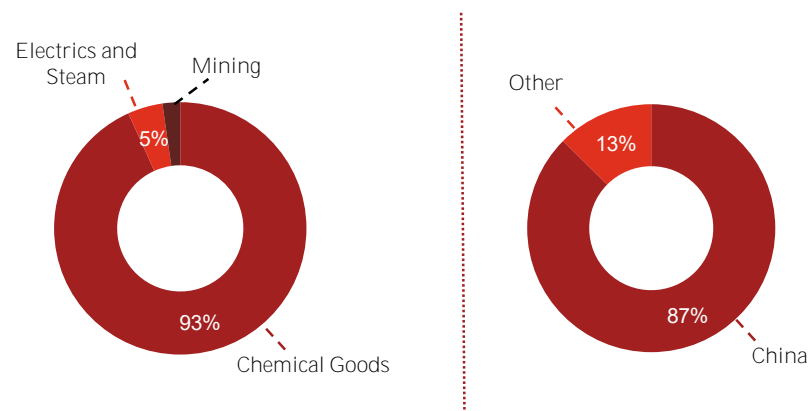
(\$ m)	FY17	FY18	FY19
Net Sales	3,104	2,933	2,898
Cost of Goods Sold	(2,263)	(2,160)	(2,313)
<b>Gross Profit</b>	<b>841</b>	<b>773</b>	<b>585</b>
General, Administrative & Selling Expenses	(344)	(346)	(350)
Research and Development Expenses	(11)	(7)	(6)
Other Operating Income/Loss	(32)	(35)	(32)
<b>Operating Income</b>	<b>454</b>	<b>385</b>	<b>198</b>
Financial Income/Loss	(59)	(50)	(50)
Other Income/Loss	(4)	(29)	(28)
<b>Earnings Before Tax</b>	<b>391</b>	<b>307</b>	<b>120</b>
Provision for Income Tax	(81)	(59)	(24)
<b>Net Income</b>	<b>310</b>	<b>247</b>	<b>95</b>
<b>EBITDA</b>	<b>603</b>	<b>531</b>	<b>341</b>
EBITDA Margin (%)	19.4%	18.1%	11.8%

#### Balance Sheet

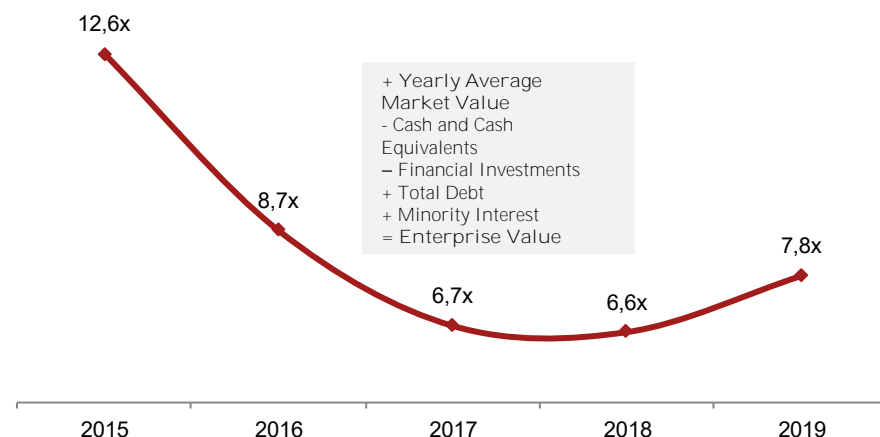
(\$ m)	31.12.201	31.12.201	30.09.201
<b>Current Assets</b>	<b>1,109</b>	<b>1,132</b>	<b>1,128</b>
Cash and Cash Equivalents	359	454	434
Account Receivables	408	356	361
Other Receivables	10	15	22
Inventory	293	275	274
Other Current Assets	39	31	37
<b>Fixed Assets</b>	<b>2,594</b>	<b>2,552</b>	<b>2,448</b>
Long-term Investments	1	1	0
Property, Plant & Equipment	2,389	2,374	2,266
Intangible Assets	132	125	119
Other Fixed Assets	73	53	63
<b>Total Assets</b>	<b>3,702</b>	<b>3,684</b>	<b>3,576</b>
<b>Current Liabilities</b>	<b>1,452</b>	<b>1,300</b>	<b>1,208</b>
Accounts Payable	549	563	473
Short-term Borrowings	591	499	484
Current Portion of Long-term Debt	90	64	58
Other Short-term liabilities	222	174	192
<b>Long-term Liabilities</b>	<b>616</b>	<b>672</b>	<b>701</b>
Long-term Financial Liabilities	576	623	649
Other non-current Liabilities	40	49	52
<b>Total Equity</b>	<b>1,634</b>	<b>1,713</b>	<b>1,666</b>
<b>Total Liabilities and Equity</b>	<b>3,702</b>	<b>3,684</b>	<b>3,576</b>

Source: Company's Activity and Audit Reports, Capital IQ

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



## Genesis Energy, L.P.

Genesis Energy performs natural gas and crude oil transportation on shore and off shore, and at the same time performs mining of sodium minerals. Genesis Energy, L.P. Has been established in 1996 and the base is located in Houston, Texas.

## SODA

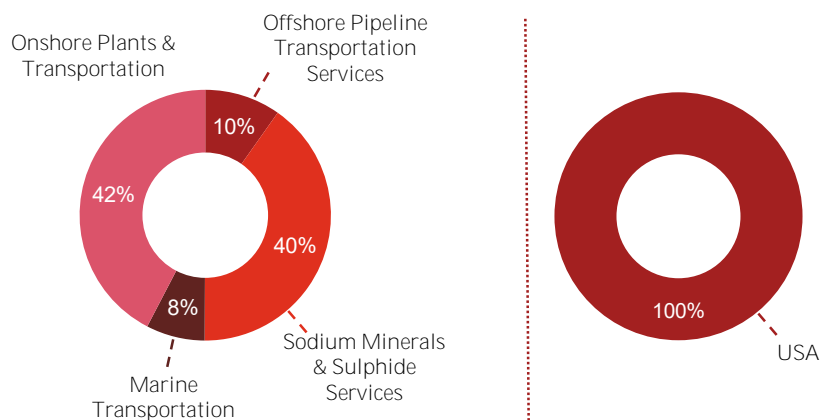
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	2,028	2,913	2,481
Cost of Goods Sold	(1,529)	(2,278)	(1,836)
<b>Gross Profit</b>	<b>499</b>	<b>634</b>	<b>645</b>
General, Administrative & Selling Expenses	(54)	(65)	(53)
Depreciation	(252)	(313)	(320)
<b>Operating Income</b>	<b>192</b>	<b>256</b>	<b>273</b>
Financial Income/Loss	(177)	(229)	(219)
Other Income/Loss	63	(37)	48
<b>Earnings Before Tax</b>	<b>78</b>	<b>(10)</b>	<b>101</b>
Provision for Income Tax	4	(1)	(1)
<b>Net Income</b>	<b>82</b>	<b>(12)</b>	<b>101</b>
<b>EBITDA</b>	<b>443</b>	<b>568</b>	<b>591</b>
EBITDA Margin (%)	21.9%	19.5%	23.8%

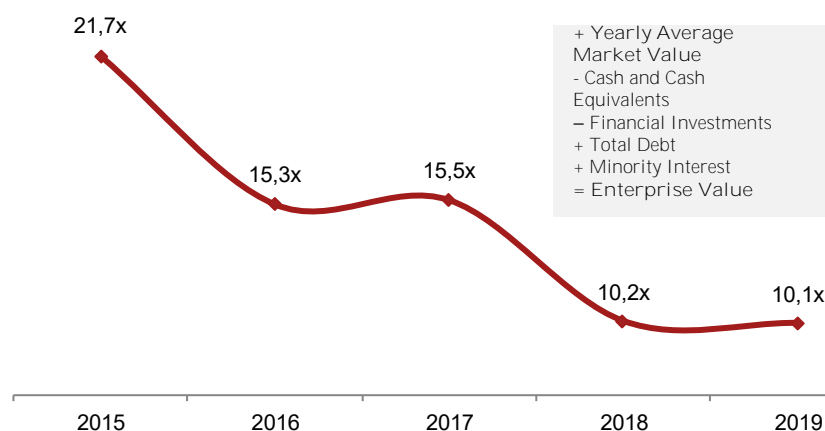
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>636</b>	<b>443</b>	<b>593</b>
Cash and Cash Equivalents	9	10	29
Account Receivables	503	332	426
Other Receivables	-	-	-
Inventory	89	74	65
Other Current Assets	35	28	73
<b>Fixed Assets</b>	<b>6,501</b>	<b>6,036</b>	<b>6,005</b>
Long-term Investments	382	355	335
Property, Plant & Equipment	5,431	4,978	5,027
Intangible Assets	507	465	441
Other Fixed Assets	182	239	202
<b>Total Assets</b>	<b>7,137</b>	<b>6,479</b>	<b>6,598</b>
<b>Current Liabilities</b>	<b>456</b>	<b>333</b>	<b>415</b>
Accounts Payable	271	127	219
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	-	-	28
Other Short-term liabilities	185	206	168
<b>Long-term Liabilities</b>	<b>3,921</b>	<b>3,663</b>	<b>3,784</b>
Long-term Financial Liabilities	3,698	3,432	3,574
Other non-current Liabilities	223	231	210
<b>Total Equity</b>	<b>2,760</b>	<b>2,483</b>	<b>2,398</b>
<b>Total Liabilities and Equity</b>	<b>7,137</b>	<b>6,479</b>	<b>6,598</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Tata Chemicals Limited

Tata Chemicals Limited has production and marketing operations of basic chemical products on an international scale.

## SODA

### Income Statement

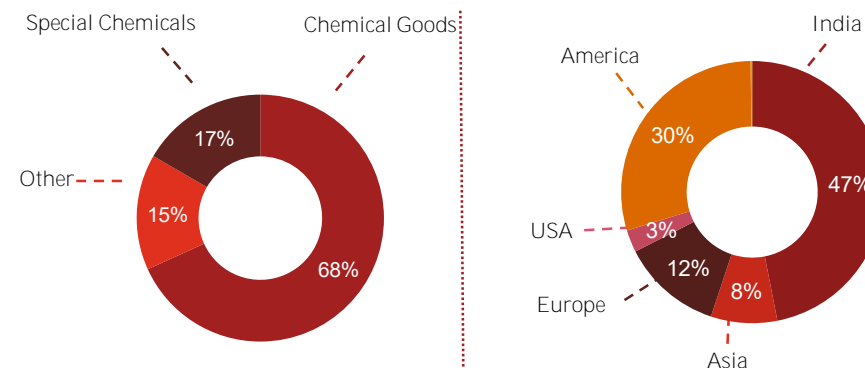
(\$ m)	FY17	FY18	S12A*
Net Sales	1,597	1,578	1,638
Cost of Goods Sold	(381)	(324)	(371)
<b>Gross Profit</b>	<b>1,216</b>	<b>1,254</b>	<b>1,267</b>
General, Administrative & Selling Expenses	(250)	(244)	(246)
Depreciation	(79)	(80)	(88)
Other Operating Income/Loss	(639)	(670)	(700)
<b>Operating Income</b>	<b>248</b>	<b>261</b>	<b>233</b>
Financial Income/Loss	(32)	(24)	(26)
Other Income/Loss	28	188	39
<b>Earnings Before Tax</b>	<b>244</b>	<b>425</b>	<b>246</b>
Provision for Income Tax	(53)	(9)	(38)
<b>Net Income</b>	<b>190</b>	<b>415</b>	<b>208</b>
<b>EBITDA</b>	<b>327</b>	<b>340</b>	<b>321</b>
EBITDA Margin (%)	20.5%	21.6%	19.6%

### Balance Sheet

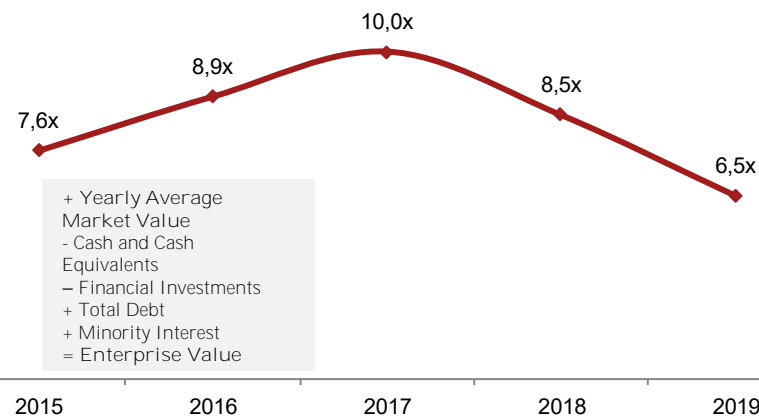
\*Last 12 months from September

(\$ m)	31.03.201	31.03.201	30.09.201
<b>Current Assets</b>	<b>1,138</b>	<b>1,389</b>	<b>1,096</b>
Cash and Cash Equivalents	291	703	580
Account Receivables	323	201	232
Other Receivables	28	53	1
Inventory	214	225	233
Other Current Assets	282	207	50
<b>Fixed Assets</b>	<b>2,506</b>	<b>2,588</b>	<b>2,791</b>
Long-term Investments	397	424	485
Property, Plant & Equipment	647	670	805
Intangible Assets	262	266	267
Other Fixed Assets	1,200	1,227	1,234
<b>Total Assets</b>	<b>3,644</b>	<b>3,977</b>	<b>3,886</b>
<b>Current Liabilities</b>	<b>865</b>	<b>569</b>	<b>762</b>
Accounts Payable	203	227	221
Short-term Borrowings	111	22	23
Current Portion of Long-term Debt	308	89	-
Other Short-term liabilities	242	231	517
<b>Long-term Liabilities</b>	<b>1,153</b>	<b>1,284</b>	<b>906</b>
Long-term Financial Liabilities	674	829	489
Other non-current Liabilities	480	455	416
<b>Total Equity</b>	<b>1,625</b>	<b>2,124</b>	<b>2,219</b>
<b>Total Liabilities and Equity</b>	<b>3,644</b>	<b>3,977</b>	<b>3,886</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Chengdu Wintrue Holding Co. Ltd.

Chengdu Wintrue Holding Co. Ltd., producers various chemical goods, as NPK fertilisers, soda ash, ammonium chloride, anhydrous sodium sulphate, edible and industrial salts, and carbamide.

### SODA

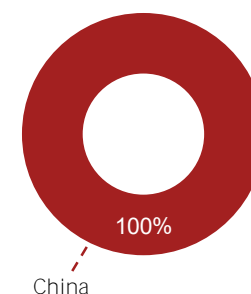
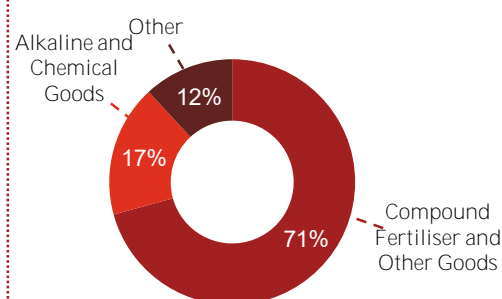
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	1,190	1,144	1,208
Cost of Goods Sold	(1,013)	(985)	(1,029)
<b>Gross Profit</b>	<b>176</b>	<b>159</b>	<b>180</b>
General, Administrative & Selling Expenses	(112)	(91)	(96)
Research and Development Expenses	(3)	(4)	(22)
Other Operating Income/Loss	(10)	(9)	(14)
<b>Operating Income</b>	<b>52</b>	<b>55</b>	<b>47</b>
Financial Income/Loss	(27)	(27)	(21)
Other Income/Loss	(3)	2	11
<b>Earnings Before Tax</b>	<b>21</b>	<b>30</b>	<b>37</b>
Provision for Income Tax	(6)	(6)	(7)
<b>Net Income</b>	<b>16</b>	<b>24</b>	<b>30</b>
<b>EBITDA</b>	<b>137</b>	<b>137</b>	<b>128</b>
EBITDA Margin (%)	11.5%	12.0%	10.6%

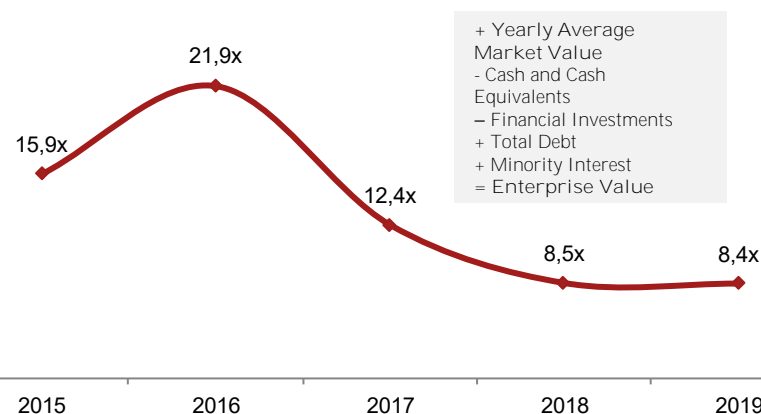
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	30.09.201
<b>Current Assets</b>	<b>593</b>	<b>653</b>	<b>594</b>
Cash and Cash Equivalents	203	269	219
Account Receivables	75	58	76
Other Receivables	15	10	12
Inventory	171	216	210
Other Current Assets	128	100	76
<b>Fixed Assets</b>	<b>836</b>	<b>855</b>	<b>764</b>
Long-term Investments	3	12	2
Property, Plant & Equipment	633	638	590
Intangible Assets	138	152	113
Other Fixed Assets	62	53	59
<b>Total Assets</b>	<b>1,429</b>	<b>1,508</b>	<b>1,358</b>
<b>Current Liabilities</b>	<b>841</b>	<b>900</b>	<b>738</b>
Accounts Payable	208	218	211
Short-term Borrowings	508	544	426
Current Portion of Long-term Debt	5	2	2
Other Short-term liabilities	119	136	99
<b>Long-term Liabilities</b>	<b>102</b>	<b>145</b>	<b>160</b>
Long-term Financial Liabilities	81	128	144
Other non-current Liabilities	21	17	16
<b>Total Equity</b>	<b>486</b>	<b>463</b>	<b>459</b>
<b>Total Liabilities and Equity</b>	<b>1,429</b>	<b>1,508</b>	<b>1,358</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Ciech S.A.

Ciech operates in four business segments, as soda, organic silicate, glass and transportation. Ciech has been established in 1945 and its' headquarters are in Warsaw, Poland.

## SODA

### Income Statement

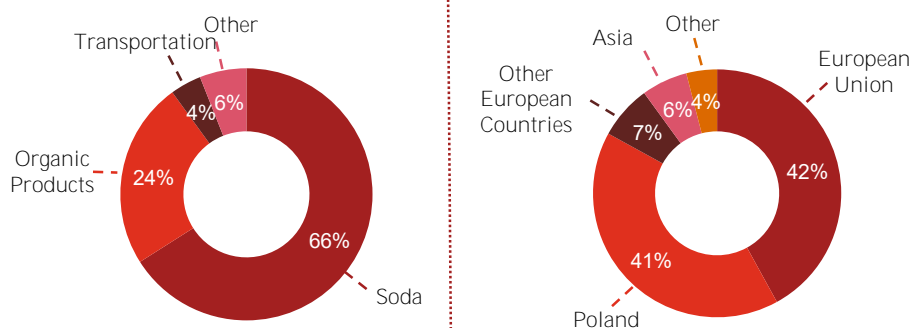
(\$ m)	FY17	FY18	FY19
Net Sales	1,029	979	937
Cost of Goods Sold	(765)	(776)	(730)
<b>Gross Profit</b>	<b>263</b>	<b>204</b>	<b>206</b>
General, Administrative & Selling Expenses	(116)	(111)	(120)
Other Operating Income/Loss	19	5	(16)
<b>Operating Income</b>	<b>166</b>	<b>98</b>	<b>71</b>
Financial Income/Loss	(10)	(17)	(24)
Other Income/Loss	(8)	0	2
<b>Earnings Before Tax</b>	<b>148</b>	<b>81</b>	<b>48</b>
Provision for Income Tax	(35)	(51)	(18)
<b>Net Income</b>	<b>113</b>	<b>30</b>	<b>31</b>
<b>EBITDA</b>	<b>236</b>	<b>171</b>	<b>157</b>
EBITDA Margin (%)	23.0%	17.4%	16.8%

### Balance Sheet

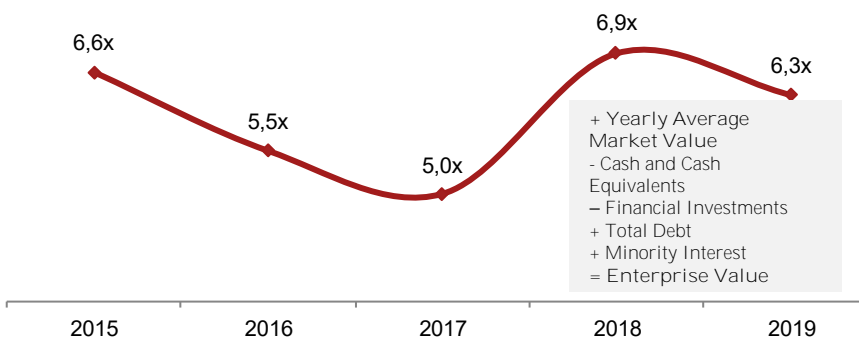
(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>413</b>	<b>339</b>	<b>346</b>
Cash and Cash Equivalents	146	55	83
Account Receivables	114	118	93
Other Receivables	43	45	49
Inventory	105	117	120
Other Current Assets	6	5	2
<b>Fixed Assets</b>	<b>921</b>	<b>947</b>	<b>986</b>
Long-term Investments	15	8	6
Property, Plant & Equipment	780	762	815
Intangible Assets	56	129	125
Other Fixed Assets	71	48	39
<b>Total Assets</b>	<b>1,335</b>	<b>1,286</b>	<b>1,332</b>
<b>Current Liabilities</b>	<b>313</b>	<b>343</b>	<b>296</b>
Accounts Payable	116	131	114
Short-term Borrowings	8	5	7
Current Portion of Long-term Debt	59	81	29
Other Short-term liabilities	130	125	146
<b>Long-term Liabilities</b>	<b>394</b>	<b>436</b>	<b>514</b>
Long-term Financial Liabilities	343	372	450
Other non-current Liabilities	51	64	64
<b>Total Equity</b>	<b>628</b>	<b>506</b>	<b>522</b>
<b>Total Liabilities and Equity</b>	<b>1,335</b>	<b>1,286</b>	<b>1,332</b>

Source: Company's Activity and Audit Reports, Capital IQ

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



## Shandong Jinjing Science and Tech. Stock Co. Ltd.

### SODA

Shandong Jinjing Stock Co, Ltd has been established in 1999 and the centre of operations is in China's Zibo region. The Company produces glass products, such as ultra white glass, off-line coating glass, ordered coating glass, sun-film glass, colourful glass, fire resistant glass, automotive glass, low salted heavy glass, and sodium goods, such as soda ash, light soda ash, sodium bicarbonate and sodium bicarbonate detergent.

#### Income Statement

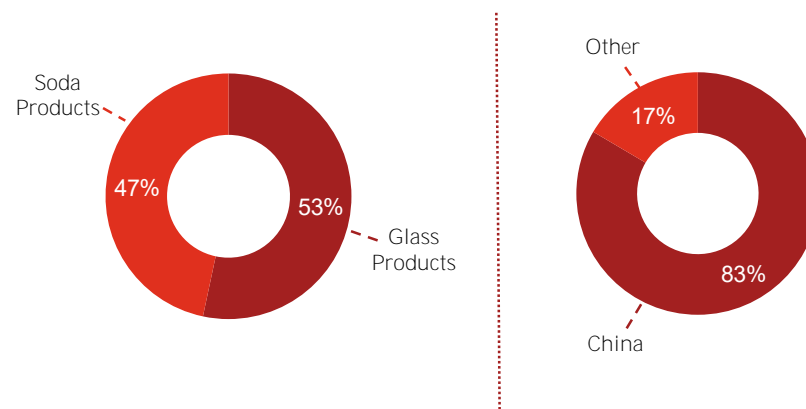
(\$ m)	FY17	FY18	FY19
Net Sales	669	745	726
Cost of Goods Sold	(493)	(585)	(592)
<b>Gross Profit</b>	<b>176</b>	<b>160</b>	<b>134</b>
General, Administrative & Selling Expenses	(63)	(59)	(61)
Research and Development Expenses	(1)	(15)	(20)
Other Operating Income/Loss	(14)	(16)	(13)
<b>Operating Income</b>	<b>98</b>	<b>70</b>	<b>41</b>
Financial Income/Loss	(33)	(29)	(28)
Other Income/Loss	(21)	(18)	(16)
<b>Earnings Before Tax</b>	<b>44</b>	<b>23</b>	<b>(4)</b>
Provision for Income Tax	(27)	(11)	(1)
<b>Net Income</b>	<b>17</b>	<b>12</b>	<b>(5)</b>
<b>EBITDA</b>	<b>169</b>	<b>141</b>	<b>112</b>
EBITDA Margin (%)	25.2%	18.9%	15.4%

#### Balance Sheet

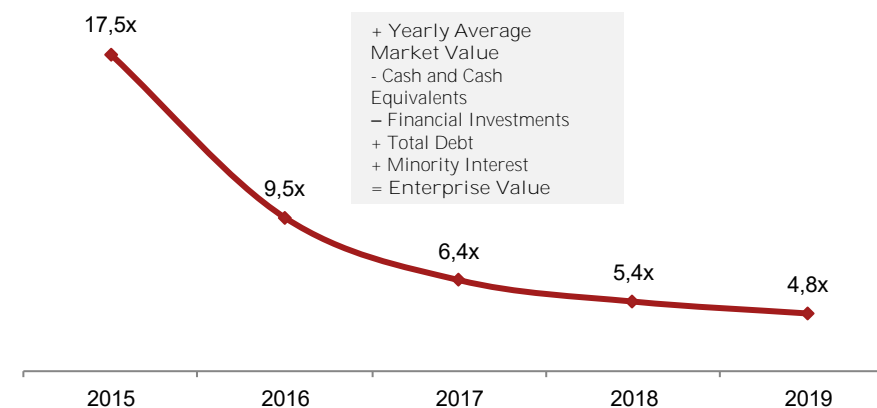
(\$ m)	31.12.201	31.12.201	30.09.201
<b>Current Assets</b>	<b>490</b>	<b>561</b>	<b>501</b>
Cash and Cash Equivalents	188	265	227
Account Receivables	122	131	111
Other Receivables	50	49	42
Inventory	125	109	97
Other Current Assets	5	7	25
<b>Fixed Assets</b>	<b>985</b>	<b>842</b>	<b>798</b>
Long-term Investments	36	56	55
Property, Plant & Equipment	781	638	599
Intangible Assets	71	83	78
Other Fixed Assets	97	66	67
<b>Total Assets</b>	<b>1,476</b>	<b>1,404</b>	<b>1,299</b>
<b>Current Liabilities</b>	<b>687</b>	<b>707</b>	<b>628</b>
Accounts Payable	383	359	364
Short-term Borrowings	132	185	173
Current Portion of Long-term Debt	52	57	-
Other Short-term liabilities	119	105	91
<b>Long-term Liabilities</b>	<b>131</b>	<b>75</b>	<b>79</b>
Long-term Financial Liabilities	67	35	-
Other non-current Liabilities	63	39	79
<b>Total Equity</b>	<b>658</b>	<b>622</b>	<b>593</b>
<b>Total Liabilities and Equity</b>	<b>1,476</b>	<b>1,404</b>	<b>1,299</b>

\*Last 12 months - September

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Ciner Resources LP

Ciner Resources performs operations of soda ash production and trona mining. The Company processes the trona and gets it to the raw material state of soda ash for the flat glass, glass packages, detergents, chemicals, paper and other consumable and industrial goods. The Company has a c. 23,500 acres underground mining area, which is rented and licenced in the Wyoming Green River Basin. 100% of Company's sales are soda ash sales.

### SODA

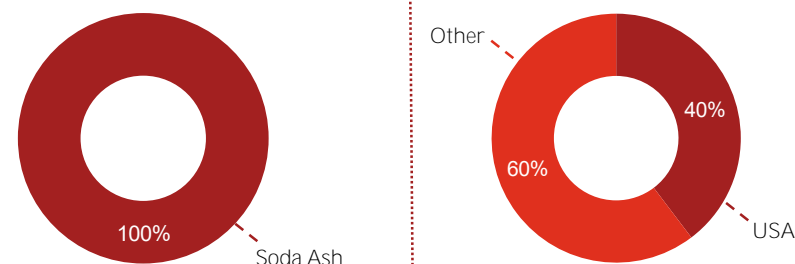
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	497	487	523
Cost of Goods Sold	(357)	(355)	(365)
<b>Gross Profit</b>	<b>141</b>	<b>132</b>	<b>158</b>
General, Administrative & Selling Expenses	(22)	(24)	(24)
Depreciation	(27)	(28)	(27)
<b>Operating Income</b>	<b>92</b>	<b>79</b>	<b>107</b>
Financial Income/Loss	(3)	(3)	(6)
Other Income/Loss	(3)	27	-
<b>Earnings Before Tax</b>	<b>86</b>	<b>103</b>	<b>102</b>
Provision for Income Tax	-	-	-
<b>Net Income</b>	<b>86</b>	<b>103</b>	<b>102</b>
<b>EBITDA</b>	<b>119</b>	<b>107</b>	<b>134</b>
EBITDA Margin (%)	23.9%	22.0%	25.6%

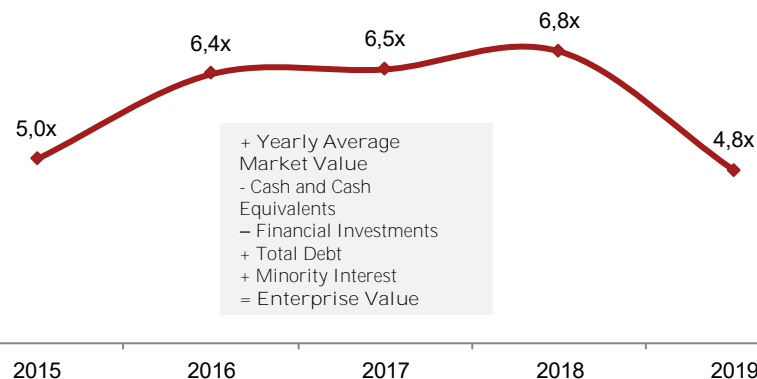
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>184</b>	<b>142</b>	<b>172</b>
Cash and Cash Equivalents	30	10	15
Account Receivables	126	101	84
Other Receivables	7	6	47
Inventory	20	22	24
Other Current Assets	2	2	2
<b>Fixed Assets</b>	<b>269</b>	<b>293</b>	<b>322</b>
Long-term Investments	-	-	-
Property, Plant & Equipment	249	267	298
Intangible Assets	-	6	6
Other Fixed Assets	20	20	18
<b>Total Assets</b>	<b>453</b>	<b>435</b>	<b>494</b>
<b>Current Liabilities</b>	<b>57</b>	<b>65</b>	<b>56</b>
Accounts Payable	15	18	14
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	11	0	1
Other Short-term liabilities	31	47	41
<b>Long-term Liabilities</b>	<b>148</b>	<b>110</b>	<b>138</b>
Long-term Financial Liabilities	138	99	130
Other non-current Liabilities	10	11	9
<b>Total Equity</b>	<b>248</b>	<b>260</b>	<b>300</b>
<b>Total Liabilities and Equity</b>	<b>453</b>	<b>435</b>	<b>494</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Elementis plc

Elementis produces and sells special chemical goods. The Company operates under two business segments: special usage products and chromium. The special usage products segment provides services to personal care, packaging, energy and construction industries. Chromium segment provides chromium chemicals to the metal coating, chromium pigments, wood processing and other sectors. The Company has been established in 1844 and its' headquarters are in London.

## CHROMIUM

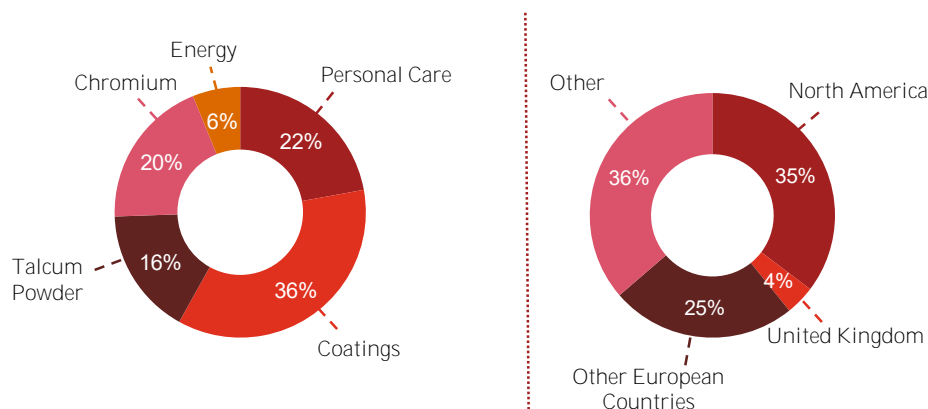
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	783	822	874
Cost of Goods Sold	(488)	(517)	(552)
<b>Gross Profit</b>	<b>295</b>	<b>306</b>	<b>321</b>
General, Administrative & Selling Expenses	(183)	(176)	(218)
<b>Operating Income</b>	<b>112</b>	<b>130</b>	<b>104</b>
Financial Income/Loss	(10)	(17)	(25)
Other Income/Loss	(20)	(56)	(18)
<b>Earnings Before Tax</b>	<b>83</b>	<b>57</b>	<b>61</b>
Provision for Income Tax	34	(16)	(15)
<b>Net Income</b>	<b>118</b>	<b>41</b>	<b>46</b>
<b>EBITDA</b>	<b>150</b>	<b>175</b>	<b>167</b>
EBITDA Margin (%)	19.2%	21.3%	19.2%

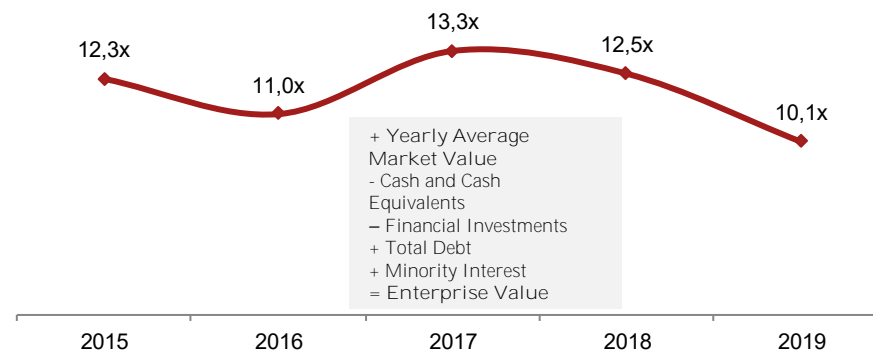
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>387</b>	<b>424</b>	<b>393</b>
Cash and Cash Equivalents	55	98	104
Account Receivables	110	112	97
Other Receivables	8	17	16
Inventory	144	189	169
Other Current Assets	70	8	8
<b>Fixed Assets</b>	<b>953</b>	<b>1,511</b>	<b>1,512</b>
Long-term Investments	527	717	726
Property, Plant & Equipment	220	478	514
Intangible Assets	190	259	232
Other Fixed Assets	16	56	40
<b>Total Assets</b>	<b>1,340</b>	<b>1,935</b>	<b>1,905</b>
<b>Current Liabilities</b>	<b>168</b>	<b>168</b>	<b>176</b>
Accounts Payable	54	62	80
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	3	3	9
Other Short-term liabilities	112	104	86
<b>Long-term Liabilities</b>	<b>469</b>	<b>851</b>	<b>824</b>
Long-term Financial Liabilities	343	586	591
Other non-current Liabilities	126	265	233
<b>Total Equity</b>	<b>702</b>	<b>916</b>	<b>906</b>
<b>Total Liabilities and Equity</b>	<b>1,340</b>	<b>1,935</b>	<b>1,905</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Nippon Chemical Industrial Co. Ltd.

*Nippon Chemical Industrial Co. Ltd. has been established in 1983 and its' headquarters are in Tokyo, China. The Company produces chromium compounds, phosphorus compounds, silicate compounds and inorganic chemical goods including silica. It also produces industrial chemicals, as lithium compounds, sodium sulphate, potassium permanganate and copper oxide.*

## CHROMIUM

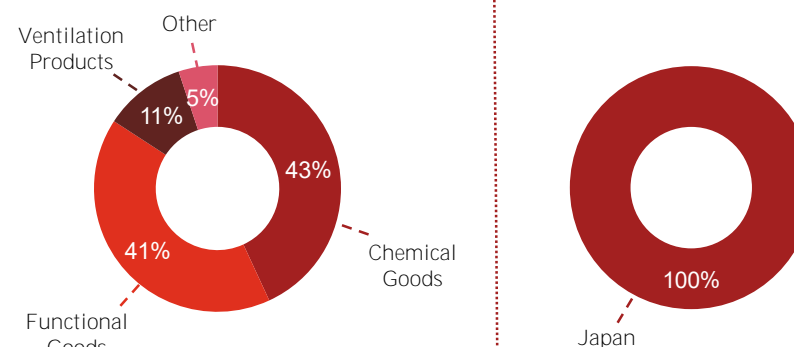
### Income Statement

(\$ m)	S12A17*	S12A18*	S12A19*
Net Sales	314	333	335
Cost of Goods Sold	(240)	(253)	(262)
<b>Gross Profit</b>	<b>73</b>	<b>80</b>	<b>73</b>
General, Administrative & Selling Expenses	(31)	(32)	(37)
Research and Development Expenses	(11)	(9)	(11)
Other Operating Income/Loss	(4)	(3)	(0)
<b>Operating Income</b>	<b>28</b>	<b>36</b>	<b>25</b>
Financial Income/Loss	-	0	1
Other Income/Loss	0	(2)	(1)
<b>Earnings Before Tax</b>	<b>28</b>	<b>34</b>	<b>24</b>
Provision for Income Tax	(5)	(10)	(6)
<b>Net Income</b>	<b>24</b>	<b>24</b>	<b>18</b>
<b>EBITDA</b>	<b>48</b>	<b>56</b>	<b>44</b>
EBITDA Margin (%)	15.2%	16.8%	13.1%

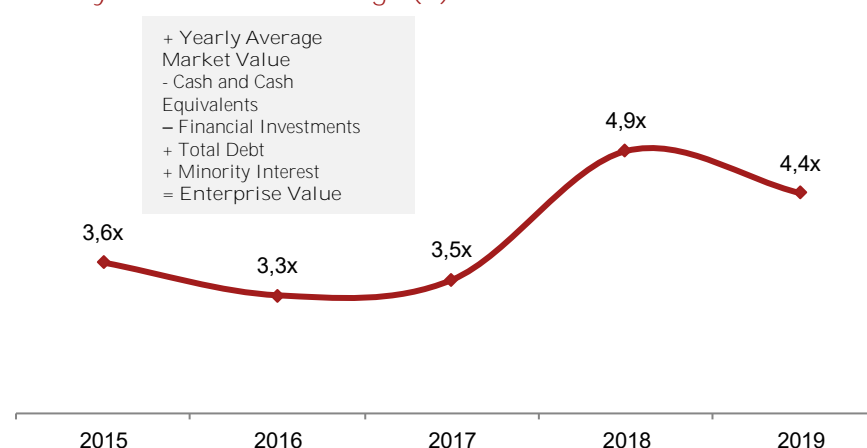
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>255</b>	<b>264</b>	<b>286</b>
Cash and Cash Equivalents	69	69	85
Account Receivables	105	101	108
Other Receivables	0	-	0
Inventory	73	91	87
Other Current Assets	8	5	6
<b>Fixed Assets</b>	<b>287</b>	<b>308</b>	<b>344</b>
Long-term Investments	71	66	70
Property, Plant & Equipment	212	238	269
Intangible Assets	2	3	4
Other Fixed Assets	1	1	1
<b>Total Assets</b>	<b>542</b>	<b>572</b>	<b>630</b>
<b>Current Liabilities</b>	<b>174</b>	<b>159</b>	<b>155</b>
Accounts Payable	36	41	38
Short-term Borrowings	99	80	73
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	39	38	44
<b>Long-term Liabilities</b>	<b>67</b>	<b>92</b>	<b>137</b>
Long-term Financial Liabilities	18	42	81
Other non-current Liabilities	50	50	56
<b>Total Equity</b>	<b>300</b>	<b>322</b>	<b>338</b>
<b>Total Liabilities and Equity</b>	<b>542</b>	<b>572</b>	<b>630</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Hubei Zhenhua Chemical Co. Ltd.

### CHROMIUM

Hubei Zhenhua Kimyasal Co. Ltd. has been established in 1967 and the centre of operations is located in China's Huangshi region. The Company researches, develops, produces and performs marketing of chromium salts. The Company produces sodium bichromate and dichromate, chromic acid anhydride, crystal chromic acid anhydride, nonsolid chromic anhydride, chromium oxide green, chromic trioxide, potassium dichromate, basic chromium sulphate, K3 vitamin, sodium sulphate, aluminium hydroxide and others.

#### Income Statement

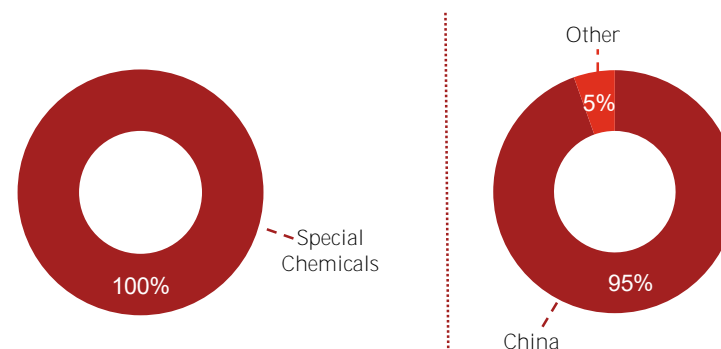
(\$ m)	FY17	FY18	FY19
Net Sales	182	204	199
Cost of Goods Sold	(138)	(146)	(144)
<b>Gross Profit</b>	<b>44</b>	<b>58</b>	<b>55</b>
General, Administrative & Selling Expenses	(19)	(22)	(24)
Research and Development Expenses	(6)	(7)	(6)
Other Operating Income/Loss	(2)	(3)	(3)
<b>Operating Income</b>	<b>16</b>	<b>25</b>	<b>22</b>
Financial Income/Loss	(0)	0	0
Other Income/Loss	0	(1)	(1)
<b>Earnings Before Tax</b>	<b>16</b>	<b>24</b>	<b>22</b>
Provision for Income Tax	(2)	(3)	(1)
<b>Net Income</b>	<b>15</b>	<b>21</b>	<b>21</b>
<b>EBITDA</b>	<b>27</b>	<b>36</b>	<b>33</b>
EBITDA Margin (%)	15.1%	17.7%	16.5%

#### Balance Sheet

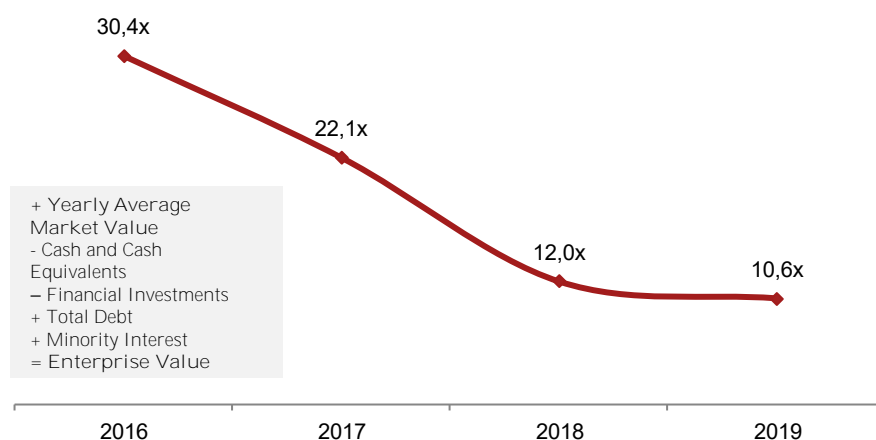
\*Last 12 months - September

(\$ m)	31.12.2017	31.12.2018	30.09.2019
<b>Current Assets</b>	<b>96</b>	<b>110</b>	<b>112</b>
Cash and Cash Equivalents	20	25	33
Account Receivables	54	60	52
Other Receivables	0	1	1
Inventory	18	17	17
Other Current Assets	4	8	10
<b>Fixed Assets</b>	<b>92</b>	<b>86</b>	<b>92</b>
Long-term Investments	-	-	4
Property, Plant & Equipment	86	79	79
Intangible Assets	6	5	5
Other Fixed Assets	1	2	4
<b>Total Assets</b>	<b>188</b>	<b>197</b>	<b>204</b>
<b>Current Liabilities</b>	<b>15</b>	<b>14</b>	<b>15</b>
Accounts Payable	8	7	10
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	7	8	6
<b>Long-term Liabilities</b>	<b>2</b>	<b>2</b>	<b>3</b>
Long-term Financial Liabilities	-	-	-
Other non-current Liabilities	2	2	3
<b>Total Equity</b>	<b>172</b>	<b>180</b>	<b>186</b>
<b>Total Liabilities and Equity</b>	<b>188</b>	<b>197</b>	<b>204</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Brother Enterprises Holding Co. Ltd.

### CHROMIUM

Brother Enterprises produces vitamins and skin chemicals. Tanning substances, oils, nurturing substances, auxiliary products and chromium powders are among the skin chemicals produced by the Company. The Company also produces B1 and K3 vitamins. Brother Enterprises has been established in 1991 and the head office is in Haining, China.

#### Income Statement

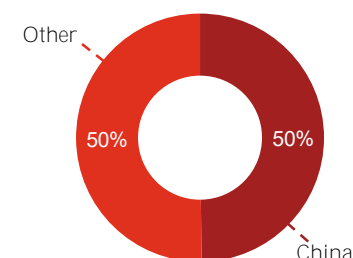
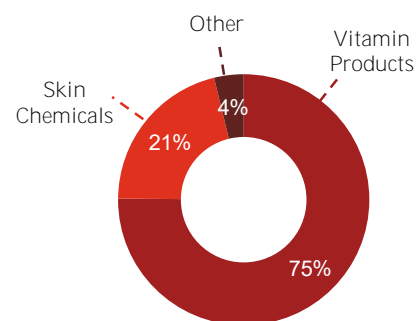
(\$ m)	FY17	FY18	FY19
Net Sales	239	206	173
Cost of Goods Sold	(126)	(159)	(135)
<b>Gross Profit</b>	<b>113</b>	<b>47</b>	<b>39</b>
General, Administrative & Selling Expenses	(26)	(25)	(30)
Research and Development Expenses	(10)	(11)	(10)
Other Operating Income/Loss	(4)	(2)	(3)
<b>Operating Income</b>	<b>72</b>	<b>8</b>	<b>(4)</b>
Financial Income/Loss	2	0	(1)
Other Income/Loss	(3)	1	3
<b>Earnings Before Tax</b>	<b>71</b>	<b>9</b>	<b>(3)</b>
Provision for Income Tax	(11)	(6)	(2)
<b>Net Income</b>	<b>61</b>	<b>3</b>	<b>(5)</b>
<b>EBITDA</b>	<b>91</b>	<b>29</b>	<b>20</b>
EBITDA Margin (%)	38.1%	14.2%	11.5%

#### Balance Sheet

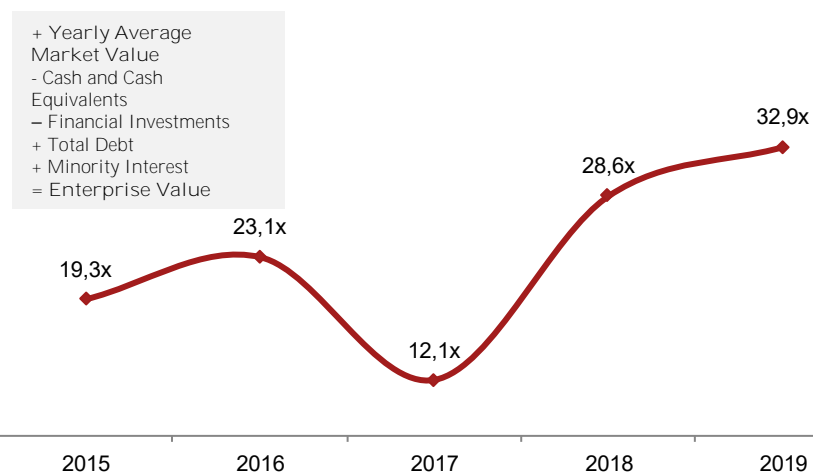
\* Last 12 months - September

(\$ m)	31.12.2017	31.12.2018	30.09.2019
<b>Current Assets</b>	<b>296</b>	<b>210</b>	<b>161</b>
Cash and Cash Equivalents	173	116	63
Account Receivables	55	38	28
Other Receivables	0	1	1
Inventory	47	42	48
Other Current Assets	20	14	22
<b>Fixed Assets</b>	<b>236</b>	<b>311</b>	<b>357</b>
Long-term Investments	0	0	0
Property, Plant & Equipment	211	288	333
Intangible Assets	19	17	16
Other Fixed Assets	6	6	8
<b>Total Assets</b>	<b>533</b>	<b>521</b>	<b>518</b>
<b>Current Liabilities</b>	<b>94</b>	<b>113</b>	<b>133</b>
Accounts Payable	69	103	91
Short-term Borrowings	0	-	34
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	24	10	8
<b>Long-term Liabilities</b>	<b>88</b>	<b>80</b>	<b>64</b>
Long-term Financial Liabilities	88	79	64
Other non-current Liabilities	0	0	0
<b>Total Equity</b>	<b>351</b>	<b>328</b>	<b>321</b>
<b>Total Liabilities and Equity</b>	<b>533</b>	<b>521</b>	<b>518</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Vishnu Chemicals Limited

Vishnu Chemicals Limited produces chromium chemicals in India. The Company produces chromium chemicals as sodium dichromate, chromic acid, chrome oxide green, basic chromium sulphate, potassium dichromate, as well as barium carbonate sulphide and its' analogues.

## CHROMIUM

### Income Statement

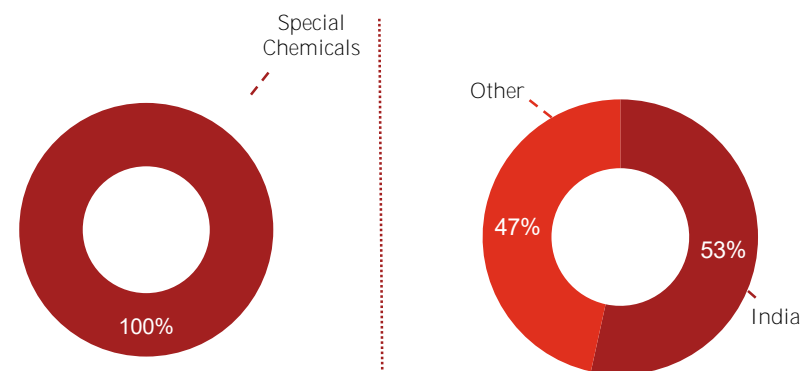
(\$ m)	FY17	FY18	S12A*
Net Sales	78	99	105
Cost of Goods Sold	(36)	(59)	(59)
<b>Gross Profit</b>	<b>43</b>	<b>39</b>	<b>46</b>
General, Administrative & Selling Expenses	(5)	(6)	(6)
Depreciation	(2)	(3)	(3)
Other Operating Income/Loss	(27)	(21)	(26)
<b>Operating Income</b>	<b>7</b>	<b>9</b>	<b>11</b>
Financial Income/Loss	(5)	(5)	(4)
Other Income/Loss	(0)	(1)	(2)
<b>Earnings Before Tax</b>	<b>2</b>	<b>3</b>	<b>5</b>
Provision for Income Tax	(1)	(1)	(2)
<b>Net Income</b>	<b>1</b>	<b>2</b>	<b>4</b>
<b>EBITDA</b>	<b>10</b>	<b>12</b>	<b>14</b>
EBITDA Margin (%)	12.6%	12.2%	13.2%

### Balance Sheet

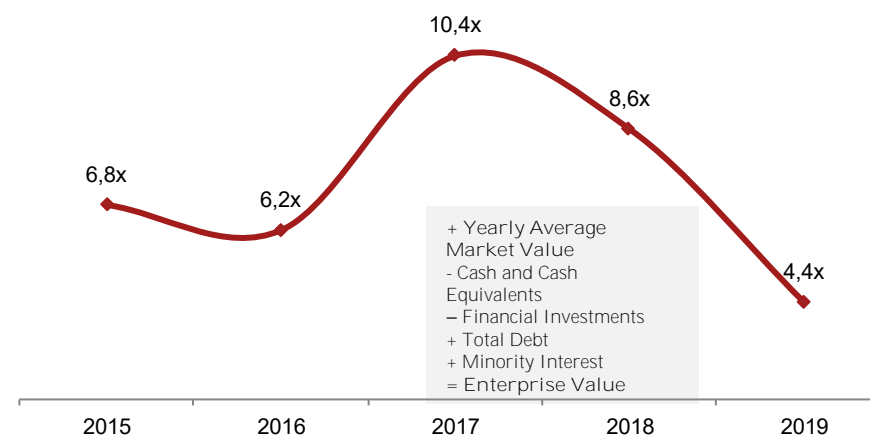
(\$ m)	31.03.2017	31.03.2018	30.09.2019
<b>Current Assets</b>	<b>62</b>	<b>54</b>	<b>51</b>
Cash and Cash Equivalents	0	0	3
Account Receivables	22	19	15
Other Receivables	0	0	-
Inventory	28	27	27
Other Current Assets	11	7	5
<b>Fixed Assets</b>	<b>58</b>	<b>55</b>	<b>54</b>
Long-term Investments	0	0	0
Property, Plant & Equipment	56	53	52
Intangible Assets	0	0	0
Other Fixed Assets	2	2	2
<b>Total Assets</b>	<b>120</b>	<b>109</b>	<b>105</b>
<b>Current Liabilities</b>	<b>65</b>	<b>53</b>	<b>49</b>
Accounts Payable	27	20	21
Short-term Borrowings	29	23	20
Current Portion of Long-term Debt	3	3	-
Other Short-term liabilities	5	7	9
<b>Long-term Liabilities</b>	<b>38</b>	<b>36</b>	<b>34</b>
Long-term Financial Liabilities	26	24	23
Other non-current Liabilities	12	12	11
<b>Total Equity</b>	<b>17</b>	<b>21</b>	<b>22</b>
<b>Total Liabilities and Equity</b>	<b>120</b>	<b>109</b>	<b>105</b>

\*Last 12 months - September

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Wata Chemicals Limited

*Wata Chemicals Limited has been established in 1981 and its' centre of operations is in Dakka, Bangladesh. The Company produces chemicals like aluminium and zinc sulphate, sulphuric acid, basic chromium powder and linear alkylbenzene sulfonic acid.*

### CHROMIUM

#### Income Statement

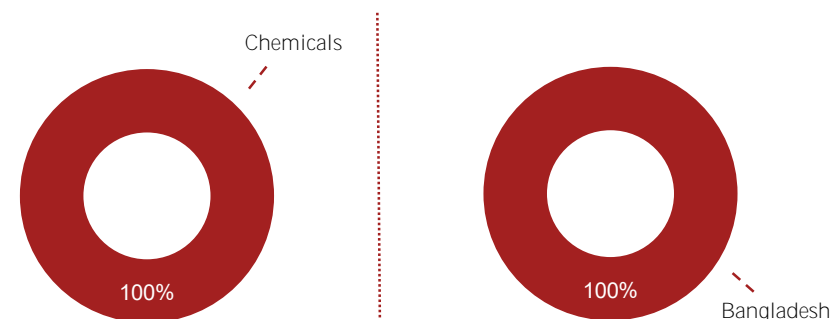
(\$ m)	FY17	FY18	S12A*
Net Sales	5	5	11
Cost of Goods Sold	(4)	(3)	(7)
<b>Gross Profit</b>	<b>1</b>	<b>2</b>	<b>4</b>
General, Administrative & Selling Expenses	(0)	(0)	(1)
Depreciation	(0)	(0)	(0)
<b>Operating Income</b>	<b>1</b>	<b>1</b>	<b>4</b>
Financial Income/Loss	(0)	(1)	(1)
Other Income/Loss	0	0	0
<b>Earnings Before Tax</b>	<b>1</b>	<b>1</b>	<b>3</b>
Provision for Income Tax	(0)	(0)	(1)
<b>Net Income</b>	<b>0</b>	<b>1</b>	<b>2</b>
<b>EBITDA</b>	<b>1</b>	<b>1</b>	<b>4</b>
EBITDA Margin (%)	18.8%	28.7%	34.1%

#### Balance Sheet

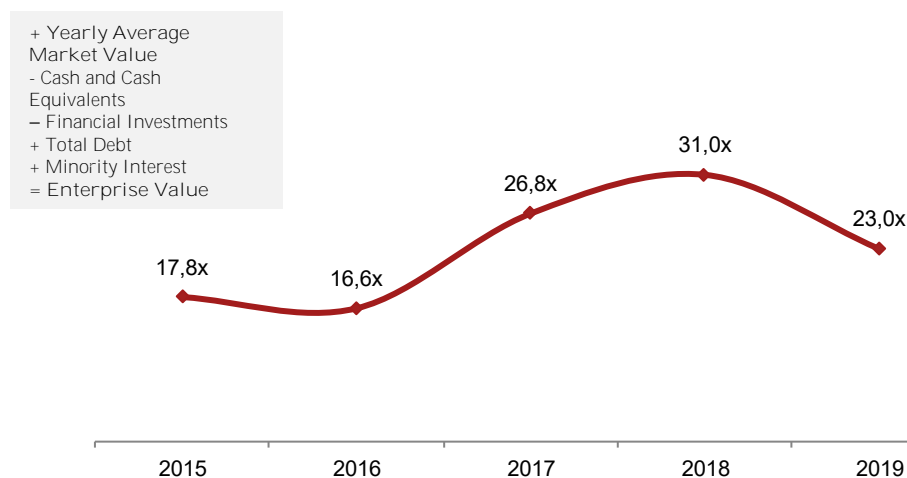
\*Last 12 months - December

(\$ m)	30.06.2017	30.06.2018	31.12.2019
<b>Current Assets</b>	<b>4</b>	<b>5</b>	<b>14</b>
Cash and Cash Equivalents	0	0	0
Account Receivables	0	0	3
Other Receivables	0	-	-
Inventory	3	4	3
Other Current Assets	1	1	8
<b>Fixed Assets</b>	<b>12</b>	<b>14</b>	<b>15</b>
Long-term Investments	-	-	-
Property, Plant & Equipment	12	14	15
Intangible Assets	-	-	-
Other Fixed Assets	-	-	-
<b>Total Assets</b>	<b>16</b>	<b>19</b>	<b>28</b>
<b>Current Liabilities</b>	<b>5</b>	<b>10</b>	<b>13</b>
Accounts Payable	0	0	0
Short-term Borrowings	3	7	9
Current Portion of Long-term Debt	0	0	-
Other Short-term liabilities	2	3	3
<b>Long-term Liabilities</b>	<b>2</b>	<b>1</b>	<b>6</b>
Long-term Financial Liabilities	2	1	6
Other non-current Liabilities	0	0	0
<b>Total Equity</b>	<b>8</b>	<b>8</b>	<b>10</b>
<b>Total Liabilities and Equity</b>	<b>16</b>	<b>19</b>	<b>28</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# LANXESS

## Aktiengesellschaft

LANXESS produces chemical intermediates, special chemicals and plastic materials. The Company has been established in 1863 with the headquarters in Köln, Germany.

## GLASS FIBER

### Income Statement

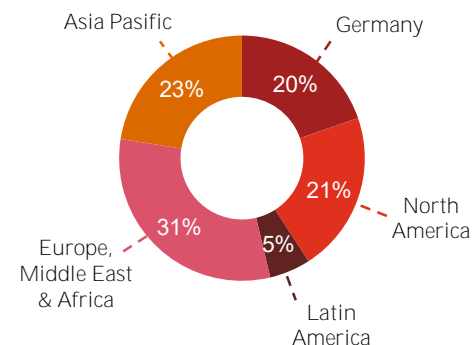
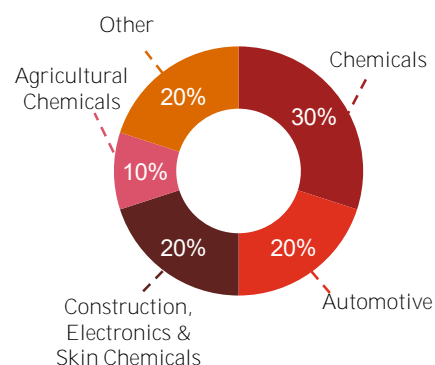
(\$ m)	FY17	FY18	FY19
Net Sales	7,841	7,813	7,633
Cost of Goods Sold	(5,759)	(5,817)	(5,656)
<b>Gross Profit</b>	<b>2,082</b>	<b>1,996</b>	<b>1,977</b>
General, Administrative & Selling Expenses	(1,334)	(1,241)	(1,251)
Research and Development Expenses	(124)	(125)	(128)
Other Operating Income/Loss	20	6	(3)
<b>Operating Income</b>	<b>645</b>	<b>635</b>	<b>595</b>
Financial Income/Loss	(49)	(72)	(38)
Other Income/Loss	(256)	149	(224)
<b>Earnings Before Tax</b>	<b>340</b>	<b>712</b>	<b>332</b>
Provision for Income Tax	(191)	(113)	(118)
<b>Net Income</b>	<b>149</b>	<b>599</b>	<b>214</b>
<b>EBITDA</b>	<b>1,081</b>	<b>1,095</b>	<b>1,056</b>
EBITDA Margin (%)	13.8%	14.0%	13.8%

### Balance Sheet

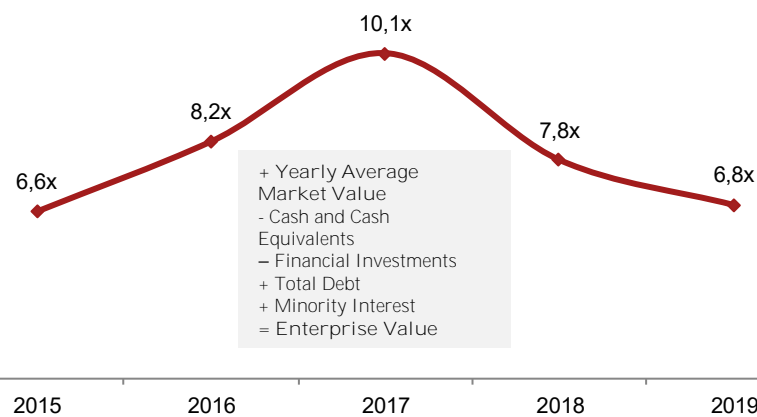
\* Last 12 months - September

(\$ m)	31.12.2017	31.12.2018	31.12.2019
<b>Current Assets</b>	<b>4,751</b>	<b>4,466</b>	<b>4,074</b>
Cash and Cash Equivalents	707	1,533	1,207
Account Receivables	1,580	1,084	948
Other Receivables	373	279	318
Inventory	2,017	1,542	1,341
Other Current Assets	73	27	259
<b>Fixed Assets</b>	<b>7,750</b>	<b>5,480</b>	<b>5,684</b>
Long-term Investments	12	2	1
Property, Plant & Equipment	4,288	2,439	2,513
Intangible Assets	2,083	1,935	1,879
Other Fixed Assets	1,366	1,104	1,292
<b>Total Assets</b>	<b>12,501</b>	<b>9,946</b>	<b>9,758</b>
<b>Current Liabilities</b>	<b>2,951</b>	<b>1,739</b>	<b>1,663</b>
Accounts Payable	1,258	910	736
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	760	68	74
Other Short-term liabilities	933	761	853
<b>Long-term Liabilities</b>	<b>5,451</b>	<b>5,032</b>	<b>5,124</b>
Long-term Financial Liabilities	2,692	3,075	3,116
Other non-current Liabilities	2,759	1,957	2,008
<b>Total Equity</b>	<b>4,098</b>	<b>3,175</b>	<b>2,970</b>
<b>Total Liabilities and Equity</b>	<b>12,501</b>	<b>9,946</b>	<b>9,758</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

# Owens Corning

*Owens Corning has been established in 1938 and its' head office is in Ohio, USA. The Company operates in 3 segments: composites, isolation and roof coating. It produces fibre glass reinforcements and composite materials, as well as housing, retail and industrial construction materials.*

## GLASS FIBER

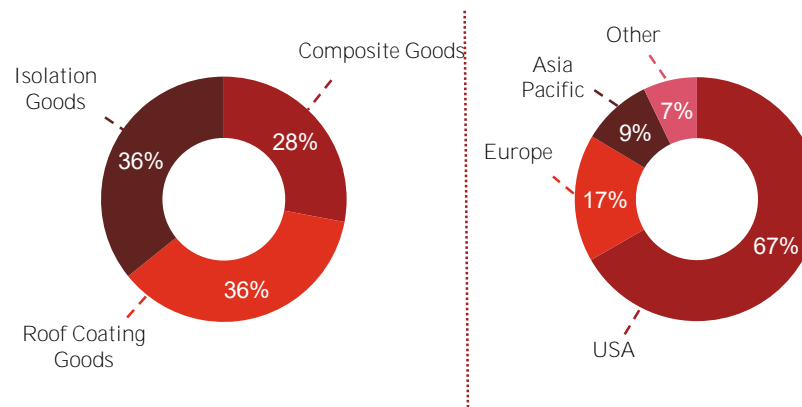
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	6,384	7,057	7,160
Cost of Goods Sold	(4,790)	(5,406)	(5,536)
<b>Gross Profit</b>	<b>1,594</b>	<b>1,651</b>	<b>1,624</b>
General, Administrative & Selling Expenses	(674)	(680)	(732)
Research and Development Expenses	(85)	(89)	(87)
Other Operating Income/Loss	(55)	(29)	(37)
<b>Operating Income</b>	<b>780</b>	<b>853</b>	<b>768</b>
Financial Income/Loss	(107)	(117)	(131)
Other Income/Loss	(114)	(33)	(46)
<b>Earnings Before Tax</b>	<b>559</b>	<b>703</b>	<b>591</b>
Provision for Income Tax	(269)	(156)	(186)
<b>Net Income</b>	<b>290</b>	<b>547</b>	<b>405</b>
<b>EBITDA</b>	<b>1,134</b>	<b>1,276</b>	<b>1,216</b>
EBITDA Margin (%)	17.8%	18.1%	17.0%

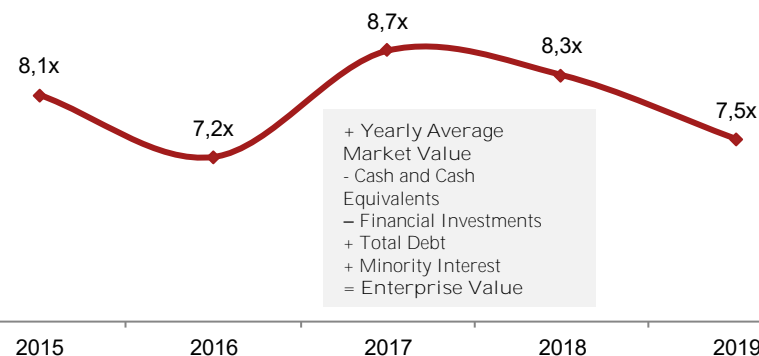
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>1,985</b>	<b>2,020</b>	<b>2,061</b>
Cash and Cash Equivalents	246	78	172
Account Receivables	806	794	770
Other Receivables	-	-	-
Inventory	841	1,072	1,033
Other Current Assets	92	76	86
<b>Fixed Assets</b>	<b>6,647</b>	<b>7,751</b>	<b>7,945</b>
Long-term Investments	52	51	51
Property, Plant & Equipment	3,425	3,811	4,079
Intangible Assets	2,867	3,728	3,653
Other Fixed Assets	303	161	162
<b>Total Assets</b>	<b>8,632</b>	<b>9,771</b>	<b>10,006</b>
<b>Current Liabilities</b>	<b>1,282</b>	<b>1,278</b>	<b>1,329</b>
Accounts Payable	834	851	815
Short-term Borrowings	1	16	20
Current Portion of Long-term Debt	4	9	73
Other Short-term liabilities	443	402	421
<b>Long-term Liabilities</b>	<b>3,146</b>	<b>4,169</b>	<b>4,006</b>
Long-term Financial Liabilities	2,405	3,362	3,124
Other non-current Liabilities	741	807	882
<b>Total Equity</b>	<b>4,204</b>	<b>4,324</b>	<b>4,671</b>
<b>Total Liabilities and Equity</b>	<b>8,632</b>	<b>9,771</b>	<b>10,006</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Nippon Electric Glass Co. Ltd.

Nippon Electric Glass produces special glass products and glass machines along with its' subsidiaries. The Company's product group includes ophthalmic glasses, chemical enhancement glasses and solar cell glasses. The Company has been established in 1944 and the headquarters are located in Otsu, Japan.

### GLASS FIBER

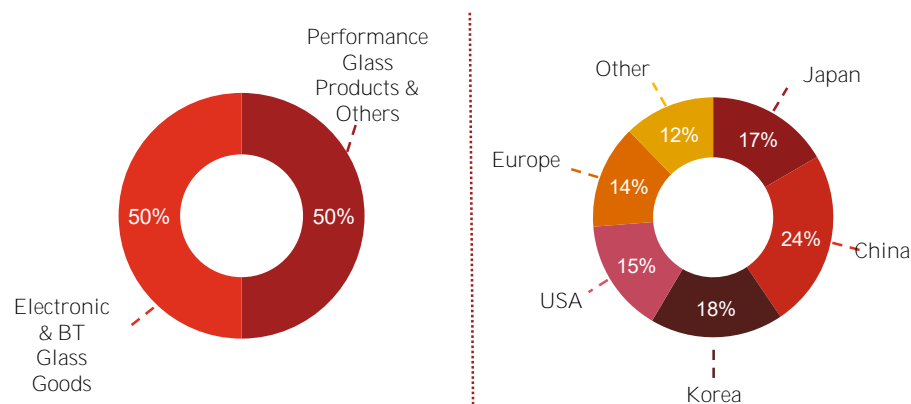
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	2,508	2,737	2,367
Cost of Goods Sold	(1,880)	(2,126)	(1,864)
<b>Gross Profit</b>	<b>627</b>	<b>612</b>	<b>502</b>
General, Administrative & Selling Expenses	(295)	(338)	(355)
Research and Development Expenses	(47)	(47)	-
Depreciation	(8)	-	(5)
<b>Operating Income</b>	<b>278</b>	<b>227</b>	<b>141</b>
Financial Income/Loss	10	3	12
Other Income/Loss	2	3	(330)
<b>Earnings Before Tax</b>	<b>290</b>	<b>232</b>	<b>(177)</b>
Provision for Income Tax	(44)	(89)	(129)
<b>Net Income</b>	<b>246</b>	<b>143</b>	<b>(306)</b>
<b>EBITDA</b>	<b>533</b>	<b>498</b>	<b>404</b>
EBITDA Margin (%)	21.3%	18.2%	17.1%

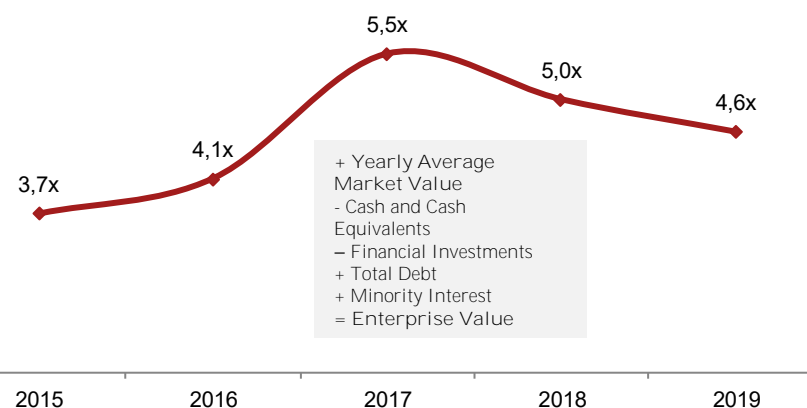
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>2,334</b>	<b>2,305</b>	<b>2,222</b>
Cash and Cash Equivalents	1,039	1,064	934
Account Receivables	541	516	484
Other Receivables	-	-	-
Inventory	616	621	754
Other Current Assets	138	104	50
<b>Fixed Assets</b>	<b>4,452</b>	<b>4,308</b>	<b>3,895</b>
Long-term Investments	619	480	506
Property, Plant & Equipment	3,496	3,523	3,300
Intangible Assets	311	291	67
Other Fixed Assets	26	14	21
<b>Total Assets</b>	<b>6,787</b>	<b>6,613</b>	<b>6,117</b>
<b>Current Liabilities</b>	<b>922</b>	<b>1,030</b>	<b>888</b>
Accounts Payable	337	353	321
Short-term Borrowings	316	304	220
Current Portion of Long-term Debt	-	91	92
Other Short-term liabilities	268	281	255
<b>Long-term Liabilities</b>	<b>1,037</b>	<b>830</b>	<b>839</b>
Long-term Financial Liabilities	737	608	594
Other non-current Liabilities	300	222	244
<b>Total Equity</b>	<b>4,828</b>	<b>4,754</b>	<b>4,391</b>
<b>Total Liabilities and Equity</b>	<b>6,787</b>	<b>6,613</b>	<b>6,117</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## China Jushi Co. Ltd.

The headquarters of China Jushi Co., Ltd, producing fibre glass and its' tissues, are located in Tongxiang, China. The Company presents a series of reinforced fibre glass products, such as E-glass and C-glass rovings, minced wires, dust and emulsion minced wire mats and touch rovings.

## GLASS FIBER

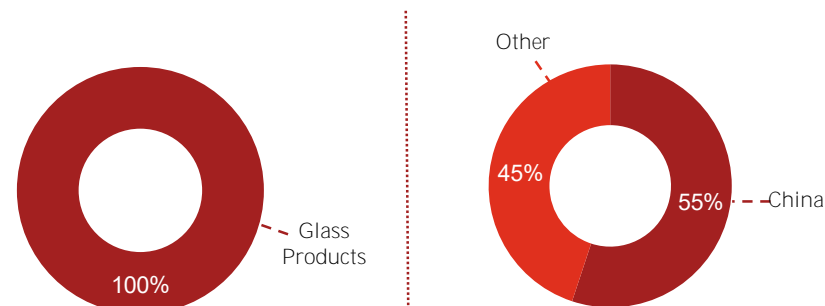
### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	1,330	1,459	1,507
Cost of Goods Sold	(721)	(802)	(973)
<b>Gross Profit</b>	<b>608</b>	<b>656</b>	<b>534</b>
General, Administrative & Selling Expenses	(125)	(148)	(96)
Research and Development Expenses	(39)	(42)	(41)
Other Operating Income/Loss	(14)	(13)	12
<b>Operating Income</b>	<b>430</b>	<b>454</b>	<b>410</b>
Financial Income/Loss	(46)	(50)	9
Other Income/Loss	5	6	(55)
<b>Earnings Before Tax</b>	<b>389</b>	<b>411</b>	<b>364</b>
Provision for Income Tax	(58)	(64)	(61)
<b>Net Income</b>	<b>332</b>	<b>347</b>	<b>304</b>
<b>EBITDA</b>	<b>581</b>	<b>557</b>	<b>568</b>
EBITDA Margin (%)	43.7%	38.2%	37.7%

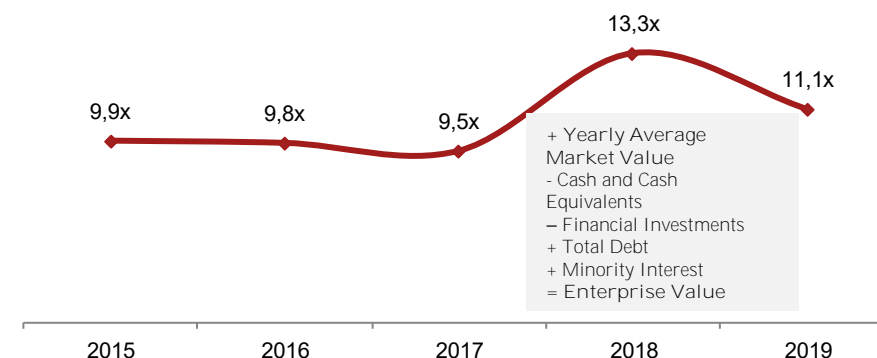
### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>1,205</b>	<b>1,058</b>	<b>1,314</b>
Cash and Cash Equivalents	369	230	208
Account Receivables	538	489	726
Other Receivables	15	20	19
Inventory	204	244	297
Other Current Assets	78	75	63
<b>Fixed Assets</b>	<b>2,605</b>	<b>3,358</b>	<b>3,512</b>
Long-term Investments	182	176	177
Property, Plant & Equipment	2,254	2,992	3,129
Intangible Assets	153	156	183
Other Fixed Assets	16	35	23
<b>Total Assets</b>	<b>3,810</b>	<b>4,416</b>	<b>4,826</b>
<b>Current Liabilities</b>	<b>1,202</b>	<b>1,794</b>	<b>1,675</b>
Accounts Payable	266	447	346
Short-term Borrowings	691	717	949
Current Portion of Long-term Debt	102	456	57
Other Short-term liabilities	143	174	323
<b>Long-term Liabilities</b>	<b>679</b>	<b>502</b>	<b>841</b>
Long-term Financial Liabilities	651	451	769
Other non-current Liabilities	28	51	73
<b>Total Equity</b>	<b>1,929</b>	<b>2,120</b>	<b>2,309</b>
<b>Total Liabilities and Equity</b>	<b>3,810</b>	<b>4,416</b>	<b>4,826</b>

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Taiwan Glass Ind. Corp.

Taiwan Glass Ind. Corp. Has been established in 1964 in Taipei City, Taiwan. The Company's products are fibre glasses and photoelectric glasses such as float glass, automatic glass, photovoltaic glass and concentrated sun energy glasses.

### GLASS FIBER

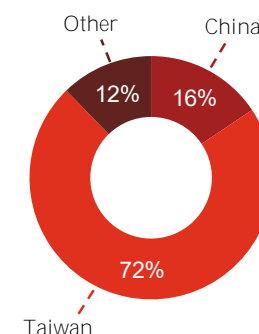
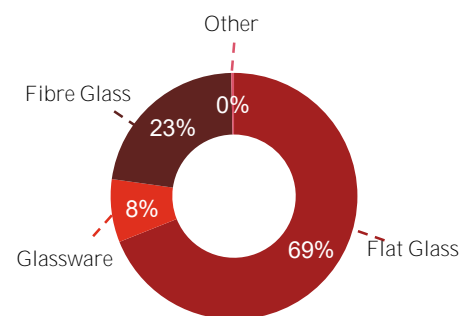
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	1,512	1,506	1,396
Cost of Goods Sold	(1,255)	(1,266)	(1,282)
<b>Gross Profit</b>	<b>257</b>	<b>240</b>	<b>114</b>
General, Administrative & Selling Expenses	(156)	(150)	(139)
Research and Development Expenses	(12)	(14)	(13)
<b>Operating Income</b>	<b>89</b>	<b>76</b>	<b>(37)</b>
Financial Income/Loss	(24)	(21)	(23)
Other Income/Loss	16	(4)	17
<b>Earnings Before Tax</b>	<b>81</b>	<b>51</b>	<b>(44)</b>
Provision for Income Tax	(7)	(17)	(10)
<b>Net Income</b>	<b>73</b>	<b>34</b>	<b>(54)</b>
<b>EBITDA</b>	<b>267</b>	<b>244</b>	<b>138</b>
EBITDA Margin (%)	17.7%	16.2%	9.9%

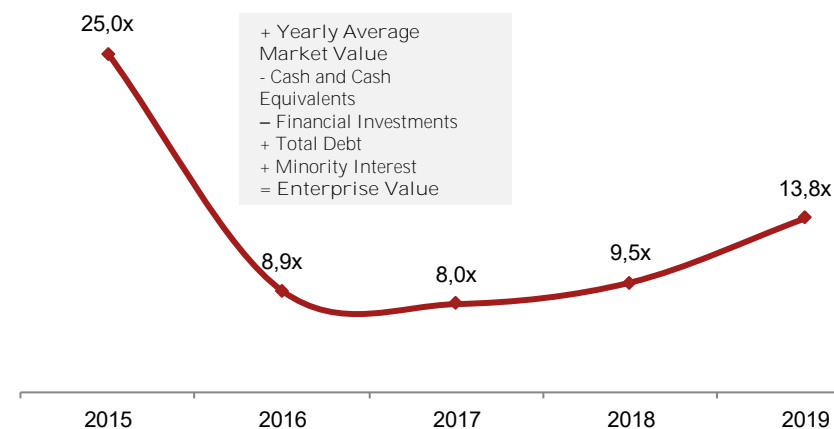
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>848</b>	<b>857</b>	<b>1,047</b>
Cash and Cash Equivalents	197	170	233
Account Receivables	328	323	443
Other Receivables	6	8	7
Inventory	249	289	302
Other Current Assets	68	67	62
<b>Fixed Assets</b>	<b>1,985</b>	<b>1,922</b>	<b>1,872</b>
Long-term Investments	111	144	150
Property, Plant & Equipment	1,751	1,661	1,697
Intangible Assets	3	2	2
Other Fixed Assets	120	116	23
<b>Total Assets</b>	<b>2,832</b>	<b>2,779</b>	<b>2,919</b>
<b>Current Liabilities</b>	<b>728</b>	<b>760</b>	<b>1,001</b>
Accounts Payable	119	101	237
Short-term Borrowings	343	338	445
Current Portion of Long-term Debt	128	183	201
Other Short-term liabilities	139	138	119
<b>Long-term Liabilities</b>	<b>432</b>	<b>460</b>	<b>469</b>
Long-term Financial Liabilities	355	377	384
Other non-current Liabilities	77	83	84
<b>Total Equity</b>	<b>1,672</b>	<b>1,559</b>	<b>1,449</b>
<b>Total Liabilities and Equity</b>	<b>2,832</b>	<b>2,779</b>	<b>2,919</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Jiangsu Changhai Composite Materials Co. Ltd

Jiangsu Changhai Composite Materials Co. Ltd. has been established in 2000, and the centre of its' operations is in Changzhou, China. The Company operates in R&D, production, sales of chemicals, as well as production and sales of fiberglass based composite materials. The Company makes sales to 30 countries.

### GLASS FIBER

#### Income Statement

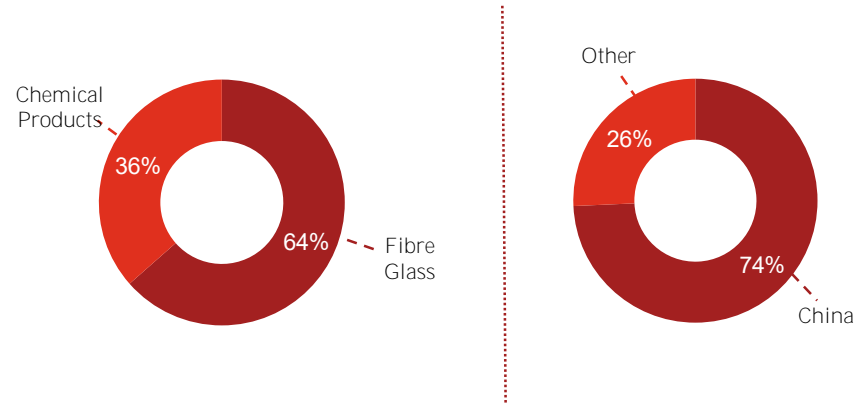
(\$ m)	FY17	FY18	FY19
Net Sales	312	320	319
Cost of Goods Sold	(233)	(237)	(229)
<b>Gross Profit</b>	<b>79</b>	<b>82</b>	<b>90</b>
General, Administrative & Selling Expenses	(30)	(30)	(31)
Research and Development Expenses	(10)	(12)	(13)
Other Operating Income/Loss	(3)	(2)	(4)
<b>Operating Income</b>	<b>35</b>	<b>38</b>	<b>43</b>
Financial Income/Loss	2	2	2
Other Income/Loss	(2)	5	3
<b>Earnings Before Tax</b>	<b>36</b>	<b>44</b>	<b>48</b>
Provision for Income Tax	(5)	(6)	(6)
<b>Net Income</b>	<b>31</b>	<b>38</b>	<b>42</b>
<b>EBITDA</b>	<b>53</b>	<b>57</b>	<b>63</b>
EBITDA Margin (%)	17.1%	17.8%	19.9%

#### Balance Sheet

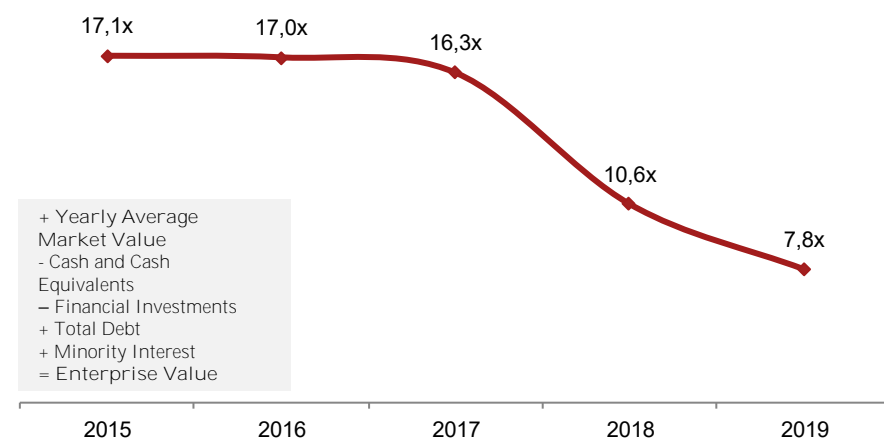
(\$ m)	31.12.201	31.12.201	30.09.201
<b>Current Assets</b>	<b>248</b>	<b>212</b>	<b>216</b>
Cash and Cash Equivalents	152	98	88
Account Receivables	67	80	85
Other Receivables	1	1	1
Inventory	26	30	26
Other Current Assets	4	3	17
<b>Fixed Assets</b>	<b>229</b>	<b>244</b>	<b>228</b>
Long-term Investments	-	-	-
Property, Plant & Equipment	198	215	200
Intangible Assets	27	25	23
Other Fixed Assets	4	5	5
<b>Total Assets</b>	<b>477</b>	<b>456</b>	<b>444</b>
<b>Current Liabilities</b>	<b>92</b>	<b>80</b>	<b>63</b>
Accounts Payable	43	43	40
Short-term Borrowings	14	25	11
Current Portion of Long-term Debt	24	1	3
Other Short-term liabilities	11	11	9
<b>Long-term Liabilities</b>	<b>8</b>	<b>9</b>	<b>6</b>
Long-term Financial Liabilities	-	2	-
Other non-current Liabilities	8	7	6
<b>Total Equity</b>	<b>377</b>	<b>367</b>	<b>374</b>
<b>Total Liabilities and Equity</b>	<b>477</b>	<b>456</b>	<b>444</b>

Source: Company's Activity and Audit Reports, Capital IQ

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



## Bluestar Adisseo Company

Bluestar Adisseo Company has been established in 1939 and its' headquarters are in Beijing, China. The Company researches, develops, produces and sells feeding supplements for the animal feeding. It is a subsidiary of Bluestar Adisseo Company, China National Bluestar (Group) Co. Ltd.

## VITAMIN K3 & SMBS

### Income Statement

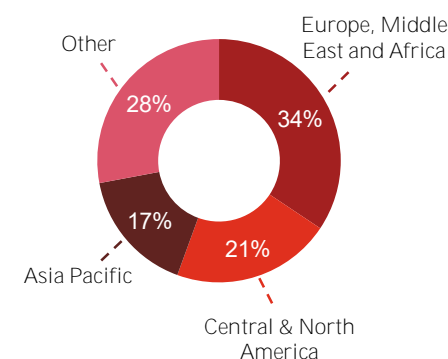
(\$ m)	FY17	FY18	FY19
Net Sales	1,598	1,660	1,599
Cost of Goods Sold	(975)	(1,083)	(1,057)
<b>Gross Profit</b>	<b>623</b>	<b>577</b>	<b>543</b>
General, Administrative & Selling Expenses	(229)	(275)	(275)
Research and Development Expenses	(36)	(41)	(41)
Other Operating Income/Loss	(16)	(9)	(12)
<b>Operating Income</b>	<b>343</b>	<b>252</b>	<b>214</b>
Financial Income/Loss	12	14	15
Other Income/Loss	12	(22)	19
<b>Earnings Before Tax</b>	<b>367</b>	<b>244</b>	<b>249</b>
Provision for Income Tax	(109)	(67)	(68)
<b>Net Income</b>	<b>258</b>	<b>177</b>	<b>181</b>
<b>EBITDA</b>	<b>468</b>	<b>389</b>	<b>347</b>
EBITDA Margin (%)	29.3%	23.4%	21.7%

### Balance Sheet

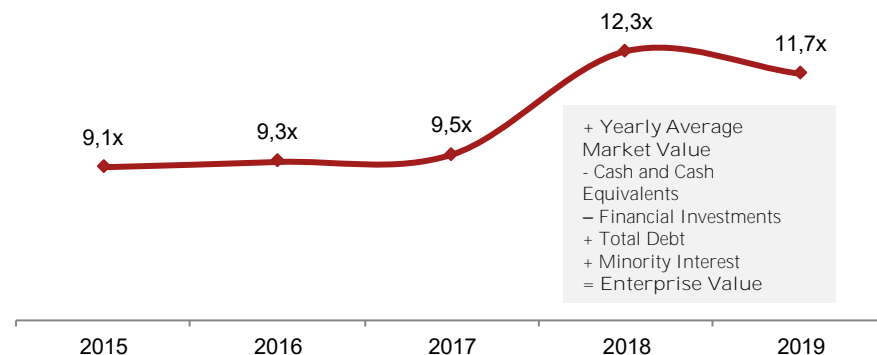
(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>1,716</b>	<b>1,365</b>	<b>1,293</b>
Cash and Cash Equivalents	1,177	768	760
Account Receivables	215	241	221
Other Receivables	8	6	6
Inventory	246	257	241
Other Current Assets	69	93	65
<b>Fixed Assets</b>	<b>1,562</b>	<b>1,755</b>	<b>1,741</b>
Long-term Investments	3	4	6
Property, Plant & Equipment	1,112	1,128	1,148
Intangible Assets	408	568	542
Other Fixed Assets	40	55	45
<b>Total Assets</b>	<b>3,278</b>	<b>3,119</b>	<b>3,034</b>
<b>Current Liabilities</b>	<b>430</b>	<b>370</b>	<b>356</b>
Accounts Payable	187	178	158
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	0	1	1
Other Short-term liabilities	243	191	197
<b>Long-term Liabilities</b>	<b>196</b>	<b>220</b>	<b>206</b>
Long-term Financial Liabilities	2	5	4
Other non-current Liabilities	194	215	202
<b>Total Equity</b>	<b>2,652</b>	<b>2,530</b>	<b>2,472</b>
<b>Total Liabilities and Equity</b>	<b>3,278</b>	<b>3,119</b>	<b>3,034</b>

Source: Company's Activity and Audit Reports, Capital IQ

### Sales by Product Lines and Geographic Territories Breakdown (%)



### Yearly EV/EBITDA Change (x)



## China Chemical & Pharmaceutical Co. Ltd.

China Chemical & Pharmaceutical Co. Ltd has been established in 1952 with headquarters in Taipei City, Taiwan. The Company provides generic pharmaceutical and health products for humans and animals. The Company supplies various prescriptive drugs and anti- infection pills, as well as vitamins, liver toning substances, electrolyte, calories preparators and other dietary supplements.

### VITAMIN K<sub>3</sub> & SMBS

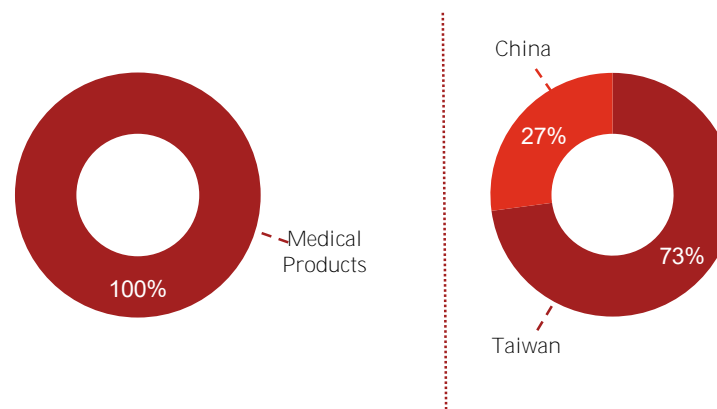
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	211	248	266
Cost of Goods Sold	(146)	(154)	(167)
<b>Gross Profit</b>	<b>65</b>	<b>94</b>	<b>99</b>
General, Administrative & Selling Expenses	(44)	(69)	(71)
Research and Development Expenses	(12)	(13)	(15)
<b>Operating Income</b>	<b>9</b>	<b>11</b>	<b>13</b>
Financial Income/Loss	(0)	0	(2)
Other Income/Loss	3	4	3
<b>Earnings Before Tax</b>	<b>12</b>	<b>15</b>	<b>15</b>
Provision for Income Tax	(2)	(3)	(2)
<b>Net Income</b>	<b>10</b>	<b>12</b>	<b>13</b>
<b>EBITDA</b>	<b>18</b>	<b>19</b>	<b>22</b>
EBITDA Margin (%)	8.5%	7.8%	8.1%

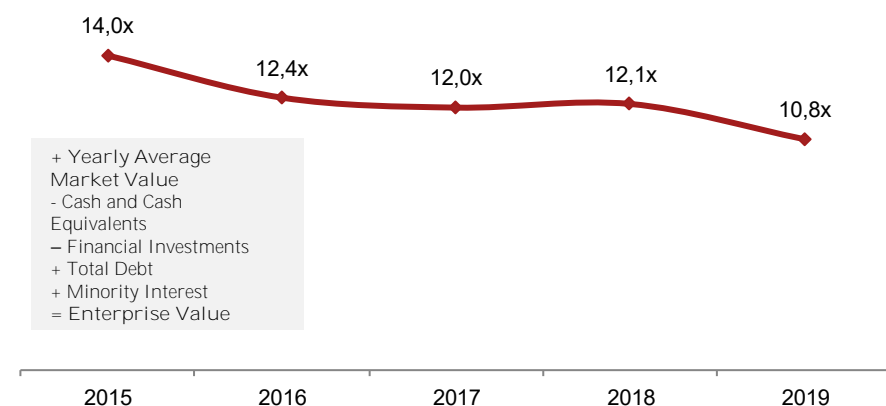
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>159</b>	<b>169</b>	<b>184</b>
Cash and Cash Equivalents	26	19	26
Account Receivables	65	69	73
Other Receivables	7	7	8
Inventory	57	70	73
Other Current Assets	4	3	4
<b>Fixed Assets</b>	<b>187</b>	<b>183</b>	<b>203</b>
Long-term Investments	38	39	47
Property, Plant & Equipment	136	129	145
Intangible Assets	2	2	1
Other Fixed Assets	11	13	11
<b>Total Assets</b>	<b>346</b>	<b>352</b>	<b>387</b>
<b>Current Liabilities</b>	<b>89</b>	<b>94</b>	<b>101</b>
Accounts Payable	28	34	30
Short-term Borrowings	40	37	45
Current Portion of Long-term Debt	-	-	0
Other Short-term liabilities	21	23	26
<b>Long-term Liabilities</b>	<b>69</b>	<b>72</b>	<b>87</b>
Long-term Financial Liabilities	57	60	77
Other non-current Liabilities	12	12	10
<b>Total Equity</b>	<b>189</b>	<b>186</b>	<b>199</b>
<b>Total Liabilities and Equity</b>	<b>346</b>	<b>352</b>	<b>387</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Hubei Zhenhua Chemical Co. Ltd.

### VITAMİN K3 & SMBS

Hubei Zhenhua Kimyasal Co. Ltd. has been established in 1967 and the centre of operations is located in China's Huangshi region. The Company researches, develops, produces and performs marketing of chromium salts. The Company produces sodium bichromate and dichromate, chromic acid anhydride, crystal chromic acid anhydride, nonsolid chromic anhydride, chromium oxide green, chromic trioxide, potassium dichromate, basic chromium sulphate, K3 vitamin, sodium sulphate, aluminium hydroxide and others.

#### Income Statement

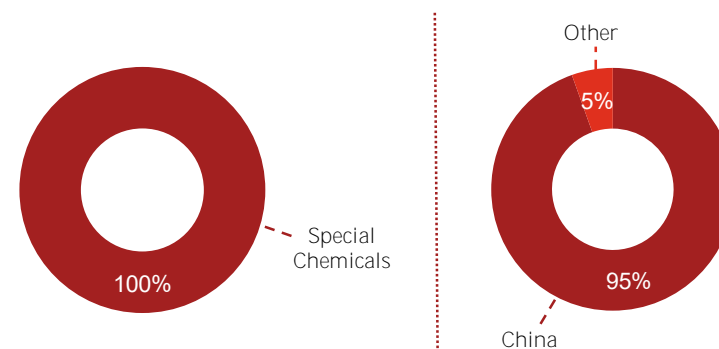
(\$ m)	FY17	FY18	FY19
Net Sales	182	204	199
Cost of Goods Sold	(138)	(146)	(144)
<b>Gross Profit</b>	<b>44</b>	<b>58</b>	<b>55</b>
General, Administrative & Selling Expenses	(19)	(22)	(24)
Research and Development Expenses	(6)	(7)	(6)
Other Operating Income/Loss	(2)	(3)	(3)
<b>Operating Income</b>	<b>16</b>	<b>25</b>	<b>22</b>
Financial Income/Loss	(0)	0	0
Other Income/Loss	0	(1)	(1)
<b>Earnings Before Tax</b>	<b>16</b>	<b>24</b>	<b>22</b>
Provision for Income Tax	(2)	(3)	(1)
<b>Net Income</b>	<b>15</b>	<b>21</b>	<b>21</b>
<b>EBITDA</b>	<b>27</b>	<b>36</b>	<b>33</b>
EBITDA Margin (%)	15.1%	17.7%	16.5%

\*Last 12 months - September

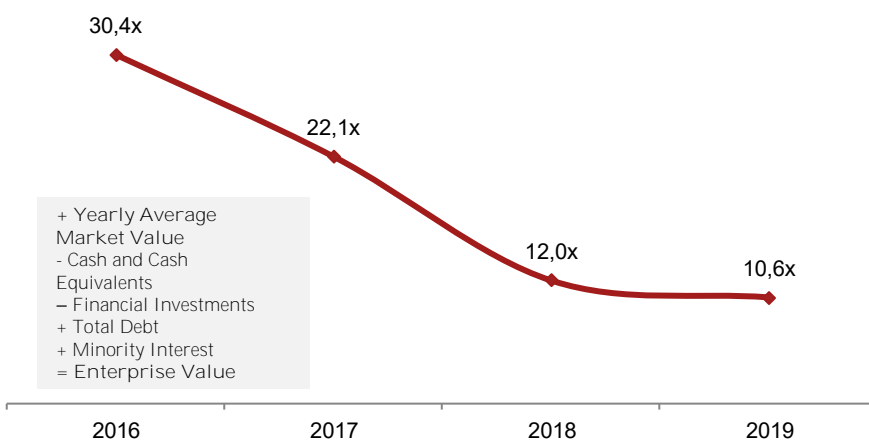
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	30.09.2019
<b>Current Assets</b>	<b>96</b>	<b>110</b>	<b>112</b>
Cash and Cash Equivalents	20	25	33
Account Receivables	54	60	52
Other Receivables	0	1	1
Inventory	18	17	17
Other Current Assets	4	8	10
<b>Fixed Assets</b>	<b>92</b>	<b>86</b>	<b>92</b>
Long-term Investments	-	-	4
Property, Plant & Equipment	86	79	79
Intangible Assets	6	5	5
Other Fixed Assets	1	2	4
<b>Total Assets</b>	<b>188</b>	<b>197</b>	<b>204</b>
<b>Current Liabilities</b>	<b>15</b>	<b>14</b>	<b>15</b>
Accounts Payable	8	7	10
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	7	8	6
<b>Long-term Liabilities</b>	<b>2</b>	<b>2</b>	<b>3</b>
Long-term Financial Liabilities	-	-	-
Other non-current Liabilities	2	2	3
<b>Total Equity</b>	<b>172</b>	<b>180</b>	<b>186</b>
<b>Total Liabilities and Equity</b>	<b>188</b>	<b>197</b>	<b>204</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Brother Enterprises Holding Co. Ltd.

Brother Enterprises produces vitamins and skin chemicals. The skin chemicals include tanning substances, oils, nurturing substances, auxiliary substances and chromium powders. The Company also produces B1 and K3 vitamins. Brother Enterprises has been established in 1991 and is based in Haining, China.

### VITAMIN K3 & SMBS

#### Income Statement

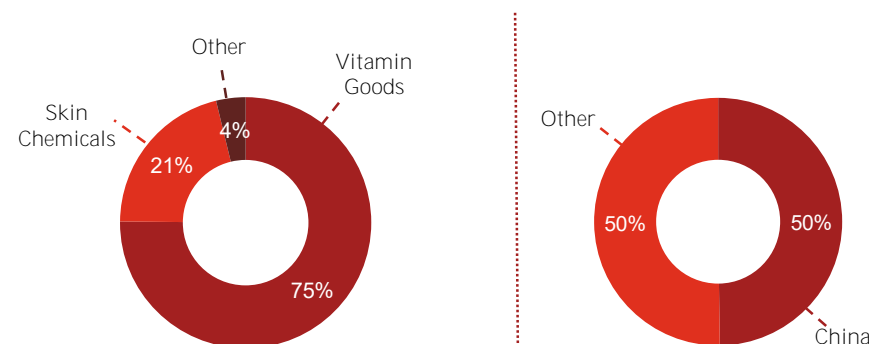
(\$ m)	FY17	FY18	FY19
Net Sales	239	206	173
Cost of Goods Sold	(126)	(159)	(135)
<b>Gross Profit</b>	<b>113</b>	<b>47</b>	<b>39</b>
General, Administrative & Selling Expenses	(26)	(25)	(30)
Research and Development Expenses	(10)	(11)	(10)
Other Operating Income/Loss	(4)	(2)	(3)
<b>Operating Income</b>	<b>72</b>	<b>8</b>	<b>(4)</b>
Financial Income/Loss	2	0	(1)
Other Income/Loss	(3)	1	3
<b>Earnings Before Tax</b>	<b>71</b>	<b>9</b>	<b>(3)</b>
Provision for Income Tax	(11)	(6)	(2)
<b>Net Income</b>	<b>61</b>	<b>3</b>	<b>(5)</b>
<b>EBITDA</b>	<b>91</b>	<b>29</b>	<b>20</b>
EBITDA Margin (%)	38.1%	14.2%	11.5%

\*Last 12 months - September

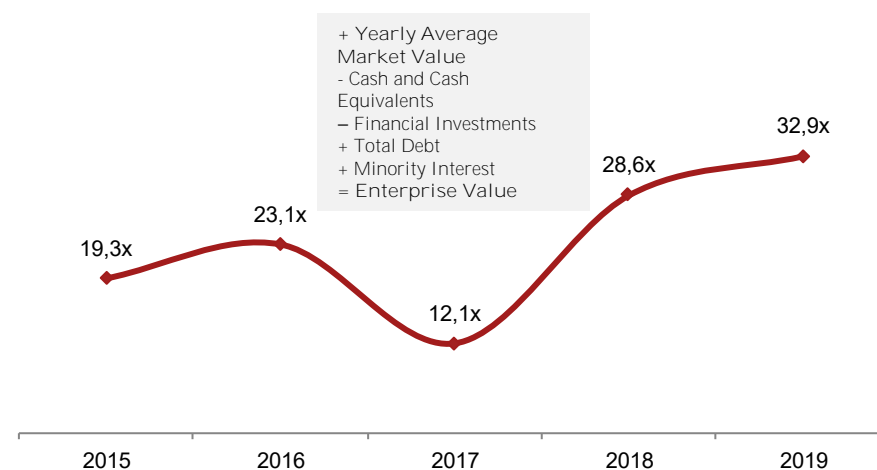
#### Balance Sheet

(\$ m)	31.12.2017	31.12.2018	30.09.2019
<b>Current Assets</b>	<b>296</b>	<b>210</b>	<b>161</b>
Cash and Cash Equivalents	173	116	63
Account Receivables	55	38	28
Other Receivables	0	1	1
Inventory	47	42	48
Other Current Assets	20	14	22
<b>Fixed Assets</b>	<b>236</b>	<b>311</b>	<b>357</b>
Long-term Investments	0	0	0
Property, Plant & Equipment	211	288	333
Intangible Assets	19	17	16
Other Fixed Assets	6	6	8
<b>Total Assets</b>	<b>533</b>	<b>521</b>	<b>518</b>
<b>Current Liabilities</b>	<b>94</b>	<b>113</b>	<b>133</b>
Accounts Payable	69	103	91
Short-term Borrowings	0	-	34
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	24	10	8
<b>Long-term Liabilities</b>	<b>88</b>	<b>80</b>	<b>64</b>
Long-term Financial Liabilities	88	79	64
Other non-current Liabilities	0	0	0
<b>Total Equity</b>	<b>351</b>	<b>328</b>	<b>321</b>
<b>Total Liabilities and Equity</b>	<b>533</b>	<b>521</b>	<b>518</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



Source: Company's Activity and Audit Reports, Capital IQ

## Genebiotech Co. Ltd.

Genebiotech Co. Ltd. is a fermentation company which has been established in 2000 with a centre in Gongju. The Company researches, develops, produces and sells biological roots in various fields as animal roots, agriculture, food, pharmaceuticals etc.

### VITAMİN K<sub>3</sub> & SMBS

#### Income Statement

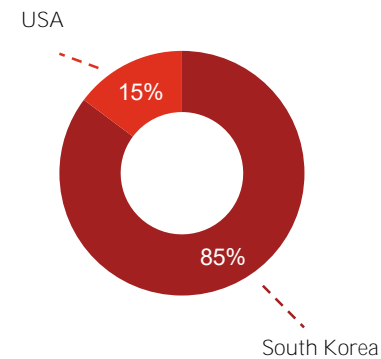
(\$ m)	FY17	FY18	FY19
Net Sales	52	56	50
Cost of Goods Sold	(43)	(43)	(42)
<b>Gross Profit</b>	<b>9</b>	<b>13</b>	<b>8</b>
General, Administrative & Selling Expenses	(6)	(6)	(6)
Research and Development Expenses	(1)	(1)	(1)
Depreciation	(0)	(0)	(0)
Other Operating Income/Loss	(0)	(0)	(0)
<b>Operating Income</b>	<b>2</b>	<b>6</b>	<b>1</b>
Financial Income/Loss	-	-	-
Other Income/Loss	(0)	(1)	(0)
<b>Earnings Before Tax</b>	<b>2</b>	<b>5</b>	<b>0</b>
Provision for Income Tax	(0)	(3)	(0)
<b>Net Income</b>	<b>2</b>	<b>2</b>	<b>(0)</b>
<b>EBITDA</b>	<b>4</b>	<b>7</b>	<b>2</b>
EBITDA Margin (%)	6.9%	12.4%	4.3%

#### Balance Sheet

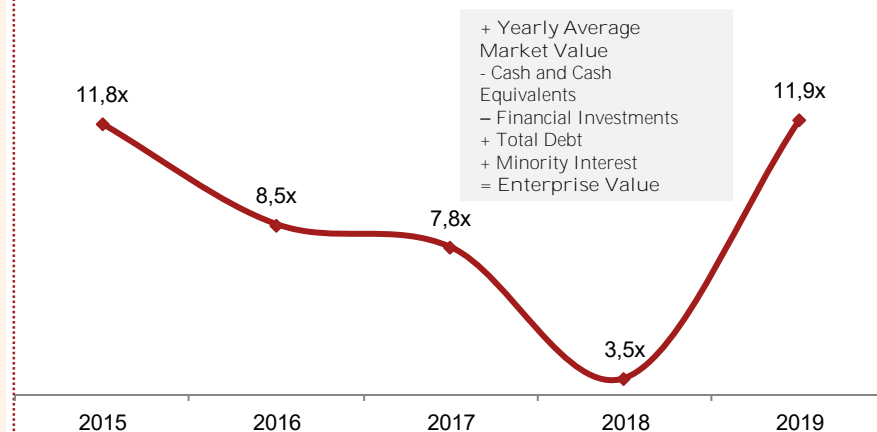
(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>29</b>	<b>43</b>	<b>38</b>
Cash and Cash Equivalents	14	27	22
Account Receivables	8	8	7
Other Receivables	0	0	0
Inventory	7	7	9
Other Current Assets	0	0	0
<b>Fixed Assets</b>	<b>27</b>	<b>22</b>	<b>21</b>
Long-term Investments	8	4	3
Property, Plant & Equipment	17	16	16
Intangible Assets	1	1	1
Other Fixed Assets	1	1	1
<b>Total Assets</b>	<b>56</b>	<b>65</b>	<b>59</b>
<b>Current Liabilities</b>	<b>11</b>	<b>13</b>	<b>9</b>
Accounts Payable	3	3	2
Short-term Borrowings	5	4	2
Current Portion of Long-term Debt	-	-	0
Other Short-term liabilities	3	6	4
<b>Long-term Liabilities</b>	<b>9</b>	<b>12</b>	<b>13</b>
Long-term Financial Liabilities	7	11	13
Other non-current Liabilities	1	1	0
<b>Total Equity</b>	<b>36</b>	<b>41</b>	<b>38</b>
<b>Total Liabilities and Equity</b>	<b>56</b>	<b>65</b>	<b>59</b>

Source: Company's Activity and Audit Reports, Capital IQ

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



## Eagle Veterinary Technology Co. Ltd.

*Eagle Veterinary Technology Co, Ltd has been established in 1970 and its' centre of operations is in Yesan, South Korea. The Company produces antibiotics, antibacterial, anthelmintic and antihistaminic products, as well as injectable feeding supplements, oral liquids and solvable powders for buffalos, poultry and swine.*

### VITAMIN K3 & SMBS

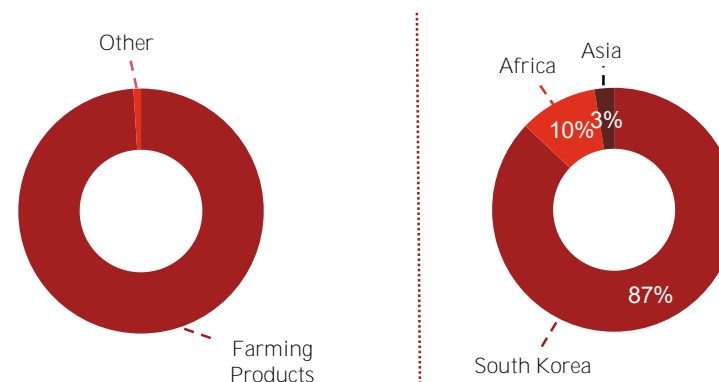
#### Income Statement

(\$ m)	FY17	FY18	FY19
Net Sales	32	27	30
Cost of Goods Sold	(22)	(20)	(22)
<b>Gross Profit</b>	<b>10</b>	<b>7</b>	<b>8</b>
General, Administrative & Selling Expenses	(7)	(6)	(6)
Research and Development Expenses	(0)	(0)	(0)
Depreciation	(0)	(0)	(0)
Other Operating Income/Loss	(0)	(0)	(0)
<b>Operating Income</b>	<b>3</b>	<b>1</b>	<b>1</b>
Financial Income/Loss	(0)	(0)	(0)
Other Income/Loss	(1)	0	(0)
<b>Earnings Before Tax</b>	<b>2</b>	<b>1</b>	<b>1</b>
Provision for Income Tax	(0)	(0)	(0)
<b>Net Income</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>EBITDA</b>	<b>4</b>	<b>3</b>	<b>3</b>
EBITDA Margin (%)	13.4%	9.7%	10.9%

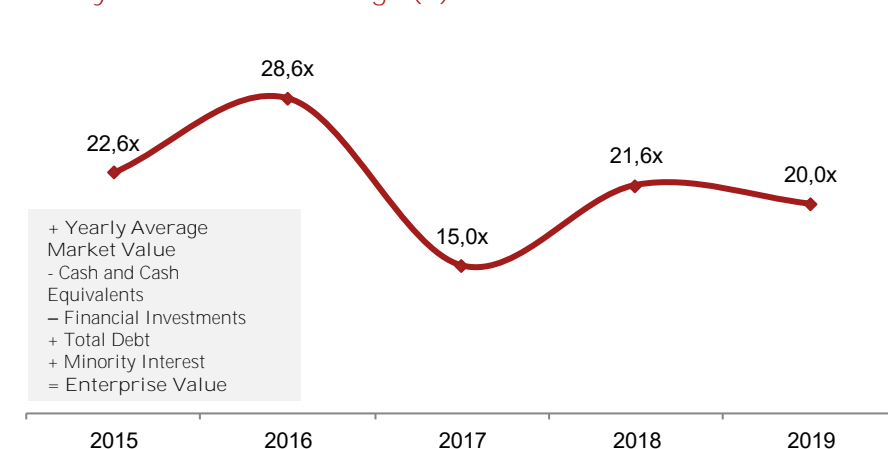
#### Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
<b>Current Assets</b>	<b>20</b>	<b>18</b>	<b>19</b>
Cash and Cash Equivalents	2	1	2
Account Receivables	6	5	6
Other Receivables	1	1	1
Inventory	11	10	9
Other Current Assets	0	1	0
<b>Fixed Assets</b>	<b>27</b>	<b>24</b>	<b>21</b>
Long-term Investments	0	0	0
Property, Plant & Equipment	25	22	20
Intangible Assets	0	0	0
Other Fixed Assets	1	2	1
<b>Total Assets</b>	<b>47</b>	<b>41</b>	<b>40</b>
<b>Current Liabilities</b>	<b>13</b>	<b>7</b>	<b>6</b>
Accounts Payable	3	2	1
Short-term Borrowings	5	2	1
Current Portion of Long-term Debt	2	2	2
Other Short-term liabilities	2	2	2
<b>Long-term Liabilities</b>	<b>4</b>	<b>3</b>	<b>3</b>
Long-term Financial Liabilities	4	3	3
Other non-current Liabilities	-	0	0
<b>Total Equity</b>	<b>30</b>	<b>31</b>	<b>31</b>
<b>Total Liabilities and Equity</b>	<b>47</b>	<b>41</b>	<b>40</b>

#### Sales by Product Lines and Geographic Territories Breakdown (%)



#### Yearly EV/EBITDA Change (x)



+ Yearly Average  
Market Value  
- Cash and Cash  
Equivalents  
- Financial Investments  
+ Total Debt  
+ Minority Interest  
= Enterprise Value

Source: Company's Activity and Audit Reports, Capital IQ

# *Beta and WACC Analysis*

## Beta (1/13)

### TRKCM – Architectural Glass

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Compagnie de Saint-Gobain S.A.	France	0.99	22,269	57%	33%	0.72
Fuyao Glass Industry Group Co., Ltd.	China	0.77	8,449	16%	25%	0.69
AGC Inc.	Japan	1.14	8,011	67%	31%	0.78
Xinyi Glass Holdings Limited	Hong Kong	1.11	5,325	29%	17%	0.89
Zhuzhou Kibing Group Co.,Ltd	China	1.03	2,119	29%	25%	0.85
CSG Holding Co., Ltd.	China	0.96	1,790	45%	25%	0.72
Vitro, S.A.B. de C.V.	Mexico	0.90	1,060	40%	30%	0.70
<b>Average</b>		<b>0.99</b>		<b>40%</b>		<b>0.76</b>

\*Market CAP is shown based on the year-end data.

Source: Management, Capital IQ, PwC Analysis

## Beta (2/13)

### TRKCM – Automotive Glass

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Fuyao Glass Industry Group Co., Ltd.	China	0.77	8,449	16%	25%	0.69
Standard Motor Products, Inc.	USA	1.00	1,195	6%	21%	0.96
Mahle Metal Leve S.A.	Brazil	0.62	919	12%	34%	0.57
Shandong Gold Phoenix Co.,Ltd	China	0.70	523	10%	25%	0.65
Suprajit Engineering Limited	India	0.97	387	12%	35%	0.90
Cayman Engley Industrial Co., Ltd.	Cayman	1.05	378	42%	0%	0.74
Feilong Auto Components Co., Ltd.	China	0.94	359	11%	25%	0.87
Fras-le S.A.	Brazil	0.84	304	41%	34%	0.66
Iron Force Industrial Co., Ltd.	Taiwan	0.75	303	1%	17%	0.74
P.C.S. Machine Group Holding Public Co. Ltd.	Thailand	0.78	297	0%	20%	0.78
SNT Corporation	Japan	0.72	203	6%	31%	0.70
Automotive Axles Limited	India	1.08	177	2%	35%	1.06
Steel Strips Wheels Limited	India	1.20	168	94%	35%	0.74
JBM Auto Limited	India	1.46	163	56%	35%	1.07
Sterling Tools Limited	India	1.07	109	15%	35%	0.98
The Hi-Tech Gears Limited	India	1.28	44	40%	35%	1.01
Shivam Autotech Limited	India	1.47	32	75%	35%	0.98
Triton Valves Limited	India	1.06	13	49%	35%	0.80
News World Wu Company	Taiwan	0.78	12	59%	17%	0.52
<b>Average</b>		<b>0.98</b>		<b>29%</b>		<b>0.81</b>

Automotive Glass Business Segment makes Original Equipment Manufacturing (OEM) sales based on the long term contracts signed with global automotive producers. When the production structure, the relevant market and the Companies under the Automotive Glass Business Segment have been taken into consideration, it has been decided that the publicly listed companies active in Original Equipment Manufacturing (OEM) need to be analysed for making the decision on the beta to be used.

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (3/13)

### ANACM

Company	Country	Equity Beta	Market CAP* (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Ardagh Group S.A.	Luxembourg	1.15	4,628	198%	29%	0.48
Vidrala, S.A.	Spain	0.60	2,858	25%	25%	0.50
Gerresheimer AG	Germany	0.87	2,431	46%	30%	0.66
O-I Glass, Inc.	USA	1.42	1,857	208%	21%	0.54
Zignago Vetro S.p.A.	Italy	0.72	1,250	32%	31%	0.59
Vetropack Holding AG	Switzerland	0.84	1,245	8%	18%	0.79
Verallia Deutschland AG	Germany	0.40	572	36%	30%	0.32
Cristalerías de Chile S.A.	Chile	0.95	451	33%	24%	0.76
BG Container Glass	Thailand	1.05	317	108%	20%	0.56
<b>Average</b>		<b>0.89</b>		<b>77%</b>		<b>0.58</b>

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (4/13)

### PASAB

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Nadir Figueiredo Indústria e Comércio S.A.	Brazil	0.72	1,415	76%	34%	0.48
La Opala RG Limited	India	0.61	1,354	0%	35%	0.61
King's Flair International (Holdings) Limited	Hong Kong	0.63	631	8%	17%	0.59
Kütahya Porselen Sanayi Anonim Sirketi	Turkey	0.78	264	5%	20%	0.75
Denizli Cam Sanayii ve Ticaret A.S.	Turkey	0.91	125	31%	20%	0.73
Ocean Glass Public Company Limited	Thailand	0.86	106	103%	20%	0.47
<b>Average</b>		<b>0.75</b>		<b>37%</b>		<b>0.61</b>

Some of the companies were not considered for the beta comparable companies analysis, as the Companies operating in the glassware sector do not have the same financial size as PASAB. Therefore, it has been assumed that the financial outputs of the aforementioned companies will not give meaningful results.

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (5/13)

### SODA

#### Soda Sanayii A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Solvay SA	Belgium	0.87	71,155	46%	34%	0.67
Genesis Energy, L.P.	USA	1.19	14,938	115%	21%	0.63
Tata Chemicals Limited	India	1.16	14,207	59%	35%	0.84
Tangshan Sanyou Chemical Industries Co.,Ltd	China	0.99	11,150	63%	25%	0.67
Chengdu Wintrue Holding Co., Ltd.	China	0.69	4,238	62%	25%	0.47
Shandong Jinjing Science and Technology Stock Co., Ltd.	China	1.00	3,517	34%	25%	0.80
Ciech S.A.	Poland	0.73	3,286	60%	19%	0.50
Ciner Resources LP	USA	1.06	2,081	26%	21%	0.88
<b>Average</b>				<b>58%</b>		<b>0.68</b>

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Elementis plc	UK	1.09	8,176	21%	20%	0.93
Brother Enterprises Holding Co.,Ltd.	China	1.09	3,734	7%	25%	1.04
Hubei Zhenhua Chemical Co.,Ltd.	China	0.41	2,233	0%	25%	0.41
Nippon Chemical Industrial Co., Ltd.	Japan	1.05	1,519	67%	31%	0.71
Wata Chemicals Limited	Bangladesh	1.03	380	22%	25%	0.89
Vishnu Chemicals Limited	India	2.09	135	112%	35%	1.21
<b>Average</b>				<b>38%</b>		<b>0.86</b>
<b>Weighted Average Beta</b>						<b>0.73</b>
<b>Weighted Average Debt/Equity %</b>						<b>52%</b>

The average asset beta and the weighted average debt/capital rate has been gained by weighting the betas for sodium carbonate and chromium companies based on the projection period income breakdown.

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (6/13)

### SODA

#### Şişecam Elyaf Sanayii A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Owens Corning	USA	1.15	42,154	42%	21%	0.87
LANXESS Aktiengesellschaft	Germany	1.24	34,931	54%	30%	0.90
China Jushi Co., Ltd.	China	1.08	32,624	37%	25%	0.85
Nippon Electric Glass Co., Ltd.	Japan	1.10	12,913	36%	31%	0.89
Taiwan Glass Ind. Corp.	Taiwan	0.91	6,594	78%	17%	0.55
Jiangsu Changhai Composite Materials Co., Ltd	China	0.87	4,045	4%	25%	0.84
<b>Average</b>		<b>1.06</b>		<b>41.8%</b>		<b>0.82</b>

#### Oxyvit Kimya Sanayii Ve Tic. A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Bluestar Adisseo Company	China	0.81	25,349	0%	25%	0.81
Brother Enterprises Holding Co.,Ltd.	China	1.09	3,734	7%	25%	1.04
Hubei Zhenhua Chemical Co.,Ltd.	China	0.41	2,233	0%	25%	0.41
China Chemical & Pharmaceutical Co., Ltd.	Taiwan	0.78	1,138	54%	17%	0.54
Eagle Veterinary Technology Co.,Ltd	South Korea	0.46	437	15%	24%	0.41
Genebiotech Co., Ltd.	South Korea	1.46	249	35%	24%	1.15
<b>Average</b>		<b>0.84</b>		<b>18.6%</b>		<b>0.73</b>

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (7/13)

### SODA

*Selected firms have been used in the comparable companies analysis for the following Companies: **Şişecam Bulgaria EOOD, Şişecam Soda Lukavac D.O.O., Solvay Şişecam Holding AG** and Pacific Soda LLC.*

Company	Country	Equity Beta	Market CAP (USD million)*	5 year average debt / equity	Tax Rate	Asset Beta
Solvay SA	Belgium	0.87	71,155	46%	34%	0.67
Genesis Energy, L.P.	USA	1.19	14,938	115%	21%	0.63
Tata Chemicals Limited	India	1.16	14,207	59%	35%	0.84
Tangshan Sanyou Chemical Industries Co.,Ltd	China	0.99	11,150	63%	25%	0.67
Chengdu Wintrue Holding Co., Ltd.	China	0.69	4,238	62%	25%	0.47
Shandong Jinjing Science and Technology Stock Co., Ltd.	China	1.00	3,517	34%	25%	0.80
Ciech S.A.	Poland	0.73	3,286	60%	19%	0.50
Ciner Resources LP	USA	1.06	2,081	26%	21%	0.88
<b>Average</b>		<b>0.96</b>		<b>58%</b>		<b>0.68</b>

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (8/13)

### SODA

#### Cromital S.p.A

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Elementis plc	UK	1.09	8,176	21%	20%	0.93
Brother Enterprises Holding Co.,Ltd.	China	1.09	3,734	7%	25%	1.04
Hubei Zhenhua Chemical Co.,Ltd.	China	0.41	2,233	0%	25%	0.41
Nippon Chemical Industrial Co., Ltd.	Japan	1.05	1,519	67%	31%	0.71
Wata Chemicals Limited	Bangladesh	1.03	380	22%	25%	0.89
Vishnu Chemicals Limited	India	2.09	135	112%	35%	1.21
<b>Average</b>		<b>1.13</b>		<b>38%</b>		<b>0.86</b>

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (9/13)

### SISE

#### Şişecam Çevre Sistemleri A.Ş.

Company	Country	Equity Beta	Market CAP* (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Ardagh Group S.A.	Luxembourg	1.15	4,628	198%	29%	0.48
Vidrala, S.A.	Spain	0.60	2,858	25%	25%	0.50
Gerresheimer AG	Germany	0.87	2,431	46%	30%	0.66
O-I Glass, Inc.	USA	1.42	1,857	208%	21%	0.54
Zignago Vetro S.p.A.	Italy	0.72	1,250	32%	31%	0.59
Vetropack Holding AG	Switzerland	0.84	1,245	8%	18%	0.79
Verallia Deutschland AG	Germany	0.40	572	36%	30%	0.32
Cristalerías de Chile S.A.	Chile	0.95	451	33%	24%	0.76
BG Container Glass	Thailand	1.05	317	108%	20%	0.56
<b>Average</b>		<b>0.89</b>		<b>77%</b>		<b>0.58</b>

\*Market CAP is shown based on the year-end data.  
Source: Management, Capital IQ, PwC Analysis

## Beta (10/13) SISE

### Türkiye Şişe ve Cam Fabrikaları A.Ş.

Equity Beta	2020	2021	2022	2023	2024	2025
Trakya Cam Sanayii A.Ş.	1.00	1.01	1.01	1.01	1.01	1.01
Şişecam Otomotiv A.Ş.	1.00	1.00	1.00	1.00	1.00	1.00
Anadolu Cam Sanayii A.Ş.	0.93	0.93	0.93	0.93	0.93	0.93
OOO Ruscam Glass Packaging Holding	0.93	0.93	0.93	0.93	0.93	0.93
Soda Sanayii A.Ş.	1.03	1.04	1.04	1.04	1.04	1.04
<b>Weighted Average Beta</b>	<b>0.98</b>	<b>0.99</b>	<b>0.99</b>	<b>0.99</b>	<b>0.99</b>	<b>0.99</b>

When the asset beta estimation has been made, the annually calculated weighted average beta has been taken into consideration by analysing the approximate asset betas for the Group companies which generate the similar royalty income and which are leading in the main business segments in proportion with the royalty income.

### Şişecam Dış Ticaret A.Ş.

Equity Beta	2020	2021	2022	2023	2024	2025
Anadolu Cam Sanayii A.Ş.	0.93	0.93	0.93	0.93	0.93	0.93
Camiş Madencilik A.Ş.	0.96	0.97	0.97	0.97	0.97	0.97
Oxyvit Kimya San. ve Tic. A.Ş.	0.83	0.84	0.84	0.84	0.84	0.84
Paşabahçe Mağazaları A.Ş.	0.78	0.78	0.78	0.78	0.78	0.78
Şişecam Otomotiv A.Ş.	1.00	1.00	1.00	1.00	1.00	1.00
Şişecam Elyaf Sanayi A.Ş.	1.08	1.09	1.09	1.09	1.09	1.09
Camiş Ambalaj Sanayi A.Ş.	0.92	0.93	0.93	0.93	0.93	0.93
Paşabahçe Cam San. ve Tic. A.Ş.	0.78	0.79	0.79	0.79	0.79	0.79
Soda Sanayi A.Ş.	1.03	1.04	1.04	1.04	1.04	1.04
Trakya Cam Sanayii A.Ş.	1.00	1.01	1.01	1.01	1.01	1.01
<b>Weighted Average Beta</b>	<b>0.96</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>

When the asset beta estimation for DT has been made, a weighted average asset beta has been taken into consideration along with the beta estimations for the Group Companies that create the trading volume of DT and the monetary value of sales.

Source: Management, PwC Analysis

## Beta (11/13)

### SISE

#### Şişecam Sigorta Aracılık Hizmetleri A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)
Anadolu Anonim Türk Sigorta Sirketi	Turkey	0.73	370
Aksigorta A.S.	Turkey	0.85	313
Günes Sigorta Anonim Sirketi	Turkey	1.04	198
Halk Sigorta A.S.	Turkey	0.83	116
Ray Sigorta Anonim Sirketi	Turkey	0.84	94
<b>Average</b>		<b>0.86</b>	

#### Camiş Elektrik Üretim A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
Shanxi Zhangze Electric Power Co., LTD.	China	1.06	1,074	241%	25%	0.38
Enel Generación Costanera S.A.	Argentina	0.93	163	53%	35%	0.70
Altern Energy Limited	Pakistan	0.54	71	42%	32%	0.42
Saif Power Limited	Pakistan	0.70	52	77%	32%	0.46
<b>Average</b>		<b>0.81</b>		<b>103%</b>		<b>0.49</b>

\*Market CAP is shown based on the year-end data.

Source: Management, Capital IQ, PwC Analysis

## Beta (12/13) SISE

*Selected firms have been used in the comparable companies analysis for the following Companies: **Camiş Madencilik A.Ş., Madencilik Sanayii ve Tic. A.Ş., Camiş Egypt Mining Ltd. Co. and Rudnik Krechnjaka Vijenac D.O.O.***

Company	Asset Beta
Trakya Cam Sanayii A.Ş.	0.76
Paşabahçe Cam Sanayii ve Tic. A.Ş.	0.61
Anadolu Cam Sanayii A.Ş.	0.58
<b>Weighted Average Beta*</b>	<b>0.67</b>

The betas of companies used for the beta analysis have been weighted, as the mining companies mainly perform sales to the flat glass, glass packaging and glassware companies within the Group.

Source: Management, PwC Analysis

## Beta (13/13)

### SISE

#### Camiş Ambalaj Sanayii A.Ş.

Company	Country	Equity Beta	Market CAP (USD million)	5 year average debt / equity	Tax Rate	Asset Beta
WestRock Company	USA	1.46	65,934	69%	21%	0.94
Smurfit Kappa Group plc	Ireland	1.06	54,178	61%	13%	0.69
Mayr-Melnhof Karton AG	Austria	0.63	15,973	13%	25%	0.57
Xiamen Hexing Packaging Printing Co., Ltd.	China	0.82	4,018	28%	25%	0.68
Zhejiang Jingxing Paper Joint Stock Co., Ltd.	China	1.09	3,172	31%	25%	0.89
Tailim Packaging Co., Ltd.	South Korea	0.61	1,507	86%	24%	0.37
Kartonsan Karton Sanayi ve Ticaret A.Ş.	Turkey	0.74	1,106	2%	20%	0.73
Mondi Tire Kutsan Kagit ve Ambalaj Sanayi A.Ş.	Turkey	0.97	828	62%	20%	0.65
Dynapac Co., Ltd.	Japan	0.66	799	19%	31%	0.58
Sambo Corrugated Board Co., Ltd.	South Korea	0.90	682	98%	24%	0.52
Olmuksan International Paper Ambalaj Sanayi ve Ticaret A.Ş.	Turkey	0.95	509	38%	20%	0.73
Korea Export Packaging Industrial Co.,Ltd	South Korea	0.85	408	31%	24%	0.69
Daelim Paper Co.,Ltd.	South Korea	1.12	291	92%	24%	0.66
Hop Fung Group Holdings Limited	Hong Kong	1.31	240	44%	17%	0.96
Bien Hoa Packaging Company	Vietnam	0.45	220	40%	22%	0.34
Kaplamin Ambalaj Sanayi ve Ticaret A.Ş.	Turkey	1.00	111	71%	20%	0.64
Shree Ajit Pulp and Paper Limited	India	0.90	74	57%	35%	0.66
Worth Peripherals Limited	India	0.84	66	8%	35%	0.80
<b>Average</b>		<b>0.91</b>		<b>47%</b>		<b>0.67</b>

\*Market CAP is shown based on the year-end data.

Source: Management, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital Calculation Method

Parameter	Calculation	Details
Risk Free Rate (RFR)	a	The RFR estimation method used has been explained in detail in the following pages.
Asset Beta	b	Calculated by analyzing the comparable companies (Equity betas have been unlevered to asset betas using the Miller-Modigliani formula : Asset Beta = Equity Beta / (1 + D/E*(1-tax)))
Debt/Equity Ratio	c	D/E ratios of comparable companies are taken into account
Target Gearing	$d=(1/(1+1/c))$	Gearing: Debt/(Debt+Equity)
Equity Beta	$e=b*(1+c*(1-j))$	Equity Beta: Asset Beta x (1+D/E x (1 - Corporate tax Rate))
Equity Market Risk Premium (EMRP)	f	The historical difference between average returns on equity and average global returns on risk-free securities is taken into consideration.
Business Risk Premium	g	An additional risk premium has been applied to the companies, if applicable. If the Business Risk Premium has been applied, the reason has been explained in detail on the company based WACC pages.
<b>Cost of Equity</b>	<b><math>h=a+e*f+g</math></b>	<b>Cost of Equity (CoE): (RfR) + Beta x (EMRP) + Business Risk Premium</b>
Corporate Tax Rate	i	Corporate Income Tax Rate applicable to the relevant company has been taken into consideration.
Debt Premium	J	The difference between the return between the SISE's \$700 m bond, which has been issued on 14 March 2019 and will be redeemed on 14 March 2026 and the average return from the TR Government Bond due on 2026 has been taken into consideration while determining the debt premium. The return from bond issue is distributed among SISE Group based on requirements, and therefore the same debt premium has been applied for the SISE Group companies.
<b>Cost of Debt</b>	<b><math>k=(a+j)*(1-i)</math></b>	<b>Cost of Debt: (RfR + Debt Premium)*(1-tax rate)</b>
<b>WACC</b>	<b><math>l= k*d+h*(1-d)</math></b>	<b>WACC: [(Cost of Equity * (1-Debt/(Debt + Equity) Ratio)] + [Cost of Debt * (Debt/(Debt + Equity) Ratio)]</b>

Source: PwC Analysis

## Weighted Average Cost of Capital

### RfR Estimation Method (1/2)

A changing RfR is considered in WACC calculation, leading to a changing WACC rate that is applied to the free cash flows under Income Approach.

#### «Indirect» Estimation Method



Results– Country/Region Risk Premiums & Risk Free Return Bases

Country/Region	2020	2021	2022	2023	2024	2025
<b>Turkey</b>	<b>4.7%</b>	<b>3.6%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.2%</b>
Russia	1.8%	1.8%	1.7%	1.7%	1.7%	1.7%
Italy	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
<b>India</b>	<b>2.4%</b>	<b>1.8%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>
<b>Egypt</b>	<b>5.3%</b>	<b>4.4%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>
China	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
North and West Europe	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Europe - Other	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
<b>CIS</b>	<b>3.6%</b>	<b>3.2%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>2.9%</b>
North America	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Risk Free Return Base</b>	<b>1.4%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>2.8%</b>

\*When the first quarter of the year data for the highlighted countries/regions has been analysed, it has been observed that the country/region risk premiums have increased in comparison to the average historic rates. It is estimated that the increased risk premium in 2020 in relation to these countries/regions have been caused by the decreased risk free return base in 2020. Due to the fact that data for other countries/regions has been consistent with other years, it has been assumed that the risk premium will stay constant between 2020- 2022.

#### Calculation Method

RFRs have been estimated by combining three components, as shown on the adjacent graph. The methods utilised while estimating the Risk Free Return Base and Country Risk Premium are discussed below:

**1 Risk Free Return:** The basis for risk free return has been taken as the 30 year US\$ denominated US Treasury Bond return. When the aforementioned return has been determined, the actual returns for March and April 2020 has been taken into consideration and the 2020 expected return has been estimated. It is predicted that the 2021 and 2022 yearly return rate will increase in line with \$ inflation, and will reach the average level of return between 2017 and 2019 (2.8%) in 2022.

**2 Country/Region Risk Premium:** The countries to which the Group Companies perform sales to, have been classified under groups based on their size and economic similarities while some of the countries have been considered separately when assigning a country risk Premium.

The 10 year US\$ denominated CDS rate of the relevant countries have been compared with the 10 year US Treasury CDS rates, and the difference between the two has been used as a determinant of the relevant country risk premium. It has been estimated that the country risk premiums in 2020 will decrease in 2021 due to the improvements in economic circumstances and decreasing risk, and will eventually reach the average historic CRP level observed during 2017-2019 in 2022.

Source: PwC Analysis, Company Management, Capital IQ, Bloomberg

## Weighted Average Cost of Capital

### RFR Estimation Method (2/2)

*It has been estimated that the RFR and WACC will be constant in the terminal period and will be in line with the estimates made for the final projection period.*

#### Calculation Method (cont'd)

Countries with volatile CRPs and countries with relatively stable CRPs have been identified and this structural difference was reflected when calculating the RfR.

##### Constant Risk Premium Countries/Regions

<b>RFR</b>	<b>=</b>	<div><div>Risk Free Return Base Constant</div><div>+</div><div>Country/ Region Risk Premium</div><div>+</div><div>Inflation Difference Constant</div></div>					
<b>Example</b>							
<b>Italy - EUR</b>							
Risk Free Return Base	2020	2021	2022	2023	2024	2025	TV
Country Risk Premium	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
Inflation Difference	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>RFR</b>	<b>4.6%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>4.7%</b>

In the long-run, the risk free rate is expected to converge to 2.8% in line with the historical trends. For countries / regions that are classified under the constant risk premium group, 2.8% has been utilized as the risk free return basis. CRPs have been observed to be relatively stable for these countries/regions in 2020 and in historic periods. When considering the overall decrease in real interest rates in 2020 and the fact that the CRP of these countries have stayed relatively stable, this would lead to a lower RfR for these countries/regions. *However, it is understood that the cost of equity is not expected to decrease in the near future. Accordingly, the long-term stabilized RfR has been applied in such cases.*

##### Changing Risk Premium Countries/Regions

RFR

=

Risk Free Return Base

Changing

+

Country/Region Risk Premium

+

Inflation Difference

Changing

Example

Turkey - TL

2020

2021

2022

2023

2024

2025

TV

Risk Free Return Base

Country Risk Premium

Inflation Difference

RFR

%1.4

%2.5

%2.8

%2.8

%2.8

%2.8

%2.8

%4.7

%3.6

%3.2

%3.2

%3.2

%3.2

%3.2

%3.2

%11.4

%9.8

%9.3

%8.5

%7.5

%6.5

%6.0

%18.3

%16.6

%16.0

%15.2

%14.1

%13.1

%12.5

It is understood that some countries/regions experienced an increasing risk premium as a reaction to the risk premium rate base change. The economic developments in the beginning of 2020 and the effect of Covid-19 pandemic have increased the demand for the US Treasury Bonds, which are the determinants of the risk-free rate.

*The inflation expectations have increased in relation to the risk premium and local currencies due to the investor interest loss in the developing countries during the aforementioned period.*

*Aside is an example for a company that has all of its operations in Turkey. A constant RfR of 13-14% should be applied to arrive at a similar enterprise value as opposed to a changing RfR.*

Source: PwC Analysis, Company Management, Capital IQ, Bloomberg

# Weighted Average Cost of Capital

## TRKCM (1/6)

Parameter	Trakya Cam Sanayii A.Ş. - TR							Trakya Glass Bulgaria EAD - TB						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	17.8%	16.1%	15.5%	14.7%	13.7%	12.7%	12.1%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Asset Beta	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Debt/Equity Ratio	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%
Target Gearing	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%
Equity Beta	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	24.4%	22.6%	22.1%	21.3%	20.3%	19.2%	18.7%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	14.3%	13.2%	12.8%	12.2%	11.4%	10.5%	10.1%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
WACC	21.5%	19.9%	19.4%	18.7%	17.7%	16.7%	16.2%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%

Source: Bloomberg, Capital IQ, PwC Analysis

# Weighted Average Cost of Capital TRKCM (2/6)

Parameter	HNG Float Glass Limited - HD							Trakya Glass Rus AO -RD						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%
Asset Beta	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Debt/Equity Ratio	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%
Target Gearing	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%
Equity Beta	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%
Corporate Tax Rate	25.2%	25.2%	25.2%	25.2%	25.2%	25.2%	25.2%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
WACC	10.7%	10.7%	10.7%	10.7%	10.7%	10.7%	10.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital TRKCM (3/6)

Parameter	Sisecam Flat Glass South Italy SRL - FI							Şişecam Flat Glass Italy S.R.L - SI						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Asset Beta	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Debt/Equity Ratio	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%	40.4%
Target Gearing	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%	28.8%
Equity Beta	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium*	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
Corporate Tax Rate	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
WACC	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%

\*Business Risk Premium: FI is the only firm within the Architectural Glass Group that has not started operations as at the end of 2019. Therefore, the risk premium utilised in the WACC rate has been estimated accordingly. An additional risk premium has been taken into consideration in the determination of the WACC rate due to the fact that the assumptions of the business plan cannot be compared with the realised data.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### TRKCM (4/6)

Parameter	Şişecam Otomotiv A.Ş. - SO							Automotive Glass Alliance Rus AO - RO						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	14.4%	13.7%	13.5%	12.7%	11.6%	10.6%	10.1%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
Asset Beta	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Debt/Equity Ratio	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%
Target Gearing	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%
Equity Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	20.8%	20.2%	20.0%	19.2%	18.1%	17.1%	16.6%	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	11.6%	11.3%	11.2%	10.5%	9.7%	8.9%	8.5%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%
WACC	18.8%	18.2%	18.0%	17.2%	16.2%	15.2%	14.7%	12.2%	12.2%	12.2%	12.2%	12.2%	12.2%	12.2%

Source: Bloomberg, Capital IQ, PwC Analysis

# Weighted Average Cost of Capital

## TRKCM (5/6)

Parameter	Glass Corp S.A. - GO							Şişecam Automotive Bulgaria EAD - BO						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
Asset Beta	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Debt/Equity Ratio	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%
Target Gearing	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%
Equity Beta	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%
Corporate Tax Rate	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
WACC	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### TRKCM (6/6)

Parameter	Richard Fritz Holding GmbH - FO						
	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Asset Beta	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Debt/Equity Ratio	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%	28.9%
Target Gearing	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%	22.4%
Equity Beta	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cost of Equity	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%
Corporate Tax Rate	27.4%	27.4%	27.4%	27.4%	27.4%	27.4%	27.4%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
WACC	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%

\*Business Risk Premium: One of the two production plants of FO in Germany has been terminated along with the transformation project that has started in 2019. Additionally, actions towards the reduction of the fixed operational costs have been performed. Therefore, an additional risk premium has been considered in relation to the transformation project.

Source: Bloomberg, Capital IQ, PwC Analysis

# Weighted Average Cost of Capital ANACM (1/2)

Parameter	Anadolu Cam Sanayii A.Ş. - AC							OOO Ruscam Glass Packaging Holding - RH						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	16.8%	15.4%	15.0%	14.3%	13.3%	12.2%	11.7%	6.7%	6.6%	6.5%	6.5%	6.5%	6.5%	6.5%
Asset Beta	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Debt/Equity Ratio	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%
Target Gearing	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%
Equity Beta	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	22.8%	21.5%	21.1%	20.4%	19.4%	18.3%	17.8%	12.8%	12.7%	12.6%	12.6%	12.6%	12.6%	12.6%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	13.5%	12.7%	12.4%	11.9%	11.0%	10.2%	9.8%	5.8%	5.7%	5.6%	5.6%	5.6%	5.6%	5.6%
WACC	18.7%	17.7%	17.3%	16.7%	15.7%	14.8%	14.3%	9.8%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital ANACM (2/2)

Parameter	JSC Mina - MN							ANACM - Yatırım Projesi						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Asset Beta	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Debt/Equity Ratio	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%
Target Gearing	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%
Equity Beta	1.02	1.02	1.02	1.02	1.02	1.02	1.02	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Cost of Equity	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Corporate Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Cost of Debt	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
WACC	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%

\*Business Risk Premium: It appears that the agreement related to the investment project is in the negotiation process at the date of the report. Even if ANACM Management has not reached a certain agreement, it has high expectations of the investment project materialisation. For that reason, the investment project has been taken into consideration in the valuation works of ANACM, however an additional risk premium has been applied to the WACC rate to reflect the uncertainties.

\*\*Debt premium: According to **Management's information**, an approximate cost of debt has been taken into a consideration as one of the elements of RFR while estimating the WACC for the investment project.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### PASAB (1/6)

Parameter	Paşabahçe Cam Sanayii ve Tic. A.Ş. - PB							Denizli Cam Sanayii ve Tic. A.Ş. - DC						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	16.3%	15.2%	14.8%	14.0%	12.9%	11.9%	11.4%	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%
Asset Beta	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Debt/Equity Ratio	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Target Gearing	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%
Equity Beta	0.78	0.79	0.79	0.79	0.79	0.79	0.79	0.78	0.79	0.79	0.79	0.79	0.79	0.79
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	21.4%	20.3%	19.9%	19.1%	18.1%	17.0%	16.5%	23.4%	21.7%	21.1%	20.3%	19.2%	18.2%	17.6%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	13.1%	12.5%	12.3%	11.6%	10.8%	9.9%	9.5%	14.7%	13.6%	13.2%	12.5%	11.7%	10.8%	10.4%
WACC	19.2%	18.2%	17.9%	17.1%	16.1%	15.1%	14.6%	21.0%	19.5%	19.0%	18.2%	17.2%	16.2%	15.7%

Source: Bloomberg, Capital IQ, PwC Analysis

# Weighted Average Cost of Capital PASAB (2/6)

Parameter	Paşabahçe Bulgaria EAD - BP							OOO Posuda - PR						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	4.0%	3.8%	3.7%	3.7%	3.7%	3.7%	3.7%	7.2%	7.1%	7.0%	7.0%	7.0%	7.0%	7.0%
Asset Beta	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Debt/Equity Ratio	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Target Gearing	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%
Equity Beta	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	9.2%	9.1%	9.0%	9.0%	9.0%	9.0%	9.0%	12.3%	12.2%	12.1%	12.1%	12.1%	12.1%	12.1%
Corporate Tax Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	4.0%	3.9%	3.8%	3.8%	3.8%	3.8%	3.8%	6.2%	6.1%	6.0%	6.0%	6.0%	6.0%	6.0%
WACC	7.8%	7.7%	7.6%	7.6%	7.6%	7.6%	7.6%	10.7%	10.6%	10.4%	10.4%	10.4%	10.4%	10.4%

Source: Bloomberg, Capital IQ, PwC Analysis

Weighted Average Cost of Capital  
PASAB (3/6)

Parameter	Paşabahçe Egypt Glass Manufacturing S.A.E. - EG							Paşabahçe Glass GmbH						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	6.3%	5.6%	5.2%	5.2%	5.2%	5.2%	5.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Asset Beta	0.61	0.61	0.61	0.61	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Debt/Equity Ratio	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	27.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	0.78	0.78	0.78	0.78	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	11.4%	10.7%	10.3%	10.3%	10.3%	10.3%	10.3%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
Corporate Tax Rate	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	29.8%	29.8%	29.8%	29.8%	29.8%	29.8%	29.8%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	5.3%	4.7%	4.4%	4.4%	4.4%	4.4%	4.4%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
WACC	9.7%	9.1%	8.7%	8.7%	8.7%	8.7%	8.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital PASAB (4/6)

Parameter	Paşabahçe Mağazaları A.Ş. - PS							Paşabahçe SRL - PI						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
Asset Beta	0.61	0.61	0.61	0.61	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Debt/Equity Ratio	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	0.78	0.78	0.78	0.78	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cost of Equity	24.4%	22.6%	22.1%	21.3%	20.2%	19.1%	18.6%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	14.7%	13.6%	13.2%	12.5%	11.7%	10.8%	10.4%	3.7%	3.7%	3.8%	3.8%	3.8%	3.8%	3.8%
WACC	21.7%	20.2%	19.7%	18.9%	17.9%	16.9%	16.4%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%	14.2%

\*Business Risk Premium: 1% of risk premium has been taken into consideration due to the new franchises and store openings planned during the projection period.

\*Business Risk Premium: An additional risk premium of 3.0% has been taken into consideration due to the fact that PI is a trading company and is largely connected to the producer companies.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### PASAB (5/6)

Parametre	Paşabahçe (Shangai) Trading Co. Ltd. -PT							Paşabahçe USA Inc.						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
Asset Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Debt/Equity Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Cost of Equity	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Corporate Tax Rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
WACC	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	14.1%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%

\*Business Risk Premium: An additional risk premium of 3.0% has been taken into consideration due to the fact that PT is a trading company and is largely connected to the producer companies.

\*Business Risk Premium: An additional risk premium of 1.0% has been taken into consideration due to the fact that PA is a trading company and is largely connected to the producer companies.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### PASAB (6/6)

Parametre	Paşabahçe Spain SL						
	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	3.9%	3.7%	3.5%	3.5%	3.5%	3.5%	3.5%
Asset Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Debt/Equity Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	10.4%	10.2%	10.0%	10.0%	10.0%	10.0%	10.0%
Corporate Tax Rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.3%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%
WACC	10.4%	10.2%	10.0%	10.0%	10.0%	10.0%	10.0%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SODA (1/5)

Parameter	Soda Sanayii A.Ş. - SS							Şişecam Elyaf Sanayii A.Ş. - ES						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	5.9%	5.7%	5.5%	5.5%	5.5%	5.5%	5.5%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%
Asset Beta	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Debt/Equity Ratio	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%	41.8%	41.8%	41.8%	41.8%	41.8%	41.8%	41.8%
Target Gearing	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	29.5%	29.5%	29.5%	29.5%	29.5%	29.5%	29.5%
Equity Beta	1.03	1.04	1.04	1.04	1.04	1.04	1.04	1.08	1.09	1.09	1.09	1.09	1.09	1.09
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Cost of Equity	12.6%	12.5%	12.2%	12.2%	12.2%	12.2%	12.2%	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	5.0%	4.9%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
WACC	10.0%	9.9%	9.7%	9.7%	9.7%	9.7%	9.7%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%

\*Business Risk Premium: It appears that ES has higher risk in comparison to the other companies in the projection due to the fact that ES has recently started its operations in 2019. Therefore, an additional 1.0% of business risk premium has been taken into consideration.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SODA (2/5)

Parameter	Oxyvit Kimya Sanayii Ve Tic. A.Ş. - OX							Şişecam Bulgaria EOOD - BL						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	4.7%	4.6%	4.5%	4.5%	4.5%	4.5%	4.5%	5.3%	4.8%	4.7%	4.7%	4.7%	4.7%	4.7%
Asset Beta	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Debt/Equity Ratio	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%
Target Gearing	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Equity Beta	0.83	0.84	0.84	0.84	0.84	0.84	0.84	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cost of Equity	10.1%	10.0%	9.9%	9.9%	9.9%	9.9%	9.9%	15.1%	14.6%	14.4%	14.4%	14.4%	14.4%	14.4%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	4.0%	4.1%	4.0%	4.0%	4.0%	4.0%	4.0%	5.2%	4.8%	4.7%	4.7%	4.7%	4.7%	4.7%
WACC	9.1%	9.1%	9.0%	9.0%	9.0%	9.0%	9.0%	11.5%	11.0%	10.8%	10.8%	10.8%	10.8%	10.8%

\*Business Risk Premium: An additional business risk premium of 3.0% has been taken into consideration since the Company does not have own production and depends on BL's production volume.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SODA (3/5)

Parameter	Cromital S.p.A - CO							Şişecam Soda Lukavac D.O.O. - SL						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	7.2%	7.1%	7.0%	7.0%	7.0%	7.0%	7.0%
Asset Beta	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Debt/Equity Ratio	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%
Target Gearing	27.7%	27.7%	27.7%	27.7%	27.7%	27.7%	27.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Equity Beta	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	14.0%	13.8%	13.7%	13.7%	13.7%	13.7%	13.7%
Corporate Tax Rate	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	6.9%	6.8%	6.7%	6.7%	6.7%	6.7%	6.7%
WACC	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	11.4%	11.3%	11.2%	11.2%	11.2%	11.2%	11.2%

\*Business Risk Premium: The projected risk is higher in comparison to other companies due to the risks associated with the fact that CO has started new operations in 2020. Therefore, an additional business risk premium of 5.0% has been included.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SODA (4/5)

Parameter	Şişecam Trading Co. - HG							Solvay Şişecam Holding AG - SH						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	5.3%	4.8%	4.7%	4.7%	4.7%	4.7%	4.7%
Asset Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Debt/Equity Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%
Target Gearing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Equity Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cost of Equity	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	15.1%	14.6%	14.4%	14.4%	14.4%	14.4%	14.4%
Corporate Tax Rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	5.2%	4.8%	4.7%	4.7%	4.7%	4.7%	4.7%
WACC	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	11.5%	11.0%	10.8%	10.8%	10.8%	10.8%	10.8%

\*Business risk premium: An additional 5.0% of risk premium has been taken into consideration due to the fact **that ST is a trading company and its' sales and profit are mostly related to SS.**

\*Business risk premium: An additional risk premium of 3.0% has been taken into consideration for SH, considering the fact that SH does not have a managerial control over Solvay Holding and the uncertainty in relation to the future dividend amounts.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SODA (5/5)

Parameter	Pacific Soda LLC - UP						
	2020	2021	2022	2023	2024	2025	2085
Risk Free Rate	1.4%	2.5%	2.8%	2.8%	2.8%	2.8%	2.8%
Asset Beta	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Debt/Equity Ratio	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%	58.1%
Target Gearing	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Equity Beta	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Equity Market Risk Premium	7.4%	6.3%	6.0%	6.0%	6.0%	6.0%	6.0%
Business Risk Premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Cost of Equity	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%
Corporate Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Debt Premium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.5%
Cost of Debt	3.5%	4.3%	4.6%	4.6%	4.6%	4.6%	2.6%
WACC	10.0%	10.3%	10.4%	10.4%	10.4%	10.4%	9.7%

\*Business Risk Premium: An additional business risk premium of 5.0% has been taken into consideration when calculating WACC for Pacific Soda, since the investment has not started yet and the first income should be gained in 2026 and since there are uncertainties due to the permit process and operations.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SISE (1/6)

Parameter	Şişecam Enerji A.Ş. - SE							Şişecam Çevre Sistemleri A.Ş. - CV						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%
Asset Beta								0.58	0.58	0.58	0.58	0.58	0.58	0.58
Debt/Equity Ratio								77.1%	77.1%	77.1%	77.1%	77.1%	77.1%	77.1%
Target Gearing								43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%
Equity Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	24.8%	23.1%	22.5%	21.7%	20.6%	19.6%	19.0%	22.8%	21.5%	21.1%	20.4%	19.4%	18.3%	17.8%
Corporate Tax Rate								22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium								0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt								13.5%	12.7%	12.4%	11.9%	11.0%	10.2%	9.8%
WACC								18.7%	17.7%	17.3%	16.7%	15.7%	14.8%	14.3%

\*asset beta: SE does not have any financial debt in relation to its' operations. Also, publicly listed companies with similar operations have not been determined for the beta analysis. As the Company does not need high paid-in capital and as it operates in a highly competitive business segment by trading low income electricity and gas, it has been decided that the asset beta should at least reflect the market risk level. For that reason, the Company's asset beta has been taken into consideration as 1.00.

In the valuation process of CV, the fact that ANACM is the only customer of CV has been taken into consideration, and therefore the WACC estimated for ANACM has also been used for CV.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital SISE (2/6)

Parameter	Türkiye Şişe ve Cam Fabrikaları A.Ş. - SC							Şişecam Dış Ticaret A.Ş. - DT						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	16.9%	15.5%	15.0%	14.2%	13.2%	12.1%	11.6%	15.0%	14.4%	14.2%	13.4%	12.4%	11.3%	10.8%
Asset Beta														
Debt/Equity Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.97	0.97	0.97	0.97	0.97	0.97
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	23.3%	21.9%	21.4%	20.7%	19.6%	18.6%	18.1%	21.2%	20.7%	20.5%	19.7%	18.7%	17.6%	17.1%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	13.6%	12.8%	12.4%	11.8%	10.9%	10.1%	9.7%	12.1%	11.9%	11.7%	11.1%	10.3%	9.4%	9.0%
WACC	23.3%	21.9%	21.4%	20.7%	19.6%	18.6%	18.1%	21.2%	20.7%	20.5%	19.7%	18.7%	17.6%	17.1%

\*RFR and asset beta: When the RFR estimation has been made for SC, an annually calculated weighted average country risk premium has been taken into consideration by taking the country risk premiums estimated for the Companies that gain the similar royalty incomes to SC and which are the leaders of the main business segments in proportion to the royalty income.  
asset beta estimation has also been made by taking the relevant **companies' beta estimations and royalty incomes into consideration.**

\*RFR and asset beta: When RFR estimation has been made for DT, the calculated weighted average risk premium data has been utilised by taking the created trading volume by the Group Companies on DT, annual monetary value of sales, and country risk premiums into consideration. asset beta has also been estimated by using the same method.

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital SISE (3/6)

Parameter	Şişecam Sigorta Aracılık Hizmetleri A.Ş. - SG							Camiş Elektrik Üretim A.Ş. - CA					
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	TV
Risk Free Rate	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%
Asset Beta								0.49	0.49	0.49	0.49	0.49	0.49
Debt/Equity Ratio								0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Gearing								0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity Beta	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.49	0.49	0.49	0.49	0.49	0.49
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	23.9%	22.2%	21.6%	20.8%	19.7%	18.7%	18.1%	21.5%	19.7%	19.2%	18.4%	17.3%	16.2%
Corporate Tax Rate								22.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium								0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt								14.7%	13.6%	13.2%	12.5%	11.7%	10.8%
WACC								21.5%	19.7%	19.2%	18.4%	17.3%	16.2%

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital

### SISE (4/6)

Parameter	Camiş Madencilik A.Ş. - MD							Madencilik Sanayii ve Tic. A.Ş. - MT						
	2020	2021	2022	2023	2024	2025	2080	2020	2021	2022	2023	2024	2025	2080
Risk Free Rate	17.7%	16.2%	15.7%	14.8%	13.8%	12.7%	12.2%	18.3%	16.6%	16.0%	15.2%	14.1%	13.1%	12.5%
Asset Beta	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Debt/Equity Ratio	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%
Target Gearing	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Equity Beta	0.96	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.97	0.97	0.97	0.97	0.97	0.97
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	23.9%	22.5%	22.0%	21.1%	20.1%	19.0%	18.5%	24.5%	22.9%	22.3%	21.5%	20.4%	19.4%	18.8%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	14.2%	13.3%	12.9%	12.3%	11.4%	10.6%	10.1%	14.7%	13.6%	13.2%	12.5%	11.7%	10.8%	10.4%
WACC	20.5%	19.2%	18.8%	18.0%	17.0%	16.0%	15.5%	21.0%	19.6%	19.1%	18.3%	17.3%	16.3%	15.9%

Source: Bloomberg, Capital IQ, PwC Analysis

# Weighted Average Cost of Capital SISE (5/6)

Parameter	Camiş Egypt Mining Ltd. Co. - ME							Rudnik Krencjaka Vijenac D.O.O. - VM						
	2020	2021	2022	2023	2024	2025	TV	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%
Asset Beta	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Debt/Equity Ratio	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%	54.7%
Target Gearing	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Equity Beta	0.96	0.96	0.96	0.96	0.96	0.96	0.96	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	12.4%	12.4%	12.4%	12.4%	12.4%	12.4%	12.4%	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
Corporate Tax Rate	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%							
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%							
Cost of Debt	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%							
WACC	9.9%	9.9%	9.8%	9.8%	9.8%	9.8%	9.8%							

Source: Bloomberg, Capital IQ, PwC Analysis

## Weighted Average Cost of Capital SISE (6/6)

Parameter	Camiş Ambalaj Sanayii A.Ş. - CA						
	2020	2021	2022	2023	2024	2025	TV
Risk Free Rate	17.7%	16.1%	15.6%	14.8%	13.7%	12.7%	12.2%
Asset Beta	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Debt/Equity Ratio	47.2%	47.2%	47.2%	47.2%	47.2%	47.2%	47.2%
Target Gearing	32.1%	32.1%	32.1%	32.1%	32.1%	32.1%	32.1%
Equity Beta	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Equity Market Risk Premium	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Business Risk Premium	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cost of Equity	23.6%	22.1%	21.7%	20.8%	19.8%	18.7%	18.2%
Corporate Tax Rate	22.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Debt Premium	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Cost of Debt	14.2%	13.3%	12.9%	12.2%	11.4%	10.6%	10.1%
WACC	20.6%	19.3%	18.9%	18.1%	17.1%	16.1%	15.6%

Source: Bloomberg, Capital IQ, PwC Analysis

# Glossary

## Glossary (1/6)

### Company Codes

Term	Definition	Term	Definition
AC	Anadolu Cam Sanayii A.Ş.	CY	Çayırova Cam Sanayii A.Ş.
AG	AC Glass Holding B.V.	DC	Denizli Cam Sanayii ve Tic. A.Ş.
AI	Anadolu Cam Investment B.V.	DT	Şişecam Dış Ticaret A.Ş.
BL	Şişecam Bulgaria EOOD	EF	Saint Gobain Glass Egypt S.A.E.
BO	Şişecam Automotive Bulgaria EAD	EG	Paşabahçe Egypt Glass Manufacturing S.A.E.
BP	Paşabahçe Bulgaria EAD	ES	Şişecam Elyaf Sanayii A.Ş.
BS	Balsand B.V.	EU	Camiş Elektrik Üretim A.Ş.
CA	Camiş Ambalaj Sanayii A.Ş.	FK	Richard Fritz Kft.
CE	Cam Elyaf Sanayii A.Ş.	FO	Richard Fritz Holding GmbH
CO	Cromital S.p.A	FP	Richard Fritz Holding Prototype + Spare Parts GmbH
CV	Şişecam Çevre Sistemleri A.Ş.	FS	Richard Fritz Spol S.R.O.

Source: PwC Analysis

## Glossary (2/6)

### Company Codes

Term	Definition	Term	Definition
GO	Glass Corp S.A.	MT	Madencilik Sanayii ve Tic. A.Ş.
HC	Şişecam Chem Investment B.V.	ND	Nude Design İnvestment B.V.
HD	HNG Float Glass Limited	NG	Nude Glass İnvestment B.V.
HF	Şişecam Flat Glass Holding B.V.	OX	Oxyvit Kimya Sanayii Ve Tic. A.Ş.
HG	SC Glass Trading B.V.	PB	Paşabahçe Cam Sanayii ve Tic. A.Ş.
HT	Trakya İnvestment B.V.	PH	Paşabahçe Investment B.V.
II	İstanbul İnvestment B.V.	PI	Paşabahçe SRL
LT	Camiş Limited	PR	OOO Posuda
MD	Camiş Madencilik A.Ş.	PS	Paşabahçe Mağazaları A.Ş.
ME	Camiş Egypt Mining Ltd. Co.	PT	Paşabahçe (Shangai) Trading Co. Ltd.
MN	JSC Mina	RA	Automotive Glass Alliance Rus Trading OOO

Source: PwC Analysis

## Glossary (3/6)

### Company Codes

Term	Definition	Term	Definition
RD	Trakya Glass Rus AO	SL	Şişecam Soda Lukavac D.O.O.
RH	OOO Ruscam Glass Packaging Holding	SO	Şişecam Otomotiv A.Ş.
RM	OOO Ruscam Management Company	SS	Soda Sanayii A.Ş.
RO	Automotive Glass Alliance Rus AO	TB	Trakya Glass Bulgaria EAD
RS	OOO Energosystems	TN	Trakya Yenişehir Cam Sanayii A.Ş.
RT	Trakya Glass Rus Trading OOO	TP	Trakya Polatlı Cam Sanayii A.Ş.
SC	Türkiye Şişe ve Cam Fabrikaları A.Ş.	TR	Trakya Cam Sanayii A.Ş.
SE	Şişecam Enerji A.Ş.	TS	TRSG Glass Holding B.V.
SG	Şişecam Sigorta Aracılık Hizmetleri A.Ş.	UK	CJSC Brewery Pivdenna
SH	Solvay Şişecam Holding AG	UM	Merefa Glass Company Ltd.
SI	Şişecam Flat Glass Italy S.R.L	VM	Rudnik Krecnjaka Vijenac D.O.O.

Source: PwC Analysis

## Glossary (4/6)

Term	Definition	Term	Definition
\$	American Dollar	CBT	Central Bank of Turkey
AIA	Automotive Industry Association	CNY	Chinese Yuan
Avg	Average	Ciner Resources LP	Ciner Group
BCS	Basic Chromium Sulphate	Cogen	Cogeneration Unit
bps	Basis Point	CAGR	Compound Annual Growth Rate
bn	Billion	m3	Cubic Metre
BAM	Bosnia-Herzegovina Mark	DCF	Discounted Cash Flows
BGN	Bulgarian Lev	EBITDA	Earnings before Interest ,Tax, Depreciation and Amortization
B2B	Business to Business	EBT	Earnings before Tax
CUR	Capacity Utilization Rate	EGP	Egyptian Pound
CMB	Capital Market Board	etc.	Et Cetera

Source: PwC Analysis

## Glossary (5/6)

Term	Definition	Term	Definition
EUR	Euro	LTGR	Long Term Growth Rate
EBRD	European Bank for Reconstruction and Development	MA	Market Approach
FY	Fiscal Year	MW	Megawatt
GEL	Georgian Lari	MCF	Mersin Chromium Facility
IA	Income Approach	MSF	Mersin Soda Facility
Inc	Incorporated Company	m	Metre
CPA	Independent Accountant and Financial Advisor	m	Million
IFC	International Finance Corporation	MMBtu	Million BTU (British Thermal Unit)
IMF	International Monetary Fund	NVY	Net Asset Approach
INR	Indian Rupee	NOTW	Neutralization of Old Technology Wastes
IMF WEO	IMF World Economic Outlook	OEM	Original Equipment Manufacturer

Source: PwC Analysis

Glossary (6/6)

Term	Definition	Term	Definition
PDP	Public Disclosure Platform		
POA	Public Oversight Accounting and Auditing Standards Authority		
R&D	Research and Development		
RON	Romanian Leu		
RUB	Ruble		
m2	Square Meter		
TAS	Turkish Accounting Standards		
TFRS	Turkish Financial Reporting Standards		
TL	Turkish Lira		
UAH	Ukraine Hryvnia		
WACC	Weighted Average Cost of Capital		

Source: PwC Analysis



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