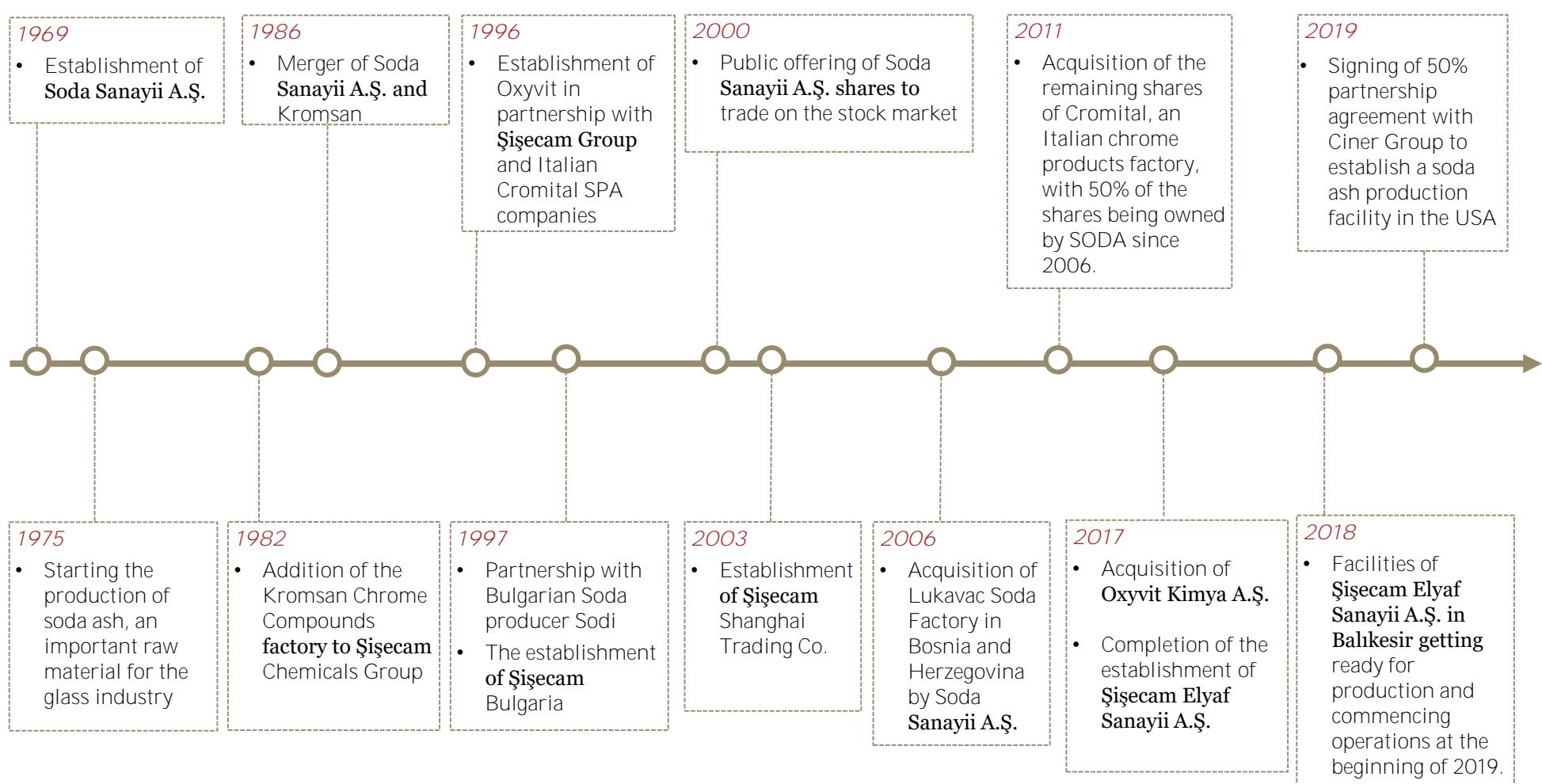


SODA

Important Historical Milestones



SODA

Fields of Activity and Products

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.

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.

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.



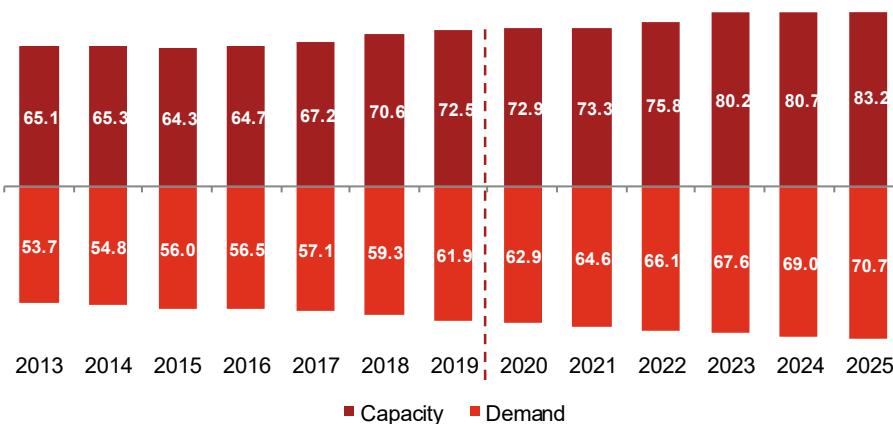
*Europe's
only
Vitamin K3
producer*

Source: Company Management

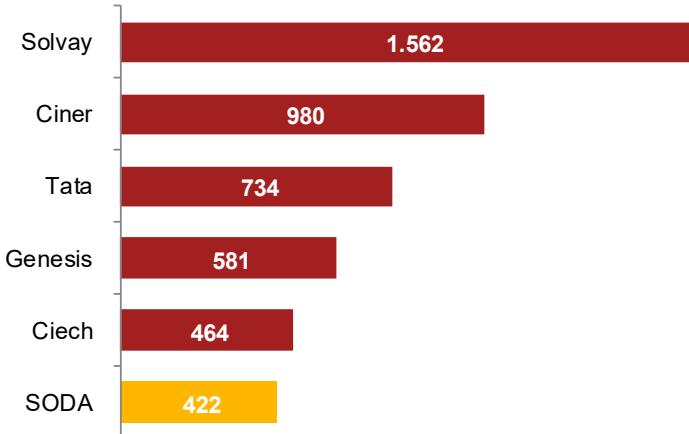
Global Soda Market

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.

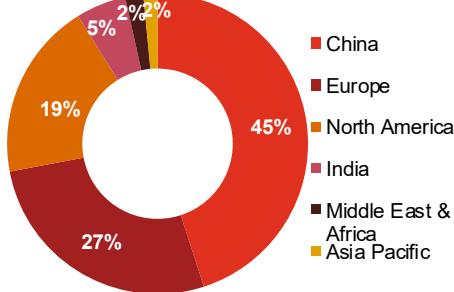
Global Soda Ash Capacity and Demand (m ton)



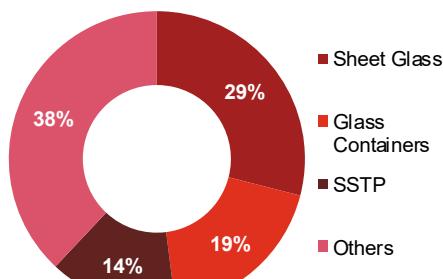
2018 Soda Revenues (m EUR)



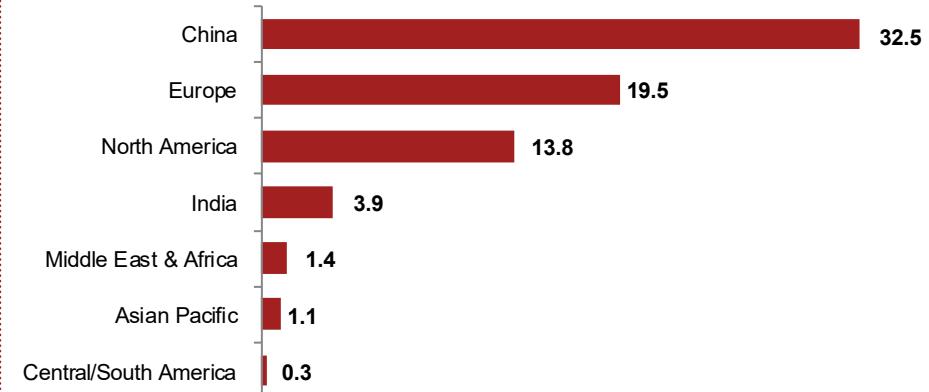
Regional Capacity Distribution, 2019



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					

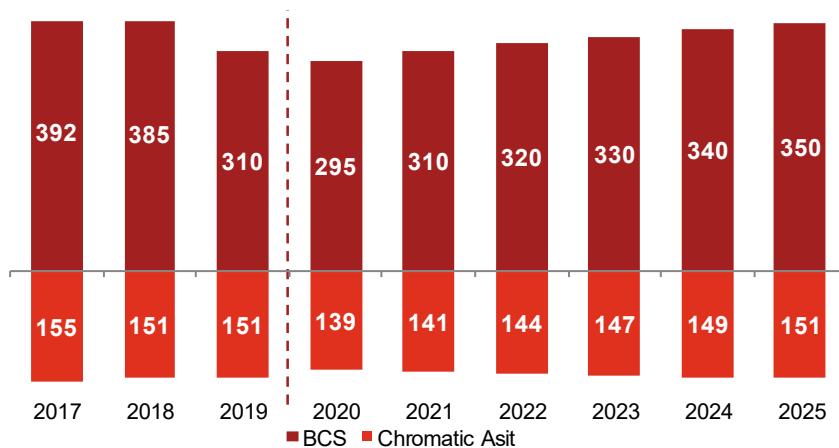
* Figures represent soda business.

Source: Company Management

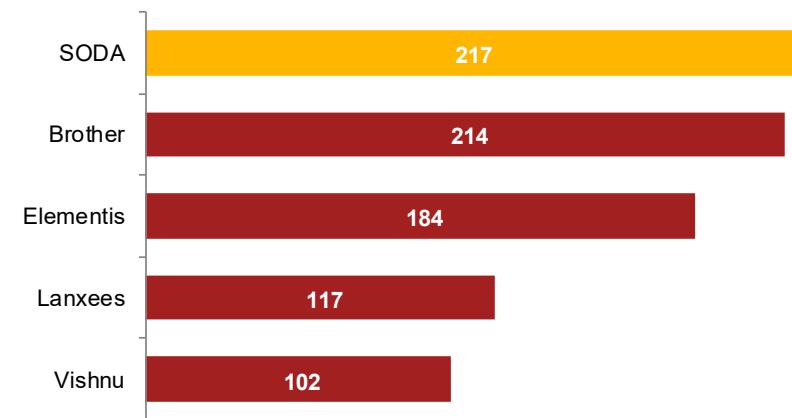
Global Chrome Market

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.

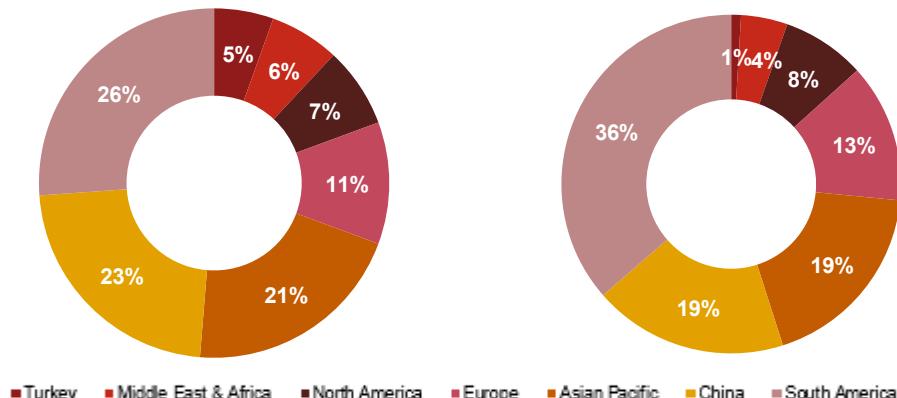
BCS and Chromic Acid Market Sizes (k tons)



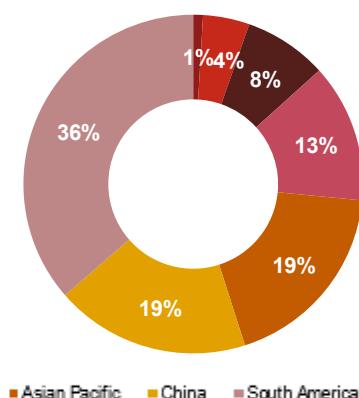
Chrome Revenue of Regional Competitors 2018 (m \$)



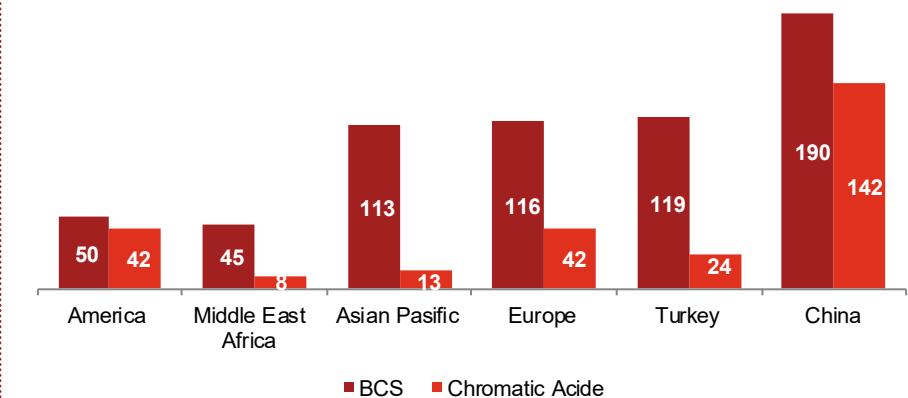
BCS Regional Demand Distribution, 2019



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 ¹	Brother ²	Elementis	Lanxess ⁴	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 ³	2	2

¹ Figures represent Chrome business

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

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

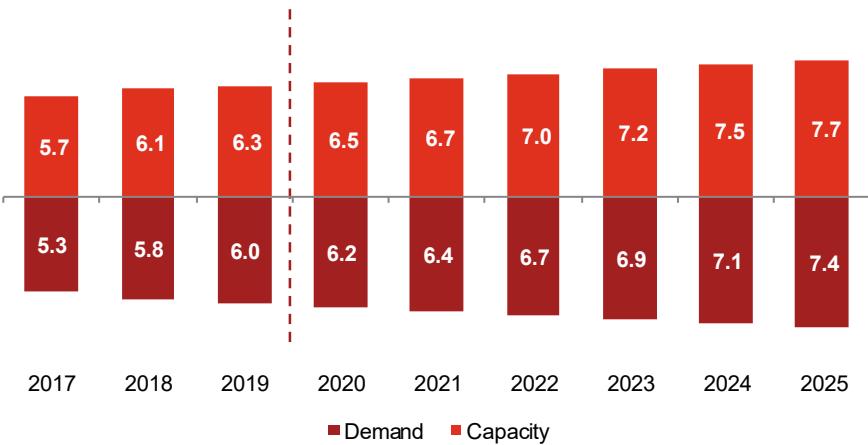
⁴ Figures represent the financial results of the "Performance Chemicals" segment.

Source: Company Management

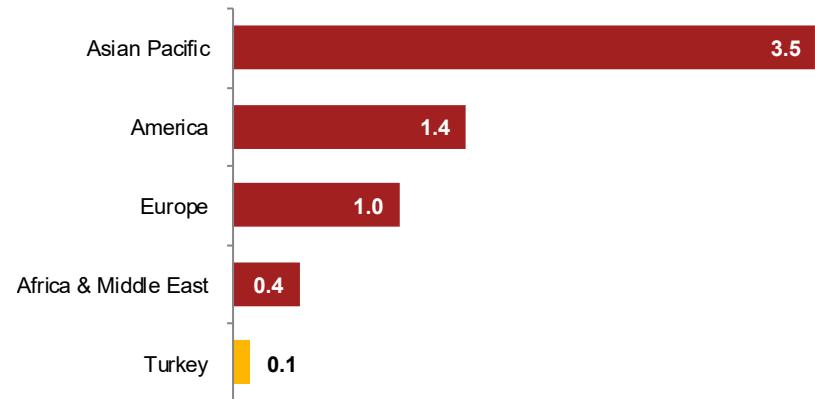
Global Fiber Glass Market

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.

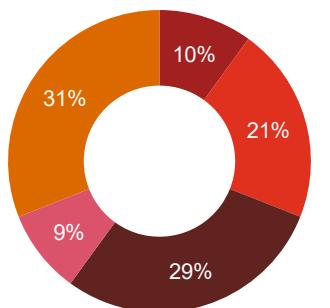
Glass Fiber Capacity and Demand (m ton)



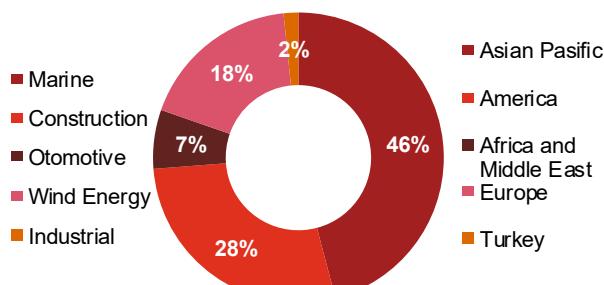
Regional Capacity Distribution - 2019 (m ton)



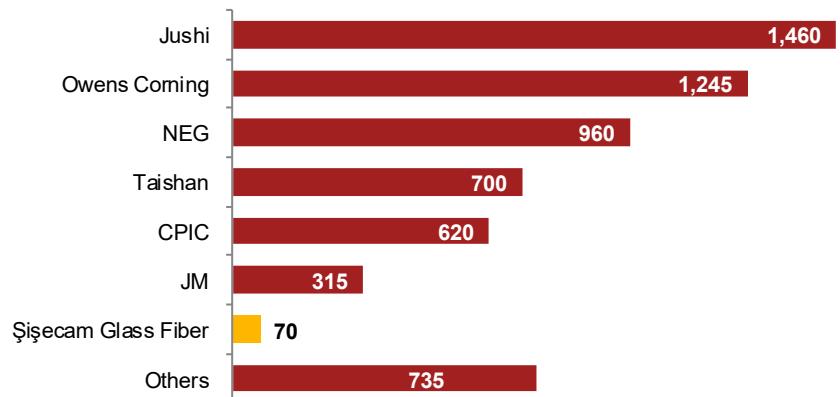
Industrial Distribution, 2019



Regional Capacity Distribution, 2019



Regional Competitor Capacity (k ton)



Source: Company Management

SODA

Historical Financial Statements

(1/3)

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
Current Assets	1,631	2,612	4,053
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
Long Term Assets	2,250	3,757	4,574
Total Assets	3,881	6,369	8,627
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
Short-Term Liabilities	379	1,087	1,525
Long Term Borrowings	265	321	1,309
Other Payables	2	1	1
Long Term Expenses	33	38	43
Deferred Tax	10	53	8
Long-Term Liabilities	309	413	1,361
Equity	3,192	4,869	5,742
Total Liabilities and Shareholders Equity	3,881	6,369	8,627

Source: Company Management

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.

- 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.

SODA

Historical Financial Statements

(2/3)

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
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	Prepaid Expenses	17	73	30
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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.

- 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.

SODA

Historical Financial Statements

(3/3)

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)
	Gross Profit	854	1,316	1,432
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
	EBITDA	644	1,067	1,073
	(-) Depreciation	(136)	(151)	(204)
	Gross Real Operating Profit/Loss	508	917	868
	Income from Investment Activities	76	448	214
	Expense from Investment Activities	(34)	(201)	(68)
	Financing Income	270	734	594
	Financing Expense	(182)	(503)	(606)
	Profit Before Tax	639	1,395	1,002
	Period Tax (Expense) Income	(57)	(229)	(132)
	Deferred Tax (Expense) Income	(12)	318	164
	Profit for the Period (Loss)	570	1,485	1,034

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.

- 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.

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
Income Approach 	TL 12,074 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.
Market Approach 	TL 11,158 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.
Net Asset Approach 	TL 5,497 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.
Stock Market Value 	TL 6,294 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.

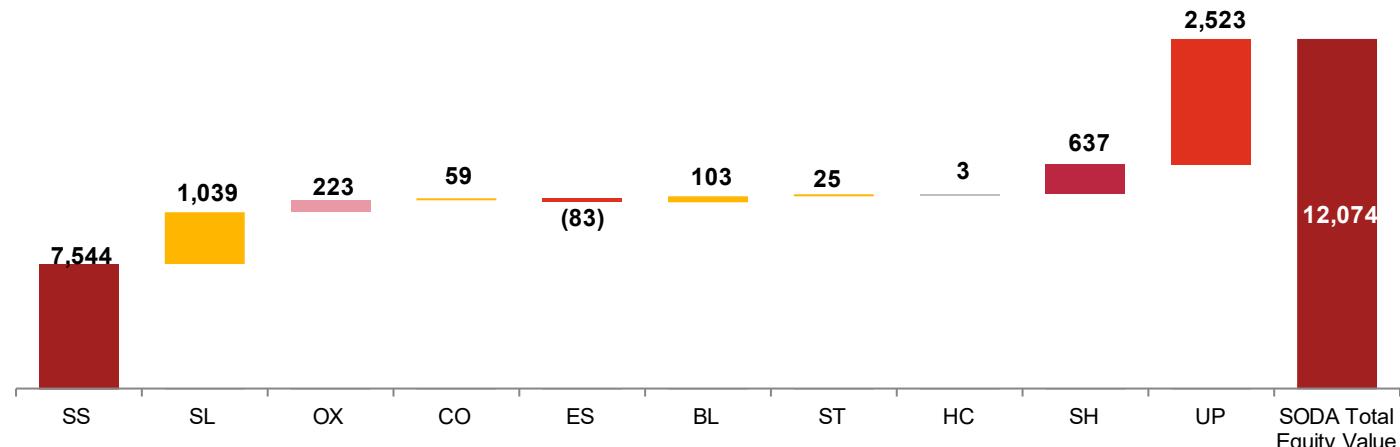
Source: Company Management, PwC analysis

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

SODA

Income Approach

Total Equity Value (TL m)

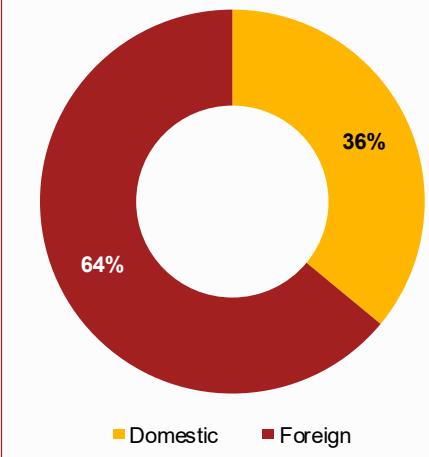
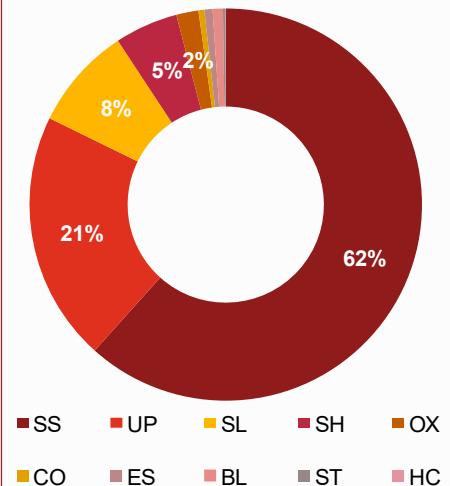


TL m	SS	SL	OX	CO	ES	BL	ST	HC	SH	UP	Total SODA
Enterprise Value	5,967	1,115	212	51	736	92	16	-	-	-	8,190
Net Cash/(Debt)	1,788	(76)	36	8	(907)	19	8	-	-	-	876
Tax Related Assets	1	-	-	-	88	-	-	-	-	-	89
Dividend Payment (-)	(245)	-	(25)	-	-	(7)	-	-	-	-	(277)
Dividend Income (+)	32	-	-	-	-	-	-	-	-	-	32
Equity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

Source: Holding Management, PwC Analysis

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

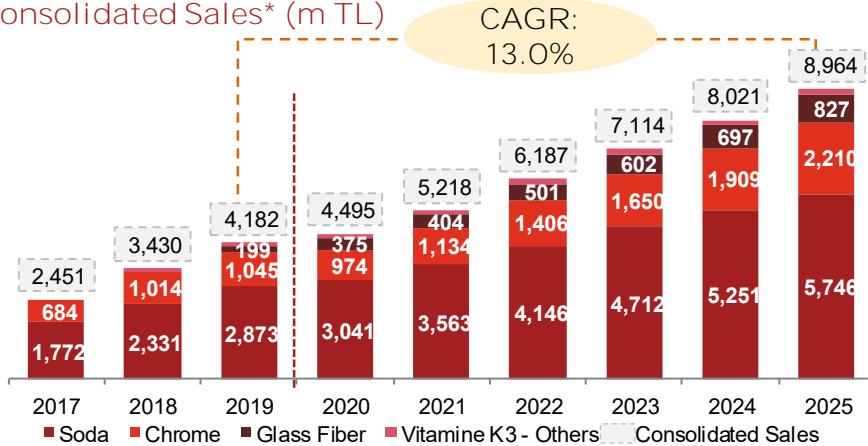
Equity Value Breakdown



SODA

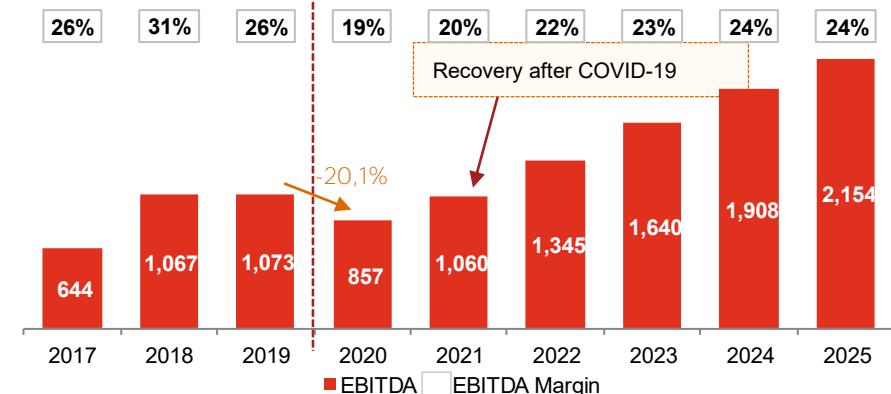
Income Approach

Consolidated Sales* (m TL)

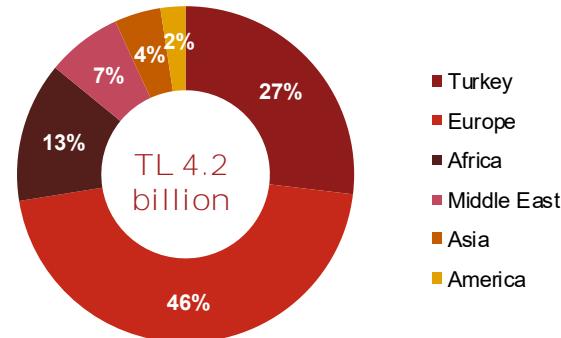


CAGR:
13.0%

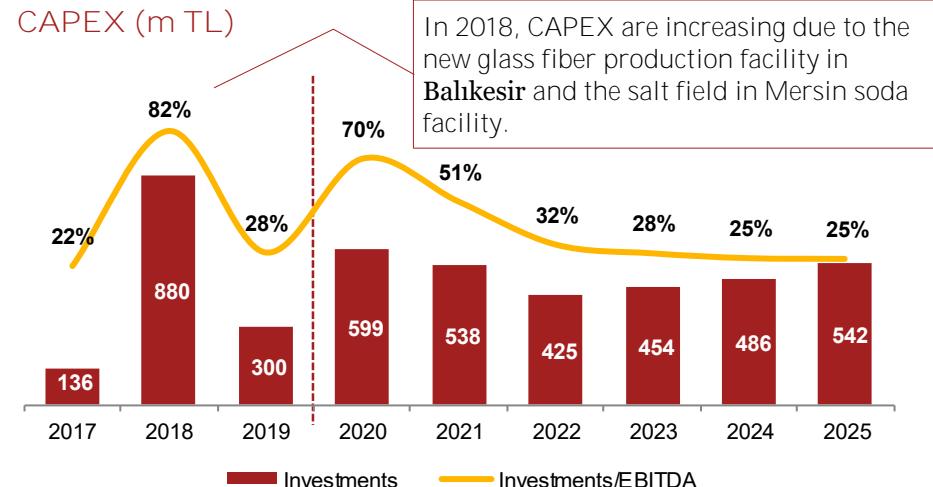
Consolidated EBITDA* (m TL)



Geographical Distribution of Revenues - 2019



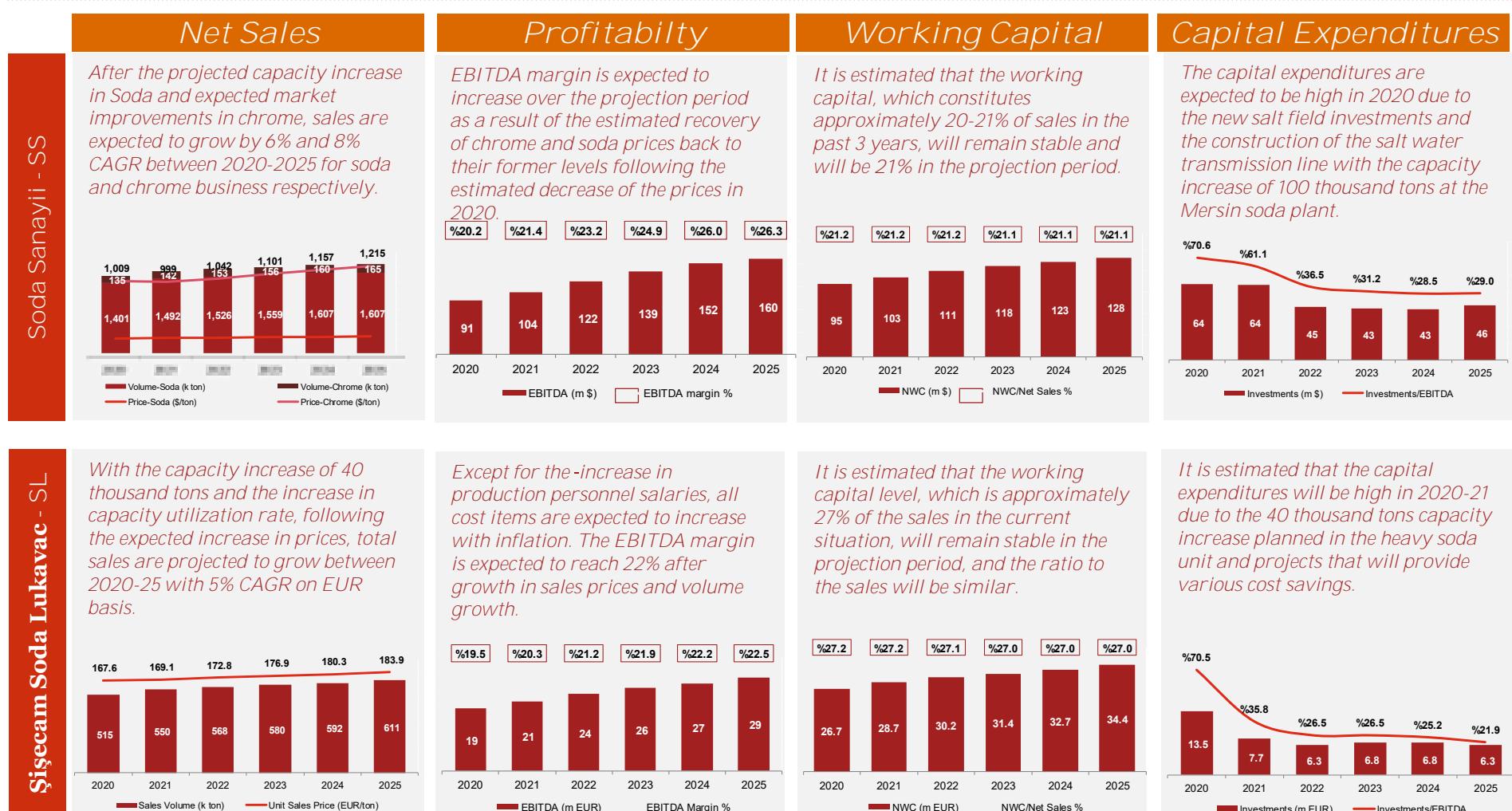
CAPEX (m TL)



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

SODA

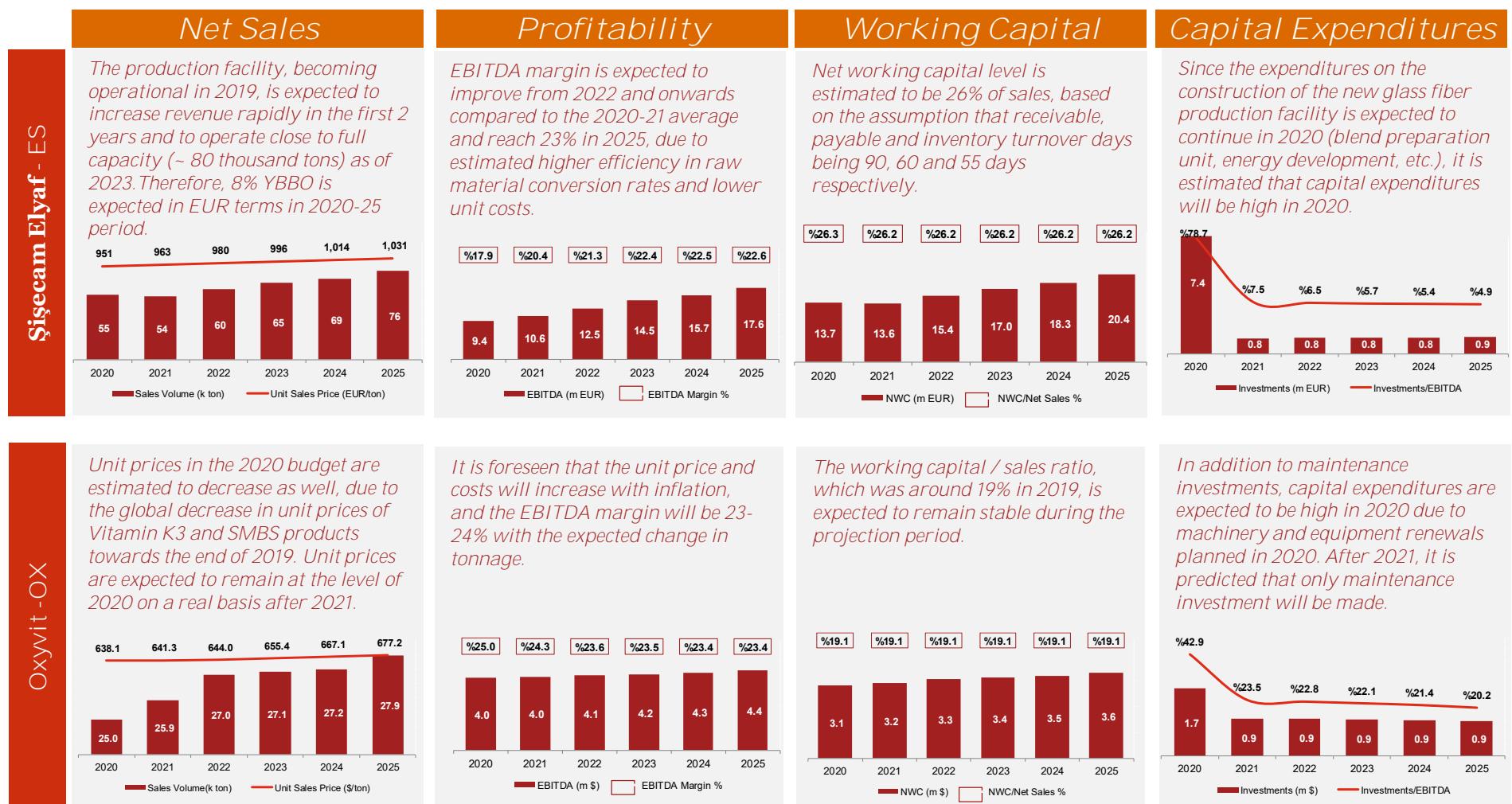
Main Assumptions as the Basis of Valuation (1/3)



Source: Company Management, PwC analysis

SODA

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

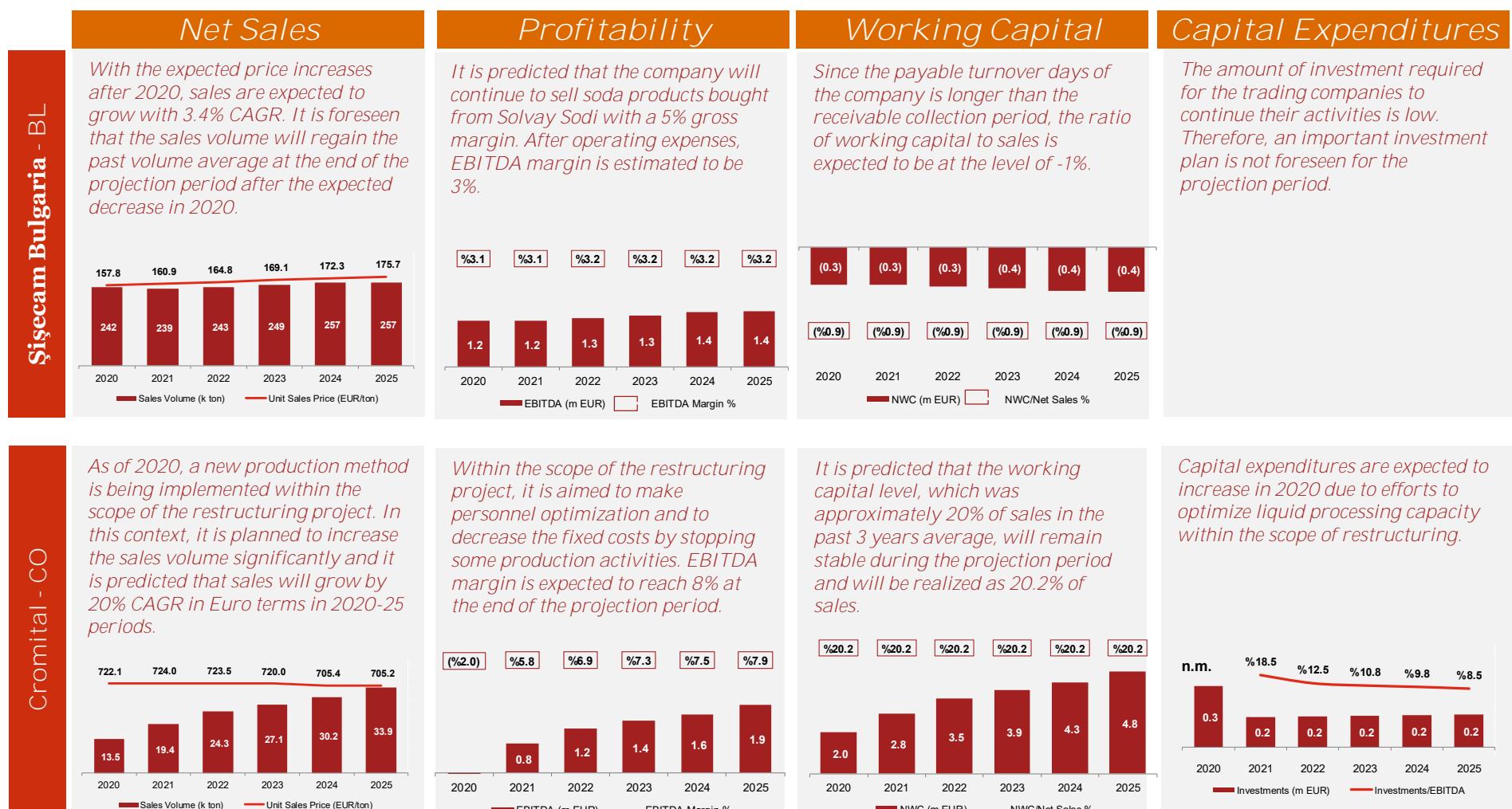


Source: Company Management, PwC analysis

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)

	MY19	MY20	MY21	MY22	Average*
EBITDA	1,071	857	1,060	1,345	
① Effective EBITDA	1,071	857	1,060	1,345	
<i>Inflation Indexiation</i>	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
<i>Solvay Şişecam Holding AG</i>					637
<i>Pacific Soda LLC</i>					2,523
⑥ Other Companies					3
<i>Şişecam Chem Investment B.V.</i>					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.

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

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.

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 Wintrue 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 Adisseo 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)

Soda		Enterprise Value / EBITDA (x)					
\$ m		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 Winture 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
Average		8.0x	7.7x	7.7x	7.4x	6.8x	7.5x
Chrome		Enterprise Value / EBITDA (x)					
\$ m		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
Average		9.5x	8.6x	11.2x	9.5x	7.4x	9.2x
Glass Fiber		Enterprise Value / EBITDA (x)					
\$ m		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
Average		8.2x	7.6x	8.3x	8.2x	7.6x	8.0x
Vitamin K3		Enterprise Value / EBITDA (x)					
\$ m		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
Genbiotech 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
Average		10.5x	10.1x	10.3x	12.1x	11.3x	10.9x

Source: Company Management, Capital IQ, PwC analysis

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

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

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.

SODA

Net Asset Approach

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

* 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.

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.

The breakdown of the consolidated shareholders equity for SODA, which is prepared in accordance with the CMB's "Principles of Financial Reporting in Capital Markets¹", 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/TFRS 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.

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.

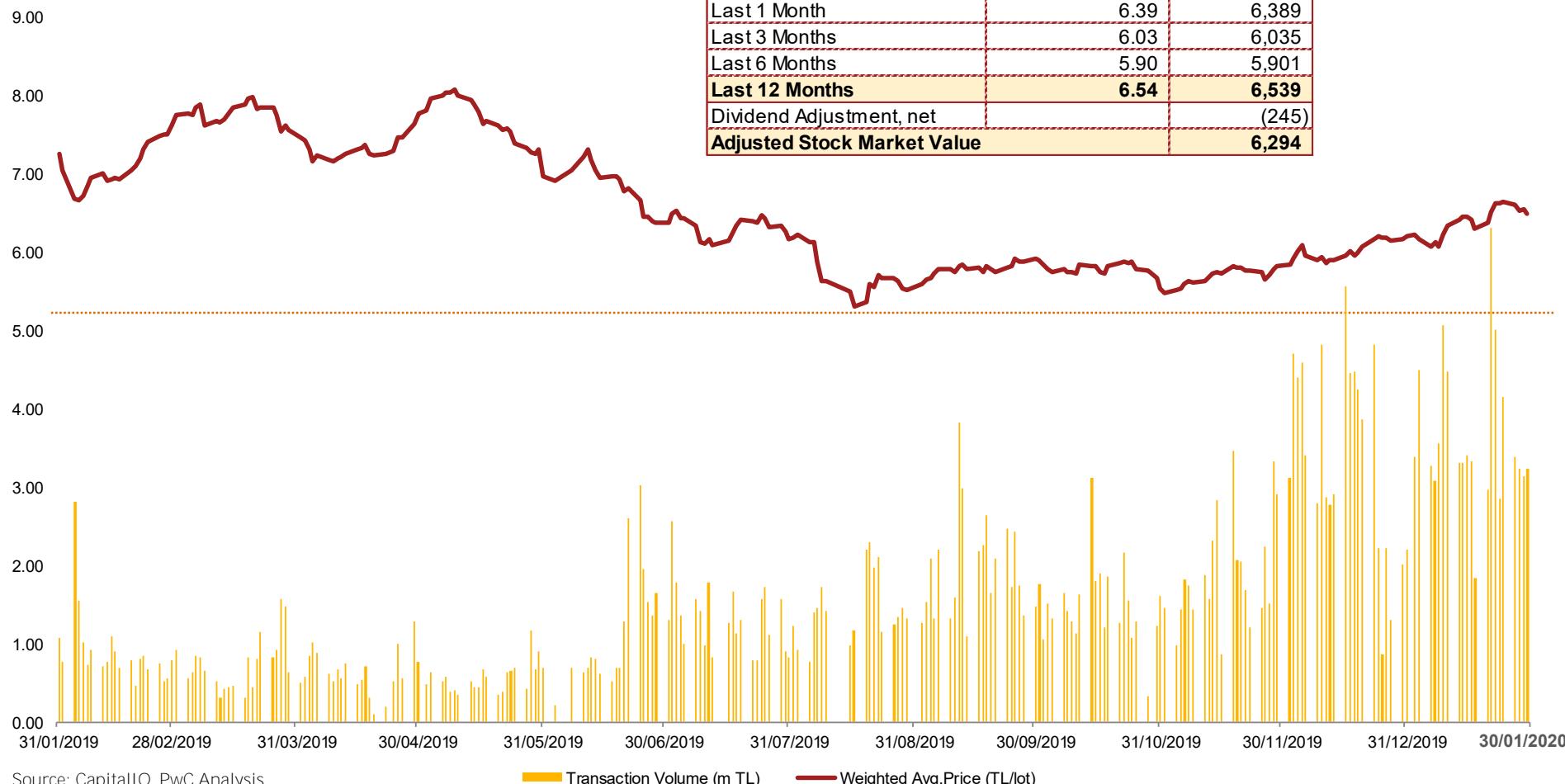
SODA

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)



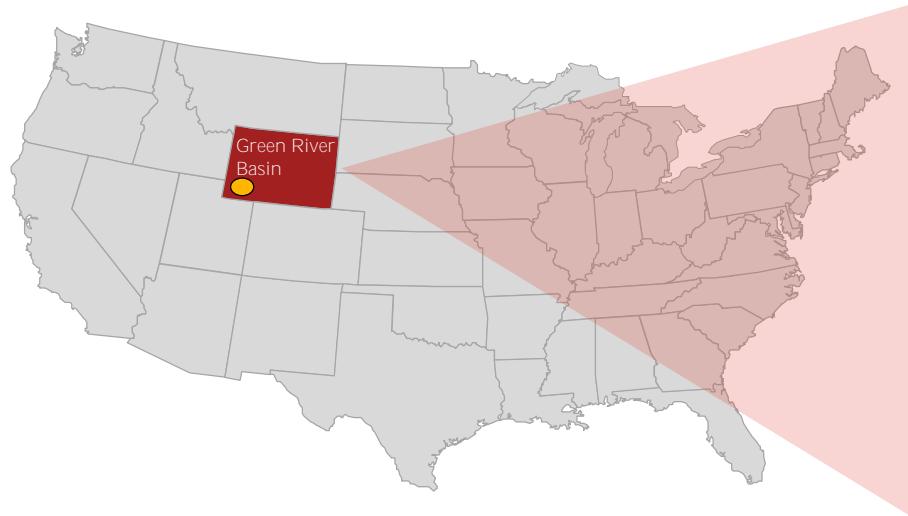
Source: CapitalIQ, PwC Analysis

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.

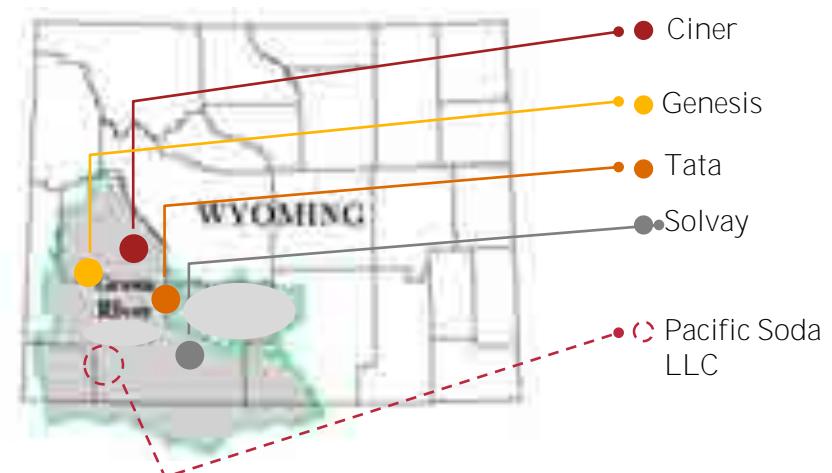
Investment Area



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

Wyoming – Green River Basin



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.

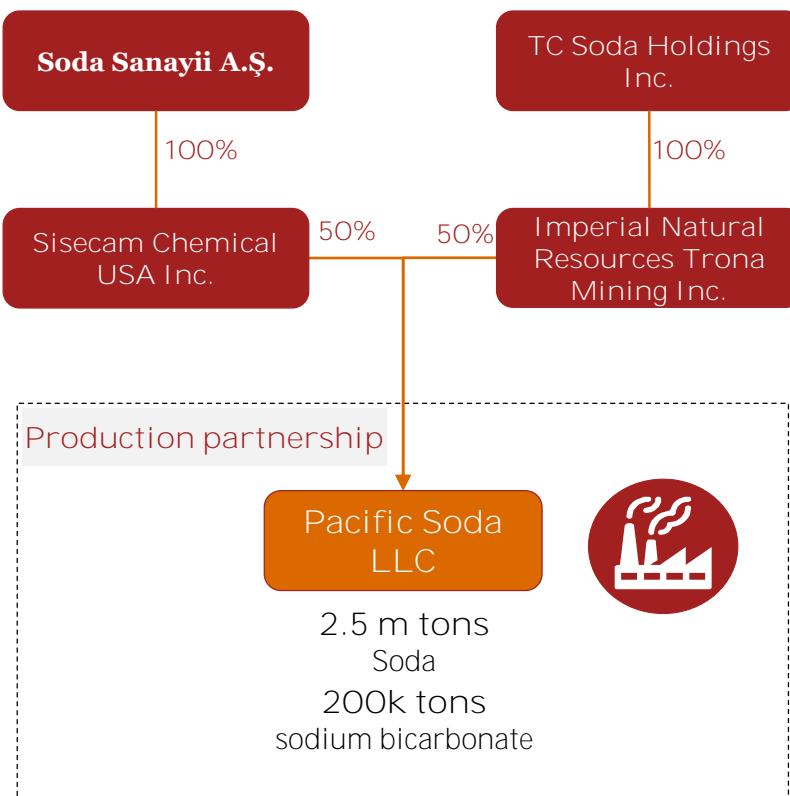
- *Global position*: The target of becoming the 5th largest soda producer in the world
- *Cost advantage*: The opportunity to perform production with solution mining method which has the lowest cost of soda production
- *New markets*: An easier access to the markets with lower sales opportunities currently,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

Source: Company 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.

Türkiye Şişe ve Cam Fabrikaları A.Ş.
PwC

Strictly private and confidential

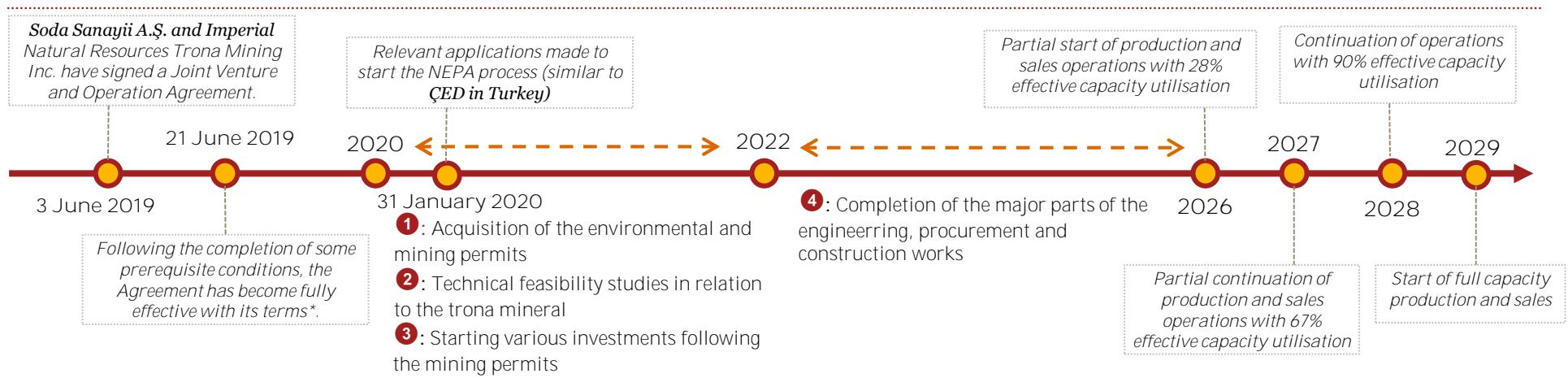
Source: Company Management

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223

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

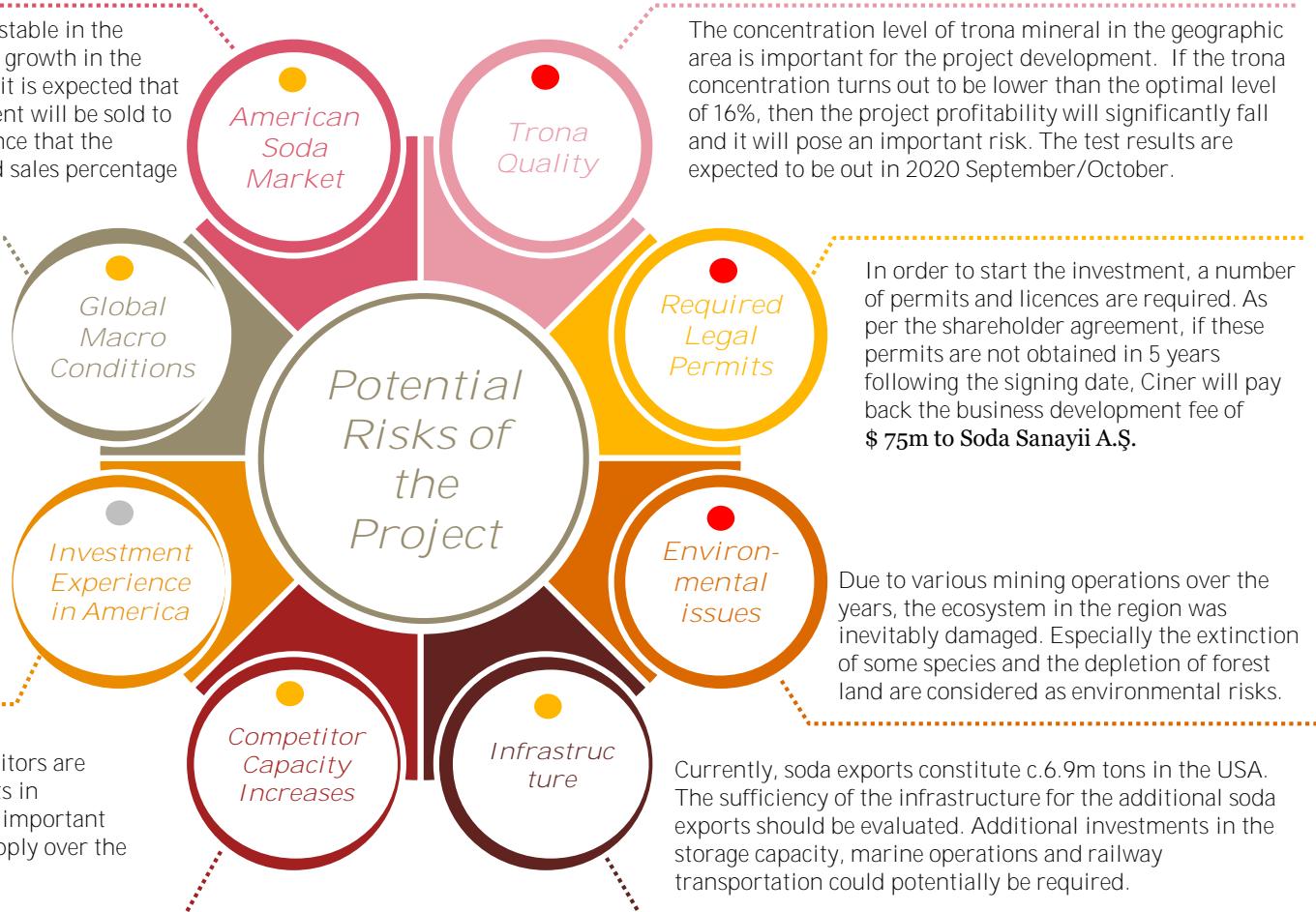
The potential risks of the planned natural soda ash investment by Şişecam and Ciner partnership in USA are stated below.

The local USA market has remained relatively stable in the recent years and it is expected to see moderate growth in the following years. Based on the financial model, it is expected that 20% of the capacity reached from the investment will be sold to the local USA market. However, there is a chance that the demand needed to achieve the aforementioned sales percentage may not be at the desired level.

Due to the extended period of investment (6.5 years), some uncertainties on the macro level could lead to the slowdown in the global growth, and therefore could cause a decrease in the demand of soda.

The possible risks of Şişecam not having any experience of investing in USA will be mediated with Ciner's knowledge of production and sales in this market.

It is known that Ciner and other large competitors are planning on making high capacity investments in Wyoming. The timing of these investments is important for evaluating the impact of the additional supply over the market.

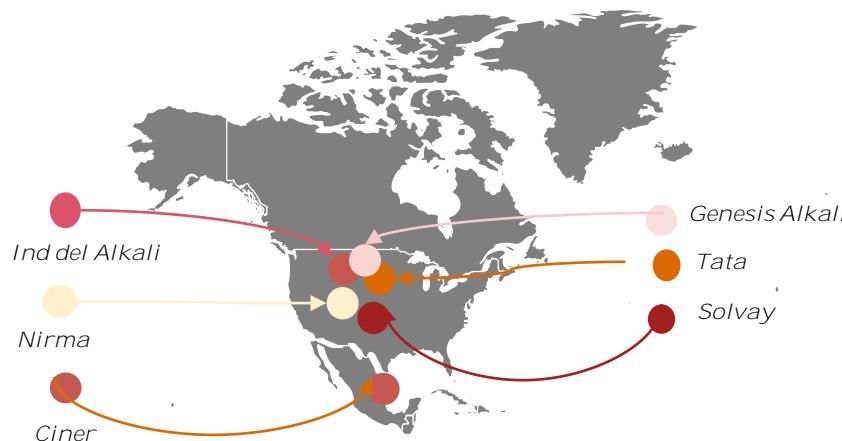


Risk Level	High
	Medium
	Low

Natural Soda Ash Investment American Soda Market

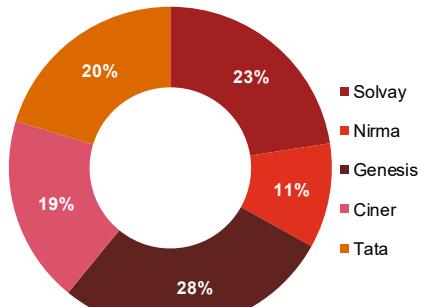
There are plans of new investments to increase capacity in Wyoming, which holds the largest trona reserve in the world. Considering the growth of global soda sector, there is a potential for increase in exports from USA, which currently exports 59% of its production.

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).

Capacity Breakdown, 2018 USA General Information, 2018



Source: Company Management

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

Developments in the market

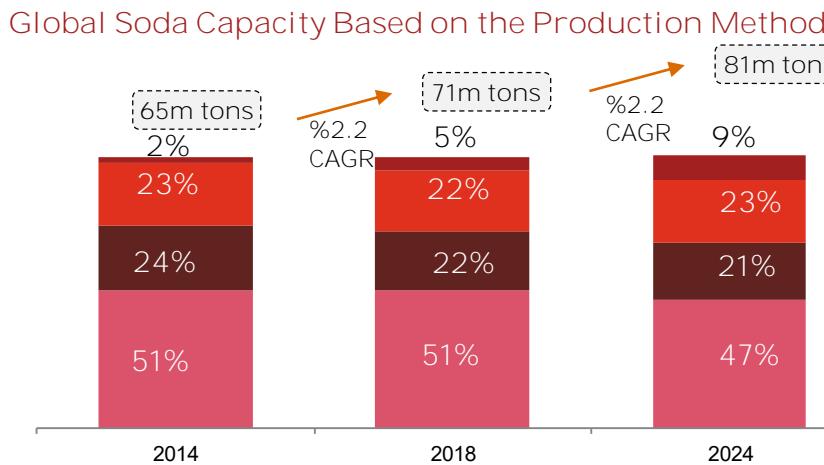
Competitor	Developments and increases in capacity
Solvay ¹	<ul style="list-style-type: none"> Capacity increase of 1m tons of soda ash and 300k tons of sodium bicarbonate in the existing plants
Ciner	<ul style="list-style-type: none"> Capacity increase of c. 1m tons in the existing plants New investment: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

1 Also includes capacity increases outside of the American market.

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.



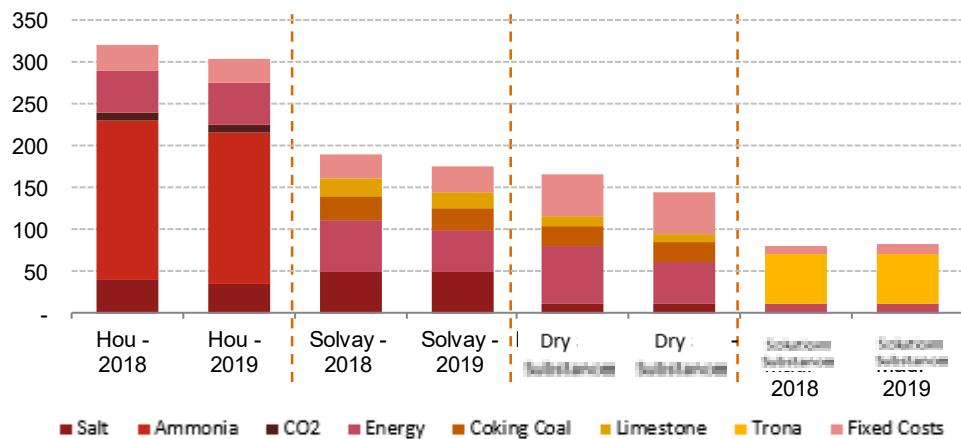
Most of the capacity increases planned in the period between 2018-2024 are from natural soda. Therefore, it is expected for the natural soda share to increase to 32% with the upcoming projects.

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		Natural Soda	
• Production is conducted through Hou Proses and Solvay Proses methods		• The methods used in production are dry mining and solution mining	
• The raw material used is salt and limestone		• Trona mineral is used as a raw material	
• High energy utilisation (10-14 MMBtu/ton)		• Low energy utilisation (4-6 MMBtu/ton)	
• High production cost		• 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
Anadarko Rent Payments	8	4	4	4	5	0	0	27
Soda Plant	-	-	-	144	289	289	-	722
Equipment	-	-	-	46	93	93	-	232
Supply Equipment	-	-	-	70	140	140	-	350
Construction	-	-	-	28	56	56	-	140
Cogeneration Unit	-	-	-	34	68	68	-	171
Equipment	-	-	-	16	32	32	-	80
Construction and Supply Equipment	-	-	-	18	36	36	-	91
Well Drilling	-	-	-	82	110	82	-	274
Equipment	-	-	-	26	34	26	-	85
Construction and Supply Equipment	-	-	-	57	76	57	-	189
Indirect Cost	42	42	24	17	17	10	44	198
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
Surface Preparation	-	-	-	12	16	12	-	40
Water Pipeline (20 miles)	-	-	-	-	-	23	23	46
Electric Transmission Line	-	-	-	-	-	9	9	18
Railway and Transportation	-	-	-	-	-	25	25	50
Natural Gas Pipeline	-	-	-	-	-	9	9	18
Other	-	-	-	5	5	5	5	20
Total	51	46	29	299	510	533	115	1,583

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)

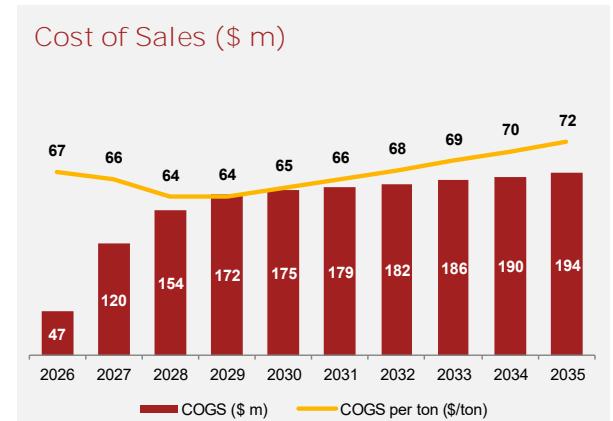
Sales Volume		Sales Price		Sales Revenues																																																																																																																																																					
<ul style="list-style-type: none"> Production and sales activities are expected to start partially in 2026. While 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). 		<ul style="list-style-type: none"> 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. 		<ul style="list-style-type: none"> 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. 																																																																																																																																																					
<p>Total Sales Volume (k ton)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Soda (k ton)</th> <th>Sodium Bicarbonate (k ton)</th> <th>Avg. KKO (k ton)</th> </tr> </thead> <tbody> <tr><td>2026</td><td>700</td><td>0</td><td>700</td></tr> <tr><td>2027</td><td>1,680</td><td>0</td><td>1,680</td></tr> <tr><td>2028</td><td>2,250</td><td>0</td><td>2,250</td></tr> <tr><td>2029</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2030</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2031</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2032</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2033</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2034</td><td>2,500</td><td>0</td><td>2,500</td></tr> <tr><td>2035</td><td>2,500</td><td>0</td><td>2,500</td></tr> </tbody> </table>		Year	Soda (k ton)	Sodium Bicarbonate (k ton)	Avg. KKO (k ton)	2026	700	0	700	2027	1,680	0	1,680	2028	2,250	0	2,250	2029	2,500	0	2,500	2030	2,500	0	2,500	2031	2,500	0	2,500	2032	2,500	0	2,500	2033	2,500	0	2,500	2034	2,500	0	2,500	2035	2,500	0	2,500	<p>Sales Price (\$/ton)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Soda - America</th> <th>Soda - International</th> <th>Sodium Bicarbonate - America</th> <th>Sodium Bicarbonate - International</th> </tr> </thead> <tbody> <tr><td>2026</td><td>210</td><td>190</td><td>258</td><td>190</td></tr> <tr><td>2027</td><td>214</td><td>194</td><td>263</td><td>194</td></tr> <tr><td>2028</td><td>219</td><td>198</td><td>268</td><td>198</td></tr> <tr><td>2029</td><td>223</td><td>202</td><td>274</td><td>202</td></tr> <tr><td>2030</td><td>227</td><td>206</td><td>279</td><td>206</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Year</th> <th>Soda - America</th> <th>Soda - International</th> <th>Sodium Bicarbonate - America</th> <th>Sodium Bicarbonate - International</th> </tr> </thead> <tbody> <tr><td>2031</td><td>232</td><td>210</td><td>285</td><td>210</td></tr> <tr><td>2032</td><td>237</td><td>214</td><td>290</td><td>214</td></tr> <tr><td>2033</td><td>241</td><td>219</td><td>296</td><td>218</td></tr> <tr><td>2034</td><td>246</td><td>223</td><td>302</td><td>223</td></tr> <tr><td>2035</td><td>251</td><td>228</td><td>308</td><td>227</td></tr> </tbody> </table>		Year	Soda - America	Soda - International	Sodium Bicarbonate - America	Sodium Bicarbonate - International	2026	210	190	258	190	2027	214	194	263	194	2028	219	198	268	198	2029	223	202	274	202	2030	227	206	279	206	Year	Soda - America	Soda - International	Sodium Bicarbonate - America	Sodium Bicarbonate - International	2031	232	210	285	210	2032	237	214	290	214	2033	241	219	296	218	2034	246	223	302	223	2035	251	228	308	227	<p>Total Sales Revenues (\$ m)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Soda (\$ m)</th> <th>Sodium Bicarbonate (\$ m)</th> <th>Total (\$ m)</th> </tr> </thead> <tbody> <tr><td>2026</td><td>184</td><td>0</td><td>184</td></tr> <tr><td>2027</td><td>450</td><td>0</td><td>450</td></tr> <tr><td>2028</td><td>615</td><td>0</td><td>615</td></tr> <tr><td>2029</td><td>697</td><td>0</td><td>697</td></tr> <tr><td>2030</td><td>711</td><td>0</td><td>711</td></tr> <tr><td>2031</td><td>726</td><td>0</td><td>726</td></tr> <tr><td>2032</td><td>740</td><td>0</td><td>740</td></tr> <tr><td>2033</td><td>755</td><td>0</td><td>755</td></tr> <tr><td>2034</td><td>770</td><td>0</td><td>770</td></tr> <tr><td>2035</td><td>785</td><td>0</td><td>785</td></tr> </tbody> </table>		Year	Soda (\$ m)	Sodium Bicarbonate (\$ m)	Total (\$ m)	2026	184	0	184	2027	450	0	450	2028	615	0	615	2029	697	0	697	2030	711	0	711	2031	726	0	726	2032	740	0	740	2033	755	0	755	2034	770	0	770	2035	785	0	785
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Natural Soda Ash Investment

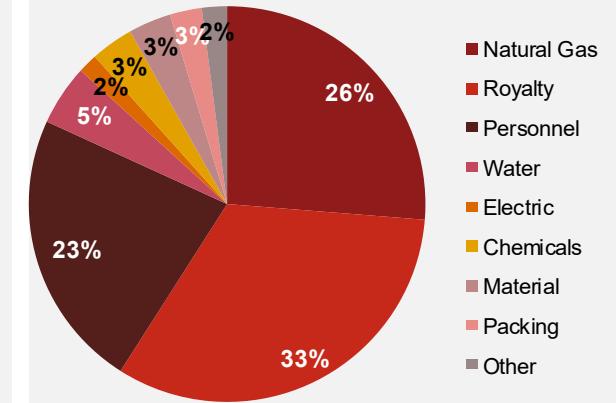
Basic Assumptions (2/3)

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.



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.

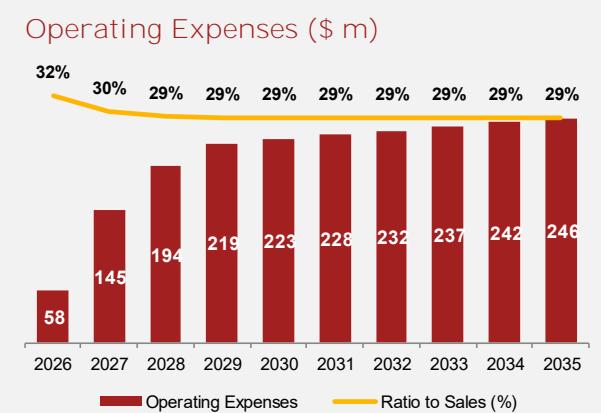
Tax

- 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.

NW/C

- 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.
- 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.

Reserve



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
Görkem ELVERİCİ	SISE	Chairman, Financial Affairs
Gökhan GÜRALP	SISE	Financial Control and Reporting Director
Tolga İŞMEN	SISE	Chief Legal Counsel
Özlem VERGON	SISE	Chairman, Strategy
Başak ÖGE	SISE	Coordinator, Corporate Governance & Compliance
Murat Ardıç YILMAZ	SISE	Strategic Planning and Portfolio Management Director

Contacts (2/6)

SISE – Other Companies

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

Contacts (3/6)

TRKCM

Contact person	Company name	Position
Ebru ŞAPOĞLU	TRKCM	Sales and Marketing Vice President
Bülent AYDIN	TRKCM	Strategic Planning Director
Bünyamin ARSLAN	TRKCM	Budget and Financial Controlling Manager– Architectural Glass
Ufuk YAMAK	TRKCM	Budget and Financial Controlling Manager– Automotive Glass
Ahmet DERVİŞ	TRKCM	Business Development Director
Ege ÖZGÜVEN	TRKCM	Senior Strategic Planning Specialist
Orçun KAHYAOĞLU	TRKCM	Senior Strategic Planning Specialist
Tansu AKALIN	TRKCM	Senior Budget and Financial Controlling Specialist
Ahmet ÖZTÜRK	TRKCM	Budget and Financial Controlling Specialist
Ezgi UÇAR	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 KOÇ KARACAOĞLU	ANACM	Financial Affairs Director
Selim KALKAN	ANACM	Strategic Planning Director
İlker GÜVEN	ANACM	Budget and Financial Controlling Manager
Hasan TUNÇ	ANACM	Strategic Planning Specialist
Sibel TEMURLENK	ANACM	Strategic Planning Assistant Specialist

Contacts (5/6)

PASAB & DENCM

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

Contacts (6/6)

SODA

Contact person	Company name	Position
Fehmi ALANLI	SODA	Sales and Marketing- Vice President
Hidayet ÖZDEMİR	SODA	Production Vice President - Advisor
Umut Barış DÖNMEZ	SODA	Financial Affairs Director
Selma AKYOL	SODA	Supply Chain Director
Nedim KULAKSIZOĞLU	SODA	Financial Affairs Director- Pacific LLC
Tuğrul ERHAN	SODA	Sales and Marketing Group Manager - Soda
Aylin ERENTÜRK	SODA	Foreign Sales Manager
Gülay TEZCAN	SODA	Budget and Financial Controlling Specialist
Ece Keklik ÖLMEZ	SODA	Strategic Planning Specialist
Serra NEMUTLU	SODA	Strategic Planning Specialist
Azize DEMİR	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 and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS, 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 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 , 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 years' losses deductible from the tax base
Strategic Plan Presentation and Other Key Information	TRKCM	<ul style="list-style-type: none"> • Production capacity, furnace count, personnel count, brands • Current shareholding structure • Fixed asset movement tables • Historical developments and current state of TRKCM and solo companies • Key information and forecasts in relation to the architectural glass and automotive glass markets • Details on the receivables and payables of a financing nature for the companies within the Flat Glass Group • Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Flat Glass Group

Information Sources (2/7)

ANACM

Financial information	Company name	Description
Consolidated Financial Statements	ANACM	Consolidated financial statements, relevant consolidation work and audit reports prepared and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS , 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 Güney Bağımsız Denetim ve S.M.M.M. A.Ş. dated 31.12.2017, 31.12.2018 and 31.12.2019 , 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 years' losses deductible from the tax base.
Strategic Plan Presentation and Other Key Information	ANACM	<ul style="list-style-type: none"> Production capacity, furnace count, personnel count Income and cost calculations related to the 2020 budget Current shareholding structure Fixed asset movement tables Historical developments and current state of the Glass Packaging Group and solo companies Key information and forecasts in relation to the glass packaging market Key information, presentations and detailed feasibility works in relation to the Eastern Europe investments Details on the receivables and payables of a financing nature for the companies within the Glass Packaging Group Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Glass Packaging Group

Information Sources (3/7)

PASAB

Financial information	Company name	Description
Consolidated Financial Statements	PASAB	Consolidated financial statements, relevant consolidation work and audit reports prepared and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS, 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 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 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 years' losses deductible from the tax base.
Strategic Plan Presentation and Other Key Information	PASAB	<ul style="list-style-type: none"> • Production capacity, furnace count, personnel count • Income and cost calculations related to the 2020 budget • Current shareholding structure • Fixed asset movement tables • Historical developments and current state of the Glassware Group and solo companies • Key information and forecasts in relation to the glassware market • Details on the receivables and payables of a financing nature for the companies within the Glassware Group • Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Glassware Group

Information Sources (4/7)

DENCM

Financial information	Company name	Description
Consolidated Financial Statements	DENCM	Consolidated financial statements, relevant consolidation work and audit reports prepared and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS, 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 DENCM, 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 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 years' losses deductible from the tax base.
Strategic Plan Presentation and Other Key Information	DENCM	<ul style="list-style-type: none"> • Production capacity, furnace count, personnel count • Income and cost calculations related to the 2020 budget • Current shareholding structure • Fixed asset movement tables • Historical developments and current state of DENCM • Key information and forecasts in relation to the glassware market • Details on the receivables and payables of a financing nature of DENCM • Non-operational assets and liabilities and information on one-off income and expenses of DENCM

Information Sources (5/7)

SODA

Financial information	Company name	Description
Consolidated Financial Statements	SODA	Consolidated financial statements, relevant consolidation work and audit reports prepared and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS, 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 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 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 years' losses deductible from the tax base.
Strategic Plan Presentation and Other Key Information	SODA	<ul style="list-style-type: none"> • Production capacity, furnace count, personnel count • Income and cost calculations related to the 2020 budget • Current shareholding structure • Fixed asset movement tables • Historical developments and current state of the Chemicals Group and solo companies • Key information and forecasts in relation to the chemicals market • Key information, presentations and detailed feasibility works in relation to the USA investment • Details on the receivables and payables of a financing nature for the companies within the Chemicals Group • Non-operational assets and liabilities and information on one-off income and expenses for the Companies within the Chemicals Group

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 and audited by Güney Bağımsız Denetim ve S.M.M.M. A.Ş. in accordance to TMS and TFRS, 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 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 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 years' losses deductible from the tax base.
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"> • Current shareholding structure • Fixed asset movement tables • Appraisal reports for the Investment Properties • Copyright and central services income works and detailed investment plans for SC • R&D centre spending briefing for SC • Aging table for the investment credit of CV • Details on the receivables and payables of a financing nature for all Other Companies • Non-operational assets and liabilities and information on one-off income and expenses for all Other Companies • The documentation prepared for the existing land and the land sold in 2020 for CY • The amount of precious metal owned by CE and the valuation works

Information Sources (7/7)

Publicly Available Sources

- 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)

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)

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)

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

m TL	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	TL m
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)	
Gross Profit	843	992	1,235	1,109	1,371	1,749	2,124	2,431	2,744	2,963	
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	
EBITDA	560	703	843	654	912	1,194	1,468	1,664	1,878	2,028	
EBITDA Margin (%)	27.9%	29.7%	29.2%	23.8%	27.5%	29.2%	30.2%	30.1%	30.3%	30.3%	
Depreciation and Amortization	(58)	(60)	(116)	(193)	(218)	(274)	(296)	(329)	(371)	(752)	
EBIT	502	643	727	461	694	920	1,171	1,334	1,507	1,276	
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	
Operational Cash Flows				553	773	1,010	1,233	1,397	1,577	1,773	
Change in NWC				68	(114)	(156)	(156)	(135)	(135)	(99)	
Capex				(810)	(710)	(938)	(479)	(657)	(450)	(752)	
Free Cash Flows				(190)	(52)	(84)	598	605	991	921	
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	
Discounted Cash Flows				(172)	(39)	(53)	316	270	378	4,278	

Source: Management, PwC Analysis

Discounted Cash Flows

Trakya Glass Bulgaria EAD

Sensitivity
Analysis (BGN m)

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

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%	2.3%
Cost of Sales	(136)	(121)	(118)	(139)	(141)	(153)	(157)	(160)	(164)	(168)
Gross Profit	98	97	87	89	99	112	115	117	120	123
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
EBITDA	50	49	37	40	47	59	57	59	60	62
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)
EBIT	23	22	6	4	11	22	21	22	24	34
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
Operational Cash Flows				40	46	56	55	57	58	58
Change in NWC				(9)	(3)	(7)	(2)	(2)	(2)	(2)
Capex				(22)	(28)	(16)	(16)	(16)	(16)	(27)
Free Cash Flows				9	15	33	37	39	40	29
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
Discounted Cash Flows				9	13	27	28	26	25	267

Source: Management, PwC Analysis

Discounted Cash Flows

Trakya Glass Rus AO

Sensitivity Analysis (RUB m)

LGR	WACC				
	-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	RUB m	TL m
Revenue	4,454	4,515	3,915	3,626	3,884	4,356	4,484	4,653	4,839	5,033	3,565	341
Change (%)		1.4%	-13.3%	-7.4%	7.1%	12.1%	2.9%	3.8%	4.0%	4.0%	Terminal Value (>2025)	5,227 499
Cost of Sales	(2,208)	(2,369)	(2,218)	(2,161)	(2,297)	(2,537)	(2,610)	(2,709)	(2,817)	(2,930)	Enterprise Value	8,792 840
Gross Profit	2,246	2,146	1,697	1,464	1,588	1,819	1,874	1,944	2,022	2,103	Net Cash/(Debt)	2,390 228
GP Margin (%)	50.4%	47.5%	43.4%	40.4%	40.9%	41.7%	41.8%	41.8%	41.8%	41.8%	Tax Incentive Assets	24 2
Operating Expenses	(656)	(713)	(657)	(647)	(636)	(703)	(725)	(751)	(781)	(813)	Adjusted Equity Value	11,206 1,070
Other Operating Income / Expenses	7	40	11	9	9	10	11	11	11	12		
EBITDA	1,597	1,473	1,051	826	961	1,126	1,159	1,204	1,252	1,302		
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)		
EBIT	1,355	1,265	805	397	539	710	747	777	811	779		
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		
Operational Cash Flows				818	950	1,112	1,144	1,188	1,236	1,287		
Change in NWC				87	(30)	(53)	(16)	(22)	(24)	(25)		
Capex				(121)	(253)	(256)	(260)	(265)	(270)	(523)		
Free Cash Flows				784	668	802	868	901	942	739		
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		
Discounted Cash Flows				742	566	608	589	548	513	5,227		

Source: Management, PwC Analysis

Discounted Cash Flows

HNG Float Glass Limited

Sensitivity Analysis (INR m)

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

INR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	INR m	TL m
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)		
Gross Profit	-	1,695	1,519	1,720	1,876	2,322	3,878	5,189	5,634	5,859		
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		
EBITDA	-	691	485	385	467	913	1,996	3,083	3,387	3,523		
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)		
EBIT	-	249	(2)	(56)	(1,132)	(793)	241	1,277	1,530	2,045		
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		
Operational Cash Flows				385	467	913	1,935	2,761	3,002	3,008		
Change in NWC				(1)	(33)	(89)	(608)	(196)	(137)	(74)		
Capex				(76)	(15,047)	(1,386)	(643)	(656)	(669)	(1,477)		
Free Cash Flows				308	(14,612)	(562)	684	1,909	2,197	1,457		
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		
Discounted Cash Flows				293	(12,547)	(436)	479	1,209	1,256	12,447		

Source: Management, PwC Analysis

Discounted Cash Flows

Sisecam Flat Glass Italy S.R.L

Sensitivity Analysis (EUR m)

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

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)
Gross Profit	32	35	28	10	20	25	28	10	29	29
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
EBITDA	18	18	9	(5)	4	7	9	(6)	9	9
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)
EBIT	11	12	2	(12)	(3)	(0)	1	(17)	(2)	3
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
Operational Cash Flows				(5)	4	7	9	(6)	9	8
Change in NWC	(4)	0	(2)	(1)	2	(3)				(0)
Capex	(4)	(7)	(3)	(7)	(30)	(7)				(6)
Free Cash Flows				(13)	(3)	3	1	(34)	(1)	2
Discount Rate	8.4%	8.4%	8.4%	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	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
Discounted Cash Flows				(12)	(2)	2	1	(24)	(1)	23

Source: Management, PwC Analysis

Discounted Cash Flows

Sisecam Flat Glass South Italy S.R.L.

Sensitivity Analysis (EUR m)

LGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-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	EUR m	TL m
Revenue	-	1	8	46	56	63	68	77	71	72	6	42
Change (%)			504.9%	492.2%	21.2%	13.6%	7.2%	13.9%	-8.6%	2.0%	28	184
Cost of Sales	-	(1)	(6)	(38)	(33)	(36)	(38)	(46)	(40)	(41)		
Gross Profit	-	-	2	8	23	27	30	31	31	32	34	226
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)	-	-	-	-	-	-	-	1	9
EBITDA	-	(4)	(5)	(6)	7	10	12	12	12	13	9	61
EBITDA Margin (%)	-276.1%	-63.1%		-13.3%	12.8%	16.2%	17.6%	16.1%	17.6%	17.6%		
Depreciation and Amortization	-	-	(1)	(4)	(4)	(4)	(5)	(5)	(4)	(6)		
EBIT	-	(4)	(6)	(10)	3	6	7	8	8	7		
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%	27.9%	27.9%		
Depreciation and Amortization (+)				4	4	4	5	5	4	6		
Operational Cash Flows				(6)	6	9	10	10	10	11		
Change in NWC				0	(0)	(1)	(0)	(1)	1	(0)		
Capex				(3)	(8)	(3)	(3)	(3)	(3)	(6)		
Free Cash Flows				(9)	(2)	5	6	6	8	5		
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		
Discounted Cash Flows				(8)	(2)	4	4	4	4	28		

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Otomotiv A.Ş.

Sensitivity Analysis (TL m)

L GTR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-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	TL m
Revenue	558	706	840	757	984	1,120	1,389	1,745	1,914	2,067	76
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)	
Gross Profit	139	227	218	165	209	250	312	431	499	539	
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 / E	6	19	52	37	43	51	61	72	76	82	
EBITDA	72	170	170	96	127	159	209	314	370	400	
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)	
EBIT	53	151	152	73	101	129	174	272	322	276	
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%	20.0%
Depreciation and Amortization (+)				22	26	30	35	41	48	124	
Operational Cash Flows				80	107	133	175	259	306	345	
Change in NWC				23	(68)	(40)	(80)	(104)	(49)	(45)	
Capex				(71)	(75)	(79)	(100)	(121)	(127)	(124)	
Free Cash Flows				31	(36)	14	(6)	34	129	175	
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	
Discounted Cash Flows				29	(28)	9	(3)	16	53	1,071	

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Automotive Bulgaria EAD

Sensitivity Analysis (BGN m)

LGR	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)
Gross Profit	29	22	13	18	17	23	28	30	31	32
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
EBITDA	16	9	5	6	6	11	16	17	18	19
EBITDA Margin (%)	14.8%	9.1%	5.5%	6.9%	6.7%	9.7%	12.4%	12.9%	14.0%	14.0%
Depreciation and Amortization	(7)	(9)	(7)	(8)	(8)	(9)	(9)	(9)	(10)	(8)
EBIT	9	0	(2)	(1)	(2)	2	7	7	9	11
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
Operational Cash Flows				6	6	11	15	16	17	18
Change in NWC				(1)	(1)	(5)	(4)	(1)	(1)	(1)
Capex				(15)	(10)	(7)	(7)	(7)	(7)	(8)
Free Cash Flows				(9)	(4)	(1)	4	8	10	9
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
Discounted Cash Flows				(9)	(4)	(1)	3	6	6	86

Source: Management, PwC Analysis

Discounted Cash Flows

Automotive Glass Alliance Rus AO

Sensitivity Analysis (RUB m)

LGR	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	RUB m	TL m
Revenue	1,131	1,299	1,603	1,363	1,984	2,492	2,788	2,937	2,943	3,061	447	43
Change (%)		14.9%	23.4%	-15.0%	45.5%	25.6%	11.9%	5.4%	0.2%	4.0%	Terminal Value (>2025)	1,288
Cost of Sales	(933)	(1,086)	(1,236)	(1,076)	(1,503)	(1,849)	(2,070)	(2,157)	(2,150)	(2,236)	Enterprise Value	1,735
Gross Profit	198	213	368	287	481	643	718	780	793	825	Net Cash/(Debt)	(793)
GP Margin (%)	17.5%	16.4%	22.9%	21.1%	24.3%	25.8%	25.8%	26.6%	27.0%	27.0%	Tax Incentive Assets	1
Operating Expenses	(148)	(176)	(232)	(244)	(328)	(375)	(411)	(430)	(440)	(457)	Adjusted Equity Value	943
Other Operating Income / Ex	(11)	(3)	20	25	35	44	49	51	51	53		90
EBITDA	39	34	156	68	188	311	355	401	405	421		
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)		
EBIT	(203)	(204)	(91)	(183)	(67)	52	90	128	122	237		
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		
Operational Cash Flows				68	188	310	354	398	402	416		
Change in NWC				74	(118)	(140)	(83)	(40)	(1)	(33)		
Capex				(75)	(84)	(85)	(130)	(155)	(180)	(184)		
Free Cash Flows				66	(14)	85	140	204	221	200		
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		
Discounted Cash Flows				63	(12)	64	94	121	117	1,288		

Source: Management, PwC Analysis

Discounted Cash Flows

Glass Corp S.A.

Sensitivity Analysis (RON m)

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

RON m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	RON m	TL m
Revenue	135	219	242	265	244	239	274	285	300	307	(32)	(45)
Change (%)	62.5%	10.3%	9.7%	-7.9%	-2.2%	14.9%	3.8%	5.2%	2.5%		Terminal Value (>2025)	157
Cost of Sales	(104)	(190)	(226)	(241)	(204)	(196)	(209)	(212)	(219)	(224)	Enterprise Value	125
Gross Profit	31	29	16	24	41	43	65	73	81	83	Net Cash/(Debt)	(306)
GP Margin (%)	23.2%	13.5%	6.7%	9.1%	16.6%	18.0%	23.7%	25.5%	27.0%	27.0%	Tax Incentive Assets	-
Operating Expenses	(18)	(33)	(37)	(41)	(39)	(39)	(43)	(44)	(45)	(47)	Adjusted Equity Value	(182)
Other Operating Income / Ex	-	(2)	10	2	2	2	2	2	2	2		(251)
EBITDA	13	(5)	(10)	(14)	3	6	25	31	38	39		
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)		
EBIT	(6)	(26)	(32)	(37)	(20)	(19)	(1)	4	11	20		
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		
Operational Cash Flows				(14)	3	6	25	30	36	36		
Change in NWC				(4)	5	1	(6)	(2)	(2)	(1)		
Capex				(14)	(10)	(27)	(22)	(15)	(18)	(18)		
Free Cash Flows				(33)	(2)	(20)	(3)	13	16	16		
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		
Discounted Cash Flows				(31)	(1)	(16)	(3)	9	10	157		

Source: Management, PwC Analysis

Discounted Cash Flows

Richard Fritz Holding GmbH*

Sensitivity Analysis (EUR m)

LGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-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%	5.9%	-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)
Gross Profit	13	27	20	21	24	26	30	32	34	35
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 / E	4	3	3	2	2	2	2	2	3	3
EBITDA	(8)	6	1	2	6	8	12	13	15	15
EBITDA Margin (%)	-4.8%	3.2%	0.5%	1.6%	4.2%	5.9%	7.4%	7.9%	8.4%	8.4%
Depreciation and Amortizat	(6)	(5)	(5)	(5)	(5)	(6)	(6)	(7)	(7)	(10)
EBIT	(14)	1	(4)	(3)	0	2	6	7	8	6
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
Operational Cash Flows				2	5	7	10	11	13	14
Change in NWC				5	(1)	(1)	(4)	(1)	(2)	(1)
Capex				(7)	(6)	(7)	(9)	(9)	(10)	(10)
Free Cash Flows				0	(2)	(1)	(3)	1	1	4
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
Discounted Cash Flows				0	(2)	(1)	(2)	1	1	25

* 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.

Discounted Cash Flows

Anadolu Cam Sanayii A.Ş.

Sensitivity Analysis (TL m)

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

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)
Gross Profit	540	685	1,035	1,391	1,639	1,885	2,062	2,339	2,679	2,894
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
EBITDA	308	452	659	786	956	1,112	1,234	1,416	1,638	1,769
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)
EBIT	160	277	411	473	557	624	694	783	928	987
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
Operational Cash Flows				682	845	987	1,095	1,259	1,452	1,572
Change in NWC				(119)	(146)	(142)	(113)	(162)	(193)	(125)
Capex				(521)	(464)	(583)	(1,023)	(833)	(618)	(782)
Free Cash Flows				43	235	263	(42)	264	642	664
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
Discounted Cash Flows				39	182	173	(24)	129	271	4,448

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Tax Incentive Asset
Adjusted Equity Value
Other Adjustments
Investment Property
Tax Incentive Assets
Dividend Payments
Total

Source: Management, PwC Analysis

Discounted Cash Flows

000 Ruscam Glass Packaging Holding

Sensitivity Analysis (RUB m)

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

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)
Gross Profit	6,255	7,614	8,480	9,549	10,169	10,688	11,050	11,565	12,187	12,675
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
EBITDA	3,457	4,496	4,886	5,416	5,561	5,869	6,064	6,377	6,748	7,018
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)
EBIT	1,405	2,491	2,924	2,330	2,781	2,627	2,639	2,852	4,257	3,467
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
Operational Cash Flows				4,950	5,005	5,343	5,536	5,807	5,896	6,324
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)
Free Cash Flows				(1,278)	631	1,433	2,833	3,884	3,855	2,465
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
Discounted Cash Flows				(1,220)	549	1,138	2,053	2,569	2,327	26,749

Source: Management, PwC Analysis

Discounted Cash Flows

JSC Mina

Sensitivity Analysis (GEL m)

LTCR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	79	76	73	70	68
	81	78	75	72	69
	83	80	76	73	70
	85	81	78	75	72

GEL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	GEL m	TL m
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)		
Gross Profit	17	18	25	23	24	20	26	27	27	28		
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		
EBITDA	11	12	16	14	15	11	16	16	17	17		
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)		
EBIT	1	7	8	6	6	(2)	2	3	10	10		
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%	0%		
Depreciation and Amortization (+)				8	8	13	13	14	7	7		
Operational Cash Flows				14	15	11	16	16	17	17		
Change in NWC				(1)	(1)	5	(6)	(1)	(1)	(1)		
Capex				(6)	(4)	(29)	(4)	(4)	(4)	(7)		
Free Cash Flows				7	9	(13)	5	11	11	9		
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		
Discounted Cash Flows				6	8	(10)	3	7	6	67		

Source: Management, PwC Analysis

Discounted Cash Flows

Investment Project

Sensitivity
Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	19	13	7	1	(4)
	21	15	9	3	(2)
	24	17	11	5	(0)
	27	20	13	7	2
	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)
Gross Profit	-	-	-	-	-	22	40	45	47	37	61	62
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)
EBITDA	-	-	-	-	-	12	25	30	32	22	42	43
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)
EBIT	-	-	-	-	-	2	10	15	18	5	22	32
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
Operational Cash Flows	-	-	-	-	-	10	22	27	29	19	39	39
Change in NWC	-	-	-	-	-	(14)	(15)	(8)	(2)	6	(7)	(1)
Capex						(177)	(2)	(6)	(6)	(6)	(48)	(8)
Free Cash Flows						(177)	(5)	1	13	21	(23)	24
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
Discounted Cash Flows						(152)	(4)	1	8	12	(6)	6
												77

Source: Management, PwC Analysis

Discounted Cash Flows

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

Sensitivity Analysis (TL m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-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)
Gross Profit	401	502	499	520	672	865	951	1,027	1,164	1,257
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 / Expenses	59	144	115	71	81	90	101	113	121	131
EBITDA	140	284	198	153	245	359	396	427	506	547
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)
EBIT	65	237	146	81	152	256	282	293	359	373
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
Operational Cash Flows				135	214	308	340	369	435	472
Change in NWC				(48)	(114)	(213)	(139)	(126)	(187)	(151)
Capex				(277)	(191)	(90)	(97)	(186)	(111)	(174)
Free Cash Flows				(190)	(91)	5	103	56	137	147
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
Discounted Cash Flows				(174)	(70)	3	58	27	57	924

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Other Adjustments
Adjusted Equity Value
Other Adjustments
m TL
Investment Property
Tax Incentive Assets
Total

Source: Management, PwC Analysis

Discounted Cash Flows

Paşabahçe Bulgaria EAD

Sensitivity Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-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)
Gross Profit	35	31	32	26	31	32	34	37	37	38
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
EBITDA	19	14	10	5	9	9	10	12	12	12
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)
EBIT	6	7	3	(3)	0	(2)	(1)	1	(0)	5
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
Operational Cash Flows				5	9	9	10	12	12	11
Change in NWC				4	(3)	(1)	(3)	(4)	(2)	(1)
Capex				(9)	(9)	(16)	(4)	(4)	(4)	(7)
Free Cash Flows				(1)	(4)	(9)	3	4	5	4
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
Discounted Cash Flows				(1)	(3)	(7)	2	3	4	45

Source: Management, PwC Analysis

Discounted Cash Flows

OOO Posuda Limited

Sensitivity
Analysis (RUB m)

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

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)
Gross Profit	1,213	1,329	1,301	1,402	1,504	1,310	1,508	1,575	1,598	1,662
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)
EBITDA	685	685	562	660	734	555	704	739	735	764
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)
EBIT	248	450	310	362	385	130	251	258	225	411
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
Operational Cash Flows	588	657	529	654	688	690				682
Change in NWC				(58)	35	127	(91)	(28)	(38)	(63)
Capex				(147)	(456)	(720)	(237)	(241)	(246)	(353)
Free Cash Flows	383	236	(64)	326	419	406				266
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
Discounted Cash Flows	364	203	(50)	229	267	234				2,385

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
-50 bp	(30)	(31)	(32)	(33)	(34)
-25 bp	(30)	(31)	(32)	(33)	(33)
-	(29)	(30)	(31)	(32)	(33)
+25 bp	(28)	(29)	(30)	(31)	(32)
+50 bp	(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)
Gross Profit	(0)	6	5	5	6	10	10	11	12	12
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
EBITDA	(0)	0	5	2	3	6	6	7	7	7
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)
EBIT	(1)	(1)	2	(2)	(3)	(0)	(0)	0	0	3
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
Operational Cash Flows				2	3	6	6	7	7	7
Change in NWC				(0)	(0)	(2)	0	(0)	(0)	(0)
Capex				(4)	(10)	(3)	(3)	(3)	(3)	(4)
Free Cash Flows				(3)	(7)	0	3	3	3	2
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
Discounted Cash Flows				(3)	(6)	0	2	2	2	19

Source: Management, PwC Analysis

Discounted Cash Flows

Denizli Cam Sanayii ve Tic. A.Ş.

Sensitivity Analysis (TL m)

LTGR	WACC				
	-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)
Gross Profit	21	20	21	5	30	39	49	55	61	66
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	-	-	-	-	-	-	-
EBITDA	5	9	7	(9)	13	20	28	32	36	39
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)
EBIT	1	5	4	(17)	5	11	18	21	23	21
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
Operational Cash Flows				(9)	12	18	24	28	31	35
Change in NWC				6	(14)	(6)	(7)	(6)	(6)	(5)
Capex				(39)	(8)	(9)	(10)	(11)	(12)	(18)
Free Cash Flows				(42)	(10)	3	8	11	14	12
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
Discounted Cash Flows				(38)	(7)	2	4	5	5	60

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

Source: Management, PwC Analysis

Discounted Cash Flows

Paşabahçe Mağazaları A.Ş.

Sensitivity Analysis (TL m)

LTGR	WACC				
	-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)
Gross Profit	112	132	165	155	205	261	311	365	422	456
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 / Expenses	1	1	2	(0)	1	2	3	4	5	6
EBITDA	11	11	22	6	17	32	41	52	63	68
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)
EBIT	6	7	16	(3)	6	19	25	33	42	60
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
Operational Cash Flows				6	16	29	36	45	55	56
Change in NWC				10	(28)	(32)	(29)	(31)	(34)	(19)
Capex				(32)	(12)	(13)	(15)	(16)	(17)	(8)
Free Cash Flows				(16)	(24)	(17)	(8)	(2)	4	29
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
Discounted Cash Flows				(14)	(18)	(10)	(4)	(1)	2	129

Source: Management, PwC Analysis

Discounted Cash Flows

Paşabahçe SRL

Sensitivity
Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	7	7	7	7	6
	7	7	7	7	7
	7	7	7	7	7
	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)
Gross Profit	4	4	4	4	4	5	5	5	5	5
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)	-	-	-	-	-	-	-
EBITDA	0	0	1	1	1	1	1	1	1	1
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)
EBIT	0	0	1	1	1	1	1	1	1	1
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
Operational Cash Flows				1	1	1	1	1	1	1
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				1	1	1	1	1	1	1
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
Discounted Cash Flows				1	0	0	0	0	0	3

Source: Management, PwC Analysis

Discounted Cash Flows

Paşabahçe (Shangai) Trading Co. Ltd.

Sensitivity Analysis (CNY m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	2	2	2	2	1
-25 bp	2	2	2	2	1
-	2	2	2	2	1
+25 bp	2	2	2	2	1
+50 bp	2	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)
Gross Profit	4	10	10	10	10	11	11	12	12	13
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 / Expenses	(1)	(1)	(0)	-	-	-	-	-	-	-
EBITDA	(5)	(1)	1	1	1	1	1	1	1	1
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)
EBIT	(5)	(1)	1	1	1	1	1	1	1	1
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
Operational Cash Flows				1	1	1	1	1	1	1
Change in NWC				(2)	(2)	(2)	(2)	(2)	(2)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				(1)	(1)	(1)	(1)	(1)	(1)	1
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
Discounted Cash Flows				(1)	(1)	(1)	(1)	(1)	(1)	3

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	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

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)
Gross Profit	-	1	1	1	1	1	1	1	1	1
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)	-	-	-	-	-	-	-
EBITDA	-	0	(0)	0	0	0	0	0	0	0
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)	-
EBIT	-	(0)	(0)	0	0	0	0	0	0	0
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	-
Operational Cash Flows				0	0	0	0	0	0	0
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Capex				-	-	-	-	-	-	-
Free Cash Flows				(0)	(0)	(0)	(0)	(0)	(0)	0
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
Discounted Cash Flows				(0)	(0)	(0)	(0)	(0)	(0)	1

Source: Management, PwC Analysis

Discounted Cash Flows

Paşabahçe Spain SL

Sensitivity Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	2	2	2	2	2
-25 bp	2	2	2	2	2
-	2	2	2	2	2
+25 bp	2	2	2	2	2
+50 bp	2	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	-	-	-	-	-	-	-	-	-	-
Gross Profit	-	1	1	1	1	1	1	1	1	1
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)	-	-	-	-	-	-	-	-
EBITDA	-	0	0	0	0	0	0	0	0	0
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)	-
EBIT	-	0	0	0	0	0	0	0	0	0
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	-
Operational Cash Flows				0	0	0	0	0	0	0
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				-	-	-	-	-	-	-
Free Cash Flows				0	0	0	0	0	0	0
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
Discounted Cash Flows				0	0	0	0	0	0	1

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

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	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

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)	-	-	-	-	-	-	-	-
Gross Profit	-	1	1	1	1	1	1	1	1	1
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)	-	-	-	-	-	-	-
EBITDA	-	0	(0)	0	0	0	0	0	0	0
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)
EBIT	-	0	(0)	0	0	0	0	0	0	0
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
Operational Cash Flows				0	0	0	0	0	0	0
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				0	0	0	0	0	0	0
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
Discounted Cash Flows				0	0	0	0	0	0	1

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)
Gross Profit	196	234	215	158	175	197	217	233	243	255
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 / Expenses	7	20	8	2	2	2	2	2	2	2
EBITDA	132	184	151	91	104	122	139	152	160	170
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)
EBIT	109	167	136	75	81	98	113	125	126	128
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
Operational Cash Flows				74	88	103	116	127	135	145
Change in NWC				15	(8)	(9)	(6)	(6)	(5)	(3)
Capex				(64)	(64)	(45)	(43)	(43)	(46)	(42)
Free Cash Flows				25	17	50	67	78	83	100
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
Discounted Cash Flows				24	14	39	48	51	50	778

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

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Elyaf Sanayii A.Ş.

Sensitivity Analysis (EUR m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	(10)	(13)	(15)	(18)	(20)
	(8)	(11)	(14)	(16)	(19)
	(7)	(10)	(12)	(15)	(17)
	(5)	(8)	(11)	(14)	(16)
	(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)
Gross Profit	-	(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
EBITDA	(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)
EBIT	(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
Operational Cash Flows				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)
Free Cash Flows				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
Discounted Cash Flows				12	10	9	7	7	7	59

Source: Management, PwC Analysis

Discounted Cash Flows

Oxyvit Kimya Sanayii Ve Tic. A.Ş.

Sensitivity Analysis (\$ m)

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

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

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

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
	9	9	9	9	8
	9	9	9	9	8
	9	9	9	9	9
	9	9	9	9	9

EUR m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	EUR m	TL m
Revenue	19	18	16	10	14	18	20	21	24	24	2	15
Change (%)	6.8%	-5.8%	-13.7%	-38.1%	43.7%	25.2%	11.3%	8.9%	12.4%	2.0%	5	36
Cost of Sales	(15)	(15)	(13)	(8)	(11)	(14)	(16)	(17)	(19)	(20)	8	51
Gross Profit	4	3	2	2	3	3	4	4	4	5	1	8
GP Margin (%)	20.9%	18.6%	14.5%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	18.6%	9	59
Operating Expenses	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)		
Other Operating Income / Expenses	(0)	0	0	(1)	-	-	-	-	-	-		
EBITDA	2	1	0	(0)	1	1	1	2	2	2		
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)		
EBIT	1	1	0	(0)	1	1	1	1	2	2		
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%		
Depreciation and Amortization (+)				0	0	0	0	0	0	0		
Operational Cash Flows				(0)	1	1	1	1	2	2		
Change in NWC				2	(1)	(1)	(0)	(0)	(1)	(0)		
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)		
Free Cash Flows				1	(0)	0	1	1	1	1		
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		
Discounted Cash Flows				1	(0)	0	0	0	0	5		

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Soda Lukavac D.O.O.

Sensitivity
Analysis (EUR m)

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)
Gross Profit	53	45	45	39	43	46	48	50	53	54
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
EBITDA	31	24	25	19	21	24	26	27	29	29
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)
EBIT	19	12	13	7	8	10	11	12	12	20
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
Operational Cash Flows				18	21	23	24	26	27	27
Change in NWC				3	(2)	(1)	(1)	(1)	(2)	(1)
Capex				(13)	(8)	(6)	(7)	(7)	(6)	(9)
Free Cash Flows				8	11	15	16	18	19	18
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
Discounted Cash Flows				7	9	11	11	11	11	107

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

Discounted Cash Flows

Solvay Şişecam Holding AG

Sensitivity Analysis (EUR m)

LTGR	WACC				
	-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
Free Cash Flows	21	21	17	13	13	13	13	13	13	13
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
Discounted Cash Flows				12	11	9	8	7	6	43
	EUR m		TL m							
DCF (2020-25)	53		353							
Terminal Value (>2025)	43		284							
Enterprise Value	96		637							

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Bulgaria EOOD

Sensitivity Analysis (EUR m)

LTGR	WACC				
	-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)
Gross Profit	2	3	2	2	2	2	2	2	2	2
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)
EBITDA	1	2	1	1	1	1	1	1	1	1
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)	-
EBIT	1	2	1	1	1	1	1	1	1	1
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	-
Operational Cash Flows				1	1	1	1	1	1	1
Change in NWC				0	0	0	0	0	0	0
Capex				-	-	-	-	-	-	-
Free Cash Flows				1	1	1	1	1	1	1
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
Discounted Cash Flows				1	1	1	1	1	1	9

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Trading Co.

Sensitivity Analysis (CNY m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
-50 bp	29	29	29	28	28
-25 bp	30	29	29	28	28
-	30	29	29	29	28
+25 bp	30	30	29	29	29
+50 bp	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
Change (%)	0.0%	-5.3%		-43.6%	40.2%	23.5%	8.7%	5.2%	6.2%	3.0%
Cost of Sales	(16)	(16)		(9)	(13)	(16)	(17)	(18)	(19)	(20)
Gross Profit	2	1		1	1	1	1	1	2	2
GP Margin (%)	11.4%	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)	(5)
Other Operating Income / Expenses	6	6		3	5	6	6	7	7	7
EBITDA	4	3		2	3	3	4	4	4	4
EBITDA Margin (%)	23.4%	19.1%		19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%
Depreciation and Amortization (-)	(0)	(0)		(0)	(0)	(0)	(0)	-	-	-
EBIT	4	3		2	3	3	4	4	4	4
EBIT Margin (%)	22.9%	18.6%		18.5%	18.7%	18.8%	19.0%	19.2%	19.2%	19.2%
Tax	-	-		(0)	(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%
Depreciation and Amortization (+)	-	-		0	0	0	0	-	-	-
Operational Cash Flows				1	2	2	3	3	3	3
Change in NWC				(0)	0	0	0	0	0	0
Capex				-	-	-	-	-	-	-
Free Cash Flows				1	2	3	3	3	3	3
Discount Rate				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	
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
Discounted Cash Flows				1	2	2	2	1	1	10

Source: Management, PwC Analysis

Discounted Cash Flows

Pacific Soda LLC

Sensitivity
Analysis (\$ m)

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

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)	
Gross Profit	-	-	-	-	-	(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)	
EBITDA	(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)	-	
EBIT	(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	-	
Operational Cash Flows	(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)	-	-	-	-	-	-	-	
Free Cash Flows	(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	
Discounted Cash Flows	(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
Net Present Value (50%)	425	2,523

Source: Management, PwC Analysis

Discounted Cash Flows

Türkiye Şişe ve Cam Fabrikaları A.Ş. (Solo)

Sensitivity
Analysis (TL m)

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

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
EBITDA	20	10	140	124	234	284	335	367	408	441
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)
EBIT	(17)	(32)	91	57	90	120	154	189	235	253
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
Operational Cash Flows				112	216	260	304	329	361	390
Change in NWC				(50)	(63)	(59)	(65)	(55)	(66)	(46)
Capex				(196)	(194)	(134)	(147)	(160)	(174)	(188)
Free Cash Flows				(135)	(41)	67	92	114	121	156
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
Discounted Cash Flows				(121)	(30)	40	46	47	42	541

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Other Adjustments
Adjusted Equity Value
TL m
24
541
565
(807)
412
170
TL m
Tax Incentive Assets
Dividend Payments
Dividend Income
Tax Incentive Assets (R&D)
Total
302
(320)
386
43
412

Source: Management, PwC Analysis

Discounted Cash Flows

Camış Madencilik A.Ş.

Sensitivity Analysis (TL m)

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

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)
Gross Profit	72	102	124	138	177	229	274	307	338	15,151
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)
EBITDA	35	51	65	53	78	111	138	157	173	6,538
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)
EBIT	24	40	51	39	56	71	88	103	114	5,750
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
Operational Cash Flows				44	66	97	121	137	150	5,388
Change in NWC				(3)	(9)	(10)	(9)	(7)	(7)	(301)
Capex				(122)	(113)	(96)	(38)	(41)	(43)	(1,006)
Free Cash Flows				(81)	(55)	(9)	74	89	100	4,081
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
Discounted Cash Flows				(74)	(42)	(6)	40	41	39	1

Source: Management, PwC Analysis

Discounted Cash Flows

Camış Ambalaj Sanayii A.Ş.

Sensitivity Analysis (TL m)

LTGR	WACC				
	-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)
Gross Profit	27	37	45	42	54	65	76	86	98	106
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
EBITDA	15	22	30	26	34	40	46	51	58	62
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)
EBIT	12	19	26	21	27	33	37	42	48	46
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
Operational Cash Flows				21	28	33	38	43	48	53
Change in NWC				1	(17)	(16)	(16)	(15)	(18)	(11)
Capex				(16)	(29)	(14)	(29)	(9)	(10)	(16)
Free Cash Flows				7	(18)	3	(6)	19	21	26
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
Discounted Cash Flows				6	(14)	2	(3)	9	8	133

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Adjusted Equity Value

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Enerji A.Ş.

Sensitivity Analysis (TL m)

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

TL m	2017	2018	2019	2020	2021	2022	2023	2024	2025	TV	TL m
Revenue	728	729	897	1,213	1,524	1,709	1,887	2,045	2,177	2,351	8.0%
Change (%)		0.1%	23.0%	35.3%	25.6%	12.1%	10.4%	8.4%	6.4%		
Cost of Sales	(715)	(704)	(873)	(1,190)	(1,494)	(1,675)	(1,850)	(2,005)	(2,134)	(2,305)	
Gross Profit	14	26	24	24	30	34	38	41	43	46	2.0%
GP Margin (%)	1.9%	3.5%	2.7%	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	
EBITDA	11	23	20	15	21	23	26	28	29	31	1.3%
EBITDA Margin (%)	1.5%	3.2%	2.2%	1.3%	1.4%	1.4%	1.4%	1.4%	1.3%		
Depreciation and Amortization (-)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
EBIT	11	23	20	15	21	23	26	27	29	31	1.3%
EBIT Margin (%)	1.5%	3.2%	2.2%	1.2%	1.3%	1.4%	1.4%	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%	20.0%
Depreciation and Amortization (+)				0	0	0	0	0	0	0	
Operational Cash Flows				12	17	19	21	22	23	25	
Change in NWC				1	(23)	(12)	(11)	(8)	(4)	(10)	
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)	
Free Cash Flows				13	(6)	6	9	14	19	14	
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	
Discounted Cash Flows				11	(5)	4	5	6	6	43	

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Çevre Sistemleri A.Ş.

Sensitivity Analysis (TL m)

LTGR	WACC				
	-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
EBITDA	5	1	6	6	7	7	8	8	8	9
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)
EBIT	4	(1)	4	1	2	2	2	3	3	6
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
Operational Cash Flows				6	7	7	7	7	8	8
Change in NWC				(12)	(3)	(1)	(1)	(1)	(1)	(1)
Capex				(11)	(1)	(1)	(1)	(1)	(1)	(3)
Free Cash Flows				(17)	3	5	5	5	6	4
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
Discounted Cash Flows				(16)	2	3	3	3	2	25

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

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Dış Ticaret A.Ş.

Sensitivity Analysis (TL m)

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

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
EBITDA	7	15	6	11	14	17	19	21	24	26
EBITDA Margin (%)	0.1%	0.2%	0.2%	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)
EBIT	7	15	6	11	14	17	19	21	24	26
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
Operational Cash Flows				9	11	14	15	17	19	21
Change in NWC				(18)	(11)	(12)	(8)	(10)	(11)	(9)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				(9)	0	1	7	7	8	12
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
Discounted Cash Flows				(8)	0	1	3	3	3	48

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Tax Assets (Accumulated Loss)
Adjusted Equity Value

Source: Management, PwC Analysis

Discounted Cash Flows

Şişecam Sigorta Aracılık Hizmetleri A.Ş.

Sensitivity
Analysis (TL m)

LTGR	WACC				
	-50 bp	-25 bp	-	+25 bp	+50 bp
	18	17	17	17	16
	18	17	17	17	16
	18	18	17	17	17
	18	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	-	-	-	-	-	-	-	-	-
EBITDA	3	2	3	2	2	2	2	3	3	3
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)
EBIT	3	2	3	2	2	2	2	3	3	3
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
Operational Cash Flows				1	2	2	2	2	2	3
Change in NWC				0	(0)	(0)	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				2	2	2	2	2	2	2
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
Discounted Cash Flows				1	1	1	1	1	1	8

TL m
DCF (2020-25)
Terminal Value (>2025)
Enterprise Value
Net Cash/(Debt)
Dividend Payments
Adjusted Equity Value

Source: Management, PwC Analysis

Discounted Cash Flows

Camış 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)
Gross Profit	5	9	4	9	14	15	17	19	2
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	-
EBITDA	5	7	2	7	12	13	15	16	1
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)
EBIT	2	4	1	2	7	8	9	11	(1)
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
Operational Cash Flows				7	11	12	13	14	1
Change in NWC				3	0	(0)	(0)	(0)	3
Capex				(13)	-	-	-	-	-
Free Cash Flows				(4)	11	11	13	14	4
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
Discounted Cash Flows				(4)	8	7	7	6	2

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

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
	18	17	17	17	16
	18	17	17	17	16
	18	17	17	17	16
	18	17	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)
Gross Profit	1	1	1	1	2	4	5	6	6	143
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)
EBITDA	0	1	1	1	2	2	2	3	3	53
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)
EBIT	0	1	1	1	2	2	2	3	3	53
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
Operational Cash Flows				1	1	2	2	2	2	42
Change in NWC				(0)	(0)	(0)	(0)	(0)	(0)	(1)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				1	1	1	2	2	2	41
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
Discounted Cash Flows				0.56	0.91	0.93	0.92	0.90	0.86	0

Source: Management, PwC Analysis

Discounted Cash Flows

Camış Egypt Mining Ltd. Co.

Sensitivity Analysis (\$ m)

LTGR	WACC				
	-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

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)
Gross Profit	4	2	2	2	1	0	1	1	1	1
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	-	-	-	-	-	-	-
EBITDA	0	0	0	0	0	0	0	0	0	0
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)
EBIT	0	0	0	0	(0)	(0)	0	0	0	0
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
Operational Cash Flows				0	0	0	0	0	0	0
Change in NWC				0	0	0	(0)	(0)	(0)	(0)
Capex				(0)	(0)	(0)	(0)	(0)	(0)	(0)
Free Cash Flows				0	0	0	0	0	0	0
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
Discounted Cash Flows				0.1	0.1	0.0	0.0	0.0	0.0	0.3

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

Source: Management, PwC Analysis

Discounted Cash Flows

Rudnik Krečnjaka Vijenac D.O.O.

Sensitivity
Analysis (BAM m)

		WACC				
		-50 bp	-25 bp	-	+25 bp	+50 bp
LtGR	-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% Camış Madencilik A.Ş. 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 Appraisement Value (TL m)*
SISE	Türkiye Şişe ve Cam Fab. A.Ş.	SC	Istanbul	Beykoz	302.4
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	187.5
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	64.7
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	37.2
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	11.9
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	11.7
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	8.9
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	6.4
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	5.6
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	4.8
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	3.9
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	3.2
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	2.6
SISE	Çayıröva Cam Sanayii A.Ş.	CY	Kocaeli	Gebze	1.9
SISE	Çayıröva 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
Total - Turkey					772.4
TRKCM	Richard Fritz Kft	FO	Besigheim - Germany		27.9
Total					800.3

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.

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)
Gross Profit	12,476	12,156	12,183
General, Administrative & Selling Expenses	(8,976)	(8,628)	(8,561)
Operating Income	3,500	3,528	3,621
Financial Income/Loss	(330)	(403)	(355)
Other Income/Loss	(693)	(2,019)	(927)
Earnings Before Tax	2,477	1,106	2,340
Provision for Income Tax	(526)	(563)	(708)
Net Income	1,951	543	1,632
EBITDA	4,947	5,761	5,087
EBITDA Margin (%)	10.1%	12.0%	10.6%

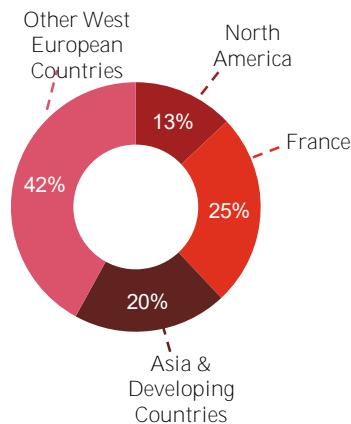
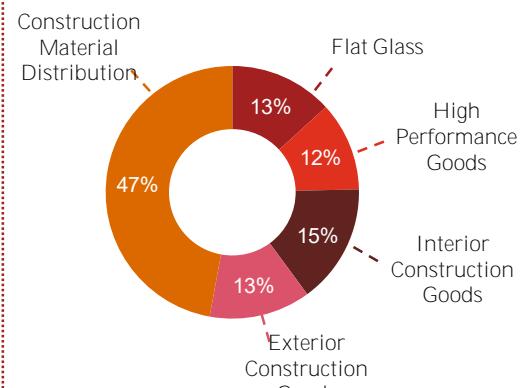
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	19,282	18,797	19,979
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
Fixed Assets	32,251	31,629	36,113
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
Total Assets	51,533	50,426	56,091
Current Liabilities	14,413	14,345	14,749
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
Long-term Liabilities	14,484	15,172	19,145
Long-term Financial Liabilities	9,192	10,554	14,407
Other non-current Liabilities	5,292	4,618	4,738
Total Equity	22,637	20,909	22,197
Total Liabilities and Equity	51,533	50,426	56,091

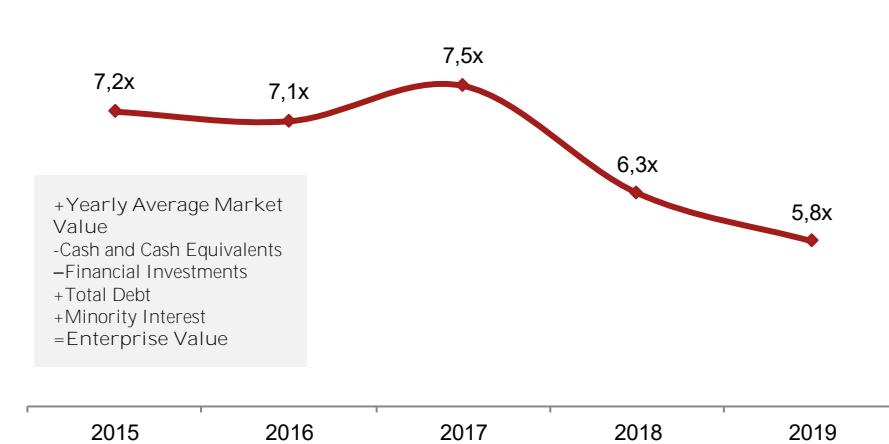
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA change (x)



AGC Inc.

FLAT GLASS

Income Statement

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

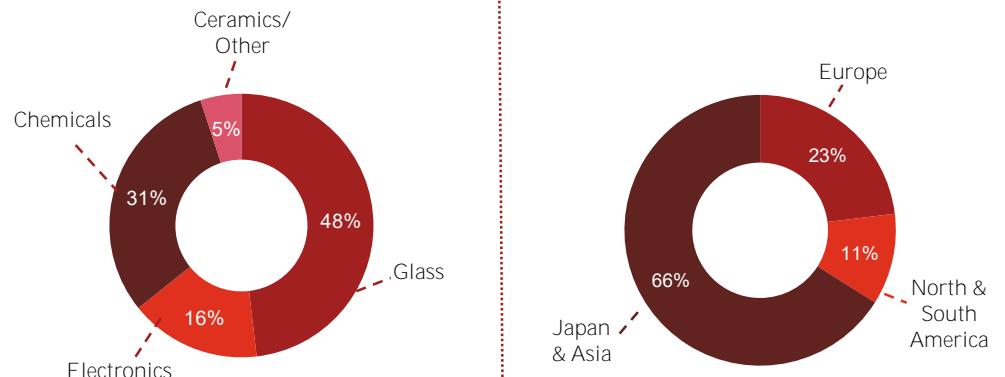
Balance Sheet

	31.12.2017	31.12.2018	31.12.2019
Current Assets	6,415	6,683	6,833
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
Fixed Assets	13,371	13,695	14,656
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
Total Assets	19,786	20,378	21,490
Current Liabilities	4,042	4,221	4,440
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
Long-term Liabilities	4,292	4,731	5,248
Long-term Financial Liabilities	3,123	3,670	4,088
Other non-current Liabilities	1,168	1,062	1,159
Total Equity	11,452	11,426	11,802
Total Liabilities and Equity	19,786	20,378	21,490

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

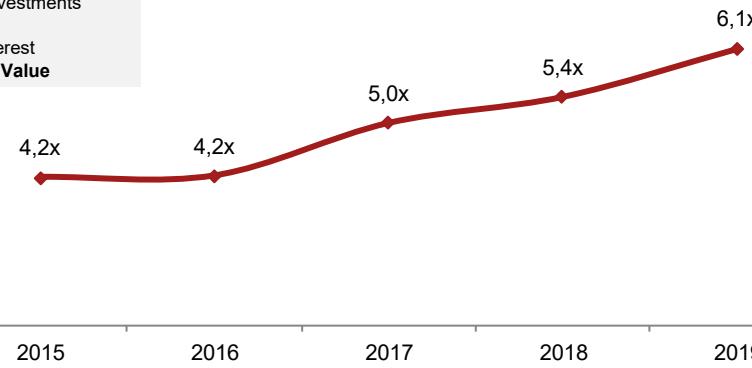
AGC supplies the glass demand that is used in the production of Companies in various sectors, from construction to electronics. The Company, establishment of which dates back to 1907, has a head office located in Tokyo, Japan. 48% of Company's sales are glass and 31% of them are chemicals.

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



Fuyao 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)
Gross Profit	1,191	1,214	1,107
General, Administrative & Selling Expenses	(434)	(477)	(528)
Research and Development Expenses	(123)	(129)	(117)
Other Operating Income/Loss	(30)	(30)	27
Operating Income	603	578	489
Financial Income/Loss	(0)	82	(62)
Other Income/Loss	(37)	62	37
Earnings Before Tax	566	722	464
Provision for Income Tax	(82)	(124)	(48)
Net Income	484	597	416
EBITDA	790	785	694
EBITDA Margin (%)	27.5%	26.7%	22.9%

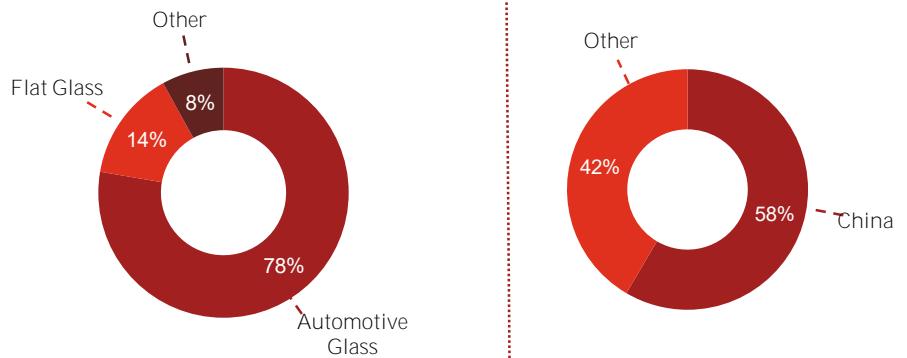
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	2,306	2,265	2,553
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
Fixed Assets	2,566	2,749	3,025
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
Total Assets	4,873	5,015	5,578
Current Liabilities	1,483	1,797	2,124
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
Long-term Liabilities	468	283	384
Long-term Financial Liabilities	386	181	253
Other non-current Liabilities	83	101	130
Total Equity	2,921	2,936	3,071
Total Liabilities and Equity	4,873	5,015	5,578

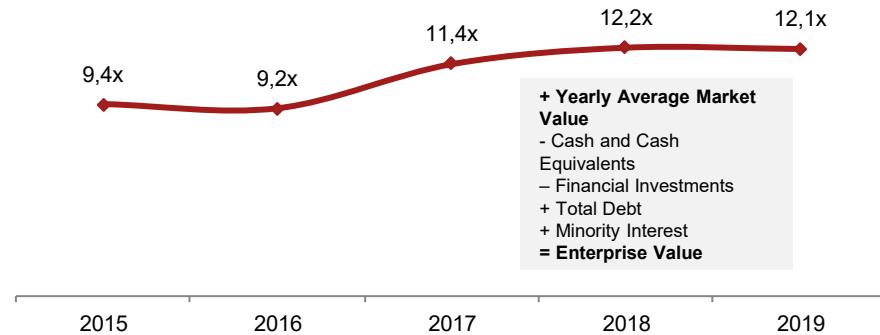
Source: Company's Activity and Audit Reports, Capital IQ

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 Fujian area. 78% of the Company's sales belong to automotive glass and 14% to flat glass.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

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)
Gross Profit	629	624	525
General, Administrative & Selling Expenses	(351)	(374)	(370)
Other Operating Income/Loss	32	3	(11)
Operating Income	310	253	144
Financial Income/Loss	(37)	(37)	(33)
Other Income/Loss	(11)	(8)	(34)
Earnings Before Tax	262	208	77
Provision for Income Tax	(68)	(46)	(13)
Net Income	194	162	64
EBITDA	418	370	282
EBITDA Margin (%)	20.2%	16.5%	12.9%

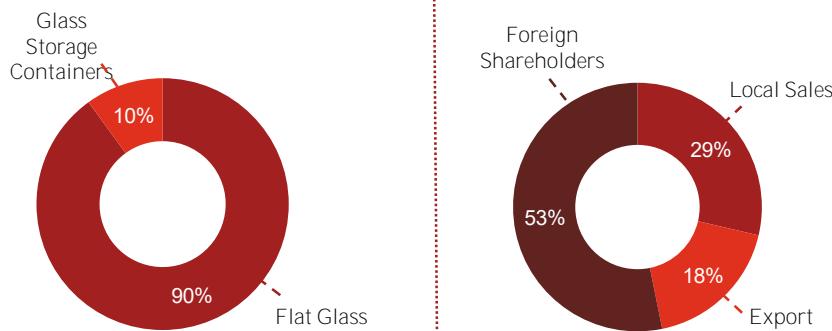
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	887	1,051	944
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
Fixed Assets	1,788	1,719	1,850
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
Total Assets	2,675	2,771	2,794
Current Liabilities	393	397	418
Accounts Payable	231	205	235
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	5	3	16
Other Short-term Liabilities	157	189	167
Long-term Liabilities	898	905	945
Long-term Financial Liabilities	685	718	700
Other non-current Liabilities	213	187	245
Total Equity	1,385	1,468	1,430
Total Liabilities and Equity	2,675	2,771	2,794

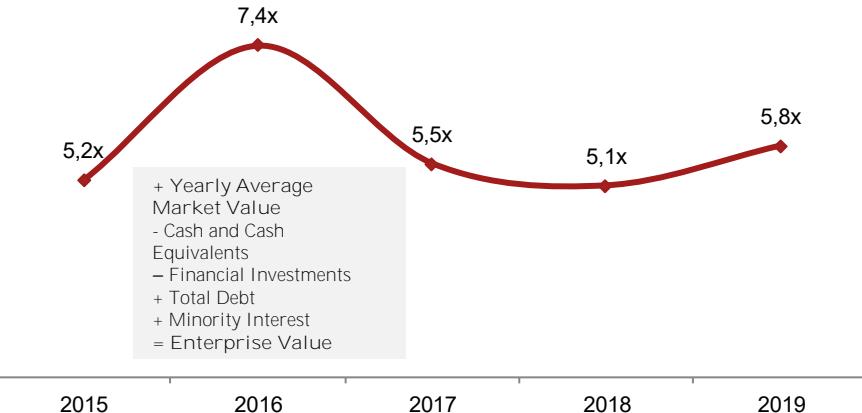
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Xinyi Glass Holdings Limited

FLAT GLASS

Income Statement

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

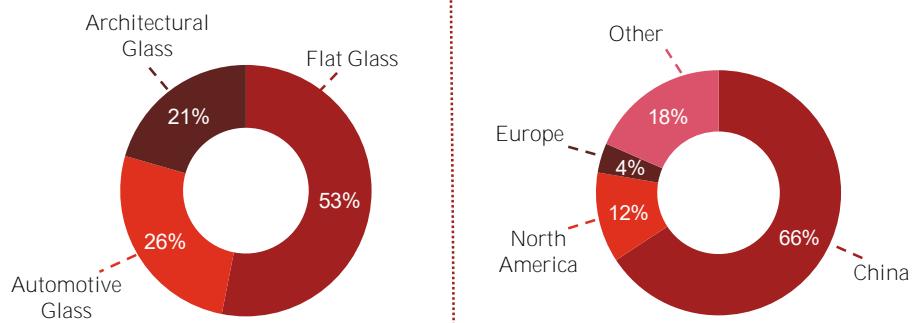
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	1,015	1,175	1,323
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
Fixed Assets	2,863	2,998	3,331
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
Total Assets	3,879	4,173	4,654
Current Liabilities	660	843	1,081
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
Long-term Liabilities	876	942	887
Long-term Financial Liabilities	819	878	816
Other non-current Liabilities	57	64	71
Total Equity	2,343	2,388	2,687
Total Liabilities and Equity	3,879	4,173	4,654

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

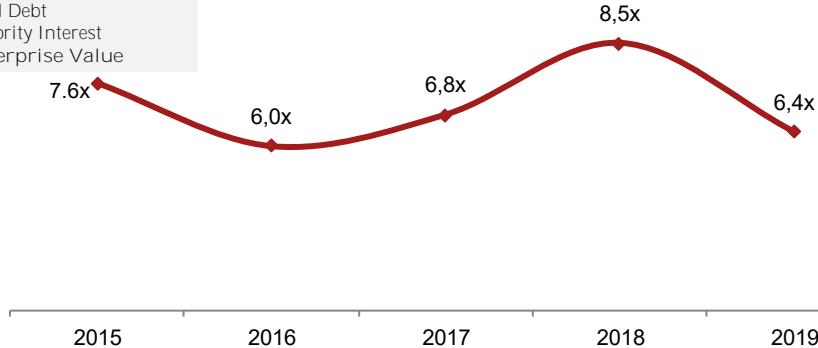
Xinyi Glass produces and sells glass products utilised for trading and industrial purposes in automotive, construction and other industries. The Company operates in three business segments such as: float glass, automotive glass and architectural glass. Xinyi Glass has been established in 1988 and the 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.

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



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

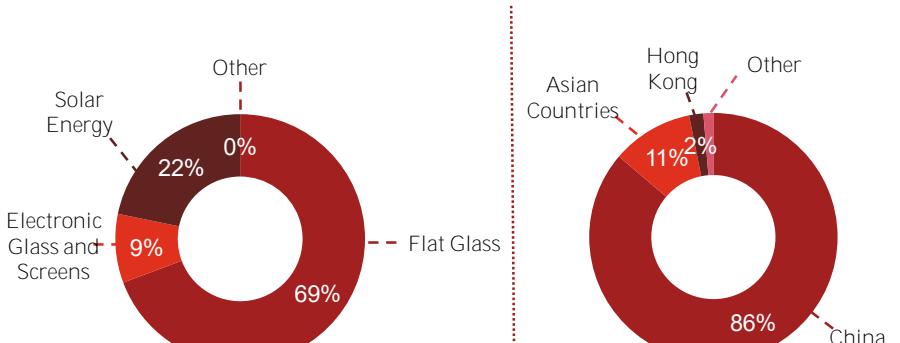
	FY17	FY18	FY19
Net Sales	1,672	1,543	1,416
Cost of Goods Sold	(1,263)	(1,181)	(1,067)
Gross Profit	409	362	348
General, Administrative & Selling Expenses	(143)	(158)	(141)
Research and Development Expenses	(51)	(49)	(46)
Other Operating Income/Loss	(19)	(20)	(24)
Operating Income	196	134	137
Financial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

Balance Sheet

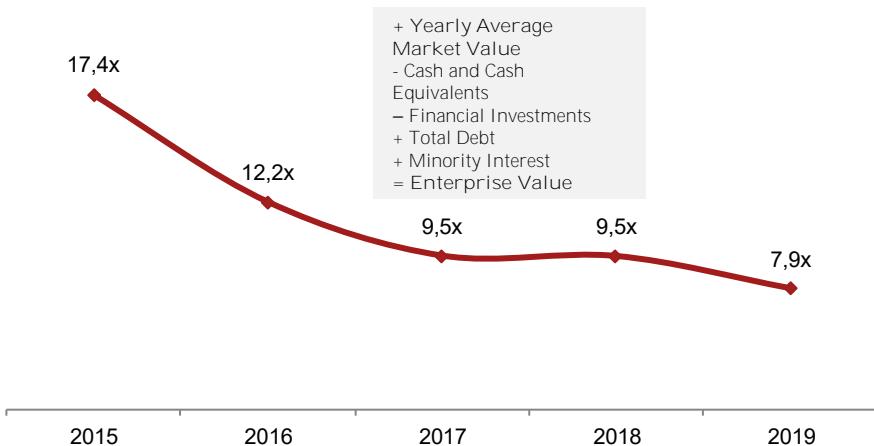
	31.12.201	31.12.201	30.09.201
Current Assets	759	717	657
Cash and Cash Equivalents	379	324	261
Account Receivables	183	191	178
Other Receivables	26	68	29
Inventory	105	87	114
Other Current Assets	66	46	76
Fixed Assets	2,244	2,063	1,920
Long-term Investments	-	-	-
Property, Plant & Equipment	1,992	1,816	1,677
Intangible Assets	223	206	198
Other Fixed Assets	29	40	45
Total Assets	3,002	2,779	2,577
Current Liabilities	1,146	901	936
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
Long-term Liabilities	507	504	255
Long-term Financial Liabilities	417	414	178
Other non-current Liabilities	90	91	77
Total Equity	1,349	1,374	1,387
Total Liabilities and Equity	3,002	2,779	2,577

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Zhuzhou Kibing Group Co. Ltd

FLAT GLASS

Income Statement

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

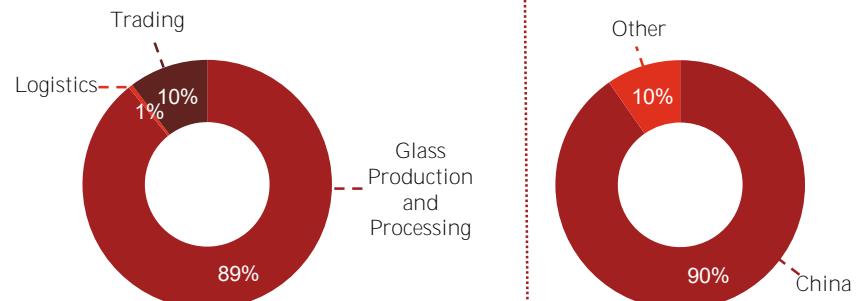
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	30.09.2019
Current Assets	323	303	343
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
Fixed Assets	1,632	1,564	1,494
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
Total Assets	1,954	1,867	1,836
Current Liabilities	306	377	478
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
Long-term Liabilities	561	389	268
Long-term Financial Liabilities	294	216	181
Other non-current Liabilities	266	173	87
Total Equity	1,088	1,101	1,090
Total Liabilities and Equity	1,954	1,867	1,836

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

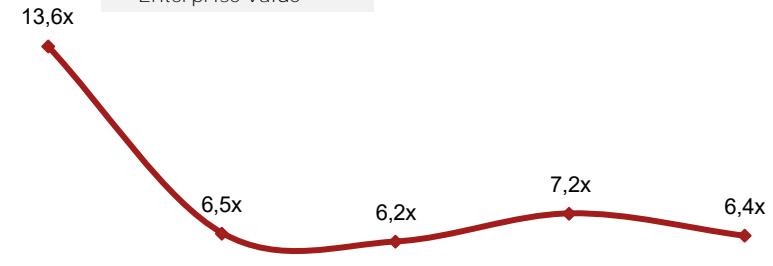
Zhuzhou Kibing produces and sells glass products. The head office of Zhuzhou Kibing, the Company that has been operating since 1988, is located in Shenzhen, China. 89% of Company's sales are associated with glass production and processing.

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



Owens-Illinois, Inc.

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)
Gross Profit	1,333	1,288	1,209
General, Administrative & Selling Expenses	(702)	(557)	(463)
Research and Development Expenses	(60)	(70)	(68)
Other Operating Income/Loss	(23)	(1)	(86)
Operating Income	548	661	592
Financial Income/Loss	(250)	(250)	(246)
Other Income/Loss	(26)	(32)	(610)
Earnings Before Tax	272	379	(264)
Provision for Income Tax	(70)	(96)	(118)
Net Income	202	283	(382)
EBITDA	976	1,090	1,054
EBITDA Margin (%)	14.2%	15.8%	15.8%

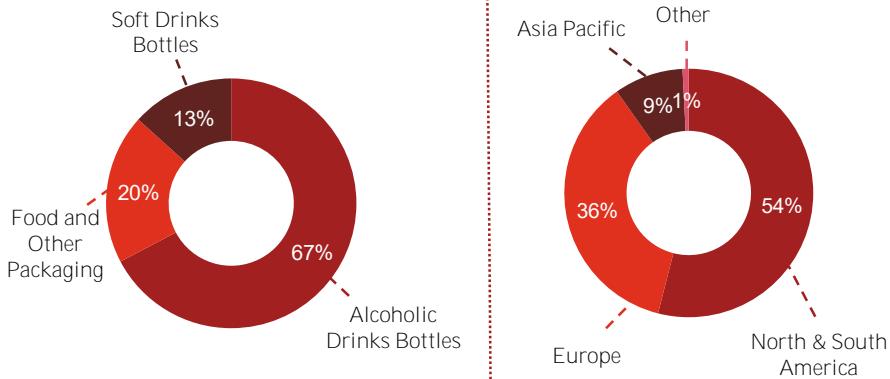
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	2,420	2,357	2,488
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
Fixed Assets	7,336	7,342	7,122
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
Total Assets	9,756	9,699	9,610
Current Liabilities	2,280	2,207	1,995
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
Long-term Liabilities	6,549	6,592	7,051
Long-term Financial Liabilities	5,121	5,181	5,573
Other non-current Liabilities	1,428	1,411	1,478
Total Equity	927	900	564
Total Liabilities and Equity	9,756	9,699	9,610

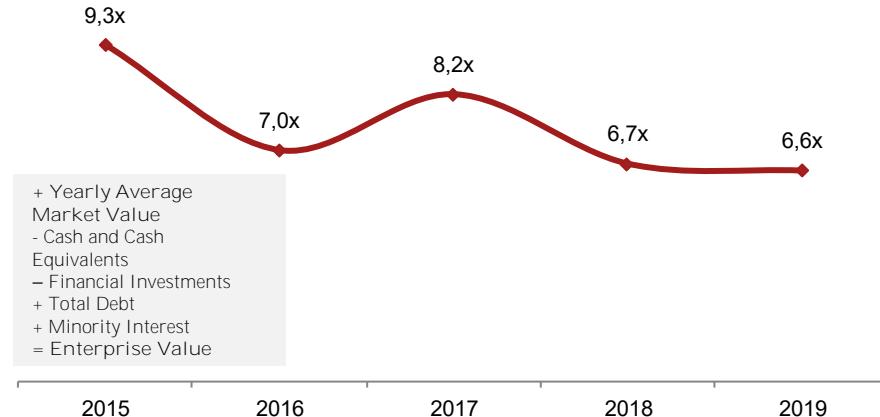
Source: Company's Activity and Audit Reports, Capital IQ

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.

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

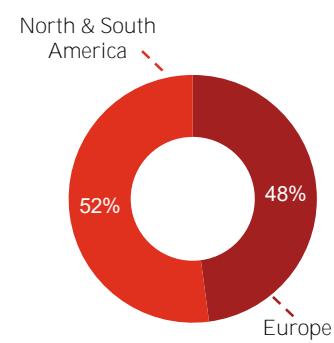
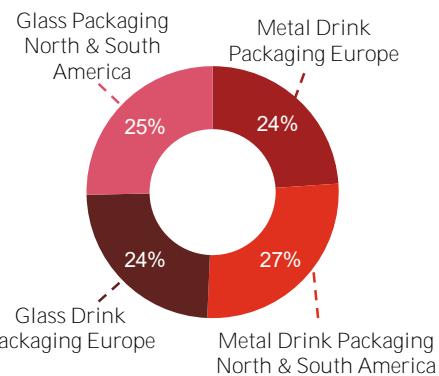
(\$ m)	FY17	FY18	FY19
Net Sales	6,390	6,676	6,660
Cost of Goods Sold	(5,309)	(5,623)	(5,610)
Gross Profit	1,081	1,053	1,050
General, Administrative & Selling Expenses	(304)	(316)	(329)
Amortization of Goodwill and Intangibles	(237)	(237)	(233)
Operating Income	540	500	488
Financial Income/Loss	(441)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

Balance Sheet

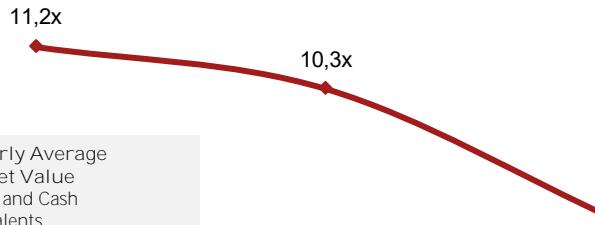
(\$ m)	31.12.201	31.12.201	31.12.201
Current Assets	3,427	3,036	2,466
Cash and Cash Equivalents	784	530	617
Account Receivables	1,015	983	667
Other Receivables	259	230	218
Inventory	1,353	1,284	964
Other Current Assets	16	9	-
Fixed Assets	7,725	7,278	6,212
Long-term Investments	10	-	381
Property, Plant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

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

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

Verallia Société Anonyme

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)
Gross Profit	497	507	609
General, Administrative & Selling Expenses	(176)	(168)	(192)
Other Operating Income/Loss	(1)	15	(19)
Operating Income	320	354	398
Financial Income/Loss	(155)	(124)	(130)
Other Income/Loss	(132)	(147)	(68)
Earnings Before Tax	33	83	200
Provision for Income Tax	(18)	(28)	(60)
Net Income	15	56	140
EBITDA	708	695	716
EBITDA Margin (%)	24.6%	25.1%	24.7%

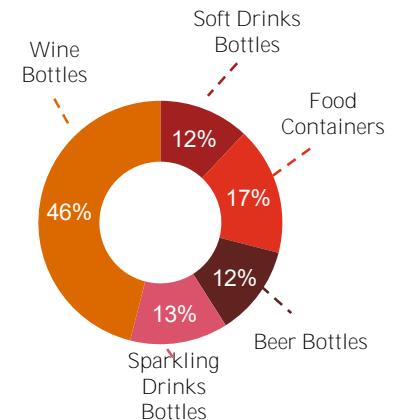
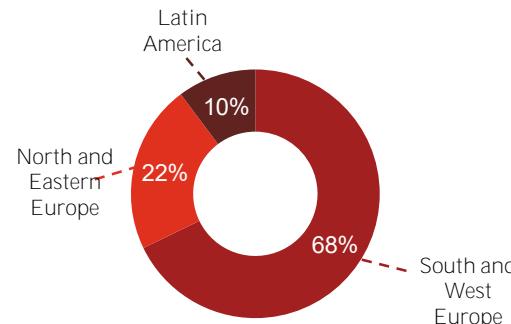
Balance Sheet

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

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

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.

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.

Gerresheimer AG

GLASS PACKAGING

Income Statement

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

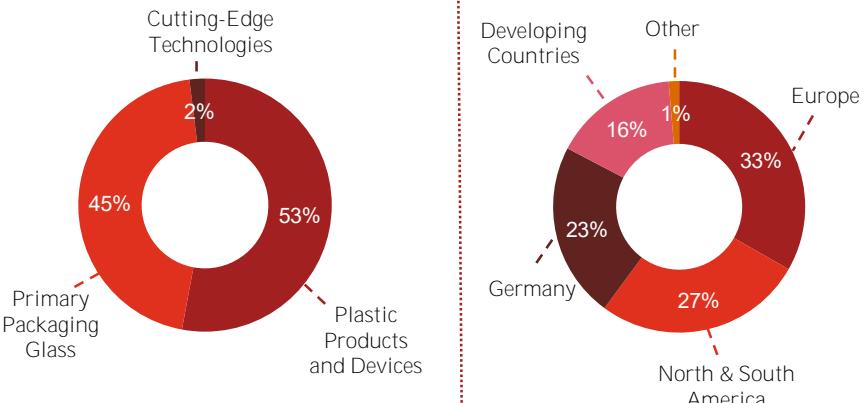
Balance Sheet

	30.11.201	30.11.201	30.11.201
Current Assets	852	647	600
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
Fixed Assets	2,059	2,445	2,310
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
Total Assets	2,911	3,092	2,910
Current Liabilities	802	870	981
Accounts Payable	210	235	244
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	377	325	581
Other Short-term liabilities	215	310	156
Long-term Liabilities	1,169	1,214	891
Long-term Financial Liabilities	811	767	548
Other non-current Liabilities	357	447	344
Total Equity	940	1,008	1,037
Total Liabilities and Equity	2,911	3,092	2,910

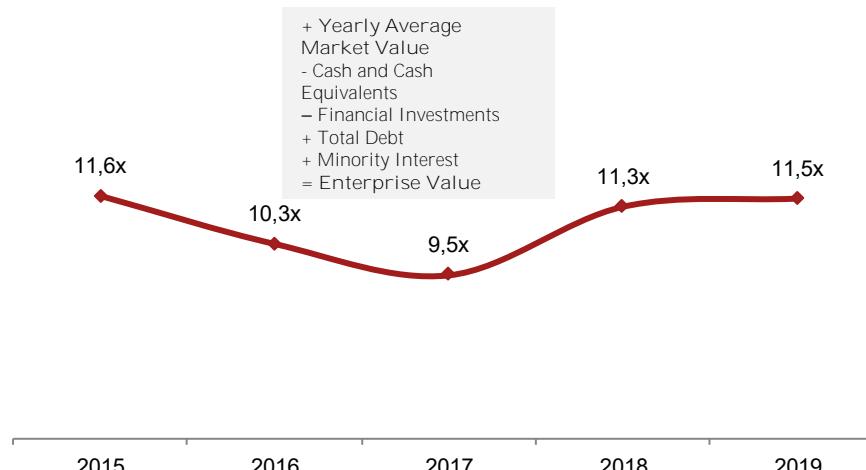
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

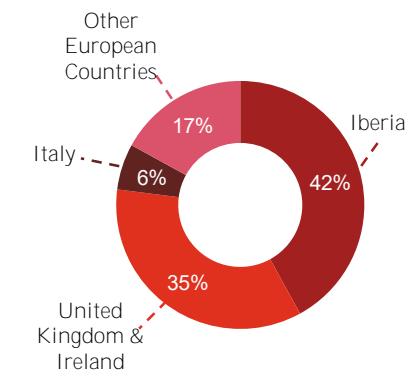
(\$ m)	FY17	FY18	FY19
Net Sales	992	1,107	1,134
Cost of Goods Sold	(332)	(373)	(400)
Gross Profit	659	734	735
General, Administrative & Selling Expenses	(210)	(218)	(222)
Amortization of Goodwill and Intangibles	(92)	(101)	(102)
Other Operating Income/Loss	(219)	(247)	(209)
Operating Income	138	168	202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

Balance Sheet

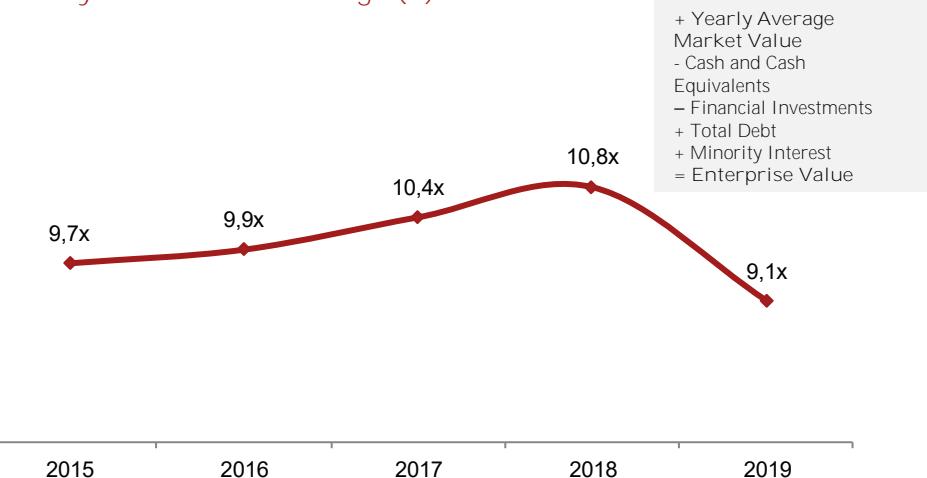
(\$ m)	31.12.201	31.12.201	31.12.201
Current Assets	542	514	549
Cash and Cash Equivalents	50	26	32
Account Receivables	238	248	275
Other Receivables	21	18	16
Inventory	228	212	218
Other Current Assets	4	10	6
Fixed Assets	1,145	1,097	1,087
Long-term Investments	0	0	0
Property, Plant & Equipment	820	783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

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Vetropack Holding AG

GLASS PACKAGING

Income Statement

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

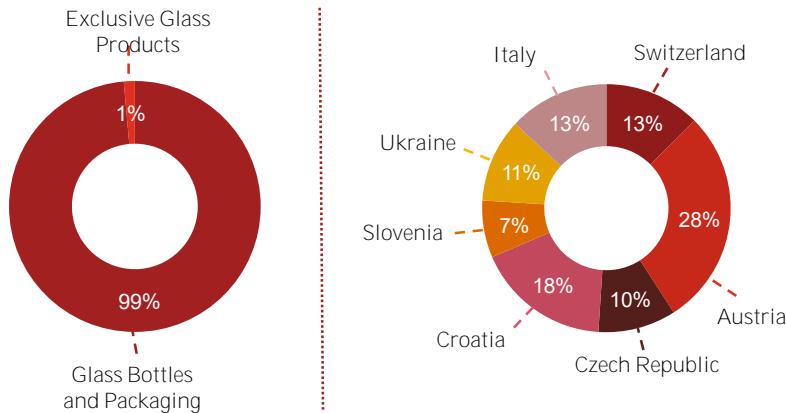
Balance Sheet

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

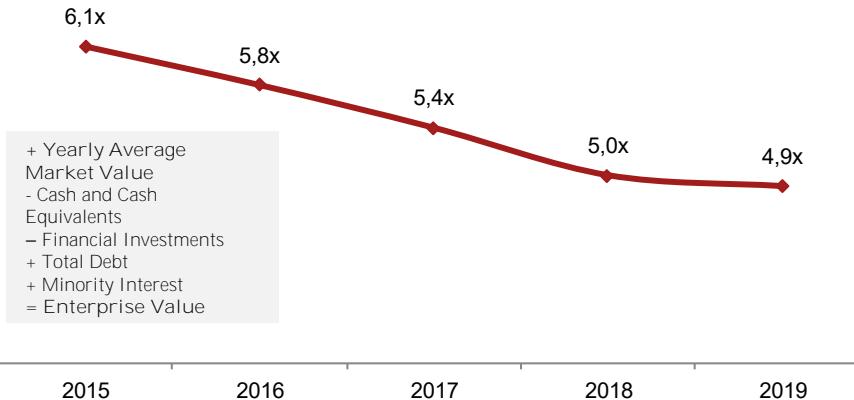
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Verallia Deutschland AG

GLASS PACKAGING

Income Statement

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

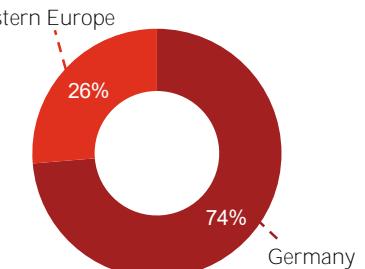
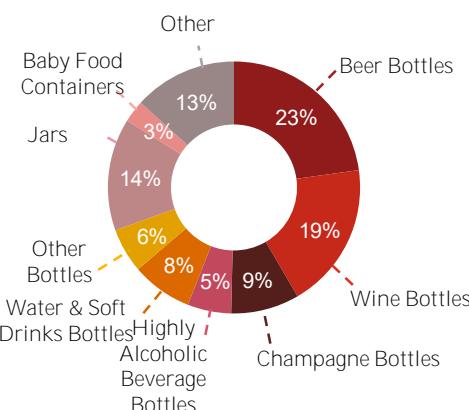
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	216	221	230
Cash and Cash Equivalents	68	88	102
Account Receivables	36	34	36
Other Receivables	6	5	6
Inventory	107	94	86
Other Current Assets	-	-	-
Fixed Assets	308	281	290
Long-term Investments	2	2	2
Property, Plant & Equipment	299	273	279
Intangible Assets	6	5	5
Other Fixed Assets	2	2	4
Total Assets	524	503	521
Current Liabilities	169	180	213
Accounts Payable	104	90	77
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	7	5	103
Other Short-term liabilities	58	85	33
Long-term Liabilities	290	277	281
Long-term Financial Liabilities	265	256	266
Other non-current Liabilities	25	21	15
Total Equity	66	46	27
Total Liabilities and Equity	524	503	521

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

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.

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

Cristalerías de Chile S.A.

GLASS PACKAGING

Income Statement

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

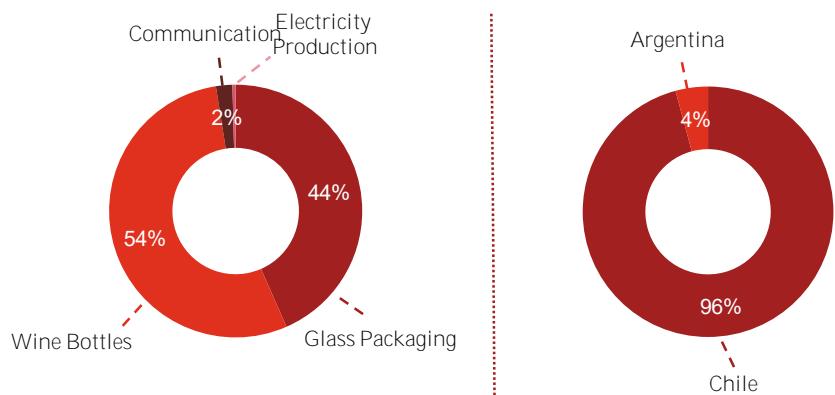
Balance Sheet

	31.12.2017	31.12.2018	31.12.2019
Current Assets	377	329	326
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
Fixed Assets	464	487	532
Long-term Investments	54	63	63
Property, Plant & Equipment	381	394	440
Intangible Assets	19	17	15
Other Fixed Assets	9	14	14
Total Assets	841	816	857
Current Liabilities	107	127	120
Accounts Payable	55	64	61
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	17	30	39
Other Short-term liabilities	35	33	20
Long-term Liabilities	214	192	260
Long-term Financial Liabilities	151	132	202
Other non-current Liabilities	63	61	58
Total Equity	520	497	477
Total Liabilities and Equity	841	816	857

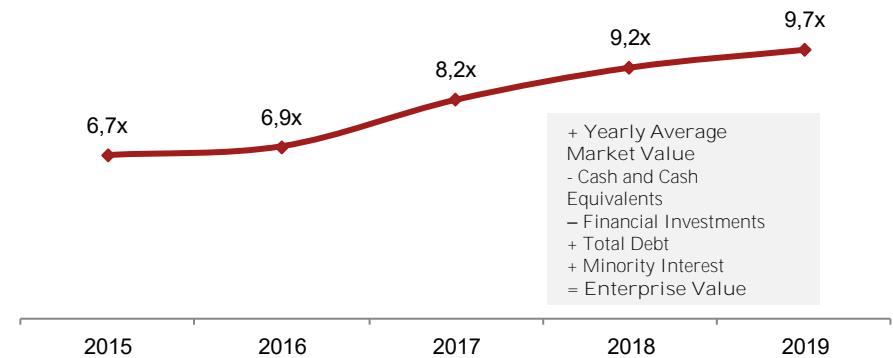
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



BG Container Glass Public Company Limited

GLASS PACKAGING

Income Statement

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

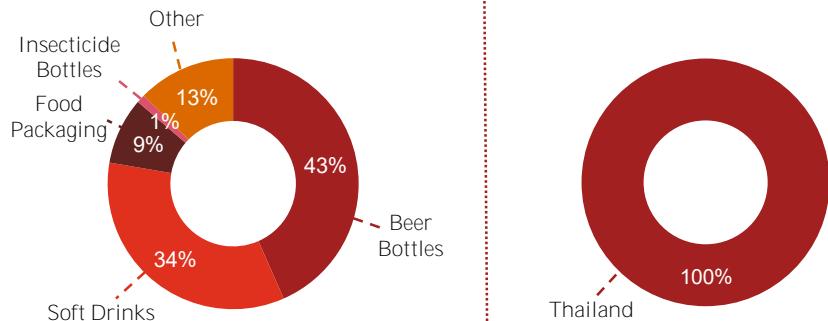
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	116	117	125
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
Fixed Assets	282	339	459
Long-term Investments	-	-	4
Property, Plant & Equipment	276	336	433
Intangible Assets	0	0	1
Other Fixed Assets	6	3	21
Total Assets	398	456	584
Current Liabilities	236	221	219
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
Long-term Liabilities	69	75	176
Long-term Financial Liabilities	54	61	155
Other non-current Liabilities	15	15	21
Total Equity	93	160	189
Total Liabilities and Equity	398	456	584

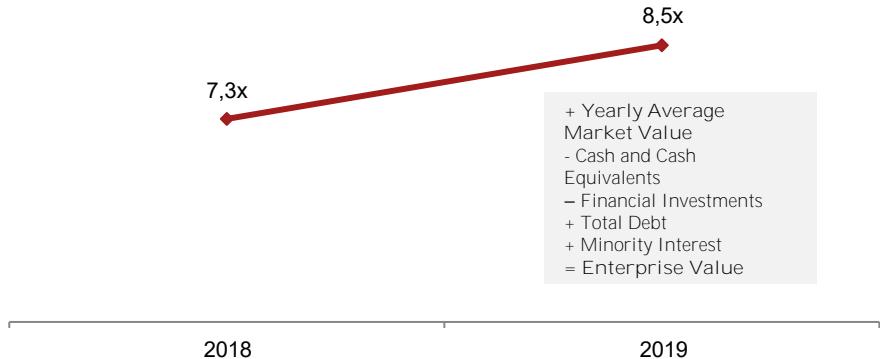
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Zignago Vetro S.p.A.

GLASS PACKAGING

Income Statement

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

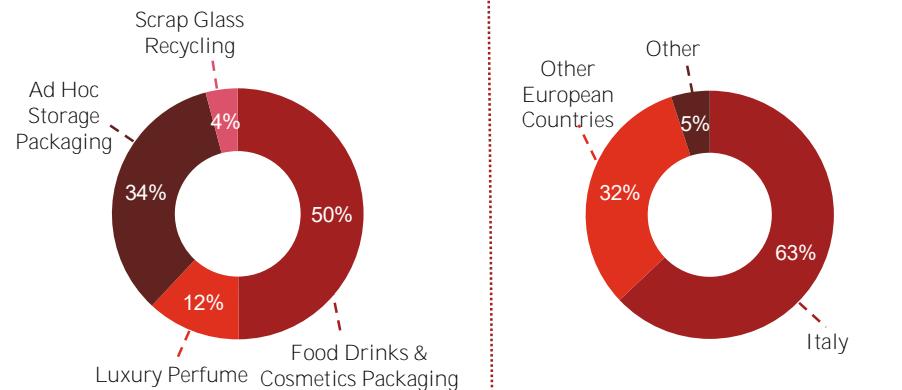
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	232	226	261
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
Fixed Assets	312	358	377
Long-term Investments	84	86	94
Property, Plant & Equipment	220	263	272
Intangible Assets	4	3	6
Other Fixed Assets	5	6	5
Total Assets	544	584	638
Current Liabilities	164	204	236
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
Long-term Liabilities	168	150	153
Long-term Financial Liabilities	150	135	139
Other non-current Liabilities	18	15	14
Total Equity	213	229	249
Total Liabilities and Equity	544	584	638

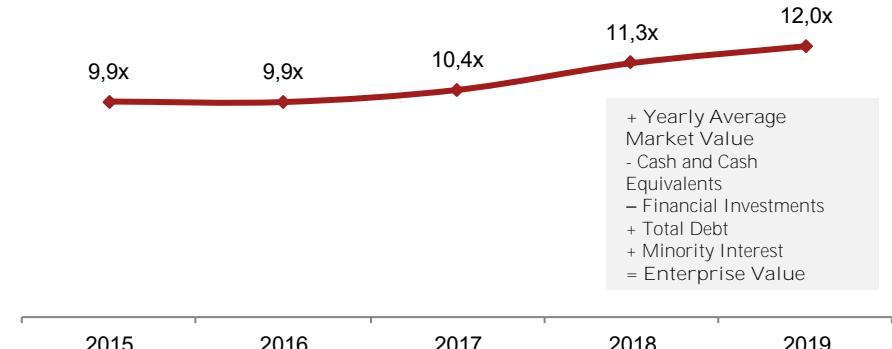
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

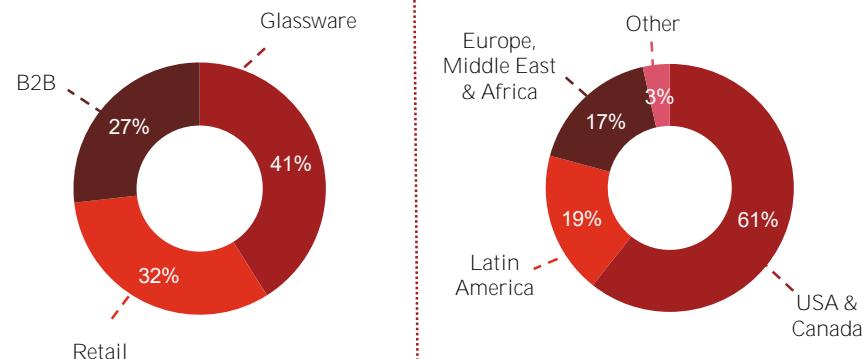
	FY17	FY18	FY19
Net Sales	785	801	786
Cost of Goods Sold	(631)	(646)	(630)
Gross Profit	154	155	156
General, Administrative & Selling Expenses	(123)	(123)	(119)
Research and Development Expenses	(3)	(4)	(3)
Operating Income	29	29	34
Financial Income/Loss	(20)	(22)	(23)
Other Income/Loss	(86)	(5)	(71)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

Balance Sheet

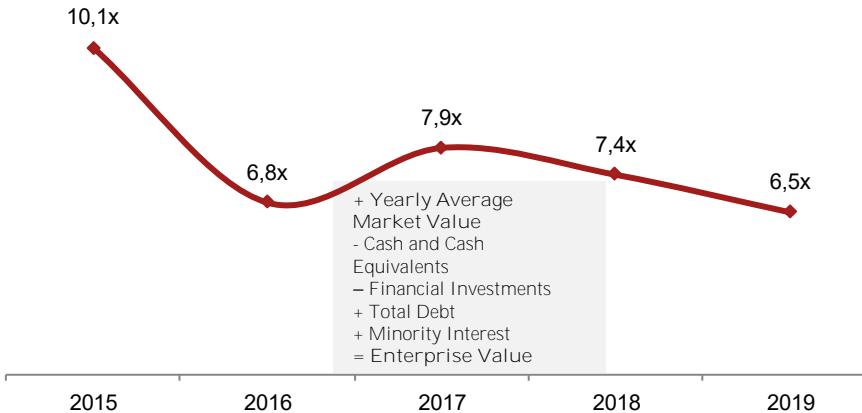
	31.12.201	31.12.201	31.12.201
Current Assets	315	318	323
Cash and Cash Equivalents	25	26	49
Account Receivables	89	83	80
Other Receivables	1	1	1
Inventory	188	192	175
Other Current Assets	13	15	18
Fixed Assets	402	397	384
Long-term Investments	1	-	-
Property, Plant & Equipment	266	265	289
Intangible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

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Nadir Figueiredo Ind. e Com. S.A.

GLASSWARE

Income Statement

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

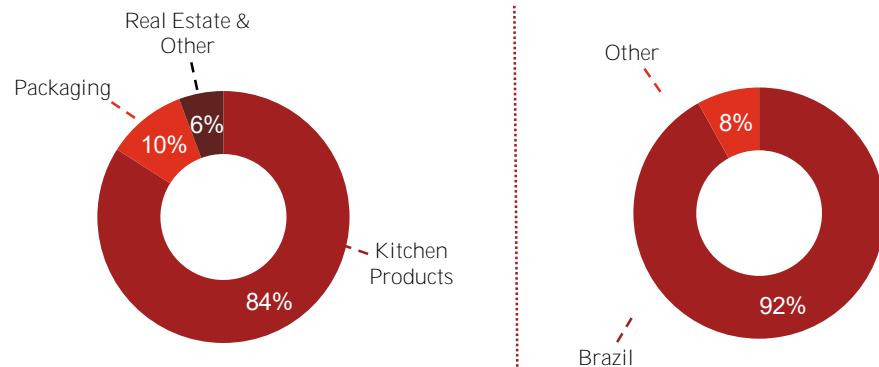
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	88	94	113
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
Fixed Assets	101	91	76
Long-term Investments	-	-	-
Property, Plant & Equipment	68	62	70
Intangible Assets	0	0	0
Other Fixed Assets	33	28	5
Total Assets	190	185	189
Current Liabilities	64	57	45
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
Long-term Liabilities	22	25	64
Long-term Financial Liabilities	10	14	55
Other non-current Liabilities	12	11	9
Total Equity	104	103	79
Total Liabilities and Equity	190	185	189

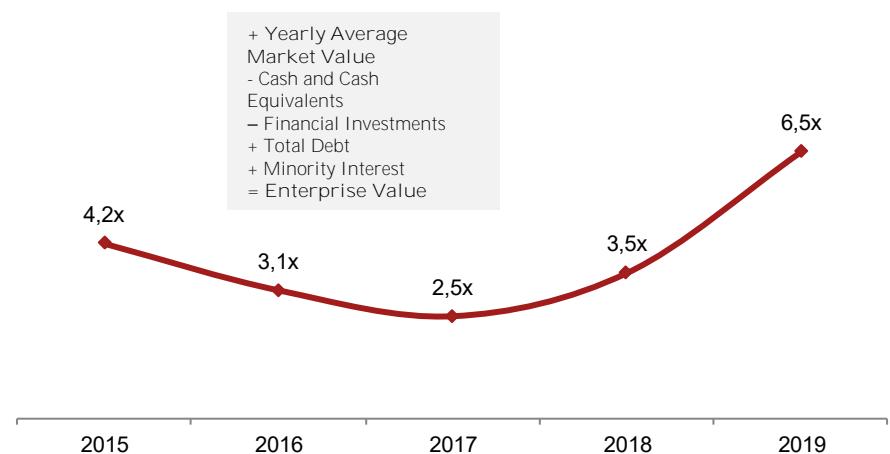
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Solvay SA

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)
Gross Profit	3,706	3,475	3,348
General, Administrative & Selling Expenses	(1,726)	(1,579)	(1,494)
Research and Development Expenses	(348)	(340)	(362)
Other Operating Income/Loss	(197)	(161)	(159)
Operating Income	1,435	1,395	1,332
Financial Income/Loss	(213)	(129)	(127)
Other Income/Loss	(118)	(131)	(859)
Earnings Before Tax	1,105	1,135	347
Provision for Income Tax	237	(86)	(172)
Net Income	1,341	1,049	175
EBITDA	2,580	2,449	2,491
EBITDA Margin (%)	19.6%	18.9%	19.8%

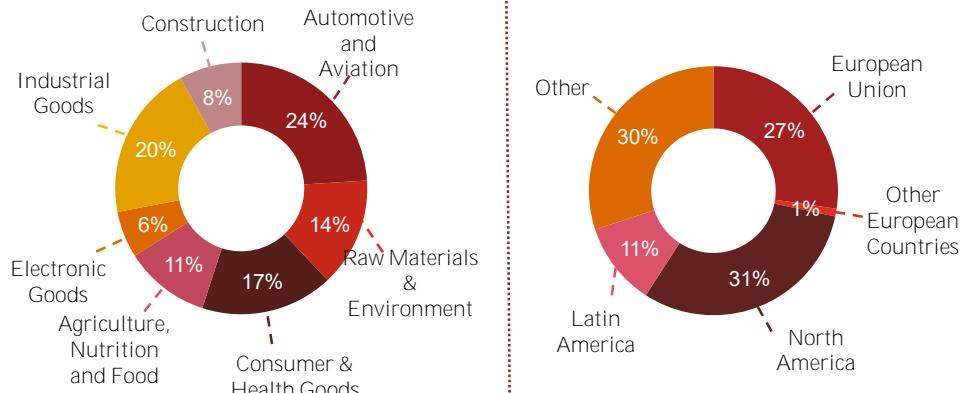
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	31.12.2019
Current Assets	7,273	7,527	7,038
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
Fixed Assets	18,485	17,662	16,872
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
Total Assets	25,758	25,189	23,911
Current Liabilities	4,957	4,468	4,591
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
Long-term Liabilities	9,091	8,556	8,519
Long-term Financial Liabilities	3,821	3,641	3,795
Other non-current Liabilities	5,270	4,915	4,723
Total Equity	11,710	12,165	10,801
Total Liabilities and Equity	25,758	25,189	23,911

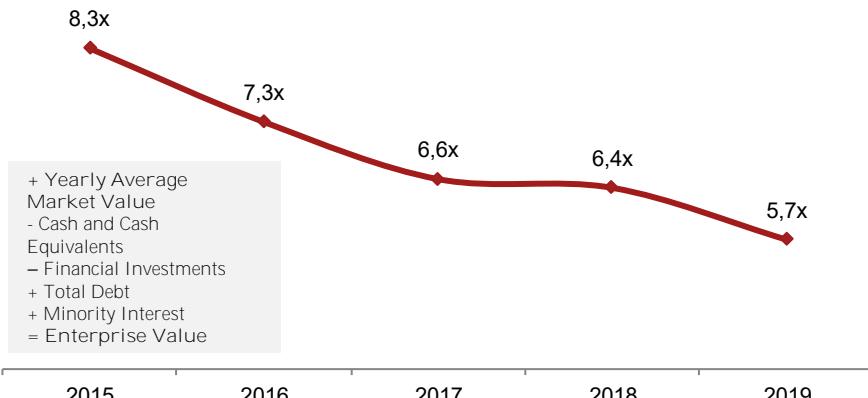
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Tangshan Sanyou Chemical Ind.

SODA

Income Statement

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

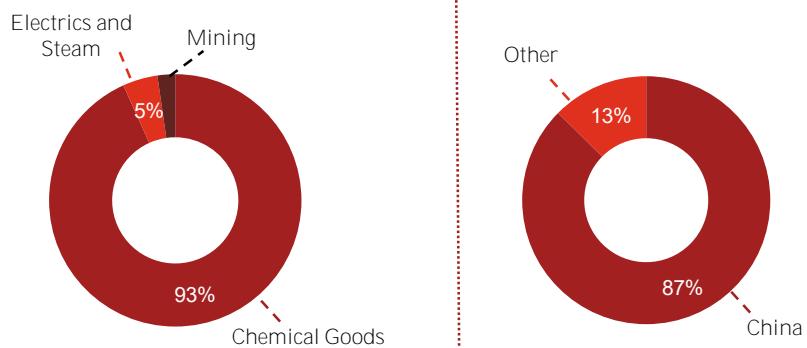
Balance Sheet

	31.12.201	31.12.201	30.09.201
Current Assets	1,109	1,132	1,128
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
Fixed Assets	2,594	2,552	2,448
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
Total Assets	3,702	3,684	3,576
Current Liabilities	1,452	1,300	1,208
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
Long-term Liabilities	616	672	701
Long-term Financial Liabilities	576	623	649
Other non-current Liabilities	40	49	52
Total Equity	1,634	1,713	1,666
Total Liabilities and Equity	3,702	3,684	3,576

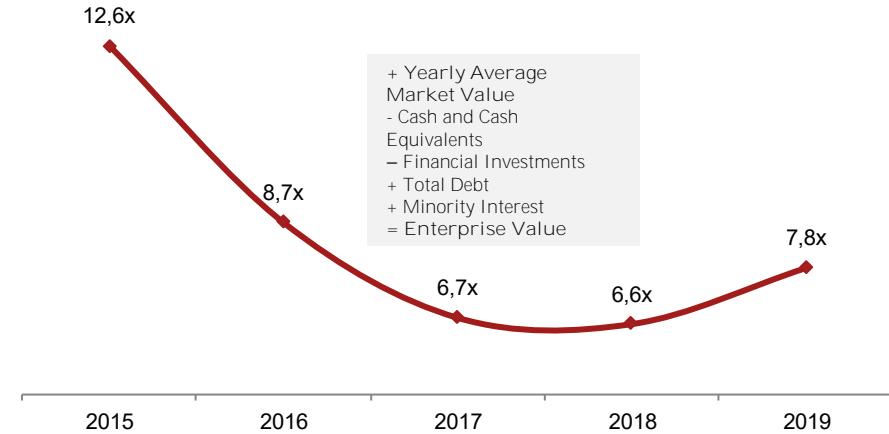
Source: Company's Activity and Audit Reports, Capital IQ

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.

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

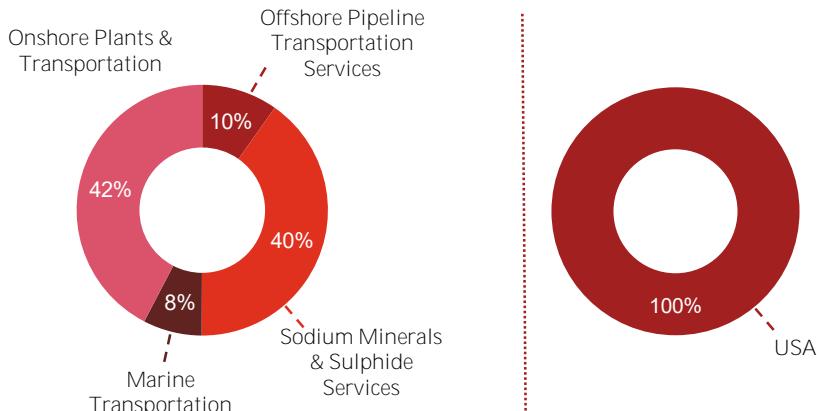
(\$ m)	FY17	FY18	FY19
Net Sales	2,028	2,913	2,481
Cost of Goods Sold	(1,529)	(2,278)	(1,836)
Gross Profit	499	634	645
General, Administrative & Selling Expenses	(54)	(65)	(53)
Depreciation	(252)	(313)	(320)
Operating Income	192	256	273
Financial Income/Loss	(177)	(229)	(219)
Other Income/Loss	63	(37)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

Balance Sheet

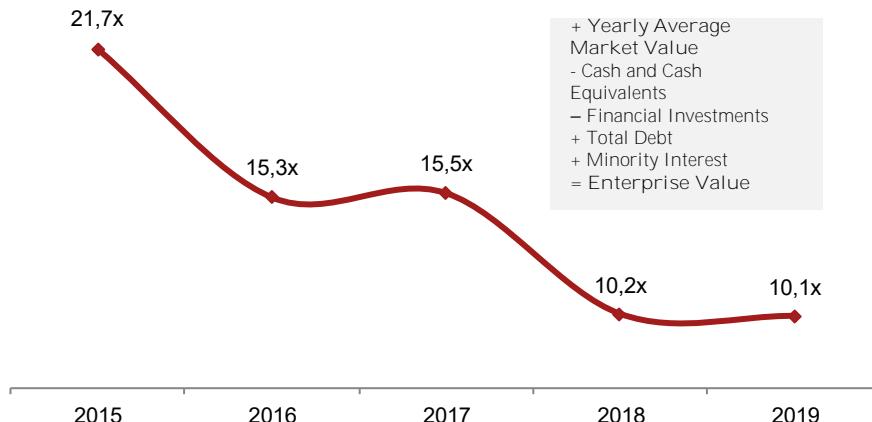
(\$ m)	31.12.201	31.12.201	31.12.201
Current Assets	636	443	593
Cash and Cash Equivalents	9	10	29
Account Receivables	503	332	426
Other Receivables	-	-	-
Inventory	89	74	65
Other Current Assets	35	28	73
Fixed Assets	6,501	6,036	6,005
Long-term Investments	382	355	335
Property, Plant & Equipment	5,431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

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Tata Chemicals Limited

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

SODA

Income Statement (\$ m)

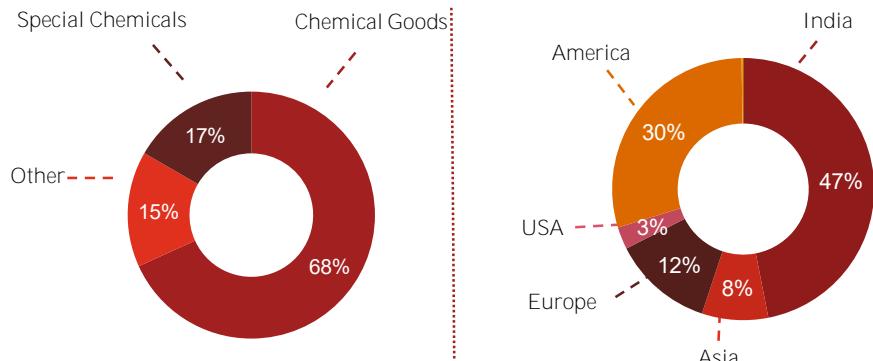
	FY17	FY18	S12A*
Net Sales	1,597	1,578	1,638
Cost of Goods Sold	(381)	(324)	(371)
Gross Profit	1,216	1,254	1,267
General, Administrative & Selling Expenses	(250)	(244)	(246)
Depreciation	(79)	(80)	(88)
Other Operating Income/Loss	(639)	(670)	(700)
Operating Income	248	261	233
Financial Income/Loss	(32)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

Balance Sheet (\$ m)

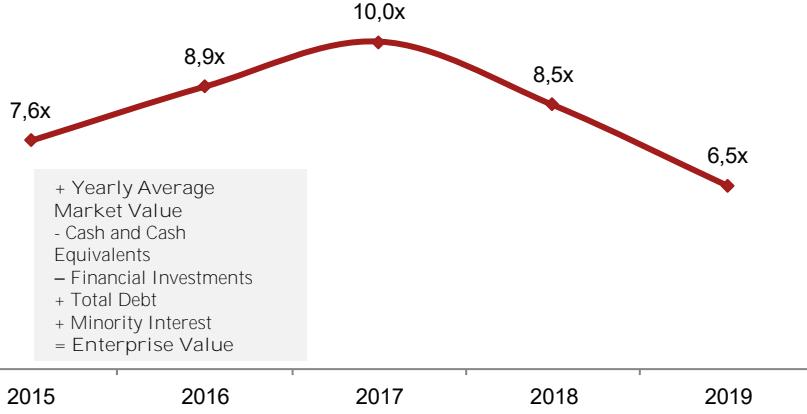
	31.03.201	31.03.201	30.09.201
Current Assets	1,138	1,389	1,096
Cash and Cash Equivalents	291	703	580
Account Receivables	323	201	232
Other Receivables	28	53	1
Inventory	214	225	233
Other Current Assets	282	207	50
Fixed Assets	2,506	2,588	2,791
Long-term Investments	397	424	485
Property, Plant & Equipment	647	670	805
Intangible Assets	262	266	267
Other Fixed Assets	1,200	1,227	1,234
Total Assets	3,644	3,977	3,886
Current Liabilities	865	569	762
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
Long-term Liabilities	1,153	1,284	906
Long-term Financial Liabilities	674	829	489
Other non-current Liabilities	480	455	416
Total Equity	1,625	2,124	2,219
Total Liabilities and Equity	3,644	3,977	3,886

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Chengdu Wintrue Holding Co. Ltd.

SODA

Income Statement

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

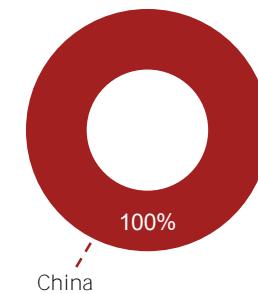
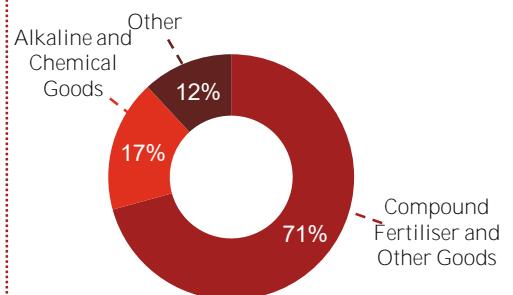
Balance Sheet

	31.12.201	31.12.201	30.09.201
Current Assets	593	653	594
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
Fixed Assets	836	855	764
Long-term Investments	3	12	2
Property, Plant & Equipment	633	638	590
Intangible Assets	138	152	113
Other Fixed Assets	62	53	59
Total Assets	1,429	1,508	1,358
Current Liabilities	841	900	738
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
Long-term Liabilities	102	145	160
Long-term Financial Liabilities	81	128	144
Other non-current Liabilities	21	17	16
Total Equity	486	463	459
Total Liabilities and Equity	1,429	1,508	1,358

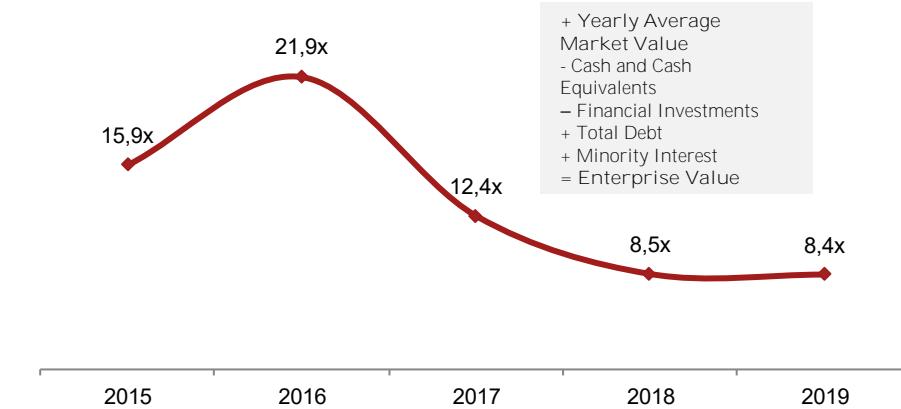
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

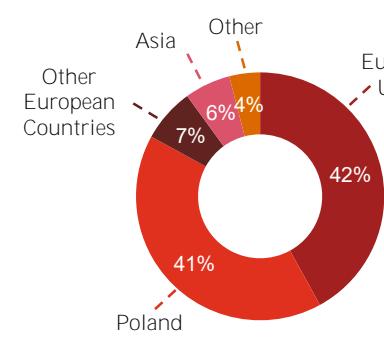
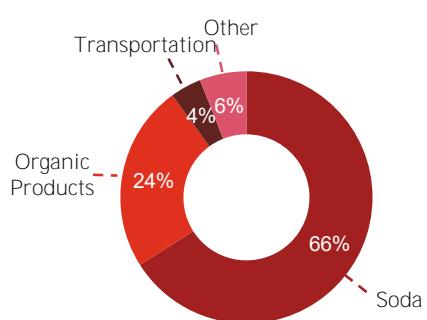
	FY17	FY18	FY19
Net Sales	1,029	979	937
Cost of Goods Sold	(765)	(776)	(730)
Gross Profit	263	204	206
General, Administrative & Selling Expenses	(116)	(111)	(120)
Other Operating Income/Loss	19	5	(16)
Operating Income	166	98	71
Financial Income/Loss	(10)	(17)	(24)
Other Income/Loss	(8)	0	2
Earnings Before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

Balance Sheet

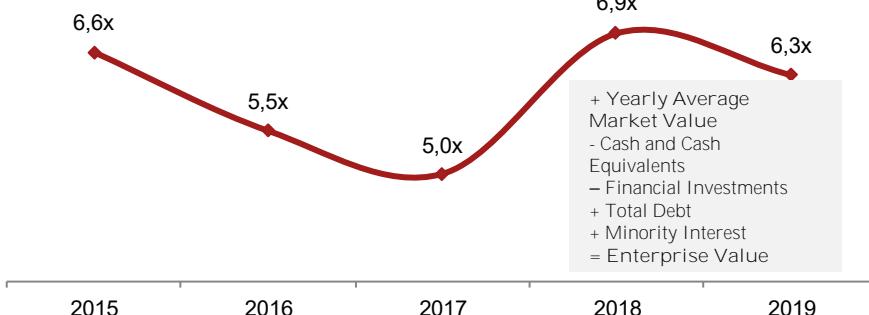
	31.12.201	31.12.201	31.12.201
Current Assets	413	339	346
Cash and Cash Equivalents	146	55	83
Account Receivables	114	118	93
Other Receivables	43	45	49
Inventory	105	117	120
Other Current Assets	6	5	2
Fixed Assets	921	947	986
Long-term Investments	15	8	6
Property, Plant & Equipment	780	762	815
Intangible Assets	56	129	125
Other Fixed Assets	71	48	39
Total Assets	1,335	1,286	1,332
Current Liabilities	313	343	296
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
Long-term Liabilities	394	436	514
Long-term Financial Liabilities	343	372	450
Other non-current Liabilities	51	64	64
Total Equity	628	506	522
Total Liabilities and Equity	1,335	1,286	1,332

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

Income Statement

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

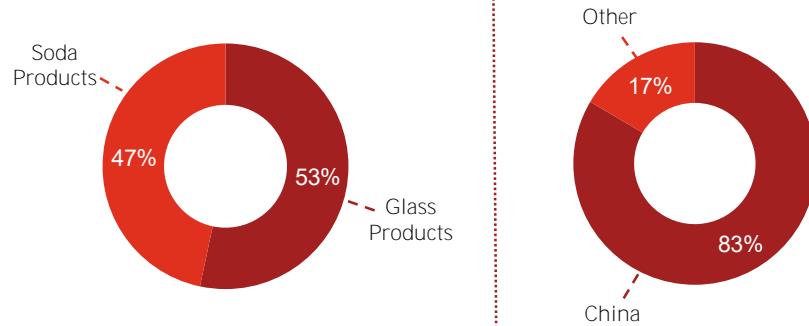
Balance Sheet

	31.12.201	31.12.201	30.09.201
Current Assets	490	561	501
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
Fixed Assets	985	842	798
Long-term Investments	36	56	55
Property, Plant & Equipment	781	638	599
Intangible Assets	71	83	78
Other Fixed Assets	97	66	67
Total Assets	1,476	1,404	1,299
Current Liabilities	687	707	628
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
Long-term Liabilities	131	75	79
Long-term Financial Liabilities	67	35	-
Other non-current Liabilities	63	39	79
Total Equity	658	622	593
Total Liabilities and Equity	1,476	1,404	1,299

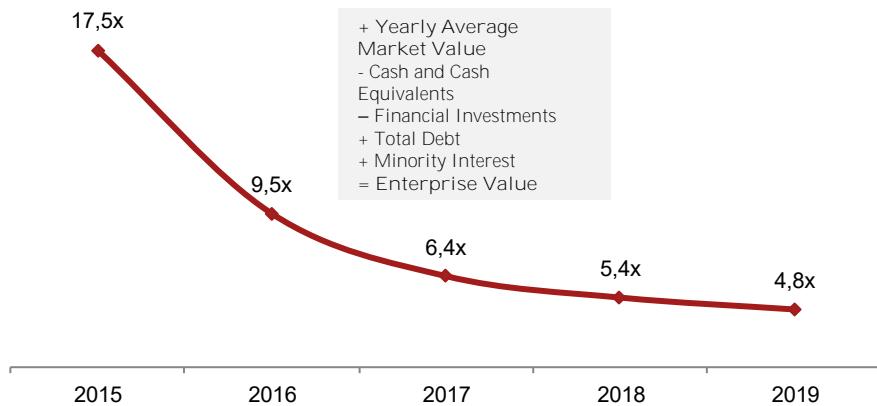
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Ciner Resources LP

SODA

Income Statement

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

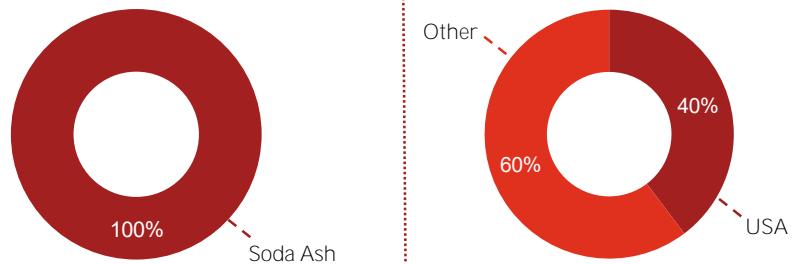
Balance Sheet

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

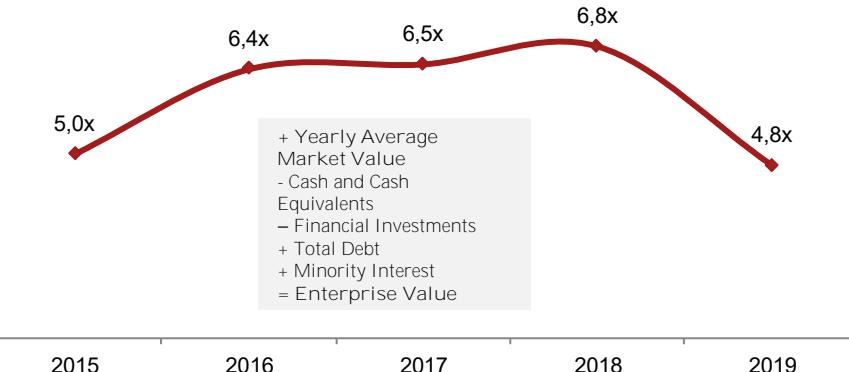
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Elementis plc

CHROMIUM

Income Statement

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

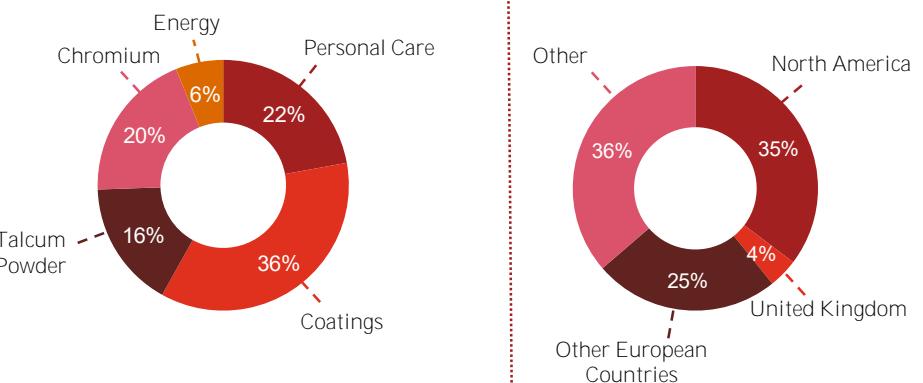
Balance Sheet

	31.12.201	31.12.201	31.12.201
Current Assets	387	424	393
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
Fixed Assets	953	1,511	1,512
Long-term Investments	527	717	726
Property, Plant & Equipment	220	478	514
Intangible Assets	190	259	232
Other Fixed Assets	16	56	40
Total Assets	1,340	1,935	1,905
Current Liabilities	168	168	176
Accounts Payable	54	62	80
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	3	3	9
Other Short-term liabilities	112	104	86
Long-term Liabilities	469	851	824
Long-term Financial Liabilities	343	586	591
Other non-current Liabilities	126	265	233
Total Equity	702	916	906
Total Liabilities and Equity	1,340	1,935	1,905

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

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Nippon Chemical Industrial Co. Ltd.

CHROMIUM

Income Statement		\$12A17*	\$12A18*	\$12A19*
	(\$ m)	MY17	MY18	MY19
Net Sales		314	333	335
Cost of Goods Sold		(240)	(253)	(262)
Gross Profit		73	80	73
General, Administrative & Selling Expenses		(31)	(32)	(37)
Research and Development Expenses		(11)	(9)	(11)
Other Operating Income/Loss		(4)	(3)	(0)
Operating Income		28	36	25
Financial Income/Loss		-	0	1
Other Income/Loss		0	(2)	(1)
Earnings Before Tax		28	34	24
Provision for Income Tax		(5)	(10)	(6)
Net Income		24	24	18
EBITDA		48	56	44
EBITDA Margin (%)		15.2%	16.8%	13.1%

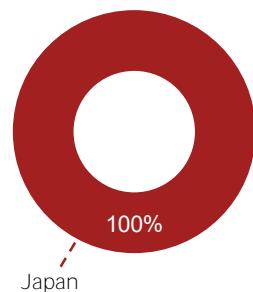
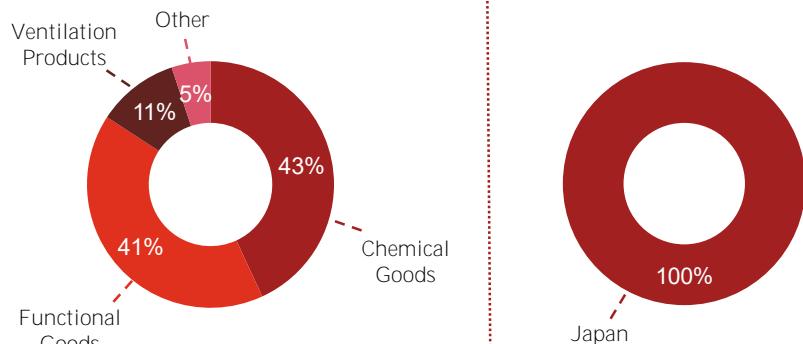
Balance Sheet

	(\$ m)	31.12.201	31.12.201	31.12.201
Current Assets		255	264	286
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
Fixed Assets		287	308	344
Long-term Investments		71	66	70
Property, Plant & Equipment		212	238	269
Intangible Assets		2	3	4
Other Fixed Assets		1	1	1
Total Assets		542	572	630
Current Liabilities		174	159	155
Accounts Payable		36	41	38
Short-term Borrowings		99	80	73
Current Portion of Long-term Debt		-	-	-
Other Short-term liabilities		39	38	44
Long-term Liabilities		67	92	137
Long-term Financial Liabilities		18	42	81
Other non-current Liabilities		50	50	56
Total Equity		300	322	338
Total Liabilities and Equity		542	572	630

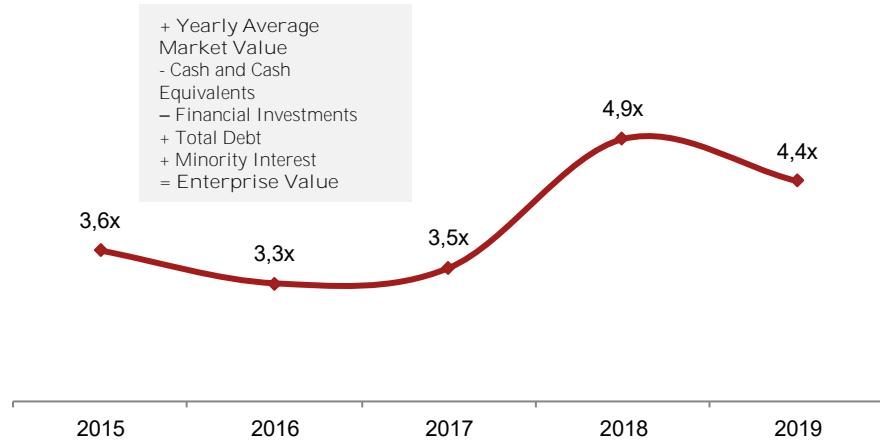
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Hubei Zhenhua Chemical Co. Ltd.

CHROMIUM

Income Statement

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

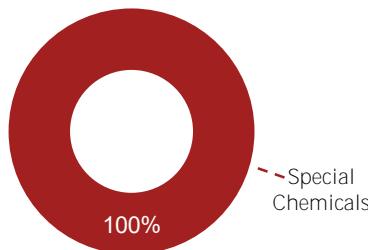
Balance Sheet

	31.12.2017	31.12.2018	30.09.2019
Current Assets	96	110	112
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
Fixed Assets	92	86	92
Long-term Investments	-	-	4
Property, Plant & Equipment	86	79	79
Intangible Assets	6	5	5
Other Fixed Assets	1	2	4
Total Assets	188	197	204
Current Liabilities	15	14	15
Accounts Payable	8	7	10
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	-	-	-
Other Short-term Liabilities	7	8	6
Long-term Liabilities	2	2	3
Long-term Financial Liabilities	-	-	-
Other non-current Liabilities	2	2	3
Total Equity	172	180	186
Total Liabilities and Equity	188	197	204

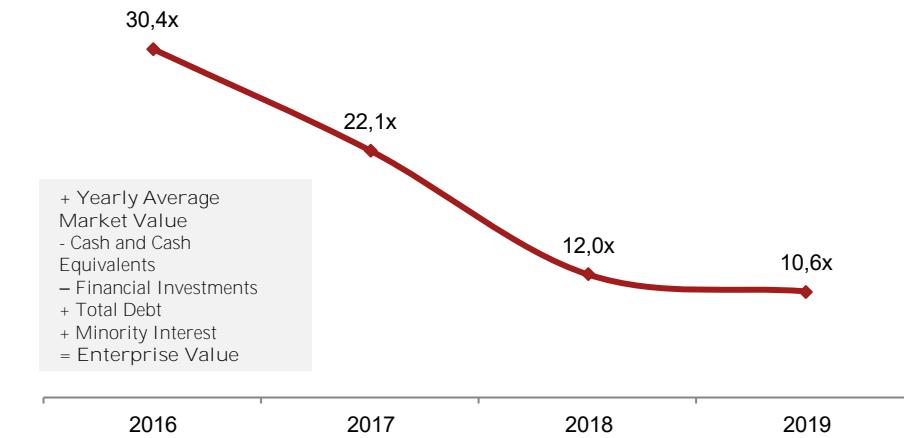
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Brother Enterprises Holding Co. Ltd.

CHROMIUM

Income Statement

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

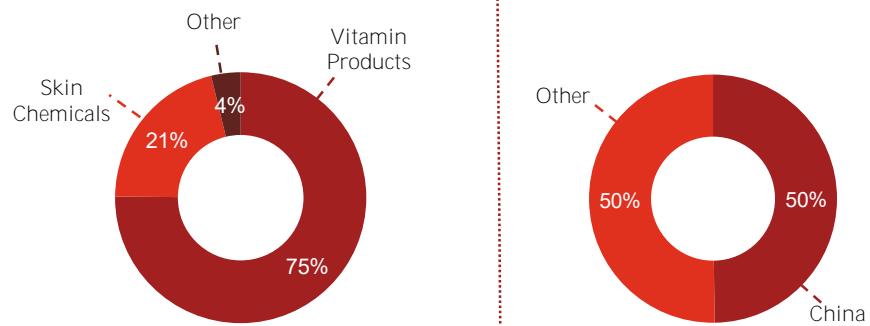
Balance Sheet

(\$ m)	31.12.2017	31.12.2018	30.09.2019
Current Assets	296	210	161
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
Fixed Assets	236	311	357
Long-term Investments	0	0	0
Property, Plant & Equipment	211	288	333
Intangible Assets	19	17	16
Other Fixed Assets	6	6	8
Total Assets	533	521	518
Current Liabilities	94	113	133
Accounts Payable	69	103	91
Short-term Borrowings	0	-	34
Current Portion of Long-term Debt	-	-	-
Other Short-term Liabilities	24	10	8
Long-term Liabilities	88	80	64
Long-term Financial Liabilities	88	79	64
Other non-current Liabilities	0	0	0
Total Equity	351	328	321
Total Liabilities and Equity	533	521	518

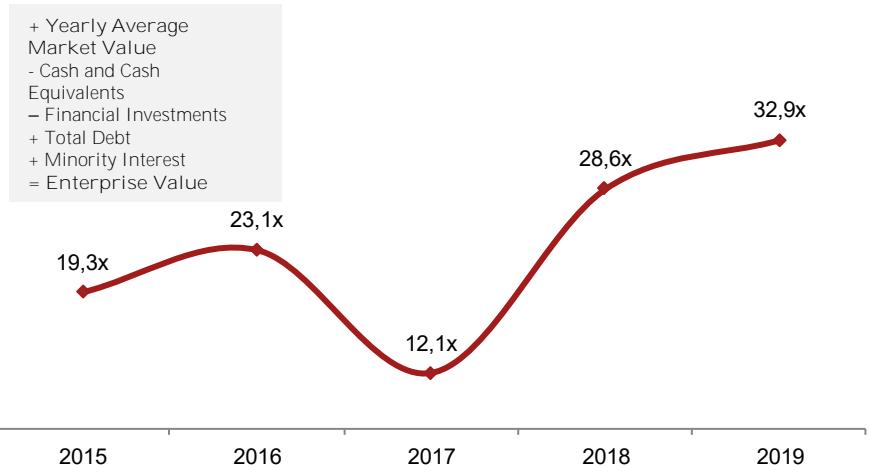
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Vishnu Chemicals Limited

CHROMIUM

Income Statement

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

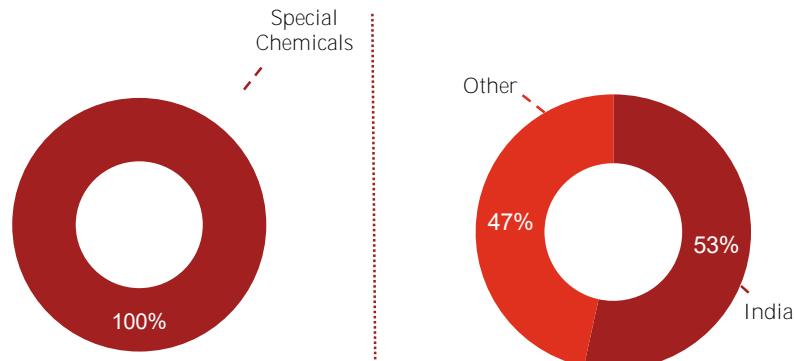
Balance Sheet

	31.03.2017	31.03.2018	30.09.2019
Current Assets	62	54	51
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
Fixed Assets	58	55	54
Long-term Investments	0	0	0
Property, Plant & Equipment	56	53	52
Intangible Assets	0	0	0
Other Fixed Assets	2	2	2
Total Assets	120	109	105
Current Liabilities	65	53	49
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
Long-term Liabilities	38	36	34
Long-term Financial Liabilities	26	24	23
Other non-current Liabilities	12	12	11
Total Equity	17	21	22
Total Liabilities and Equity	120	109	105

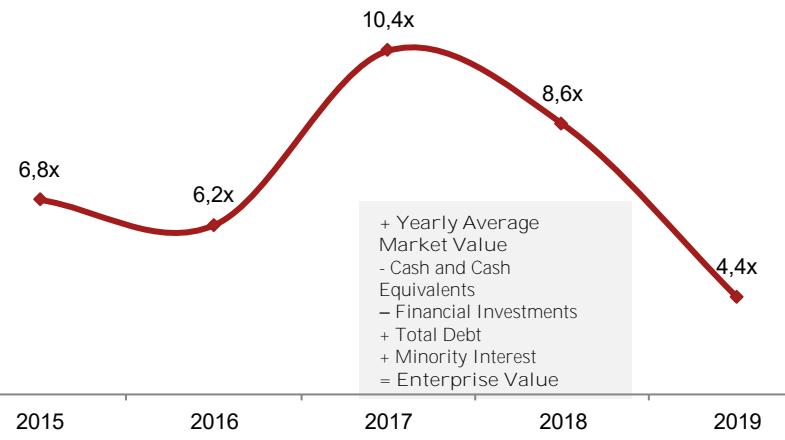
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Wata Chemicals Limited

CHROMIUM

Income Statement

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

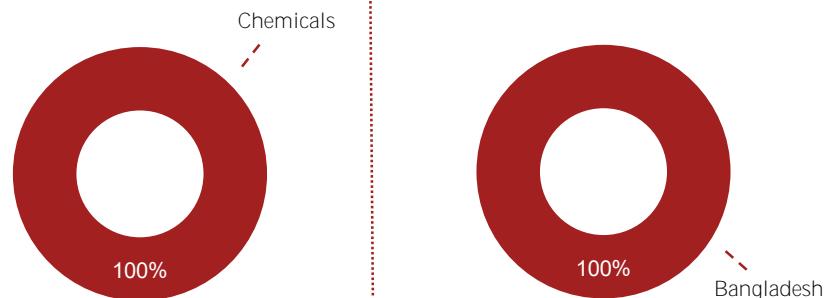
Balance Sheet

	30.06.2017	30.06.2018	31.12.2019
Current Assets	4	5	14
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
Fixed Assets	12	14	15
Long-term Investments	-	-	-
Property, Plant & Equipment	12	14	15
Intangible Assets	-	-	-
Other Fixed Assets	-	-	-
Total Assets	16	19	28
Current Liabilities	5	10	13
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
Long-term Liabilities	2	1	6
Long-term Financial Liabilities	2	1	6
Other non-current Liabilities	0	0	0
Total Equity	8	8	10
Total Liabilities and Equity	16	19	28

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

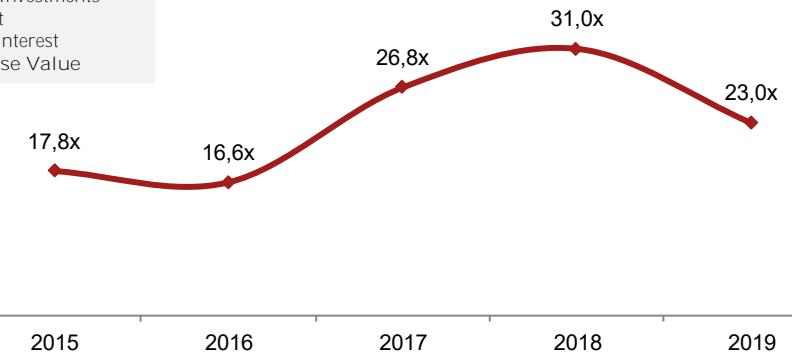
Wata Chemicals Limited has been established in 1981 and its' centre of operations is in Dakka, Bangladesh. The Company produces chemicals like aluminium and zinc sulphate, sulphuric acid, basic chromium powder and linear alkylbenzene sulfonic acid.

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



LANXESS Aktiengesellschaft

GLASS FIBER

Income Statement

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

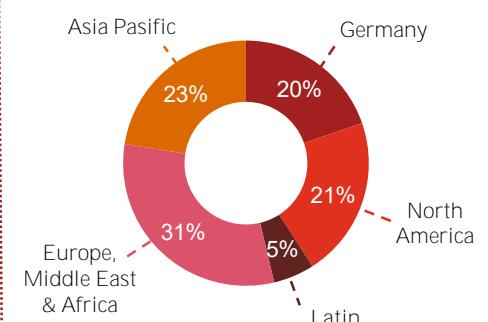
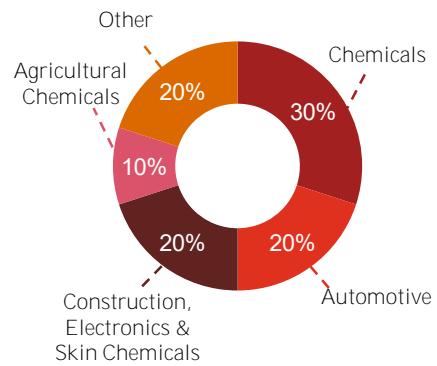
Balance Sheet

	31.12.2017	31.12.2018	31.12.2019
Current Assets	4,751	4,466	4,074
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
Fixed Assets	7,750	5,480	5,684
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
Total Assets	12,501	9,946	9,758
Current Liabilities	2,951	1,739	1,663
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
Long-term Liabilities	5,451	5,032	5,124
Long-term Financial Liabilities	2,692	3,075	3,116
Other non-current Liabilities	2,759	1,957	2,008
Total Equity	4,098	3,175	2,970
Total Liabilities and Equity	12,501	9,946	9,758

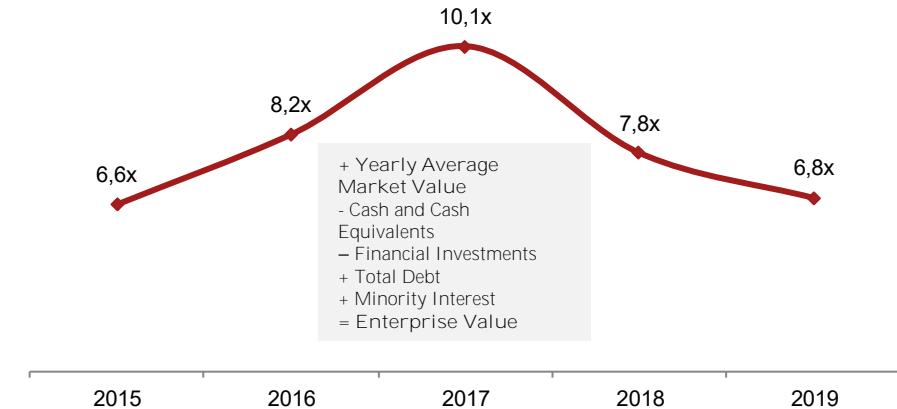
Source: Company's Activity and Audit Reports, Capital IQ

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Owens Corning

GLASS FIBER

Income Statement

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

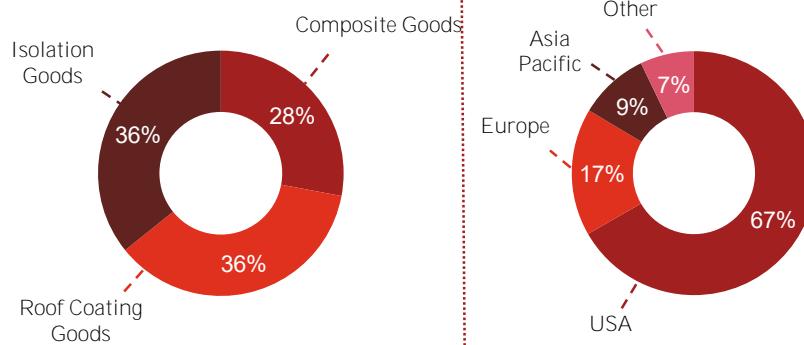
Balance Sheet

	31.12.2017	31.12.2018	31.12.2019
Current Assets	1,985	2,020	2,061
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
Fixed Assets	6,647	7,751	7,945
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
Total Assets	8,632	9,771	10,006
Current Liabilities	1,282	1,278	1,329
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
Long-term Liabilities	3,146	4,169	4,006
Long-term Financial Liabilities	2,405	3,362	3,124
Other non-current Liabilities	741	807	882
Total Equity	4,204	4,324	4,671
Total Liabilities and Equity	8,632	9,771	10,006

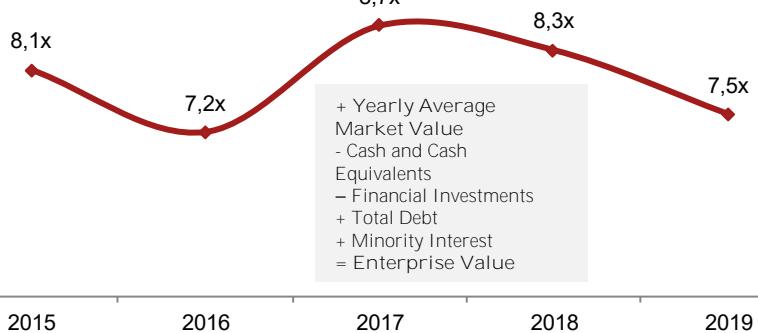
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Nippon Electric Glass Co. Ltd.

GLASS FIBER

Income Statement

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

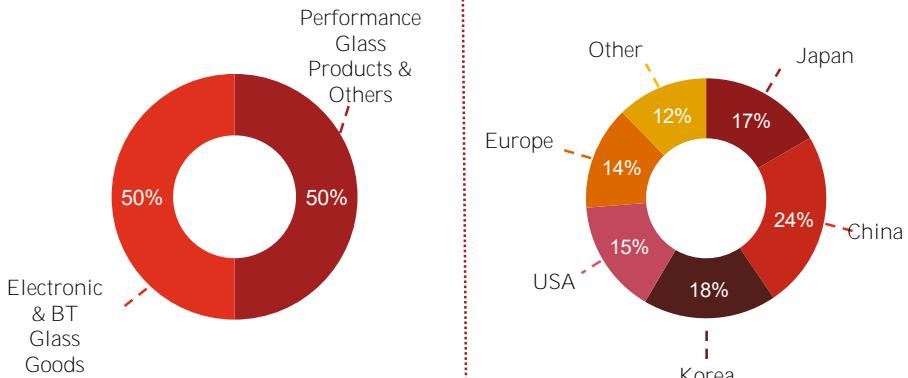
Balance Sheet

	31.12.201	31.12.201	31.12.201
Current Assets	2,334	2,305	2,222
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
Fixed Assets	4,452	4,308	3,895
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
Total Assets	6,787	6,613	6,117
Current Liabilities	922	1,030	888
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
Long-term Liabilities	1,037	830	839
Long-term Financial Liabilities	737	608	594
Other non-current Liabilities	300	222	244
Total Equity	4,828	4,754	4,391
Total Liabilities and Equity	6,787	6,613	6,117

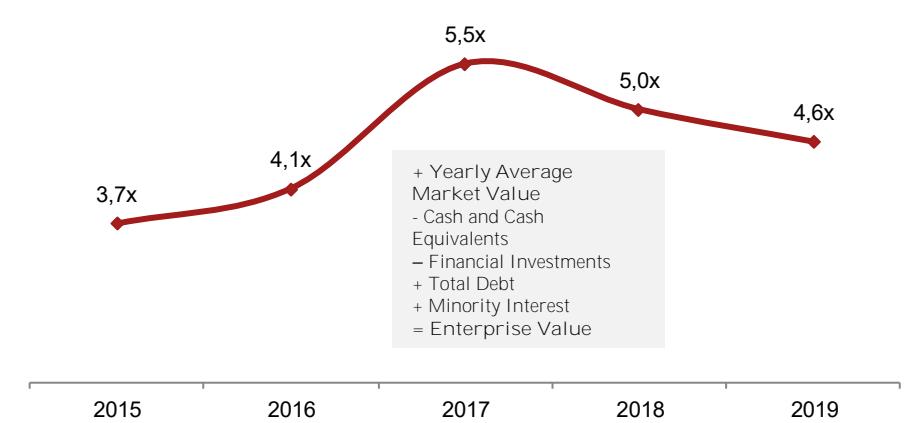
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

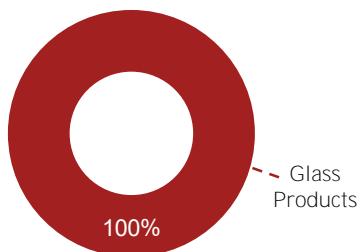
	FY17	FY18	FY19
Net Sales	1,330	1,459	1,507
Cost of Goods Sold	(721)	(802)	(973)
Gross Profit	608	656	534
General, Administrative & Selling Expenses	(125)	(148)	(96)
Research and Development Expenses	(39)	(42)	(41)
Other Operating Income/Loss	(14)	(13)	12
Operating Income	430	454	410
Financial Income/Loss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

Balance Sheet

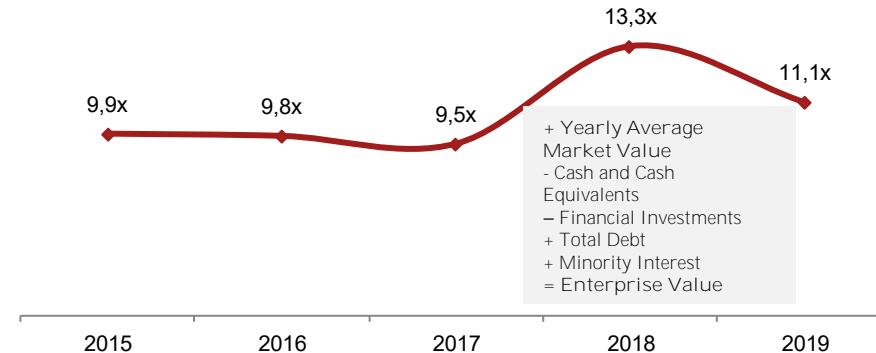
	31.12.201	31.12.201	31.12.201
Current Assets	1,205	1,058	1,314
Cash and Cash Equivalents	369	230	208
Account Receivables	538	489	726
Other Receivables	15	20	19
Inventory	204	244	297
Other Current Assets	78	75	63
Fixed Assets	2,605	3,358	3,512
Long-term Investments	182	176	177
Property, Plant & Equipment	2,254	2,992	3,129
Intangible Assets	153	156	183
Other Fixed Assets	16	35	23
Total Assets	3,810	4,416	4,826
Current Liabilities	1,202	1,794	1,675
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
Long-term Liabilities	679	502	841
Long-term Financial Liabilities	651	451	769
Other non-current Liabilities	28	51	73
Total Equity	1,929	2,120	2,309
Total Liabilities and Equity	3,810	4,416	4,826

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



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

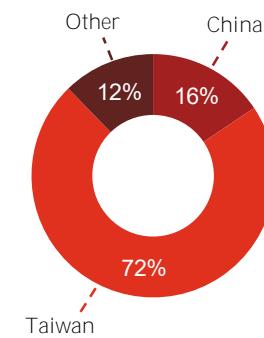
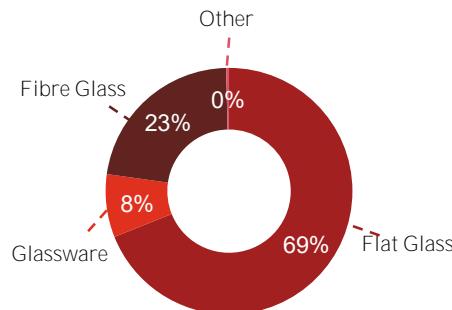
	FY17	FY18	FY19
Net Sales	1,512	1,506	1,396
Cost of Goods Sold	(1,255)	(1,266)	(1,282)
Gross Profit	257	240	114
General, Administrative & Selling Expenses	(156)	(150)	(139)
Research and Development Expenses	(12)	(14)	(13)
Operating Income	89	76	(37)
Financial Income/Loss	(24)	(21)	(23)
Other Income/Loss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

Balance Sheet

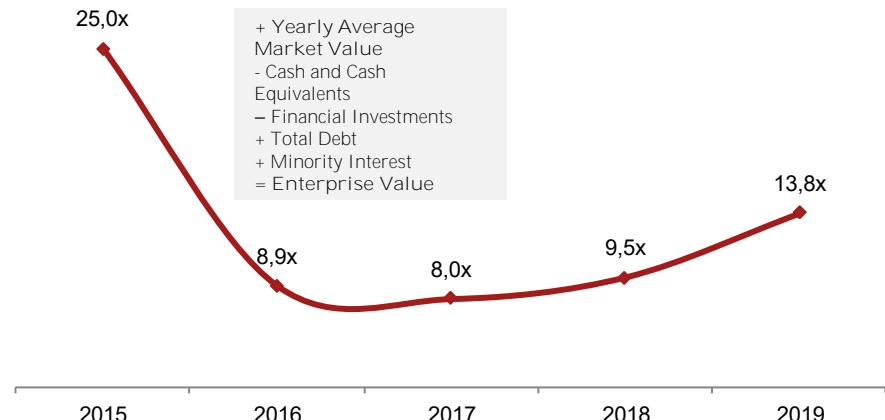
	31.12.201	31.12.201	31.12.201
Current Assets	848	857	1,047
Cash and Cash Equivalents	197	170	233
Account Receivables	328	323	443
Other Receivables	6	8	7
Inventory	249	289	302
Other Current Assets	68	67	62
Fixed Assets	1,985	1,922	1,872
Long-term Investments	111	144	150
Property, Plant & Equipment	1,751	1,661	1,697
Intangible Assets	3	2	2
Other Fixed Assets	120	116	23
Total Assets	2,832	2,779	2,919
Current Liabilities	728	760	1,001
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
Long-term Liabilities	432	460	469
Long-term Financial Liabilities	355	377	384
Other non-current Liabilities	77	83	84
Total Equity	1,672	1,559	1,449
Total Liabilities and Equity	2,832	2,779	2,919

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

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Jiangsu Changhai Composite Materials Co. Ltd

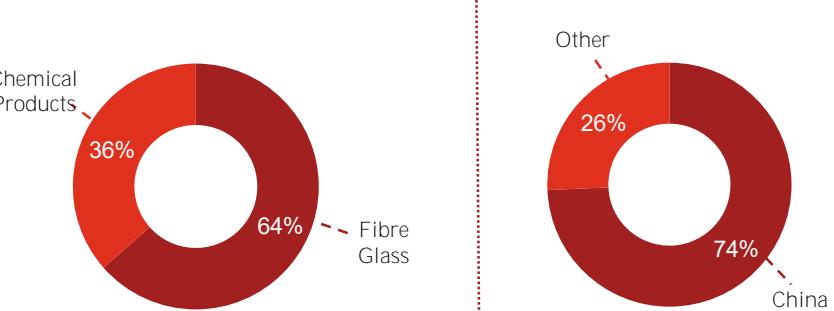
GLASS FIBER

Income Statement			
(\$ m)	FY17	FY18	FY19
Net Sales	312	320	319
Cost of Goods Sold	(233)	(237)	(229)
Gross Profit	79	82	90
General, Administrative & Selling Expenses	(30)	(30)	(31)
Research and Development Expenses	(10)	(12)	(13)
Other Operating Income/Loss	(3)	(2)	(4)
Operating Income	35	38	43
Financial Income/Loss	2	2	2
Other Income/Loss	(2)	5	3
Earnings Before Tax	36	44	48
Provision for Income Tax	(5)	(6)	(6)
Net Income	31	38	42
EBITDA	53	57	63
EBITDA Margin (%)	17.1%	17.8%	19.9%
Balance Sheet			
(\$ m)			
	31.12.2017	31.12.2018	30.09.2019
Current Assets	248	212	216
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
Fixed Assets	229	244	228
Long-term Investments	-	-	-
Property, Plant & Equipment	198	215	200
Intangible Assets	27	25	23
Other Fixed Assets	4	5	5
Total Assets	477	456	444
Current Liabilities	92	80	63
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
Long-term Liabilities	8	9	6
Long-term Financial Liabilities	-	2	-
Other non-current Liabilities	8	7	6
Total Equity	377	367	374
Total Liabilities and Equity	477	456	444

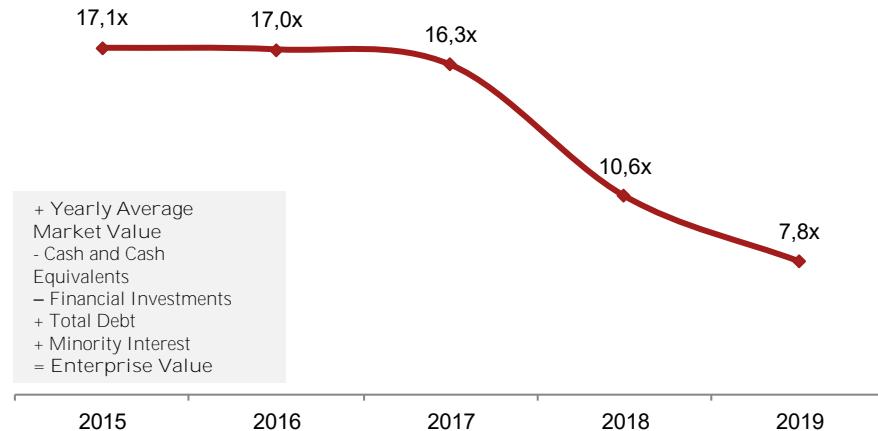
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Bluestar Adisseo Company

VİTAMİN K3 & SMBS

Income Statement

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

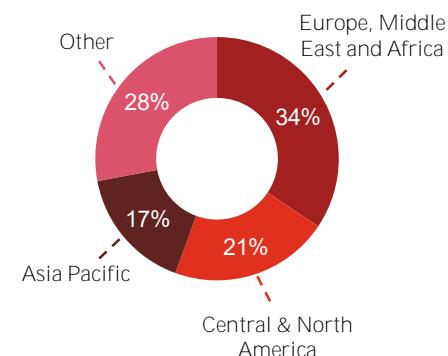
Balance Sheet

	31.12.201	31.12.201	31.12.201
Current Assets	1,716	1,365	1,293
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
Fixed Assets	1,562	1,755	1,741
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
Total Assets	3,278	3,119	3,034
Current Liabilities	430	370	356
Accounts Payable	187	178	158
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	0	1	1
Other Short-term Liabilities	243	191	197
Long-term Liabilities	196	220	206
Long-term Financial Liabilities	2	5	4
Other non-current Liabilities	194	215	202
Total Equity	2,652	2,530	2,472
Total Liabilities and Equity	3,278	3,119	3,034

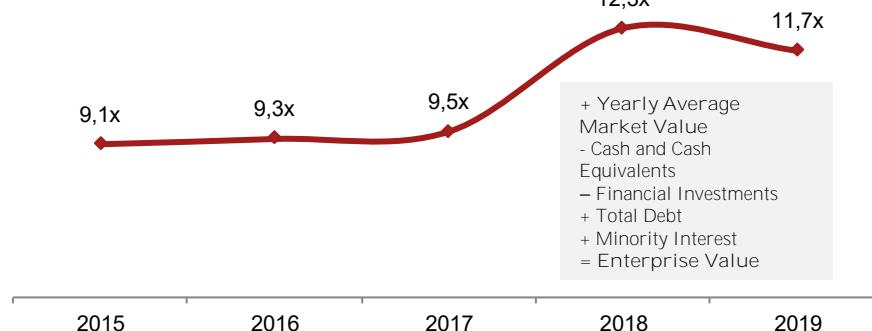
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



China Chemical & Pharmaceutical Co. Ltd.

VİTAMİN K3 & SMBS

Income Statement

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

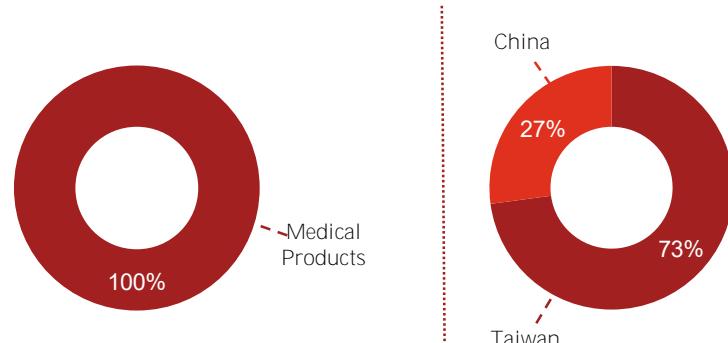
Balance Sheet

(\$ m)	31.12.201	31.12.201	31.12.201
Current Assets	159	169	184
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
Fixed Assets	187	183	203
Long-term Investments	38	39	47
Property, Plant & Equipment	136	129	145
Intangible Assets	2	2	1
Other Fixed Assets	11	13	11
Total Assets	346	352	387
Current Liabilities	89	94	101
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
Long-term Liabilities	69	72	87
Long-term Financial Liabilities	57	60	77
Other non-current Liabilities	12	12	10
Total Equity	189	186	199
Total Liabilities and Equity	346	352	387

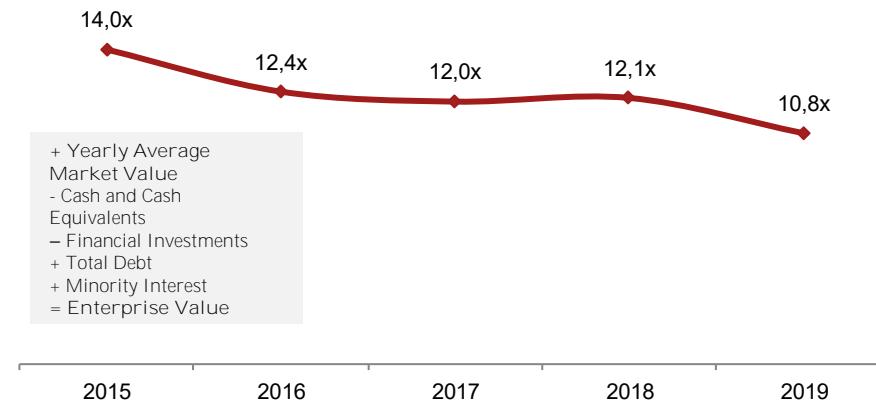
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Hubei Zhenhua Chemical Co. Ltd.

VİTAMİN K3 & SMBS

Income Statement

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

*Last 12 months - September

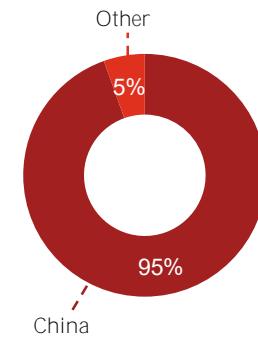
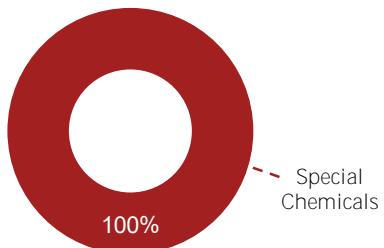
Balance Sheet

	31.12.2017	31.12.2018	30.09.2019
Current Assets	96	110	112
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
Fixed Assets	92	86	92
Long-term Investments	-	-	4
Property, Plant & Equipment	86	79	79
Intangible Assets	6	5	5
Other Fixed Assets	1	2	4
Total Assets	188	197	204
Current Liabilities	15	14	15
Accounts Payable	8	7	10
Short-term Borrowings	-	-	-
Current Portion of Long-term Debt	-	-	-
Other Short-term liabilities	7	8	6
Long-term Liabilities	2	2	3
Long-term Financial Liabilities	-	-	-
Other non-current Liabilities	2	2	3
Total Equity	172	180	186
Total Liabilities and Equity	188	197	204

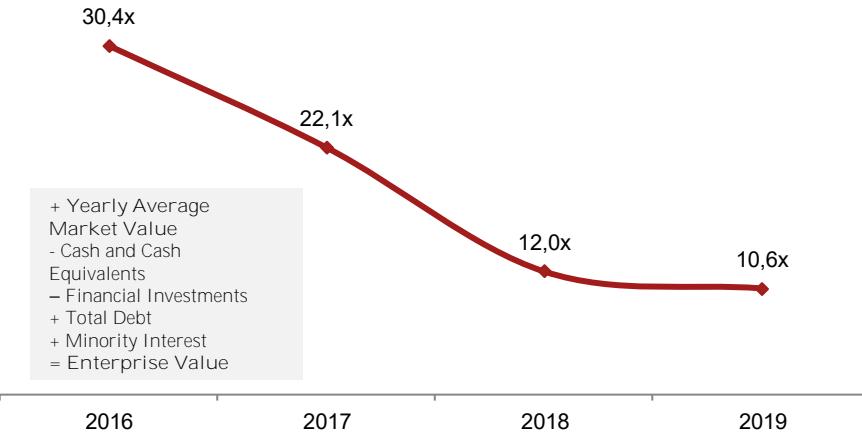
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Brother Enterprises Holding Co. Ltd.

VİTAMİN K3 & SMBS

Income Statement

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

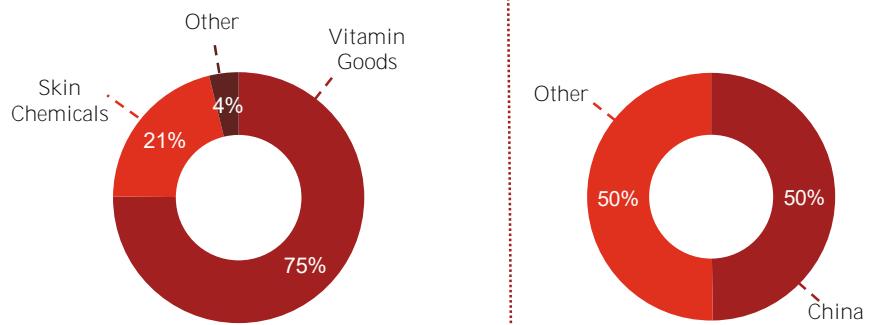
Balance Sheet

	31.12.2017	31.12.2018	30.09.2019
Current Assets	296	210	161
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
Fixed Assets	236	311	357
Long-term Investments	0	0	0
Property, Plant & Equipment	211	288	333
Intangible Assets	19	17	16
Other Fixed Assets	6	6	8
Total Assets	533	521	518
Current Liabilities	94	113	133
Accounts Payable	69	103	91
Short-term Borrowings	0	-	34
Current Portion of Long-term Debt	-	-	-
Other Short-term Liabilities	24	10	8
Long-term Liabilities	88	80	64
Long-term Financial Liabilities	88	79	64
Other non-current Liabilities	0	0	0
Total Equity	351	328	321
Total Liabilities and Equity	533	521	518

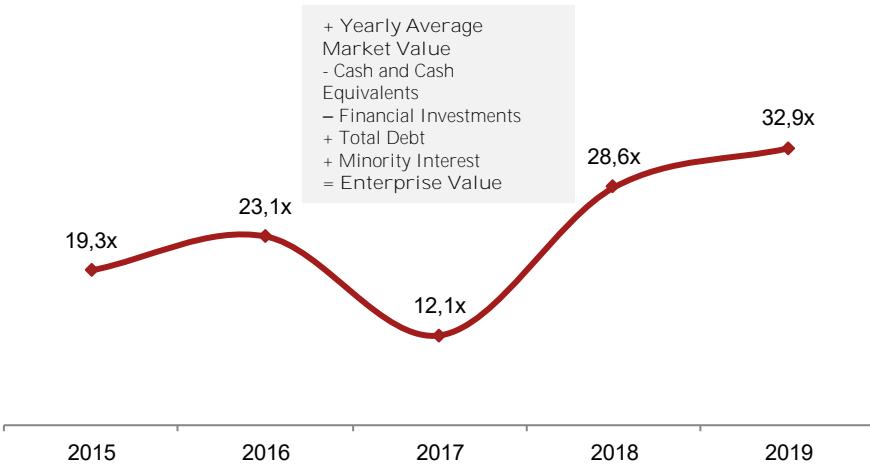
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Genebiotech Co. Ltd.

VİTAMİN K3 & SMBS

Income Statement (\$ m)

	FY17	FY18	FY19
Net Sales	52	56	50
Cost of Goods Sold	(43)	(43)	(42)
Gross Profit	9	13	8
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)
Operating Income	2	6	1
Financial Income/Loss	-	-	-
Other Income/Loss	(0)	(1)	(0)
Earnings Before Tax	2	5	0
Provision for Income Tax	(0)	(3)	(0)
Net Income	2	2	(0)
EBITDA	4	7	2
EBITDA Margin (%)	6.9%	12.4%	4.3%

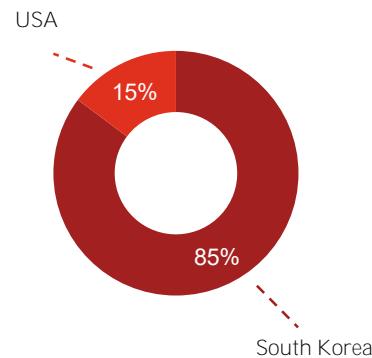
Balance Sheet (\$ m)

	31.12.201	31.12.201	31.12.201
Current Assets	29	43	38
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
Fixed Assets	27	22	21
Long-term Investments	8	4	3
Property, Plant & Equipment	17	16	16
Intangible Assets	1	1	1
Other Fixed Assets	1	1	1
Total Assets	56	65	59
Current Liabilities	11	13	9
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
Long-term Liabilities	9	12	13
Long-term Financial Liabilities	7	11	13
Other non-current Liabilities	1	1	0
Total Equity	36	41	38
Total Liabilities and Equity	56	65	59

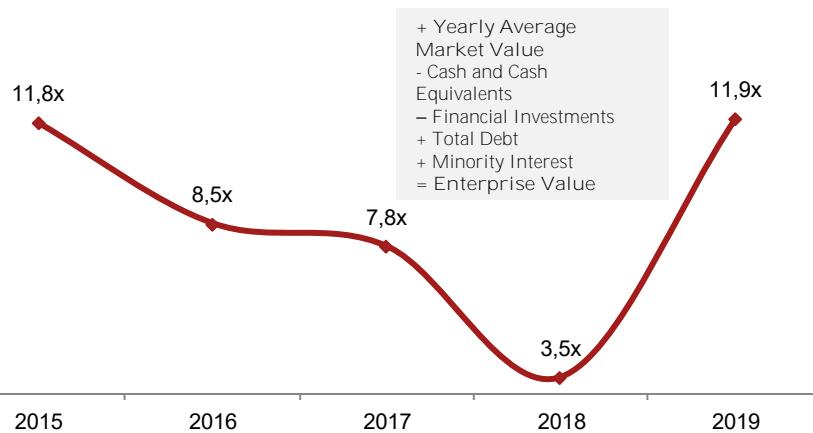
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Eagle Veterinary Technology Co. Ltd.

VİTAMİN K3 & SMBS

Income Statement (\$ m)

	FY17	FY18	FY19
Net Sales	32	27	30
Cost of Goods Sold	(22)	(20)	(22)
Gross Profit	10	7	8
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)
Operating Income	3	1	1
Financial Income/Loss	(0)	(0)	(0)
Other Income/Loss	(1)	0	(0)
Earnings Before Tax	2	1	1
Provision for Income Tax	(0)	(0)	(0)
Net Income	1	1	1
EBITDA	4	3	3
EBITDA Margin (%)	13.4%	9.7%	10.9%

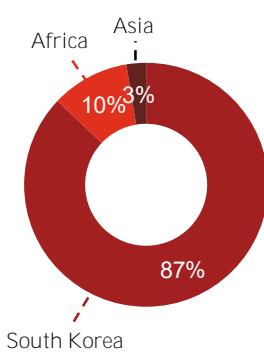
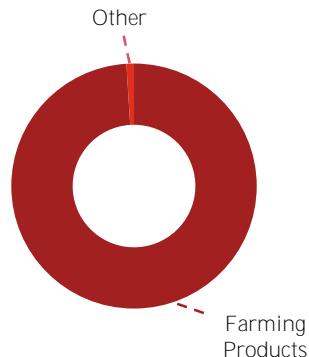
Balance Sheet (\$ m)

	31.12.2017	31.12.2018	31.12.2019
Current Assets	20	18	19
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
Fixed Assets	27	24	21
Long-term Investments	0	0	0
Property, Plant & Equipment	25	22	20
Intangible Assets	0	0	0
Other Fixed Assets	1	2	1
Total Assets	47	41	40
Current Liabilities	13	7	6
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
Long-term Liabilities	4	3	3
Long-term Financial Liabilities	4	3	3
Other non-current Liabilities	-	0	0
Total Equity	30	31	31
Total Liabilities and Equity	47	41	40

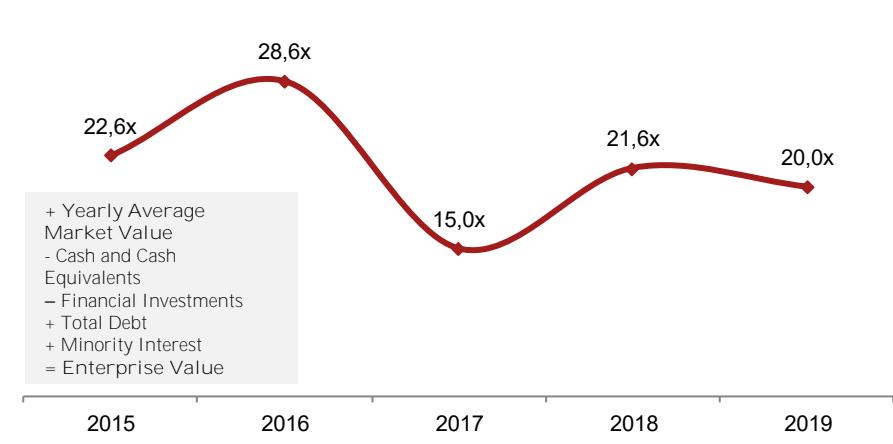
Source: Company's Activity and Audit Reports, Capital IQ

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.

Sales by Product Lines and Geographic Territories Breakdown (%)



Yearly EV/EBITDA Change (x)



Beta and WACC Analysis

Beta (1/13)

TRKCM – Architectural Glass

Company	Country	Equity Beta	Market	5 year		Asset Beta
			CAP (USD million)	average debt / equity	Tax Rate	
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
Average		0.99		40%		0.76

*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		Asset Beta
				debt / equity	Tax Rate	
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	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
Average		0.98		29%		0.81

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	5 year average debt / equity		Asset Beta
			CAP* (USD million)	Tax Rate		
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
Average		0.89		77%		0.58

*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
Average		0.75		37%		0.61

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	5 year	Asset Beta	
			CAP (USD million)	average debt / equity		
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
Average				58%	0.68	

Company	Country	Equity Beta	Market	5 year	Asset Beta	
			CAP (USD million)	average debt / equity		
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
Average				38%	0.86	
Weighted Average Beta					0.73	
Weighted Average Debt/Equity %					52%	

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
Average		1.06		41.8%		0.82

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
Average		0.84		18.6%		0.73

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

*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	5 year		Asset Beta
			CAP (USD million)	average debt / equity	Tax Rate	
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
Average		1.13		38%		0.86

*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	5 year average		Asset Beta
			CAP* (USD million)	debt / equity	Tax Rate	
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
Average		0.89		77%		0.58

*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
Weighted Average Beta	0.98	0.99	0.99	0.99	0.99	0.99

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
Camış 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
Camış 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
Weighted Average Beta	0.96	0.97	0.97	0.97	0.97	0.97

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
Average		0.86	

Camış Elektrik Üretim A.Ş.

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

*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 Krcnjaka Vjenac 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
Weighted Average Beta*	0.67

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***Camış Ambalaj Sanayii A.Ş.**

Company	Country	Equity Beta	Market CAP	5 year average	Asset Beta	
			(USD million)	debt / equity		
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.S.	Turkey	0.74	1,106	2%	20%	0.73
Mondi Tire Kutsan Kagit ve Ambalaj Sanayi A.S.	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.S.	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.S.	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
Average		0.91		47%		0.67

*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.
Cost of Equity	h=a+e*f+g	Cost of Equity (CoE): (RfR) + Beta x (EMRP) + Business Risk Premium
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.
Cost of Debt	k=(a+j)*(1-i)	Cost of Debt: (RfR + Debt Premium)*(1-tax rate)
WACC	l= k*d+h*(1-d)	WACC: [(Cost of Equity * (1-Debt/(Debt + Equity) Ratio) + [Cost of Debt * (Debt/(Debt + Equity) Ratio)]

Source: PwC Analysis

Weighted Average Cost of Capital

RfR Estimation Method (1/2)

«Indirect» Estimation Method



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

Country/Region	2020	2021	2022	2023	2024	2025
Turkey	4.7%	3.6%	3.2%	3.2%	3.2%	3.2%
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%
India	2.4%	1.8%	1.2%	1.2%	1.2%	1.2%
Egypt	5.3%	4.4%	3.5%	3.5%	3.5%	3.5%
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%
CIS	3.6%	3.2%	2.9%	2.9%	2.9%	2.9%
North America	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk Free Return Base	1.4%	2.5%	2.8%	2.8%	2.8%	2.8%

*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.

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

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.

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.

Weighted Average Cost of Capital

RfR Estimation Method (2/2)

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

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

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
Risk Free Return Base	%1.4	%2.5	%2.8	%2.8	%2.8	%2.8
Country Risk Premium	%4.7	%3.6	%3.2	%3.2	%3.2	%3.2
Inflation Difference	%11.4	%9.8	%9.3	%8.5	%7.5	%6.5
RfR	%18.3	%16.6	%16.0	%15.2	%14.1	%13.1
TV						

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 İtaly 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.

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.

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							Camış 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	Camış 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	Camış Egypt Mining Ltd. Co. - ME							Rudnik Krečnjaka 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	Camış 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	Camış Elektrik Üretim A.Ş.
CA	Camış 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 İnvestment 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 Krencjaka 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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