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Industry Report Packaging (Update)

September 2023



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1_Key Trends, Drivers, News and Implications

Current market environment challenging, but with a good medium-term outlook

Increasing focus on small and medium-size M&A transactions

Market Dynamics and Current Marketenvironment

**-14%
y-o-y**

- The S&P 500 Paper & Plastic Packaging Products & Materials index decreased **14.2%** year-on-year (Aug '22-'23), reaching USD243.9
- The negative development of packaging industry in 2023 is mainly driven by weak demand, oversupply & overstocking, macro-environmental factors (i.e. legal & regulatory requirements, inflation & energy prices, the conflict in Ukraine) as well as industry specific challenges (i.e. supply issues with aluminum foil).

Trends and Driver

**Digital,
Smart
Packaging
& Materials**

- **Digitization** to integrate emerging technologies such as digital printing
- **Smart packaging** is enhancing user experience and product data. QR codes and near-field communication (NFC) technology among other technologies are allowing real-time tracking, product information dissemination, and freshness indication
- **Advanced materials & sustainability**

Recent News

**M&A /
VC**

- Global packaging sector in **H1 2023** witnessed deals worth EUR 4.8bn, a drop of 49% compared to H1 2022, whereas the total number of M&A transactions has only dropped by 9% over the same period
- Meaning the average transaction size has decrease from EUR 46.5mn to EUR 26.1mn (-44%) and shows that investors are currently focusing more on **small and medium-sized transactions**

Implications

**Short-term
challenging
but mid-
term good**

- Macro-environmental factors and industry specific challenges **impacting the packaging industry in 2023 and beyond**
- Despite the current challenges, **medium-term growth** is expected at a CAGR of 3.94% through 2028, according to Mordor Intelligence

- The Global Packaging Market size is expected to grow from USD 1.10 trillion in 2023 to USD 1.33 trillion by 2028, at a CAGR of 3.94% during the forecast period (2023-2028)
- The global packaging market has experienced consistent growth over the last decade due to substrate choice changes and expansion of new markets. Traditional packaging may continue to be replaced by flexible packaging, high-barrier films, and stand-up retort pouches may challenge rigid pack formats like metal tins and glass jars for a wide range of food products
- According to the Flexible Packaging Association, flexible packaging is still mainly used for food, which accounts for more than 60% of the total market
- The sustainability trends, including recycling and using bio-degradable forms of PET, are expected to rise over the next years
- The market is driven by the increased usage of environmentally friendly, recyclable, biodegradable, reusable materials in packaging. Paper packaging products, such as paper bags, pouches, and cartons, are the fastest-growing sustainable packaging materials
- Still active M&A market with globally around 800 transactions in the packaging sector in the last 3 years (H2/20-H1/23) with average EV/Sales multiple for M&A transactions of 1.2x and EV/EBITDA 8.4x



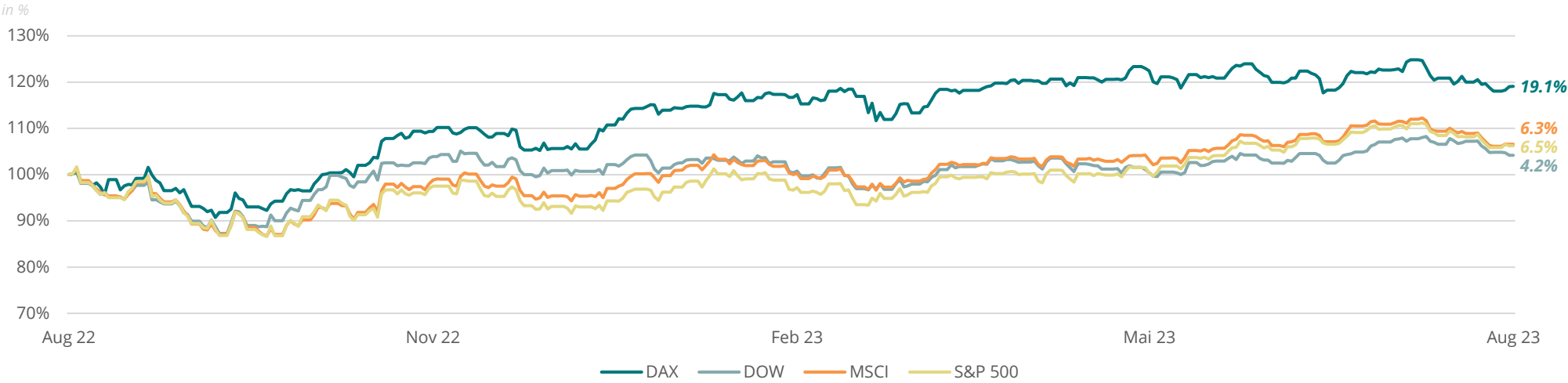
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2_General Market Update

In an overview of selected indices, the DAX outperformed other benchmarks by realising a positive return of 19.1% over the past 12 months

General Market Update | August 2022 - August 2023

Equity Market Returns



Interest Rates

EURIBOR	3-Months	3.82%	6 Months	3.95%	12 Months	4.08%
	German Gov. Bonds	2-Years	3.08%	5-Years	2.59%	10-Years
Euro Swap Rate	2-Years	3.70%	5-Years	2.22%	10-Years	2.11%
	Central Bank Rates	European Central Bank (ECB)	3.75%	Federal Reserve Rate (FED)	5.08%	Bank of England (BoE)

Key Market Indicators

Global Energy Price	↓
Energy Price Index for Germany	↓
S&P 500 Containers & Packaging	↓
Gross Domestic Profit (GDP)	↑
S&P 500 Metal, Glass & Plastic Containers	↓
S&P 500 Paper & Plastic Packaging Products & Materials	↓

Source: Capital IQ (as of 23-August-2023), Bank of England, European Central Bank, FED



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3_Packaging Industry Market Update

The ACF Packaging Index decreased on average by 33.5% over the LTM and are currently traded at a median EV/EBITDA multiple of 7.8x

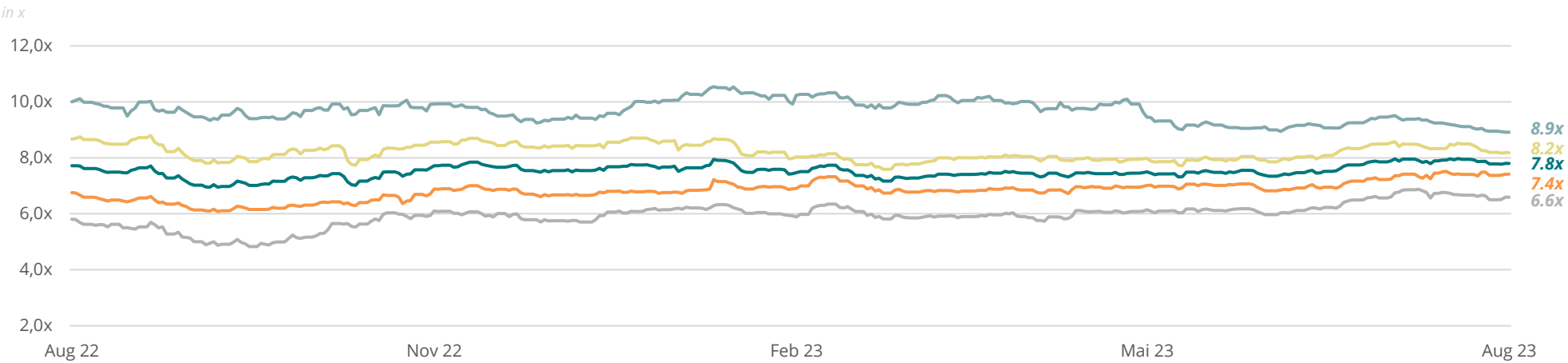
Industry Market Update | Aug 2022 - Aug 2023

ACF Packaging Index¹ Flexible Packaging²
 Labels³ Rigid Plastics⁴
 Paper/Corrugated Board/ Cardboard⁵

Equity Market Returns



Public Market Valuation Environment | NTM EV/EBITDAx



Source: Capital IQ (as of 23-August-2023)
 1) Constitutes of all companies from listed groups
 2) Constitutes of Mondi, Sonoco, Berry & Transcontinental

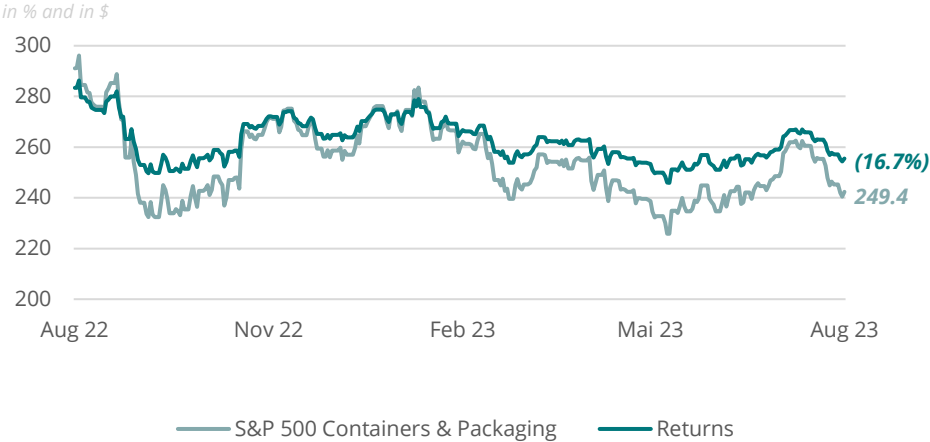
3) Constitutes of Avery Dennison, CCL, Fuji Seal & Brady
 4) Constitutes of Berry, Sealed Air, Silgan & Sonoco

5) Constitutes of International Paper, Mondi, Smurfit Kappa Group. & WestRock

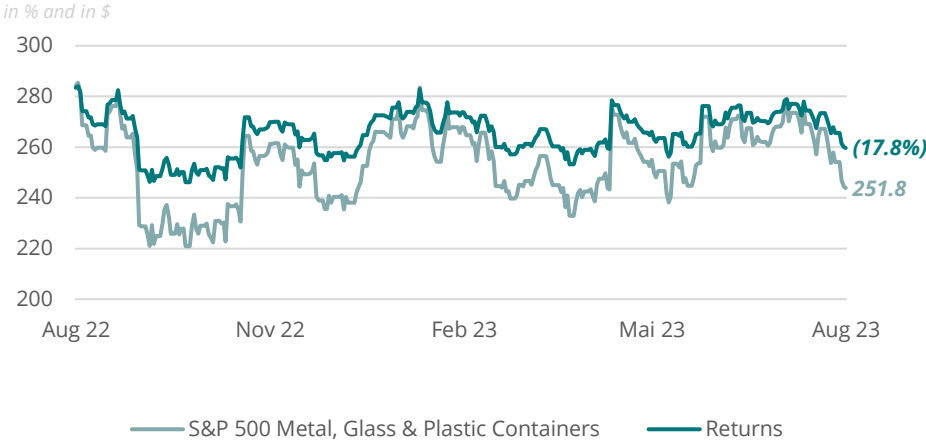
S&P 500 Container And Packaging Index fell by 16.7%, followed by a fall in the Metal, Glass & Plastic Index and the Paper & Plastic Index

Industry Market Update | August 2022 - August 2023

S&P 500 Containers & Packaging



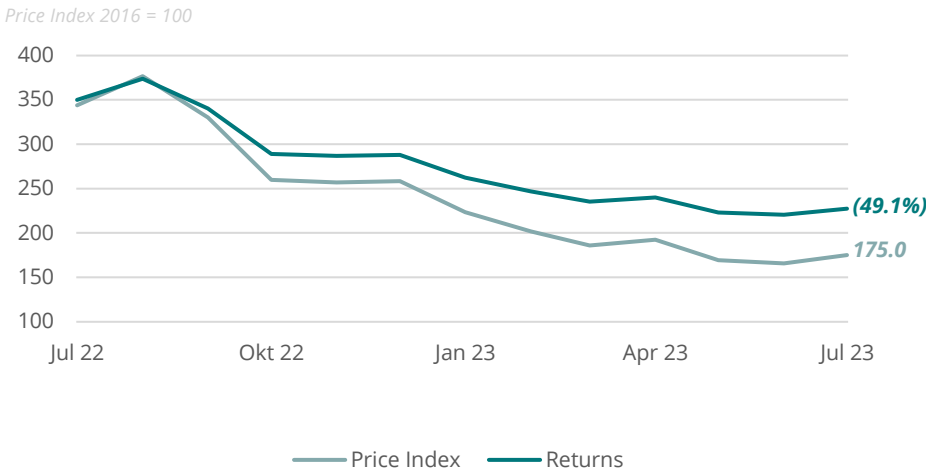
S&P 500 Metal, Glass & Plastic Containers



S&P 500 Paper & Plastic Packaging Products & Materials



Global Energy Price¹



Source: Capital IQ (as of 23-August-2023), FRFD
 1) The Global Energy Price Index 2016 = 100

Listed peers in the Flexible Packaging and Paper / Corrugated Board / Cardboard sectors are expected to trade at a median EV/EBITDA of 7.8x and 6.9x in 2023E

Comparable Public Company Valuation (1/4)

Overview of Multiples of Listed Peers – Flexible Packaging and Paper / Corrugated Board / Cardboard

2023E
2024E

in x



Source: Capital IQ (as of 23-August-2023)

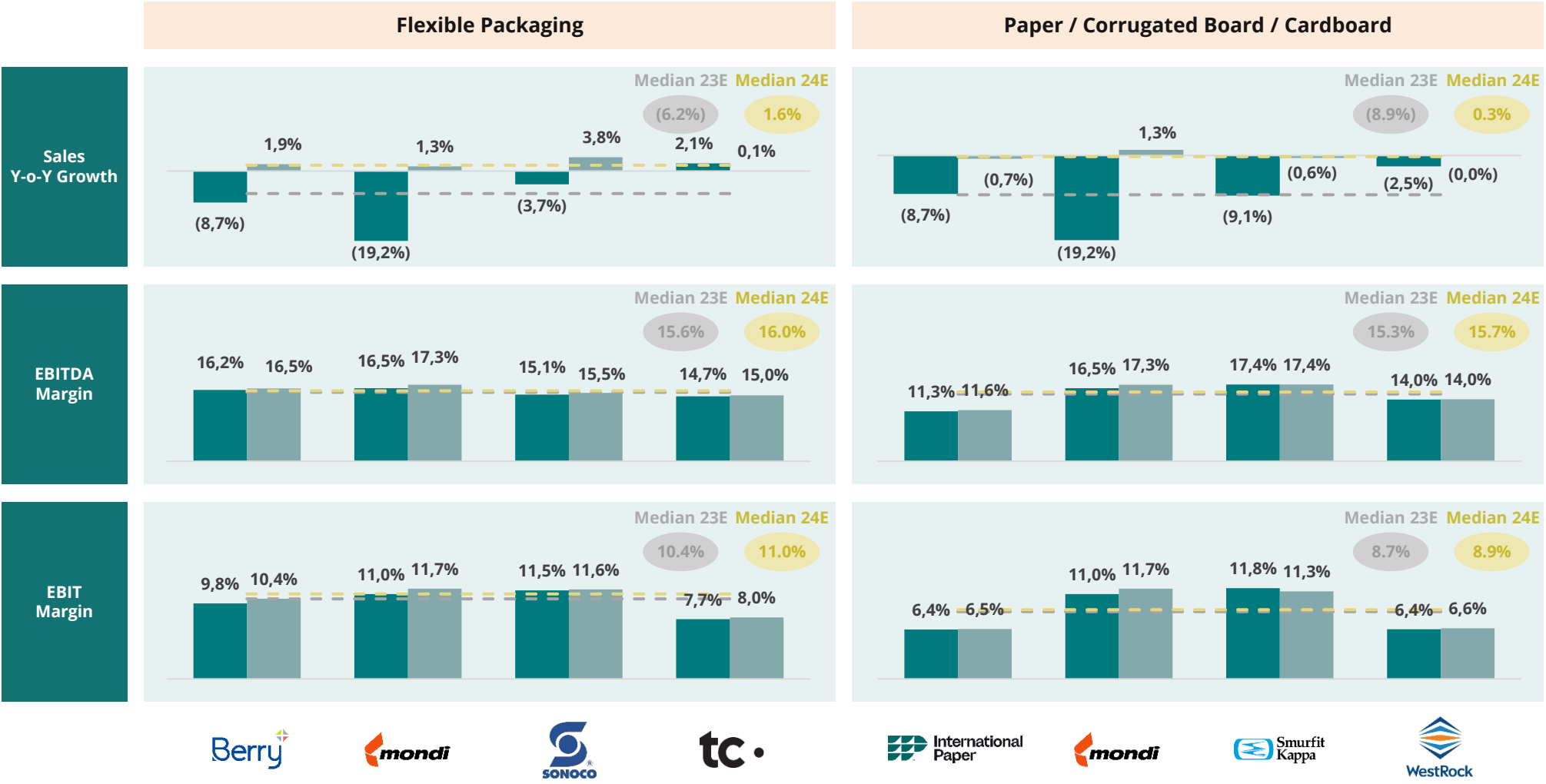
Listed peers in the Flexible Packaging and Paper / Corrugated Board / Cardboard sectors are expected to trade at a median EBITDA margin of 15.6% and 15.3% in 2023E

Comparable Public Company Valuation (2/4)

Overview of KPIs of Listed Peers - Flexible Packaging and Paper / Corrugated Board / Cardboard

2023E
2024E

in %



Source: Capital IQ (as of 23-August-2023)

Listed peers in the Rigid Plastics and Labels sectors are expected to trade at a median EV/EBITDA of 8.6x and 9.4x in 2023E

Comparable Public Company Valuation (3/4)

Overview of Multiples of Listed Peers – Rigid Plastics and Labels

■ 2023E
■ 2024E

in x



Source: Capital IQ (as of 23-August-2023)

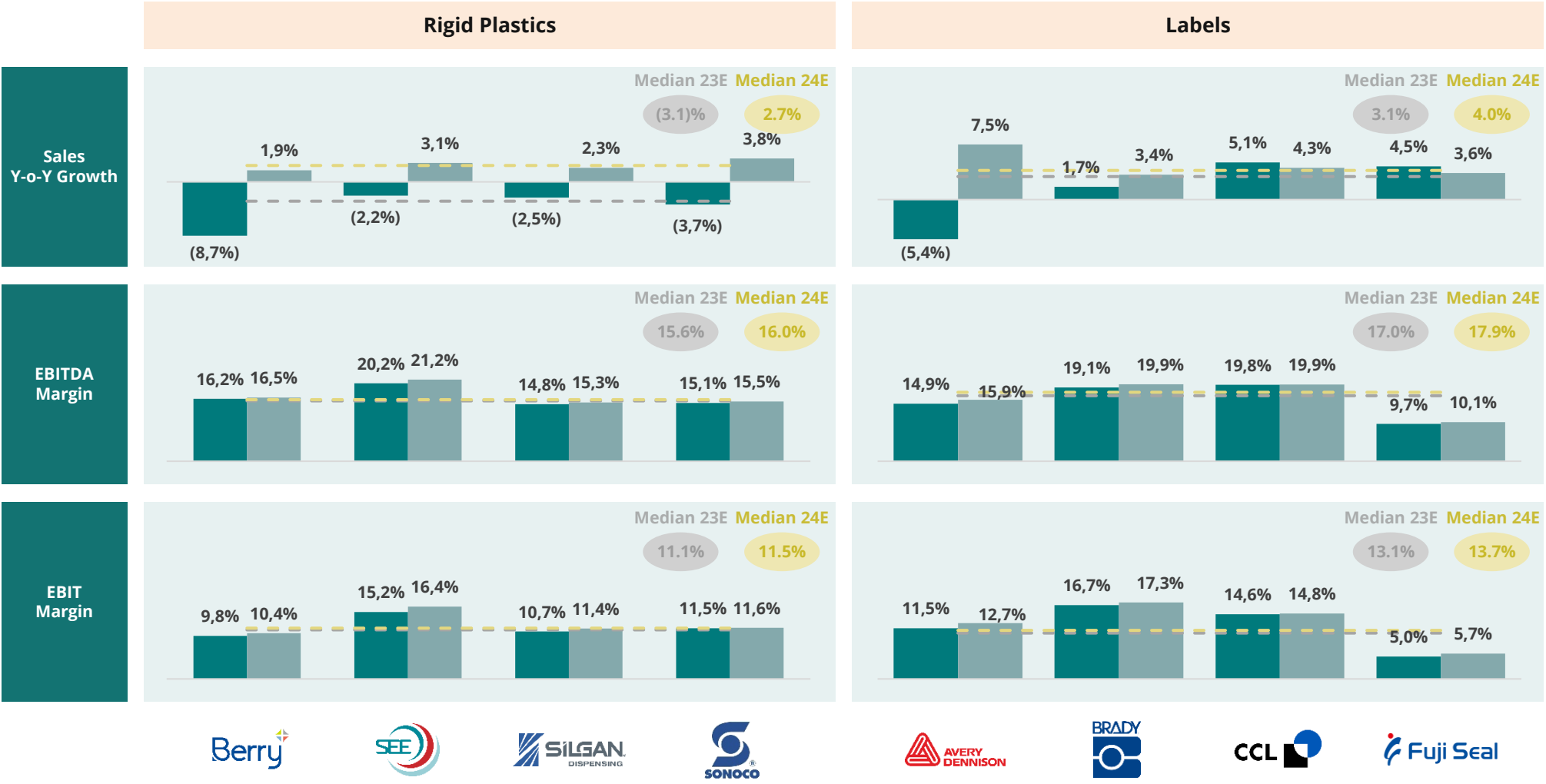
Listed peers in the Rigid Plastics and Labels sectors are expected to trade at a median EBITDA margin of 15.6% and 17.0% in 2023E

Comparable Public Company Valuation (4/4)

Overview of KPIs of Listed Peers – Rigid Plastics and Labels

■ 2023E
■ 2024E

in %



Source: Capital IQ (as of 23-August-2023)



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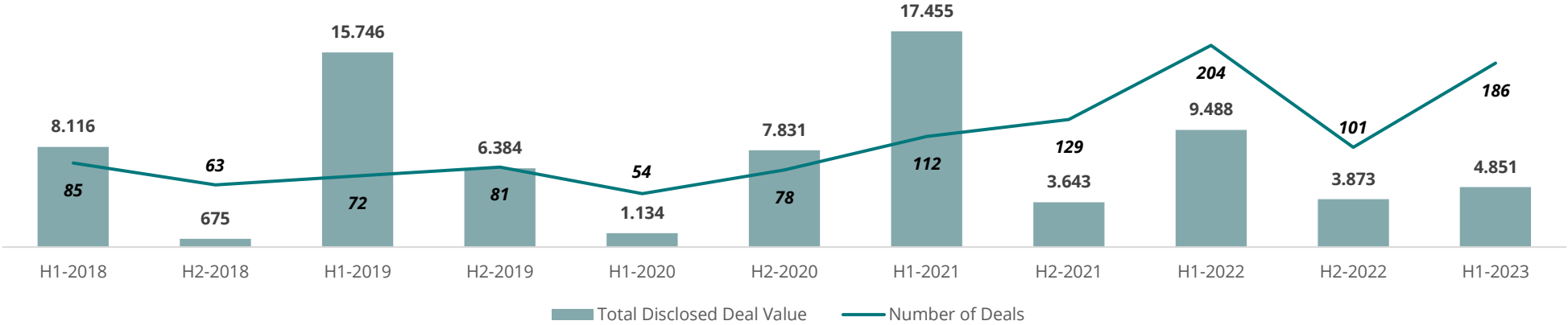
4_Selected Transaction Activity in the Packaging Market

From 2018 to June 2023, 1,165 transactions took place in the European packaging market valued at a median EV/Sales multiple of 1.2x and EV/EBITDA multiple of 8.4x

Transaction Overview | January 2018 - June 2023

Overview of Disclosed Transaction Values and Number of Deals in Europe

In EUR m, in units



Overview of Multiples (LTM)

Key Performance Indicators	Unit
Total Transactions	#1165
Transaction with Disclosed Value	#225
Transaction with Multiples	#112
EV / Sales Median	1.2x
EV / EBITDA Median	8.4x

Selected Transaction Overview
















	Date	Target	Acquirer	Description	Details
Private Equity	Jul-23	Constantia Flexibles	ONE ROCK CAPITAL PARTNERS	Manufacturer of various packaging materials for several industries	EV: 1,097m EV/Sales: n.a. EV/EBITDA: n.a.
	Mar-23	Suttons Performance Products	MACFARLANE GROUP	Manufacturer of various types of packaging and corrugated cases	EV: 10.2m EV/Sales: 1.2x EV/EBITDA: 8.2x
Private Equity	Dec-22	FINLOGIC Labeling & Vision Solutions	PM & PARTNERS PRIVATE EQUITY	Manufacturer of labels and automatic identification solutions	EV: 92.1m EV/Sales: 1.6x EV/EBITDA: 11.0x
	May-21	elif Packaging for Life	Huhtamaki	Supplier of flexible packaging solutions for several industries	EV: 412m EV/Sales: 2.5x EV/EBITDA: n.a.
Private Equity	Feb-21	Logoplaste	ONTARIO TEACHERS' PENSION PLAN	Manufacturer of rigid plastic packaging for several industries	EV: 1,400m EV/Sales: 2.3x EV/EBITDA: 10.0x

Source: Mergermarket

Different types of packaging, both rigid and flexible, reflect the diversity of the global packaging industry, illustrated by a dynamic landscape of players

Overview Of The Packaging Market (1/2)

Packaging Types

Packaging Materials	Stiffness of the material	Packaging Types			Selected Packaging Companies
Paper and Cardboards	Rigid	Cardboards	Boxes	Paper Tray	    
		Pallets	Drums	Cups	
	Flexible	Wrapping Paper	Bags	Pouches	
		Tubs & Tubes	Corrugated Roll		
Plastics	Rigid	Water/Soft Drink Bottles PET	Milk / Shampoo Bottles HDPE	Blister Packs and Clamshells PVC	    
		Squeezable Bottles LDPE	Protective Foam For Furniture & Electronics PS	Medical Bottles, Bottle Cups, Microwave Dishes PP	
		Freezer Bags HDPE	Bags For Bedding, And Medical Wrap PVC	Shrink Wrap, Stretch Films LDPE	
	Flexible				
				    	

Different types of packaging, both rigid and flexible, reflect the diversity of the global packaging industry, illustrated by a dynamic landscape of players

Overview Of The Packaging Market (2/2)

Packaging Types

Packaging Materials	Stiffness of the material	Packaging Types			Selected Packaging Companies
Metal	Rigid	 Aluminium Drink Cans	 Food Tin Cans	 Aerosol Cans	      
	Flexible	 Paint Tin Cans	 Milk Cans	 Tubes	
Glass	Rigid	 Aluminium Foils			         
		 Bottles	 Jars		



ARGONAS

Argonas Corporate Finance GmbH

Luisenstraße 41

10117 Berlin

T +49 (30) 92 27 13 39

F +49 (30) 94 04 73 25

www.argonas.de



Sascha Männel

Managing Director / Co-Founder

Head of Origination and Market Analysis

M +49 (173) 39 38 216

E s.maennel@argonas.de