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CONSULTING

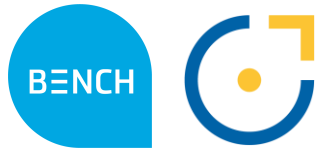
**BENCH**

## Financial benchmarking

Pulp, Paper, Packaging and  
Wood products industry

July 2024

# B3NCH covers around 90 companies in forest products, pulp, paper and packaging: The only source for financial benchmarking of key industry players



# StepChange B3NCH is a source of financial information in the Pulp, Paper, Packaging and Wood products industry



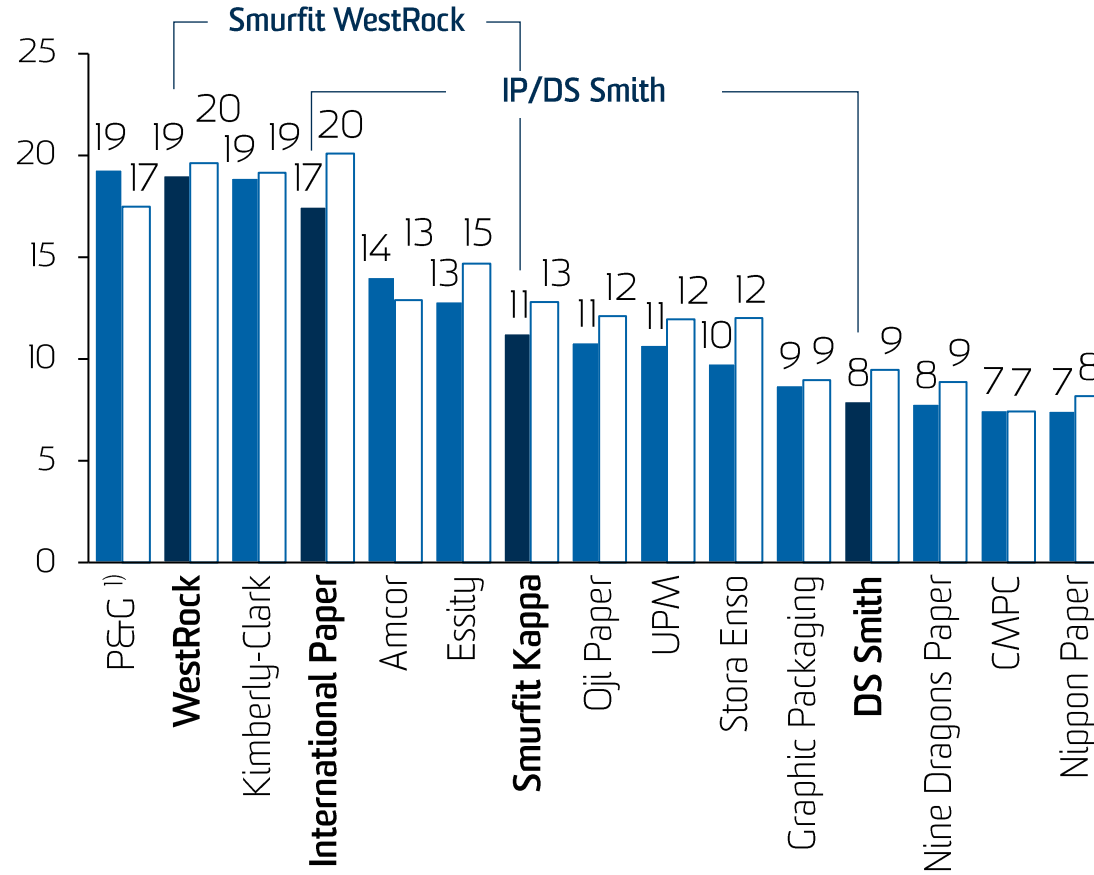
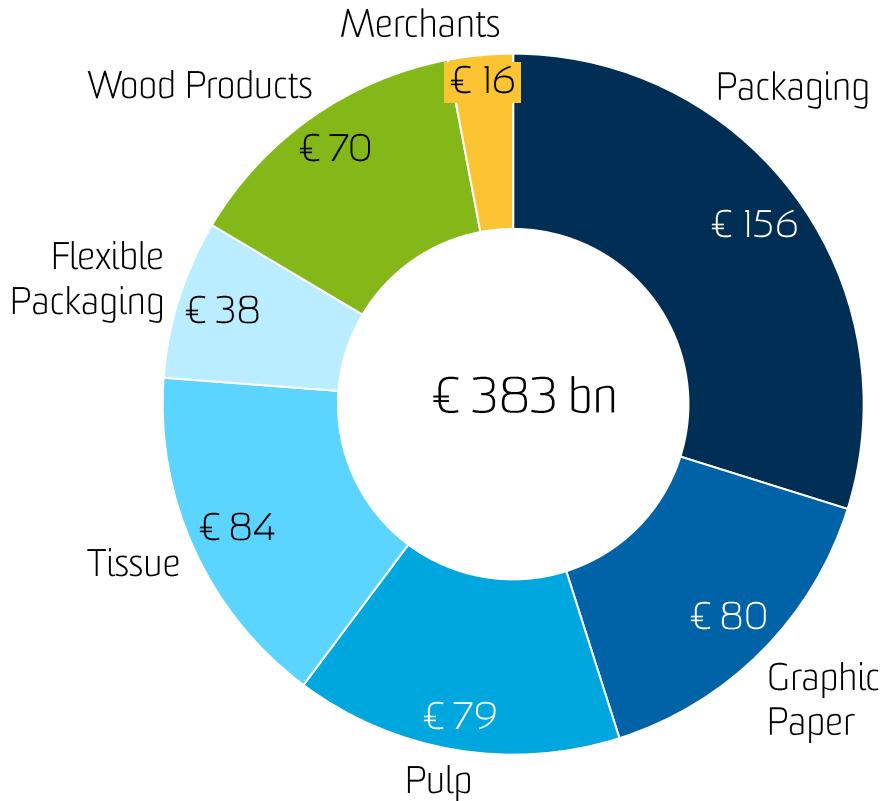
# Overview of companies covered in B3NCH:

## Revenue of PPP companies decreased by 11% on average in 2023



Revenue of peer groups covered in B3NCH  
FY-2023, billion € (overlapping segments ≠ total)

Companies with highest revenue covered in B3NCH  
FY-2023, billion €

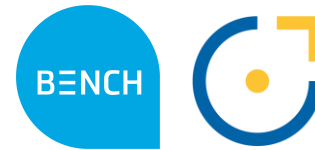


**B3NCH** covers 88 active companies with a total annual revenue of €383 billion.

Note: Companies can be part of several peer groups based on business activities

I) Segment only ■ 2023 revenue □ 2022 revenue

# Companies by peer group covered in B3NCH



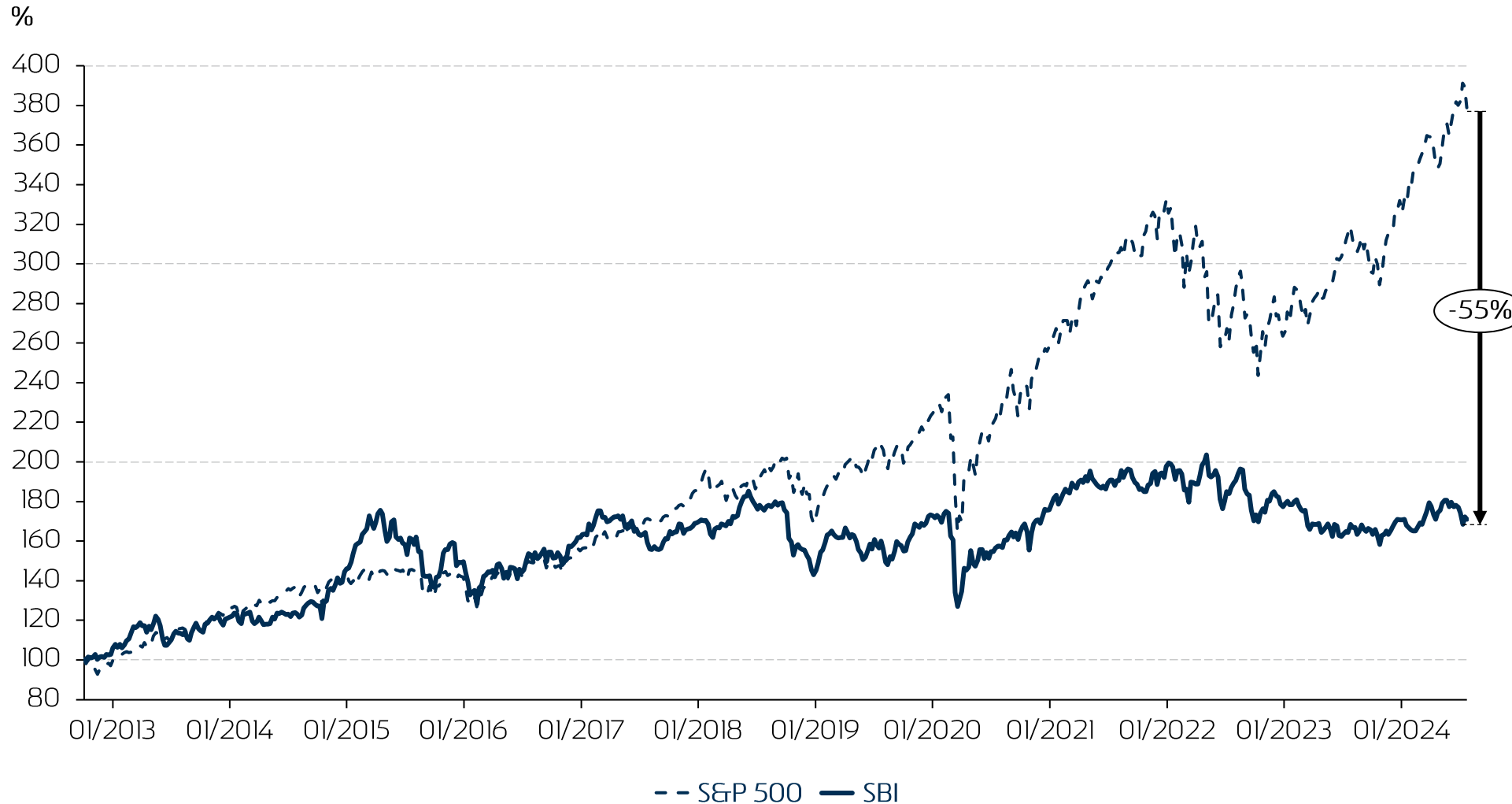
Packaging	Graphic Paper	Pulp	Tissue	Flexible Packaging	Wood Products	Merchants
APP: Indah Kiat	APP: Indah Kiat	Altri	Cascades <sup>1)</sup>	Amcor	Arauco	Heinzel Group <sup>2)</sup>
Billerud	APP: Tjiwi Kimia	APP: Indah Kiat	Clearwater Paper	Constantia Flexibles	Bergs Timber	Inapa
Cascades	Arctic Paper	Arauco	CMPC <sup>1)</sup>	Huhtamaki	Boise Cascade	Kokusai
Clearwater Paper	Billerud <sup>2)</sup>	Canfor Pulp	Essity	Mondi Group <sup>1)</sup>	Canfor Corp	Lecta <sup>2)</sup>
DS Smith	Burgo	CMPC	Hengan International	Rengo <sup>1)</sup>	Century Ply	Optigroup/Papyrus
FajarPaper	Chenming	Domtar <sup>1)</sup>	Kimberly-Clark	Sealed Air	Enviva	Veritiv
Graphic Packaging	CPH Chemie + Papier	Eldorado	Kruger Products		Holmen <sup>1)</sup>	
Greif Packaging <sup>2)</sup>	Daio Paper	Ence	Metsä Group <sup>1)</sup>		Interfor	
Holmen <sup>1)</sup>	Domtar	Ilim Group	P&G Hygiene <sup>2)</sup>		Louisiana-Pacific	
Ilim Group <sup>1)</sup>	Hokuetsu Paper	Mercer International	Sofidel		Masisa S.A.	
International Paper	Holmen <sup>1)</sup>	Metsä Group	Unicharm		Mercer International <sup>1)</sup>	
Irani	Lecta	Oji Paper <sup>1)</sup>			Moelven	
Klabin	Mitsubishi Paper	Rottneros			PotlatchDeltic	
Lee & Man	Mondi Group <sup>1)</sup>	SCA			SCA <sup>1)</sup>	
Mayr-Melnhof	Nippon Paper	Södra			Segezha Group	
Mepco	Norske Skog	Stora Enso <sup>1)</sup>			Setra Group	
Metsä Board	Oji Paper <sup>1)</sup>	Suzano			Södra <sup>1)</sup>	
Mondi Group	Sappi	UPM <sup>1)</sup>			Stella-Jones	
Mpact	Sylvamo				Stora Enso <sup>1)</sup>	
Nine Dragons Paper	The Navigator Company				UPM <sup>2)</sup>	
Oji Paper	UPM				West Fraser Timber	
Pack. Corp. of America					Western Forest Products	
Pro-Gest Group					Weyerhaeuser	
Rengo						
SCA						
SCG Packaging						
Segezha Group						
Smurfit Kappa						
Sonoco						
Stora Enso						
WestRock						

1) Grayed out companies are shown in the peer group but results are excluded from the peer group average due to high activity in other business segments 2) Segment results only

From 2013-2018 the StepChange B3NCH Index (SBI) performed in line with the S&P 500. In recent years the gap has been 30-55% below S&P.



Historical development of StepChange B3NCH Index (SBI) vs. S&P 500 (10/2012 – 07/2024)



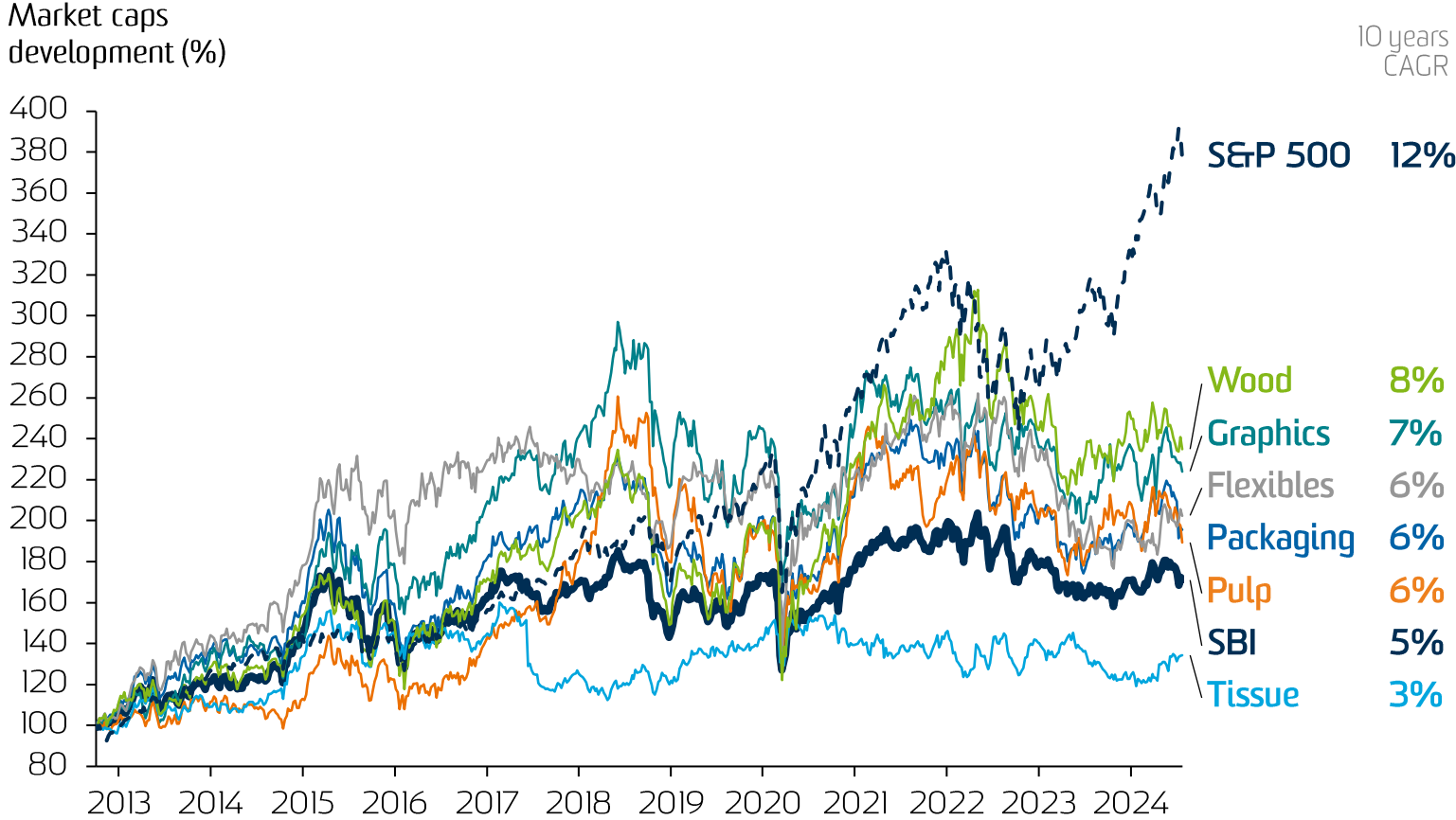
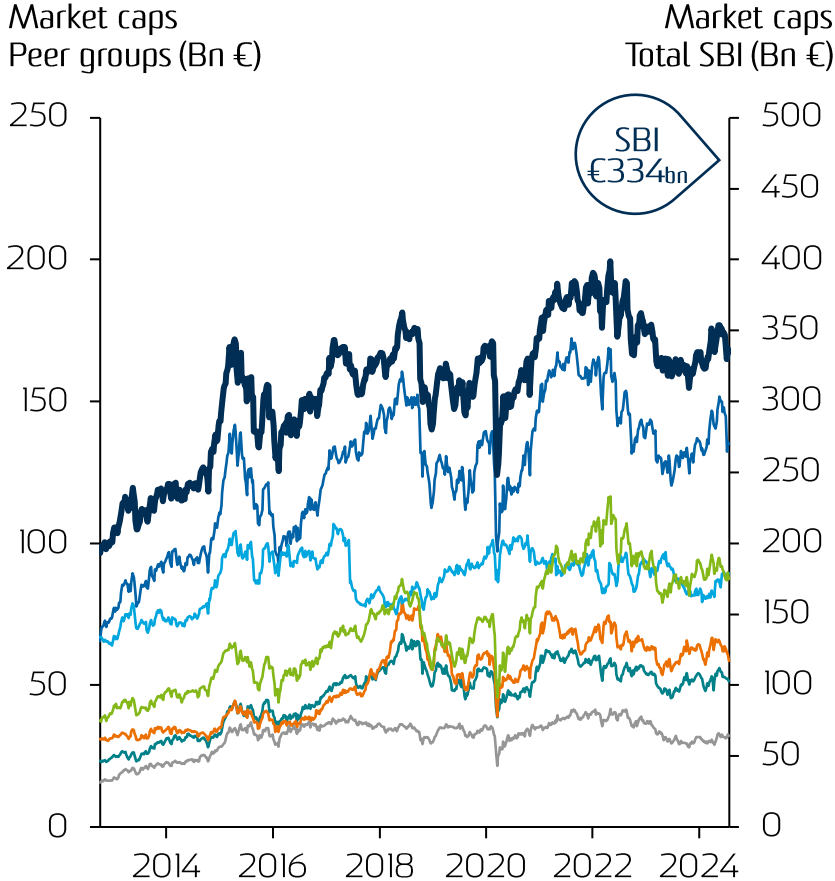
The B3NCH Index includes the market capitalization of ~68 stock listed pulp, paper & packaging companies.

Source: StepChange analysis based on historical data for ~68 companies from Google Finance, Bing and Yahoo Finance; Stock quotes as of July 30th, 2024. S&P 500 with only 6 PPP or Wood companies: Kimberly-Clark, Weyerhaeuser, International Paper, Amcor, PCA, WestRock (until 8/7/2024 from that on Smurfit Westrock).

# B3NCH market caps have shown a consistent long-term rise, but a decline since 2022. The SBI Index currently lags 7pp behind the S&P 500.



Market capitalization development of stock listed pulp, paper and packaging companies in € and % (10/2012 – 07/2024)



Source: StepChange analysis based on historical data for ~68 companies from Google Finance, Bing and Yahoo Finance; Stock quotes as of July 30th, 2024. Note: Companies can be part of several peer groups based on business activities, Segment growth ≠ total SBI growth.

# Financial KPIs available in the Benchmarking document



Following financial results are available for seven peer groups

## Name of the KPI

Peer group comparison <sup>1)</sup> : EBIT %	EBIT % (excl. special items)	OCF % vs. FCF (excl. M&A) % <sup>3)</sup>
Peer group comparison <sup>1)</sup> : EBITDA %	Segment EBIT % (incl. special items)	Operating cash flow % <sup>3)</sup>
Peer group comparison <sup>1)</sup> : Net profit %	Segment EBIT % avg. vs. Revenue growth %	Operating cash flow % development by region <sup>2)3)</sup>
Peer group comparison <sup>1)</sup> : Working capital %	Net profit %	Net investment ratio % <sup>3)</sup>
Peer group comparison <sup>1)</sup> : ROCE %	Working capital % <sup>3)</sup>	Net investment ratio % development by region <sup>2)3)</sup>
Peer group summary	Working capital % development by region <sup>2)3)</sup>	Debt ratio (total liabilities / total assets) <sup>3)</sup>
Financial performance comparison table	Cash conversion cycle (CCC) <sup>3)</sup>	Net debt to EBITDA ratio <sup>3)</sup>
EBITDA % average vs. Revenue growth %	DIO, DPO & DSO development <sup>3)</sup>	Net debt to EBITDA ratio development by region <sup>2)3)</sup>
EBITDA % (incl. special items)	ROCE % <sup>3)</sup>	Enterprise value / EBITDA <sup>3)</sup>
EBIT % (incl. special items)	ROCE % development by region <sup>2)3)</sup>	Revenue vs. Revenue / employee
EBIT % (incl. special items) development by region <sup>2)</sup>	NiROCE % <sup>3)</sup>	Effective tax rate <sup>3)</sup>

KPIs included in B3NCH

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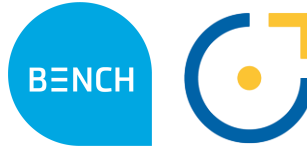
1) Comparison slides containing all peer groups

2) In the July version only; not available for Tissue, Flexible Packaging and Merchants peer groups

3) Not available for Wood Products (please contact us in case of interest)



# Financial benchmarking of seven peer groups



## Peer groups:

Peer groups are clusters of companies operating in the same industry segment according to the company's portfolio of products to show which companies are competing in a certain segment. In case a specific segment plays a substantial role in the company's portfolio, the company is allocated to the peer group with its consolidated financial results which may be including results from other segments as well in case the company operates in multiple segments as segment-only information is only available for some metrics. All company information shown is based on publicly available information.

## Company segments:

Companies are sometimes active in multiple segments. In order to make a distinction between the results of the different operations, StepChange analyses the data for every segment. As an example for a company in the Packaging peer group, StepChange analyses the full company results and also financial results of the Packaging segment only. For segment reporting, Revenue and EBIT are considered as other metrics are not uniformly available based on public data. **NOTE 2021 onwards – Due to the changes in the graphic paper sector the overall company results are heavily influenced by other segments. Few individual pure play companies remain, that represent the segment. For a more comparative view on the sector consider the pages labelled "segment only".**

## Companies shown grayed out:

Grayed out numbers are used to display companies who are active in a segment because they are relevant competitors but whose results are highly impacted by other operating segments.

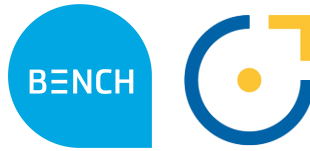
## Details shown in footnotes:

Footnotes are designed to explain the reporting period per companies shown, weighted average calculations, exclusions, abbreviations and non-recurring items and events affecting results. Footnotes are numbered and can be found at the end of each peer group. StepChange is using a common definition for metrics across all companies in order to make them comparable for all companies, therefore StepChange adjusted figures may deviate from official company publications.

## Reporting period:

For each company the latest available financial information is published, either full year (e.g. FY-19) results or extrapolated, annualized half-year (e.g. H1-19e) figures. Due to the fact that the financial year of the companies varies, the results of the same year may not cover the same calendar period for all the companies.

# Most peer groups with decline in EBITDA% in 2023 except Tissue. Pulp highest level despite the decline. Wood lowest and biggest drop.

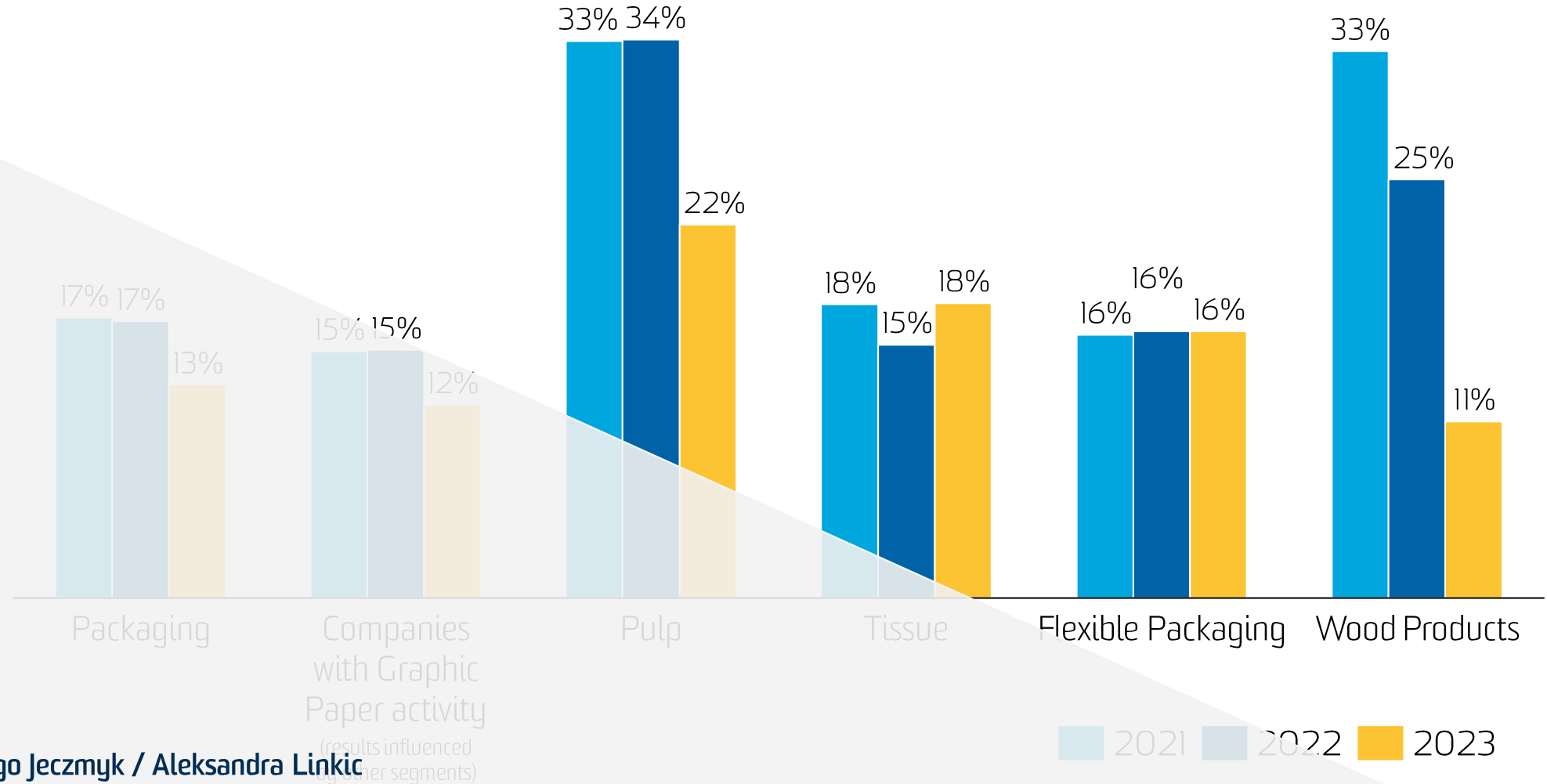


EBITDA % by peer group 2021-2023

Wood Products see a sharp decline in EBITDA in 2023.

Tissue and Flexibles with slight improvements.

Note: Graphic Paper segment totals influenced by results of other segments.



Note: Averages may change vs. previous publications, depending on data availability. Companies with no data for one of the years are excluded from the average for all years displayed.

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# Packaging peer group (Europe & Latin America): Financial benchmarking overview 2023



## Comparison of financial performance for packaging peers 2023<sup>1)</sup>

	All regions	Europe											Latin America		
		Billerud (FY-23)	DS Smith (FY-23)	Holmen <sup>3)</sup> (FY-23)	Ilum Group <sup>3)</sup> (FY-23)	Mayr-Melnhof (FY-23)	Metsä Board (FY-23)	Mondi Group (FY-23)	Pro-Gest Group (HI-23e)	SCA (FY-23)	Segezha Group (FY-23)	Smurfit Kappa (FY-23)	Stora Enso (FY-23)	Irani (FY-23)	Klabin (FY-23)
Change in pp EBIT vs. prior year	Average	↓	→	↓	↓	↓	↓	↓	↓	↓	→	↓	→	↓	
Revenue, m €		3 618	7 922	2 160	1 999	4 164	2 022	7 330	551	1 575	957	11 272	9 774	295	3 337
EBIT	5%	1%	9%	19%	23%	5%	6%	10%	27%	27%	-5%	11%	-3%	35%	23%
Revenue, m € (segment only) <sup>2)</sup>		2 362	7 922	589	1 999	4 164	2 022	6 146	551	510	957	11 272	5 634	280	3 337
EBIT (segment only) <sup>2)</sup>	6%	3%	9%	3%	23%	5%	6%	10%	6%	8%	-5%	11%	0%	37%	23%
EBITDA	13%	8%	15%	25%	30%	10%	11%	16%	19%	38%	11%	17%	16%	42%	42%
Net profit	3%	1%	6%	15%	9%	2%	5%	7%	0%	20%	-18%	7%	-4%	24%	16%
ROCE	4%	1%	9%	6%	22%	5%	5%	9%	3%	3%	-3%	13%	-2%	17%	9%
NiROCE	2%	1%	6%	5%	9%	2%	4%	6%	0%	3%	-13%	8%	-2%	12%	6%
ROA	2%	1%	4%	5%	5%	2%	3%	5%	0%	2%	-8%	6%	-2%	11%	5%
ROE	4%	2%	10%	6%	24%	4%	5%	9%	1%	3%	-68%	14%	-4%	30%	21%
WC	12%	8%	-5%	13%	6%	8%	14%	14%	46%	23%	11%	6%	5%	18%	8%
Debt ratio	58%	44%	57%	29%	80%	60%	33%	39%	63%	30%	89%	56%	48%	63%	75%
OCF	12%	8%	5%	23%	21%	19%	17%	19%	0%	22%	-12%	13%	8%	17%	42%
FCF	3%	0%	-3%	17%	10%	9%	9%	7%	-5%	5%	-22%	6%	-2%	-4%	18%
Net inv. ratio	9%	9%	7%	3%	8%	14%	8%	15%	4%	2%	5%	10%	6%	17%	12%
Net debt to EBITDA ratio	3.3	1.5	2.0	0.3	3.3	3.0	0.7	0.4	5.1	1.9	13.1	1.5	1.7	1.7	2.9

Full company results  
Segment only results

Packaging  
Graphic Paper  
Pulp  
Tissue  
Flexible Packaging  
Wood Products  
Merchants

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WC (Working Capital) margin = (Accounts Receivable excl. fin. items + Inventories - Accounts Payable excl. fin. items)/Revenue  
OCF (Operating Cash Flow) margin = OCF/Revenue  
FCF (Free Cash Flow) margin = (OCF + Cash Flow from regular investment activities)/Revenue  
Net investment ratio = Cash Flow from regular investment activities/Non-current Assets at start of period

ROA (Return On Assets) = Net profit/Total Assets  
ROE (Return On Equity) = Net profit/Total Equity  
Debt ratio = Total Liabilities/Total Assets  
e = extrapolated, annualized figure

↑ - increased by ≥ 1%  
→ - de-/increased by less than 1%  
↓ - decreased by ≤ 1%

NM = Not meaningful

# Significant revenue decline in 2023 due to lower demand. 5-year EBITDA average positive for all companies.

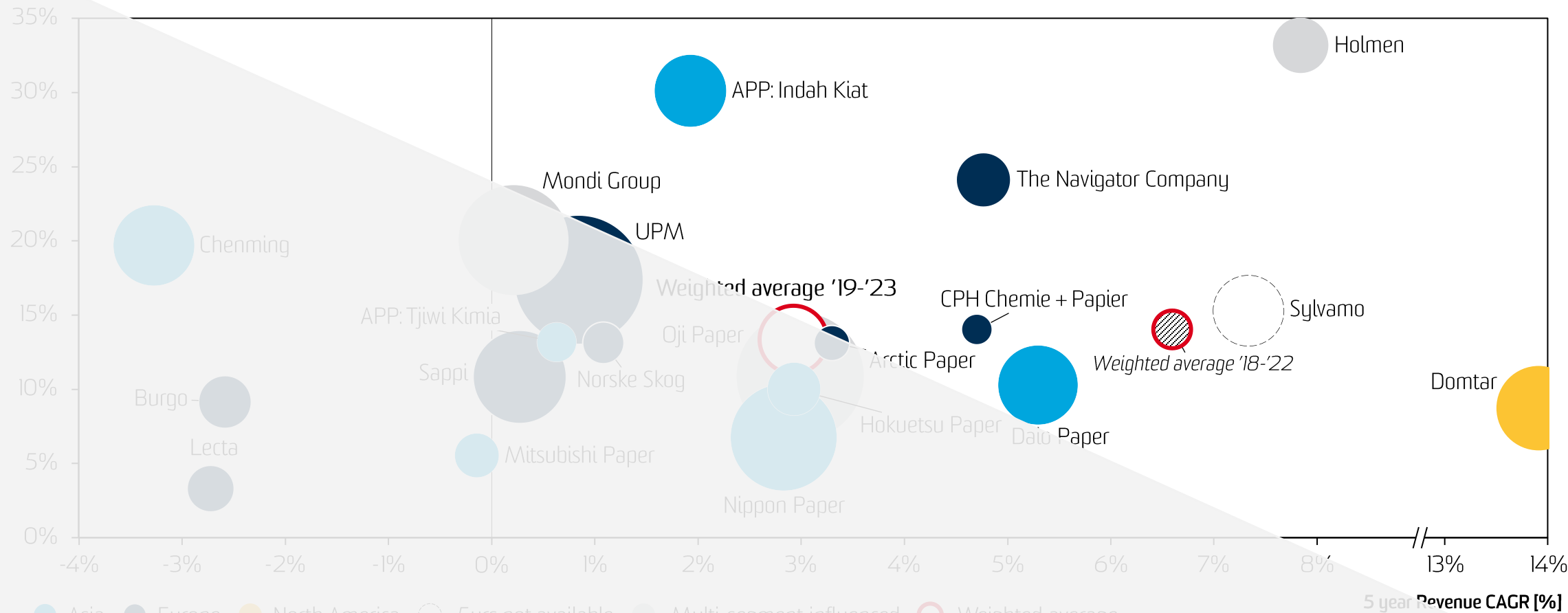


Company-wide EBITDA (incl. special items) average [%] vs. Revenue CAGR [%] 2019-2023<sup>1) 5)</sup>

W. Avg. Rev. CAGR 2022-2023: -8.7%  
W. Avg. Rev. CAGR 2021-2022: 21.7%

5 year EBITDA average [%]

Bubble size = revenue



Full company results

Segment only results

Packaging

Graphic Paper

Pulp

Tissue

Flexible Packaging

Wood Products

Merchants

● Asia ● Europe ● North America ○ 5yrs not available ● Multi-segment influenced ○ Weighted average

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Note: Results of Holmen, Mondi Group and Oji Paper highly influenced by segments other than graphic paper

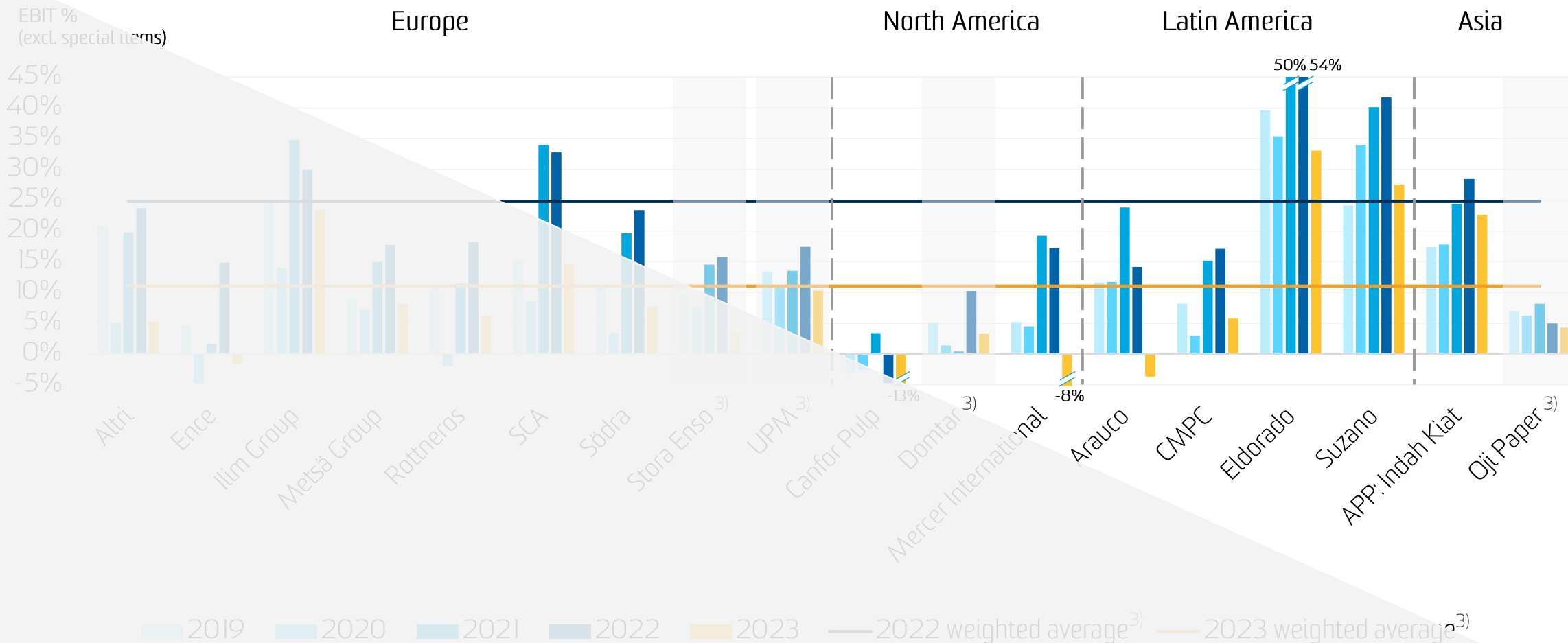
# Company-wide EBIT excl. special items drops sharply by 55.5%. Despite declines, Eldorado, Suzano, APP and Ilim remain above 20% EBIT. Four peers negative.



## Company-wide EBIT (excl. special items) as % of revenue 2019-2023<sup>1)</sup>

Special items excluded: e.g. gains/losses on assets sold; restructuring charges; disposals; fair value valuations; acquisition related costs; exchange rate gains/losses; impairments and reversals; changes in fair value of biological assets

W. Avg. 2023: 11.0%  
W. Avg. 2022: 24.8%



Full company results

Segment only results

Packaging

Graphic Paper

Pulp

Tissue

Flexible Packaging

Wood Products

Merchants

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Notes: Results of Stora Enso, UPM, Domtar and Oji Paper highly influenced by segments other than pulp



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Companywide subscription

€ 1 190,-

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(3 publications/year)



1) The subscription is automatically prolonged annually unless notice of termination is received by September 30<sup>th</sup> of year of subscription

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Thank you for your order!



# DRIVING CHANGE TO DELIVER RESULTS

WOOD • PULP • PAPER • PACKAGING



## About StepChange Consulting

StepChange is an industry focused and independent management consultancy specialized on pulp, paper and packaging with a proven track record to turn strategy into increased shareholder value.

StepChange provides support to leading organizations in the industry from strategy development to implementation of operational improvements. With an international team of industry experts StepChange will hit the ground running. StepChange develops innovative and yet pragmatic solutions, placing an emphasis on delivering measurable business results.

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