

European Snapshot

Downgrades at the start of the year

Quantitative Strategy

Screen of the Week: highest/lowest breadth of revisions

In December, the 3-month European sales (0.78), EPS (0.73) and DPS (0.91) revision ratios remained at the 3-year lows in net downgrade territory and below the typical seasonal weakness shown in the last month of the year. Only 2 stocks in our Screen of the Week had net upgrades on all 3 metrics last month, while 12 screened with net downgrades on these 3 metrics within the largest 250 European names (Exhibit 1).

Sales and EPS decline, DPS moves into net upgrades

The 1-month Sales and EPS Revision Ratios declined deeper into net downgrade territory (to 0.64 and 0.70, respectively), but the DPS Revision Ratio improved to 1.01 over the month (see Exhibit 2 for the most upgraded/downgraded stocks). Only Switzerland, Healthcare, IT, Communications and EM-exposed companies saw improvements in these ratios over the month across countries/sectors/styles/exposure baskets, while Italy, Discretionary, Energy, High Growth and Rising Price Momentum noted declines (see Exhibit 50 for details).

Other metrics: price targets improve further

The 1-month Revision Ratio rose only for price targets (to 0.99 from 0.7, due to increases in Real Estate and Communication Svs). The capex ratio fell the most (to 0.53 from 0.79, on the back of a collapse in Real Estate and Sweden), followed by the buybacks ratio (1.18 from 1.39, driven by Energy) and net debt ratio (to 2.05 from 2.15, as Discretionary halved the upgrades). Finally, the inventories ratio fell the least (to 0.62 from 0.69, led by a decline in Energy).

2023 ended with an inflow into Europe-focused funds

Europe-focused equity funds recorded their first inflow in 42 weeks of \$0.36bn last week (there were only 6 weekly inflows in 2023), with a net -26.3% seeing net inflows. Outflows amounted to \$0.7bn from active funds (not a single weekly inflow was recorded last year) and inflows into passive funds were \$1.04bn (7th consecutive inflow and largest since Mar '23, with 30 weekly inflows last year). Europe-focused funds saw \$71.3bn of outflows in 2023: \$77bn of outflows from active funds and \$5.7bn of inflows into passive funds. Healthcare (\$0.15bn), Switzerland (\$0.12bn) and Size stocks (\$0.08bn) had the largest inflows last week, while Financials (\$0.37bn), the UK (\$0.12bn) and Risk stocks (\$0.08bn) posted the largest outflows (Exhibit 28). UK-focused equity funds benchmarked to the FTSE 100 saw \$0.13bn of outflows in 2023, the first yearly outflow since 2011.

04 January 2024

Quant Strategy
Europe

Paulina Strzelinska >>
Quant Strategist
MLI (UK)
+44 20 7996 7059
paulina.strzelinska@bofa.com

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[European Snapshot: Who would buy back the most in 2024? 23 November 2023](#)

We highlight the latest C-suite changes, insider buying stats and new buyback announcements in our screens in the Appendix.

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Refer to important disclosures on page 21 to 23.

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Timestamp: 04 January 2024 12:30AM EST

Screen of the week

Exhibit 1: The top/bottom European stocks with the highest and lowest 1-month Sales/EPS/DPS Revision Ratios among the largest 250 European names within MSCI Europe index as per the market cap

Sales/EPS/DPS Revision Ratio per company, measured as: ((# of FY1 and FY2 upward Sales/EPS/DPS revisions over past month)-(# of FY1 and FY2 downward Sales/EPS/DPS revisions over past month))/ # of FY1 and FY2 estimates over past month

BBG Ticker	Name	1m SRR	1m ERR	1m DRR	BBG Ticker	Name	1m SRR	1m ERR	1m DRR
RIO LN	Rio Tinto	0.40	0.55	0.53	AHT LN	Ashtead	-0.94	-1.00	-0.71
SGE LN	Sage Group	0.50	0.57	0.26	BAER SW	Julius Baer	-0.79	-0.91	-0.66
					AAL LN	Anglo American	-0.67	-0.78	-0.82
					BATS LN	British American Tobacco	-0.73	-0.70	-0.28
					MC FP	LVMH	-0.57	-0.57	-0.27
					MONC IM	Moncler	-0.40	-0.37	-0.27
					SLHN SW	Swiss Life	-0.33	-0.44	-0.25
					CPG LN	Compass	-0.40	-0.33	-0.28
					DGE LN	Diageo	-0.22	-0.34	-0.38
					RI FP	Pernod Ricard	-0.30	-0.29	-0.32
					BAYN GR	Bayer	-0.20	-0.41	-0.27
					DSV DC	DSV	-0.22	-0.22	-0.21

Source: BofA European Equity Quant Strategy, IBES. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

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Exhibit 2: The top/bottom European stocks with the highest and lowest 1-month DPS Revision Ratios among the largest 250 European names within MSCI Europe index as per the market cap

DPS Revision Ratio per company, measured as: ((# of FY1 and FY2 upward DPS revisions over past month)-(# of FY1 and FY2 downward DPS revisions over past month))/ # of FY1 and FY2 estimates over past month

Most positive breadth of DPS revisions			Most negative breadth of DPS revisions		
BBG Ticker	Name	Ratio	BBG Ticker	Name	Ratio
RIO LN	Rio Tinto	0.53	AAL LN	Anglo American	-0.82
SIE GR	Siemens	0.48	AHT LN	Ashtead	-0.71
MRO LN	Melrose Industries	0.46	BAER SW	Julius Baer	-0.66
ITX SM	Inditex	0.45	GLEN LN	Glencore	-0.43
IMB LN	Imperial Brands	0.32	DGE LN	Diageo	-0.38
SGE LN	Sage Group	0.26	RI FP	Pernod Ricard	-0.32
LSEG LN	London Stock Exchange	0.25	BATS LN	British American Tobacco	-0.28
DANSKE DC	Danske Bank	0.24	CPG LN	Compass	-0.28
ISP IM	Intesa Sanpaolo	0.20	BAYN GR	Bayer	-0.27
ABF LN	Associated British Foods	0.20	MC FP	LVMH	-0.27
HNR1 GR	Hannover Rueck	0.19	MONC IM	Moncler	-0.27
UCG IM	UniCredit	0.19	ITRK LN	Intertek	-0.25
RWE GR	RWE	0.18	SLHN SW	Swiss Life Holding	-0.25
MAERSKB DC	A.P. Moller - Maersk	0.18	NHY NO	Norsk Hydro	-0.24
CRDA LN	Croda International	0.18	WPP LN	WPP Plc	-0.24
ADM LN	Admiral	0.18	HO FP	Thales	-0.22
ABI BB	Anheuser-Busch InBev	0.17	VOW GR	Volkswagen	-0.21
VOLVB SS	Volvo B	0.17	DSV DC	DSV	-0.21
AV/ LN	Aviva	0.17	DNB NO	DNB Bank	-0.20
ENEL IM	Enel	0.15	FRE GR	Fresenius SE	-0.20
TSCO LN	Tesco	0.14	DB1 GR	Deutsche Boerse	-0.20
RACE US	Ferrari	0.14	NOKIA FH	Nokia	-0.19
TTE FP	TotalEnergies	0.14	CFR SW	Cie Financiere Richemont	-0.18
ZURN SW	Zurich Insurance	0.14	SAMPO FH	Sampo	-0.18
AMS SM	Amadeus IT	0.14	LOGN SW	Logitech	-0.17

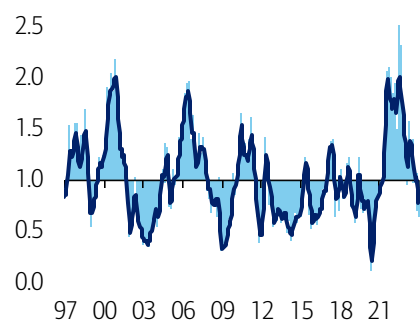
Source: BofA European Equity Quant Strategy, IBES. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

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Revisions

Exhibit 3: Sales Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has gone down to 0.78 in December, from 0.91 previously

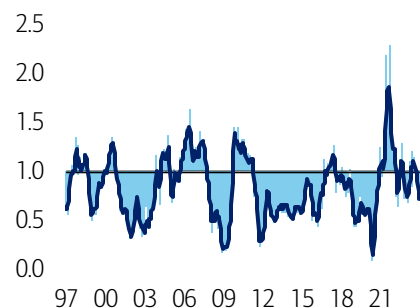


Source: BofA European Equity Quant Strategy, IBES. The Sales Revision Ratio measures the number of stocks for which the consensus Sales estimate has risen, versus the number for which it has fallen.

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Exhibit 4: EPS Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has decreased to 0.73 in December, from 0.80 previously

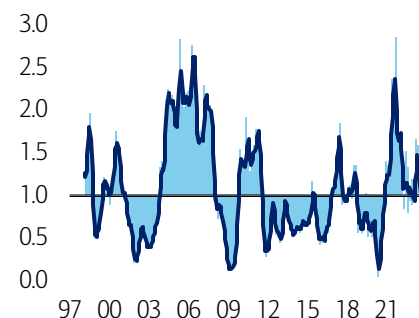


Source: BofA European Equity Quant Strategy, IBES. The EPS Revision Ratio measures the number of stocks for which the consensus EPS estimate has risen, versus the number for which it has fallen.

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Exhibit 5: DPS Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has marginally improved to 0.909 in December, from 0.908 previously

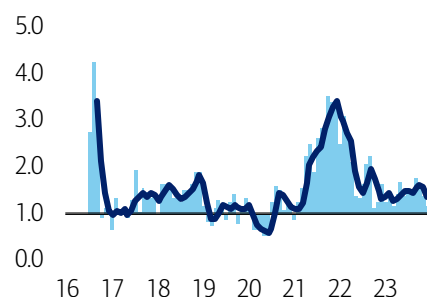


Source: BofA European Equity Quant Strategy, IBES. The DPS Revision Ratio measures the number of stocks for which the consensus DPS estimate has risen, versus the number for which it has fallen.

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Exhibit 6: Buybacks Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has decreased to 1.37 in December, from 1.57 previously

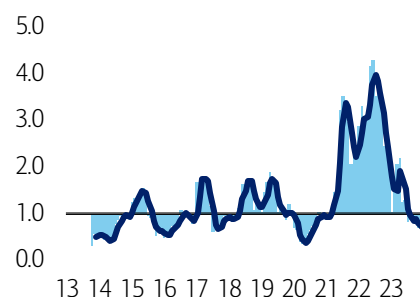


Source: BofA European Equity Quant Strategy, Factset. The Buybacks Revision Ratio measures the number of stocks for which the consensus number of share repurchases estimate has risen, versus the number for which it has fallen.

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Exhibit 7: Inventories Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has fallen to 0.73 in December, from 0.82 previously

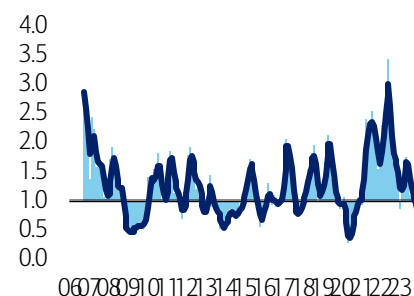


Source: BofA European Equity Quant Strategy, Factset. The Inventories Revision Ratio measures the number of stocks for which the consensus number of inventories estimate has risen, versus the number for which it has fallen.

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Exhibit 8: Capex Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has declined to 0.76 in December, from 0.94 previously

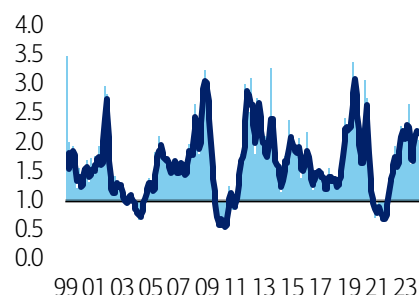


Source: BofA European Equity Quant Strategy, Factset. The Capex Revision Ratio measures the number of stocks for which the consensus number of capex estimate has risen, versus the number for which it has fallen.

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Exhibit 9: Net Debt Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has moderated to 2.15 in December, from 2.17 previously

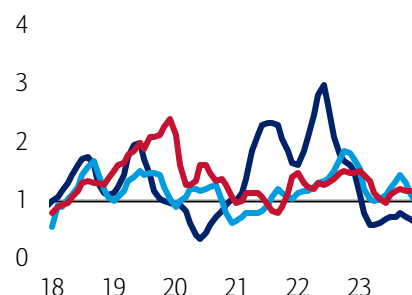


Source: BofA European Equity Quant Strategy, Factset. The Net Debt Revision Ratio measures the number of stocks for which the consensus number of net debt estimate has risen, versus the number for which it has fallen

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Exhibit 10: 1-month cash and long-term ratios increased over the month, while short-term debt ratio declined

European 3-month revision ratios for cash (dark blue), short-term debt (light blue) and long-term debt (red line)

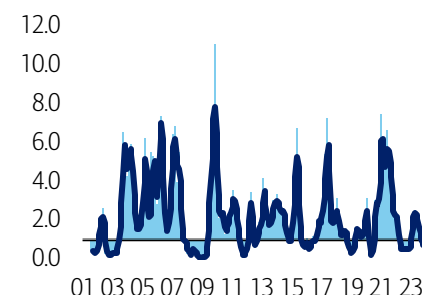


Source: BofA European Equity Quant Strategy, Factset. The Cash/Short-term debt/Long-term debt Revision Ratio measures the number of stocks for which the consensus number of cash/short-term debt/long-term debt estimates have risen, versus the number for which they have fallen

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Exhibit 11: Price Target Revision Ratio for Europe

1-month (light blue) and 3-month (dark blue); the 3-month ratio has ticked up to 0.72 in December, from 0.71 previously

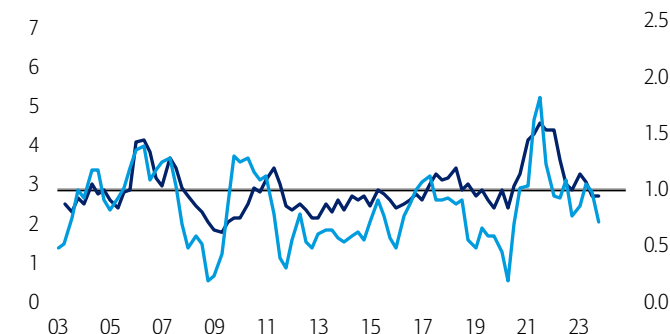


Source: BofA European Equity Quant Strategy, Factset. The Price Target Revision Ratio measures the number of stocks for which the consensus number of price target estimate has risen, versus the number for which it has fallen

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Exhibit 12: Company commentary showed marginal improvement, while sell-side earnings upgrades remain negative

Stoxx 600 Company Sentiment Ratio (dark blue line) and European 3-month EPS Revision Ratio (light blue line, rhs)

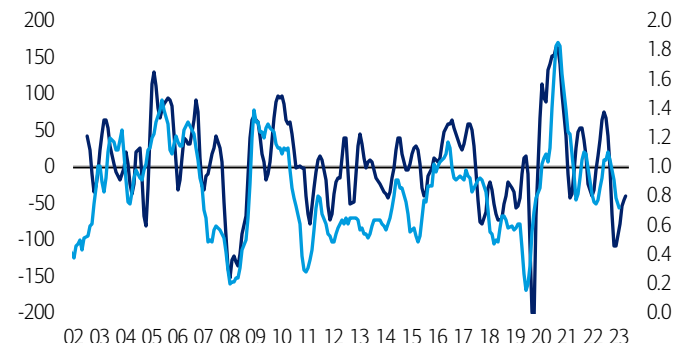


Source: BofA European Equity Quant Strategy, IBES, Factset. Stoxx 600 Company Sentiment Ratio is calculated as a ratio of mentions "better" and "stronger" to "worse" and "weaker" in the earnings transcripts for Europe Stoxx 600 companies that have reported in each quarter.

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Exhibit 13: Sell-side earnings forecasts are likely to decline further before potentially improving from early this year

Eurozone Economic Surprise Index (dark blue line, 3m mva, 3m lag) and European 3-month EPS Revision Ratio (light blue line, rhs)

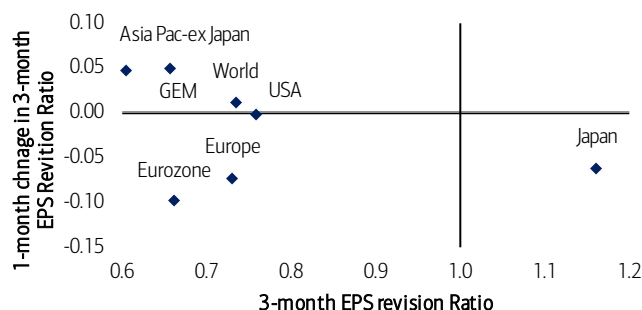


Source: BofA European Equity Quant Strategy, IBES, Refinitiv

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Exhibit 14: Only Japan is in net upgrades territory, while Europe and Eurozone's ratios declined the most

The 3-month EPS Revision Ratio and its MoM change by region in December

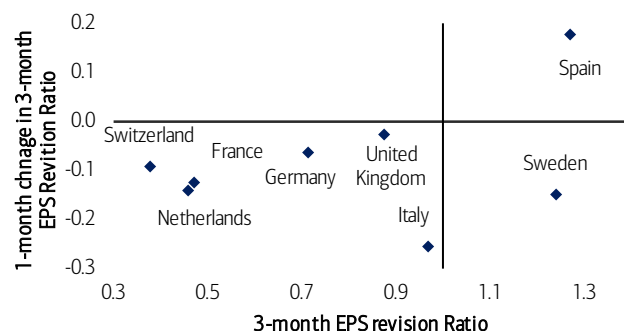


Source: BofA European Equity Quant Strategy, IBES

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Exhibit 15: Spain had the highest EPS Revision Ratio and it is the only country to show improvement over the month

The 3-month EPS Revision Ratio and its MoM change by country in December

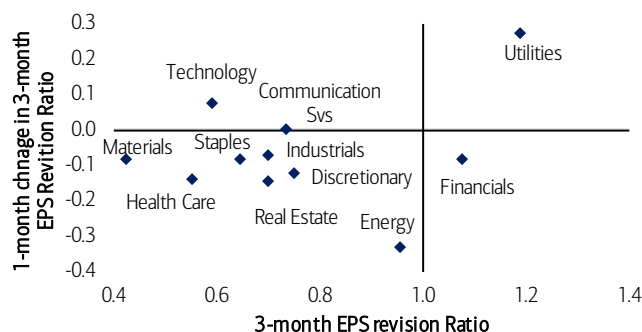


Source: BofA European Equity Quant Strategy, IBES

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Exhibit 16: Only Utilities and Financials are in net upgrades territory; Energy's ratio decreased the most over the month

The 3-month EPS Revision Ratio and its MoM change by sector in December

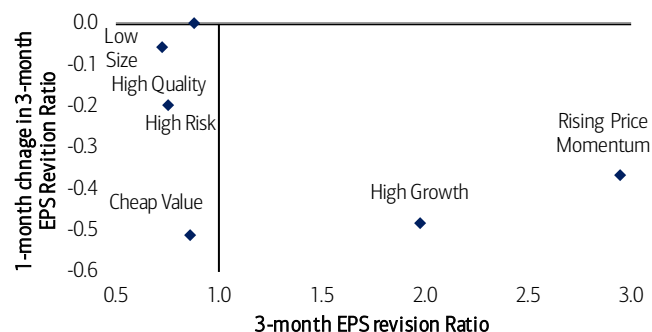


Source: BofA European Equity Quant Strategy, IBES

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Exhibit 17: Rising Price Momentum and High Growth are in net upgrades, while Cheap Value declined the most over the month

The 3-month EPS Revision Ratio and its MoM change by style in December

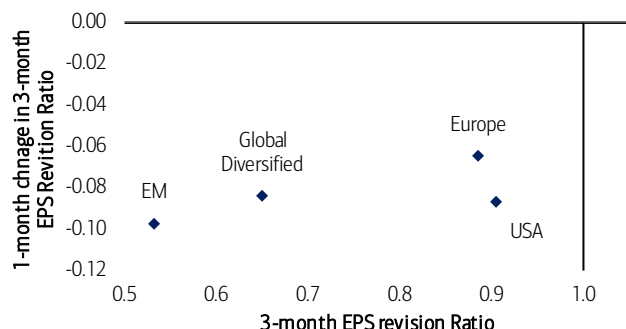


Source: BofA European Equity Quant Strategy, IBES

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Exhibit 18: USA-exposed stocks had the highest EPS Revision Ratio, while it decreased the most for EM-exposed stocks

The 3-month EPS Revision Ratio and 1-month change in the 3-month EPS Revision Ratio by revenue exposure basket in December

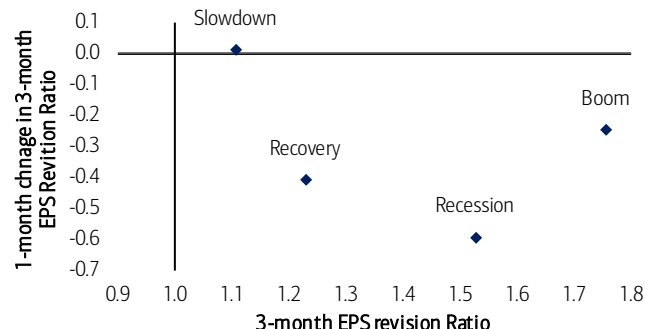


Source: BofA European Equity Quant Strategy, IBES

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Exhibit 19: Boom had the highest EPS Revision Ratio, while Recession recorded biggest drop over the month

The 3-month EPS Revision Ratio and its MoM change by top Style Cycle phase in December



Source: BofA European Equity Quant Strategy, IBES

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Exhibit 20: Financials continue to contribute the most to 2023/24 expected growth numbers, while Energy, Materials and Utilities the least

2023 and 2024 expected SPS/EPS/DPS growth contribution for MSCI Europe per country and sector

	Sales Growth (%)		EPS Growth (%)		Dividend Growth (%)	
	2024	2025	2024	2025	2024	2025
Europe	2.41	2.98	5.42	8.99	6.14	6.27
Contribution per sector						
Energy	0.14	-0.60	-0.01	-0.19	0.20	0.42
Materials	0.11	0.22	0.61	0.58	0.00	0.42
Industrials	0.58	0.92	0.91	1.62	0.60	1.16
Discretionary	0.41	0.65	0.24	1.10	0.58	0.83
Staples	0.35	0.22	0.54	0.74	0.67	0.72
Healthcare	0.38	0.49	1.05	1.72	0.69	0.90
Financials	0.62	0.69	1.62	2.10	2.79	0.97
IT	0.09	0.25	0.21	0.84	0.22	0.37
Communication Svs	0.08	0.11	0.30	0.30	0.13	0.19
Utilities	-0.33	0.00	-0.03	0.07	0.11	0.22
Real Estate	-0.01	0.02	-0.03	0.02	0.14	0.06
Contribution per country						
France	0.65	0.60	0.63	1.53	1.08	1.47
Germany	0.42	0.97	1.12	1.65	0.82	1.11
Italy	0.05	0.11	-0.02	0.12	0.32	0.17
Netherlands	0.14	0.03	0.33	0.82	0.21	0.45
Spain	0.04	0.07	0.16	0.21	0.37	0.44
Sweden	0.04	0.17	0.01	0.32	0.17	0.23
Switzerland	0.34	0.31	1.08	1.53	0.76	0.85
UK	0.00	0.03	1.35	1.69	1.94	0.72

Source: MSCI, Refinitiv

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Exhibit 21: Materials, UK and High Growth top the 12m fwd EPS growth estimates

12m fwd EPS growth (%)

Sectors	Europe: 5.42%		Styles	
	Countries			
Materials	9.88 UK	9.08	High Growth	8.57
Communication Svs	8.95 Spain	7.47	Low Size	7.40
Healthcare	8.89 Italy	7.42	High Quality	7.09
			Rising Price	
Industrials	7.43 France	5.35	Momentum	4.49
IT	6.02 Germany	3.63	High Risk	1.73
Financials	6.01 Sweden	3.08	Top Value	-1.01
Staples	5.97 Switzerland	0.30		
Discretionary	2.73 Netherlands	-0.40		
Energy	-0.09			
Utilities	-0.99			
Real Estate	-4.04			

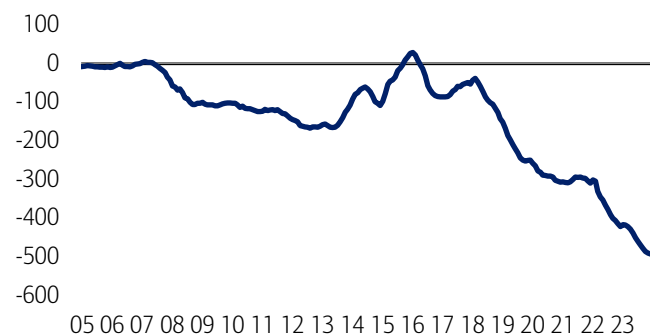
Source: BofA European Equity Quant Strategy, MSCI, Refinitiv, Factset

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Flows

Exhibit 22: Europe-focused equity funds have seen \$485bn of outflows since 2005 (active funds: \$-610bn, passive funds: \$125bn)

Long-term cumulative flows into Europe-focused equity funds (\$bn)

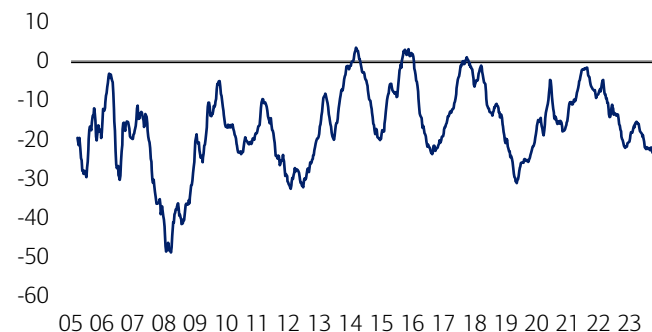


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 23: A net -26.3% of Europe-focused funds saw inflows last week, second consecutive decline

Net % of Europe-focused equity funds seeing inflows on weekly basis (12w mva)

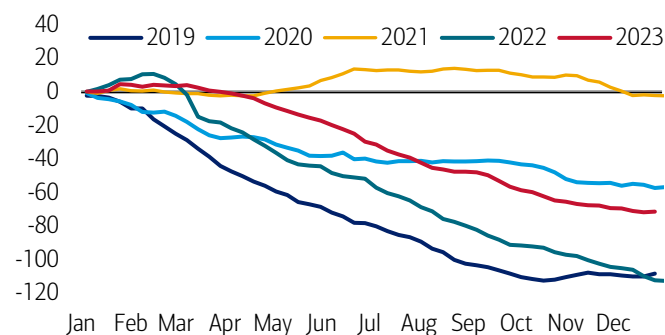


Source: BofA European Equity Quant Strategy, EPFR Global. Note: Net % calculated as % of funds that saw inflows minus % of funds that saw outflows

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Exhibit 24: Europe-focused equity funds have seen \$71.3bn of outflows in 2023, with \$69.6bn of outflows from European-domiciled funds and \$0.7bn of inflows into US-domiciled funds

Cumulative annual flows into Europe-focused equity funds (\$bn)

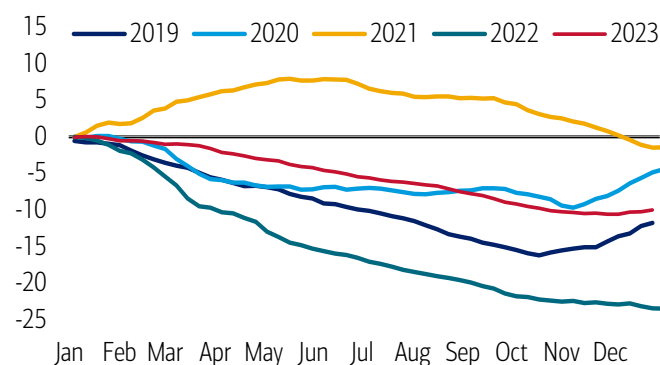


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 26: SMID focused European equity funds have seen \$9.98bn of outflows in 2023, \$10.9bn of outflows from active funds and \$0.9 inflows into passive funds

Cumulative annual flows into SMID-focused European equity funds (\$bn)

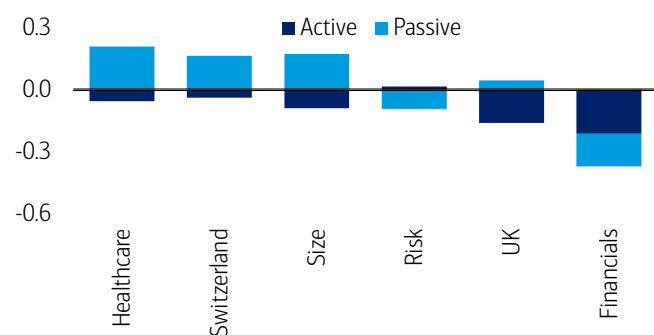


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 28: Healthcare recorded the largest inflows (\$0.15bn), while Financials noted the largest outflows (\$0.37bn) last week

Top and bottom inflows/outflows last week into Europe-focused equity funds/stocks by country, sector, style split into active and passive (\$bn)

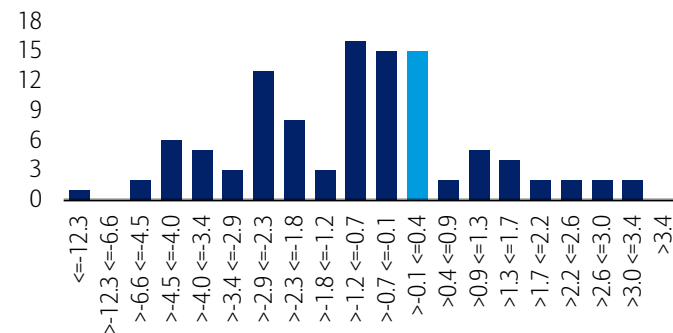


Source: BofA European Equity Quant Strategy, EPFR Global. Note: flows into styles are aggregated from stock level data

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Exhibit 25: Europe-focused equity funds saw \$0.36bn of inflows last week, first inflow after 42 weekly outflows

Distribution of weekly flows into Europe-focused equity funds over the last two years (\$bn)

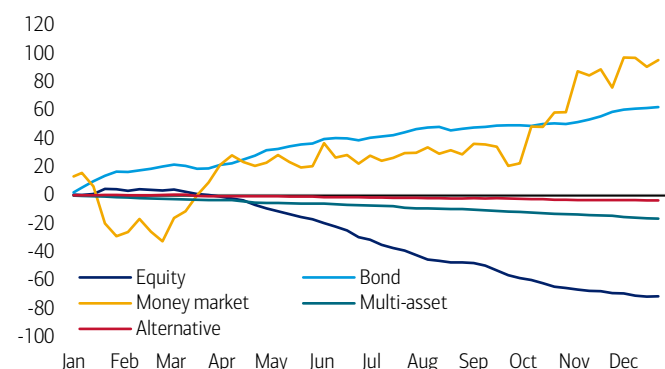


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 27: Equity funds have seen the largest outflows in 2023 (\$71.3bn), while Money market funds have seen the largest inflows (\$95.5bn)

2023 cumulative flows into Europe-focused funds by asset-class (\$bn)

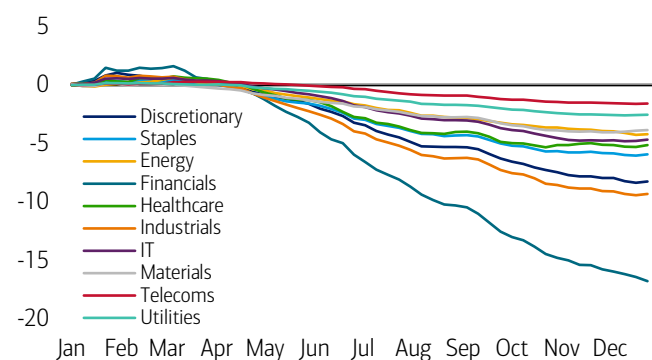


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 29: Telecoms noted the smallest outflows in 2023 (\$1.6bn), while Financials recorded the largest outflows (\$16.8bn)

2023 cumulative flows into Europe-focused equity funds by sector (\$bn)

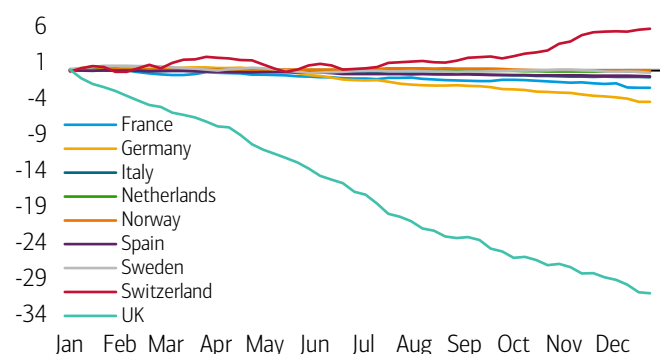


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 30: Switzerland noted the largest inflows in 2023 (\$5.8bn), while UK recorded the largest outflows (\$31bn)

2023 cumulative flows into Europe-focused equity funds by country (\$bn)

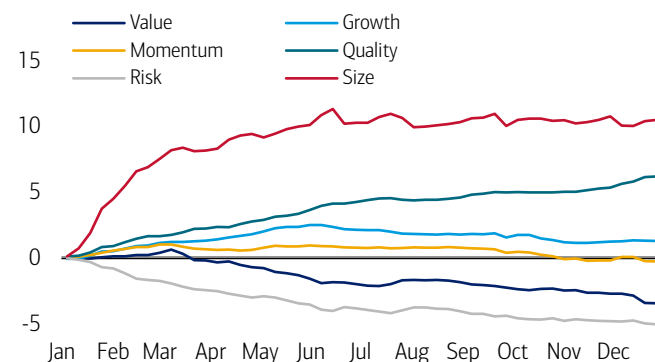


Source: BofA European Equity Quant Strategy, EPFR Global.

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Exhibit 31: Size has seen the largest inflows in 2023 (\$10.5bn), while Risk has recorded the largest outflows (\$5.1bn)

2023 cumulative flows into European equities by style (long-short, \$bn)

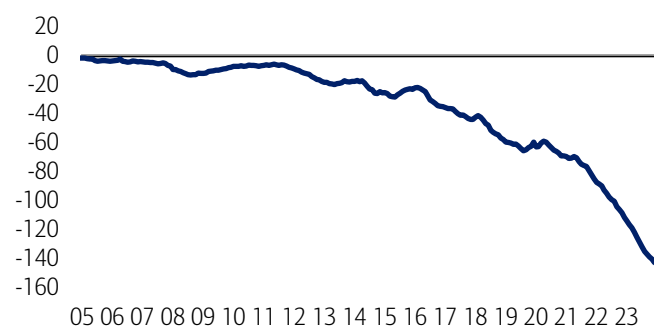


Source: BofA European Equity Quant Strategy, EPFR Global. Note: flows into styles are aggregated from stock level data

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Exhibit 32: UK-focused equity funds have seen \$141bn of outflows since 2005 (active funds: -\$159bn, passive funds: \$18bn)

Long-term cumulative flows into UK-focused equity funds (\$bn)

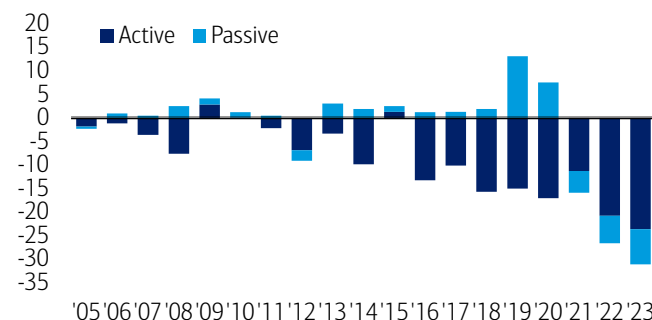


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 33: In 2023, UK-focused equity active funds have seen \$23.6bn of outflows, while passive funds recorded \$7.4bn of outflows

Yearly flows into UK-focused equity funds (\$bn) split between active and passive funds

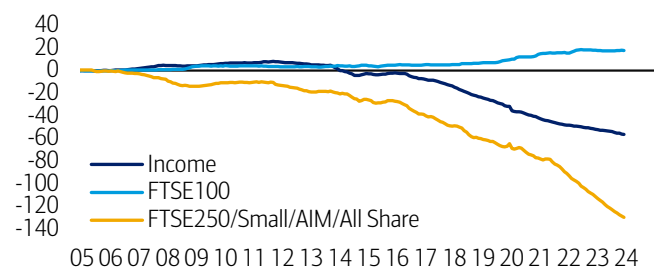


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 34: Since 2005, UK equity-focused income funds saw \$56bn of outflows, \$18bn of inflows into FTSE100 benchmarked funds and \$130bn of outflows from FTSE250/AIM/All Share/Small caps

Long-term cumulative flows into UK-focused equity funds (\$bn) split by focus

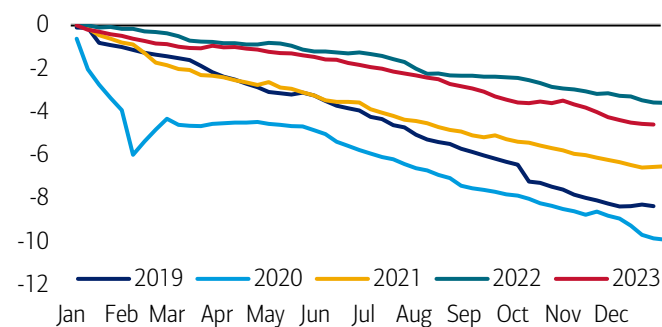


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 35: UK income-focused equity funds have seen \$4.58bn of outflows in 2023

Cumulative annual flows into UK income-focused equity funds (\$bn)

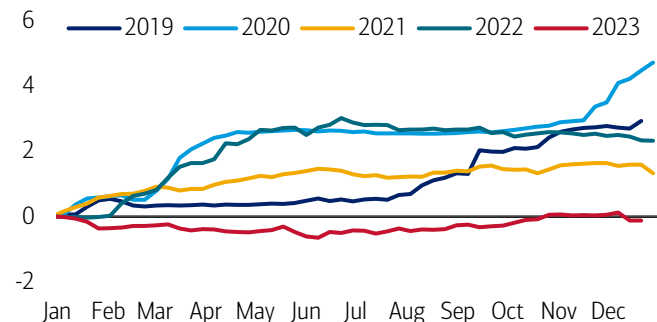


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 36: UK-focused equity funds benchmarked to FTSE 100 have seen \$0.13bn of outflows in 2023; first time since 2011

Cumulative annual flows into UK-focused equity funds benchmarked to FTSE 100 index (\$bn)

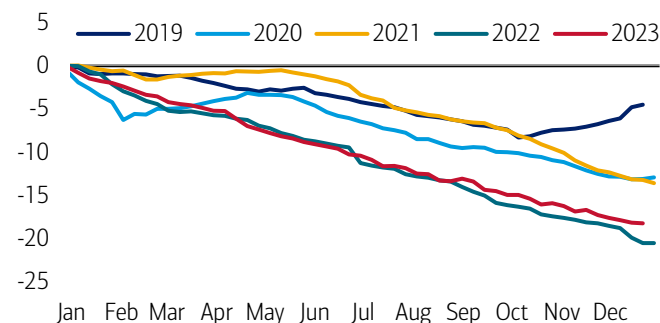


Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 37: UK-focused equity funds benchmarked to FTSE 250/Small/AIM/All Share indices have seen \$18.2bn of outflows in 2023

Cumulative annual flows into UK-focused equity funds benchmarked to FTSE 250/AIM/Small/ALL Share indices (\$bn)



Source: BofA European Equity Quant Strategy, EPFR Global

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Exhibit 38: Encavis has seen the largest inflows last week as % of mcap, while Aib Group largest outflows across funds

Top 5 and bottom 5 European companies that are part of Europe Stoxx 600 index and saw the largest inflow/outflow from different types of funds last week as % of market capitalisation

Stocks that saw the highest inflows last week

BBG		Flow as % of				
Ticker	Name	Sector	Country	mcap	Group	
NOD NO	Nordic Semiconductor	Technology	Norway	0.03	Active	
BC IM	Brunello Cudinelli	Consumer Pds & Svs	Italy	0.02	Active	
ERICB SS	Ericsson Lm	Telecommunications	Sweden	0.01	Active	
INDT SS	Indutrade	Industrial Gds & Svs	Sweden	0.01	Active	
TEL NO	Telenor	Telecommunications	Norway	0.01	Active	
ECV GR	Encavis	Utilities	Germany	0.12	Passive	
COV FP	Covivio	Real Estate	France	0.08	Passive	
ELE SM	Endesa	Utilities	Spain	0.07	Passive	
EVK GR	Evonik Industries	Chemicals	Germany	0.06	Passive	
PST IM	Poste Italiane	Insurance	Italy	0.06	Passive	

Stocks that saw the highest outflows last week

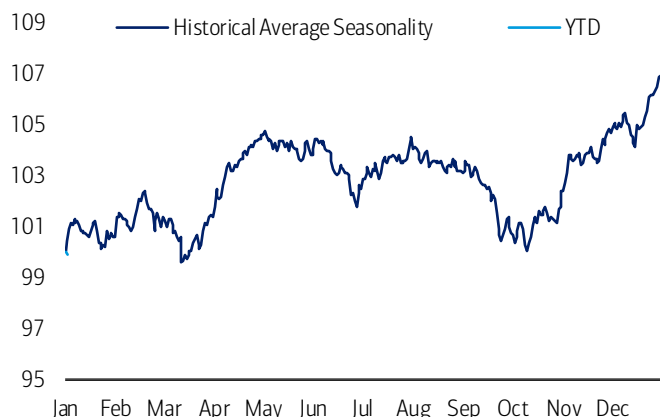
BBG Ticker Name		Sector	Country	mcap	Group
AIBG ID	Aib	Banks	Ireland	-0.08	Active
ALLFG NA	Allfunds	Financial Services	Netherlands	-0.04	Active
RBREW DC	Royal Unibrew	Food, Bev & Tobacco	Denmark	-0.04	Active
AZE BB	Azelis	Industrial Gds & Svs	Belgium	-0.03	Active
BIRG ID	Bank Of Ireland	Banks	Ireland	-0.03	Active
AMS SW	Ams-Osram	Technology	Switzerland	-0.02	Passive
YAR NO	Yara	Chemicals	Norway	-0.02	Passive
AXFO SS	Axfood	PCDG Stores	Sweden	-0.02	Passive
HOLMB SS	Holmen	Basic Resources	Sweden	-0.02	Passive
TEL2B SS	Tele2	Telecommunications	Sweden	-0.02	Passive

Source: BofA European Equity Quant Strategy, EPFR Global. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

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Performances

Exhibit 39: The SXXP index typically registers a 1.4% gain in Q1, while the current quarter-to-date return stands at a 1.2% loss
Historical average performance of Europe Stoxx 600 index (EUR, price return)



Source: BofA European Equity Quant Strategy, Refinitiv. Note: historical average performance calculated over 1992-2023

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Exhibit 40: Q1 '24 starts with stronger gains in Switzerland, Healthcare and Value compared to historical trends

Current QTD and YTD performance in comparison with historical average relative performance of MSCI sectors/countries indices (vs MSCI Europe, local currency, price return) and styles (long/short, EUR, price return)

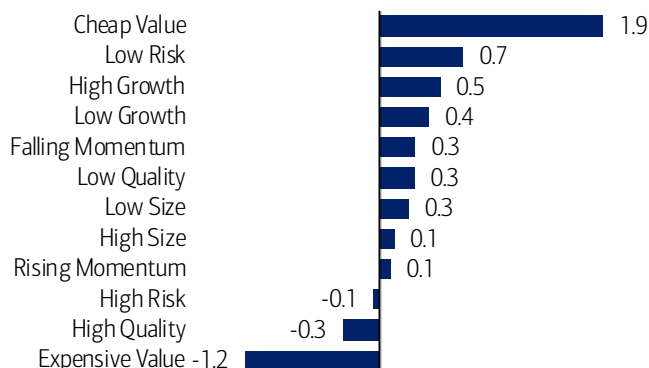
	QTD (%)	Diff vs historical	YTD (%)	Diff vs historical
Germany	0.0	-0.3	0.0	-0.3
France	-0.1	-0.2	-0.1	-0.2
Italy	0.8	0.4	0.8	0.4
Netherlands	-1.2	-1.4	-1.2	-1.4
Spain	0.9	0.5	0.9	0.5
Sweden	-0.2	-0.4	-0.2	-0.4
Switzerland	0.1	0.6	0.1	0.6
UK	0.0	0.2	0.0	0.2
Materials	-0.1	-0.5	-0.1	-0.5
Communication Svs	0.6	0.6	0.6	0.6
Discretionary	-0.4	-0.5	-0.4	-0.5
Staples	0.1	0.4	0.1	0.4
Energy	0.7	0.6	0.7	0.6
Financials	0.4	0.3	0.4	0.3
Healthcare	0.6	1.0	0.6	1.0
Industrials	-0.4	-0.5	-0.4	-0.5
IT	-1.6	-1.8	-1.6	-1.8
Utilities	-0.2	-0.1	-0.2	-0.1
Real Estate	-0.8	-0.7	-0.8	-0.7
Value	2.0	1.3	2.0	1.3
Growth	-0.3	-0.2	-0.3	-0.2
Momentum	-0.1	0.0	-0.1	0.0
Quality	-0.3	0.3	-0.3	0.3
Risk	0.1	-0.9	0.1	-0.9
Size	0.4	0.0	0.4	0.0

Source: BofA European Equity Quant Strategy, Refinitiv, MSCI. Note: historical average performance calculated over 1993-2023

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Exhibit 41: January sees largest gains in Cheap Value so far, while Expensive Value experiences the largest losses

% MTD returns for styles in the largest 250 European stocks (relative price return equally weighted in EUR)

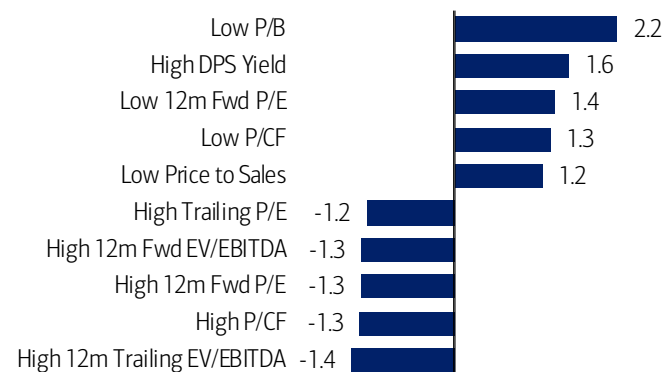


Source: BofA European Equity Quant Strategy, Factset

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Exhibit 42: Low P/B have seen the strongest gains MTD, while High 12m Trailing EV/EBITDA records the largest losses

% MTD best and worst factor in styles in the largest 250 European stocks (relative price return equally weighted in EUR)

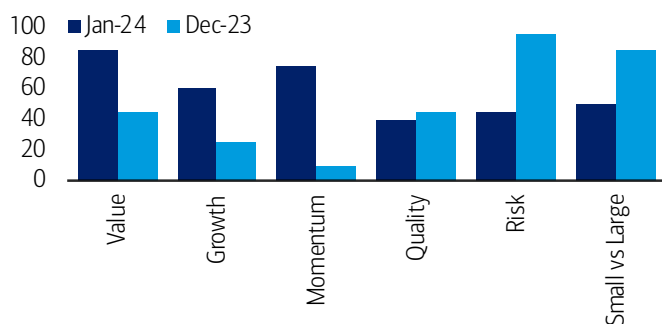


Source: BofA European Equity Quant Strategy, Factset

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Exhibit 43: Value has outperformed in 17 out of 20 sectors so far in January

% of SXXP index super-sectors in which styles (L/S) are outperforming in Jan

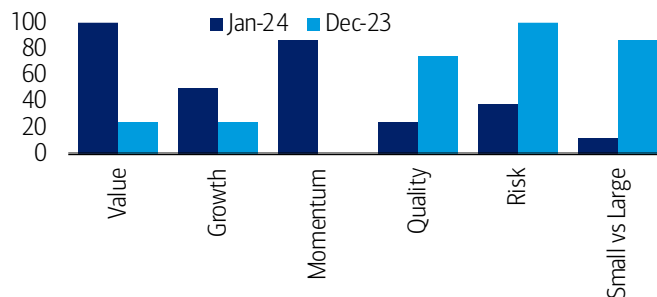


Source: BofA European Equity Quant Strategy, FactSet

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Exhibit 44: Value has outperformed in 8 out of 8 countries so far in January

% of SXXP index countries* in which styles (L/S) are outperforming in Jan

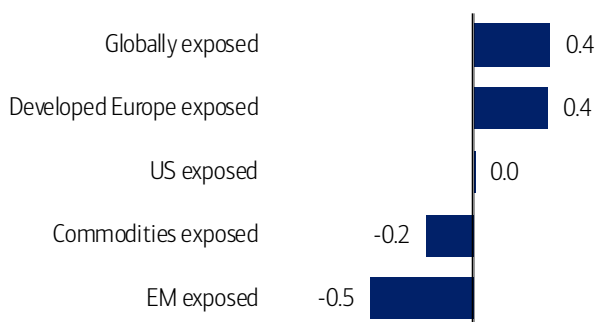


Source: BofA European Equity Quant Strategy, FactSet. Note: * countries included: France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, UK

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Exhibit 45: Globally exposed stocks have gained the most MTD, while EM exposed stocks have noted the largest losses

% MTD returns for revenue exposure baskets (relative price return equally weighted in EUR)

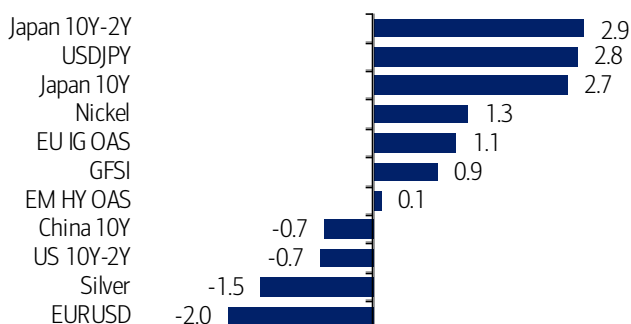


Source: BofA European Equity Quant Strategy, FactSet

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Exhibit 46: Stocks sensitive to rising Japan 10Y-2Y have gained the most MTD, while these sensitive to rising EURUSD lost the most

% MTD returns for stocks with specific cross-asset sensitivities (relative price return equally weighted in EUR)



Source: BofA European Equity Quant Strategy, FactSet

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Exhibit 47: Q1 has been historically the strongest for France, IT and Low vs High Size

Historical average returns for countries, sectors, styles (L/S) in each quarter

Quarter	Germany	France	Italy	Netherlands	Spain	Sweden	Switzerland	UK			
Q1	-0.1%	1.8%	1.5%	1.5%	0.6%	3.2%	-0.3%	-2.0%			
Q2	0.2%	-0.1%	-2.3%	1.2%	0.2%	0.9%	1.1%	-0.3%			
Q3	-2.3%	-1.2%	-0.1%	-0.6%	0.1%	1.0%	0.5%	0.9%			
Q4	2.5%	0.2%	-1.0%	0.8%	0.7%	0.7%	-0.3%	-1.0%			
Quarter	Materials	Communication Svs	Discretionary	Staples	Energy	Financials	Healthcare	Industrials	IT	Utilities	Real Estate
Q1	0.9%	-1.0%	1.5%	0.8%	0.8%	-2.4%	-0.7%	1.7%	2.3%	-0.7%	-7.4%
Q2	0.6%	-4.0%	-0.4%	1.8%	2.2%	-1.4%	2.8%	0.2%	-0.4%	0.6%	-6.5%
Q3	-2.2%	-0.4%	-1.8%	2.2%	-0.3%	0.2%	2.9%	-1.0%	-1.2%	0.8%	-1.8%
Q4	1.6%	2.1%	1.2%	-2.1%	-2.4%	0.2%	-2.4%	0.8%	2.0%	-0.7%	3.2%
Size (Low vs High)											
Quarter	Value	Growth	Momentum	Quality	Risk						
Q1	-1.1%	3.4%	3.1%	-0.2%	0.0%	4.5%					
Q2	-1.3%	0.7%	5.9%	2.1%	-2.5%	0.0%					
Q3	0.7%	0.5%	5.1%	2.4%	-3.6%	0.8%					
Q4	0.2%	0.4%	1.6%	0.9%	3.3%	0.1%					

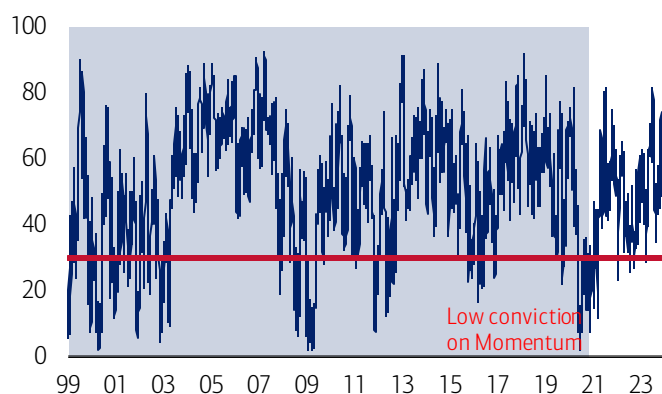
Source: BofA European Equity Quant Strategy, Refinitiv, MSCI. Note: historical average performance calculated over 1993-2023

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European Momentum Conviction Indicator

Exhibit 48: BofA European Momentum Conviction Indicator (MCI) stands at 68, above the threshold of 30 which signals a potential crash in the Momentum style

BofA European Momentum Conviction Indicator (100=High, 0 = Low)

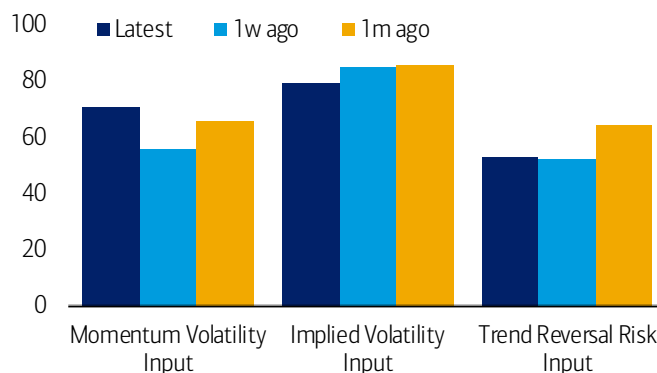


Source: BofA European Equity Quant Strategy, FactSet. Disclaimer: Performance through 06 October 2020 (shaded on the chart above) is backtested and does not represent the actual performance of any account or fund. Backtested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. The indicator identified as the BofA European Conviction Momentum Indicator above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA European Equity Quant Strategy. This indicator was not created to act as a benchmark.

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Exhibit 49: Increases in Momentum Volatility and Trend Reversal Risk inputs pushed the indicator up by 2 points over the week

BofA European Momentum Conviction Indicator's inputs latest readings (100=High, 0=Low)



Source: BofA European Equity Quant Strategy, FactSet. For definitions of the inputs please see European Momentum Conviction Indicator

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Appendix

Revision ratios by country, sector, style and exposure baskets

Exhibit 50: Revision ratios by country, sector, style and exposure baskets

December readings of the Sales, EPS, DPS, Price target, Buybacks, Net debt, Inventories and Capex Revision Ratios

	Sales Revision Ratio				EPS Revision Ratio				Dividend Revision Ratio				Price Target Revision Ratio				Buybacks Revision Ratio				Net Debt Revision Ratio				Inventories Revision Ratio				Capex Revision Ratio			
	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio	1m ratio	3m ratio	MoM: 1m ratio	MoM: 3m ratio
Europe	0.64	0.78	-0.06	-0.13	0.70	0.73	-0.03	-0.07	1.01	0.91	0.21	0.00	0.99	0.72	0.28	0.01	1.18	1.37	-0.21	-0.20	2.05	2.15	-0.10	-0.02	0.62	0.73	-0.06	-0.09	0.53	0.76	-0.26	-0.18
Countries																																
United Kingdom	0.92	1.03	-0.02	-0.09	0.82	0.87	-0.06	-0.03	1.00	1.08	0.14	0.00	1.42	0.92	0.37	0.23	0.94	1.16	-0.37	-0.37	2.68	2.33	-0.69	0.37	0.95	1.11	0.00	-0.27	0.81	1.27	-0.63	-0.14
Germany	0.45	0.51	0.05	-0.07	0.64	0.71	-0.06	-0.07	0.64	0.71	-0.07	-0.05	1.20	0.79	0.37	0.09	1.40	1.69	-0.20	0.44	1.60	2.04	-0.08	-0.62	0.52	0.51	0.04	-0.03	0.32	0.44	-0.15	-0.13
France	0.48	0.62	-0.04	-0.17	0.42	0.47	-0.01	-0.12	0.92	0.76	0.17	0.03	0.90	0.52	0.54	-0.14	1.25	1.35	-0.25	0.05	3.23	3.49	-0.68	0.89	0.32	0.43	-0.04	-0.19	0.60	0.89	-0.40	-0.20
Switzerland	0.44	0.43	0.22	0.00	0.41	0.38	0.07	-0.09	0.76	0.60	0.19	0.00	0.68	0.64	0.18	-0.10	0.40	1.00	-0.60	-0.70	2.27	2.43	0.07	-0.53	0.33	0.42	-0.02	-0.06	0.14	0.27	-0.08	-0.10
Spain	1.25	1.43	-0.13	-0.07	2.60	1.27	1.75	0.17	3.67	2.00	2.54	-0.55	1.11	0.93	0.11	-0.14	1.50	2.40	-1.00	-1.10	0.88	1.20	0.00	-0.05	2.50	1.55	1.00	0.21	1.60	1.47	0.60	-0.40
Italy	0.73	1.16	-1.07	-0.39	0.86	0.97	-0.35	-0.25	1.17	1.82	-0.83	-0.18	0.71	0.76	0.14	-0.37	-	5.00	-	2.25	3.50	3.55	-1.50	1.48	0.63	1.00	-0.38	-0.27	0.88	1.21	-0.55	-0.23
Netherlands	0.26	0.42	-0.14	-0.27	0.54	0.46	0.08	-0.14	0.90	0.76	0.17	0.05	0.92	0.68	0.14	-0.06	1.00	0.92	0.20	0.14	2.33	1.59	1.33	-0.41	0.44	0.55	0.07	-0.10	0.50	0.35	0.20	-0.02
Sweden	1.05	1.22	0.01	-0.28	1.13	1.24	-0.13	-0.15	1.75	1.19	0.68	-0.02	1.38	0.80	0.61	0.22	1.00	1.08	0.20	-0.67	1.64	1.74	0.21	-0.76	0.88	1.31	-0.76	-0.12	0.30	0.84	-0.77	-0.75
Sectors																																
Discretionary	0.41	0.58	-0.27	-0.23	0.68	0.75	-0.09	-0.12	0.58	0.80	-0.42	-0.12	0.96	0.56	0.48	0.06	0.80	1.31	-0.60	-0.59	2.36	2.97	-2.39	0.03	0.52	0.54	-0.02	-0.25	0.50	0.70	-0.21	-0.24
Staples	0.65	0.87	0.00	-0.12	0.43	0.65	-0.20	-0.08	0.80	0.87	-0.02	0.06	0.70	0.51	0.13	-0.01	0.88	0.83	0.10	-0.07	5.17	3.58	1.94	0.39	0.36	0.50	-0.02	-0.14	0.43	0.77	-0.35	-0.04
Energy	0.71	1.29	-0.79	-0.30	0.50	0.96	-0.96	-0.33	1.00	3.00	-3.00	-2.00	1.20	1.75	-3.30	0.39	1.33	2.40	-2.67	0.40	10.00	3.57	1.00	1.90	1.00	2.67	-2.00	0.17	0.57	0.67	-0.26	-0.15
Financials	0.96	1.08	-0.14	-0.09	1.19	1.08	-0.02	-0.09	1.84	1.28	0.61	0.14	1.29	1.22	0.15	-0.08	1.89	2.08	-0.11	0.11	1.80	1.59	0.02	0.09	0.00	0.40	-0.50	-0.93	1.40	1.57	-0.20	0.28
Health Care	0.59	0.69	0.07	-0.09	0.51	0.55	0.09	-0.14	0.47	0.49	0.08	-0.04	0.71	0.53	0.34	-0.03	0.75	1.73	-1.00	-0.73	4.00	3.79	0.67	-0.34	1.00	0.98	0.11	-0.15	0.54	0.68	-0.07	-0.20
Industrials	0.61	0.77	-0.07	-0.14	0.69	0.70	0.09	-0.07	0.94	0.87	0.19	-0.11	0.93	0.64	0.31	-0.08	0.90	1.14	-0.30	-0.40	1.48	1.73	-0.18	-0.03	0.59	0.80	-0.13	-0.16	0.46	0.91	-0.54	-0.43
Materials	0.29	0.45	0.00	-0.11	0.38	0.43	-0.09	-0.09	0.93	0.43	0.61	0.11	0.76	0.58	0.03	0.14	2.67	2.25	0.67	-0.61	1.57	2.21	-0.26	-1.29	0.31	0.28	0.04	-0.02	0.31	0.39	-0.10	-0.06
Technology	0.68	0.51	0.31	0.03	0.94	0.59	0.44	0.08	1.33	0.79	0.73	0.18	1.43	1.00	0.30	0.15	1.67	1.36	0.42	0.44	3.25	2.85	1.05	-0.32	2.00	2.18	0.00	0.52	0.33	0.33	0.00	-0.11
Communication Svs	0.74	0.88	0.13	-0.16	0.68	0.74	0.11	0.00	0.70	1.13	0.03	-0.29	1.86	1.07	1.02	0.13	0.40	0.36	-0.20	0.02	2.14	1.72	0.27	0.18	1.00	1.50	-1.00	0.38	0.31	0.68	-0.31	-0.50
Utilities	1.58	1.29	0.12	0.16	1.91	1.19	0.52	0.27	2.00	2.29	-0.60	0.09	0.60	0.36	0.27	-0.05	-	-	-	-	1.00	1.16	0.00	0.16	1.50	0.94	0.67	0.28	2.83	1.91	0.55	0.30
Real Estate	0.80	0.98	-0.28	-0.52	0.45	0.70	-0.88	-0.15	2.33	1.15	1.90	0.30	2.67	1.21	1.67	0.34	-	-	-	-	0.43	0.67	0.00	-0.27	#DIV/0!	3.50	-	2.25	0.40	1.09	-0.93	-0.18
Styles																																
Top Value	0.72	1.20	-0.42	-0.39	0.52	0.86	-0.44	-0.51	1.53	1.35	0.14	0.08	1.13	0.97	0.35	-0.01	1.60	1.92	-0.30	-0.31	6.00	4.75	-1.00	1.96	1.10	1.21	-0.47	0.03	0.17	0.44	-0.30	-0.33
High Growth	1.00	1.28	-0.26	-0.43	1.50	1.98	-1.33	-0.48	1.71	1.88	-1.01	-0.22	2.77	1.75	1.06	0.05	5.67	4.17	-1.00	1.67	1.62	1.36	0.12	0.19	0.35	0.67	-0.25	-0.52	1.07	1.07	0.07	-0.15
Rising Price Momentum	1.09	1.57	-1.14	-0.30	1.93	2.94	-2.94	-0.37	2.70	2.88	-0.70	0.33	23.00	4.96	16.00	0.20	3.20	3.13	-0.40	0.55	1.77	1.24	0.89	0.35	1.50	1.68	-0.79	-0.40	1.46	2.13	-1.97	-0.50
High Quality	0.65	0.82	-0.23	-0.22	0.79	0.88	-0.09	0.00	0.89	0.85	0.13	0.01	1.67	1.03	0.43	0.14	1.00	1.00	-0.11	-0.35	2.07	2.44	-0.52	0.00	0.95	0.98	-0.11	-0.09	0.69	1.00	-0.36	-0.26
High Risk	0.56	0.76	-0.16	-0.17	0.65	0.76	-0.12	-0.20	0.85	0.77	0.31	0.05	1.19	0.92	0.23	0.01	1.43	1.25	0.10	-0.15	1.38	2.10	-0.12	-0.28	0.56	0.76	-0.44	-0.15	0.50	0.75	-0.50	-0.10
Low Size	0.41	0.57	-0.01	-0.13	0.71	0.72	-0.12	-0.06	0.85	0.67	0.41	0.09	0.96	0.58	0.46	0.03	1.00	0.83	0.22	-0.40	2.31	2.46	0.44	-0.33	0.65	0.70	0.03	0.07	0.54	0.66	-0.27	-0.13
Exposure Baskets																																
Developed Europe	1.21	1.13	0.00	-0.13	1.00	0.89	-0.15	-0.06	1.16	0.98	0.20	0.02	0.96	0.73	0.28	-0.01	0.92	1.22	-0.46	-0.08	1.60	1.59	0.01	0.13	0.93	1.04	0.04	0.02	0.94	1.12	-0.20	-0.18
USA	0.62	0.81	0.04	-0.15	0.72	0.90	-0.32	-0.09	0.74	0.91	-0.17	-0.08	1.21	0.99	0.21	0.05	1.47	1.73	-0.47	0.03	1.93	2.15	-0.36	-0.20	0.49	0.60	-0.10	-0.13	0.66	0.72	-0.08	-0.05
EM	0.39	0.50	0.03	-0.12	0.61	0.53	0.21	-0.10	0.89	0.70	0.25	0.00	0.66	0.45	0.20	0.01	0.87	0.95	0.01	-0.50	2.15	2.45	0.06	-0.08	0.41	0.46	-0.05	-0.11	0.39	0.47	-0.04	-0.10
Global Diversified	0.48	0.68	-0.26	-0.20	0.95	0.65	0.44	-0.08	1.00	0.70	0.45	-0.13	0.89	0.61	0.28	-0.02	2.33	2.25	0.53	0.31	1.36	1.87	-0.64	-0.27	0.83	0.83	0.10	0.00	0.48	0.64	-0.07	-0.20

Source: BofA European Equity Quant Strategy, IBES, Factset, MSCI

BofA GLOBAL RESEARCH

Latest C-suite changes, insider trading and buyback program screens

Exhibit 51: Compass, Anglo American and Cellnex Telecom are the largest companies in Europe that saw C-suite changes last month
 Latest European companies which saw CEO/President/CFO change effective in December 2023

BBG Ticker	Name	Sector	Country	New CEO	New CEO Effective Date	New President	New President Effective Date	New CFO	New CFO Effective Date
EXM BB	Exmar	Energy	Belgium	Carl-Antoine Saverys	01/01/2024			Hadrien Bown	01/12/2023
MRX GR	Mister Spex	Discretionary	Germany	Dirk Graber; Maren Kroll	31/12/2023				
SDIPB SS	Sdiptech	Industrials	Sweden	Bengt Lejdström	16/12/2023	Bengt Lejdström	16/12/2023	Stephan Schulz-Gohritz	01/01/2024
ENT LN	Entain	Discretionary	UK	StellaJulie David	15/12/2023				
SOLB BB	Solvay	Materials	Belgium	Philippe Kehren	08/12/2023			Alexandre Blum	08/12/2023
LOGN SW	Logitech	Technology	Switzerland	Hanneke Faber	01/12/2023				
STJ LN	St James's Place	Financials	UK	Mark Thomas FitzPatrick	01/12/2023				
IRE IM	Iren	Utilities	Italy					Giovanni Gazza	01/12/2023
ACC NO	Aker Carbon	Industrials	Norway					Julie Berg	01/12/2023
CLNX SM	Cellnex Telecom	Comm. Svs	Spain					Raimon Trias	01/12/2023
DUST SS	Dustin	Technology	Sweden					Julia Lagerqvist	11/12/2023
ONTEX BB	Ontex	Staples	Belgium					Geert Peeters	01/12/2023
INTRUM SS	Intrum	Industrials	Sweden					Anders Blomqvist	13/12/2023
AAL LN	Anglo American	Materials	UK					John Heasley	01/12/2023
IVG IM	Iveco	Industrials	Italy					Anna Tanganelli	01/12/2023
PNN LN	Pennon	Utilities	UK					Steven John Buck	31/12/2023
SZU GR	Suedzucker	Staples	Germany					Stephan Meeder	19/12/2023
RAT LN	Rathbones	Financials	UK					Iain William Hooley	31/12/2023
JUST LN	Just	Financials	UK					Mark Godson	01/12/2023
CPG LN	Compass	Discretionary	UK					Petros Parras	01/12/2023
PBB GR	Pfandbriefbank	Financials	Germany					Marcus Schulte	01/12/2023
SGSN SW	SGS	Industrials	Switzerland					Géraldine Picaud	01/12/2023
SSE LN	SSE	Utilities	UK					Gregor Alexander; Barry O'Regan	01/12/2023
VNV SS	VNV Global	Financials	Sweden					Björn von Sivers	01/12/2023

Source: BofA European Equity Quant Strategy, Factset. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

BofA GLOBAL RESEARCH

Exhibit 52: Rolls Royce, Imperial Brands and Legal & General are the largest companies that saw net insider buying in December 2023

Top 25 European stocks with the largest net insider buying in December 2023 (shares bought – sold as percentage of total outstanding shares)

BBG Ticker	Name	Industry	Country	No of shares purchased	No of shares sold	Net % of shares outstanding bought	Mkt value of net shares outstanding bought (EUR mn)
SECUB SS	Securitas	Industrials	Sweden	3,200,000	0	0.59	28.06
SOBI SS	Swedish Orphan Biovitrum	Health Care	Sweden	73,408	0	0.02	1.33
INDT SS	Indutrade	Industrials	Sweden	23,700	0	0.01	0.49
METN SW	Metall Zug	Health Care	Switzerland	250	0	0.10	0.37
JMAT LN	Johnson Matthey	Materials	United Kingdom	15,000	0	0.01	0.27
LEHN SW	LEM	Information Technology	Switzerland	100	0	0.01	0.22
SKAB SS	Skanska	Industrials	Sweden	36,881	-25,000	0.00	0.19
BEZ LN	Beazley	Financials	United Kingdom	27,464	0	0.00	0.17
IMB LN	Imperial Brands	Consumer Staples	United Kingdom	6,000	0	0.00	0.13
ENT LN	Entain	Consumer Discretionary	United Kingdom	9,000	0	0.00	0.09
VCT LN	Victrix	Materials	United Kingdom	4,500	0	0.01	0.07
VPLAYB SS	Viaplay	Communication Services	Sweden	125,000	0	0.16	0.07
RR/ LN	Rolls-Royce	Industrials	United Kingdom	18,188	0	0.00	0.06
TELIA SS	Telia	Communication Services	Sweden	20,902	0	0.00	0.05
ALIFB SS	AddLife	Health Care	Sweden	8,053	0	0.01	0.05
MTRS SS	Munters	Industrials	Sweden	3,150	0	0.00	0.05
HTRO SS	Hexatronic	Industrials	Sweden	21,000	0	0.01	0.04
ALFA SS	Alfa Laval	Industrials	Sweden	920	0	0.00	0.03
GBG LN	GB	Information Technology	United Kingdom	10,000	0	0.00	0.03
ARJOB SS	Arjo	Health Care	Sweden	5,000	0	0.00	0.02
HUFVA SS	Hufvudstaden	Real Estate	Sweden	1,000	0	0.00	0.01
CFR SW	Cie Financiere Richemont	Consumer Discretionary	Switzerland	70	0	0.00	0.01
LGEN LN	Legal & General	Financials	United Kingdom	3,239	0	0.00	0.01
PCELL SS	PowerCell Sweden	Industrials	Sweden	1,000	0	0.00	0.00
NIBEB SS	NIBE Industrier	Industrials	Sweden	135	0	0.00	0.00

Source: BofA European Equity Quant Strategy, Factset. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

BofA GLOBAL RESEARCH

Exhibit 53: UBS, Atlas Copco and ABB are the largest companies that saw net insider selling in December 2023

Top 15 European stocks with the largest net insider selling in December 2023 (shares sold – bought as percentage of total outstanding shares)

BBG Ticker	Name	Industry	Country	No of shares purchased	No of shares sold	Net % of shares outstanding sold	Mkt value of net shares outstanding sold (EUR mn)
STMN SW	Straumann	Health Care	Switzerland	0	-214,350	-0.13	-28.26
HEXAB SS	Hexagon	Information Technology	Sweden	0	-1,000,000	-0.04	-10.76
ATCOA SS	Atlas Copco	Industrials	Sweden	0	-480,025	-0.01	-7.11
ABBN SW	ABB	Industrials	Switzerland	0	-82,360	0.00	-3.22
MIPS SS	Mips	Consumer Discretionary	Sweden	1,100	-45,000	-0.17	-1.21
DPLM LN	Diploma	Industrials	United Kingdom	0	-22,000	-0.02	-0.86
CHG LN	Chemring	Industrials	United Kingdom	0	-35,342	-0.01	-0.48
CAMX SS	Camurus	Health Care	Sweden	0	-8,000	-0.01	-0.33
UBSG SW	UBS	Financials	Switzerland	0	-12,430	0.00	-0.33
BIOAB SS	BioArctic	Health Care	Sweden	0	-12,000	-0.02	-0.25
CWK LN	Cranswick	Consumer Staples	United Kingdom	0	-2,666	0.00	-0.12
BOOZT SS	Boozt	Consumer Discretionary	Sweden	0	-10,000	-0.02	-0.11
SAABB SS	Saab	Industrials	Sweden	0	-1,200	0.00	-0.06
SCHP SW	Schindler	Industrials	Switzerland	50,321	-49,772	0.00	-0.04
ENGCONB SS	Sengcon	Industrials	Sweden	0	-920	0.00	-0.01

Source: BofA European Equity Quant Strategy, Factset. Disclaimer: The screen above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This screen was not created to act as a benchmark.

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Exhibit 54: The expected 12m fwd cash yield declined last month to 5.1%, with expected 1.5% yield on buyback and 3.6% on dividends

12m fwd expected buyback (dark blue) and dividend yield (light blue) for Europe Stoxx 600 index

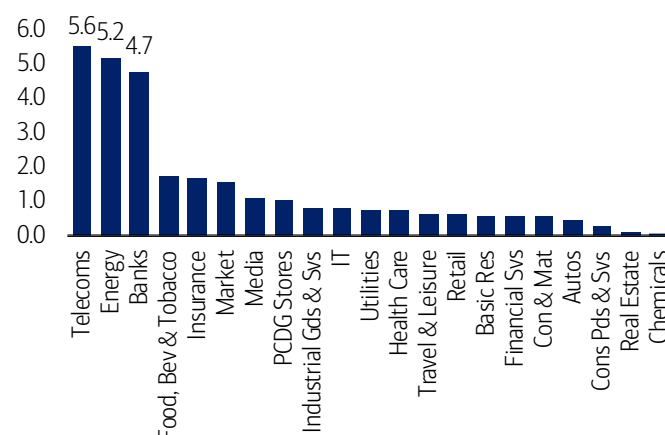


Source: BofA European Equity Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 55: Telecoms, Energy and Banks show the highest 12m fwd expected buyback yield

12m fwd expected buyback yield by European sector (%)



Source: BofA European Equity Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 56: There were 8 new buyback programs announced in Europe in the last month

European companies that have announced new buyback programs in December 2023

BBG TickerName	Country	Sector	Announcement date	Value	Expiry date
TMV GR TeamViewer	Germany	Technology	07/12/2023	EUR 150mn	to be completed within 2024 so before 31/12/2024
REL LN Relx	UK	Media	08/12/2023	GBP 150mn (program to start on 2nd Jan 2024)	09/02/2024 (before company's results announcement on 15/02/2024)
SXS LN Spectris	UK	Industrial Goods and Services	11/12/2023	GBP 150mn	first tranche of GBP 50mn will end on 31/05/2024
MICN SS Millicom Cellular	Luxembourg	Telecommunications	15/12/2023	SEK 420mn	22/05/2024
VID SM Vidrala	Spain	Industrial Goods and Services	20/12/2023	EUR 33mn	12 months program so before 20/12/2024
DG FP Vinci	France	Construction and Materials	21/12/2023	EUR 600mn	27/03/2024
DNB NO DNB Bank	Norway	Banks	22/12/2023	0.75% of own shares, i.e. 11,569,599 shares (max value of NOK 2.5bn)	08/03/2024
ENR GR Siemens Energy	Germany	Energy	22/12/2023	67,820,753 no-par-value shares (EUR 130mn)	30/09/2024

Source: Refinitiv, Bloomberg

BofA GLOBAL RESEARCH

European Momentum Conviction Indicator

We launched our European Momentum Conviction Indicator on 06 October 2020. This indicator aims to identify episodes where volatility of a cross-sectional approach to Momentum investing is too high to support consistent returns or when trends might break. We use three inputs to construct the indicator, these inputs are equally weighted and form an indicator scaled from 0-100 (100 = highest conviction in positive Momentum performance, 0 = lowest conviction):

- Momentum Volatility Risk:** Volatility of Momentum performance for risk-management is crucial as uncertainty on the economic cycle rises. High levels of volatility can compromise Momentum's performance. Since the strategy's volatility tends to be clustered, we use a GARCH (1, 1) model to forecast 1-step-ahead volatility levels and adjust the exposure to Momentum accordingly (high volatility levels = low confidence in Momentum).
- Implied Volatility for Equities:** Large Momentum drawdowns tend to occur following turning points in market cycles. We use a combination of fast- and slow- moving averages of implied volatility in European markets to detect

volatility shocks and retracement. A warning signal against Momentum is given when implied volatility retraces following a volatility shock. This often corresponds to the start of a recovery phase following a recessionary episode.

- c) **Trend Reversal Risk:** This is a contrarian signal monitoring the 2nd derivative of Momentum's short-term performance. This input identifies episodes where Momentum's performance has accelerated near term – signalling the formation of a potential "Momentum bubble" or an episode of potential profit booking. We estimate the risk of trend reversal using the month-on-month difference in trends of the Momentum strategy.

We define a Momentum crash as a drawdown of the 12m price momentum long-short strategy exceeding 10% over 20 trading days. Since the performance of the strategy is computed on a daily basis, we define unique drawdown events as the maximum drawdown of the strategy over a 2-month window (1 month look-back, 1 month look forward). Following this methodology, we identify 30 Momentum crashes from January 1999 to September 2020. A Momentum crash is said to be correctly predicted if any of the input of the European Momentum Conviction Indicator is less than 50 (bearish signal on Momentum) 20 days prior to the drawdown event.

Using the definitions above, our backtested results suggest that the inputs of the European Momentum Conviction Indicator would have correctly identified 28 of these 30 drawdowns (i.e., sending a bearish signal 20 trading days prior to the event).

Exhibit 57: Backtested (shaded) and live results of the European Momentum Conviction Indicator

Momentum Conviction Indicator and its inputs readings 1, 4, 8 weeks before the momentum crashes

1 Week Before the Crash (defined as local minimum of 4W performance)						4 Weeks Before the Crash						8 Weeks Before the Crash (defined as local minimum of 4W performance)					
1W Forward						4W Forward						8W Forward					
Date	Momentum	Implied	Trend	EMCI	Momentum	Date	Momentum	Implied	Trend	EMCI	Momentum	Date	Momentum	Implied	Trend	EMCI	Momentum
Volatility	Volatility	Reversal		Returns	Volatility	Volatility	Volatility	Reversal	EMCI	Returns	Volatility	Volatility	Reversal	EMCI	Returns	Volatility	Returns
10-Feb-99	37	1	7	15	-3%	20-Jan-99	17	1	6	8	-20%	04-Jan-99	7	38	22	-12%	
29-Apr-99	71	12	51	45	-4%	08-Apr-99	96	3	47	49	-12%	11-Mar-99	98	1	5	35	-14%
28-Mar-00	2	12	13	9	-26%	07-Mar-00	8	15	4	9	-49%	08-Feb-00	0	73	1	24	-31%
04-Aug-00	42	89	27	53	1%	14-Jul-00	38	95	61	65	-14%	16-Jun-00	17	86	43	48	-7%
11-Oct-00	37	6	25	23	0%	20-Sep-00	34	51	95	60	-16%	23-Aug-00	52	83	95	77	-9%
06-Dec-00	23	32	13	23	-6%	15-Nov-00	34	15	40	30	-26%	18-Oct-00	36	35	37	36	-29%
25-Apr-01	10	55	53	39	-9%	03-Apr-01	27	94	38	53	-24%	06-Mar-01	39	36	59	44	-7%
12-Nov-01	13	38	46	33	-15%	22-Oct-01	12	98	32	47	-26%	24-Sep-01	30	100	35	55	-36%
29-Oct-02	5	3	11	6	-10%	08-Oct-02	5	96	58	53	-25%	10-Sep-02	17	91	52	53	-4%
23-Apr-03	28	93	36	52	-6%	01-Apr-03	21	16	32	23	-25%	04-Mar-03	19	2	18	13	-22%
11-Jun-03	47	94	29	56	0%	21-May-03	37	95	38	57	-16%	23-Apr-03	28	93	36	52	-25%
25-Jul-03	79	76	78	78	-4%	04-Jul-03	67	92	25	61	-11%	06-Jun-03	51	94	29	58	-9%
01-Jun-06	31	95	83	70	-7%	11-May-06	71	35	85	64	-13%	12-Apr-06	77	41	76	65	-10%
05-Aug-08	5	9	37	17	-8%	15-Jul-08	19	28	56	34	-36%	17-Jun-08	31	8	57	32	-24%
11-Dec-08	3	79	53	45	4%	20-Nov-08	5	99	13	39	-20%	23-Oct-08	6	100	6	37	-2%
30-Mar-09	2	3	12	6	-16%	09-Mar-09	1	1	23	8	-51%	09-Feb-09	2	0	24	9	-28%
30-Jul-09	49	85	51	62	-7%	09-Jul-09	47	59	53	53	-18%	11-Jun-09	41	92	39	57	-8%
01-Feb-11	28	40	41	36	0%	11-Jan-11	57	29	52	46	-16%	14-Dec-10	30	29	77	45	-8%
03-Oct-11	12	97	36	48	-7%	12-Sep-11	38	98	21	52	-25%	15-Aug-11	17	98	58	58	-8%
27-Jan-12	27	87	24	46	-1%	06-Jan-12	44	23	47	38	-18%	08-Dec-11	23	2	57	27	-9%
14-Aug-12	26	35	34	32	-5%	24-Jul-12	35	67	46	49	-19%	26-Jun-12	27	13	44	28	-14%
08-Apr-14	50	47	81	59	-6%	18-Mar-14	65	68	86	73	-10%	18-Feb-14	76	60	89	75	-9%
19-Oct-15	23	22	48	31	2%	28-Sep-15	49	89	33	57	-12%	31-Aug-15	41	91	67	67	1%
24-Feb-16	16	89	73	59	-9%	03-Feb-16	33	77	61	57	-15%	06-Jan-16	46	10	38	31	-10%
15-Apr-16	11	37	27	25	-7%	24-Mar-16	31	58	66	51	-12%	25-Feb-16	14	88	74	59	-21%
07-Nov-16	49	19	64	44	-5%	17-Oct-16	50	22	67	46	-11%	19-Sep-16	38	38	69	48	-11%
19-Dec-16	35	66	23	41	0%	28-Nov-16	50	9	57	39	-13%	31-Oct-16	50	34	58	48	-14%
12-Apr-19	48	34	55	46	-4%	22-Mar-19	58	59	70	62	-11%	22-Feb-19	46	65	74	62	-9%
09-Sep-19	29	62	59	50	-6%	19-Aug-19	44	89	50	61	-14%	22-Jul-19	70	67	66	68	-10%

Exhibit 57: Backtested (shaded) and live results of the European Momentum Conviction Indicator

Momentum Conviction Indicator and its inputs readings 1, 4, 8 weeks before the momentum crashes

1 Week Before the Crash (defined as local minimum of 4W performance)						4 Weeks Before the Crash						8 Weeks Before the Crash (defined as local minimum of 4W performance)					
Date	Momentum		Trend		1W Forward	Date	Momentum		Trend		4W Forward	Date	Momentum		Trend		8W Forward
	Volatility	Implied Volatility	Reversal	EMCI	Momentum Returns		Volatility	Implied Volatility	Reversal	EMCI	Momentum Returns		Volatility	Implied Volatility	Reversal	EMCI	Momentum Returns
01-Jun-20	2	0	49	17	-21%	11-May-20	11	2	48	20	-27%	13-Apr-20	8	99	13	40	-12%
17-Nov-20	2	22	4	9	-8%	27-Oct-20	17	5	19	14	-32%	29-Sep-20	17	3	19	13	-33%
01-Mar-21	14	14	17	15	-9%	08-Feb-21	23	10	46	26	-18%	11-Jan-21	13	15	47	25	-16%
18-Jan-22	28	14	29	24	-1%	28-Dec-21	34	62	65	54	-10%	30-Nov-21	28	83	60	57	-13%
22-Jul-22	35	8	34	26	0%	01-Jul-22	43	5	54	34	-8%	03-Jun-22	43	10	53	35	-8%
04-Nov-22	18	45	56	40	-15%	14-Oct-22	24	70	72	55	-17%	16-Sep-22	28	12	70	36	-13%
26-Jan-23	33	83	67	61	-7%	05-Jan-23	24	81	55	53	-11%	08-Dec-22	20	91	30	47	-13%

Source: BofA European Equity Quant Strategy. 12m Momentum performance is computed from January 1999 using daily price returns in Euro, assuming daily rebalancing and excluding transaction costs. This performance is backtested (shaded) and does not represent the actual performance of any account or fund. Backtested (shaded) performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. The strategy indicated above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This strategy was not created to act as a benchmark.

BofA GLOBAL RESEARCH

Definitions

Value: Equal weighted combination of factors - Forecast/Trailing EPS Yield, Dividend Yield, Cash to Price Yield, Book to Price Yield, Price to Sales and Forecast PEG.

Growth: Equal weighted combination of factors - Forecast/Trailing EPS Growth, Forecast EPS Change and Forecast Long Term Growth.

Momentum: Equal weighted combination of factors - 3m EPS Change, EPS Revision Ratio, Sales Revision Ratio, 1m Price Change and 12m Price Change.

Quality: Equal weighted combination of factors - Return on Assets, Return on Capital, Return on Equity, 5yr Return on Equity and Leverage.

Risk: Equal weighted combination of factors - EPS Estimate Dispersion and Beta.

Size: Month end market capitalisation.

Value Factors

Forecast Earnings Yield: I/B/E/S next twelve month EPS divided by month end Price.

Trailing Earnings Yield: Trailing twelve month EPS divided by month end Price.

Dividend Yield: Trailing twelve month Dividend per share divided by month end Price.

Cash to Price: Trailing 12 month cash earnings per share divided by month end price. Cash Earnings are defined as earnings plus depreciation on fixed assets. (i.e. –not free cash flow).

Book to Price: Trailing twelve month Book Value per share divided by month end price.

Price to Sales: Month End Price divided by last reported Sales per share figure.

Forecast PEG: I/B/E/S FY1 P/E divided by I/B/E/S Long Term Growth Estimate.

Other valuations:

Free Cash Flow Yield: Trailing twelve month difference between operating cash flow and capital expenditures net of fixed assets disposals divided by the month end price

EV/EBITDA: Latest reported divided EV (market capitalisation plus total debt minus cash and cash equivalents) divided by the trailing twelve month EBITDA

Growth Factors

Forecast Earnings Growth: $(\text{I/B/E/S FY2 Mean EPS Est. less latest reported EPS}) / \text{divided by the latest reported EPS}$.

Trailing Earnings Growth: Difference between Trailing Twelve Month EPS and Trailing Twelve Month EPS a year prior divided by absolute value of Trailing Twelve Month EPS a year prior.

Forecast EPS Change: Difference between I/B/E/S Forecast Twelve Month EPS and I/B/E/S Forecast Twelve Month EPS a year prior divided by I/B/E/S Forecast Twelve Month EPS a year prior.

Long Term Mean EPS Growth: I/B/E/S Mean Long Term Growth Estimate (+5years).

Momentum Factors

3 Month Change in Mean EPS: Difference between I/B/E/S FY1 mean EPS and I/B/E/S FY1 mean EPS 3 months prior, divided by absolute value of I/B/E/S FY1 mean EPS 3 months prior.

Earnings Revision Ratio: $((\# \text{ of FY1 and FY2 upward EPS revisions over last 3 months}) - (\# \text{ of FY1 and FY2 downward EPS revisions over last 3 months})) / \# \text{ of FY1 and FY2 estimates over last 3 months}$.

Sales Revision Ratio: $((\# \text{ of FY1 and FY2 upward Sales revisions over last 3 months}) - (\# \text{ of FY1 and FY2 downward Sales revisions over last 3 months})) / \# \text{ of FY1 and FY2 estimates over last 3 months}$.

1m Price Momentum: Latest month-end price / 1-month ago price.

12m Price Momentum: Latest month-end price / 12-months ago price.

Risk Factors

Beta: Calculated using regression analysis on 60 months of price performance versus the benchmark. High beta stocks have a high correlation to the market, whilst low beta stocks have a low correlation to market movements.

EPS Estimate Dispersion: Coefficient of variation of I/B/E/S FY2 EPS estimates. The coefficient of variation is defined as the Standard Deviation of Estimates divided by the absolute value of the Mean Estimate.

Quality Factors

Return on Assets: Annual Earnings divided by Total Assets.

Return on Capital: Annual Earnings divided by Total Capital.

Return on Equity – 1yr: Trailing Twelve Month EPS divided by Trailing Twelve Month Book value per Share.

Return on Equity – 5yrs: Average RoE over the last 5 years.

Leverage: Annual Long Term Debt / (Annual Long Term Debt + Annual Book Value).

Ownership

Top 50 European Fund Managers Weight: Relative weight of the Top 50 European fund managers in the stock vs their European market holdings. 100=neutral, >100 is overweight and <100 is underweight

% Top 50 European Fund Managers Weight: Based on the above we calculate the percentage of fund managers who are underweight.

Dividend Factors

12m Fwd dividend yield: 12m fwd DPS per share estimate from I/B/E/S divided by month end price

5 Year Dividend Growth: CAGR of trailing FY0, FY1 and FY2 and forecast FY1 and FY2 DPS growth.

Dividend Revision Ratio: $((\# \text{ of FY1 and FY2 upward DPS revisions over last 3 months}) - (\# \text{ of FY1 and FY2 downward DPS revisions over last 3 months})) / \# \text{ of FY1 and FY2 estimates over last 3 months}$.

DPS Estimate Dispersion: Coefficient of variation of I/B/E/S FY2 DPS estimates. The coefficient of variation is defined as the Standard Deviation of Estimates divided by the absolute value of the Mean Estimate.

Payout Ratio: prospective FY1 DPS divided by the prospective FY1 EPS.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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