

## European Beat Factor

Out-of-consensus stocks under BofA  
Global Research coverage

## Broad-based analyst conviction in Top 10 Beat Factor list

The Beat Factor Top 10 screen (i.e., the stocks that our sector analysts are most positive versus consensus) is broad based in January, including two financials (**BNP Paribas** and **3i**), two materials (**Rio Tinto** and **Antofagasta**) and two industrials (**Kingspan** and **Airbus**), alongside one stock each from consumer discretionary (**Intercontinental Hotels**), communication services (**Publicis**), consumer staples (**Nestle**) and information technology (**Logitech**). Our analyst is positive on Logitech, while less than 20% of sell-side analysts have a Buy-rating on the stock. The new entries into the Top 10 this month are Logitech, Kingspan, Antofagasta and 3i.

## Industrials dominate the Bottom 10 Beat Factor screen

The Beat Factor Bottom 10 (i.e., the stocks that our sector analysts are most negative versus consensus) continues to be dominated by industrials (**Alfa Laval**, **Schneider**, **Schindler** and **Nibe Industrier**), with the BofA price objective for each of these stocks being a minimum of 10% below consensus. The Bottom 10 also includes two companies from energy (**Galp Energia** and **OMV**) and one each from materials (**Yara**), personal and household products (**Unilever**), autos & components (**Michelin**) and insurance (**Poste Italiane**). The new entries into the Bottom 10 this month are Galp, OMV and Michelin.

## BNP tops Beat factor score with Yara at the bottom

BNP Paribas has the highest Beat Factor score for this month, with our analysts' price objective tracking 19% above consensus and EPS estimates for 2023 and 2024 that are 21% and 8% above consensus, respectively. Yara has the lowest Beat Factor score, with a BofA price objective that is 34% below consensus, as well as 2023 and 2024 EPS estimates that are 53% and 59% below.

## Our analysts are most positive on tech and healthcare

Our sector analysts' bottom-up projections imply 16% upside in aggregate for the European stocks under BofA Global Research coverage over the coming twelve months, versus bottom-up consensus expectations at 13%. Over the coming year, our analysts see the most upside potential relative to consensus for tech (+21% versus consensus at +9%) and healthcare (+18% versus +9%), while they are most negative on real estate (-2% versus +4%) and energy (+20% versus +25%). BofA analysts expect +8% EPS growth for the European companies under coverage in 2024, while bottom-up consensus expectations point to +6%, with financials and materials accounting for most of the gap.

## Top 10 outperforms Bottom 10 by 1% over past month

The Beat Factor Top 10 outperformed the Bottom 10 by 1% over the past month, bringing the outperformance over the past 6m to 11% and over the past 12m to 28%.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

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Refer to important disclosures on page 12 to 14.

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**Exhibit 1: Top 10 Beat Factor screen of out-of-consensus European stocks covered by BofA**

Top 10 Beat Factor stocks

Beat Factor Top 10		Beat Factor (100=Most Upbeat)
BBG Code	Name	
BNP FP	BNP Paribas	100
IHG LN	Intercont'l Hotels	99
PUB FP	Publicis Groupe	98
RIO LN	Rio Tinto Plc	96
LOGN SW	Logitech	95
KSP ID	Kingspan Group Plc	94
ANTO LN	Antofagasta	93
AIR FP	Airbus	92
NESN SW	Nestle	91
III LN	3i	90

**Source:** BofA European Equity Quant Strategy, iQdatabase, BBG, IBES, Refinitiv (as of Jan 10, 2024)  
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**Beat Factor in a nutshell**

Beat Factor identifies the most out-of-consensus stocks within BofA Global Research coverage of Eurofirst300 companies. It compares our analysts' price objectives and earnings estimates from our proprietary iQdatabase with sell-side consensus estimates.

# European Beat Factor: Top 10 & Bottom 10 stocks

Our Top 10 Beat Factor screen of out-of-consensus European stocks covered by BofA Global Research analysts in January has two financials (**BNP Paribas** and **3i**), two materials (**Rio Tinto PLC** and **Antofagasta**), two industrial companies (**Kingspan Group PLC** and **Airbus**) and one stock from each of consumer discretionary (**Intercontinental Hotels**), communication services (**Publicis Groupe**), information technology (**Logitech**) and consumer staples (**Nestle**). The stock with the highest Beat Factor score is **BNP Paribas**, which has a BofA Global Research price objective that is 19% above consensus and EPS estimates for 2023 and 2024 that are 21% and 8% above consensus, respectively.

## Exhibit 2: European Beat Factor Top 10 stocks

Details of Top 10 Beat Factor stocks

Name	Sector	Industry group	Market	Beat	BofA estimates versus consensus			EPS	EPS-FY1		EPS-FY2		Consensus		
			Cap	Factor	(% above / below)			Curr	BofA	Cons	BofA	Cons	Buy	Hold	Sell
			Eur bn	(100=Upbeat)	PO	FY1 EPS	FY2 EPS								
BNP Paribas	Financials	Banks	62.5	100	19%	21%	8%	EUR	10.0	8.3	9.9	9.1	65	35	0
Intercont'l Hotels	Cons. Discretionary	Consumer Services	11.7	99	19%	4%	10%	USD	3.8	3.7	4.5	4.1	25	50	25
Publicis Groupe	Communication Svcs	Media & Entertainment	21.2	98	16%	1%	3%	EUR	6.9	6.9	7.4	7.1	71	24	6
Rio Tinto Plc	Materials	Materials	102.0	96	31%	4%	25%	USD	7.6	7.4	9.5	7.7	64	36	0
Logitech	Info. Tech	Tech. H/w & Equipment	13.5	95	27%	8%	16%	USD	3.5	3.2	4.3	3.7	18	73	9
Kingspan Group PLC	Industrials	Capital Goods	13.7	94	15%	6%	5%	EUR	3.8	3.6	3.8	3.6	44	39	17
Antofagasta	Materials	Materials	18.3	93	25%	4%	33%	USD	0.7	0.7	1.0	0.7	22	50	28
Airbus	Industrials	Capital Goods	109.8	92	38%	7%	4%	EUR	5.9	5.5	7.0	6.8	71	21	8
Nestle	Cons. Staples	Food Beverage & Tobacco	282.0	91	12%	3%	8%	CHF	5.0	4.9	5.5	5.1	65	19	15
3i	Financials	Financial Services	23.7	90	2%	24%	36%	GBP	4.7	3.8	5.4	4.0	82	18	0

**Source:** BofA European Equity Quant Strategy, iQdatabase, Bloomberg, IBES, Refinitiv (as of Jan 10, 2024). The Stock Beat screens are not a recommended list, either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions. The screens are 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. The screen was not created to act as a benchmark. The companies highlighted in blue (Intercont'l Hotels, Logitech, Kingspan Group Plc and Antofagasta) are the ones where the BofA Global Research rating is Buy and the percentage of consensus Strong Buy/Buy estimates is less than 50%.

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Our Bottom 10 Beat Factor screen of out-of-consensus European stocks covered by BofA Global Research analysts is dominated by capital good companies (**Alfa Laval**, **Schneider**, **Schindler** and **Nibe Industrier**), two from energy (**Galp Energia** and **OMV**) and one each from materials (**Yara**), personal and household products (**Unilever**), autos & components (**Michelin**) and insurance (**Poste Italiane**). **Yara** is the stock with the lowest Beat Factor score this month, with a BofA Global Research price objective that is 34% below consensus, as well as 2023 and 2024 EPS estimates that are 53% and 59% below consensus.

## Exhibit 3: European Beat Factor Bottom 10 stocks

Details of Bottom 10 Beat Factor stocks

Name	Sector	Industry group	Market	Beat	BofA estimates versus consensus			EPS	EPS-FY1		EPS-FY2		Consensus		
			Cap	Factor	consensus (% above / below)			Currency	BofA	Cons	BofA	Cons	Buy	Hold	Sell
			Eur bn	(-100=Downbeat)	PO	FY1 EPS	FY2 EPS								
Yara	Materials	Materials	8.3	-100	-34%	-53%	-59%	USD	0.3	0.6	1.3	3.1	35	40	25
Galp Energia	Energy	Energy	10.9	-99	-38%	-11%	-32%	EUR	1.0	1.2	0.9	1.3	23	50	27
OMV	Energy	Energy	13.2	-98	-31%	-13%	-28%	EUR	6.6	7.7	5.2	7.2	53	16	32
Alfa Laval	Industrials	Capital Goods	14.4	-96	-29%	-8%	-17%	SEK	15.9	17.2	16.4	19.6	26	58	16
Schneider	Industrials	Capital Goods	101.9	-94	-10%	-11%	-11%	EUR	6.9	7.7	7.5	8.4	63	29	8
Schindler	Industrials	Capital Goods	24.2	-91	-10%	-6%	-10%	CHF	7.8	8.3	8.0	8.9	35	53	12
Nibe Industrier	Industrials	Capital Goods	10.8	-89	-34%	-2%	-11%	SEK	2.5	2.6	2.4	2.7	43	29	29
Unilever	Cons. Staples	HH & Personal Products	114.1	-86	-17%	-1%	-1%	EUR	2.6	2.6	2.7	2.8	35	40	25
Michelin	Cons. Discretionary	Autos & Components	22.9	-84	-19%	0%	-7%	EUR	3.2	3.2	3.1	3.4	55	30	15
Poste Italiane	Financials	Insurance	12.5	-79	-18%	0%	-4%	EUR	1.4	1.4	1.4	1.5	53	40	7

**Source:** BofA European Equity Quant Strategy, iQdatabase, Bloomberg, IBES, Refinitiv (as of Jan 10, 2024). The Stock Beat screens are not a recommended list, either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions. The companies highlighted in red (OMV, Schneider, Michelin, Poste Italiane) are the ones where the BofA Global Research rating is Underperform and the percentage of consensus Strong Buy/Buy estimates is greater than 50%.

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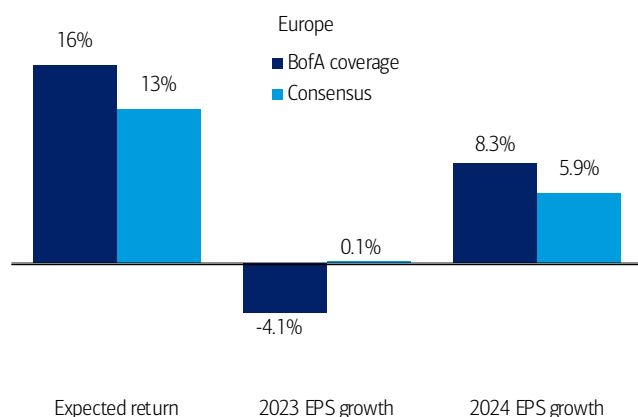
## European Beat Factor: market & sectors

Our sector analysts' bottom-up projections imply 16% upside potential in aggregate for the European stocks under BofA Global Research coverage over the coming twelve months, mildly above the bottom-up consensus estimate of 13%. BofA analysts expect -4.1% EPS growth for the European companies under their coverage in 2023 (versus consensus at 0.1%, with energy accounting for most of the difference) and +8.3% EPS growth in 2024 (versus consensus at +5.9%, with financials and materials accounting for most of the gap).

Our analysts' view on tech and healthcare is the most positive relative to consensus, with their bottom-up projections pointing to 21% and 18% upside potential for the two sectors over the coming twelve months, respectively, while consensus expects upside potential of 9% each. Our analysts are most negative relative to consensus on real estate and energy, expecting -2% downside and 20% upside potential, respectively over the coming year, below consensus at 4% and 25% upside, respectively.

### Exhibit 4: BofA vs consensus – BofA coverage of European companies

Expected return and 2023 & 2024 EPS growth (%)



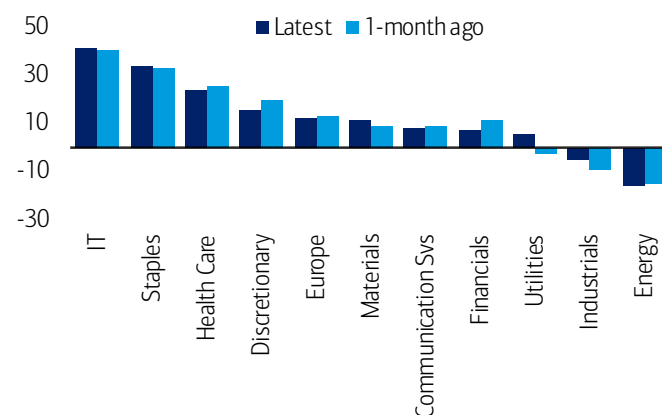
Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024)

Note: EPS growth is calculated in EUR terms

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### Exhibit 5: Beat Factor score per sector – change over the month

Utilities score improves the most over the month, while Discretionary falls the most

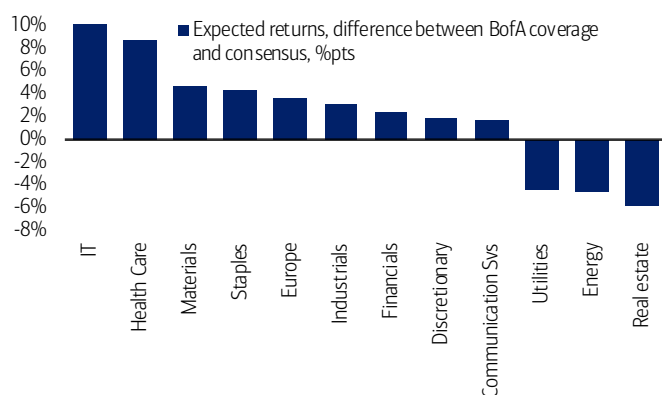


Source: BofA European Equity Quant Strategy, IQdatabase, Bloomberg, IBES, (as of Jan 10, 2024)

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### Exhibit 6: BofA vs consensus: expected return for European sectors

BofA Global Research analysts are most positive versus consensus on tech and healthcare, while they are most negative versus consensus on energy and real estate

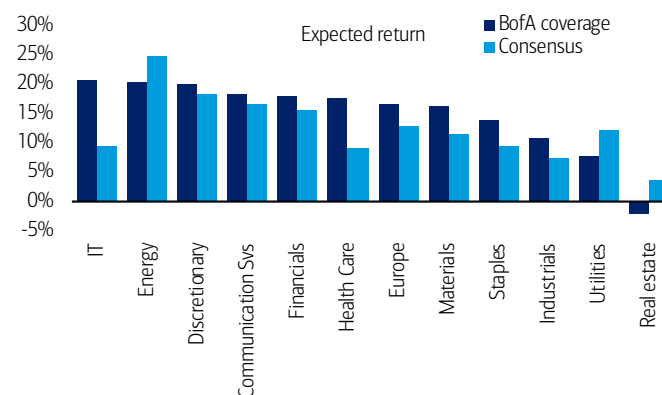


Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024)

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### Exhibit 7: BofA vs consensus: expected return for European sectors

Among European sectors, BofA Global Research analysts see the most upside potential for tech and energy over the coming twelve months, while they see the least upside potential for real estate and utilities

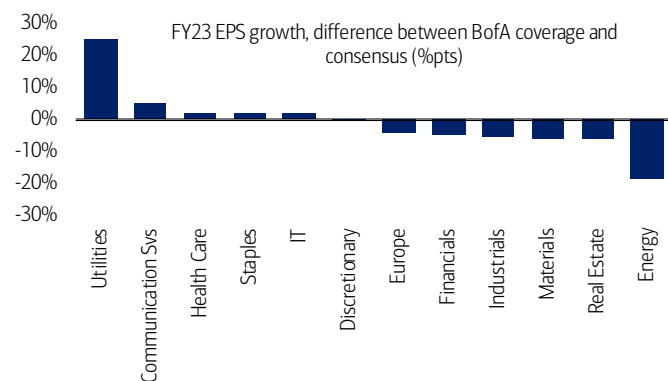


Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024)

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**Exhibit 8: BofA vs consensus: sector 2023 EPS growth estimates**

Our analysts project 2023 EPS growth for utilities that is 25 percentage points (ppts) above that projected by consensus, while they expect energy to see EPS growth that is 19ppts below that expected by consensus



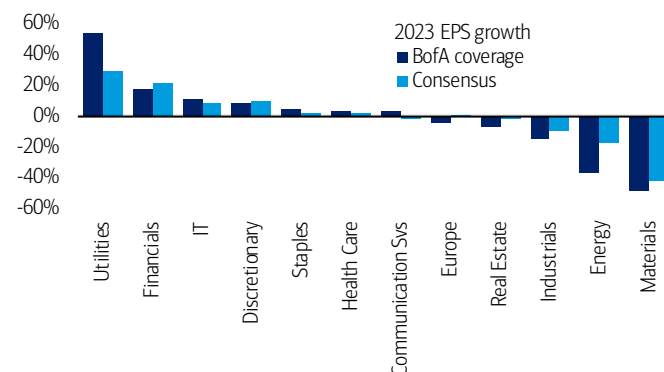
Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 9: BofA vs consensus: sector 2023 EPS growth estimates**

BofA Global Research analysts expect utilities to see the strongest EPS growth in 2023 among European sectors, while materials and energy are the sectors projected to see the most negative growth



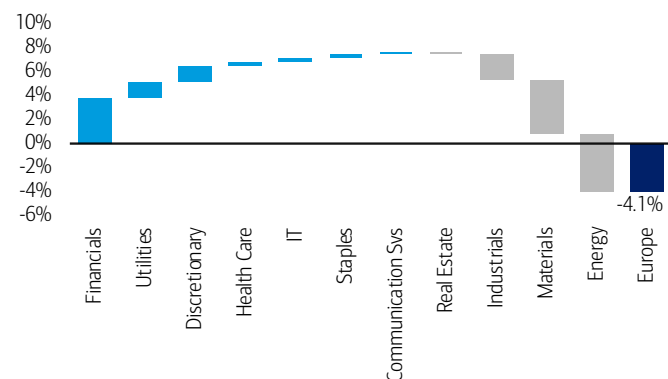
Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 10: Sector contribution to 2023 BofA EPS growth projected for European stocks under BofA Global Research coverage**

Energy and materials are the main negative contributors to the -4.1% EPS growth projected by BofA analysts for the European stocks under their coverage this year, while financials is the main positive contributor



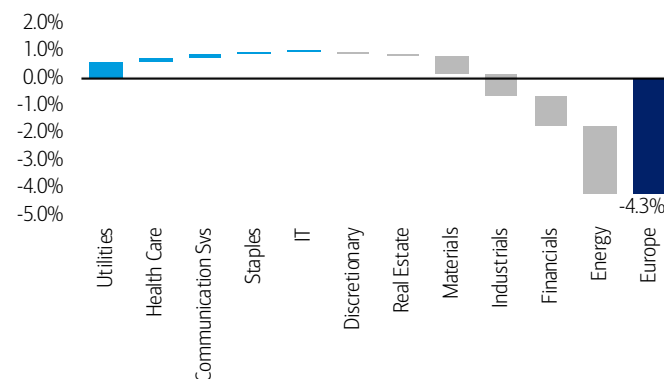
Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 11: Sector contribution to the difference in 2023 EPS growth projected by BofA Global Research analysts and consensus**

BofA Global Research analysts are projecting EPS growth this year for the European stocks under their coverage that is 4ppts lower than that projected by consensus, with most of the difference accounted for by energy



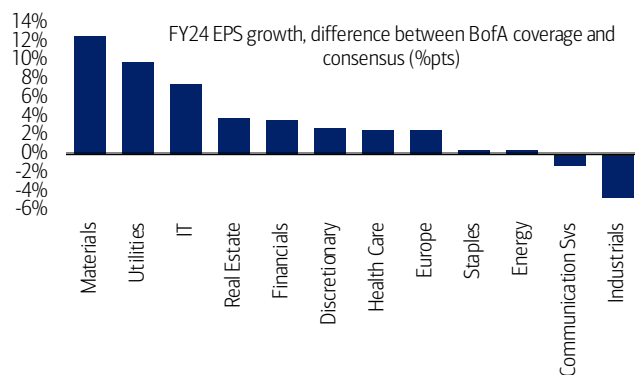
Source: BofA European Equity Quant Strategy, IQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 12: BofA vs consensus: sector 2024 EPS growth estimates**

BofA Global Research analysts project 2024 EPS growth for materials that is more than 10ppts above that expected by consensus, while they expect industrials to see EPS growth next year that is 5ppts below that expected by consensus



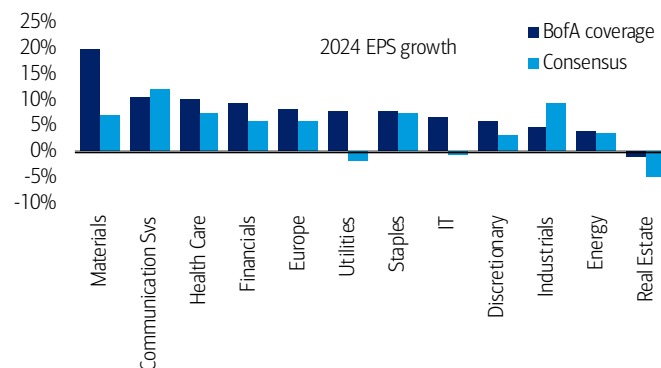
Source: BofA European Equity Quant Strategy, iQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 13: BofA vs consensus: sector 2024 EPS growth estimates**

BofA Global Research analysts expect materials to see the strongest EPS growth in 2024, while real estate is the only major sector expected to see negative growth



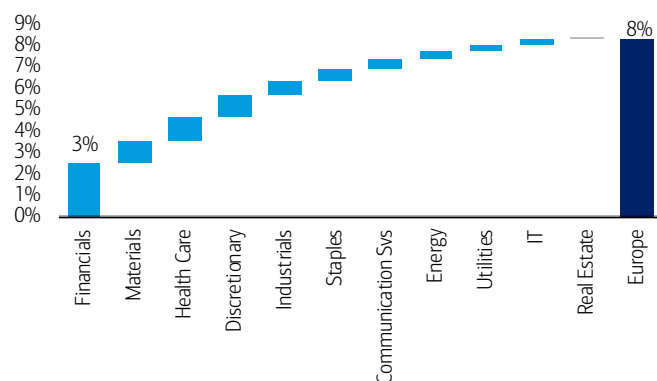
Source: BofA European Equity Quant Strategy, iQdatabase, IBES, Refinitiv (as of Jan 10, 2024)

Note: EPS growth is calculated in EUR terms

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**Exhibit 14: Sector contribution to 2024 BofA EPS growth projected for European stocks under BofA Global Research coverage**

Financials are the largest positive contributor to the 8% EPS growth projected by BofA Global Research analysts for the European stocks under their coverage in 2024



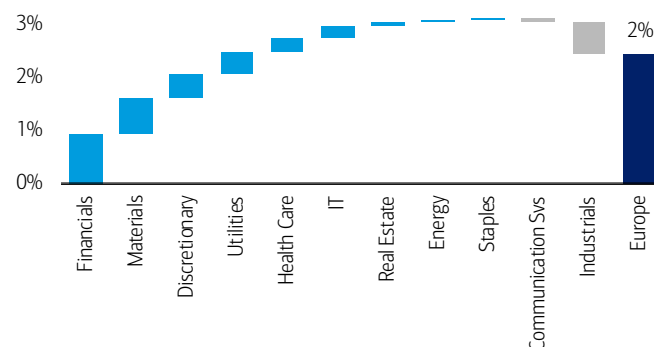
Source: BofA European Equity Quant Strategy, iQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

Note: EPS growth is calculated in EUR terms

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**Exhibit 15: Sector contribution to the difference in 2024 EPS growth projected by BofA Global Research analysts and consensus**

BofA Global Research analysts are projecting EPS growth next year for the European stocks under their coverage that is 2ppts above that expected by consensus, with most of the gap accounted for by financials and materials



Source: BofA European Equity Quant Strategy, iQdatabase, IBES, Refinitiv (as of Jan 10, 2024).

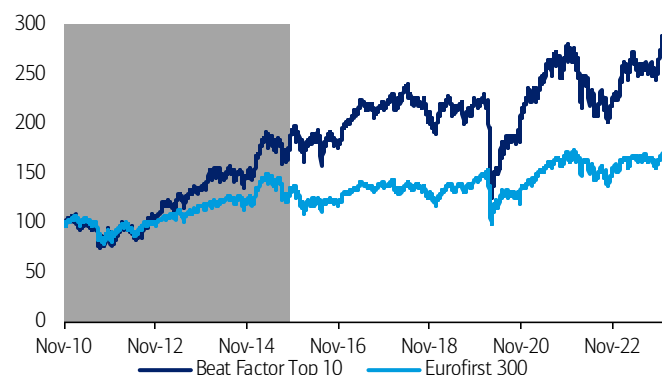
Note: EPS growth is calculated in EUR terms

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# European Beat Factor performance

## Exhibit 16: Beat Factor Top 10 performance vs Eurofirst 300 index

Absolute performance (EUR, equally weighted)

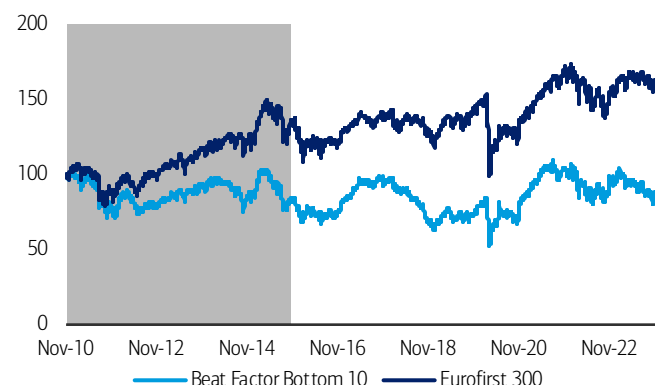


**Source:** BofA European Equity Quant Strategy, IQdatabase, Factset. The shaded area on the chart above shows backtested results during the period from Nov-10 to Sep-15. The performance data for the months between April to November 2021 depends on monthly screens that were not published at the time. Please see [European Beat Factor, 14 Dec 2021](#) for details. Past performance should not be viewed as an indicator of future performance. This performance 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.

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## Exhibit 17: Beat Factor Bottom 10 performance vs Eurofirst 300 index

Absolute performance (EUR, equally weighted)

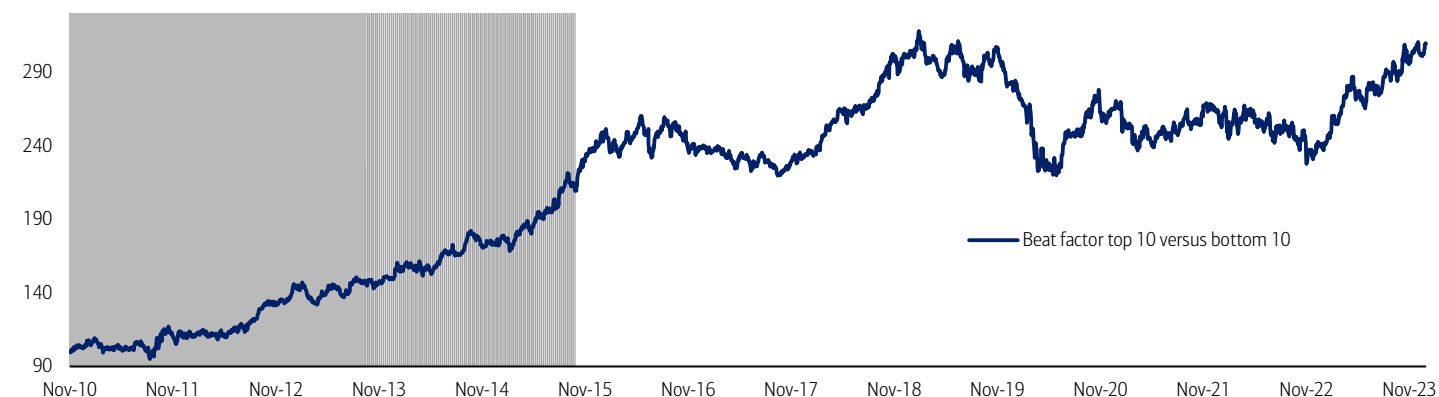


**Source:** BofA European Equity Quant Strategy, IQdatabase, Factset. The shaded area on the chart above shows backtested results during the period from Nov-10 to Sep-15. The performance data for the months between April to November 2021 depends on monthly screens that were not published at the time. Please see [European Beat Factor, 14 Dec 2021](#) for details. Past performance should not be viewed as an indicator of future performance. This performance 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.

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## Exhibit 18: Beat Factor Top 10 vs Bottom 10 actual and backtested performance

Relative performance (EUR, equally weighted)



**Source:** BofA European Equity Quant Strategy, IQdatabase, Bloomberg, IBES. The shaded area on the chart above shows backtested results during the period from Nov-10 to Sep-15. The performance data for the months between April to November 2021 depends on monthly screens that were not published at the time. Please see [European Beat Factor, 14 Dec 2021](#) for details. Past performance should not be viewed as an indicator of future performance. This performance 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.

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## Exhibit 19: Beat Factor relative and absolute performance

Price returns in EUR, %, equally weighted

	Relative Price Returns (%) in EUR						Absolute Price Returns (%) in EUR				
	1M	3M	6M	12M	Since Incept.		1M	3M	6M	12M	Since Incept.
Top 10/FTSEurofirst 300	-0.7	4.9	7.9	11.1	12.2	Top 10	0.0	10.9	11.8	18.5	62.1
Bottom 10/FTSEurofirst 300	-1.4	-2.4	-2.7	-12.9	-23.5	Bottom 10	-0.6	3.1	0.8	-7.1	10.5
Top 10/Bottom 10	0.7	7.5	11.0	27.6	46.6	FTSEurofirst 300	0.7	5.7	3.6	6.6	44.4

**Source:** BofA European Equity Quant Strategy, IQdatabase, Bloomberg, Inception = Oct 2015. Past performance should not be viewed as an indicator of future performance. The performance data for the months between April to November 2021 depends on monthly screens that were not published at the time. Please see [European Beat Factor, 14 Dec 2021](#) for details.

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# European SMID Beat Factor: Top 10 & Bottom 10 stocks

## Exhibit 20: European Beat Factor Top 10 stocks within SMID universe

Details of Top 10 Beat Factor stocks within the SMID universe

Name	Sector	Industry group	Market Cap	Beat Factor	BofA estimates versus consensus			EPS	EPS-FY1		EPS-FY2		Consensus Rating (%)		
					(% above / below)								Buy	Hold	Sell
			Eur bn	(100=Upbeat)	PO	FY1 EPS	FY2 EPS	Cur	BofA	Cons	BofA	Cons			
Auto Trader	Communication Svs.	Media & Entertainment	7.9	100	16%	8%	8%	GBP	0.3	0.3	0.3	0.3	47	42	11
Accor	Cons. Discretionary	Consumer Services	7.9	99	14%	20%	20%	EUR	2.2	1.8	2.5	2.1	74	21	5
Intercont'l Hotels	Cons. Discretionary	Consumer Services	11.7	98	19%	4%	10%	USD	3.8	3.7	4.5	4.1	25	50	25
Thyssenkrupp	Materials	Materials	4.1	97	32%	58%	37%	EUR	1.0	0.7	1.3	1.0	33	58	8
Pirelli	Cons. Discretionary	Autos & Components	4.8	95	9%	16%	8%	EUR	0.6	0.6	0.6	0.6	75	25	0
Nordic Semiconductor	Info. Tech	Semicon & Semicon Equip	2.0	93	20%	41%	112%	USD	0.1	0.1	0.3	0.1	33	50	17
OCI Global	Materials	Materials	4.5	92	36%	-288%	20%	USD	0.4	-0.2	1.7	1.4	55	45	0
Elis	Industrials	Comm. & Prof. Services	3.5	91	2%	6%	7%	EUR	1.8	1.7	2.0	1.8	92	8	0
AAK	Cons. Staples	Food Beverage & Tobacco	5.1	89	32%	1%	7%	SEK	10.9	10.8	11.8	11.0	60	20	20
Comet	Info.Tech	Tech. H/w & Equipment	2.0	89	13%	63%	7%	CHF	1.1	0.7	6.9	6.4	67	33	0

**Source:** BofA European Equity Quant Strategy, iQdatabase, Bloomberg, IBES, Refinitiv (as of Jan 10, 2024). The Stock Beat screens are not a recommended list, either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions. The screens are 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. The screen was not created to act as a benchmark. The companies highlighted in blue (Auto Trader, Intercont'l Hotels, Thyssenkrupp, Nordic Semiconductor) are the ones where the BofA Global Research rating is Buy and the percentage of consensus Strong Buy/Buy estimates is less than 50%.

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## Exhibit 21: European Beat Factor Bottom 10 Stocks within SMID universe

Details of Bottom 10 Beat Factor stocks within the SMID universe

Name	Sector	Industry group	Market Cap	Beat Factor	BofA estimates versus consensus			EPS	EPS-FY1		EPS-FY2		Consensus Rating (%)		
					(% above / below)								Buy	Hold	Sell
			Eur bn	(-100=Downbeat)	PO	FY1 EPS	FY2 EPS	Cur	BofA	Cons	BofA	Cons			
Galp Energia	Energy	Energy	10.9	-99	-38%	-11%	-32%	EUR	1.0	1.2	0.9	1.3	23	50	27
Yara	Materials	Materials	8.3	-99	-34%	-53%	-59%	USD	0.3	0.6	1.3	3.1	35	40	25
Virgin Money UK PLC	Financials	Banks	2.7	-98	-24%	-22%	-24%	GBP	0.2	0.3	0.3	0.4	56	33	11
Darktrace	Info Tech	Software & Services	2.6	-97	-47%	-41%	-49%	USD	0.1	0.1	0.1	0.1	75	13	13
Metso Corporation	Industrials	Capital Goods	7.5	-97	-24%	-7%	-13%	EUR	0.6	0.7	0.6	0.7	72	17	11
Aurubis	Materials	Materials	3.1	-95	-21%	-6%	-12%	EUR	7.2	7.6	7.6	8.7	42	50	8
Wartsila OYJ	Industrials	Capital Goods	7.7	-95	-21%	-17%	-21%	EUR	0.5	0.6	0.6	0.7	58	11	32
ITV Plc	Comm. Svs.	Media & Entertainment	3.1	-94	-47%	-2%	-19%	GBP	0.1	0.1	0.1	0.1	50	33	17
Siltronic AG	Info Tech	Semicon & Semicon Equip	2.5	-94	-36%	-10%	-58%	EUR	5.5	6.1	1.1	2.6	64	18	18
RS Group	Industrials	Capital Goods	4.5	-90	-24%	-2%	-5%	GBP	0.5	0.5	0.5	0.6	57	36	7

**Source:** BofA European Equity Quant Strategy, iQdatabase, Bloomberg, IBES, Refinitiv (as of Jan 10, 2024). The Stock Beat screens are not a recommended list, either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions. The companies highlighted in red (Virgin Money UK, Darktrace, Metso corp., Wartsila OYJ, Siltronic AG, RS Group) are the ones where the BofA Global Research rating is Underperform and the percentage of consensus Strong Buy/Buy estimates is greater than 50%.

BofA GLOBAL RESEARCH

## Appendix: Beat Factor Overview

Beat Factor identifies BofA research analysts' most out-of-consensus stock ideas within the FTSE Eurofirst 300 universe, using a purely quantitative approach based on price objectives and earnings estimates. In addition to highlighting stock-level views, the framework also finds sectors where our analysts are most upbeat or downbeat versus consensus by aggregating bottom-up estimates of our developed Europe coverage, as well as showing our bottom-up Pan-European market view. BofA estimates come from our proprietary iQdatabase®, while consensus numbers are based on I/B/E/S estimates from Factset.

The Beat Factor score is an equal-weighted measure based on our analysts' price objectives, FY1 earnings and FY2 earnings estimates relative to consensus. We compare both FY1 and FY2 earnings to avoid any single period bias. Scores are standardised to minimise any cyclical / defensive or high Risk / low Risk bias. The score is used to rank stocks from -100 (most downbeat) to +100 (most upbeat), which in turn, is used to create the 'PO Beat Factor', 'Earnings Beat Factor', and composite 'Beat Factor'. Please see the Beat Factor Methodology section below for more details.

## Beat Factor Methodology

### Filtering the universe

1. Select all stocks that are both within BofA's current coverage and within the FTSE Eurofirst 300 universe as of the tenth day of the month. The report will be published within two business days of the cut-off date.
2. Exclude stocks for which BofA does not have price objectives or earnings estimates.
3. Exclude stocks which are on BofA's restricted list or which have no rating, including those under review or under extended review.
4. Exclude stocks where the BofA's price objective was approved/validated more than six months ago.
5. Both BofA and IBES consensus price objectives are 12-month horizon data
6. Verify that the earnings estimate year for consensus is the same as for iQdatabase estimates to ensure that earnings estimates are comparable.
7. Convert consensus data into BofA estimates currency using BofA forecasts
8. Exclude stocks with fewer than five consensus estimates for each of FY1 earnings, FY2 earnings and price objective. We do not adjust the consensus number to exclude the BofA price objective and earnings estimates.
9. Exclude stocks with zero standard deviation of consensus estimates.
10. Adjust estimates for any corporate actions (e.g. stocks split and bonus shares) in the back testing period.

### Calculating ranks

1. Convert consensus price objective and earnings estimates to BofA pricing currency.
2. Calculate a Z-score for each of the estimates, price objective, FY1 earnings and FY2 earnings individually using the below formula  
(BofA Estimate – I/B/E/S Mean Estimate)

$$\text{Z-Score} = \frac{\text{BofA Estimate} - \text{I/B/E/S Mean Estimate}}{\text{Standard Deviation of I/B/E/S Estimate}}$$

Using Z-scores, standardises stocks to prevent any cyclical/defensive bias in our universe.

3. Exclude stocks with FY1 or FY2 earnings Z-score outside the range of  $\pm 5$ .





### Calculating 'PO Beat Factor' and 'Earnings Beat Factor'

1. Rank stocks' Z-scores from -100 (worst) to +100 (best) for each of the price objective, FY1 and FY2 earnings.

### Calculating 'Beat Factor'

1. Calculate an equal-weighted average of 'PO Beat Factor', 'FY1 Earnings Beat Factor', and 'FY2 Earnings Beat Factor'.
2. Rank the average score from +100 to -100 to arrive at the 'Beat Factor'. The maximum positive average score is ranked as +100 and the maximum negative average score is ranked as -100.
3. We intend to publish the Top 10 and Bottom 10 Beat Factor screens each month.

### Expected Return

'Expected Return' is calculated as the difference between the close share price prior to the update day of the Beat Factor and the share price objective of the BofA analyst as of the day of the update and the close share price prior to the update day. The Expected Return does not take into account total return.

### Upside Rank

The expected return is ranked from +100 (most upside) to 0 (least upside).

### Top and Bottom Stock Beat Screen

Stocks with BofA 'Buy' rating, positive expected return and positive Beat Factor are placed in the 'Top Stock Beat' screen.

Stocks with BofA 'Underperform' rating, negative expected return and negative Beat Factor are placed in the 'Bottom Stock Beat' screen.

## SMID Beat Factor Methodology

### SMID Beat Factor screen for Top 10 and Bottom 10 stocks

1. For the European SMID screens, we filter for European stocks under BofA coverage that have a market cap between EUR1bn and EUR12bn.
2. Exclude stocks if the covering BofA analyst has not published a dedicated report on the stock over last three months.
3. Stocks with BofA 'Buy' rating, positive expected return and positive Beat Factor are placed in the 'Top Stock Beat' screen.
4. Stocks with BofA 'Underperform' rating, negative expected return and negative Beat Factor are placed in the 'Bottom Stock Beat' screen.
5. If the expected return criterion results in the Beat Factor screens having less than 10 stocks, stocks with slightly negative expected returns may be included in the Top 10 screen and stocks with slightly positive expected returns included in the Bottom 10 screen.

6. If the Beat Factor screens contain less than 10 stocks because of the dedicated report criterion (i.e., only including stocks in the screens that have a dedicated report published over the last three months), the screens may include stocks for which a dedicated report was published over the last six months.
7. If the above criteria lead to less than 10 stocks being included in the Top or Bottom screens, the lists may have less than 10 stocks for that month.

## Sector Beat & Market Beat Methodology

To calculate 'Sector Beat' and 'Market Beat', we aggregate stock-level data of all BofA covered stocks in the Pan-European market (i.e. we no longer restrict ourselves to stocks in the FTSE Eurofirst 300 index). However, we apply all the other screening criteria as in the methodology discussed above.

The sector and market level data aggregation (except FY1 EPSG and FY2 EPSG) is market cap-weighted, while FY1 EPSG and FY2 EPSG are net income-weighted.

The Pan-European market in Europe includes: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK. From December 2010 to December 2015, the average universe size was 464 stocks

## Performance Calculation Methodology

The performance is computed for an equally weighted top 10 and bottom 10 beat screens published each month. For a detailed definition of the top and bottom stock beat screen, see the "Top and Bottom Stock Beat Screen" of this report.

Performance is calculated on price returns, in EUR and in Local CCY, and is presented on an absolute basis as well as relative to FTSE Eurofirst 300. We also present performance of top screens relative to bottom screens. For example, performance of the top 10 screen relative to FTSE Eurofirst 300 is computed using the formula:  $(1 + \text{returns of top 10}) / (1 + \text{returns of FTSE Eurofirst 300}) - 1$ . Note that Top screen implies a list of long stocks and bottom screen implies a list of short stocks.

The performance does not reflect transaction costs, taxes or advisory fees. If such costs were reflected the performance would have been lower.

Changes to the Beat Factor and accompanying lists are announced via a published research report on a monthly basis (please see [European Beat Factor, 14 Dec 2021](#) for the Beat Factor screens for the months between April and November 2021, during which the report was not published). For the purposes of calculating performance, the addition or removal of a stock will be on the closing prices on the day the change is announced if the research report is published before 12 pm London local time, or the closing price on the following trading day if the report is published after 12 pm London local time. All prices are and will be converted to EUR using the exchange rate on the pricing date. Backtested performance was calculated on a monthly basis using the closing prices on the 12<sup>th</sup> of each month for the backtested period and converted to EUR as described above.

The analysis in this report is backtested and does not represent the actual performance of any account or fund. Backtested performance depicts the hypothetical backtested performance of a particular strategy over the time period indicated. In future periods, market and economic conditions will differ and the same strategy will not necessarily produce the same results. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. In fact, there are frequently sharp differences between backtested returns and the actual results realized

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Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Please note that the numbers used in the calculation for the Beat Factor are rounded. Such rounding could influence the final results.

For details on back-testing of this framework, please refer to our [European Beat Factor, 14 Dec 2021](#).

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

<sup>R1</sup> 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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