

High Frequency Monitor

The irony of strong data

Strong US data is weighing on equities

Last week, global equities [fell](#) -2.6% as strong data in the US triggered the possibility of tighter policy. Weak data in China also impacted sentiment towards equities. Global equities have now fallen for three consecutive weeks but remain 21% above Oct-22 lows. By region, the [US](#) (-2.1%) fell the least, while Asia Pac ex-Japan (-3.8%) fell the most. The best performing global [sectors](#) were Semis (+0.1%) and Software (-1.6%), while Consumer Discretionary (-4.4%) and Materials (-3.9%) fell the most. During the defensive rotation, the [Quality](#) style outperformed Risk by -1.9%. Our global cycle indicators remain mixed, with a negative signal from the Global Wave, but positive signals from the Global [Earnings Revision Ratio](#) (0.90) and the 30-day [Global News Pulse](#).

The Earnings Revision Ratio jumped in Japan, fell in Asia

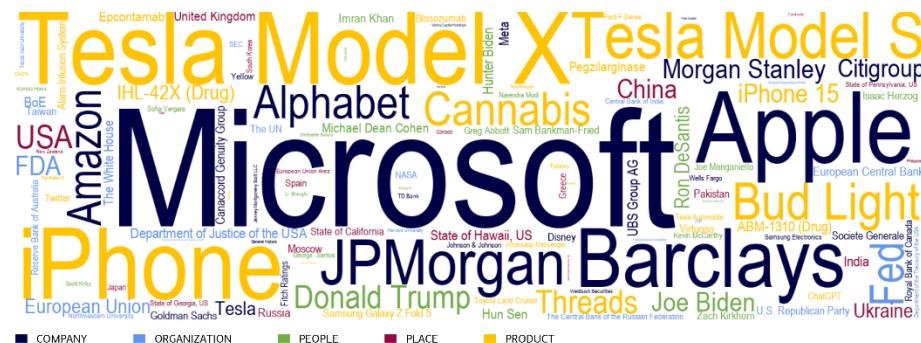
The Earnings Revision Ratio jumped in [Japan](#) last week from 1.19 to 1.36 as earnings upgrades increasingly outnumber downgrades. In contrast, the Ratio fell in Asia Pac ex-Japan (0.77 to 0.68) and Emerging Markets (0.80 to 0.72). The components of our short-term [Tactical Indicators](#) have weakened for three weeks, but a fourth week of deterioration would be required before a negative signal is triggered.

Triple Momentum has strengthened for Software

[Triple Momentum](#) (earnings, price, and news) has strengthened for the global Software sector and is also positive for Consumer Discretionary and Industrials. Recent news has been dominated by Tesla Model X, iPhone, Tesla Model S, Microsoft, Apple, and Barclays.

Chart 1: Top News Mentions (last 30 days)

Top 100 entities mentioned in news (companies, organization, people, place, and products)



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Unless otherwise noted all links on the front page of this report refer to sections in this research report.

- [Market Performance](#)
- [Product Performance](#)
- [Style Performance](#)
- [Earnings Revision Ratio](#)
- [Earnings Revision Ratio by Style](#)
- [NewsAlpha](#)
- [Word Cloud](#)
- [Tactical Indicators](#)
- [Volatility](#)
- [Rates](#)
- [Triple Momentum](#)

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Refer to important disclosures on page 41 to 43.

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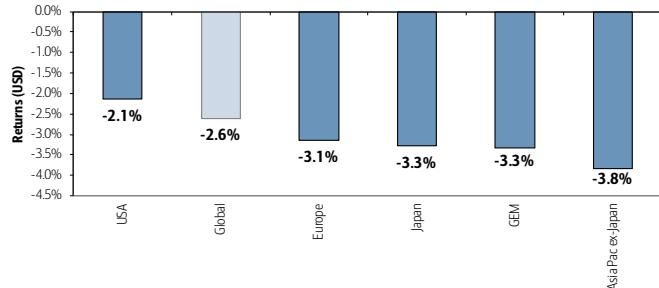
The Global News Pulse (and the regional and sectors versions of it) is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This News Pulse was not created to act as a benchmark.



Market Performance

Chart 2: Global Regions Performance: Last Week

The USA was the best performing region last week

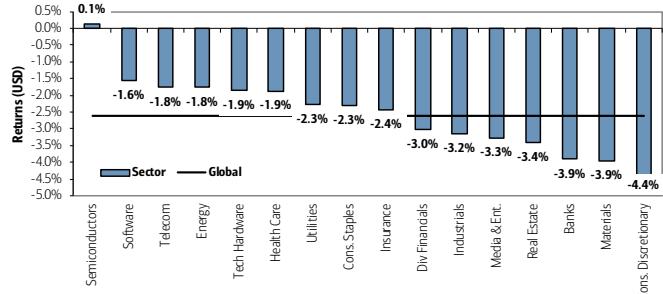


Source : BofA Global Quantitative Strategy, MSCI

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Chart 3: Global Sectors Performance: Last Week

Best performing sector last week was Semiconductors

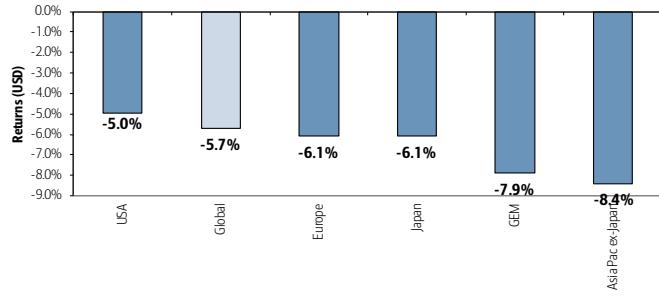


Source : BofA Global Quantitative Strategy, MSCI

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Chart 4: Global Regions Performance: MTD

Best performing region this month is The USA

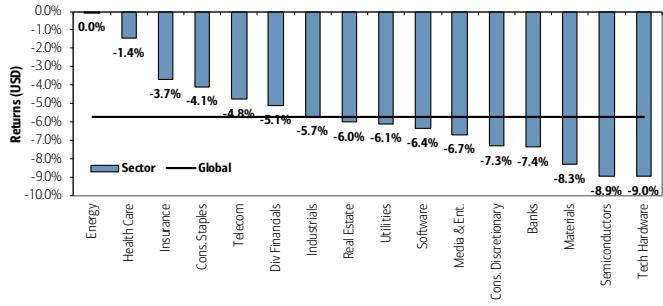


Source : BofA Global Quantitative Strategy, MSCI

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Chart 5: Global Sectors Performance: MTD

Best performing sector MTD is Energy

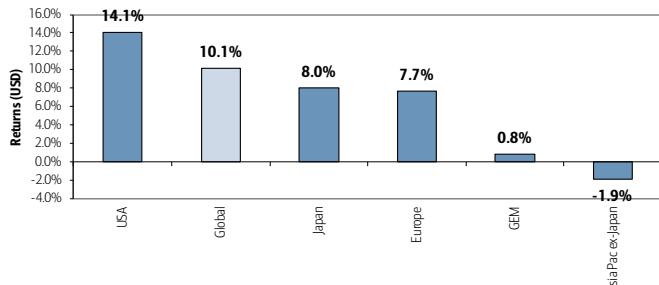


Source : BofA Global Quantitative Strategy, MSCI

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Chart 6: Global Regions Performance: YTD

The USA is the best performing region this year

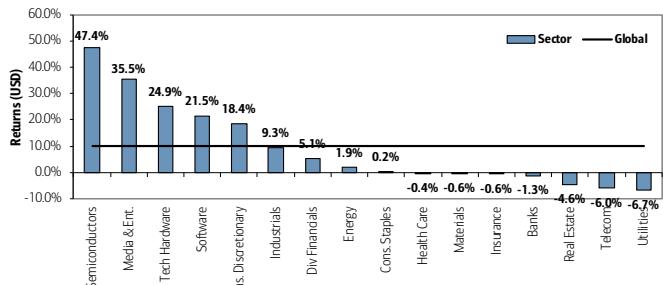


Source : BofA Global Quantitative Strategy, MSCI

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Chart 7: Global Sectors Performance: YTD

Semiconductors is the best performing sector this year



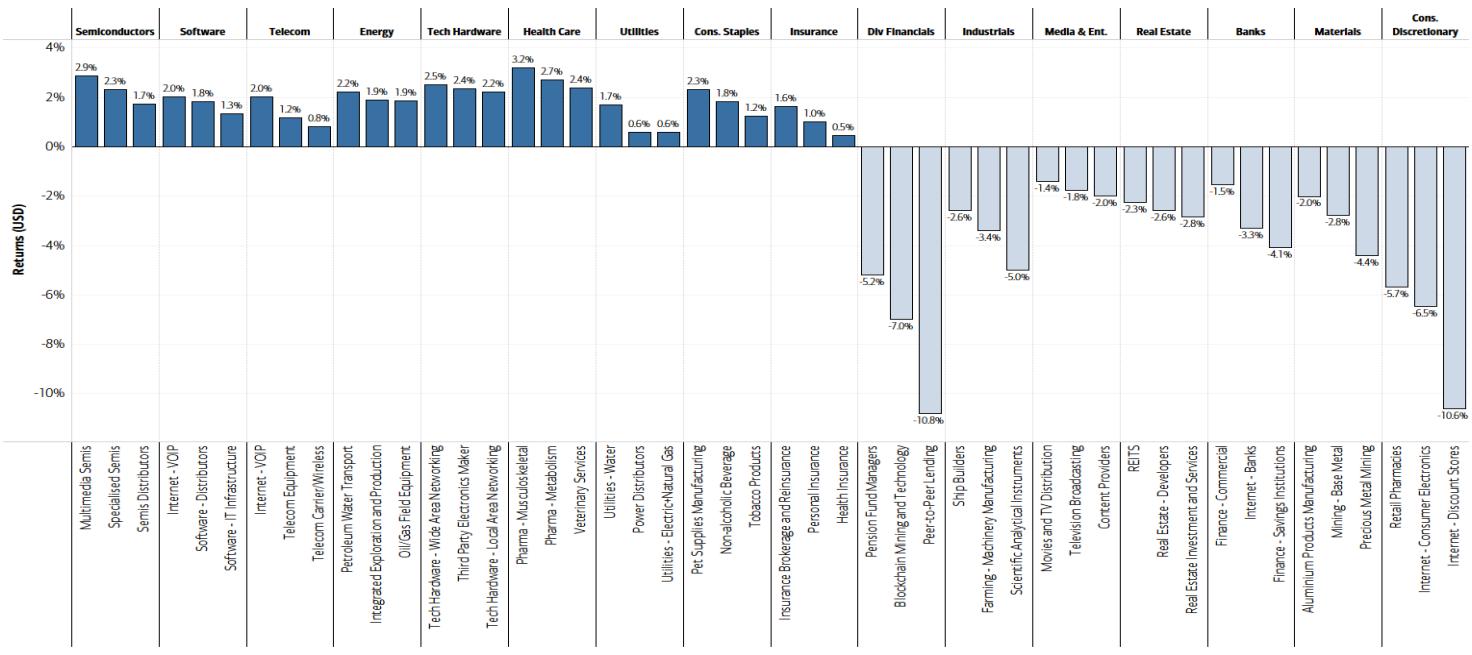
Source : BofA Global Quantitative Strategy, MSCI

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Product Performance

Chart 8: Best & Worst Performing Products - Last Week

Last week, Pharma-Musculoskeletal performed the best and Peer-to-Peer Lending performed the worst.



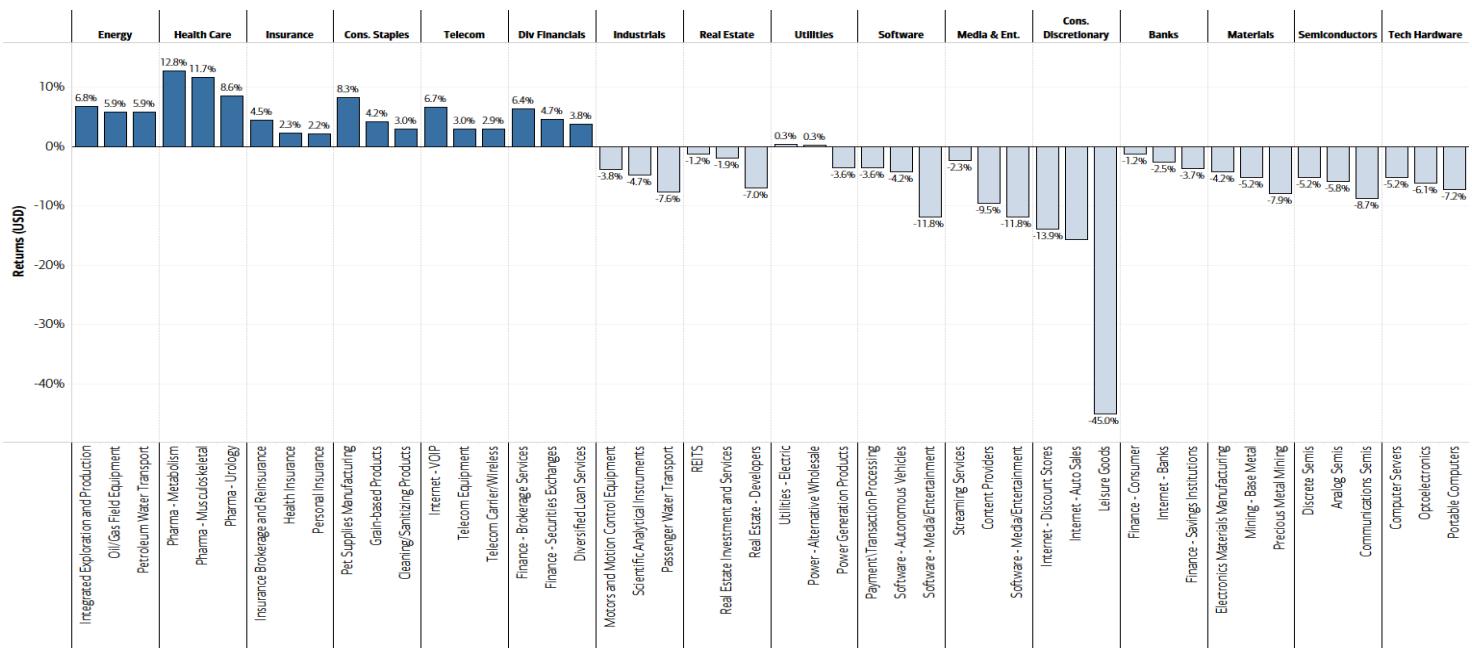
■ Three best performing Products in the outperforming global sectors
□ Three worst performing Products in the underperforming global sectors

Source : BofA Global Quantitative Strategy, MSCI, IBES, Factset

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Chart 9: Best & Worst Performing Products - MTD

Month-to-date, the best performing product is Pharma - Metabolism and the worst performing product is Leisure Goods.



■ Three best performing Products in the outperforming global sectors
□ Three worst performing Products in the underperforming global sectors

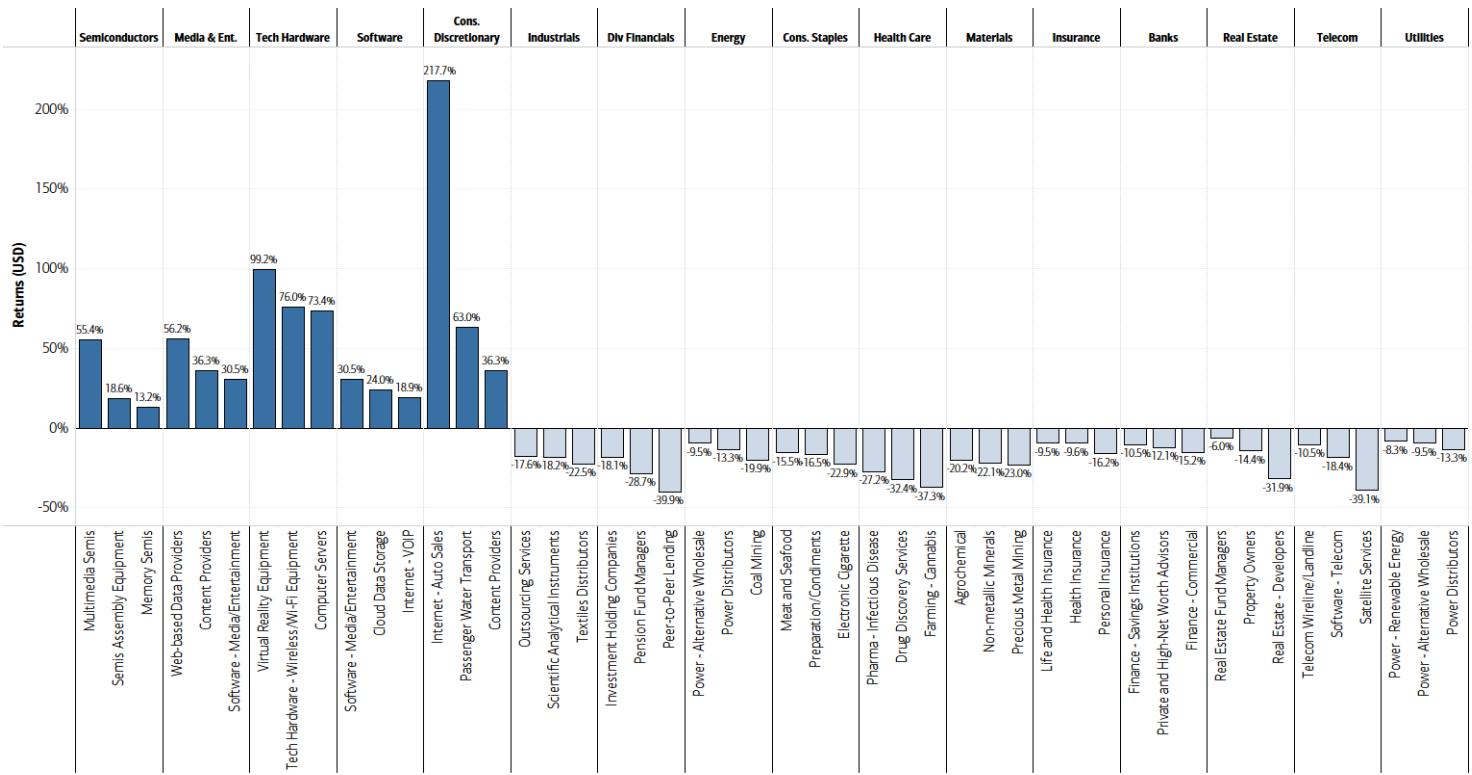
Source : BofA Global Quantitative Strategy, MSCI, IBES, Factset

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Chart 10: Best & Worst Performing Products - YTD

Year-to-date, the best performing product is Internet - Auto Sales and the worst performing product is Peer-to-Peer Lending.



█ Three best performing Products in the outperforming global sectors

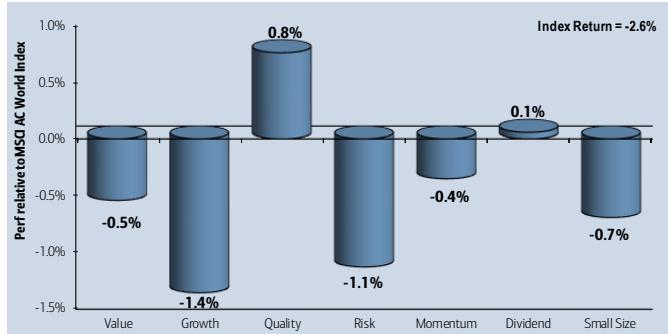
█ Three worst performing Products in the underperforming global sectors

Source : BofA Global Quantitative Strategy, MSCI, IBES, Factset

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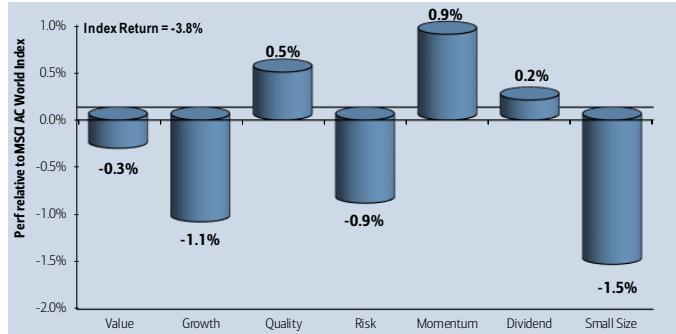
Style Performance

Chart 11: Global Quantessential Style Rel Performance: Last Week
Quality was the best performing style last week



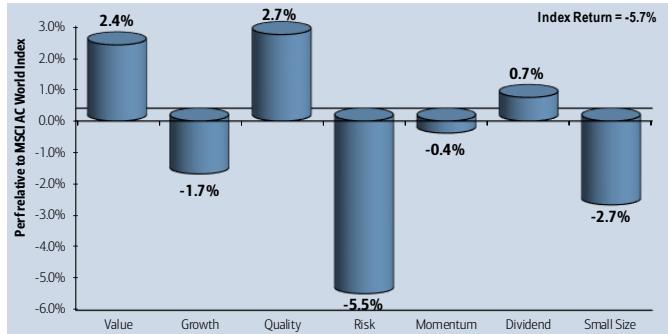
Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 12: Asia Pac Quantessential Style Rel Performance: Last Week
Last week the best performing style was Momentum



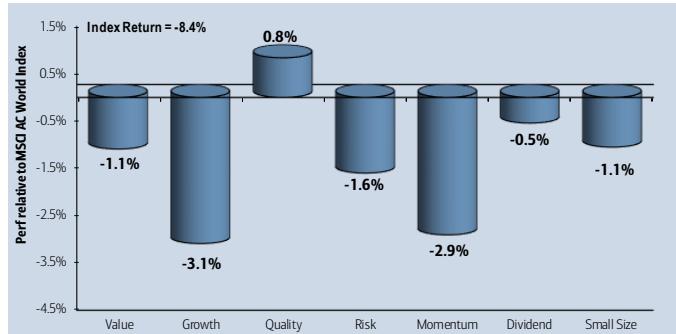
Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 13: Global Quantessential Style Relative Performance: MTD
Quality is the best performing style this month



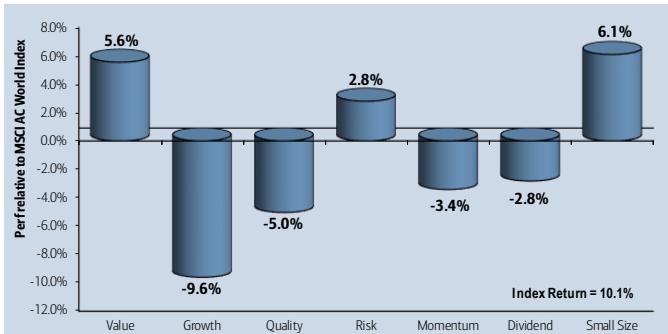
Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 14: Asia Pac Quantessential Style Relative Performance: MTD
Quality is the best performing style this month



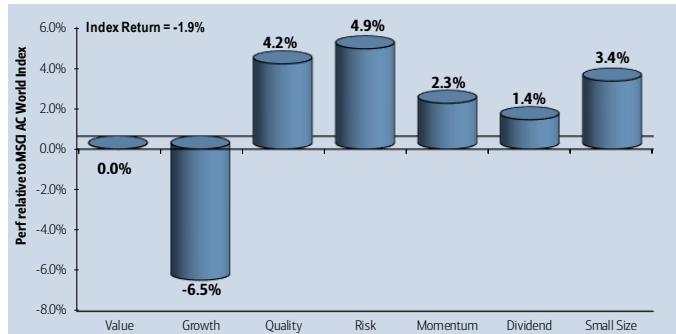
Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 15: Global Quantessential Style Relative Performance: YTD
YTD: Small Size has performed the best



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 16: Asia Pac Quantessential Style Relative Performance: YTD
YTD: Risk has performed the best



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Earnings Revision Ratio

Chart 17: Global Earnings Revision Ratio - Weekly

Earnings revisions fell in World last week



Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 18: Asia Pac Earnings Revision Ratio - Weekly

Earnings revisions for Asia Pac ex-Japan fell last week and remains below long term trend

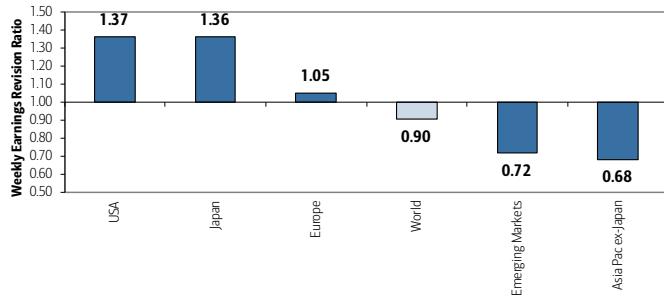


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 19: Global Regions Earnings Revision Ratio - Weekly

Earnings trends are strongest in The USA

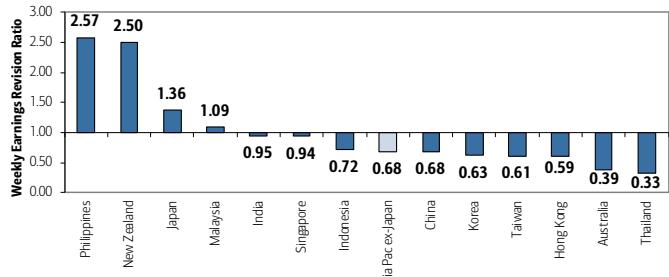


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 20: Asia Pac Countries Earnings Revision Ratio - Weekly

Earnings trend in strongest in Philippines and weakest in Thailand

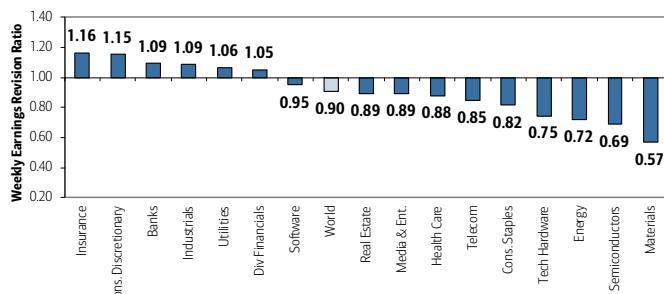


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 21: Global Sectors Earnings Revision Ratio - Weekly

There are more upgrades than downgrades in 6 out of 16 sectors

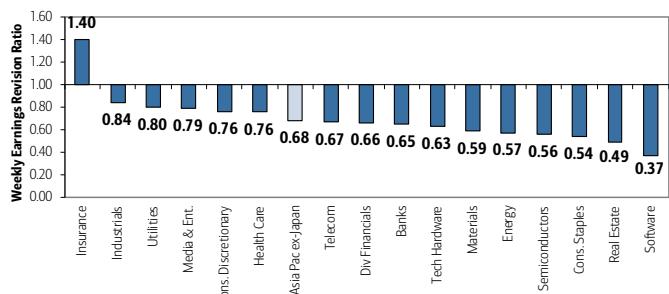


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 22: Asia Pac Sectors Earnings Revision Ratio - Weekly

Earnings Revision Ratio is strongest in Insurance sector



Source : BofA Global Quantitative Strategy, MSCI, IBES

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Table 1: Global Region/Sector/Style - Earnings Revision Ratio

Earnings revisions fell in World last week

Regions/Sectors	May-23	Jun-23	Jul-23	Aug-23 - Wk1	Aug-23 - Wk2	Aug-23 - Wk3	Aug-23 - Wk4
World	0.77	0.85	0.77	0.94	0.95	0.95	0.90
USA	1.07	0.87	0.82	1.03	1.30	1.39	1.37
Europe	1.21	1.16	0.98	1.03	1.07	1.05	1.05
Japan	1.02	0.93	0.99	1.13	1.17	1.19	1.36
Asia Pac ex-Japan	0.53	0.76	0.66	0.87	0.78	0.77	0.68
Emerging Markets	0.57	0.79	0.68	0.90	0.81	0.80	0.72
Global - Banks	0.94	1.03	0.81	1.11	1.23	1.27	1.09
Global - Cons. Discretionary	0.89	0.97	0.98	1.20	1.17	1.18	1.15
Global - Cons. Staples	0.74	0.90	0.79	0.91	0.84	0.86	0.82
Global - Div Financials	0.72	0.88	0.78	0.94	1.13	1.12	1.05
Global - Energy	0.57	0.54	0.42	0.53	0.71	0.72	0.72
Global - Health Care	0.72	0.68	0.74	0.82	0.83	0.93	0.88
Global - Industrials	1.03	1.05	0.89	1.09	1.12	1.12	1.09
Global - Insurance	1.03	0.90	0.81	0.79	0.99	1.24	1.16
Global - Materials	0.54	0.66	0.40	0.71	0.69	0.63	0.57
Global - Media & Ent.	0.78	0.95	0.75	1.22	0.93	0.91	0.89
Global - Real Estate	0.80	0.72	1.02	1.02	1.03	1.00	0.89
Global - Semiconductors	0.48	0.68	0.71	1.11	0.91	0.80	0.69
Global - Software	0.75	0.98	0.83	0.89	1.02	0.91	0.95
Global - Tech Hardware	0.42	0.76	0.85	0.91	0.76	0.78	0.74
Global - Telecom	0.80	1.02	0.90	0.76	0.86	0.85	0.85
Global - Utilities	1.06	0.92	1.03	0.97	1.01	1.04	1.06
Global - Value	0.82	0.85	0.67	0.77	0.89	1.00	0.81
Global - Growth	0.96	1.16	0.94	1.26	1.43	1.49	1.38
Global - Quality	1.16	0.86	0.79	1.04	1.16	1.28	1.34
Global - Risk	1.00	0.88	0.81	1.16	1.27	1.23	1.13
Global - Momentum	1.60	1.53	1.17	1.50	1.73	1.79	1.54
Global - Dividend	0.74	0.65	0.56	0.70	0.70	0.77	0.68
Global - Small Size	0.50	0.67	0.60	0.83	0.70	0.71	0.70

Source : BofA Global Quantitative Strategy, MSCI, IBES

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Quantessential Styles: Earnings Revision Ratio

Chart 23: Global Value Earnings Revision Ratio - Weekly

Earnings revision moderated in Value last week but remains above average



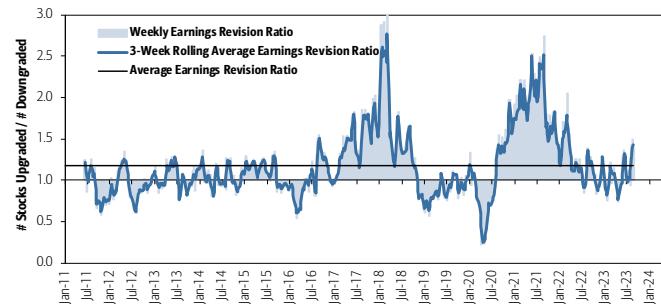
Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 24: Global Growth Earnings Revision Ratio - Weekly

Earnings revision moderated in Growth last week but remains above average

Chart 24: Global Growth Earnings Revision Ratio - Weekly

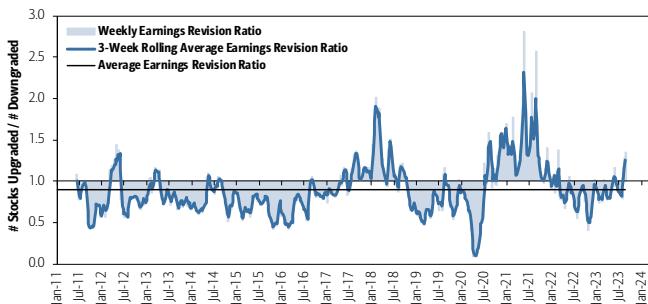
Earnings revision moderated in Growth last week but remains above average



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 25: Global Quality Earnings Revision Ratio - Weekly

Earnings trend improved in Quality in the last three weeks



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 26: Global Risk Earnings Revision Ratio - Weekly

Earnings revision moderated in Risk last week but remains above average

Chart 26: Global Risk Earnings Revision Ratio - Weekly

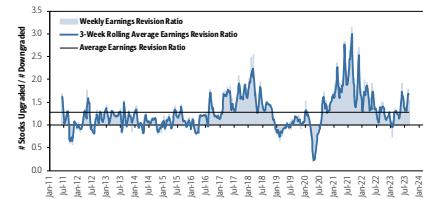
Earnings revision moderated in Risk last week but remains above average



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 27: Global Momentum Earnings Revision Ratio - Weekly

Earnings revision moderated in Momentum last week but remains above average



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 28: Global Dividend Earnings Revision Ratio - Weekly

ERR fell in Dividend last week and the trend moderated



Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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Chart 29: Global Small Size Earnings Revision Ratio - Weekly

Earnings revisions fell in Small Size last week

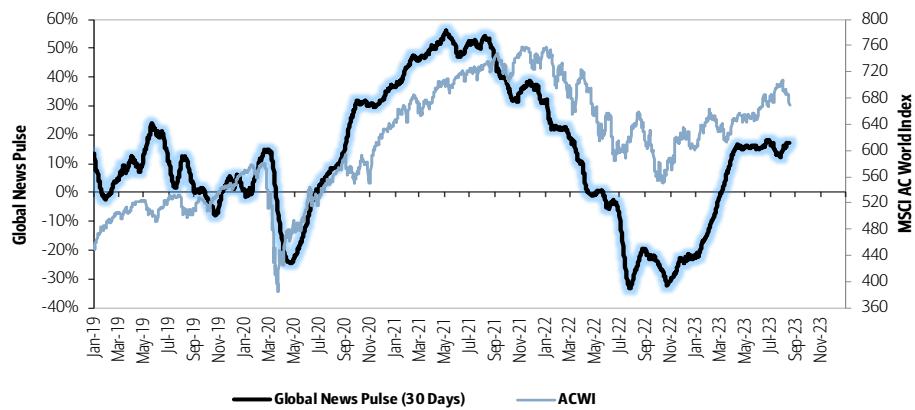


Source : BofA Global Quantitative Strategy, MSCI, IBES, S&P, Worldscope, Bloomberg
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NewsAlpha

Chart 30: Global News Pulse (last 30 days)

Globally news has improved at stock level in the last two weeks

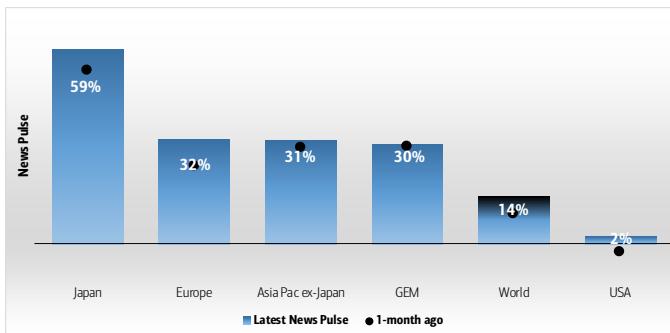


Source : BofA Global Quantitative Strategy, MSCI, Ravenpack

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Chart 31: Global Regions: Latest News Pulse

Japan has the strongest News Pulse, while The USA has the lowest Pulse

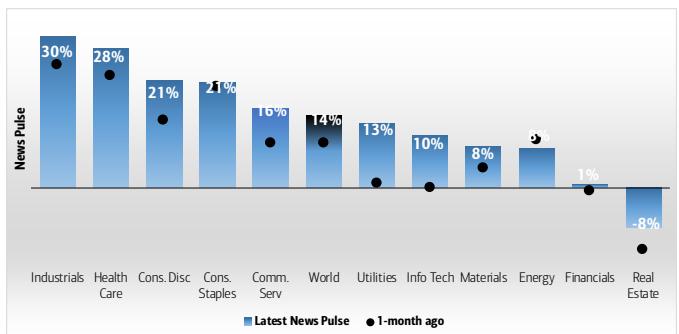


Source : BofA Global Quantitative Strategy, MSCI, Ravenpack

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Chart 32: Global Sectors: Latest News Pulse

Industrials has the strongest News Pulse, while Real Estate has the lowest Pulse

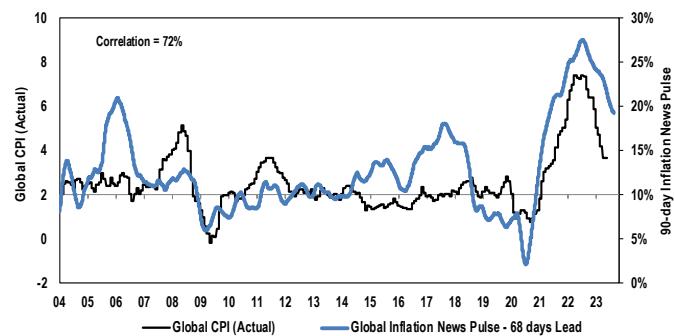


Source : BofA Global Quantitative Strategy, MSCI, Ravenpack

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Chart 33: Inflation News Pulse vs. Global CPI

Inflation News Pulse leads Global CPI by 68 days with correlation of 72%

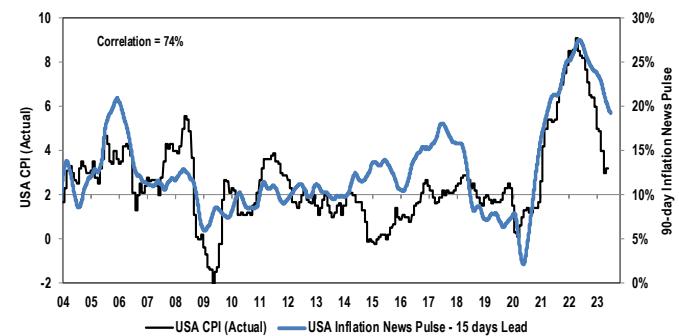


Source : BofA Global Quantitative Strategy, MSCI, Ravenpack

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Chart 34: Inflation News Pulse vs. USA CPI

Inflation News Pulse leads USA CPI by 15 days with correlation of 74%



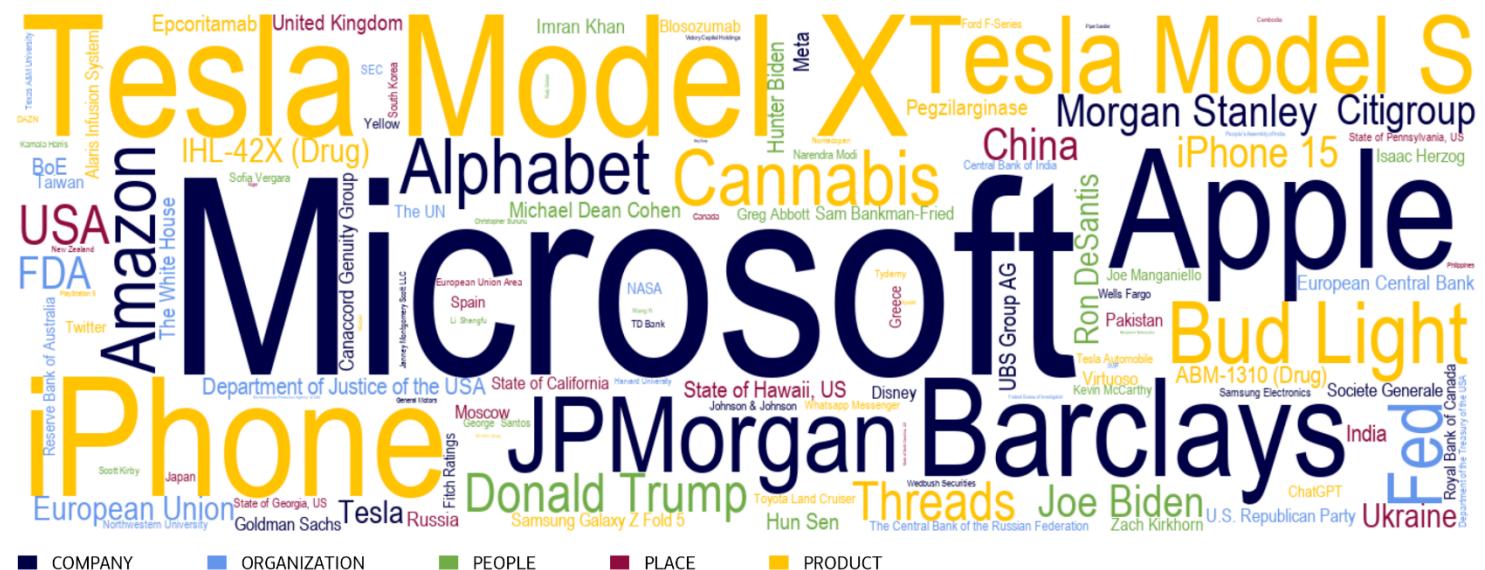
Source : BofA Global Quantitative Strategy, MSCI, Ravenpack

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Chart 35: Top News Mentions (last 30 days)

Top 100 entities mentioned in news (companies, organization, people, place, and products)

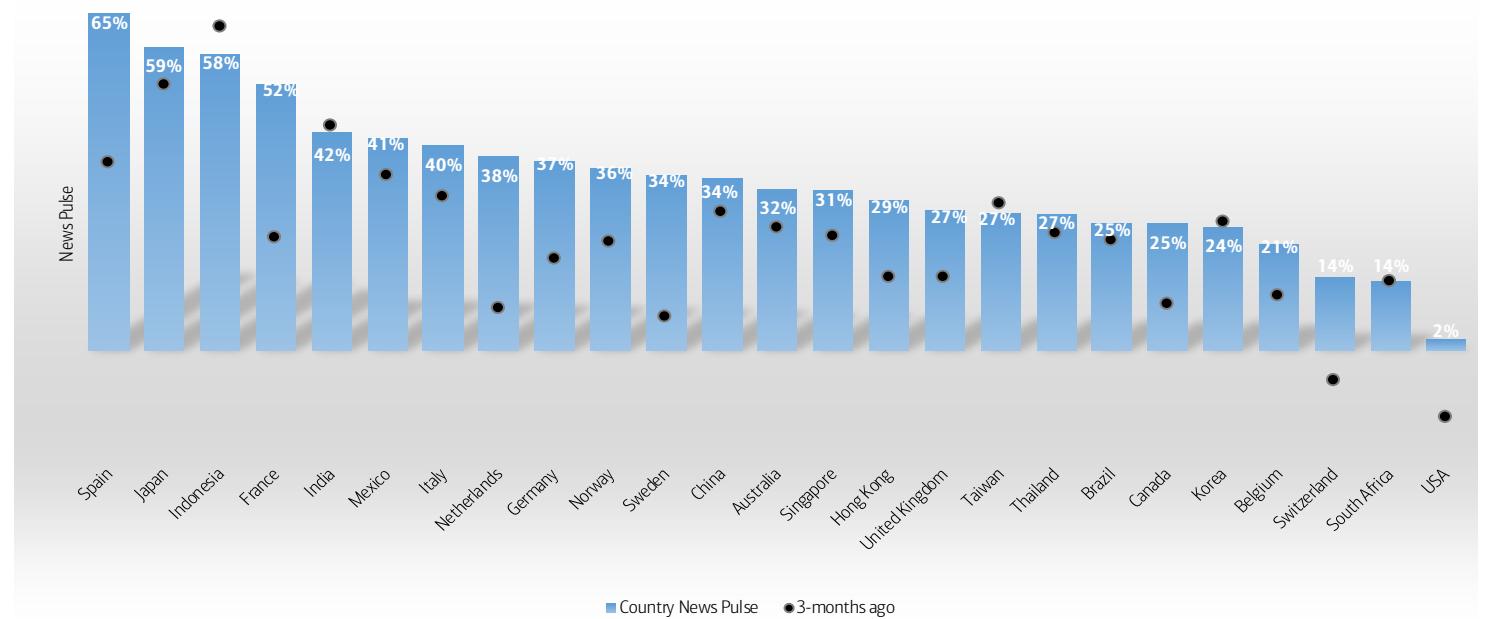


Source : BofA Global Quantitative Strategy, RavenPack

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Chart 36: Current News Pulse by Global Countries

News aggregate is highest in Spain and Japan



Source : BofA Global Quantitative Strategy, MSCI, ExShare, RavenPack

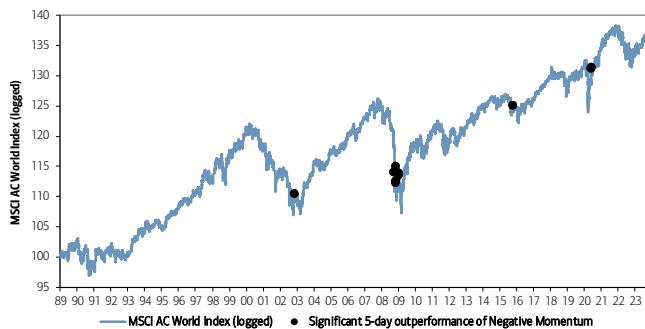
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Tactical Indicators

Chart 37: MSCI ACWI and Significant (9% in a five-day period)

Negative QE Momentum Relative Performance

Significant outperformance of Negative Price Momentum proved to be early signal for markets rally

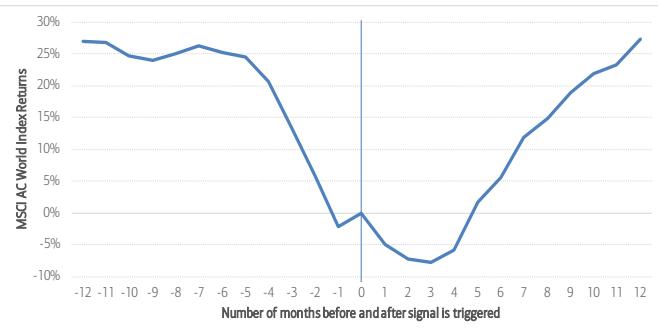


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 39: MSCI ACWI Performance in 12 months before and after the significant rotation in Global Negative Momentum

In the past, when signal triggered global equities dipped for three months before rallying 26% in the next 12 months

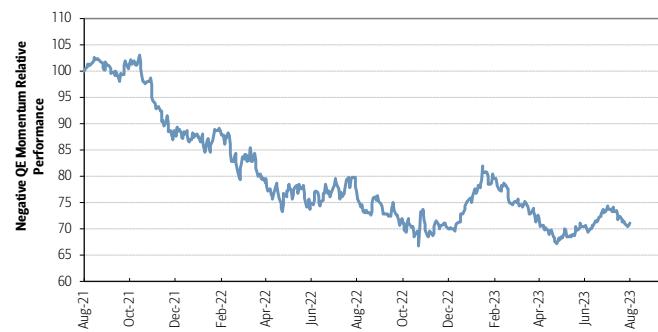


Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 38: Negative QE Momentum Relative Performance: Last 2 years

Last week, Negative QE Momentum underperformed by 0.0%



Source : BofA Global Quantitative Strategy, MSCI, IBES

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Table 2: Subsequent ACWI performance after the significant rotation in Global Negative Momentum

In the past, after a significant rotation in Negative Momentum, global equities averaged 26% in the next 12 months with 100% hit rate

Dates	Subs 1-month ACWI returns	Subs 3-months ACWI returns	Subs 6-months ACWI returns	Subs 1-year ACWI returns
22-Nov-02	-4%	-9%	2%	16%
31-Oct-08	-12%	-13%	-1%	20%
3-Nov-08	-11%	-12%	0%	19%
4-Nov-08	-16%	-15%	-5%	13%
27-Nov-08	2%	-14%	16%	35%
28-Nov-08	3%	-19%	16%	33%
5-Jan-09	-10%	-10%	0%	30%
6-Jan-09	-10%	-11%	0%	30%
7-Jan-09	-7%	-7%	1%	31%
8-Jan-09	-6%	-6%	2%	32%
8-Oct-15	1%	-7%	-2%	4%
5-Jun-20	0%	7%	18%	33%
8-Jun-20	-1%	4%	16%	32%
9-Jun-20	-1%	5%	17%	32%
Hit Rate	21%	21%	57%	100%
Average	-5.1%	-7.8%	5.6%	25.7%

Source : BofA Global Quantitative Strategy, MSCI, IBES

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Chart 40: Copper (Spot), weekly last 2 years

Copper price fell (-0.5%)

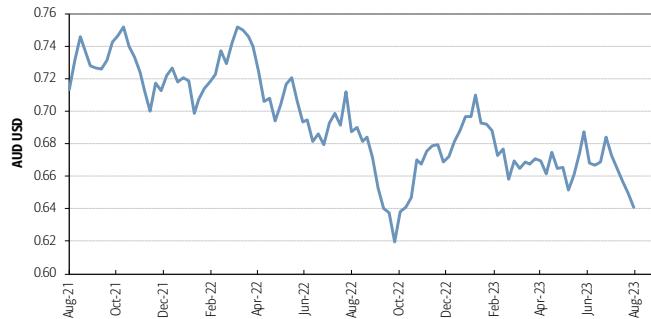


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 41: AUD-USD cross rate, weekly last 2 years

AUD depreciated (-1.4%)

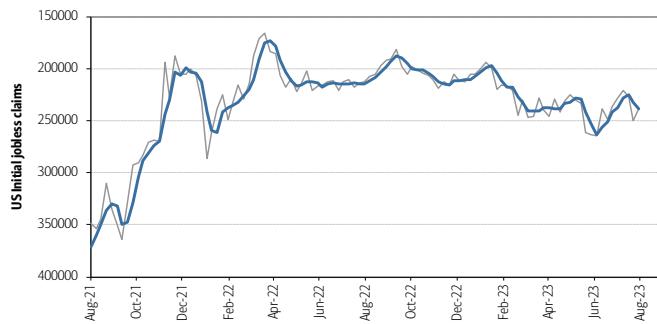


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 42: US Initial jobless claims, weekly last 2 years

US initial jobless claims fell by -11,000 to 239,000

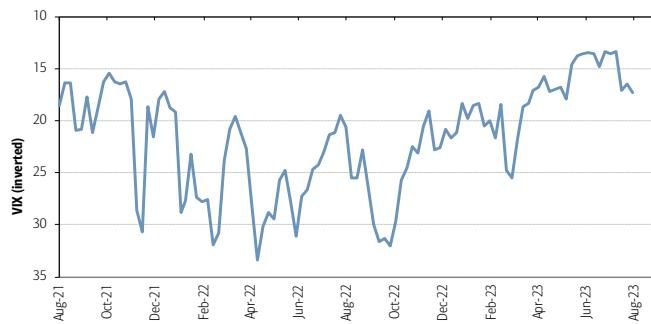


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 43: VIX (inverted), weekly last 2 years

VIX moved from 16.5 to 17.3

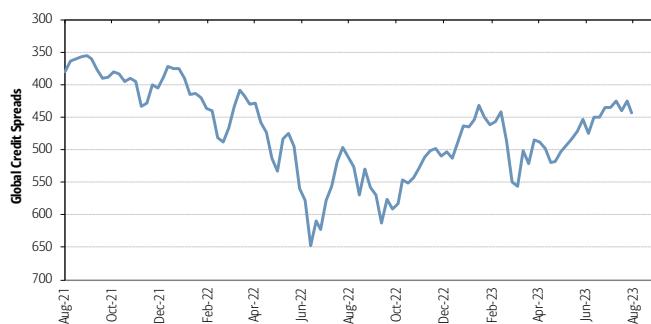


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 44: Global Credit Spreads, weekly 2 years

Global credit spreads widened (+18 bps)

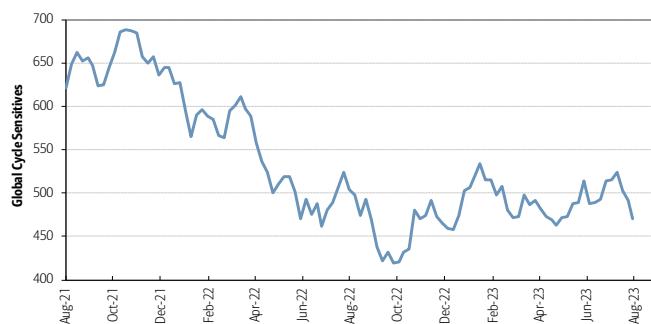


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 45: Global Cycle Sensitives, weekly returns 2 year

Global Cycle Sensitives underperformed (-4.3%)



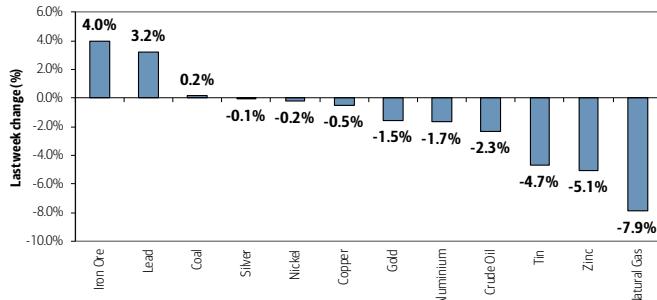
Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Commodities

Chart 46: Hard Commodities - Last week change

Iron Ore increased the most last week

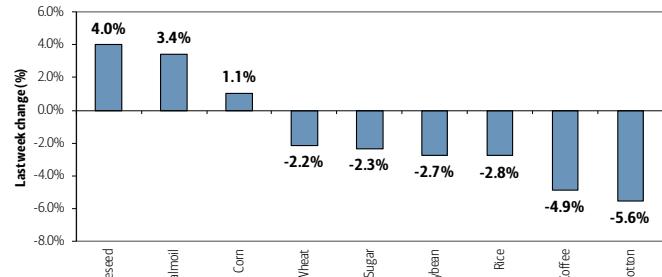


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 47: Soft Commodities - Last week change

Rapeseed increased the most last week

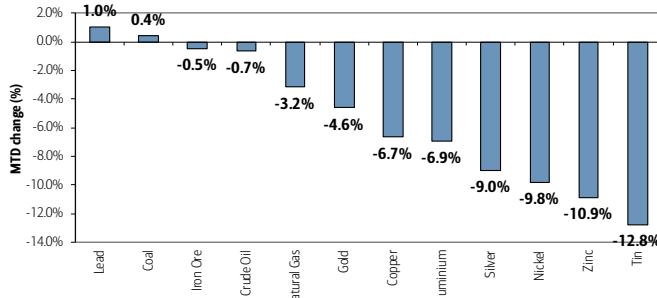


Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Chart 48: Hard Commodities - MTD change

Lead increased the most MTD

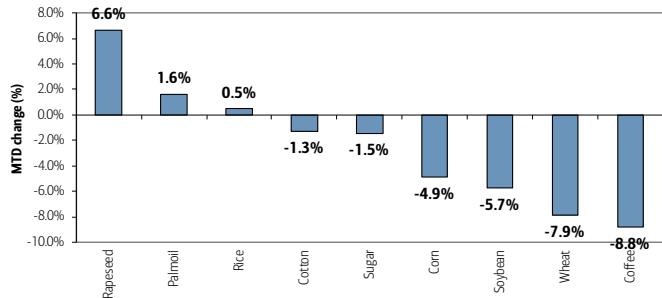


Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Chart 49: Soft Commodities - MTD change

Rapeseed increased the most MTD

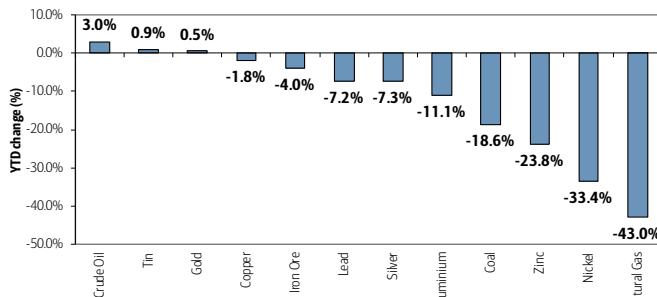


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 50: Hard Commodities - YTD change

Crude Oil increased the most YTD

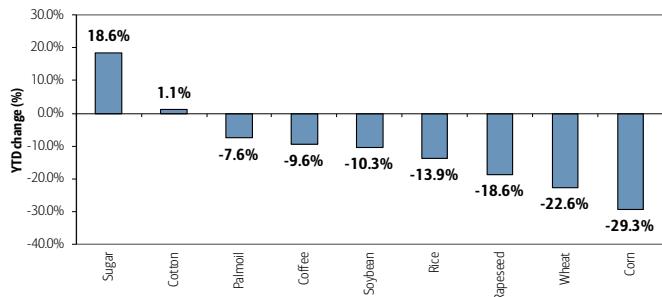


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 51: Soft Commodities - YTD change

Sugar increased the most YTD



Source : BofA Global Quantitative Strategy, Bloomberg

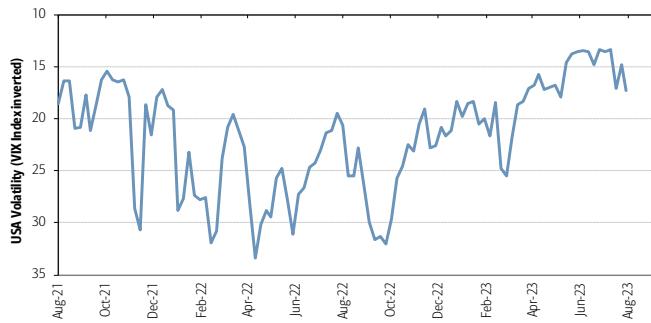
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Volatility

Chart 52: USA Volatility (VIX Index) - Inverted

VIX Index moved from 14.8 to 17.3



Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 53: Europe Volatility (V2X Index) - Inverted

V2X Index moved from 18.4 to 20.2

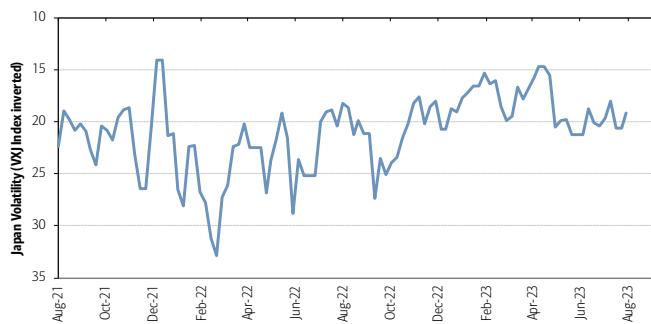


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 54: Japan Volatility (VXJ Index) - Inverted

VXJ Index moved from 20.7 to 19.2



Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 55: Emerging Markets Volatility (VXEEM Index) - Inverted

VXEEM Index moved from 20.2 to 21.5

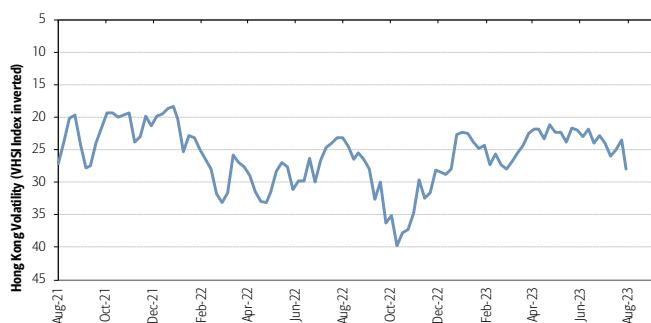


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 56: Hong Kong Volatility (VHSI Index) - Inverted

VHSI Index moved from 23.5 to 28.0

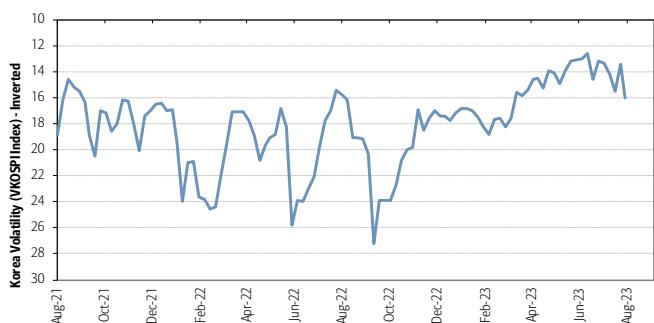


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 57: Korea Volatility (VKOSPI Index) - Inverted

VKOSPI Index moved from 13.4 to 16.0



Source : BofA Global Quantitative Strategy, Bloomberg

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Rates

Chart 58: USA 10-year Bond Yield

US 10-year yield up by 10 bps to 4.25%

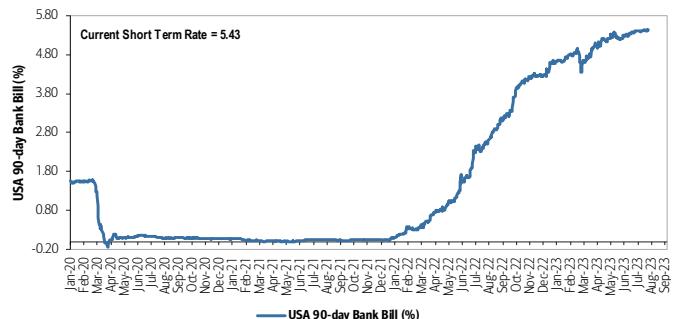


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 59: USA 90-day Bank Bill

US 90-day yield up by 1 bps to 5.43%

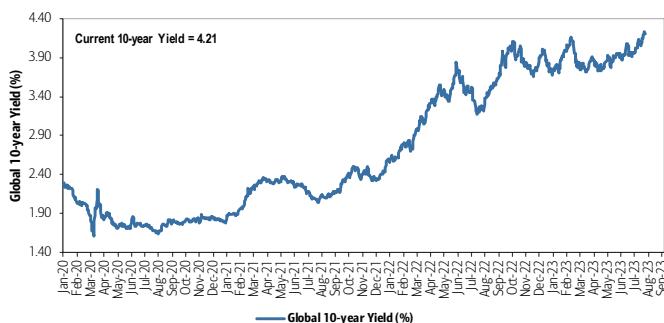


Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Chart 60: Global 10-year Bond Yield

Current 10-yr Global GDP weighted bond yield is 4.21%

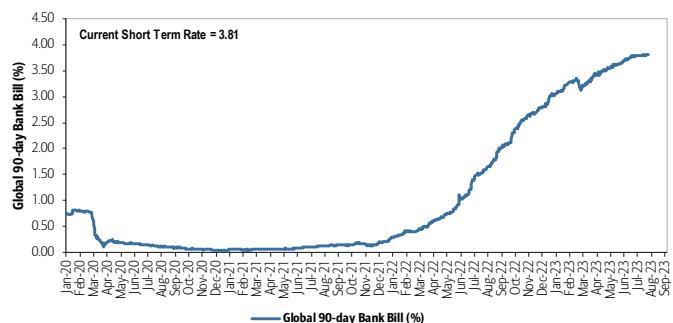


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 61: Global 90-day Bank Bill

Current 90d Global GDP weighted bond yield is 3.81%

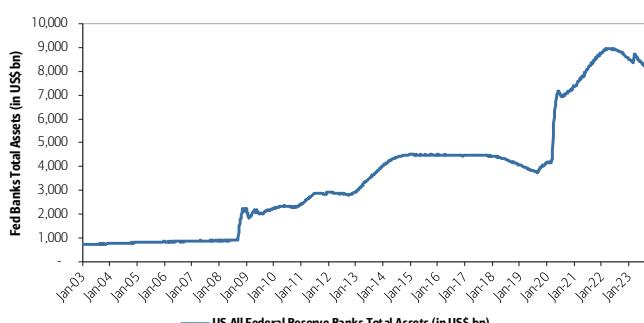


Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Chart 62: US Federal Reserve Total Assets (in US\$ bn)

Last week, Fed Reserve's balance sheet reduced by US\$-63bn

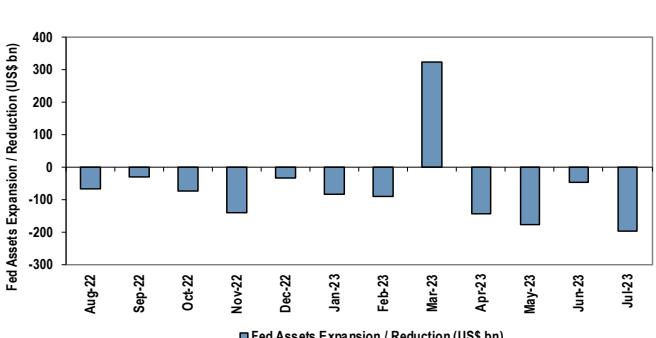


Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 63: US Federal Reserve Assets Expansion / Reduction (US\$ bn)

Last month, Fed reduced the balance sheet by US\$ -45bn



Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 64: China 10-year Bond Yield

Current China 10-year Yield = 2.56%



Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 65: China 90-day Bank Bill

Current China 90-day Rate = 1.83%



Source : BofA Global Quantitative Strategy, Bloomberg

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Chart 66: Asia Pac ex-Japan 10-year Bond Yield

Current 10-year Asia Pac GDP weighted bond yield is 3.54%

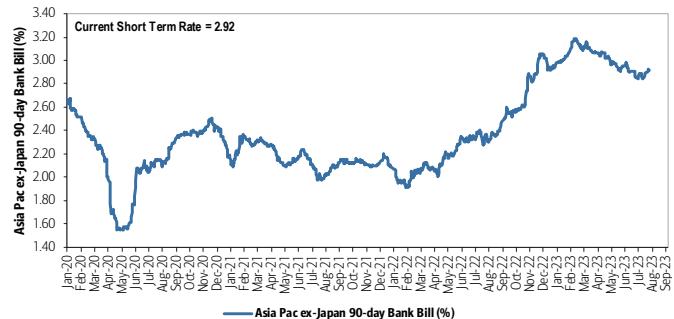


Source : BofA Global Quantitative Strategy, Bloomberg

BofA GLOBAL RESEARCH

Chart 67: Asia Pac ex-Japan 90-day Bank Bill

Current 90d Asia Pac GDP weighted bond yield is 2.92%



Source : BofA Global Quantitative Strategy, Bloomberg

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Valuation

Chart 68: Global Price-to-Book trailing

The latest Global Price-to-Book ratio is 2.66



Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

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Chart 69: Global Prospective PE

The latest Global Prospective PE is 16.6

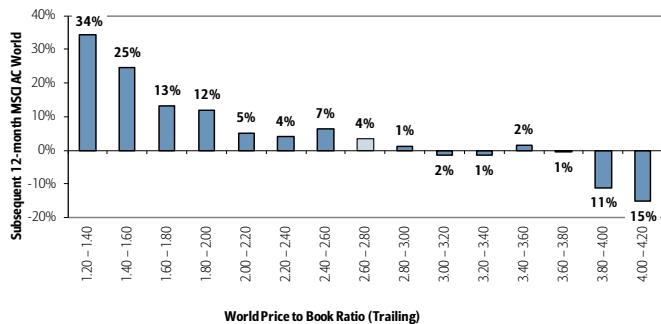


Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

BofA GLOBAL RESEARCH

Chart 70: Global Price-to-Book trailing and ACWI subsequent 12m returns

For current PB level, MSCI ACWI returns 4% in the subsequent 12m on average

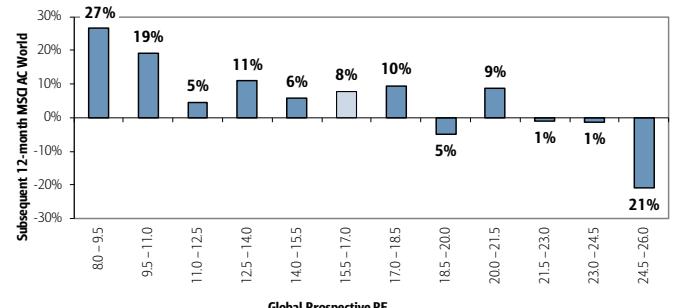


Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

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Chart 71: Global Prospective PE and ACWI subsequent 12m returns

For current PE level, MSCI ACWI returns 8% in the subsequent 12m on average

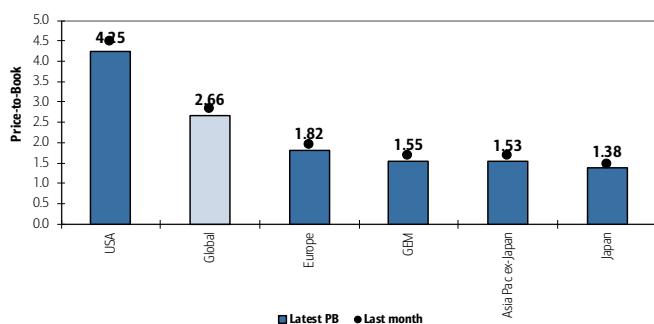


Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

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Chart 72: Price-to-Book: Global Regions

In terms of PB, the USA is the most expensive region

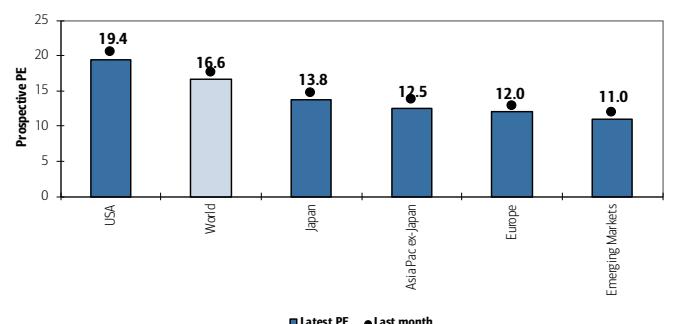


Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

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Chart 73: Global Prospective PE: Global Regions

In terms of PE, GEM is the most inexpensive region



Source : BofA Global Quantitative Strategy, MSCI, IBES, Worldscope

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Triple Momentum

In this analysis, we highlight the power of combining three types of momentum, including Earnings Momentum, Price Momentum, and News Momentum.

Earnings Momentum quantifies the sentiment of sell-side analysts by monitoring changing consensus earnings estimates, and is defined as the three-month change in the consensus EPS estimate for each stock.

Price Momentum, which is what most investors think of when they think of “momentum”, captures the sentiment of market participants who buy and sell equities. Our Price Momentum measure is defined as the slope of the log-linear regression using daily prices over the preceding 12-months.

News Momentum captures the sentiment from all other market players including journalists, experts, regulators, corporates, and more. We calculate a News Pulse for each stock which quantifies the momentum in news using news articles from the preceding 90 days. Triple Momentum is an amalgamation of Earnings Momentum, Price Momentum and News Momentum.

We screen for Triple Momentum stocks with above-average Earnings Momentum, above-average Price Momentum, top quintile by News Momentum, and above-average one-month change in News Momentum.

For detailed methodology refer [“Signals from Triple Momentum”](#).

Table 3: Global Region-Sectors - Triple Momentum

Triple Momentum highest in Japan Diversified Financials and lowest for USA Banks

Average Triple Momentum Rank	Banks	Cons. Discretionary	Cons. Staples	Div Financials	Energy	Health Care	Industrials	Insurance	Materials	Media & Ent.	Real Estate	Semiconductors	Software	Tech Hardware	Telecom	Utilities	Region
Asia Pac ex-Japan	50	54	44	53	40	53	54	61	33	49	33	42	35	58	45	52	48
Emerging ex-Asia	61	32	59	73	36	62	64	56	29	26	52	55	64	63	51	52	
Europe	73	70	55	60	33	56	63	49	32	51	35	73	69	32	45	51	56
Japan	67	67	48	93	48	47	58	61	47	47	42	63	51	55	40	79	56
United States	23	57	47	48	28	44	57	61	39	52	38	61	64	44	27	28	48
Global	55	59	49	54	34	49	58	57	35	48	37	56	59	52	47	45	

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Table 4: Asia Pac ex-Japan Country-Sectors - Triple Momentum

Triple Momentum highest in Korea Diversified Financials and lowest in Thailand Utilities

Average Triple Momentum Rank	Banks	Cons. Discretionary	Cons. Staples	Div Financials	Energy	Health Care	Industrials	Insurance	Materials	Media & Ent.	Real Estate	Semiconductors	Software	Tech Hardware	Telecom	Utilities	Country
Australia	50	45	45	29	47	40	61	69	36	68	23	89	84	94	46		
China	19	60	40	49	45	50	49	54	41	64	22	28	23	47	53	47	
Hong Kong	55	64	33	30			33	49			39	16	6		39	45	39
India	68	66	61	68	68	60	65	75	54	68	52		54			54	62
Indonesia	79	60	63		48		61		25					46		56	
Malaysia	56	52	39		54	64	64		24			74			34	85	52
New Zealand						15	60					73		63	72	57	
Philippines	87	64	62				70			80				57	78	74	
Singapore	88	71	9	88			77			4	41			18	54		53
South Korea	43	56	37	87	32	62	62	63	14	30			40	54	50	72	50
Taiwan	61	29	87		27		38	51	28			33		61	59		48
Thailand	67	56	30	40	32	76	74		16		45		76	41	5	42	
Asia Pac ex-Japan	55	58	47	55	47	53	55	61	36	48	36	34	51	56	50	54	

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 74: Regional-Sectors with the highest average (green) and lowest average (red) Triple Momentum Rank

Triple Momentum highest in Japan Diversified Financials and lowest for USA Banks



Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 75: Asia Pac ex-Japan Country-Sectors with the highest average (green) and lowest average (red) Triple Momentum Rank

Triple Momentum highest in Korea Diversified Financials and lowest in Thailand Utilities



Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

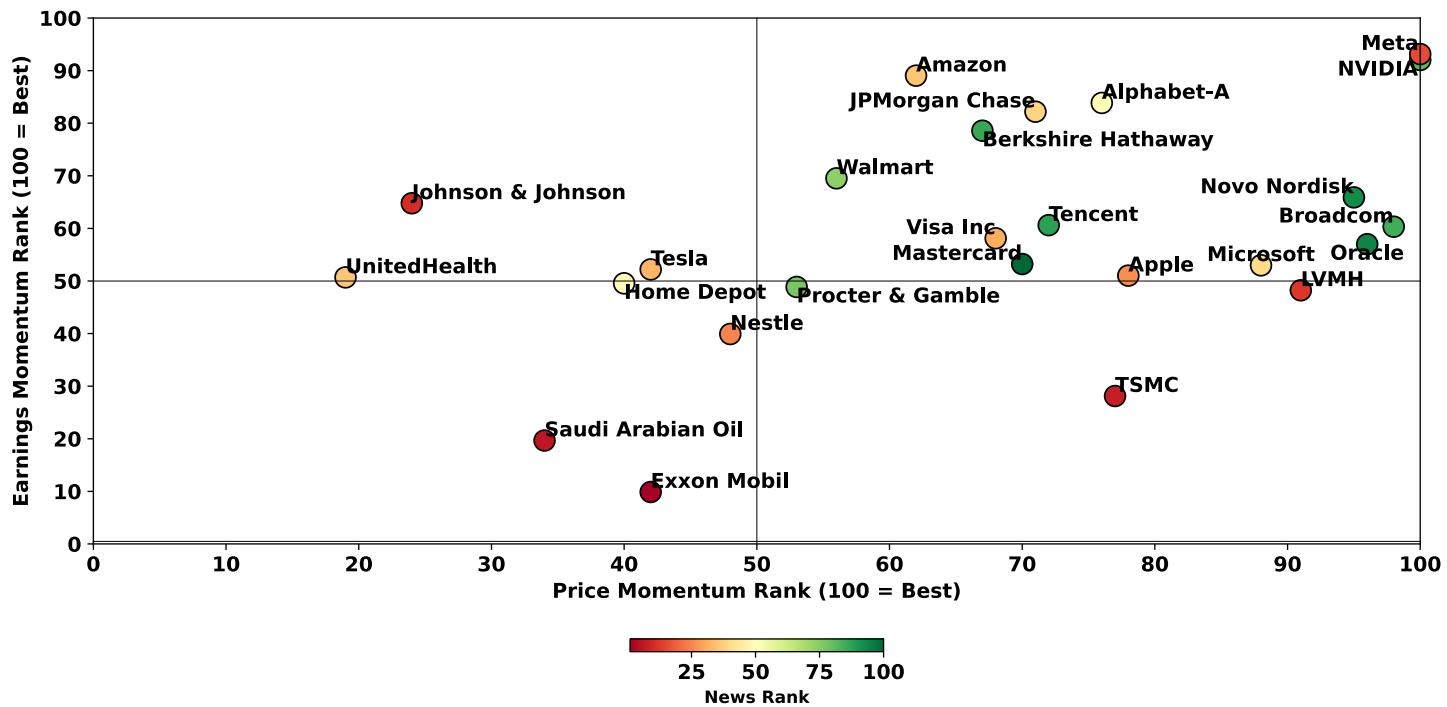
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Global Regions: Triple Momentum Charts

Chart 76: Global: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for NVIDIA, Novo Nordisk and Oracle

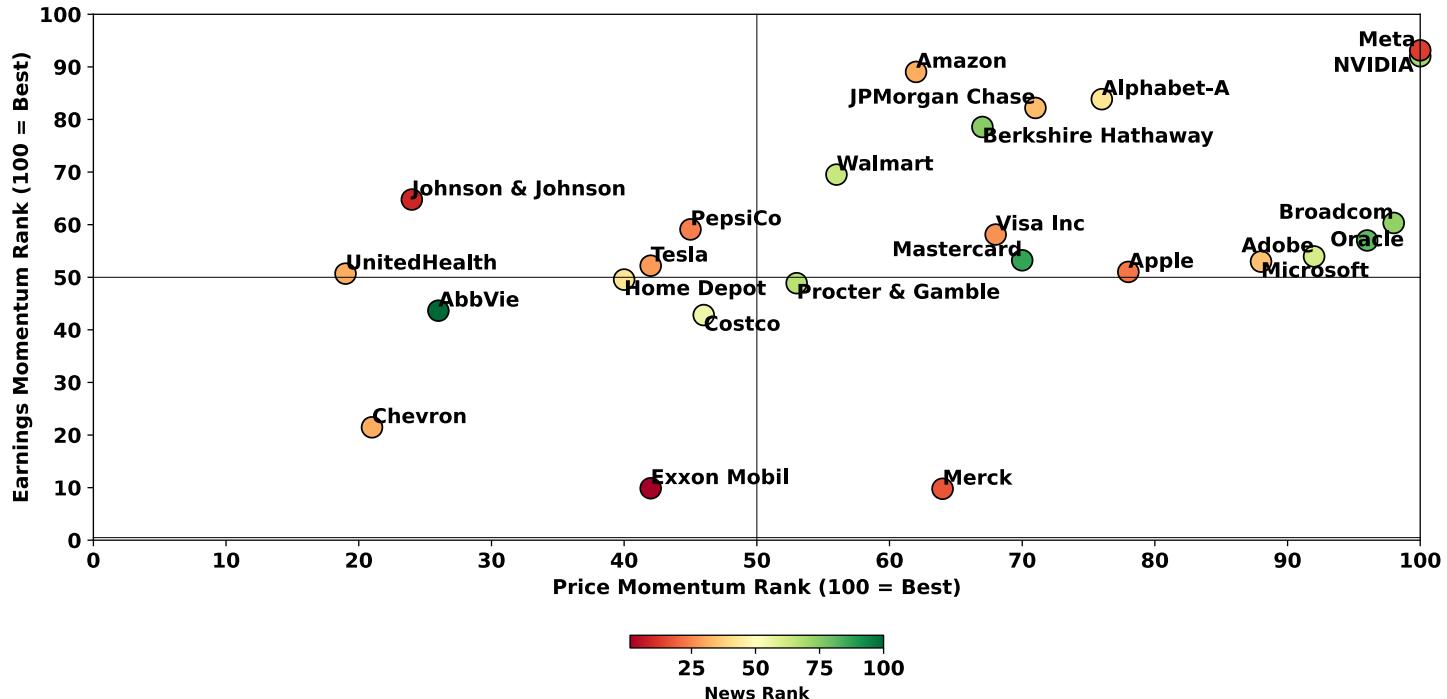


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 77: USA: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for NVIDIA, Oracle and Broadcom

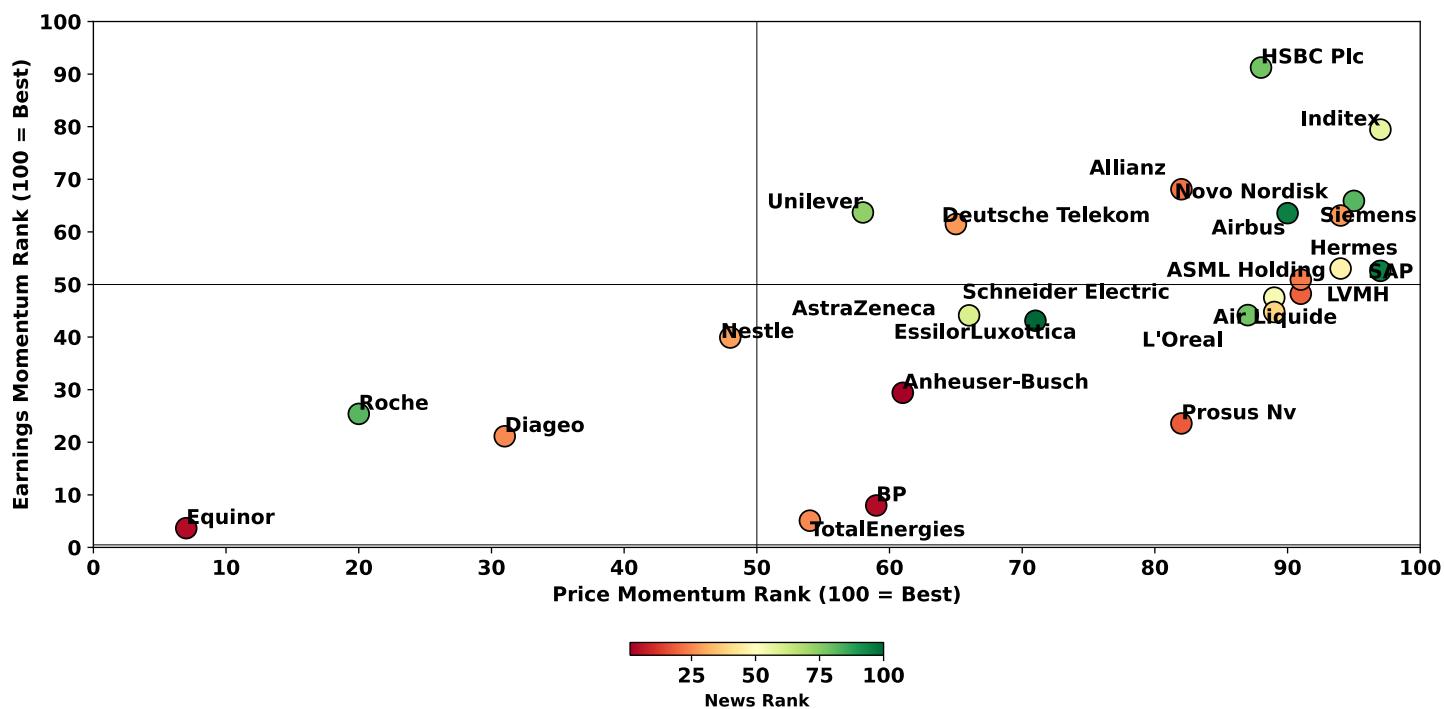


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 78: Europe: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Airbus, HSBC Plc and Novo Nordisk

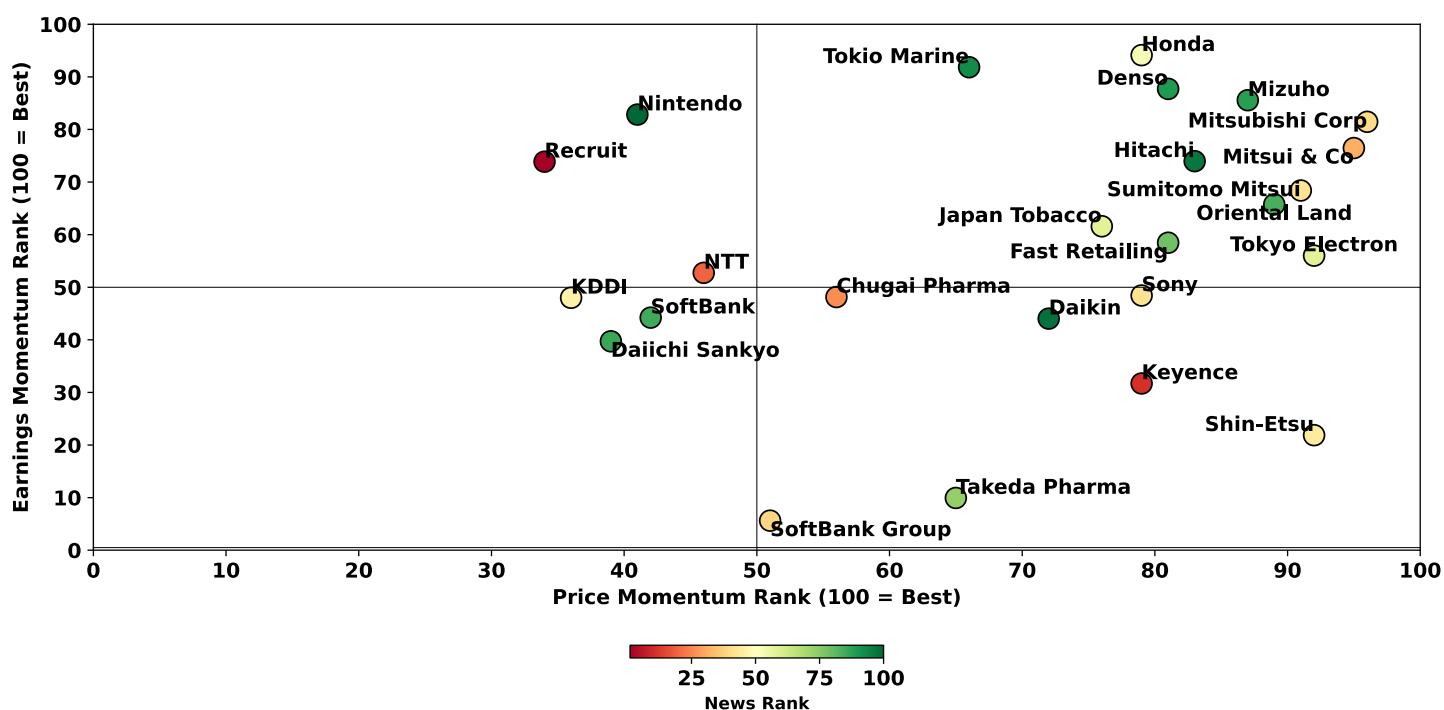


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 79: Japan: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Mizuho, Hitachi and Denso



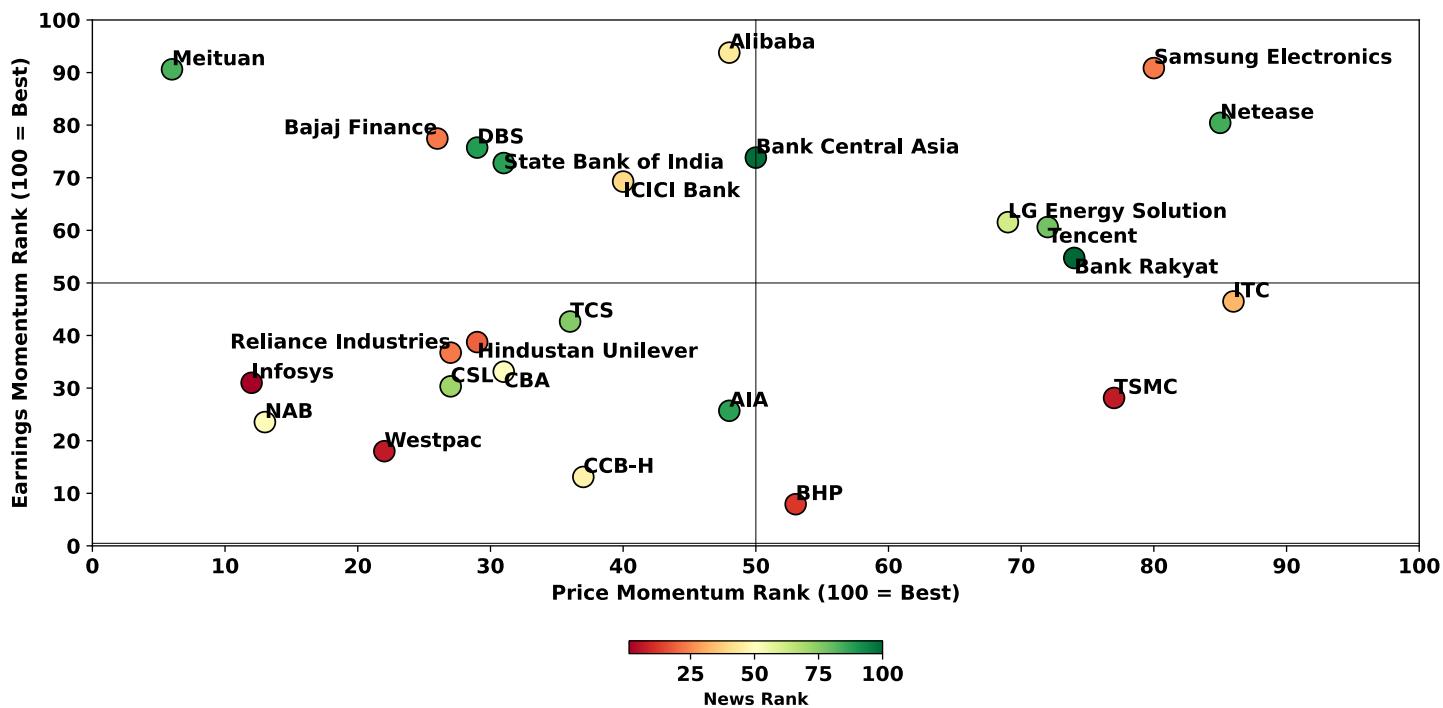
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 80: Asia Pac ex-Japan: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Netease, Bank Rakyat and Tencent

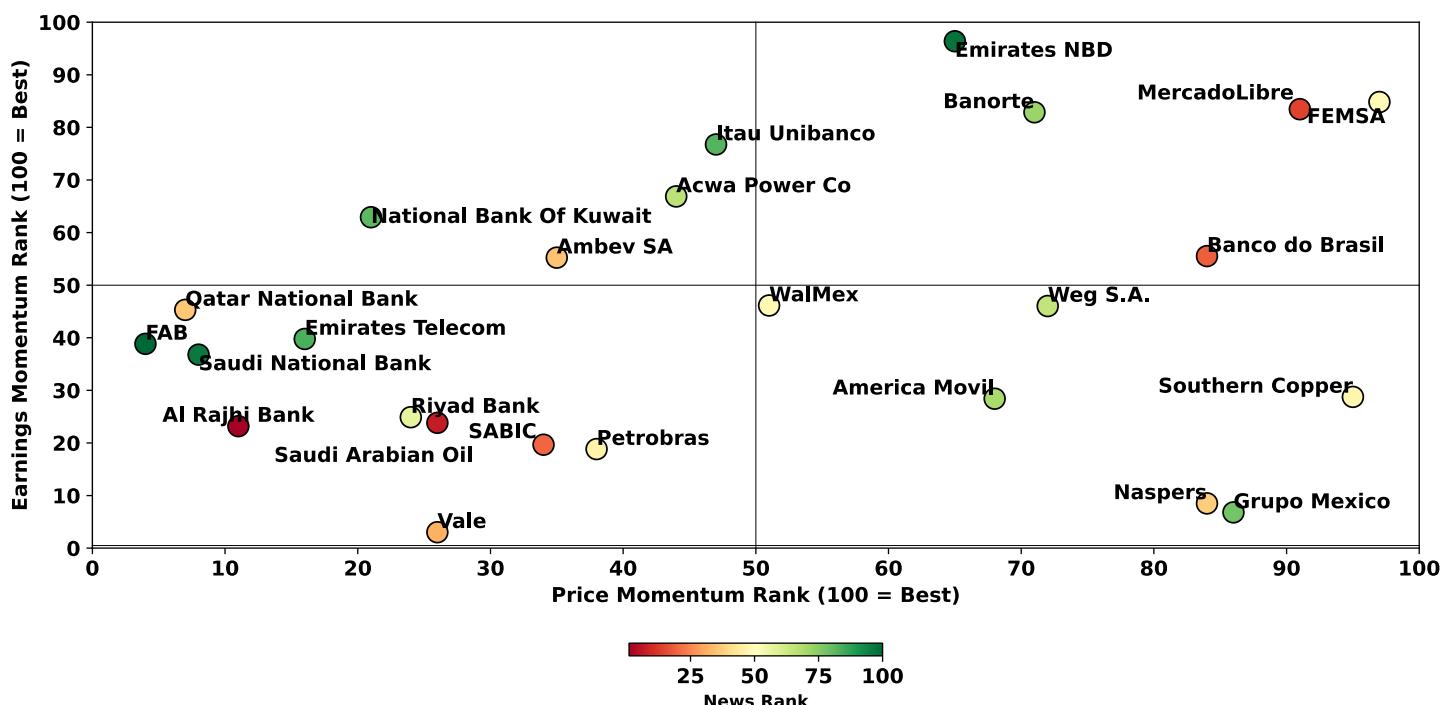


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 81: Emerging ex-Asia: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Emirates NBD, Banorte and FEMSA



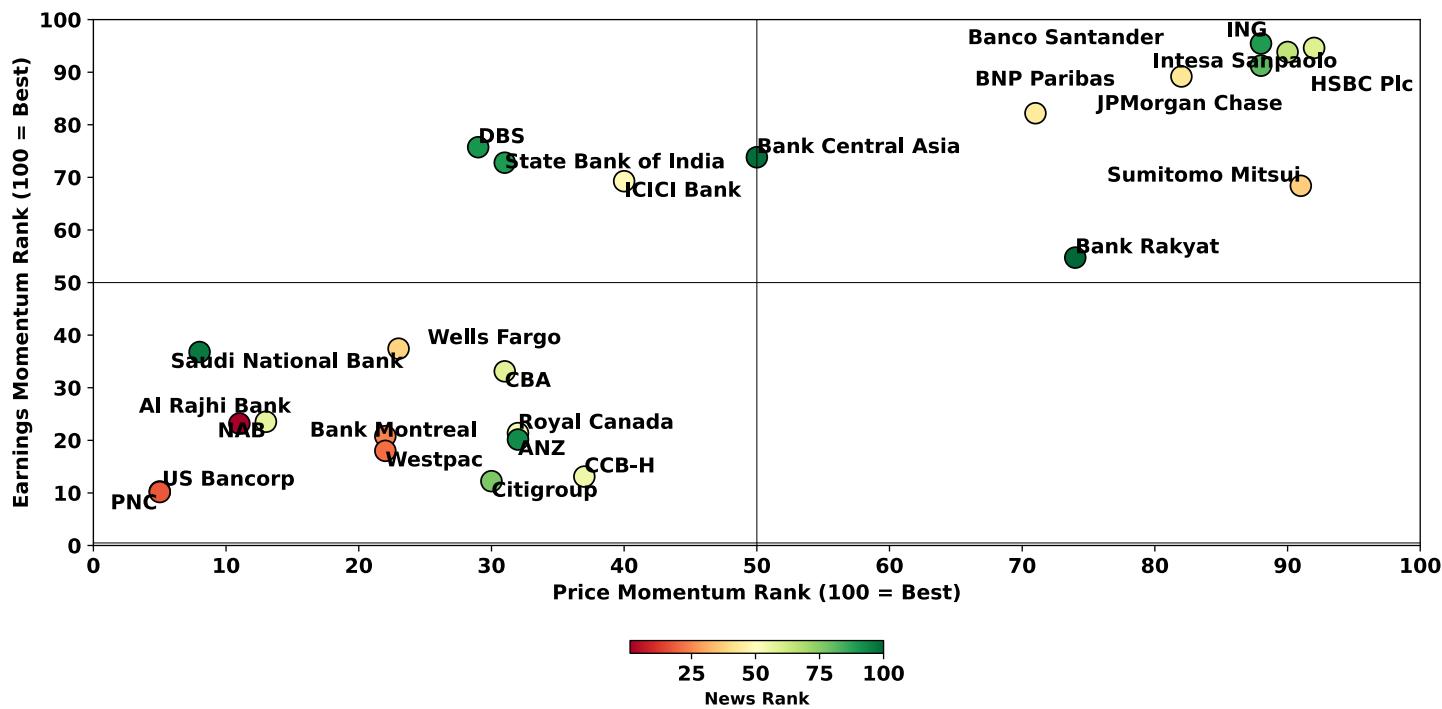
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Global Sectors: Triple Momentum Charts

Chart 82: Banks: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for ING, HSBC Plc and Bank Rakyat

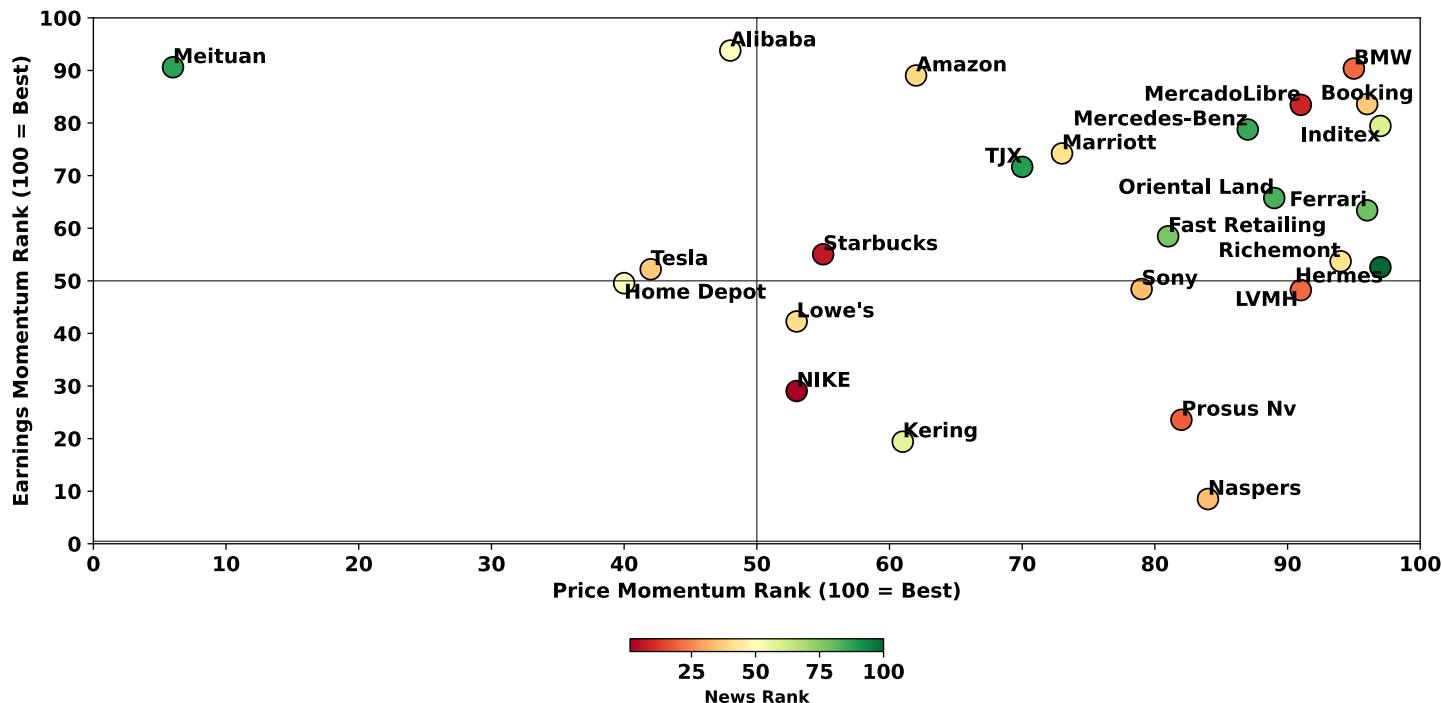


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 83: Consumer Discretionary: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Mercedes-Benz, Hermes and Oriental Land



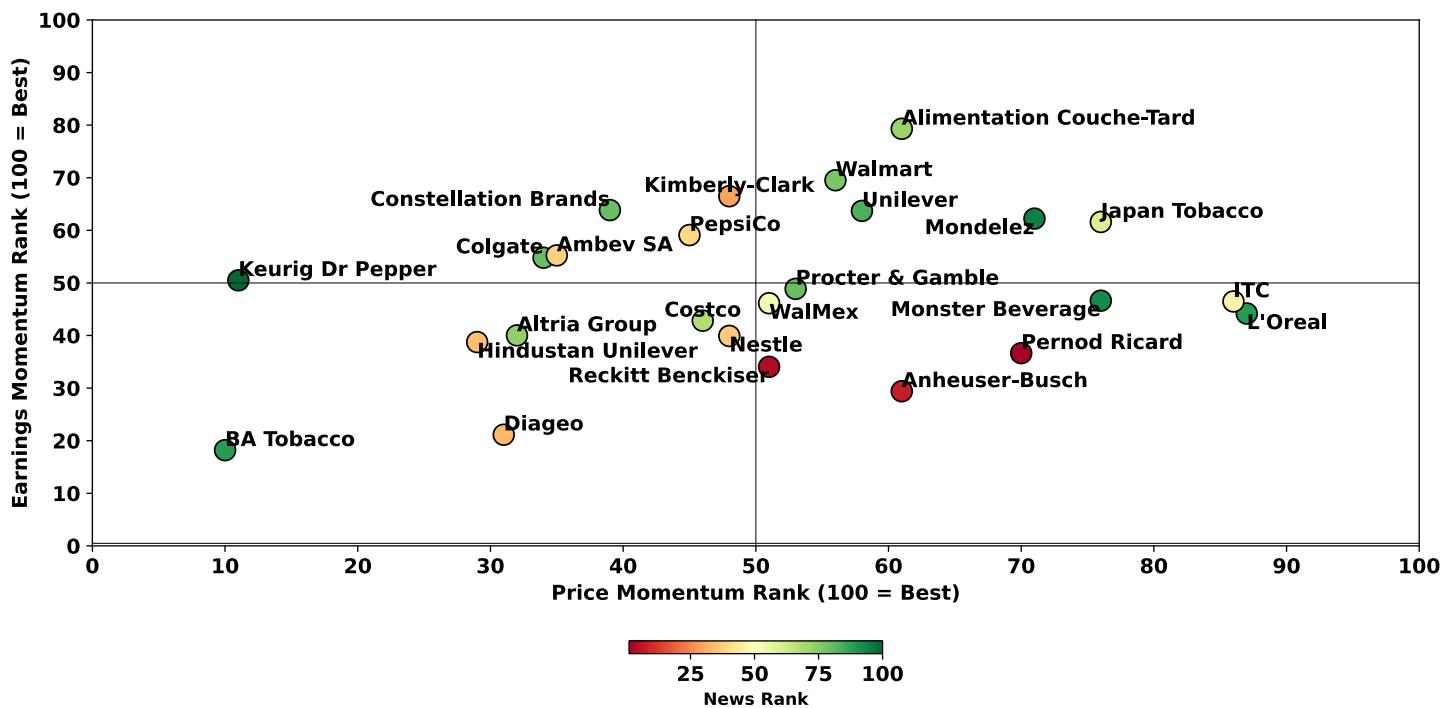
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 84: Consumer Staples: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Mondelez, Unilever and Walmart

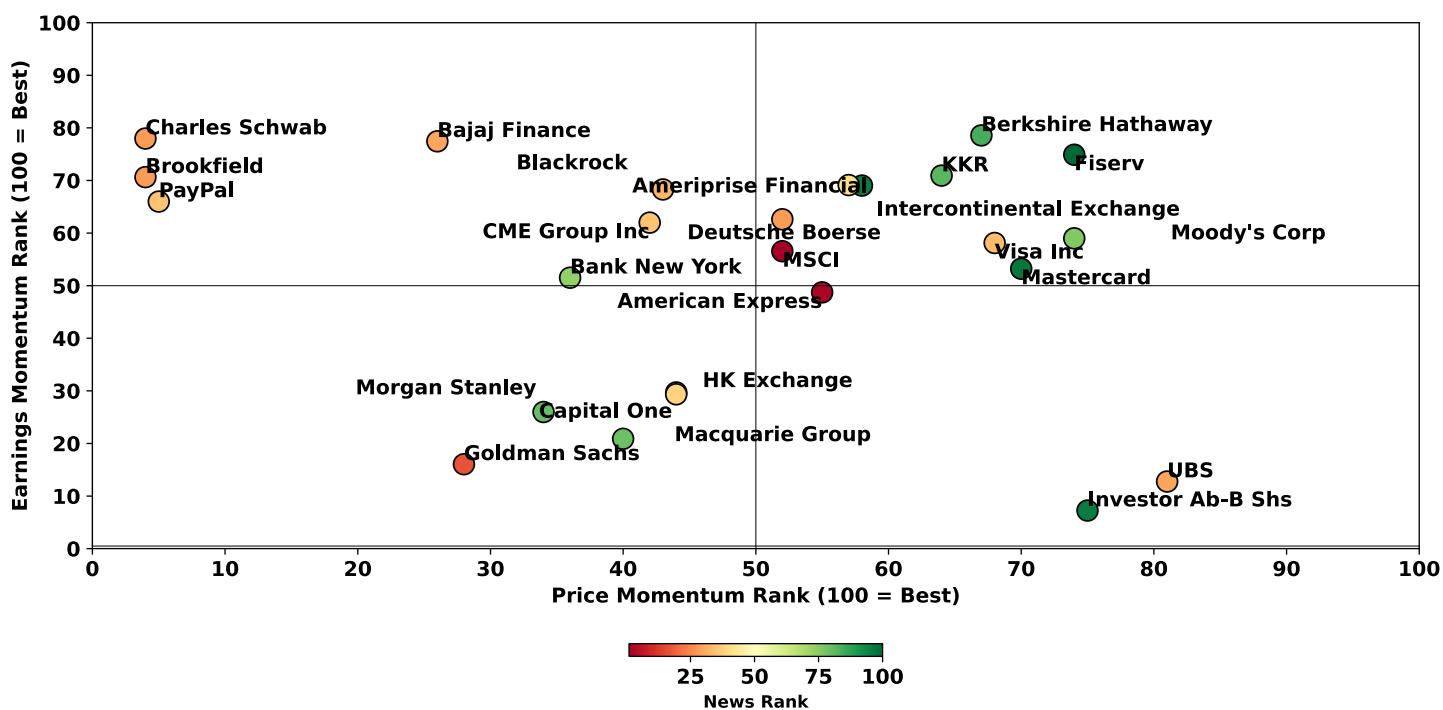


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 85: Diversified Financials: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Fiserv, Berkshire Hathaway and Intercontinental Exchange

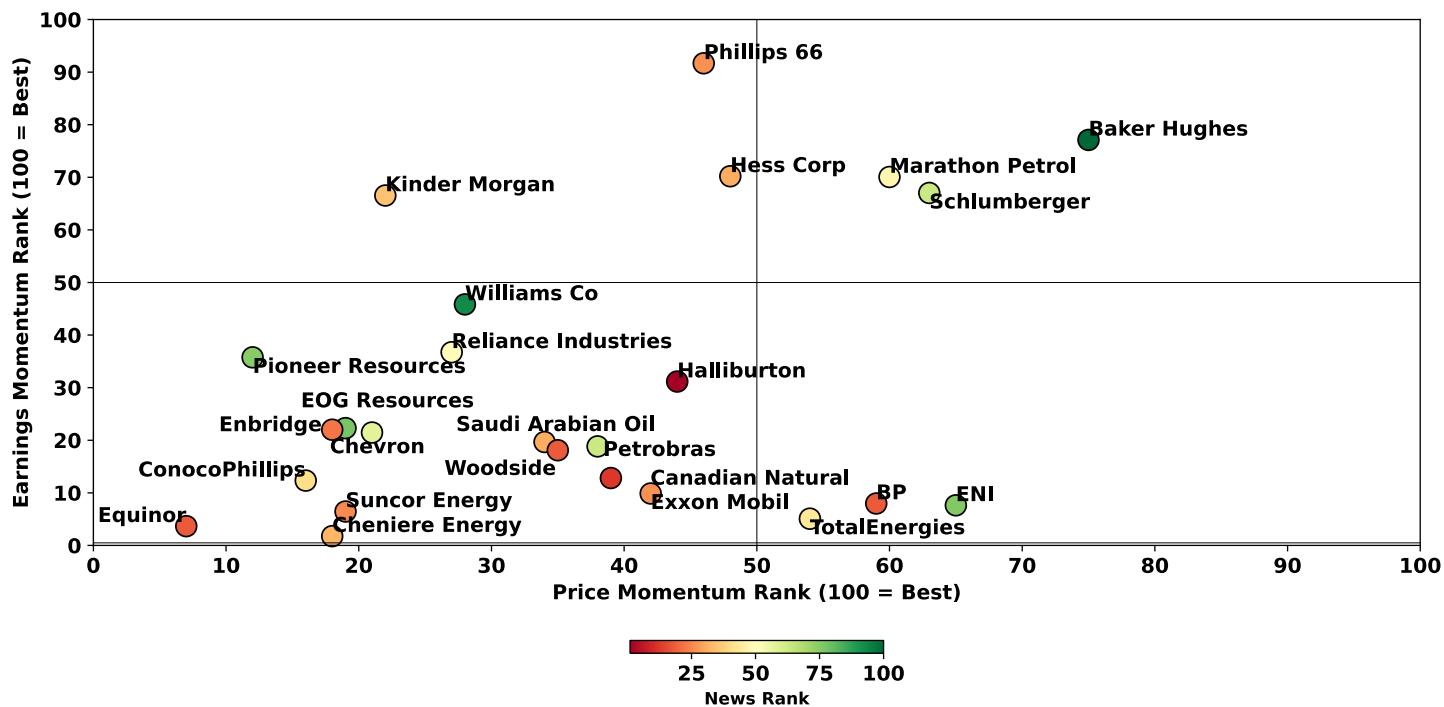


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 86: Energy: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Baker Hughes

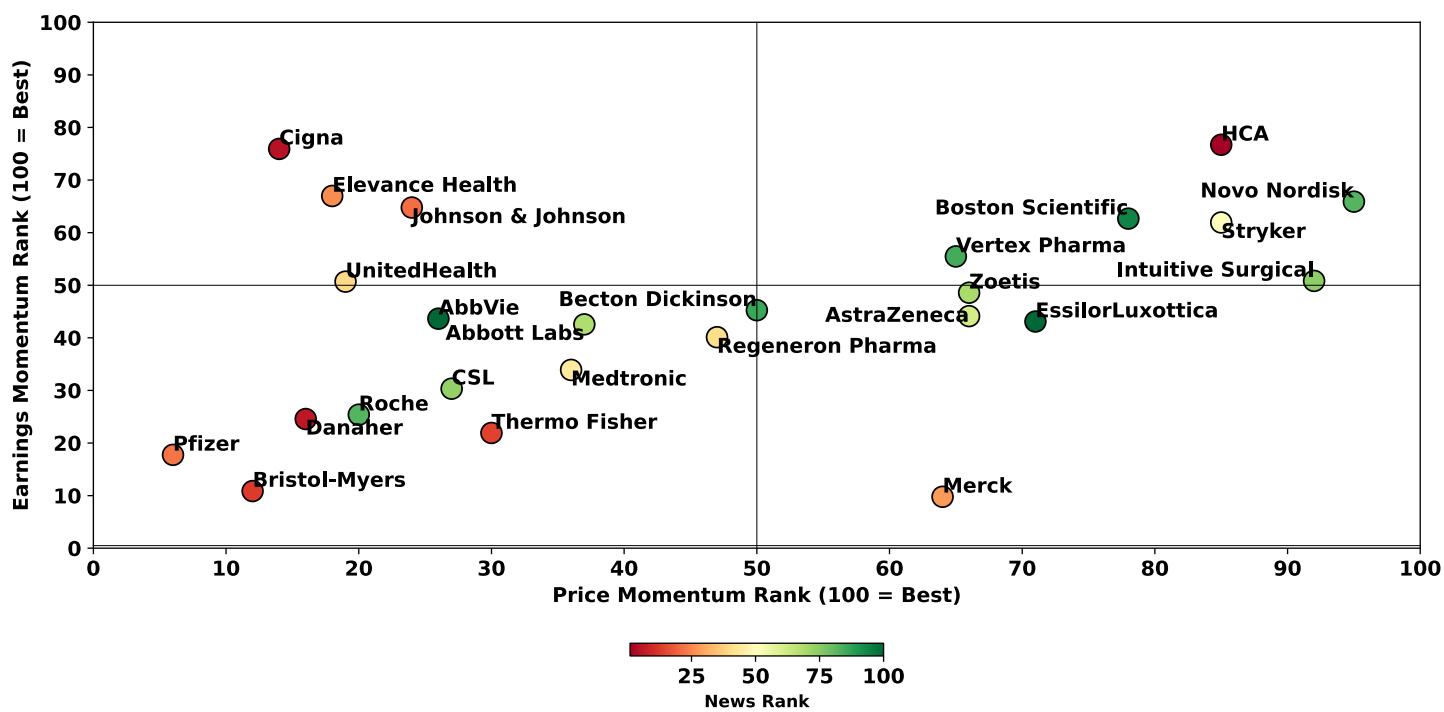


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 87: Health Care: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Novo Nordisk, Boston Scientific and Vertex Pharma



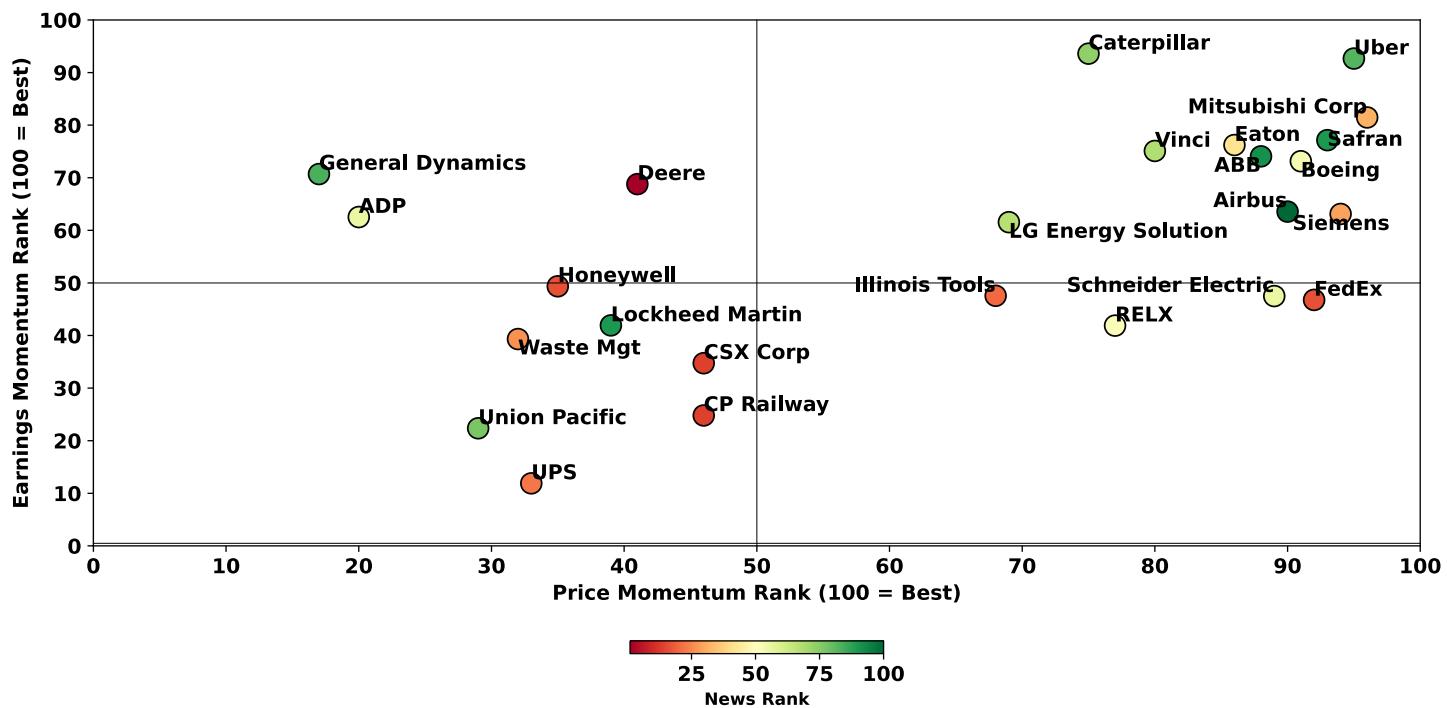
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 88: Industrials: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Uber, Safran and Airbus

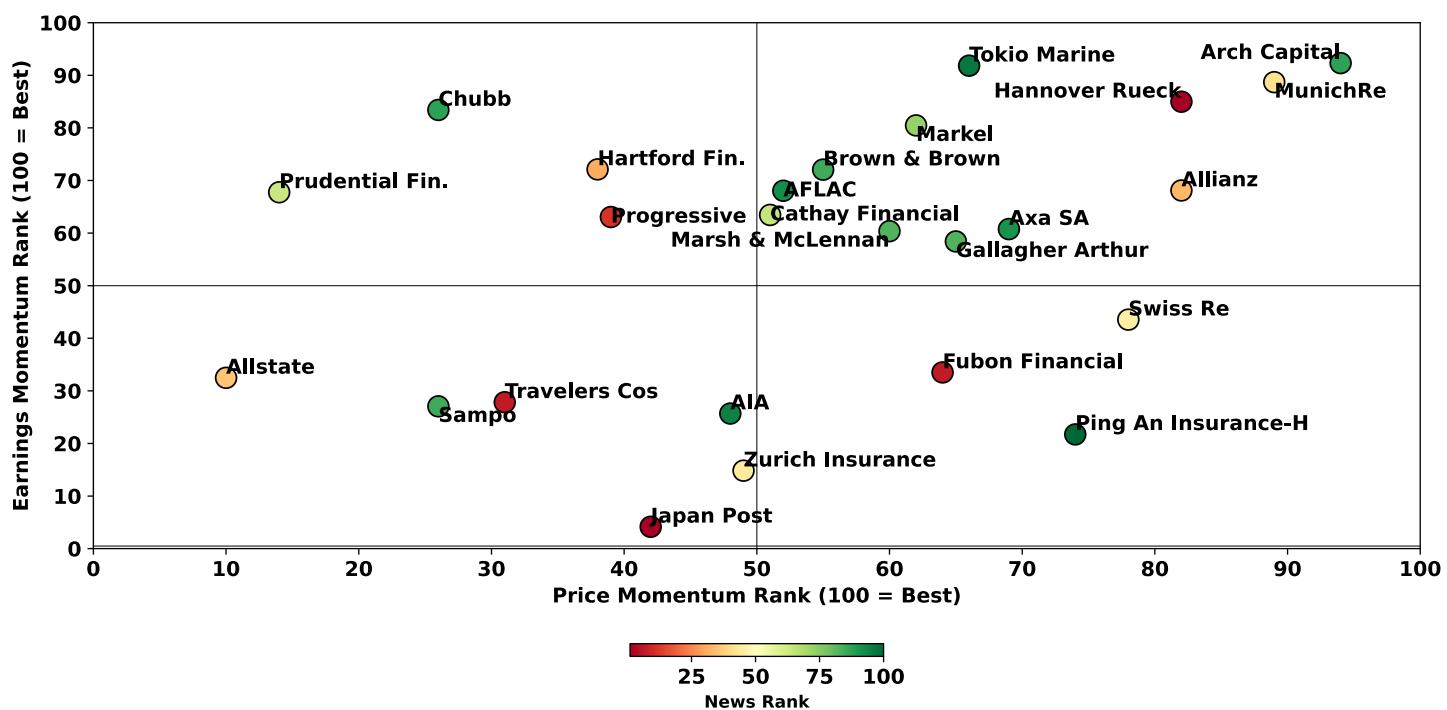


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 89: Insurance: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Arch Capital, Tokio Marine and Axa SA

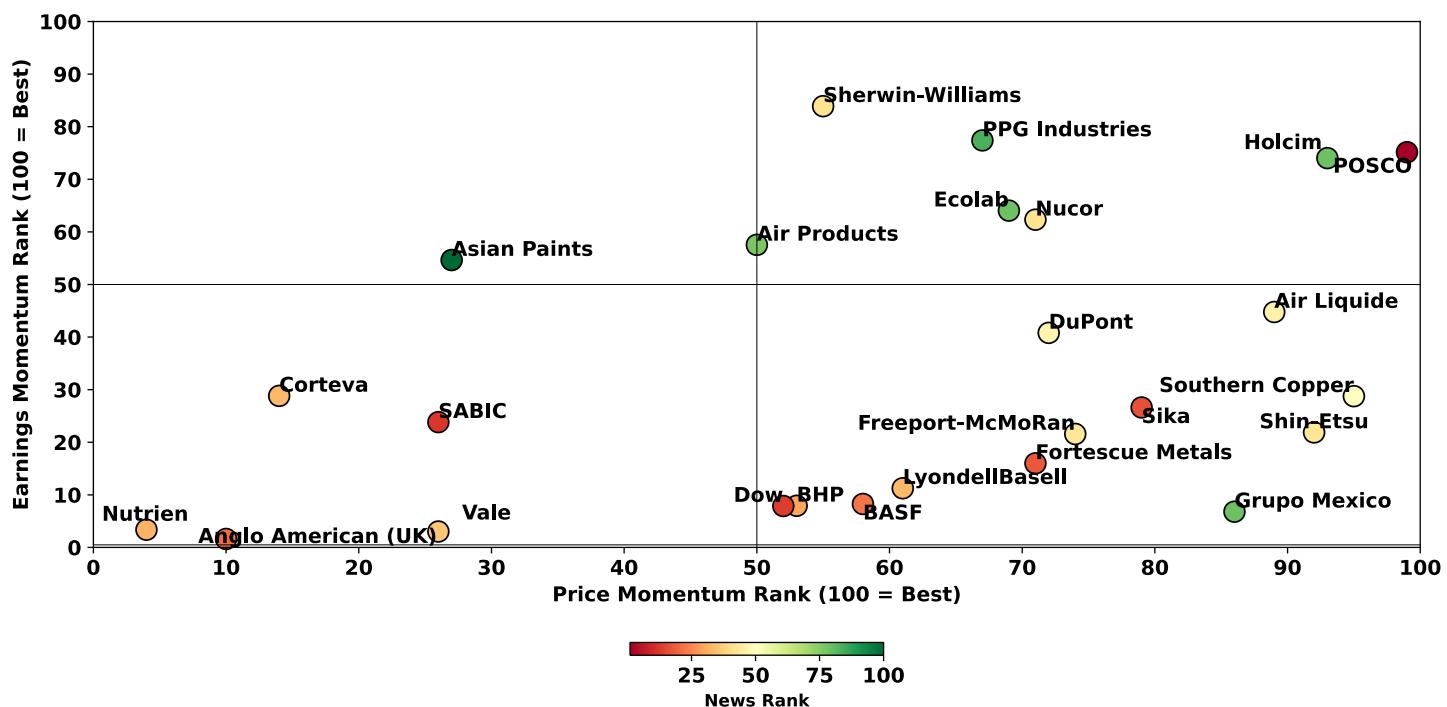


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 90: Materials: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Holcim, PPG Industries and Ecolab

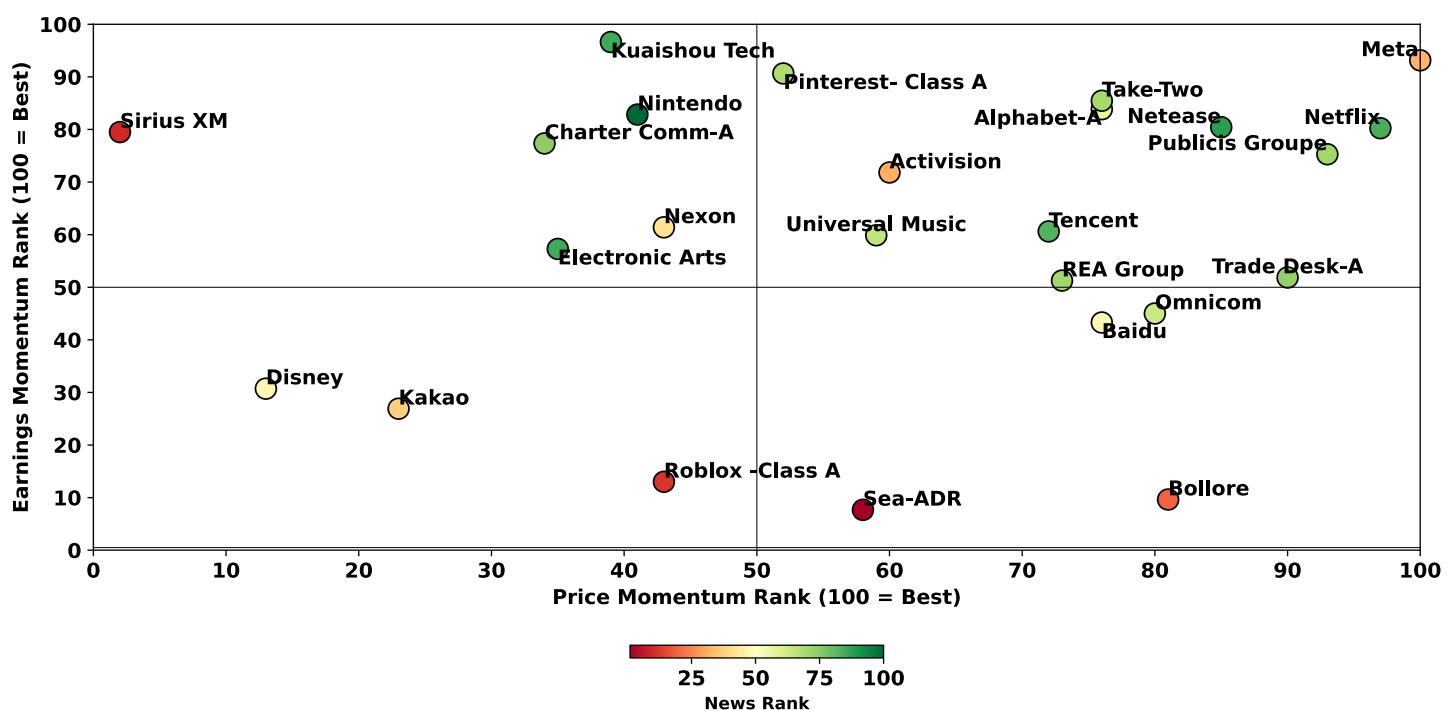


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 91: Media & Entertainment: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Netflix, Netease and Tencent



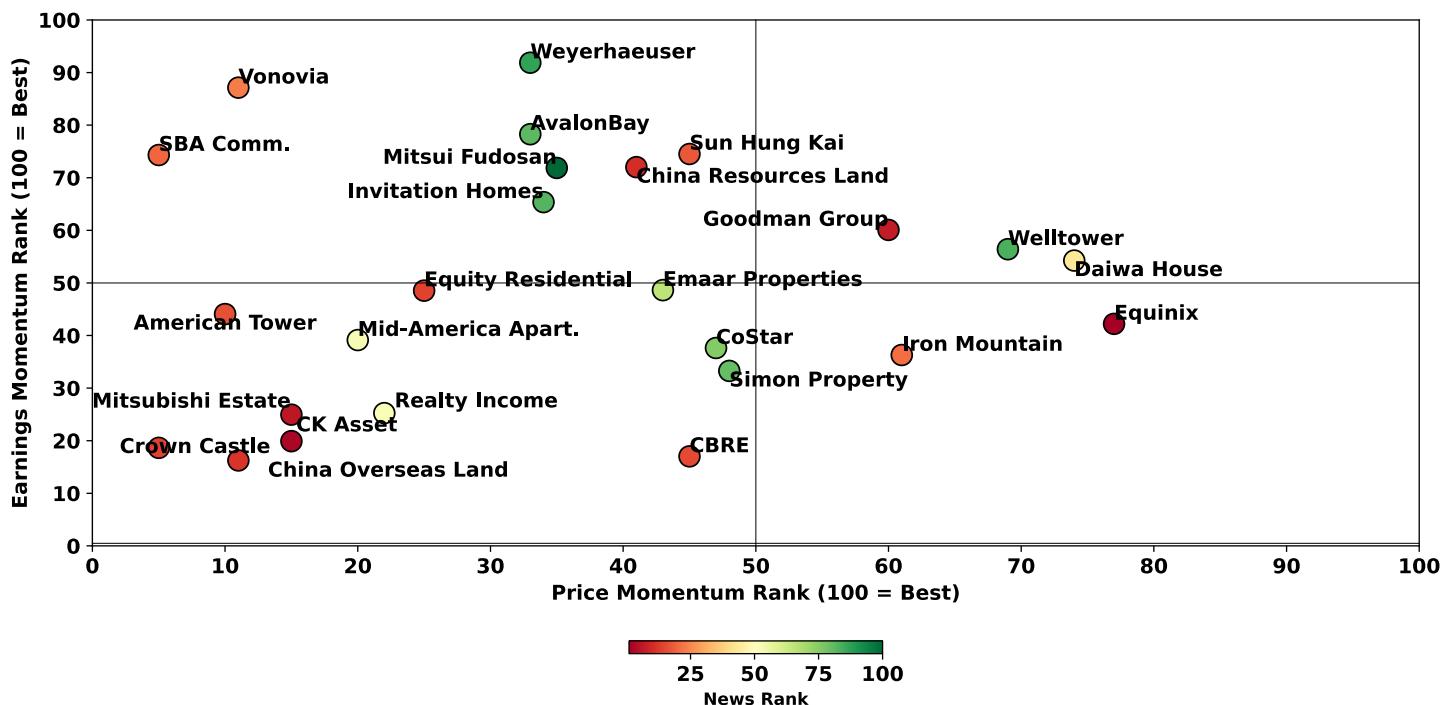
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 92: Real Estate: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Welltower

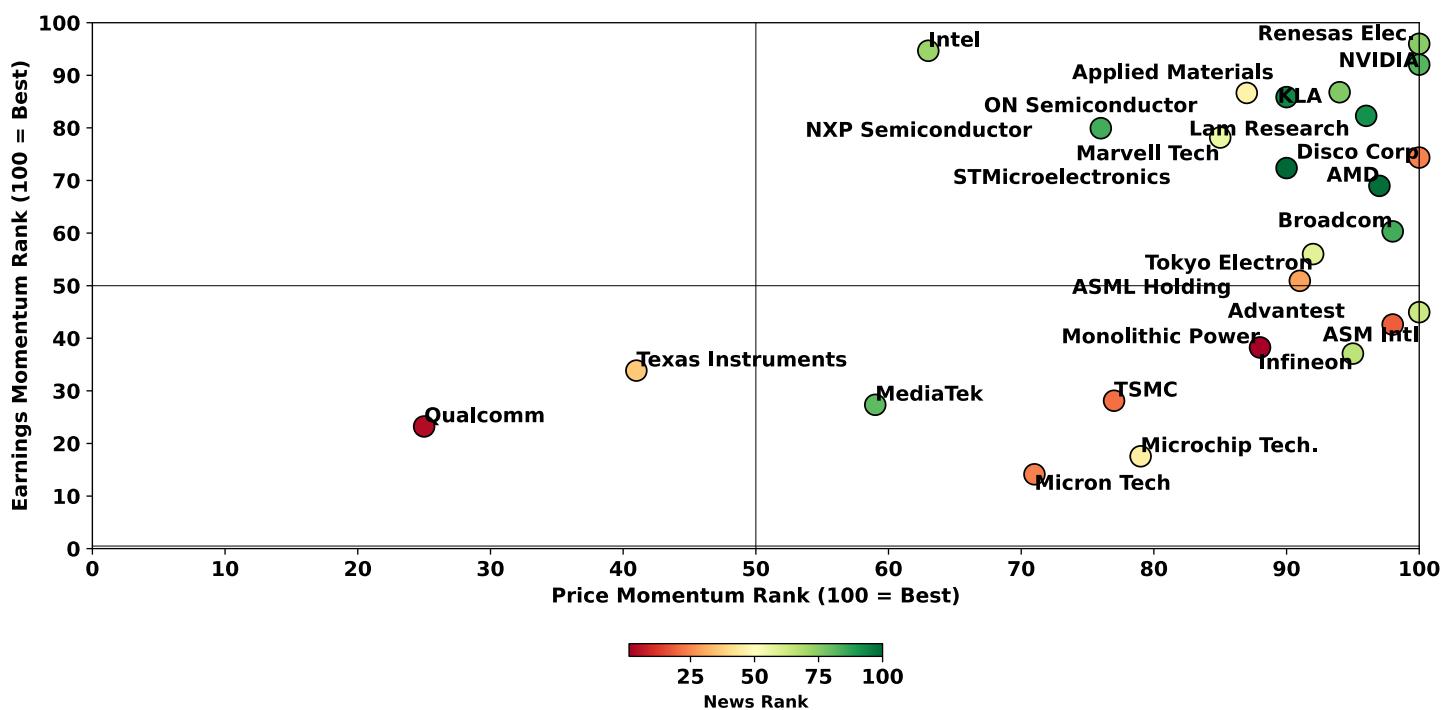


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 93: Semiconductors: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Lam Research, ON Semiconductor and STMicroelectronics

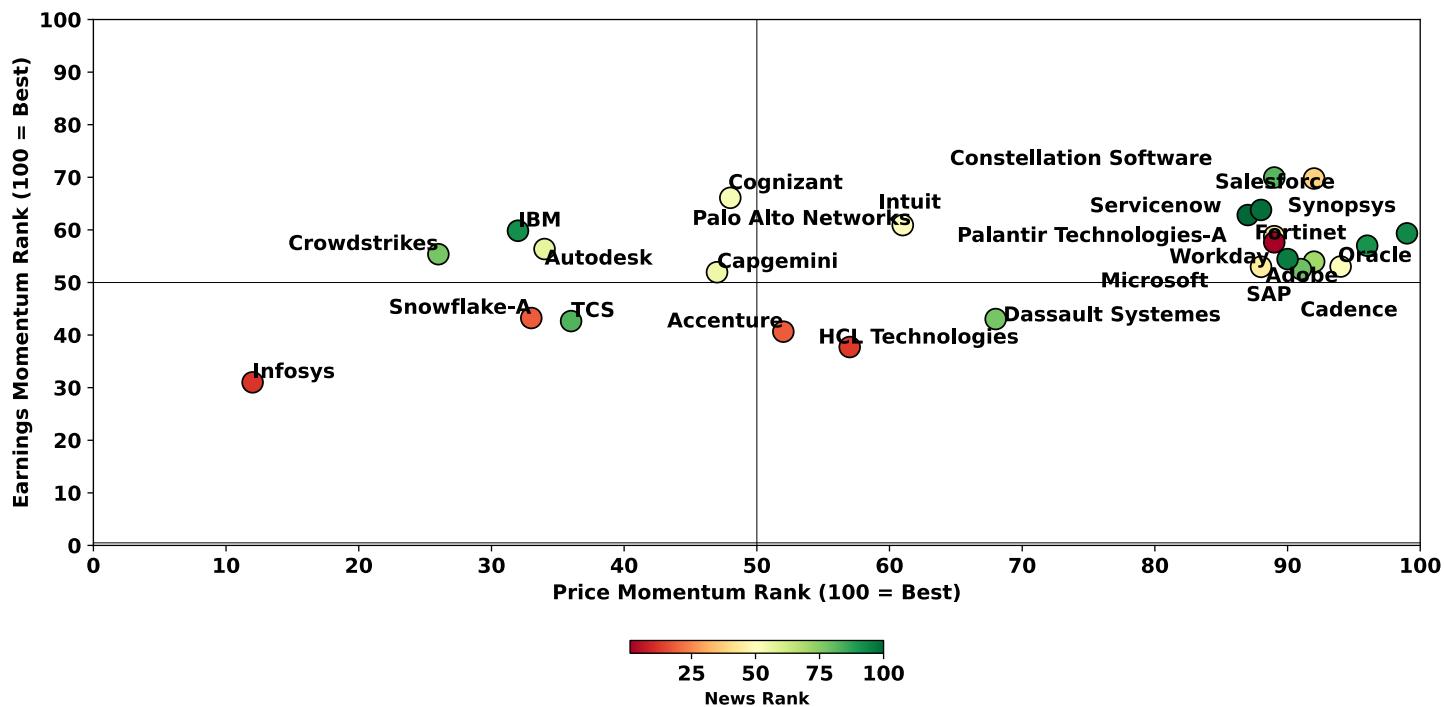


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 94: Software: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for ServiceNow, Synopsys and Palantir Technologies-A

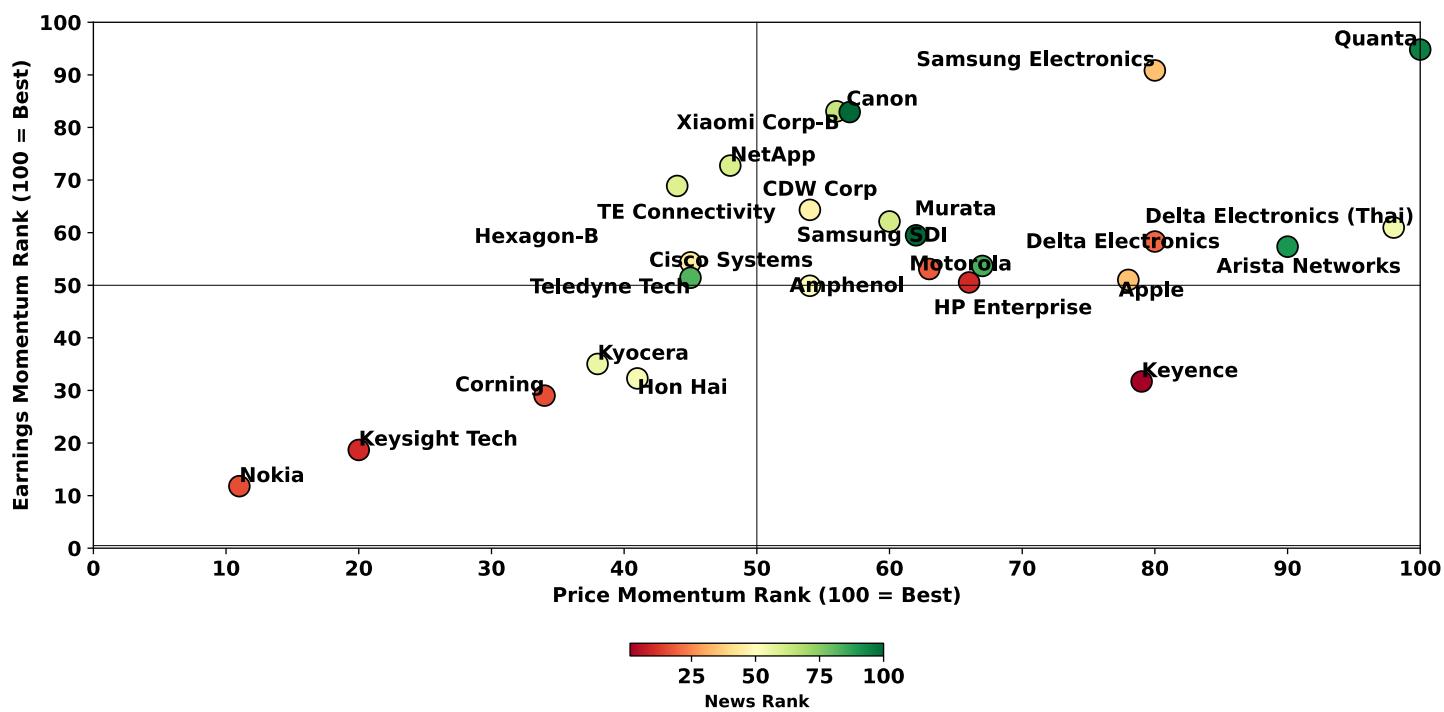


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 95: Tech Hardware: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Quanta, Xiaomi Corp-B and Arista Networks



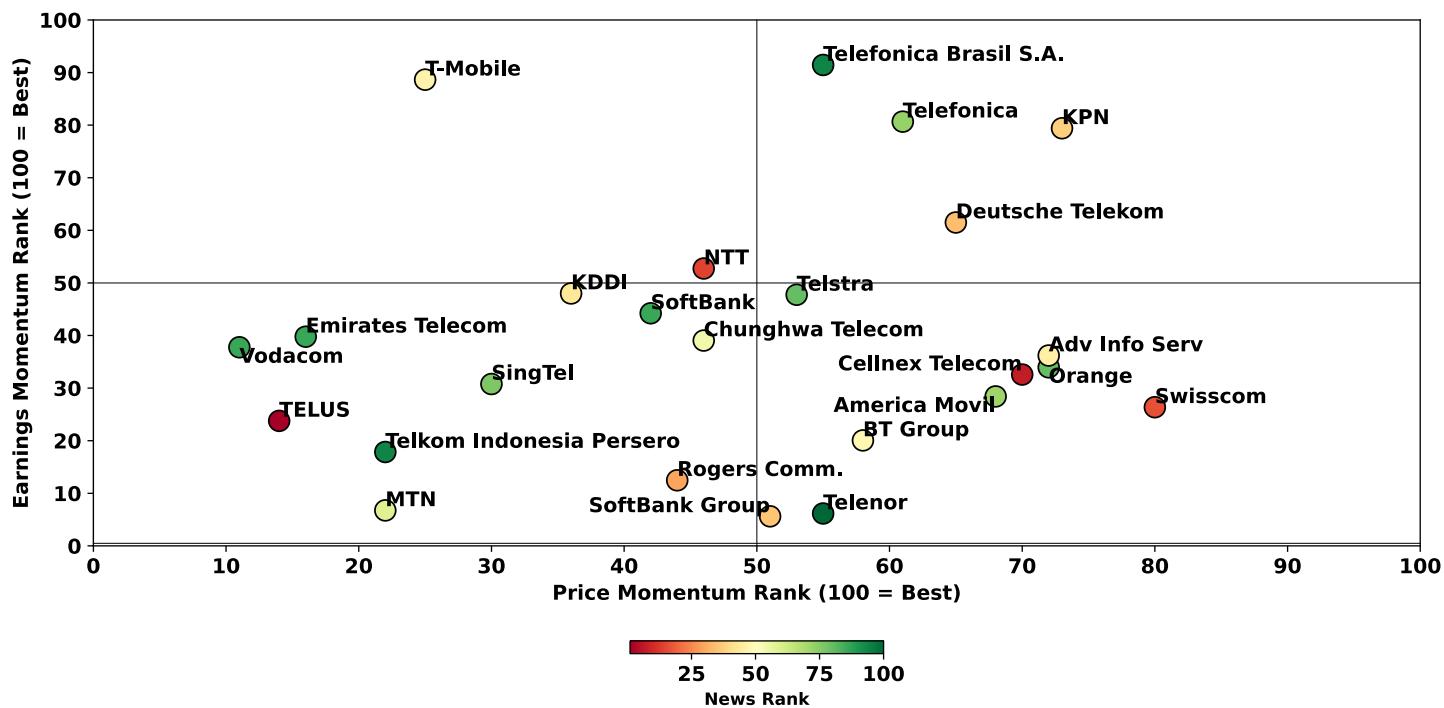
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 96: Telecom: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Telefonica Brasil S.A. and Telefonica

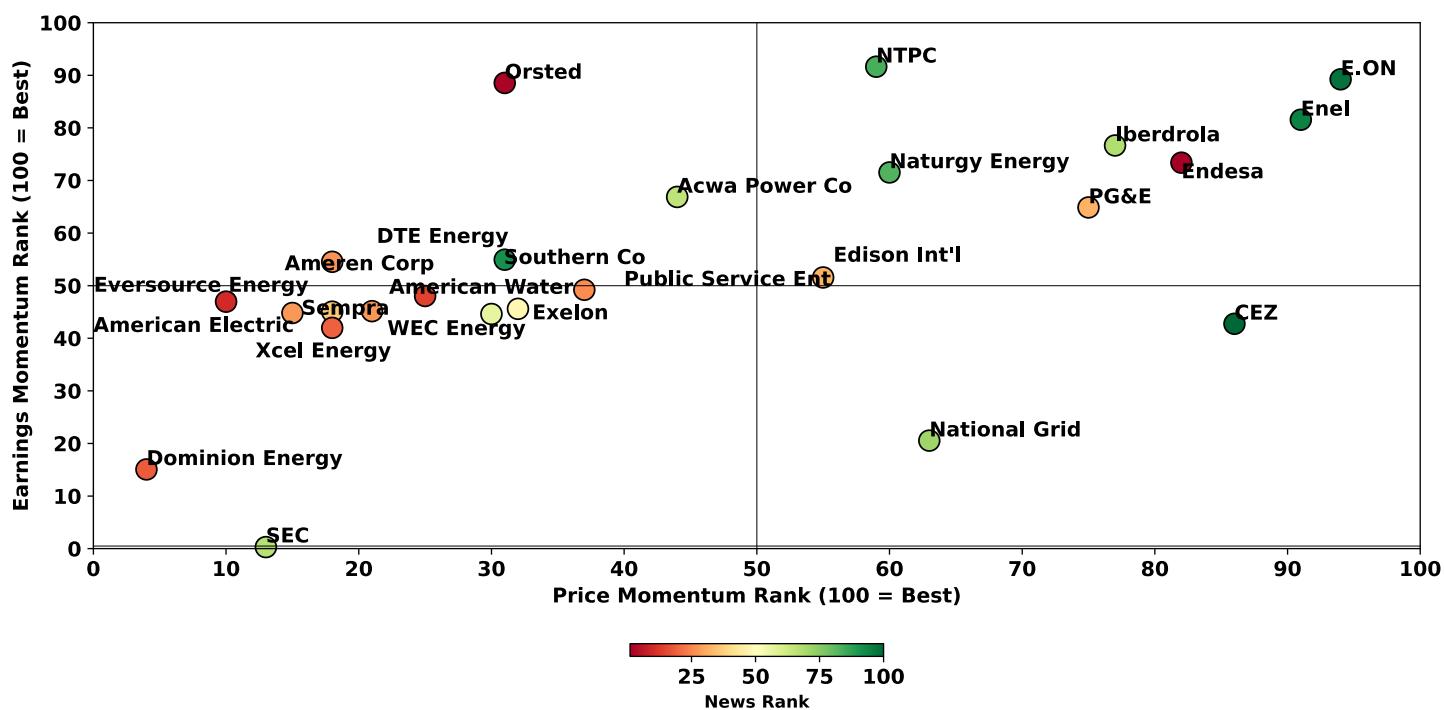


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 97: Utilities: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for E.ON, Enel and NTPC



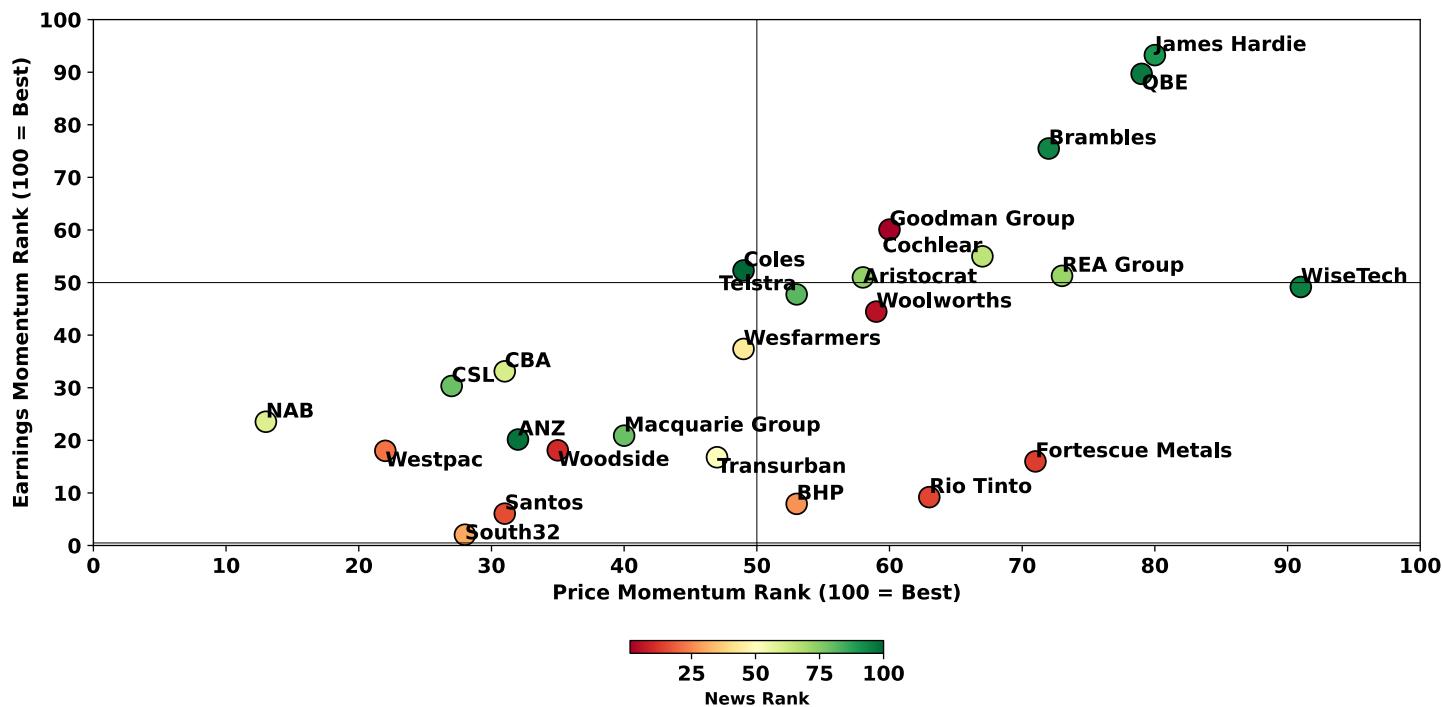
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Countries: Triple Momentum Charts

Chart 98: Australia: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for QBE, James Hardie and Brambles

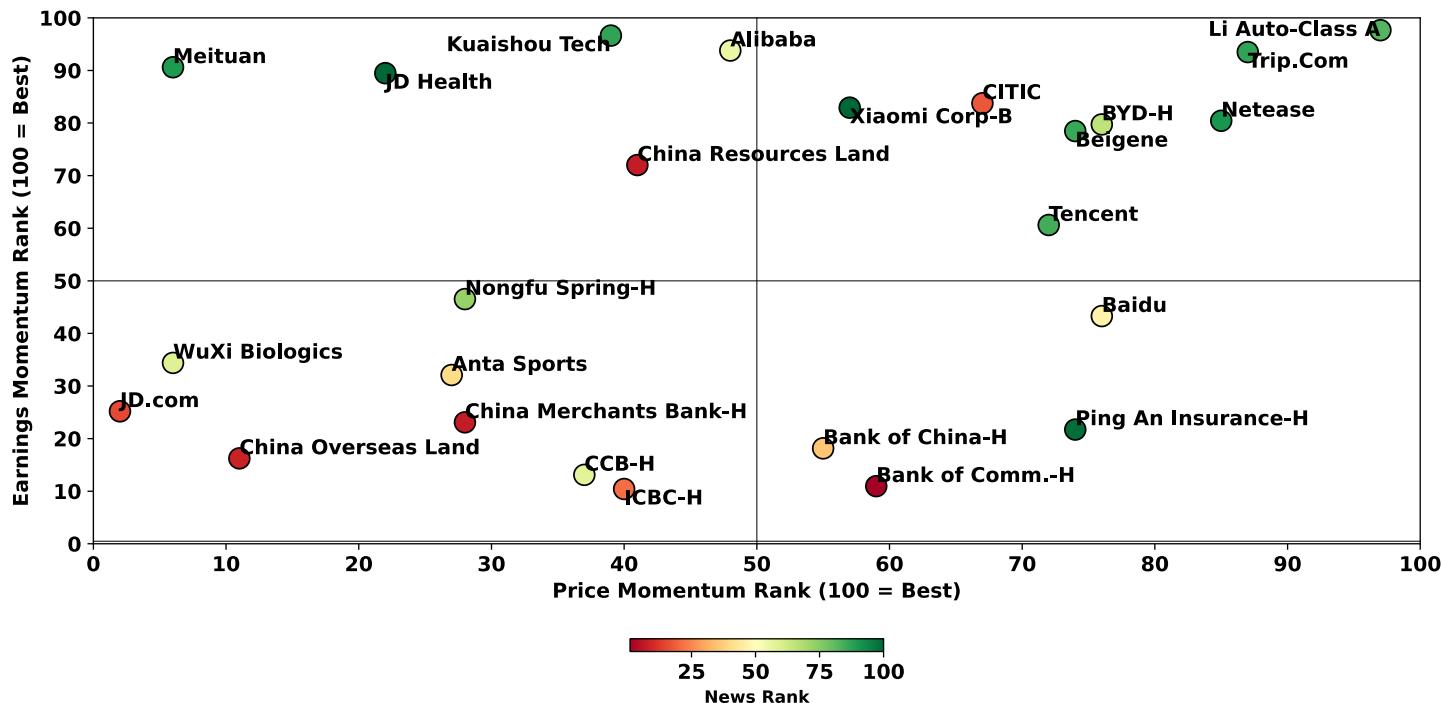


Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 99: China: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Li Auto-Class A, Trip.Com and Netease



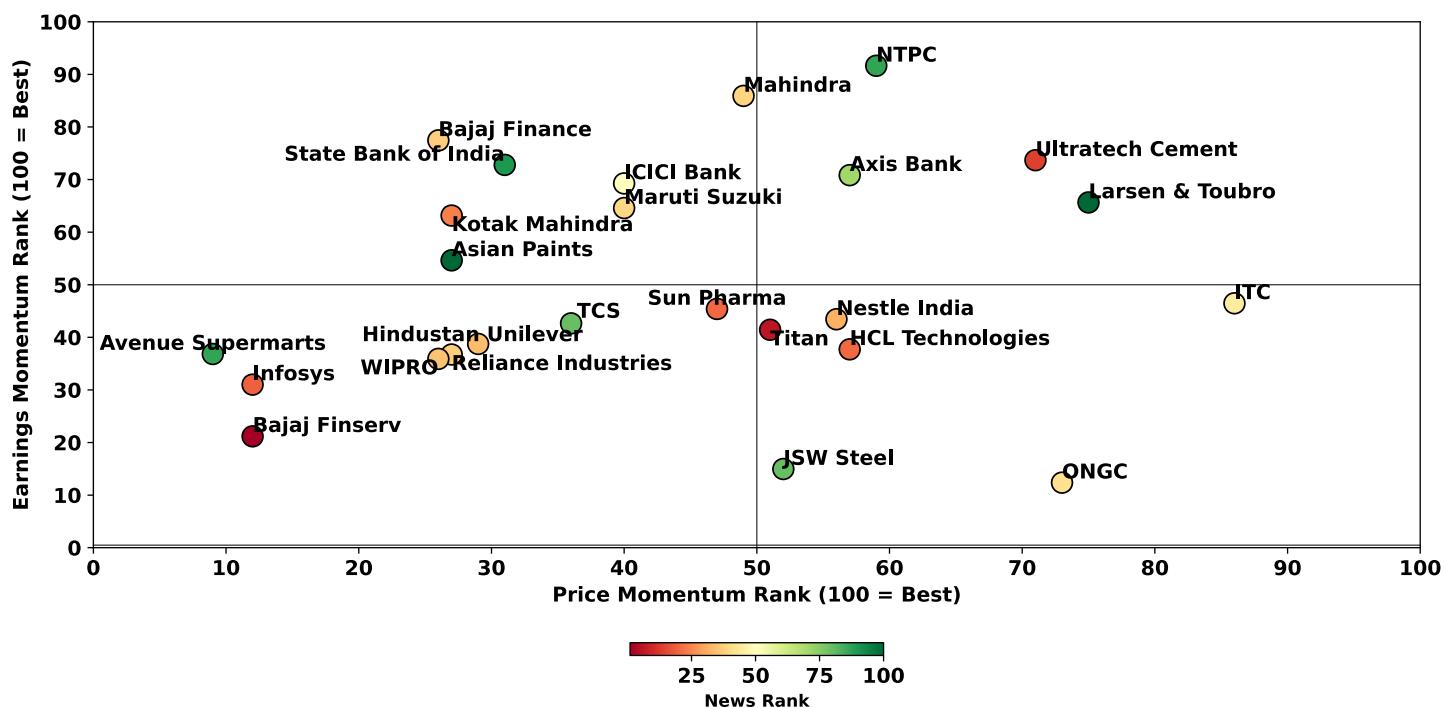
Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Chart 100: India: Earnings Momentum (vertical axis), Price Momentum (horizontal axis), News Momentum (colour)

Triple Momentum is most positive for Larsen & Toubro, NTPC and Axis Bank



Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Global Triple Momentum screens

Table 5: Global Positive Triple Momentum - Top stocks by Triple Momentum rank

Top Global stocks with Triple Momentum ranks

Company Name	BBG Code	Country	Sector	MCAP (Total \$USm)	Avg Daily TO (6m \$US m)
Origin Energy	ORG AU	Australia	Utilities	9,575	47.8
COSCO Shipping Energy-H	1138 HK	China	Energy	1,378	15.7
Sany Heavy	631 HK	China	Industrials	4,659	5.4
CMOC-H	3993 HK	China	Materials	2,335	15.7
China Resources Power	836 HK	China	Utilities	9,864	29.0
Huaneng Power-H	902 HK	China	Utilities	2,617	21.9
Rockwool	ROCKB DC	Denmark	Industrials	2,658	12.6
E.ON	EOAN GR	Germany	Utilities	32,152	64.1
Alpha Services	ALPHA GA	Greece	Banks	3,678	13.4
Mytilineos	MYTIL GA	Greece	Industrials	5,469	8.1
OTP Bank	OTP HB	Hungary	Banks	11,231	13.9
Hindustan Petroleum	HPCL IN	India	Energy	4,458	12.2
Indian Oil	IOCL IN	India	Energy	15,531	13.4
Mediobanca	MB IM	Italy	Banks	10,740	29.7
Poste Italiane	PST IM	Italy	Insurance	14,134	26.8
Enel	ENEL IM	Italy	Utilities	65,488	161.4
Panasonic	6752 JP	Japan	Cons. Discretionary	26,806	89.0
Yamaha Motor	7272 JP	Japan	Cons. Discretionary	8,948	42.5
Dainippon	7912 JP	Japan	Industrials	7,773	26.3
Hitachi Machinery	6305 JP	Japan	Industrials	6,150	20.2
Makita	6586 JP	Japan	Industrials	7,729	25.3
Toyota Tsusho	8015 JP	Japan	Industrials	19,863	34.9
Kansai Electric	9503 JP	Japan	Utilities	11,996	30.7
ING	INGA NA	Netherlands	Banks	50,857	174.9
Exor Nv	EXO NA	Netherlands	Div Financials	20,865	13.5
Koninklijke Philips	PHIA NA	Netherlands	Health Care	20,669	52.8
BDO Unibank	BDO PM	Philippines	Banks	12,953	7.5
Bank Pekao	PEO PW	Poland	Banks	6,774	16.2
PKO	PKO PW	Poland	Banks	11,201	19.3
Elm Co	ELM AB	Saudi Arabia	Software	15,086	21.4
Etihad Etisalat	EEC AB	Saudi Arabia	Telecom	9,311	13.3
Meritz Financial	138040 KS	South Korea	Div Financials	7,709	22.5
Doosan Bobcat	241560 KS	South Korea	Industrials	4,023	18.7
Samsung Eng.	028050 KS	South Korea	Industrials	5,199	24.8
China Airlines	2610 TT	Taiwan	Industrials	4,447	57.6
Asustek	2357 TT	Taiwan	Tech Hardware	8,918	33.9
Lite-On Tech	2301 TT	Taiwan	Tech Hardware	10,783	82.3
Quanta	2382 TT	Taiwan	Tech Hardware	30,917	182.4
Pegasus Hava	PGSUS TI	Turkiye	Industrials	3,397	50.7
Next	NXT LN	United Kingdom	Cons. Discretionary	11,183	22.5
Whitbread	WTB LN	United Kingdom	Cons. Discretionary	8,715	18.2
Coca-Cola HBC AG	CCH LN	United Kingdom	Cons. Staples	10,710	16.9
Rolls-Royce	RR/ LN	United Kingdom	Industrials	21,429	47.8
Centrica	CNA LN	United Kingdom	Utilities	10,361	30.7
D.R. Horton	DHI US	United States	Cons. Discretionary	40,283	331.3

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Table 6: Global Negative Triple Momentum - Bottom stocks by Triple Momentum rank

Bottom Global stocks with Triple Momentum ranks

Company Name	BBG Code	Country	Sector	MCAP (Total \$USm)	Avg Daily TO (6m \$US m)
Verbund	VER AV	Austria	Utilities	13,846	10.3
JBS SA	JBSS3 BZ	Brazil	Cons. Staples	8,589	43.6
Nuvei-Subordinate Vtg	NVEI CN	Canada	Div Financials	1,104	19.2
Smoore Int'l	6969 HK	China	Cons. Staples	5,976	13.6
Microport	853 HK	China	Health Care	3,013	13.7
Country Garden	2007 HK	China	Real Estate	2,682	45.3
Sunny Optical	2382 HK	China	Tech Hardware	9,124	59.2
Novozymes	NZYMB DC	Denmark	Materials	9,949	26.9
HK Land	HKL SP	Hong Kong	Real Estate	7,872	7.4
Chinasoft Int'l	354 HK	Hong Kong	Software	1,874	14.4
UPL	UPLL IN	India	Materials	5,225	18.4
Unilever Indonesia	UNVR IJ	Indonesia	Cons. Staples	9,210	4.6
ICL	ICL IT	Israel	Materials	7,848	17.8
Misumi Group	9962 JP	Japan	Industrials	4,809	21.0
Petronas Chemicals	PCHEM MK	Malaysia	Materials	11,705	8.9
OCI	OCI NA	Netherlands	Materials	5,380	17.4
Yara Int'l	YAR NO	Norway	Materials	9,323	25.0
Rabigh Refining	PETROR AB	Saudi Arabia	Energy	4,607	9.5
Exxaro	EXX SJ	South Africa	Energy	2,697	8.5
African Rainbow	ARI SJ	South Africa	Materials	2,077	5.4
LG H&H	051900 KS	South Korea	Cons. Staples	5,223	32.2
S-Oil	010950 KS	South Korea	Energy	6,141	19.4
HMM	011200 KS	South Korea	Industrials	6,417	28.6
Hyundai Mipo	010620 KS	South Korea	Industrials	2,519	17.9
Hanwha Solutions	009830 KS	South Korea	Materials	4,515	68.7
NCSoft	036570 KS	South Korea	Media & Ent.	4,101	34.4
Embracer Group Ab	EMBRACB SS	Sweden	Media & Ent.	3,328	25.6
Far Eastern	1402 TT	Taiwan	Industrials	4,812	6.9
Yang Ming	2609 TT	Taiwan	Industrials	4,793	71.5
Zhen Ding Tech	4958 TT	Taiwan	Tech Hardware	2,816	12.5
Banpu Public	BANPU TB	Thailand	Energy	2,067	29.1
Indorama Ventures	IVL TB	Thailand	Materials	4,841	14.5
PTT Global Chem	PTTGC TB	Thailand	Materials	4,653	18.5
Global Power Synergy	GPSC TB	Thailand	Utilities	4,205	10.5
Clarivate	CLVT US	United Kingdom	Industrials	4,790	46.4
Legal & General	LGEN LN	United Kingdom	Insurance	16,613	38.9
Advance Auto Parts	AAP US	United States	Cons. Discretionary	4,150	195.1
VF Corp	VFC US	United States	Cons. Discretionary	7,777	170.5
FMC	FMC US	United States	Materials	11,138	114.7
Intl Flavors & Fragrances	IFF US	United States	Materials	16,245	183.3
Mosaic Co	MOS US	United States	Materials	13,121	182.8
Zoominfo Tech-A	ZI US	United States	Media & Ent.	7,043	136.2
Enphase Energy	ENPH US	United States	Semiconductors	17,852	767.0
Western Digital	WDC US	United States	Tech Hardware	12,690	141.4
Zebra Tech	ZBRA US	United States	Tech Hardware	13,980	98.1

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Asia Pace ex-Japan Triple Momentum screens

Table 7: APxJ Positive Triple Momentum - Top 30 stocks by Triple Momentum rank

Top 30 APxJ stocks with Triple Momentum ranks

Company Name	BBG Code	Country	Sector	MCAP (Total \$USm)	Avg Daily TO (6m \$US m)
James Hardie	JHX AU	Australia	Materials	12,809	39.8
Tongcheng Travel	780 HK	China	Cons. Discretionary	4,900	9.7
Huatai Sec-H	6886 HK	China	Div Financials	2,344	5.8
COSCO Shipping Energy-H	1138 HK	China	Energy	1,378	15.7
Legend Biotech-ADR	LEGN US	China	Health Care	10,954	46.8
Sany Heavy	631 HK	China	Industrials	4,659	5.4
CMOC-H	3993 HK	China	Materials	2,335	15.7
MRF	MRF IN	India	Cons. Discretionary	5,499	9.0
Samvardhana Motherson	MOTHERSO IN	India	Cons. Discretionary	7,681	16.5
Shriram Finance	SHFL IN	India	Div Financials	8,202	24.1
Hindustan Petroleum	HPCL IN	India	Energy	4,458	12.2
Indian Oil	IOCL IN	India	Energy	15,531	13.4
Dr Reddy's	DRRD IN	India	Health Care	11,771	23.5
Jindal Steel	JSP IN	India	Materials	7,869	19.1
Bank Mandiri	BMRI IJ	Indonesia	Banks	35,263	33.7
Indofood Sukses	INDF IJ	Indonesia	Cons. Staples	4,050	3.9
Gamuda	GAM MK	Malaysia	Industrials	2,564	6.5
BDO Unibank	BDO PM	Philippines	Banks	12,953	7.5
Hyundai Mobis	012330 KS	South Korea	Cons. Discretionary	16,169	34.8
Meritz Financial	138040 KS	South Korea	Div Financials	7,709	22.5
NH Investment	005940 KS	South Korea	Div Financials	2,545	3.5
Doosan Bobcat	241560 KS	South Korea	Industrials	4,023	18.7
Samsung Eng.	028050 KS	South Korea	Industrials	5,199	24.8
CTBC Financial	2891 TT	Taiwan	Banks	14,297	23.1
Mega Financial	2886 TT	Taiwan	Banks	15,684	20.1
China Airlines	2610 TT	Taiwan	Industrials	4,447	57.6
EVA Airways	2618 TT	Taiwan	Industrials	5,567	100.7
Asustek	2357 TT	Taiwan	Tech Hardware	8,918	33.9
Lite-On Tech	2301 TT	Taiwan	Tech Hardware	10,783	82.3
Quanta	2382 TT	Taiwan	Tech Hardware	30,917	182.4

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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Table 8: APxJ Negative Triple Momentum - Bottom 30 stocks by Triple Momentum rank

Bottom 30 APxJ stocks with Triple Momentum ranks

Company Name	BBG Code	Country	Sector	MCAP (Total \$USm)	Avg Daily TO (6m \$US m)
Li Ning	2331 HK	China	Cons. Discretionary	13,160	98.3
China Feihe	6186 HK	China	Cons. Staples	5,060	11.7
Microport	853 HK	China	Health Care	3,013	13.7
China Jinmao	817 HK	China	Real Estate	1,904	5.3
Country Garden	2007 HK	China	Real Estate	2,682	45.3
Sunny Optical	2382 HK	China	Tech Hardware	9,124	59.2
HK Land	HKL SP	Hong Kong	Real Estate	7,872	7.4
Chinasoft Int'l	354 HK	Hong Kong	Software	1,874	14.4
UPL	UPLL IN	India	Materials	5,225	18.4
Unilever Indonesia	UNVR IJ	Indonesia	Cons. Staples	9,210	4.6
Petronas Chemicals	PCHEM MK	Malaysia	Materials	11,705	8.9
Sea-ADR	SE US	Singapore	Media & Ent.	20,161	348.3
LG H&H	051900 KS	South Korea	Cons. Staples	5,223	32.2
S-Oil	010950 KS	South Korea	Energy	6,141	19.4
HMM	011200 KS	South Korea	Industrials	6,417	28.6
Hanwha Solutions	009830 KS	South Korea	Materials	4,515	68.7
Lotte Chemical	011170 KS	South Korea	Materials	4,155	16.2
SKC Co	011790 KS	South Korea	Materials	2,567	26.9
NCSoft	036570 KS	South Korea	Media & Ent.	4,101	34.4
Nien Made	8464 TT	Taiwan	Cons. Discretionary	2,790	4.4
Far Eastern	1402 TT	Taiwan	Industrials	4,812	6.9
Yang Ming	2609 TT	Taiwan	Industrials	4,793	71.5
Vanguard Intl	5347 TT	Taiwan	Semiconductors	3,608	15.4
Win Semi	3105 TT	Taiwan	Semiconductors	1,750	28.2
Yageo Corp	2327 TT	Taiwan	Tech Hardware	6,081	48.5
Zhen Ding Tech	4958 TT	Taiwan	Tech Hardware	2,816	12.5
Banpu Public	BANPU TB	Thailand	Energy	2,067	29.1
Indorama Ventures	IVL TB	Thailand	Materials	4,841	14.5
PTT Global Chem	PTTGC TB	Thailand	Materials	4,653	18.5
Global Power Synergy	GPSC TB	Thailand	Utilities	4,205	10.5

Source : BofA Global Quantitative Strategy, MSCI, IBES, FactSet, RavenPack

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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%

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