Asia Quantitative Strategy | Asia Pacific

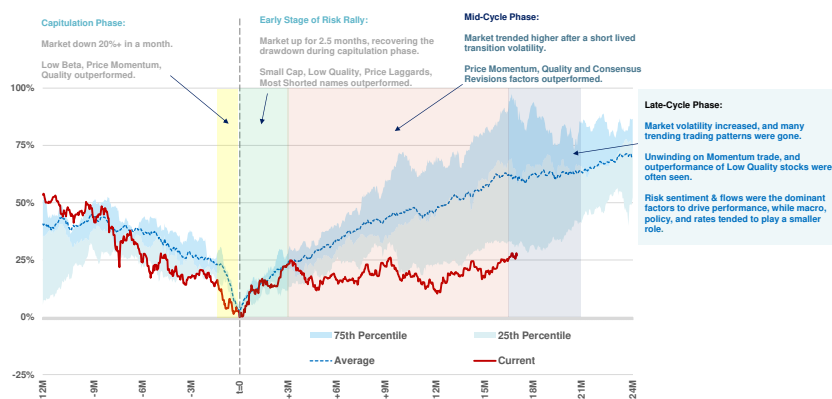# Biweekly Perspectives: Rising Signs Of Market Late-Cycle

The unwinding of Momentum trades in APxJ/EM and outperformance of Low Quality stocks flag signs of market transition to late-cycle. Our model forecasts higher market volatility ahead and a potential Momentum reversal in Japan in April. QUANTWISE [q/w]

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Key Takeaways

- Alpha efficacy of mid-cycle factors have been fading out in Asia, via Momentum trade unwinding, crowded short covering on low Quality names.

- Such unwinding was the most significant in APxJ over the last four weeks; we see a potential unwinding of Japan Momentum trades in April as likely.

- Concurrently, style rotation and price actions in Asia/EM are mostly responding to flows and risk sentiment, but not macro factors, e.g. UST yields.

- These are the signs of transition from mid-cycle to late-cycle factor landscape. Our quant model suggests taking Low Volatility strategy for now.

Market dynamics & signs of Late-cycle: Our quant model has been classifying Asia/EM equities in a mid-cycle phase since March 2023, and recommended picking stocks with Price Momentum, Balance Sheet Quality, and Consensus Revisions Leadership. However, their alpha efficacy has been fading sequentially since February. Per our last Biweekly, we discussed that the elevated factor volatility might lead the factor landscape to transition to late-cycle. In March MTD, we note that the sensitivity between Value/Growth rotation vs. UST 10Y yield (and DXY) has also been deteriorating. Such trading pattern rhymes with what we saw during historical late-cycles, and adds to our conviction to prefer Low Volatility style.

Exhibit 1: Historical Performance In A Market Cycle - Asia/EM

Source: FactSet, Bloomberg, MSCI, Morgan Stanley Research. Note: data coverage is from January 1995 to March 22, 2024, covering 10 market capitulation scenarios of MSCI EM - Sep 10, 1998, Oct 3, 2001, Oct 10, 2002, May 17, 2004, Jun 13, 2006, Mar 2, 2009, Oct 4, 2011, Jan 21, 2016, Oct 29, 2018, Mar 23, 2020. Past performance is no guarantee of future results.

Market Dynamics and Style Implications

Latest Style Performance Overview in Asia/EM

Momentum trades unwinding continued in APxJ/EM & The rising signs of Late-cycle Factor Dynamics: We note that the majority of market mid-cycle factors, e.g. Quality, Price Momentum, Consensus Revisions, were all fading out in alpha efficacy in March MTD (Exhibit 2). Meanwhile, the sensitivity of Value/Growth rotation against macro factors, e.g. UST bond yields, DXY, were deteriorating. These phenomenon were often seen in the historical late-cycle phase, in which investor sentiment and flows were the dominant drivers behind the market price actions.

Meanwhile, the higher factor volatility and correlations across factors also lowered the diversification effect within equity investors' portfolios. Total volatility of the equity market is on the rise, and if it evolves further, hedge funds' deleveraging might accelerate, triggering further unwinding of Momentum trades (Exhibit 3).

Exhibit 2: L/S factor return of major styles and factors – APxJ/EM equities
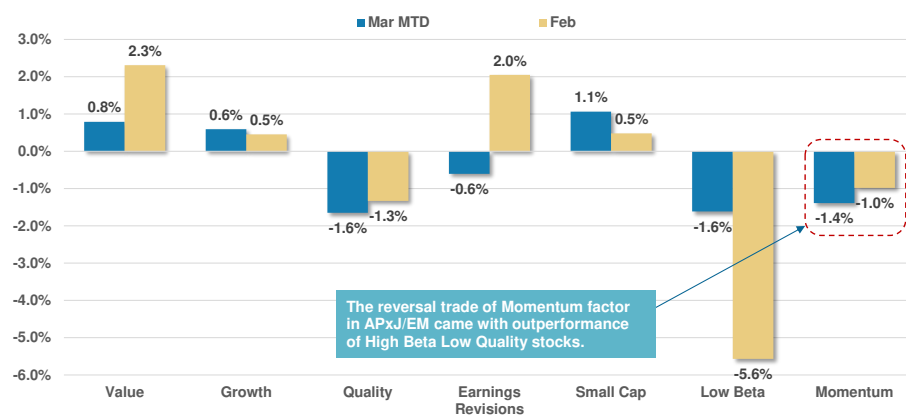
The reversal trade of Momentum factor in APxJ/EM came with outperformance of High Beta Low Quality stocks.

Source: FactSet, Morgan Stanley Research; data as of March 22, 2024; Past performance is no guarantee of future results.

Exhibit 3: Price Momentum factor performance in current cycle vs. history
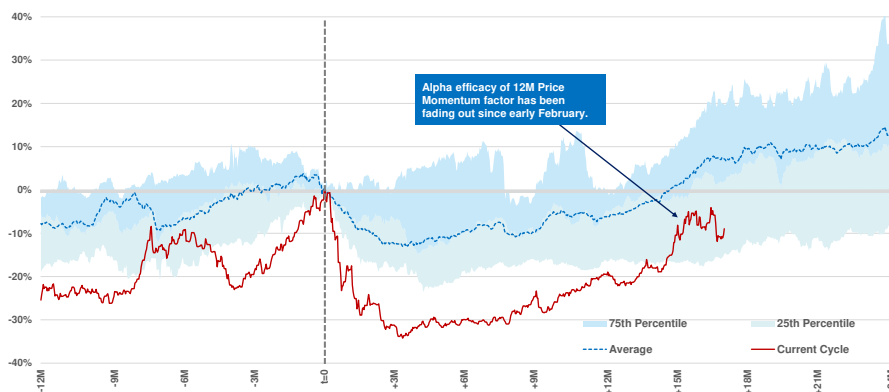
Alpha efficacy of 12M Price Momentum factor has been fading out since early February.

Source: FactSet, Bloomberg, MSCI, Morgan Stanley Research. Note: data coverage is from January 1995 to March 22, 2024, covering 10 market capitulation scenarios of MSCI EM - Sep 10, 1998, Oct 3, 2001, Oct 10, 2002, May 17, 2004, Jun 13, 2006, Mar 2, 2009, Oct 4, 2011, Jan 21, 2016, Oct 29, 2018, Mar 23, 2020. Past performance is no guarantee of future results.

In Japan, Momentum trade is slowing down: March is a typical month when Japan's Price Momentum factor outperforms, and the same trading pattern repeated again this year.

But if we compare the MTD vs. YTD performance, we note there are some changes in the market micro-structure level, implying that the Momentum trade in Japan might see a reversal shortly.

The most significant one is the fade out of the momentum of Large-cap stocks in Japan in March MTD. Per what we discussed in the last Biweekly Perspectives, the top crowding risk in Japan was in Large-Cap stocks, particularly Banks and Automobiles, as of February month-end. However, the relative performance of Large-cap vs. Small-mid cap turned out to be muted in March. (Exhibit 4)

Secondly, we believe the seasonal tailwind of Japan Momentum trade may turn to be a headwind in April, as investors tend to cover shorts after dividend ex-dates. Our model recognizes a high consistency that Japan market price actions tend to trade on a reversal basis, in which stocks with high short interest outperformed. (Exhibit 5)

Exhibit 4: L/S factor return of major styles and factors – Japan equities
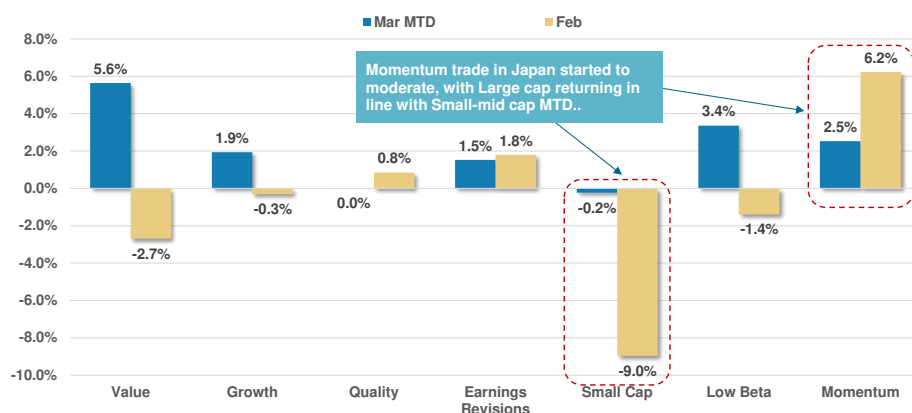
Source: FactSet, Morgan Stanley Research; data as of March 22, 2024; Past performance is no guarantee of future results.

Exhibit 5: Historical short interest flows & factor performance in Japan before and after March/September month-end
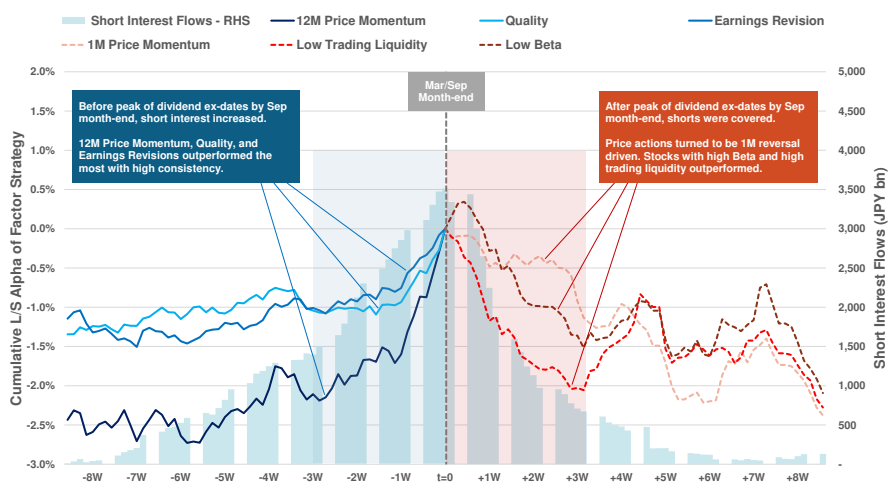
Source: IHS Markit, FactSet, Morgan Stanley Research; data coverage: 1996 to 2023.

Macro and Market Dynamics That Matter

The charts and paragraphs below illustrate our latest views on market dynamics and style recommendations.

i) Our model continues to highlight on-going risk of Momentum trades unwinding. Such unwinding has been dominated by "crowded short covering", which drove Chinese Growth/Tech stocks to outperform in Asia/EM since February. If history is any guide, the next phase of unwinding will likely be about the "crowded long selling", and Japan Momentum stocks, in particular those in Semis, Automobiles, and Financials, might face a short term headwind in April.

**Exhibit 6:** Momentum factor return in China, Japan, and US
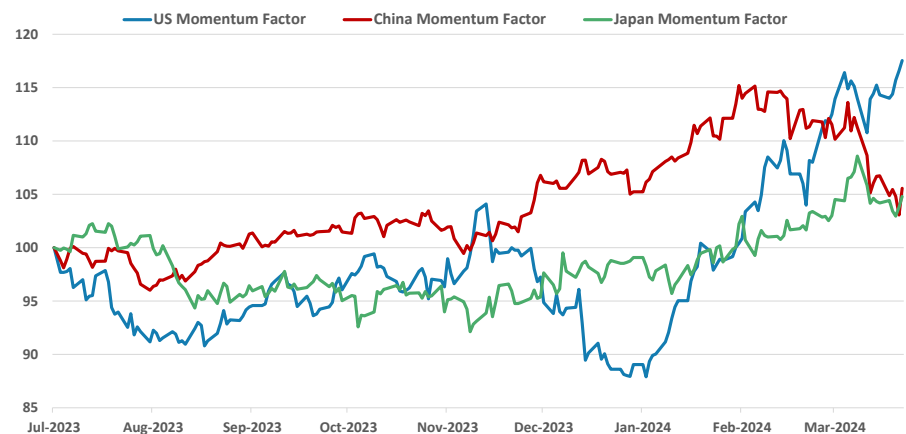
Source: Bloomberg, Morgan Stanley Research; data as of March 22, 2024.

ii) Growth outperformed Value despite a higher UST 10Y Yield (Exhibit 8): Bond futures markets have been pricing out Fed rate cut expectations YTD. US treasury bond yields trended higher in the last two weeks. However, Bond volatility (MOVE Index) trended lower, and JPY also depreciated against USD. In our quant model, these macro dynamics are taken as offsetting factors of tighter financial conditions.

With support from short covering flows among Growth/Tech stocks, outperformance of Growth over Value has continued into March MTD, rounding up an in-line relative return of these two major styles in Asia/EM.

Exhibit 7:   US treasury 10Y bond yields vs. Value/Growth relative performance in Asia/EM
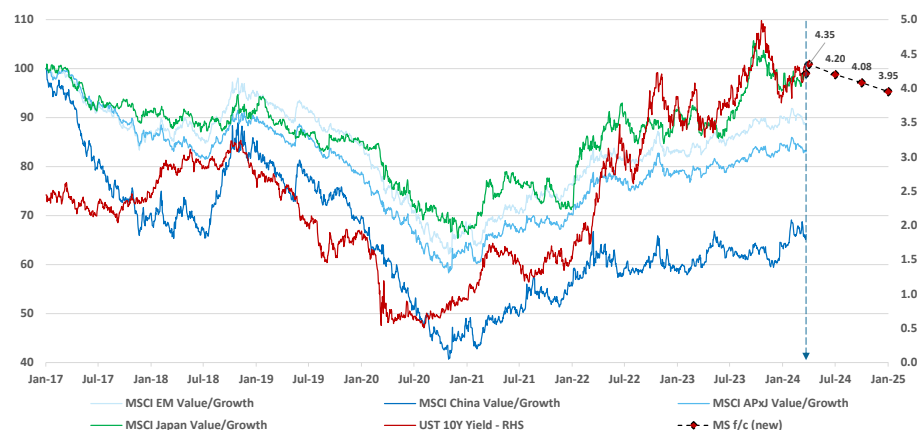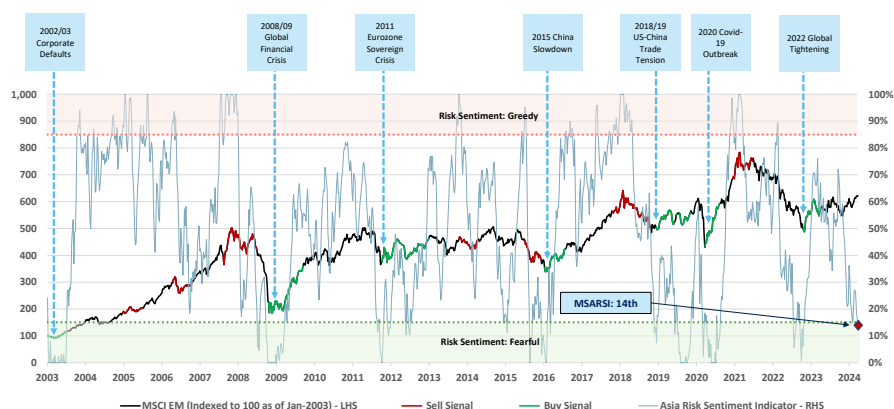

Source: Bloomberg, MSCI, Morgan Stanley Research; data coverage from January 1, 2017 to March 8, 2024. Past performance is no guarantee of future results.

iii) Risk-off sentiment remains in Asia/EM: According to Morgan Stanley's Asia Risk Sentiment Indicator (Exhibit 8), overall risk allocation among global asset owners continues to prefer low-risk assets as money market funds dominate fund inflows, and their appetite for EM equity funds remained lackluster. Per our flows tracking via EPFR data, net fund flows to EM equity have been on and off on a weekly basis YTD. We believe the strong DXY remains the key macro driver behind that.

Comparing the risk sentiment in Asia vs. that in the US, we note a major decoupling with growing signs of greedy sentiment in US equity and global HY markets (Exhibit 8). In our view, this could potentially lead to Momentum reversal in Asia, stemming from US equity market.

**Exhibit 8:**   Morgan Stanley Asia Risk Sentiment Indicator vs. MSCI EM – As of March 22, 2024

Source: FactSet, Bloomberg, EPFR, MSCI, Morgan Stanley Research. Note: Buy/Sell signals are generated if average weekly readings of the risk sentiment indicator in the last four weeks were below the 15th percentile or above the 85th percentile. The above red/green lines are tracking the forward 6M returns since the signal appeared. MSARSI methodology and its other details can be referred to in insight #1 in the QuantASIA launch report. Past performance is no guarantee of future results.

Exhibit 9: Morgan Stanley Global Risk Demand Index - as of March 22, 2024
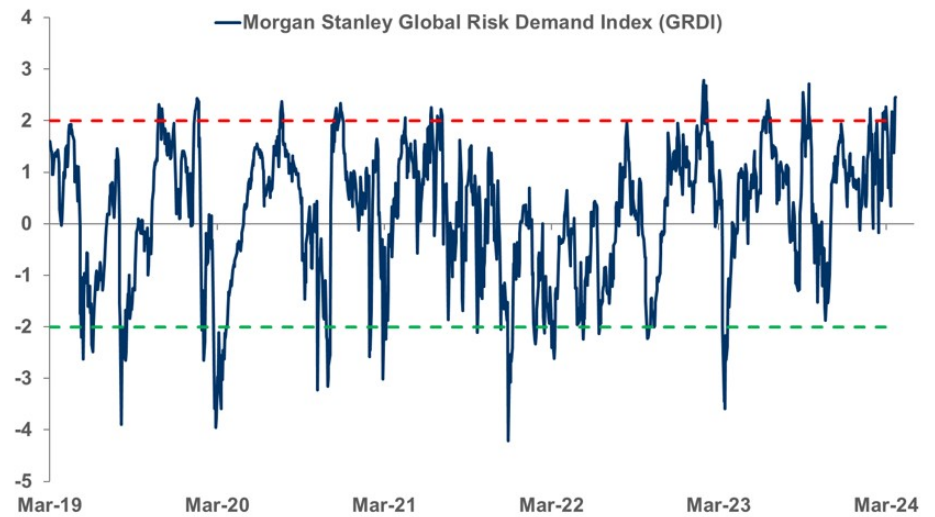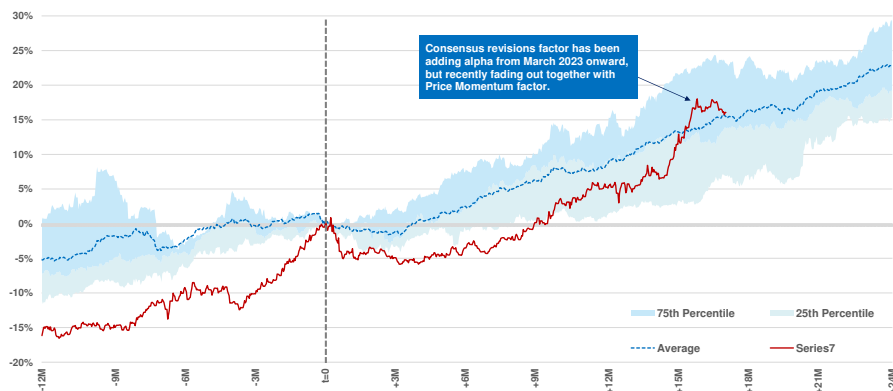

Source: Bloomberg, Morgan Stanley Research

iv) Factor performance indicates that the market is in transition from mid-cycle to late-cycle phase: We note that various market mid-cycle factors have been losing their alpha efficacy from February onward. Many fundamentally solid companies underperformed in Asia/EM. i.e. stocks with high Quality balance sheets and consensus revisions leadership turned to underperform. Such a reversal of this long-lasting trading pattern is a meaningful sign that the market is no longer in a mid-cycle phase. From a quant perspective, we prefer Low Volatility strategy, and we suggest investors put risk management as the #1 thing to focus on in market late-cycle phase.

Exhibit 10: Factor performance of "MS Balance Sheet Quality Composite" before and after market troughs
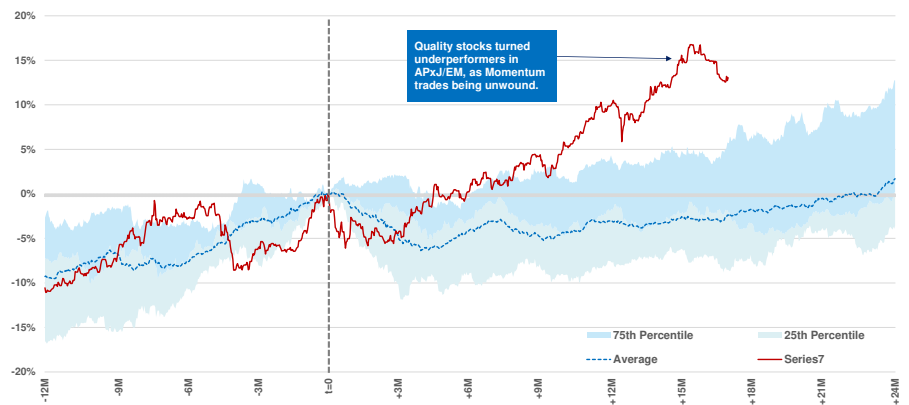
Source: FactSet, Bloomberg, MSCI, Morgan Stanley Research. Note: data coverage is from January 1995 to March 22, 2024, covering 10 market capitulation scenarios of MSCI EM - Sep 10, 1998, Oct 3, 2001, Oct 10, 2002, May 17, 2004, Jun 13, 2006, Mar 2, 2009, Oct 4, 2011, Jan 21, 2016, Oct 29, 2018, Mar 23, 2020. Past performance is no guarantee of future results.

Exhibit 11: Factor performance of "Consensus Earnings Revision" before and after market troughs

Source: FactSet, Bloomberg, MSCI, Morgan Stanley Research. Note: data coverage is from January 1995 to March 22, 2024, covering 10 market capitulation scenarios of MSCI EM - Sep 10, 1998, Oct 3, 2001, Oct 10, 2002, May 17, 2004, Jun 13, 2006, Mar 2, 2009, Oct 4, 2011, Jan 21, 2016, Oct 29, 2018, Mar 23, 2020. Past performance is no guarantee of future results.

Short Interest Update – March 22, 2024

1. Utilization ratio of security lending market increased in the region MTD, in which Asia ex China led the new short position adding.
2. In China, short interest remained largely unchanged MTD, with cyclical sectors, like Energy and Materials seeing higher short interest, while non-cyclical sectors, e.g. Utilities, Info Tech, recorded short covering.
3. In Japan, outstanding short interest increased MTD as seasonality trade on Japan dividend ex-date repeated.

Exhibit 12: Changes in Utilization Ratio of Market/Sector (as of March 22, 2024 vs. prior month average); positive changes mean adding shorts, negative values mean covering shorts

MSCI Classification	AxJ		China		Japan	
Utilization Ratio	Latest	Change vs. Last Month	Latest	Change vs. Last Month	Latest	Change vs. Last Month
Energy	6.3	*2.3*	5.6	*2.7*	13.3	*9.0*
Materials	22.2	*-0.9*	17.0	*1.9*	11.5	*5.8*
Industrials	22.4	*0.3*	13.5	*0.6*	11.3	*7.6*
Consumer Discretionary	8.6	*0.6*	5.5	*-0.3*	9.2	*0.7*
Consumer Staples	12.9	*-1.6*	14.3	*-0.9*	7.0	*3.7*
Health Care	26.2	*-10.6*	19.1	*0.8*	7.2	*4.3*
Financials	10.9	*4.8*	4.4	*-0.4*	16.4	*13.6*
Information Technology	14.0	*4.2*	9.7	*-2.0*	7.0	*-3.6*
Communication Services	5.4	*1.3*	2.3	*0.5*	10.9	*5.0*
Utilities	11.5	*0.5*	7.5	*-2.0*	9.9	*-22.7*
Real Estate	10.4	*-1.1*	14.7	*-0.9*	9.3	*6.0*
In Aggregate	**12.7**	*2.0*	**6.6**	*0.1*	**10.2**	*5.3*

Source: IHS Markit, FactSet, Morgan Stanley Research

Note: The Utilization Ratio highlights the balance between demand and supply of stock loans. A stock might appear to have low levels of short interest only due to its lack of availability for shorting purposes. The Utilization Ratio measures the percentage of supply being covered by demand, and is calculated as short interest/actively available amount of stock loan supply. The active element refers to IHS Markit adjustments for small or inactive inventory.

Exhibit 13: Top 10 Increases and Decreases in Short Interest Value Among AxJ Companies – As of March 22, 2024

AxJ	Company Name	GICS Sector	Short Interest Value (US$m)	Changes vs. Last Month	Utilization Ratio (%)	Days to Cover
6488-TW	GlobalWafers Co., Ltd.	Information Technology	413	299	70.9	26.10
ZTO-US	ZTO Express (Cayman), Inc. Sponsored ADR Class A	Industrials	320	259	15.0	5.67
2317-TW	Hon Hai Precision Industry Co., Ltd.	Information Technology	533	227	1.4	11.33
2603-TW	Evergreen Marine Corp. (Taiwan) Ltd.	Industrials	304	211	48.9	3.67
5-HK	HSBC Holdings Plc	Financials	425	210	51.3	2.71
2454-TW	MediaTek Inc	Information Technology	428	209	0.5	1.85
BIDU-US	Baidu Inc Sponsored ADR Class A	Communication Services	340	181	9.5	1.08
669-HK	Techtronic Industries Co., Ltd.	Industrials	291	165	3.1	8.07
HTHT-US	H World Group Limited Sponsored ADR	Consumer Discretionary	423	162	15.9	5.49
3231-TW	Wistron Corporation	Information Technology	493	151	48.1	2.32
2330-TW	Taiwan Semiconductor Manufacturing Co., Ltd.	Information Technology	365	(1,342)	0.5	0.63
NIO-US	NIO Inc. Sponsored ADR Class A	Consumer Discretionary	2,163	(382)	75.1	8.20
1876-HK	Budweiser Brewing Co. APAC Ltd.	Consumer Staples	74	(212)	25.8	2.18
005930-KR	Samsung Electronics Co., Ltd.	Information Technology	597	(199)	0.0	0.80
U14-SG	UOL Group Limited	Real Estate	8	(150)	1.9	0.33
BABA-US	Alibaba Group Holding Limited Sponsored ADR	Consumer Discretionary	917	(132)	10.8	0.68
005490-KR	POSCO Holdings Inc.	Materials	529	(121)	12.8	3.46
005935-KR	Samsung Electronics Co Ltd Pfd Non-Voting	Information Technology	58	(119)	100.0	1.01
17-HK	New World Development Co. Ltd.	Real Estate	125	(108)	65.3	6.16
3443-TW	Global Unichip Corp.	Information Technology	246	(105)	85.3	1.86

Source: FactSet, IHS Markit, Morgan Stanley Research. For important disclosures regarding companies that are the subject of this screen, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures.

Exhibit 14: Top 10 Increases and Decreases in Short Interest Value Among China Companies – as of March 22, 2024

China	Company Name	GICS Sector	Short Interest Value (US$m)	Changes vs. Last Month	Utilization Ratio (%)	Days to Cover
ZTO-US	ZTO Express (Cayman), Inc. Sponsored ADR Class A	Industrials	320	259	15.0	5.67
BIDU-US	Baidu Inc Sponsored ADR Class A	Communication Services	340	181	9.5	1.08
HTHT-US	H World Group Limited Sponsored ADR	Consumer Discretionary	423	162	15.9	5.49
9868-HK	XPeng, Inc. Class A	Consumer Discretionary	646	151	48.1	12.62
3690-HK	Meituan Class B	Consumer Discretionary	231	144	0.7	0.70
JD-US	JD.com, Inc. Sponsored ADR Class A	Consumer Discretionary	629	104	53.3	2.51
700-HK	Tencent Holdings Ltd.	Communication Services	247	98	0.3	0.42
YUMC-US	Yum China Holdings, Inc.	Consumer Discretionary	336	97	4.7	2.14
EH-US	EHang Holdings Ltd. Sponsored ADR Class A	Industrials	177	89	95.9	28.93
3968-HK	China Merchants Bank Co., Ltd. Class H	Financials	254	78	4.1	3.03
NIO-US	NIO Inc. Sponsored ADR Class A	Consumer Discretionary	2,163	(382)	75.1	8.20
BABA-US	Alibaba Group Holding Limited Sponsored ADR	Consumer Discretionary	917	(132)	10.8	0.68
354-HK	Chinasoft International Ltd.	Information Technology	61	(96)	12.7	3.85
NTES-US	Netease Inc Sponsored ADR	Communication Services	67	(95)	2.9	0.48
2359-HK	WuXi AppTec Co., Ltd. Class H	Health Care	145	(83)	23.4	2.22
9633-HK	Nongfu Spring Co., Ltd. Class H	Consumer Staples	312	(76)	15.4	21.68
6030-HK	CITIC Securities Co. Ltd. Class H	Financials	98	(74)	5.7	6.25
1833-HK	Ping An Healthcare and Technology Company Limited	Consumer Staples	56	(69)	65.0	6.03
853-HK	MicroPort Scientific Corp.	Health Care	32	(62)	56.1	2.29
257-HK	China Everbright Environment Group Limited	Industrials	33	(62)	46.0	2.25

Source: FactSet, IHS Markit, Morgan Stanley Research. For important disclosures regarding companies that are the subject of this screen, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures.

Exhibit 15: Top 10 Increases and Decreases in Short Interest Value Among Japan Companies – as of March 22, 2024

JP	Company Name	GICS Sector	Short Interest Value (JPYm)	Changes vs. Last Month	Utilization Ratio (%)	Days to Cover
7267-JP	Honda Motor Co., Ltd.	Consumer Discretionary	238,480	152,844	16.1	8.67
6920-JP	Lasertec Corp.	Information Technology	253,067	139,127	17.0	0.91
2914-JP	Japan Tobacco Inc.	Consumer Staples	214,975	132,350	7.1	10.40
7751-JP	Canon Inc.	Information Technology	274,584	111,654	7.4	16.16
4519-JP	Chugai Pharmaceutical Co., Ltd.	Health Care	193,793	110,416	2.7	13.86
1605-JP	Inpex Corporation	Energy	116,247	78,431	4.9	7.65
4324-JP	Dentsu Group Inc.	Communication Services	101,817	73,294	6.8	24.95
5108-JP	Bridgestone Corporation	Consumer Discretionary	147,730	71,490	2.1	10.71
6326-JP	Kubota Corporation	Industrials	157,959	68,453	4.0	18.89
6723-JP	Renesas Electronics Corporation	Information Technology	220,102	60,965	5.7	4.24
7203-JP	Toyota Motor Corp.	Consumer Discretionary	228,353	(230,475)	7.8	1.80
6758-JP	Sony Group Corporation	Consumer Discretionary	30,316	(168,813)	1.1	0.52
6861-JP	Keyence Corporation	Information Technology	21,184	(124,261)	0.7	0.55
6857-JP	Advantest Corp.	Information Technology	117,280	(111,440)	9.9	1.07
7974-JP	Nintendo Co., Ltd.	Communication Services	79,644	(109,688)	4.2	1.63
4568-JP	Daiichi Sankyo Company, Limited	Health Care	9,964	(67,815)	0.8	0.50
6501-JP	Hitachi,Ltd.	Industrials	102,710	(63,639)	2.6	3.92
8035-JP	Tokyo Electron Ltd.	Information Technology	159,859	(59,482)	3.3	1.15
8001-JP	Itochu Corporation	Industrials	531,535	(40,657)	30.7	22.14
4063-JP	Shin-Etsu Chemical Co Ltd	Materials	64,524	(39,248)	1.9	1.76

Source: FactSet, IHS Markit, Morgan Stanley Research. For important disclosures regarding companies that are the subject of this screen, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures.
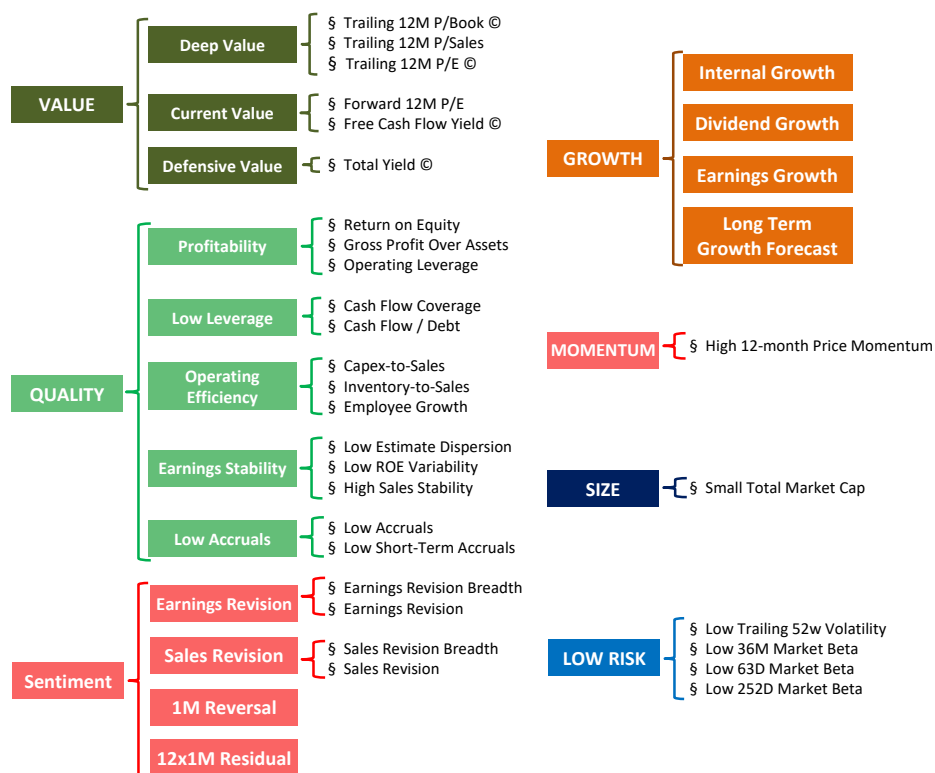
Factor Monitor – Biweekly Update March 22, 2024

Methodology

Factor return calculation: To evaluate historical factor performance, we rank stocks as at month-end within defined universes, and form quintile portfolios based on the underlying factor values. We go long the top quintile and short the bottom quintile (i.e., long the top 20th percentile of stocks within the defined universe and short those in the bottom 20th percentile), rebalanced monthly. We then calculate the performance of the time series of this L/S market-neutral portfolio over various time horizons.

Composite formation: To calculate the composite factors, we first z-score the individual factor values at each monthly observation within the defined universe. Individual factor z-scores are then averaged into composite scores for each stock on an equal-weighted basis.

Exhibit 16: Morgan Stanley Factor Structure (Definitions can be found in Appendix – Factor Definitions)

VALUE
- **Deep Value**
  - § Trailing 12M P/Book ©
  - § Trailing 12M P/Sales
  - § Trailing 12M P/E ©
- **Current Value**
  - § Forward 12M P/E
  - § Free Cash Flow Yield ©
- **Defensive Value**
  - § Total Yield ©

GROWTH
- Internal Growth
- Dividend Growth
- Earnings Growth
- Long Term Growth Forecast

QUALITY
- **Profitability**
  - § Return on Equity
  - § Gross Profit Over Assets
  - § Operating Leverage
- **Low Leverage**
  - § Cash Flow Coverage
  - § Cash Flow / Debt
- **Operating Efficiency**
  - § Capex-to-Sales
  - § Inventory-to-Sales
  - § Employee Growth
- **Earnings Stability**
  - § Low Estimate Dispersion
  - § Low ROE Variability
  - § High Sales Stability
- **Low Accruals**
  - § Low Accruals
  - § Low Short-Term Accruals

MOMENTUM
- § High 12-month Price Momentum

SIZE
- § Small Total Market Cap

Sentiment
- **Earnings Revision**
  - § Earnings Revision Breadth
  - § Earnings Revision
- **Sales Revision**
  - § Sales Revision Breadth
  - § Sales Revision
- **1M Reversal**
- **12x1M Residual**

LOW RISK
- § Low Trailing 52w Volatility
- § Low 36M Market Beta
- § Low 63D Market Beta
- § Low 252D Market Beta

Source: Morgan Stanley Research

Asia Pacific ex Japan – Factor Monitor

Exhibit 17: Asia Pacific ex Japan – Factor Performance Summary

As of: 3/22/2024

Category	Factor Description	Asia Pacific ex Japan		
		Mar MTD	Feb	YTD
Deep Value	Cheap P/B	1.4%	2.5%	3.9%
	Cheap P/S	1.8%	1.1%	3.0%
	Cheap P/E	0.8%	1.8%	2.6%
Defensive Value	High Total Yield	0.7%	-1.6%	-0.9%
Current Value	Cheap Fwd P/E	2.5%	3.2%	5.8%
Quality Value	High FCF Yield	0.5%	-1.5%	-1.0%
	Value Composite	**1.0%**	**3.0%**	**4.1%**
Quality	Low Accruals	-1.0%	-0.2%	-1.2%
	High Earnings Stability	1.0%	-0.3%	0.7%
	High Profitability	-1.3%	-0.2%	-1.5%
	Low Leverage	0.2%	3.7%	3.9%
	High Operating Efficiency	-0.3%	-1.2%	-1.5%
	Quality Composite	**-1.0%**	**-0.5%**	**-1.5%**
Growth	High Internal Growth	-1.0%	2.6%	1.6%
	High Dividend Growth	-0.5%	0.4%	-0.1%
	High Earnings Growth	-0.5%	3.9%	3.4%
	High Long Term Growth f/c	2.5%	2.5%	5.0%
	Growth Composite	**-1.2%**	**1.6%**	**0.4%**
Sentiment	1M Loser	-1.1%	4.2%	3.1%
	12M-1M Residual Return	1.0%	3.2%	4.2%
	Earnings Revision	-0.1%	1.9%	1.8%
	Sales Revision	0.7%	0.2%	1.0%
	Sentiment Composite	**1.6%**	**4.9%**	**6.6%**
Technicals	12M Price Momentum	-0.8%	-2.0%	-2.9%
	Small Cap	1.8%	1.0%	2.8%
	Low Trading Liquidity	-1.5%	-4.5%	-6.0%
	High Short Ratio	1.4%	5.5%	6.9%
	High DTC Short	0.8%	3.7%	4.6%
	High Short Utilization	0.5%	3.9%	4.4%
	Low Volatility	-0.8%	-7.1%	-7.9%
	Low Beta	-2.3%	-5.1%	-7.3%

Source: FactSet, Morgan Stanley Research

Exhibit 18: Cumulative L/S Alpha since 2022 – Asia Pacific ex Japan

Asia Pacific ex Japan - Overall Composites

Legend: 12M Price Momentum — Small Cap — Low Beta — MS Value Composite — MS Quality Composite — MS Growth Composite — MS Sentiment Composite
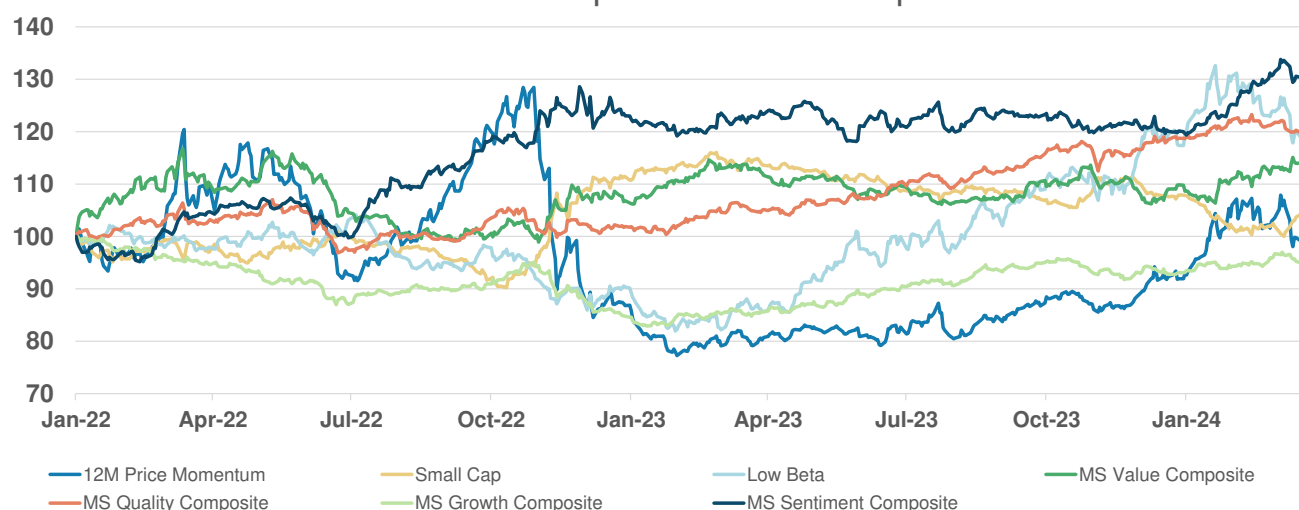
Source: FactSet, Morgan Stanley Research

Exhibit 19: Value Factors: Cumulative L/S Alpha since 2022 – Asia Pacific ex Japan
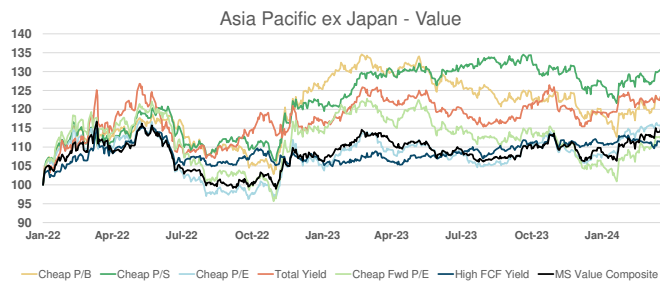
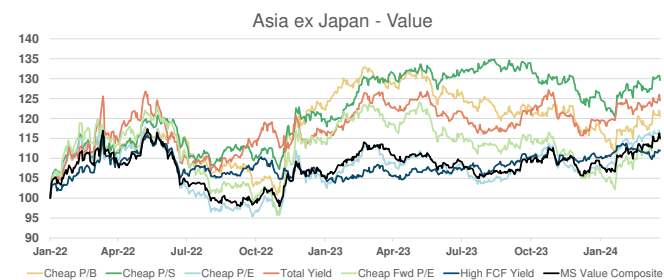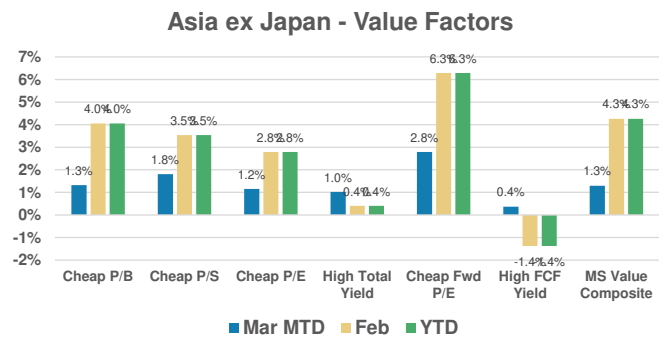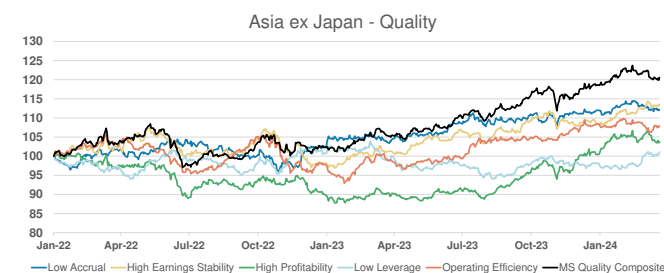
Source: FactSet, Morgan Stanley Research

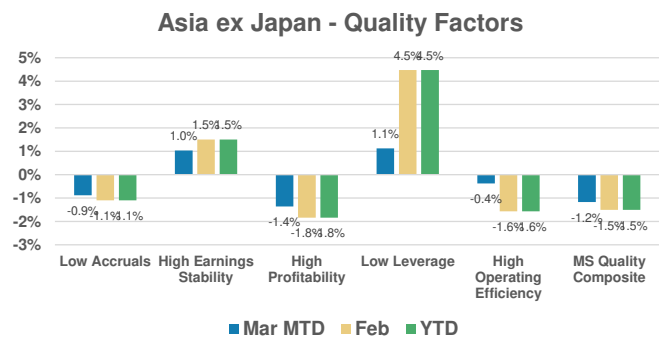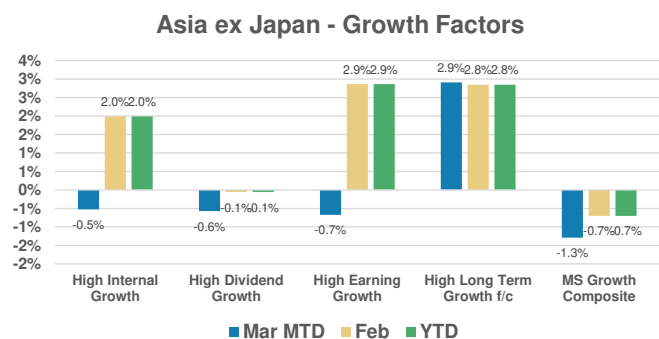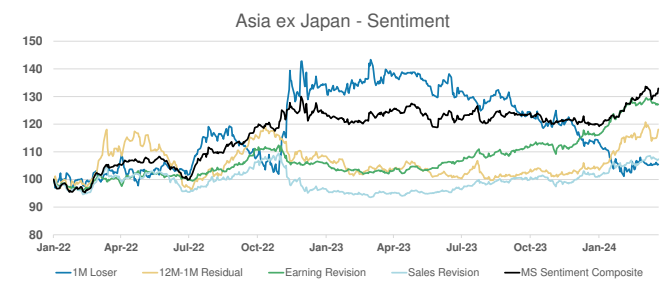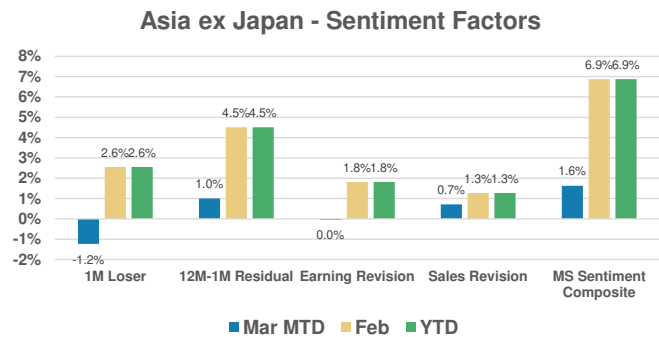**Exhibit 20:** Value Factors: L/S Alpha Asia Pacific ex Japan
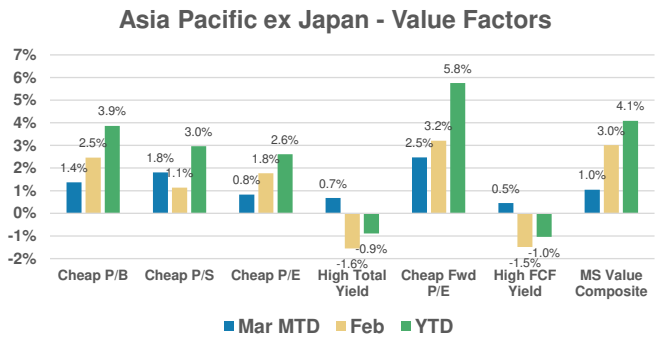
Source: FactSet, Morgan Stanley Research

Exhibit 21: Quality Factors: Cumulative L/S Alpha since 2022 – Alpha Asia Pacific ex Japan
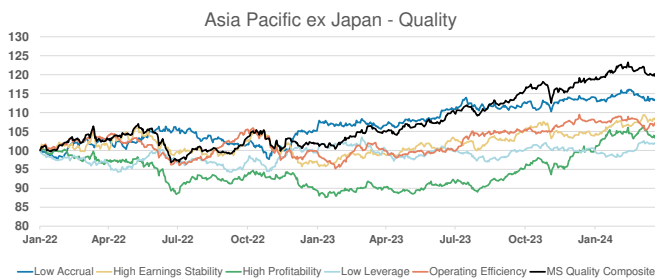
Source: FactSet, Morgan Stanley Research

Exhibit 22: Quality Factors: L/S Alpha Asia Pacific ex Japan
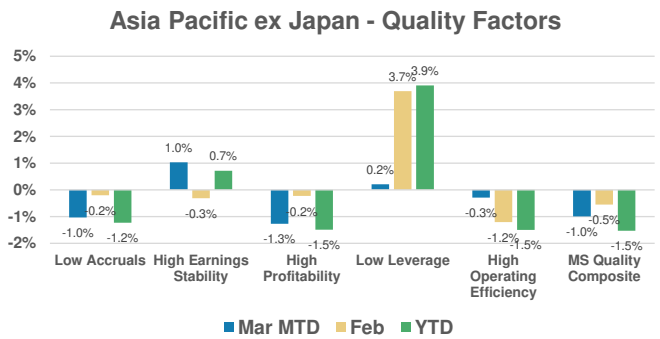
Source: FactSet, Morgan Stanley Research

Exhibit 23: Growth Factors: Cumulative L/S Alpha since 2022 – Asia Pacific ex Japan

Source: FactSet, Morgan Stanley Research

Exhibit 24: Growth Factors: L/S Alpha Asia Pacific ex Japan
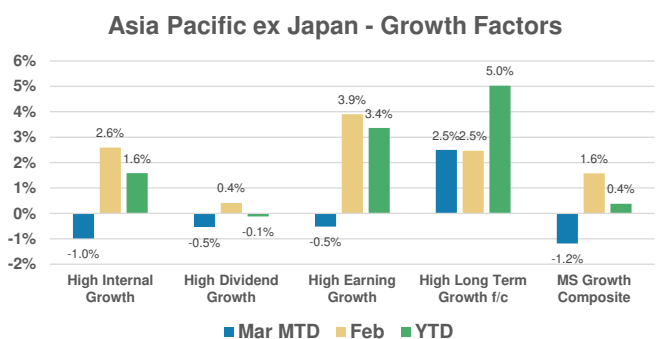
Source: FactSet, Morgan Stanley Research

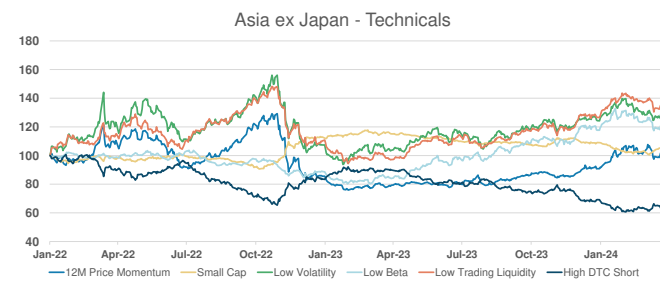**Exhibit 25:** Sentiment Factors: Cumulative L/S Alpha since 2022 – Asia Pacific ex Japan

Asia Pacific ex Japan - Sentiment
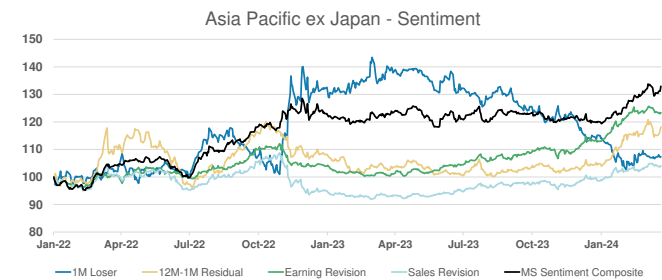
Source: FactSet, Morgan Stanley Research

Exhibit 26: Sentiment Factors: L/S Alpha Asia Pacific ex Japan

Asia Pacific ex Japan - Sentiment Factors
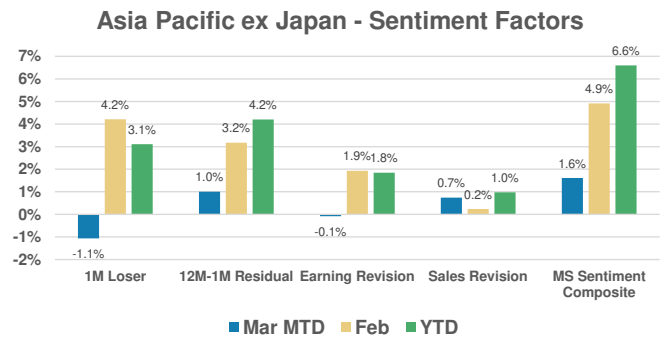
Source: FactSet, Morgan Stanley Research

Exhibit 27: Other Factors: Cumulative L/S Alpha since 2022 – Asia Pacific ex Japan

Asia Pacific ex Japan - Technicals
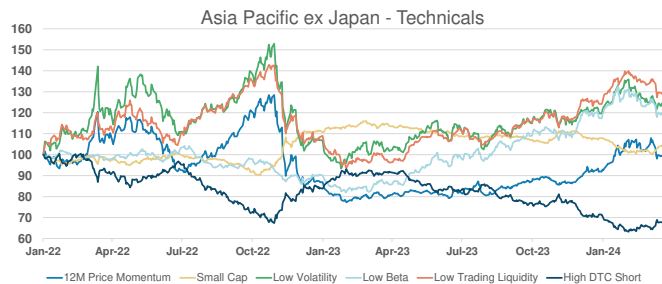
Source: FactSet, Morgan Stanley Research

Exhibit 28: Other Factors: L/S Alpha Asia Pacific ex Japan

Asia Pacific ex Japan - Other Factors
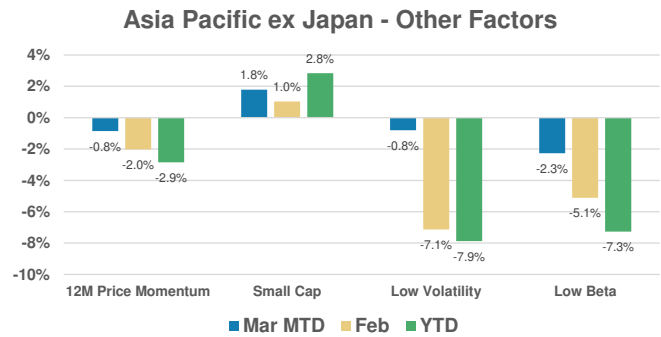
Source: FactSet, Morgan Stanley Research

Asia ex Japan – Factor Monitor

Exhibit 29: Asia ex Japan – Factor Performance Summary

		Asia ex Japan		
As of: 3/22/2024				
Category	**Factor Description**	**Mar MTD**	**Feb**	**YTD**
Deep Value	Cheap P/B	1.3%	2.7%	4.0%
	Cheap P/S	1.8%	1.7%	3.5%
	Cheap P/E	1.2%	1.6%	2.8%
Defensive Value	High Total Yield	1.0%	-0.6%	0.4%
Current Value	Cheap Fwd P/E	2.8%	3.4%	6.3%
Quality Value	High FCF Yield	0.4%	-1.7%	-1.4%
	Value Composite	**1.3%**	**2.9%**	**4.3%**
Quality	Low Accruals	-0.9%	-0.2%	-1.1%
	High Earnings Stability	1.0%	0.5%	1.5%
	High Profitability	-1.4%	-0.5%	-1.8%
	Low Leverage	1.1%	3.3%	4.5%
	High Operating Efficiency	-0.4%	-1.2%	-1.6%
	Quality Composite	**-1.2%**	**-0.3%**	**-1.5%**
Growth	High Internal Growth	-0.5%	2.5%	2.0%
	High Dividend Growth	-0.6%	0.5%	-0.1%
	High Earnings Growth	-0.7%	3.6%	2.9%
	High Long Term Growth f/c	2.9%	-0.1%	2.8%
	Growth Composite	**-1.3%**	**0.6%**	**-0.7%**
Sentiment	1M Loser	-1.2%	3.8%	2.6%
	12M-1M Residual Return	1.0%	3.5%	4.5%
	Earnings Revision	0.0%	1.9%	1.8%
	Sales Revision	0.7%	0.5%	1.3%
	Sentiment Composite	**1.6%**	**5.2%**	**6.9%**
Technicals	12M Price Momentum	-0.9%	-2.3%	-3.1%
	Small Cap	1.8%	0.5%	2.3%
	Low Trading Liquidity	-1.5%	-4.4%	-5.9%
	High Short Ratio	1.2%	5.4%	6.7%
	High DTC Short	0.2%	3.8%	4.0%
	High Short Utilization	0.6%	4.3%	4.9%
	Low Volatility	-0.9%	-7.3%	-8.1%
	Low Beta	-2.5%	-5.3%	-7.7%

Source: FactSet, Morgan Stanley Research

Exhibit 30: Cumulative L/S Alpha since 2021 – Asia ex Japan

Asia ex Japan - Overall Composites

Legend: 12M Price Momentum, Small Cap, Low Beta, MS Value Composite, MS Quality Composite, MS Growth Composite, MS Sentiment Composite
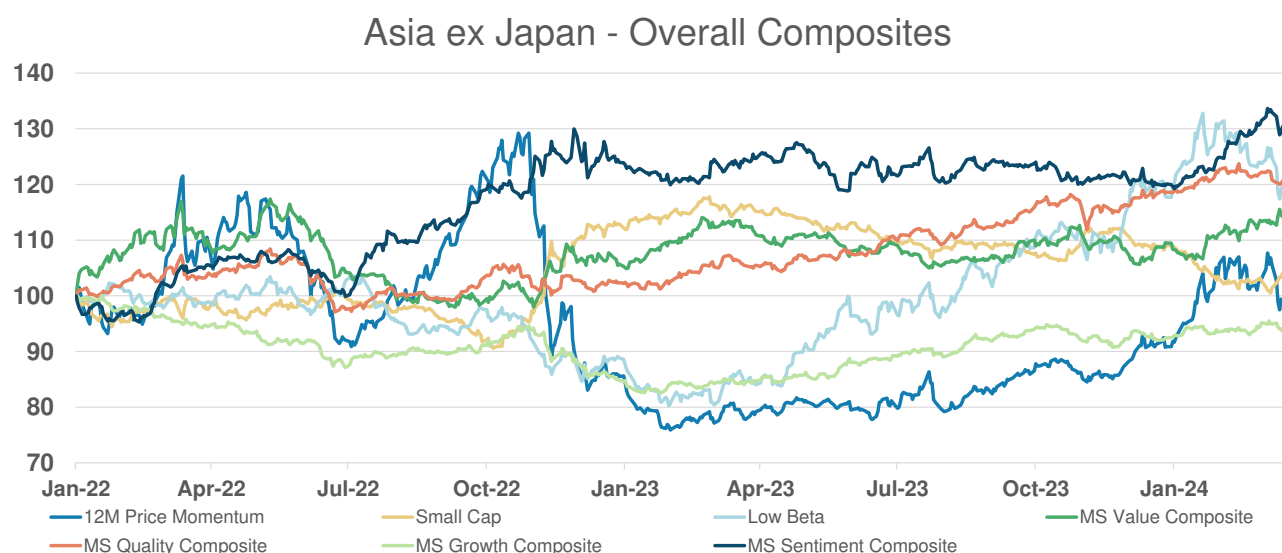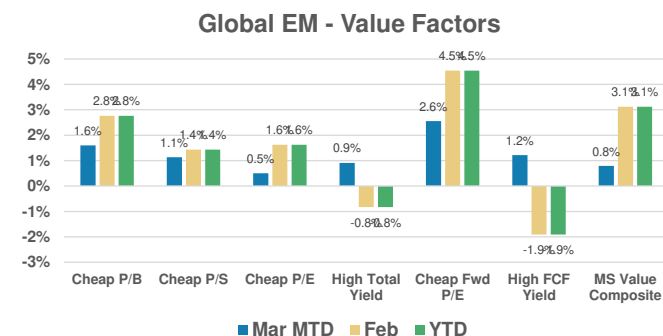
Source: FactSet, Morgan Stanley Research

Exhibit 31: Value Factors: Cumulative L/S Alpha since 2022 – Asia ex Japan

Asia ex Japan - Value
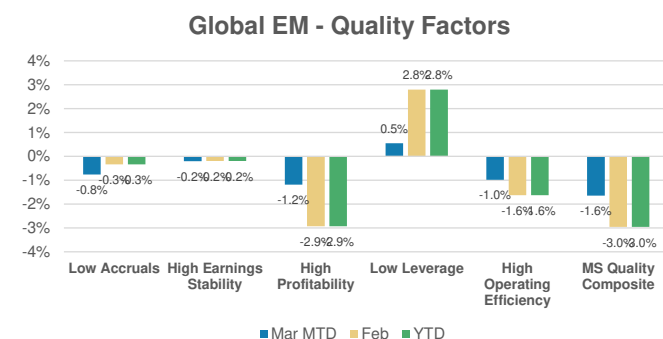
Source: FactSet, Morgan Stanley Research

Exhibit 32: Value Factors: L/S Alpha Asia ex Japan

Asia ex Japan - Value Factors

Source: FactSet, Morgan Stanley Research

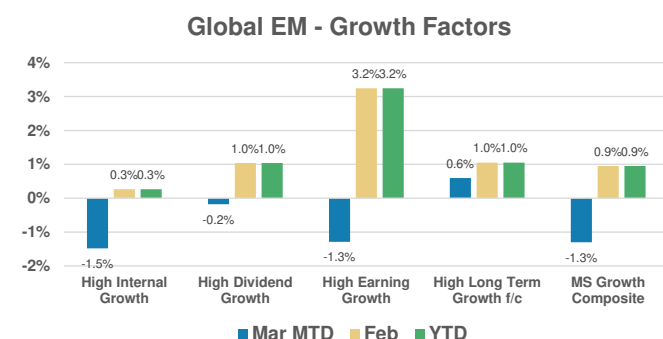**Exhibit 33:** Quality Factors: Cumulative L/S Alpha since 2022 – Asia ex Japan

Asia ex Japan - Quality

Source: FactSet, Morgan Stanley Research

Exhibit 34: Quality Factors: L/S Alpha Asia ex Japan

Asia ex Japan - Quality Factors

Source: FactSet, Morgan Stanley Research

Exhibit 35: Growth Factors: Cumulative L/S Alpha since 2022 – Asia ex Japan

Asia ex Japan - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 36: Growth Factors: L/S Alpha Asia ex Japan

Asia ex Japan - Growth Factors

Source: FactSet, Morgan Stanley Research

**Exhibit 37:** Sentiment Factors: Cumulative L/S Alpha since 2022 – Asia ex Japan

Asia ex Japan - Sentiment

Legend: 1M Loser, 12M-1M Residual, Earning Revision, Sales Revision, MS Sentiment Composite

Source: FactSet, Morgan Stanley Research

Exhibit 38: Sentiment Factors: L/S Alpha Asia ex Japan

Asia ex Japan - Sentiment Factors

Legend: Mar MTD, Feb, YTD

Source: FactSet, Morgan Stanley Research

Exhibit 39: Other Factors: Cumulative L/S Alpha since 2022 – Asia ex Japan

Asia ex Japan - Technicals

Legend: 12M Price Momentum, Small Cap, Low Volatility, Low Beta, Low Trading Liquidity, High DTC Short

Source: FactSet, Morgan Stanley Research

Exhibit 40: Other Factors: L/S Alpha Asia ex Japan

Asia ex Japan - Other Factors

Legend: Mar MTD, Feb, YTD
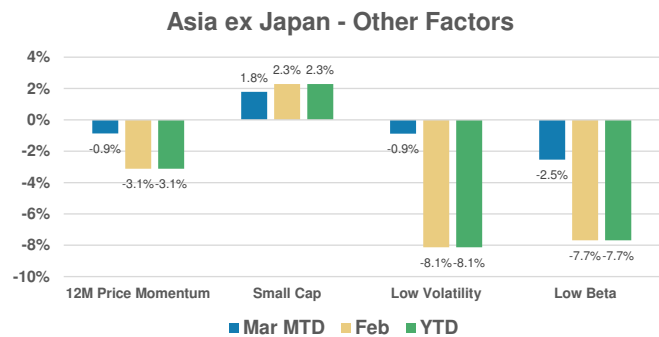
Source: FactSet, Morgan Stanley Research

Emerging Markets – Factor Monitor

Exhibit 41: Global EM – Factor Performance Summary

As of: 3/22/2024

Global Emerging Markets

Category	Factor Description	Mar MTD	Feb	YTD
Deep Value	Cheap P/B	1.6%	1.1%	2.8%
	Cheap P/S	1.1%	0.3%	1.4%
	Cheap P/E	0.5%	1.1%	1.6%
Defensive Value	High Total Yield	0.9%	-1.7%	-0.8%
Current Value	Cheap Fwd P/E	2.6%	1.9%	4.5%
Quality Value	High FCF Yield	1.2%	-3.1%	-1.9%
	Value Composite	**0.8%**	**2.3%**	**3.1%**
Quality	Low Accruals	-0.8%	0.4%	-0.3%
	High Earnings Stability	-0.2%	0.0%	-0.2%
	High Profitability	-1.2%	-1.8%	-2.9%
	Low Leverage	0.5%	2.2%	2.8%
	High Operating Efficiency	-1.0%	-0.6%	-1.6%
	Quality Composite	**-1.6%**	**-1.3%**	**-3.0%**
Growth	High Internal Growth	-1.5%	1.8%	0.3%
	High Dividend Growth	-0.2%	1.2%	1.0%
	High Earnings Growth	-1.3%	4.6%	3.2%
	High Long Term Growth f/c	0.6%	0.5%	1.0%
	Growth Composite	**-1.3%**	**2.3%**	**0.9%**
Sentiment	1M Loser	0.0%	3.1%	3.1%
	12M-1M Residual Return	-0.3%	2.5%	2.3%
	Earnings Revision	-0.6%	2.0%	1.4%
	Sales Revision	0.2%	0.2%	0.4%
	Sentiment Composite	**0.1%**	**4.2%**	**4.2%**
Technicals	12M Price Momentum	-1.4%	-1.0%	-2.4%
	Small Cap	1.1%	0.5%	1.6%
	Low Trading Liquidity	-1.3%	-3.5%	-4.8%
	High Short Ratio	1.3%	3.1%	4.4%
	High DTC Short	1.0%	2.7%	3.7%
	High Short Utilization	1.1%	4.3%	5.5%
	Low Volatility	-1.6%	-5.6%	-7.1%
	Low Beta	-1.8%	-4.0%	-5.7%

Source: FactSet, Morgan Stanley Research

Exhibit 42: Cumulative L/S Alpha since 2021 – Global EM

Global EM - Overall Composites

Legend: 12M Price Momentum, Small Cap, Low Beta, MS Value Composite, MS Quality Composite, MS Growth Composite, MS Sentiment Composite
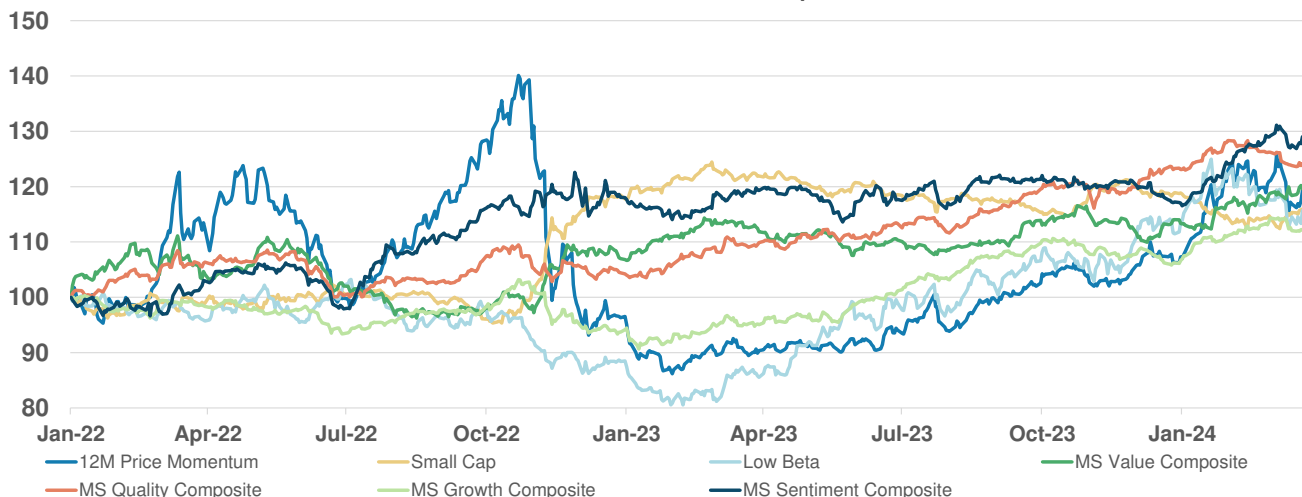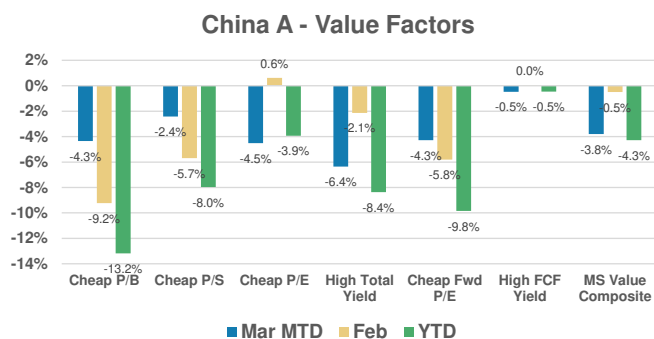
Source: FactSet, Morgan Stanley Research

Exhibit 43: Value Factors: Cumulative L/S Alpha since 2022 – Global EM
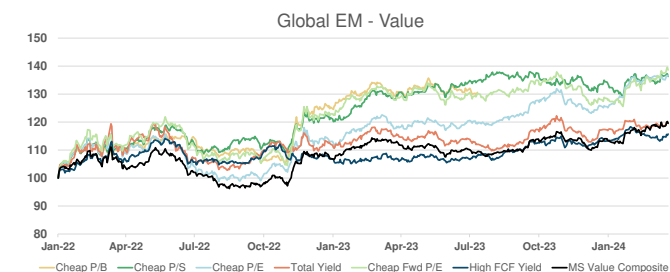
Global EM - Value
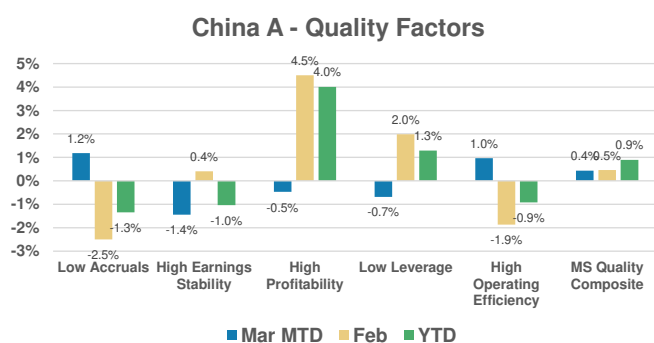
Source: FactSet, Morgan Stanley Research

Exhibit 44: Value Factors: L/S Alpha Global EM

Global EM - Value Factors

Source: FactSet, Morgan Stanley Research

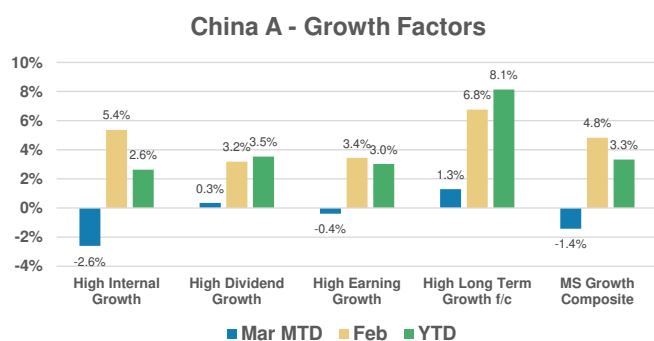**Exhibit 45:** Quality Factors: Cumulative L/S Alpha since 2022 – Global EM
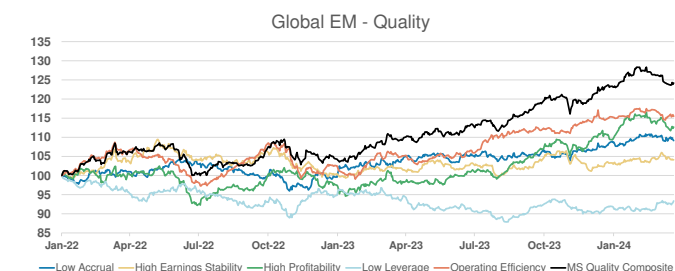
Global EM - Quality

Source: FactSet, Morgan Stanley Research

Exhibit 46: Quality Factors: L/S Alpha Global EM

Global EM - Quality Factors

Source: FactSet, Morgan Stanley Research

Exhibit 47: Growth Factors: Cumulative L/S Alpha since 2022 – Global EM

Global EM - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 48: Growth Factors: L/S Alpha Global EM

Global EM - Growth Factors

Source: FactSet, Morgan Stanley Research

Exhibit 49: Sentiment Factors: Cumulative L/S Alpha since 2022 – Global EM

Global EM - Sentiment
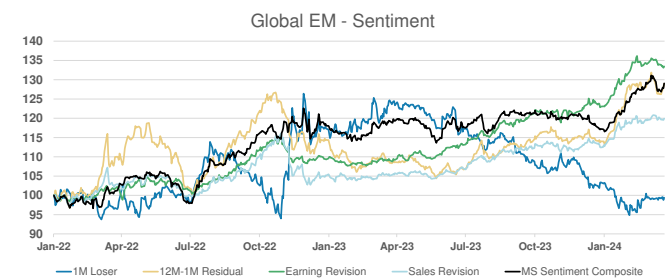
Source: FactSet, Morgan Stanley Research

Exhibit 50: Sentiment Factors: L/S Alpha Global EM

Global EM - Sentiment Factors
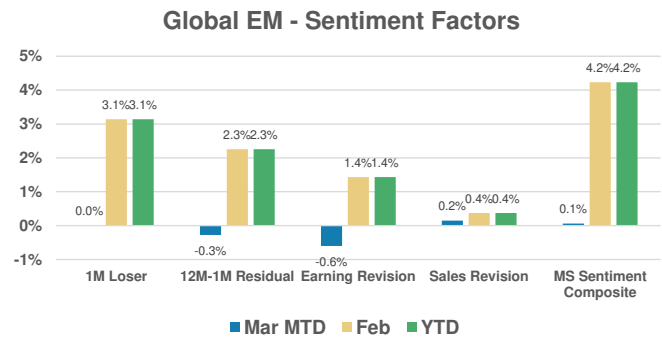
Source: FactSet, Morgan Stanley Research

Exhibit 51: Other Factors: Cumulative L/S Alpha since 2022 – Global EM

Global EM - Technicals
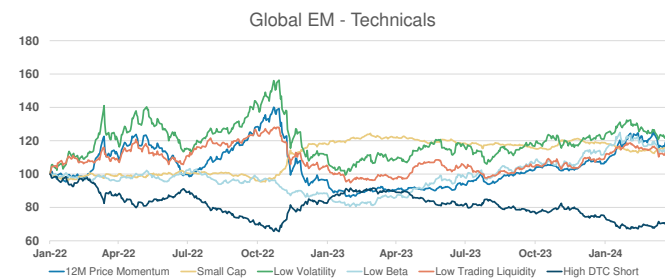
Source: FactSet, Morgan Stanley Research

Exhibit 52: Other Factors: L/S Alpha Global EM

Global EM - Other Factors
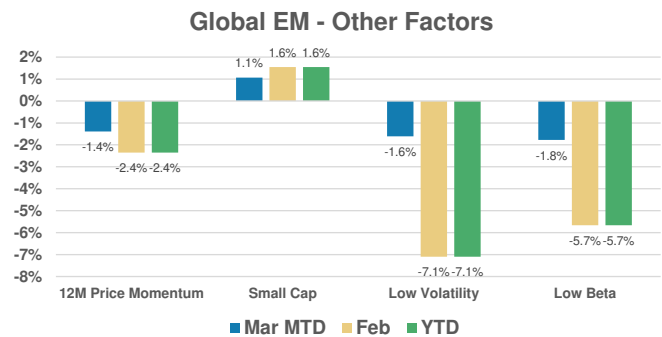
Source: FactSet, Morgan Stanley Research

China A – Factor Monitor

Exhibit 53: China A – Factor Performance Summary

| Category	Factor Description	China A		
As of: 3/22/2024		**Mar MTD**	**Feb**	**YTD**
Deep Value	Cheap P/B	-4.3%	-9.2%	13.2%
	Cheap P/S	-2.4%	-5.7%	-8.0%
	Cheap P/E	-4.5%	0.6%	-3.9%
Defensive Value	High Total Yield	-6.4%	-2.1%	-8.4%
Current Value	Cheap Fwd P/E	-4.3%	-5.8%	-9.8%
Quality Value	High FCF Yield	-0.5%	0.0%	-0.5%
	Value Composite	**-3.8%**	**-0.5%**	**-4.3%**
Quality	Low Accruals	1.2%	-2.5%	-1.3%
	High Earnings Stability	-1.4%	0.4%	-1.0%
	High Profitability	-0.5%	4.5%	4.0%
	Low Leverage	-0.7%	2.0%	1.3%
	High Operating Efficiency	1.0%	-1.9%	-0.9%
	Quality Composite	**0.4%**	**0.5%**	**0.9%**
Growth	High Internal Growth	-2.6%	5.4%	2.6%
	High Dividend Growth	0.3%	3.2%	3.5%
	High Earnings Growth	-0.4%	3.4%	3.0%
	High Long Term Growth f/c	1.3%	6.8%	8.1%
	Growth Composite	**-1.4%**	**4.8%**	**3.3%**
Sentiment	1M Loser	1.9%	6.9%	9.0%
	12M-1M Residual Return	6.9%	3.2%	10.4%
	Earnings Revision	1.2%	-0.6%	0.5%
	Sales Revision	2.1%	0.0%	2.1%
	Sentiment Composite	**5.0%**	**3.1%**	**8.2%**
Technicals	12M Price Momentum	2.2%	0.0%	2.2%
	Small Cap	8.9%	-8.8%	-0.6%
	Low Trading Liquidity	-9.0%	-2.9%	11.6%
	Low Volatility	-9.7%	-10.1%	18.8%
	Low Beta	-5.1%	-8.1%	12.8%

Source: FactSet, Morgan Stanley Research

Exhibit 54: Cumulative L/S Alpha since 2021 – China A
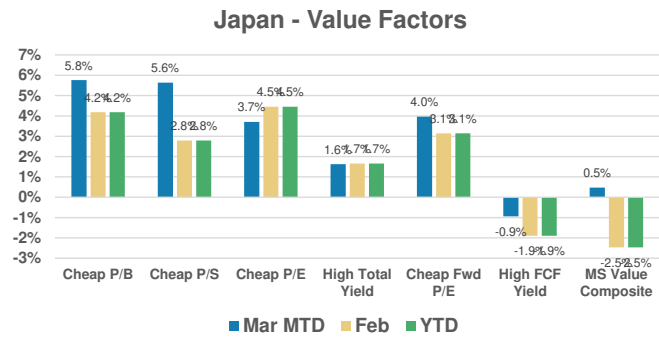

China A - Overall Composites
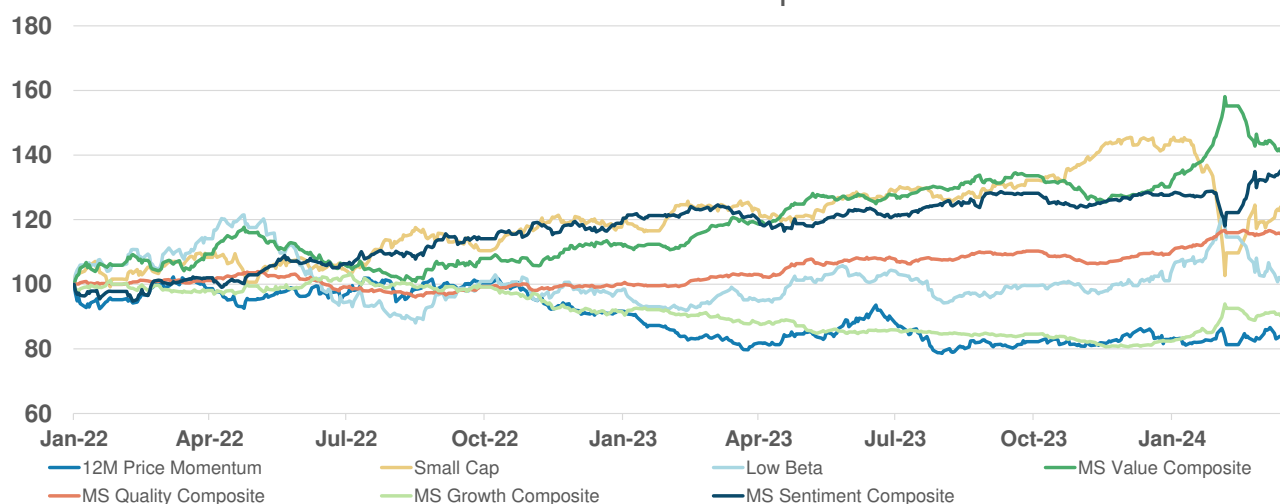
Source: FactSet, Morgan Stanley Research

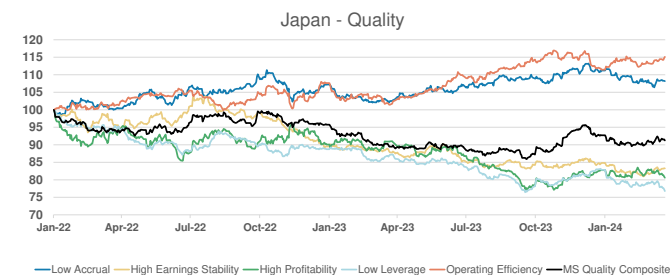**Exhibit 55:** Value Factors: Cumulative L/S Alpha since 2022 – China A
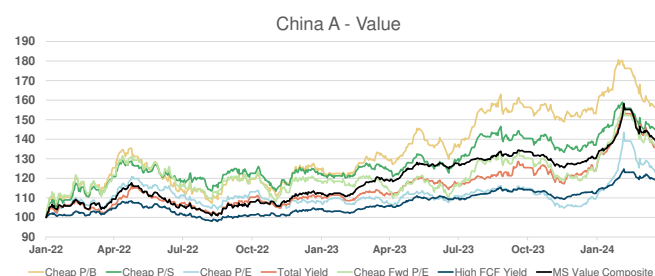
China A - Value

Source: FactSet, Morgan Stanley Research

Exhibit 56: Value Factors: L/S Alpha China A

China A - Value Factors

Source: FactSet, Morgan Stanley Research

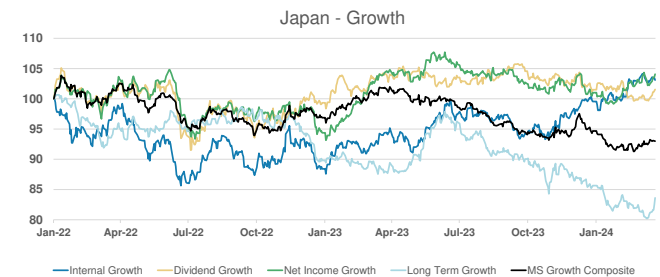**Exhibit 57:** Quality Factors: – Cumulative L/S Alpha since 2022 – China A

China A - Quality

Source: FactSet, Morgan Stanley Research

Exhibit 58: Quality Factors: L/S Alpha China A

China A - Quality Factors

Source: FactSet, Morgan Stanley Research

Exhibit 59: Growth Factors: Cumulative L/S Alpha since 2022 – China A

China A - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 60: Growth Factors: L/S Alpha China A

China A - Growth Factors

Source: FactSet, Morgan Stanley Research

Exhibit 61: Sentiment Factors: Cumulative L/S Alpha since 2022 – China A
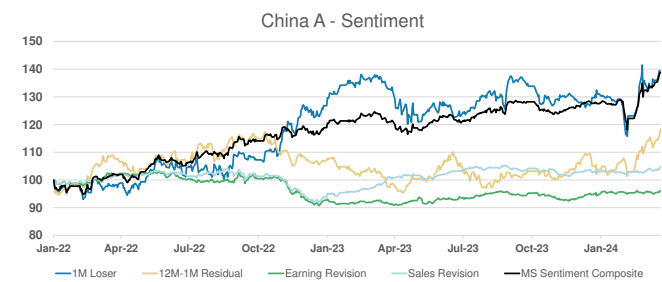
China A - Sentiment
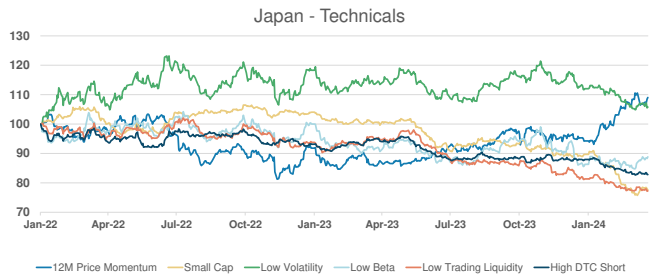

Source: FactSet, Morgan Stanley Research

Exhibit 62: Sentiment Factors: L/S Alpha China A

China A - Sentiment Factors
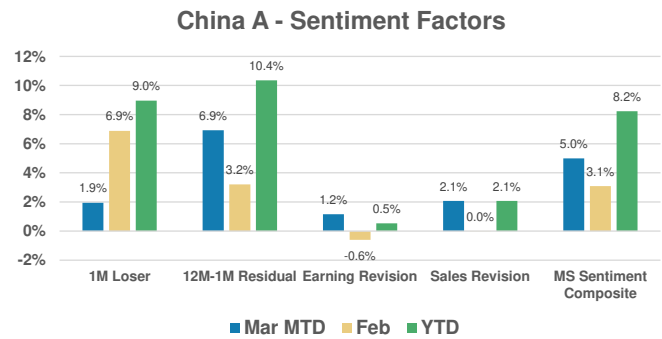
Source: FactSet, Morgan Stanley Research

Exhibit 63: Other Factors: Cumulative L/S Alpha since 2022 – China A

China A - Technicals

Source: FactSet, Morgan Stanley Research

Exhibit 64: Other Factors: L/S Alpha China A

China A - Other Factors
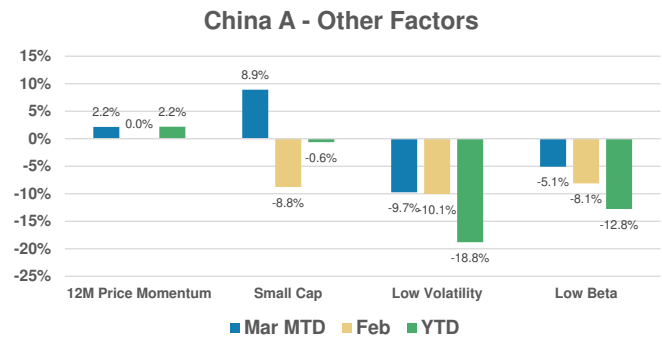
Source: FactSet, Morgan Stanley Research

Japan – Factor Monitor

Exhibit 65: Japan – Factor Performance Summary

		Japan		
As of: 3/22/2024				
Category	**Factor Description**	**Mar MTD**	**Feb**	**YTD**
Deep Value	Cheap P/B	5.8%	-1.5%	4.2%
	Cheap P/S	5.6%	-2.7%	2.8%
	Cheap P/E	3.7%	0.7%	4.5%
Defensive Value	High Total Yield	1.6%	0.0%	1.7%
Current Value	Cheap Fwd P/E	4.0%	-0.8%	3.1%
Quality Value	High FCF Yield	-0.9%	-1.0%	-1.9%
	Value Composite	**0.5%**	**-2.9%**	**-2.5%**
Quality	Low Accruals	-0.3%	-1.0%	-1.2%
	High Earnings Stability	1.6%	-0.2%	1.4%
	High Profitability	-2.9%	2.4%	-0.6%
	Low Leverage	-3.2%	0.2%	-2.9%
	High Operating Efficiency	1.6%	-1.7%	-0.1%
	Quality Composite	**0.0%**	**0.8%**	**0.8%**
Growth	High Internal Growth	0.0%	3.0%	3.0%
	High Dividend Growth	1.4%	-1.7%	-0.2%
	High Earnings Growth	1.0%	3.2%	4.2%
	High Long Term Growth f/c	1.9%	-0.3%	1.6%
	Growth Composite	**0.6%**	**0.4%**	**1.0%**
Sentiment	1M Loser	-2.6%	-6.1%	-8.5%
	12M-1M Residual Return	0.9%	3.3%	4.3%
	Earnings Revision	1.5%	1.8%	3.3%
	Sales Revision	-0.1%	3.6%	3.5%
	Sentiment Composite	**0.0%**	**-0.7%**	**-0.6%**
Technicals	12M Price Momentum	2.5%	6.2%	8.9%
	Small Cap	-0.2%	-9.0%	-9.2%
	Low Trading Liquidity	-0.3%	-3.1%	-3.4%
	High Short Ratio	-3.3%	-0.3%	-3.6%
	High DTC Short	-1.1%	-2.0%	-3.0%
	High Short Utilization	-2.3%	-2.9%	-5.1%
	Low Volatility	-0.5%	-4.2%	-4.7%
	Low Beta	3.4%	-1.4%	1.9%

Source: FactSet, Morgan Stanley Research

Exhibit 66: Cumulative L/S Alpha since 2022 – Japan

Japan - Overall Composites

Legend: 12M Price Momentum, Small Cap, Low Beta, MS Value Composite, MS Quality Composite, MS Growth Composite, MS Sentiment Composite
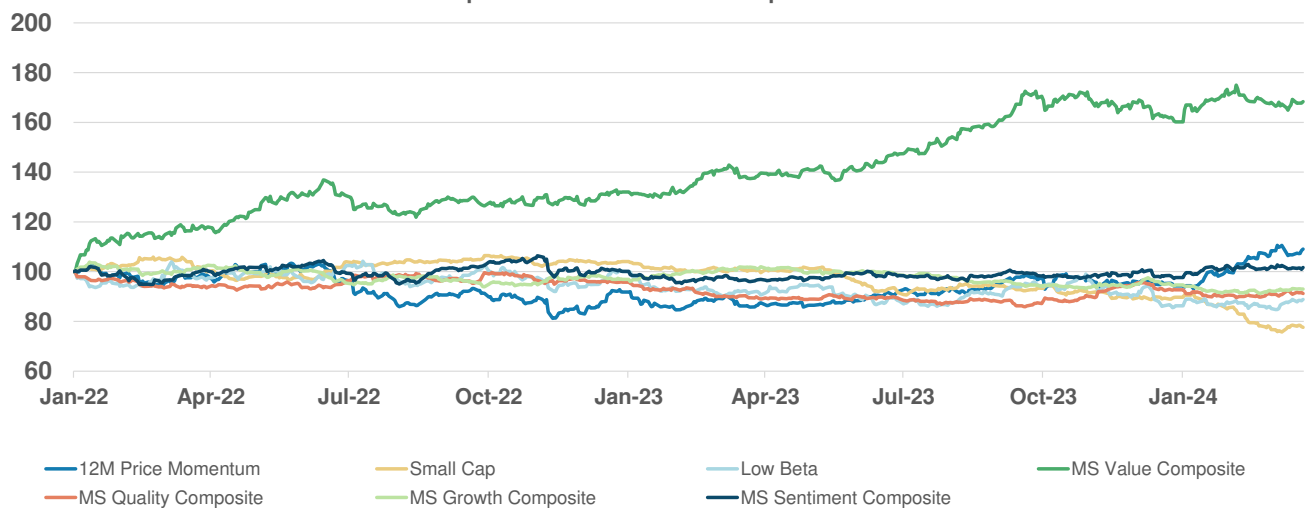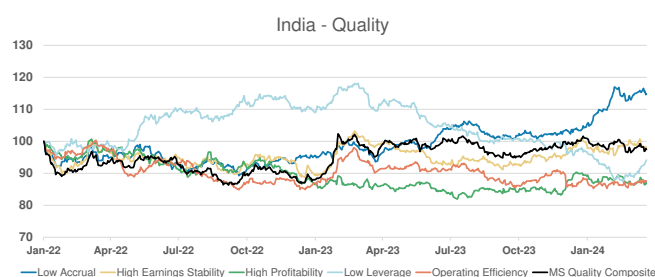
Source: FactSet, Morgan Stanley Research

Exhibit 67: Value Factors: Cumulative L/S Alpha since 2022 – Japan

Japan - Value
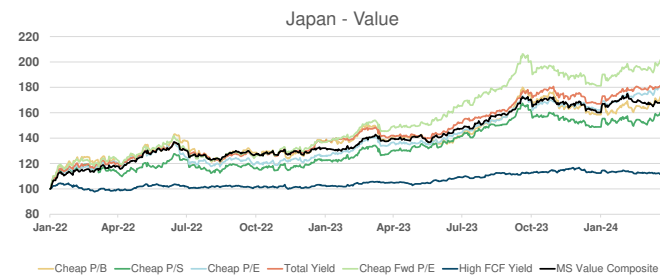
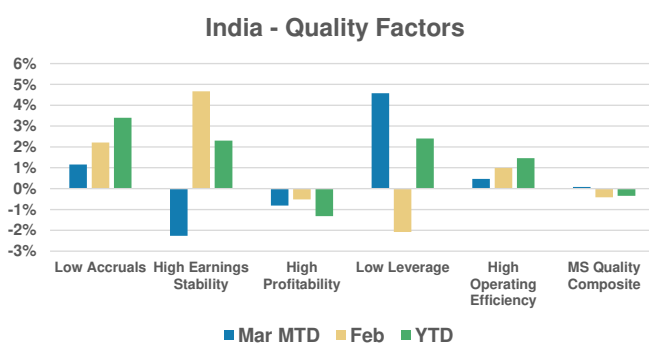Source: FactSet, Morgan Stanley Research

Exhibit 68: Value Factors: L/S Alpha Japan

Japan - Value Factors

Source: FactSet, Morgan Stanley Research

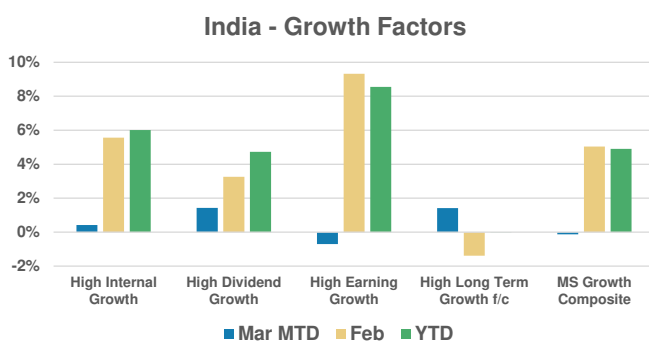**Exhibit 69:** Quality Factors: Cumulative L/S Alpha since 2022 – Japan

Japan - Quality

Source: FactSet, Morgan Stanley Research

Exhibit 70: Quality Factors: L/S Alpha Japan

Japan - Quality Factors
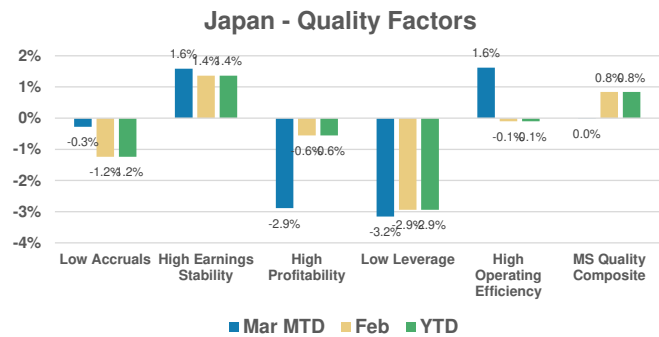
Source: FactSet, Morgan Stanley Research

Exhibit 71: Growth Factors: Cumulative L/S Alpha since 2022 – Japan

Japan - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 72: Growth Factors: L/S Alpha Japan

Japan - Growth Factors
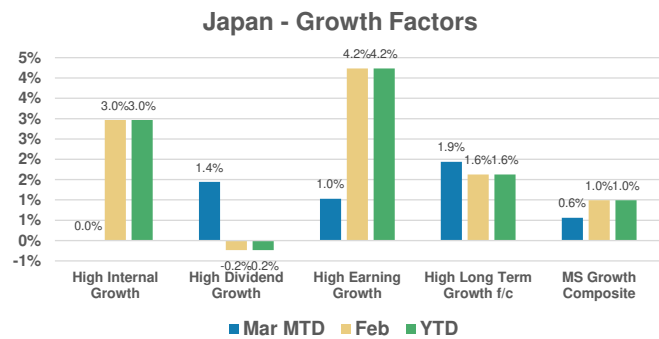
Source: FactSet, Morgan Stanley Research

Exhibit 73: Sentiment Factors: Cumulative L/S Alpha since 2022 – Japan
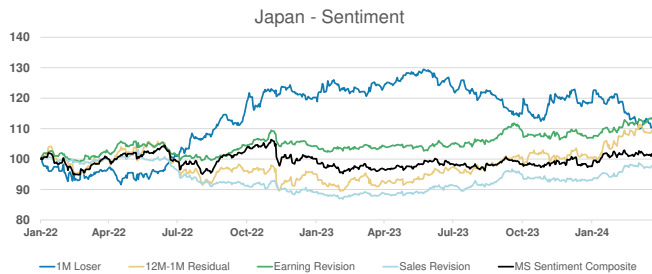
Japan - Sentiment

Source: FactSet, Morgan Stanley Research

Exhibit 74: Sentiment Factors: L/S Alpha Japan

Japan - Sentiment Factors
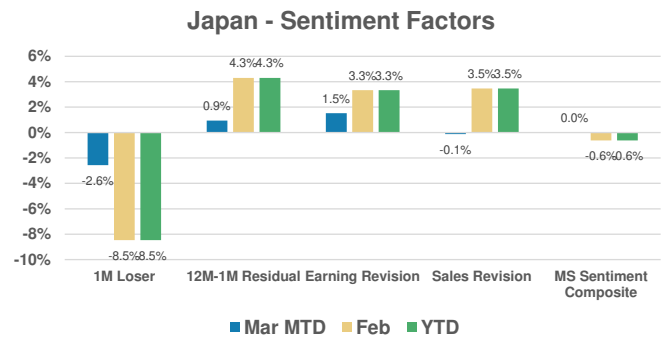
Source: FactSet, Morgan Stanley Research

Exhibit 75: Other Factors: Cumulative L/S Alpha since 2022 – Japan

Japan - Technicals

Source: FactSet, Morgan Stanley Research

Exhibit 76: Other Factors: L/S Alpha Japan

Japan - Other Factors
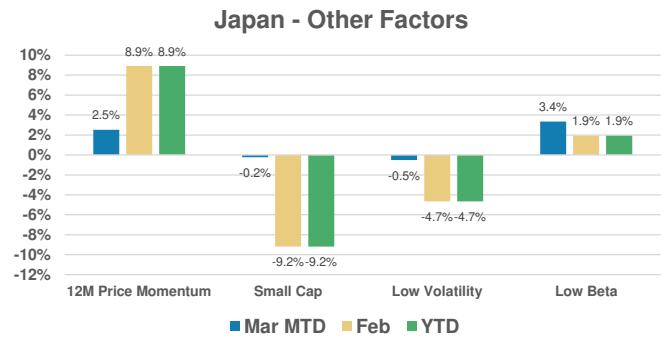
Source: FactSet, Morgan Stanley Research

India – Factor Monitor

Exhibit 77: India – Factor Performance Summary

As of: 3/22/2024		India		
Category	**Factor Description**	**Mar MTD**	**Feb**	**YTD**
Deep Value	Cheap P/B	-0.8%	-1.2%	-2.0%
	Cheap P/S	1.5%	-3.0%	-1.5%
	Cheap P/E	-1.3%	0.4%	-0.9%
Defensive Value	High Total Yield	-1.0%	-1.6%	-2.6%
Current Value	Cheap Fwd P/E	-1.5%	-1.8%	-3.3%
Quality Value	High FCF Yield	0.4%	-3.9%	-3.5%
	Value Composite	**-2.0%**	**2.3%**	**0.3%**
Quality	Low Accruals	1.2%	2.2%	3.4%
	High Earnings Stability	-2.3%	4.7%	2.3%
	High Profitability	-0.8%	-0.5%	-1.3%
	Low Leverage	4.6%	-2.1%	2.4%
	High Operating Efficiency	0.5%	1.0%	1.5%
	Quality Composite	**0.1%**	**-0.4%**	**-0.3%**
Growth	High Internal Growth	0.4%	5.6%	6.0%
	High Dividend Growth	1.4%	3.3%	4.7%
	High Earnings Growth	-0.7%	9.3%	8.6%
	High Long Term Growth f/c	1.4%	-1.4%	0.0%
	Growth Composite	**-0.1%**	**5.0%**	**4.9%**
Sentiment	1M Loser	2.0%	-4.6%	-2.7%
	12M-1M Residual Return	-0.4%	3.2%	2.8%
	Earnings Revision	1.4%	5.0%	6.4%
	Sales Revision	1.5%	-0.7%	0.8%
	Sentiment Composite	**1.6%**	**5.0%**	**6.7%**
Technicals	12M Price Momentum	-1.1%	6.6%	5.4%
	Small Cap	-3.1%	-4.3%	-7.2%
	Low Trading Liquidity	0.6%	3.0%	3.6%
	Low Volatility	0.8%	0.3%	1.2%
	Low Beta	0.2%	-0.4%	-0.2%

Source: FactSet, Morgan Stanley Research

Exhibit 78: Cumulative L/S Alpha since 2022 – India

India - Overall Composites

Legend: 12M Price Momentum, Small Cap, Low Beta, MS Value Composite, MS Quality Composite, MS Growth Composite, MS Sentiment Composite
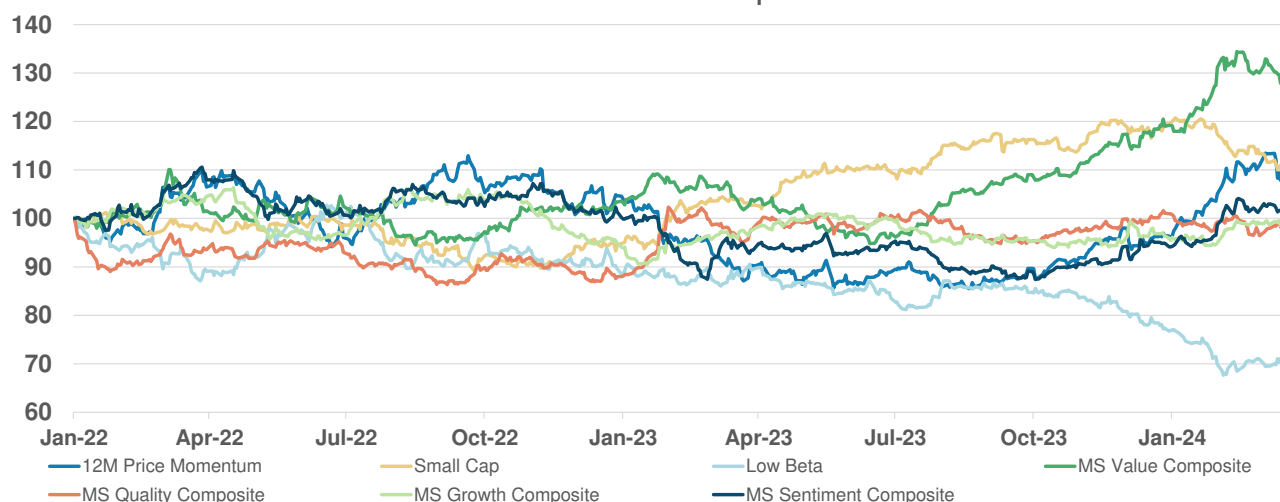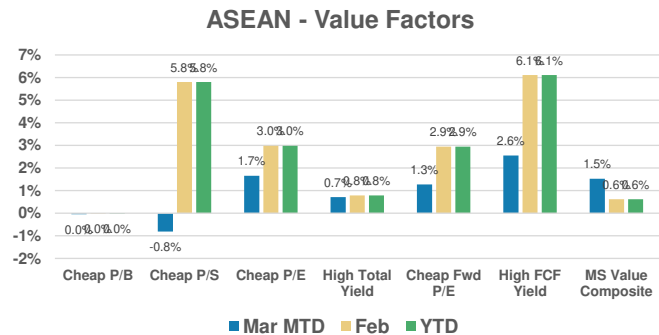
Source: FactSet, Morgan Stanley Research

Exhibit 79: Value Factors: Cumulative L/S Alpha since 2022 – India

India - Value
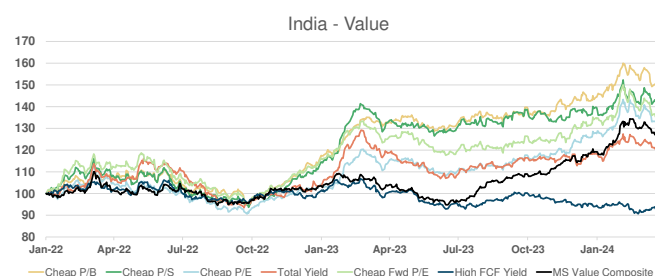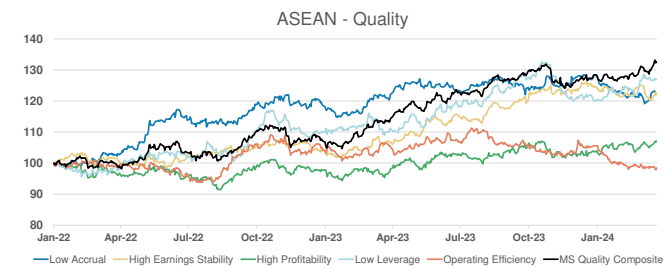

Source: FactSet, Morgan Stanley Research

Exhibit 80: Value Factors: L/S Alpha India

India - Value Factors
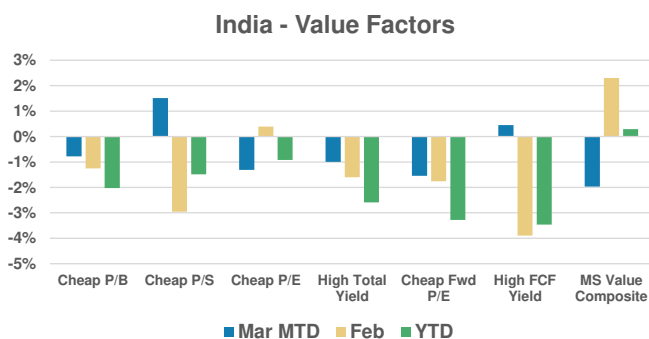
Source: FactSet, Morgan Stanley Research

Exhibit 81: Quality Factors: Cumulative L/S Alpha since 2022 – India

India - Quality
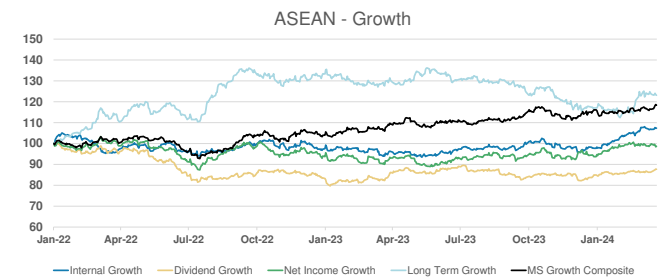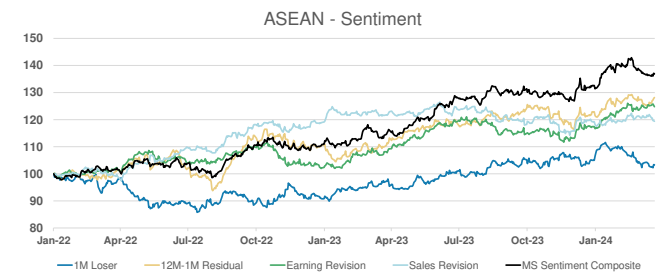

Source: FactSet, Morgan Stanley Research

Exhibit 82: Quality Factors: L/S Alpha India

India - Quality Factors

Source: FactSet, Morgan Stanley Research

Exhibit 83: Growth Factors: Cumulative L/S Alpha since 2022 – India
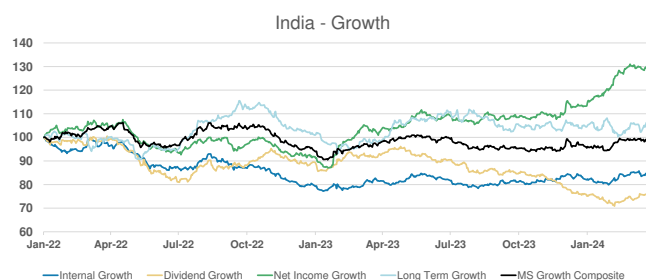
India - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 84: Growth Factors: L/S Alpha India

India - Growth Factors

Source: FactSet, Morgan Stanley Research

**Exhibit 85:** Sentiment Factors: Cumulative L/S Alpha since 2022 – India
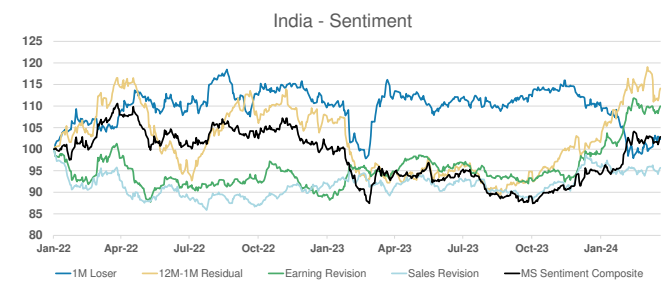
India - Sentiment

Source: FactSet, Morgan Stanley Research

Exhibit 86: Sentiment Factors: L/S Alpha India

India - Sentiment Factors
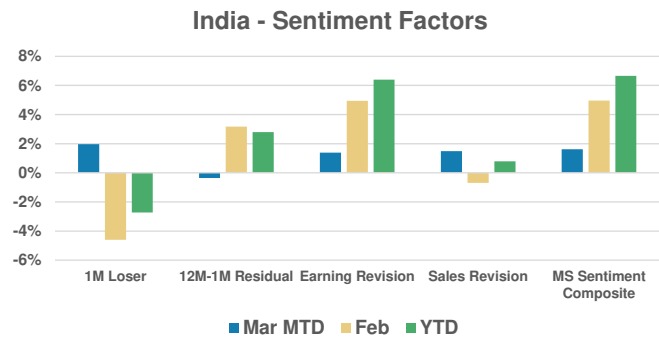
Source: FactSet, Morgan Stanley Research

Exhibit 87: Other Factors: Cumulative L/S Alpha since 2022 – India

India - Technicals

Source: FactSet, Morgan Stanley Research

Exhibit 88: Other Factors: L/S Alpha India

India - Other Factors
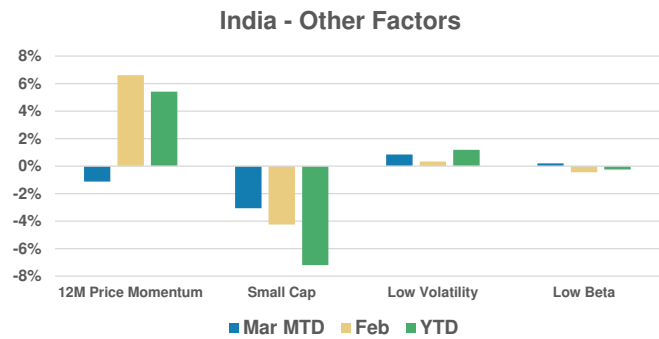
Source: FactSet, Morgan Stanley Research

ASEAN – Factor Monitor

Exhibit 89: ASEAN – Factor Performance Summary

As of: 3/22/2024		ASEAN		
Category	**Factor Description**	**Mar MTD**	**Feb**	**YTD**
Deep Value	Cheap P/B	0.0%	0.0%	0.0%
	Cheap P/S	-0.8%	6.7%	5.8%
	Cheap P/E	1.7%	1.3%	3.0%
Defensive Value	High Total Yield	0.7%	0.1%	0.8%
Current Value	Cheap Fwd P/E	1.3%	1.7%	2.9%
Quality Value	High FCF Yield	2.6%	3.5%	6.1%
	Value Composite	**1.5%**	**-0.9%**	**0.6%**
Quality	Low Accruals	0.3%	-1.1%	-0.8%
	High Earnings Stability	-1.9%	2.0%	0.0%
	High Profitability	2.1%	-0.5%	1.5%
	Low Leverage	0.3%	3.4%	3.7%
	High Operating Efficiency	-0.5%	-0.6%	-1.1%
	Quality Composite	**1.7%**	**2.5%**	**4.2%**
Growth	High Internal Growth	0.9%	4.6%	5.6%
	High Dividend Growth	1.8%	0.8%	2.7%
	High Earnings Growth	-0.3%	0.3%	0.1%
	High Long Term Growth f/c	-0.3%	9.1%	8.8%
	Growth Composite	**2.4%**	**-0.2%**	**2.2%**
Sentiment	1M Loser	-0.6%	-5.2%	-5.8%
	12M-1M Residual Return	-0.2%	0.4%	0.2%
	Earnings Revision	1.0%	0.3%	1.4%
	Sales Revision	-1.5%	1.8%	0.3%
	Sentiment Composite	**-1.4%**	**-1.2%**	**-2.6%**
Technicals	12M Price Momentum	-0.7%	1.8%	1.1%
	Small Cap	-1.1%	-1.0%	-2.0%
	Low Trading Liquidity	-2.1%	2.9%	0.7%
	High Short Ratio	-1.8%	-1.3%	-3.1%
	High DTC Short	-2.4%	-2.4%	-4.8%
	High Short Utilization	-2.6%	-0.3%	-2.9%
	Low Volatility	-0.4%	1.1%	0.7%
	Low Beta	-0.1%	1.0%	0.9%

Source: FactSet, Morgan Stanley Research

Exhibit 90: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Overall Composites

Legend: 12M Price Momentum, Small Cap, Low Beta, MS Value Composite, MS Quality Composite, MS Growth Composite, MS Sentiment Composite
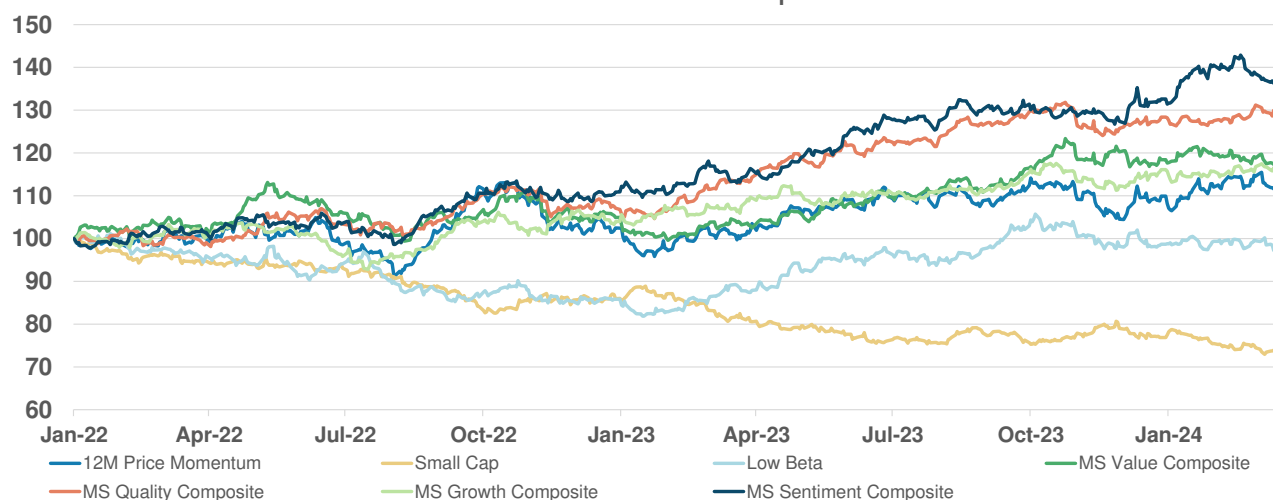
Source: FactSet, Morgan Stanley Research

Exhibit 91: Value Factors: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Value
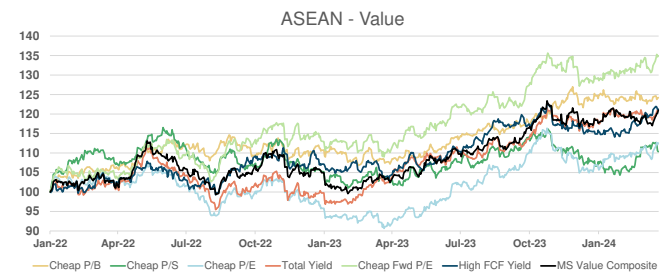
Source: FactSet, Morgan Stanley Research

Exhibit 92: Value Factors: L/S Alpha ASEAN

ASEAN - Value Factors

Source: FactSet, Morgan Stanley Research

Exhibit 93: Quality Factors: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Quality

Source: FactSet, Morgan Stanley Research

Exhibit 94: Quality Factors: L/S Alpha ASEAN

ASEAN - Quality Factors
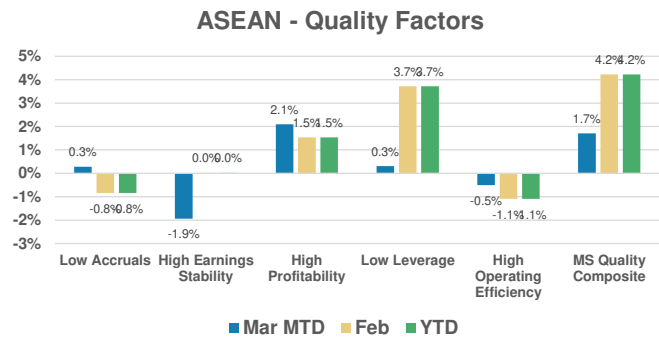
Source: FactSet, Morgan Stanley Research

Exhibit 95: Growth Factors: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Growth

Source: FactSet, Morgan Stanley Research

Exhibit 96: Growth Factors: L/S Alpha ASEAN

ASEAN - Growth Factors
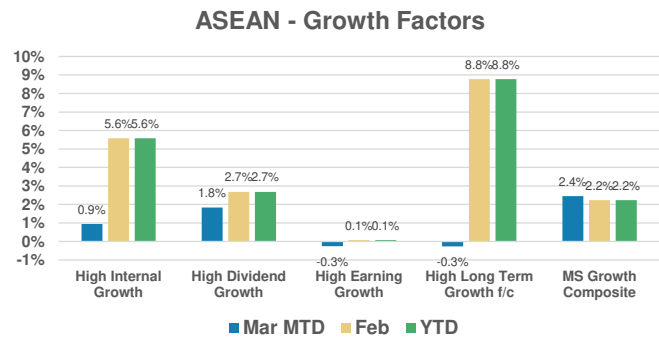
Source: FactSet, Morgan Stanley Research

Exhibit 97: Sentiment Factors: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Sentiment

Source: FactSet, Morgan Stanley Research

Exhibit 98: Sentiment Factors: L/S Alpha ASEAN

ASEAN - Sentiment Factors
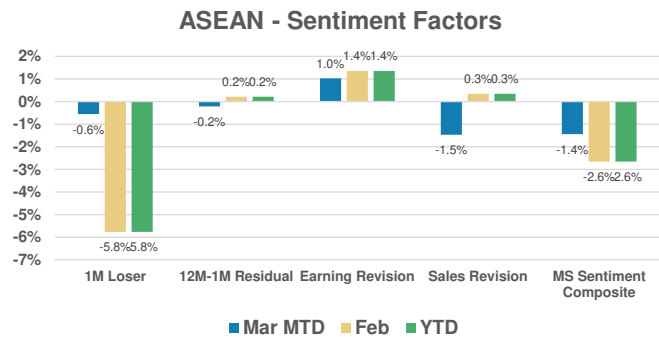
Source: FactSet, Morgan Stanley Research

Exhibit 99: Other Factors: Cumulative L/S Alpha since 2022 – ASEAN

ASEAN - Technicals
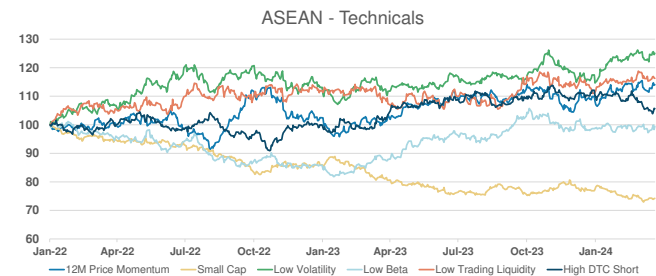
Source: FactSet, Morgan Stanley Research

Exhibit 100: Other Factors: L/S Alpha ASEAN

ASEAN - Other Factors
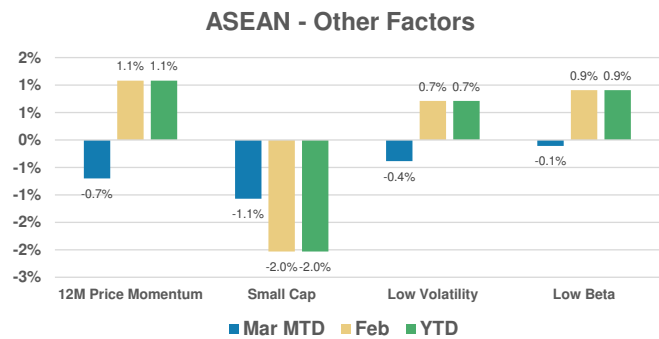
Source: FactSet, Morgan Stanley Research

Factor Performance by Market

Exhibit 101: YTD Factor Performance Summary – by MSCI Market

As of: 3/22/2024				Asia Pacific ex Japan									
Category	**Factor Description**	**YTD**	**Country Neutral**	Australia	China	Hong Kong	India	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand
Deep Value	Cheap P/B	1.7%	4.7%	-2.9%	3.4%	-6.4%	5.5%	2.1%	17.9%	5.0%	2.4%	-15.4%	6.4%	-0.5%
	Cheap P/S	1.7%	3.6%	-6.9%	5.0%	2.8%	2.9%	11.4%	0.3%	4.4%	-7.1%	1.5%	8.1%	-4.0%
	Cheap P/E	7.2%	5.7%	-4.6%	6.3%	4.1%	4.8%	18.7%	11.1%	0.5%	15.6%	5.5%	18.7%	-1.9%
Defensive Value	High Total Yield	3.1%	5.3%	-11.2%	5.4%	-2.9%	2.2%	14.9%	22.0%	1.3%	11.3%	0.9%	9.6%	-5.9%
Current Value	Cheap Fwd P/E	5.9%	7.6%	-5.8%	6.7%	4.3%	1.6%	19.5%	25.3%	1.3%	20.2%	3.7%	16.8%	-5.0%
Quality Value	High FCF Yield	0.5%	3.8%	-6.1%	4.7%	13.5%	-1.6%	16.3%	8.2%	-1.2%	2.4%	-9.5%	11.9%	2.0%
	Value Composite	**4.3%**	**5.3%**	**-11.3%**	**5.7%**	**7.2%**	**7.2%**	**12.0%**	**7.8%**	**-2.7%**	**3.2%**	**-1.2%**	**15.0%**	**-5.1%**
Quality	Low Accruals	-0.8%	0.6%	-11.6%	1.0%	4.4%	10.0%	-3.0%	-1.6%	-2.5%	9.4%	-5.7%	0.8%	-8.2%
	High Earnings Stability	4.5%	6.8%	2.2%	9.0%	14.2%	-1.8%	-0.7%	11.2%	-6.6%	4.2%	4.8%	11.5%	-12.1%
	High Profitability	4.0%	2.2%	0.4%	3.9%	-2.2%	-3.1%	22.9%	-8.6%	-2.9%	5.1%	16.8%	4.4%	-9.3%
	Low Leverage	1.4%	3.3%	-5.6%	4.1%	11.4%	-3.1%	15.6%	-0.5%	1.1%	-6.1%	13.6%	-0.7%	4.0%
	High Operating Efficiency	-1.0%	3.0%	4.8%	6.8%	11.3%	-0.8%	-9.4%	-13.4%	-6.0%	6.8%	6.9%	15.3%	-11.9%
	Quality Composite	**1.3%**	**4.9%**	**-2.2%**	**9.0%**	**18.7%**	**-3.6%**	**10.9%**	**-0.3%**	**-6.5%**	**18.3%**	**3.8%**	**-1.5%**	**-10.2%**
Growth	High Internal Growth	2.7%	0.8%	4.0%	-2.1%	6.6%	2.8%	16.3%	4.5%	-2.0%	7.5%	18.5%	6.0%	0.0%
	High Dividend Growth	2.3%	4.2%	6.3%	3.1%	3.9%	-0.2%	6.5%	0.0%	-0.5%	11.6%	1.9%	9.9%	1.4%
	High Earnings Growth	8.5%	6.6%	6.9%	3.6%	0.4%	14.9%	-8.0%	17.9%	4.8%	3.0%	2.4%	14.4%	11.1%
	High Long Term Growth f/c	3.6%	-0.7%	13.2%	0.2%	-13.5%	1.1%	22.8%	-8.0%	8.5%	0.0%	-3.1%	3.2%	4.8%
	Growth Composite	**1.9%**	**4.1%**	**12.5%**	**1.5%**	**-5.1%**	**2.9%**	**14.4%**	**-5.5%**	**-2.4%**	**2.0%**	**6.2%**	**11.7%**	**2.8%**
Sentiment	1M Loser	-6.8%	-2.0%	4.2%	-1.4%	-2.9%	-7.8%	-1.2%	-19.7%	-0.8%	18.0%	-4.4%	3.0%	-4.0%
	12M-1M Residual Return	12.8%	12.6%	9.0%	12.8%	14.0%	11.7%	14.9%	21.1%	7.8%	14.8%	1.0%	14.3%	8.1%
	Earnings Revision	9.2%	7.8%	8.8%	9.7%	-4.1%	11.1%	3.2%	18.5%	-1.4%	-7.0%	2.6%	2.3%	0.9%
	Sales Revision	5.6%	3.7%	5.3%	6.7%	8.3%	-0.5%	-9.8%	6.2%	-1.1%	10.5%	-2.5%	-2.9%	-3.7%
	Sentiment Composite	**10.7%**	**10.3%**	**8.7%**	**11.7%**	**11.7%**	**8.4%**	**10.0%**	**9.1%**	**2.6%**	**6.7%**	**-4.4%**	**9.7%**	**-0.1%**
Others	12M Price Momentum	11.3%	11.6%	7.8%	11.8%	14.3%	13.2%	18.9%	23.5%	4.2%	11.1%	6.4%	12.2%	-1.0%
	Small Cap	-3.3%	-4.0%	-2.4%	-5.4%	-3.5%	-7.3%	-14.1%	-9.2%	5.2%	3.9%	-25.0%	-4.7%	-4.7%
	Low Volatility	4.2%	1.4%	5.3%	1.1%	-2.4%	-8.3%	19.2%	15.8%	-2.6%	18.3%	4.4%	-1.8%	-1.9%
	Low Beta	3.3%	2.1%	7.2%	1.9%	-5.1%	-7.9%	-4.5%	14.9%	-0.4%	-4.1%	15.0%	7.4%	-5.3%

Source: FactSet, MSCI, Morgan Stanley Research

Factor Performance by Sector

Exhibit 102: YTD Factor Performance Summary – by GICS Sector

As of: 3/22/2024

Category	Factor Description	YTD	Sector Neutral	Energy	Materials	Industrials	Cons. Disc.	Cons. Staple	Health Care	Financials	Info Tech	Comm. Services	Utilities	Real Estate
Deep Value	Cheap P/B	1.7%	3.1%	1.0%	3.0%	-2.2%	8.9%	1.5%	-6.0%	18.1%	-0.1%	-0.4%	3.9%	-15.9%
	Cheap P/S	1.7%	1.0%	2.1%	6.6%	-1.6%	4.5%	0.2%	-0.5%	0.0%	2.4%	-4.4%	5.4%	-16.9%
	Cheap P/E	7.2%	5.6%	17.7%	7.8%	3.2%	12.7%	7.8%	-0.8%	14.5%	6.5%	-2.7%	-0.8%	-11.4%
Defensive Value	High Total Yield	3.1%	2.8%	-0.1%	0.8%	3.1%	0.9%	6.6%	3.5%	13.5%	6.2%	-7.6%	-6.4%	-6.7%
Current Value	Cheap Fwd P/E	5.9%	6.1%	8.4%	12.5%	0.4%	10.0%	2.8%	-0.2%	14.8%	8.6%	-11.2%	8.3%	-15.0%
Quality Value	High FCF Yield	0.5%	3.9%	-3.4%	10.1%	6.0%	4.9%	2.2%	6.6%	0.0%	5.6%	5.6%	-6.6%	-7.3%
	Value Composite	**4.3%**	**7.0%**	**17.4%**	**5.5%**	**1.0%**	**9.2%**	**6.7%**	**3.4%**	**15.1%**	**9.5%**	**-4.7%**	**-1.1%**	**-16.6%**
Quality	Low Accruals	-0.8%	0.6%	0.1%	-3.8%	-0.2%	1.1%	-8.4%	9.5%	0.0%	6.5%	-6.4%	-2.7%	5.4%
	High Earnings Stability	4.5%	5.4%	5.1%	2.1%	9.0%	5.3%	4.2%	0.3%	6.9%	13.5%	-11.0%	-2.3%	6.3%
	High Profitability	4.0%	3.5%	7.8%	-4.0%	9.3%	4.4%	2.0%	-0.3%	4.5%	5.4%	-7.0%	-7.7%	0.4%
	Low Leverage	1.4%	2.2%	-0.9%	1.2%	11.2%	-2.3%	2.4%	-1.9%	0.0%	0.0%	8.1%	-5.6%	0.8%
	High Operating Efficiency	-1.0%	4.0%	8.4%	-0.6%	2.0%	6.9%	-1.8%	15.7%	4.2%	3.8%	4.1%	4.7%	-6.0%
	Quality Composite	**1.3%**	**6.2%**	**4.6%**	**2.6%**	**8.0%**	**8.8%**	**-1.0%**	**8.5%**	**7.8%**	**6.6%**	**-7.4%**	**-5.7%**	**9.0%**
Growth	High Internal Growth	2.7%	0.8%	13.6%	3.8%	7.4%	6.8%	-1.3%	-9.3%	-1.5%	-1.4%	-1.3%	-3.3%	-1.4%
	High Dividend Growth	2.3%	3.7%	0.4%	3.3%	0.8%	1.6%	-1.2%	1.2%	6.3%	3.1%	6.2%	1.1%	9.1%
	High Earnings Growth	8.5%	3.9%	-4.1%	4.0%	8.0%	7.5%	-5.4%	7.2%	5.1%	9.8%	2.6%	1.4%	5.5%
	High Long Term Growth f/c	3.6%	-3.6%	3.6%	-5.0%	-15.9%	17.3%	-1.2%	-4.6%	-14.5%	-6.6%	2.0%	5.9%	2.7%
	Growth Composite	**1.9%**	**2.6%**	**8.4%**	**2.0%**	**-2.2%**	**8.8%**	**0.2%**	**0.1%**	**3.2%**	**7.5%**	**1.7%**	**-1.7%**	**2.6%**
Sentiment	1M Loser	-6.8%	-3.3%	-8.3%	-1.6%	1.5%	-3.4%	-6.4%	-14.3%	-6.3%	-6.5%	-0.5%	-4.1%	-8.1%
	12M-1M Residual Return	12.8%	11.4%	8.8%	8.7%	11.2%	22.4%	5.0%	18.6%	5.7%	20.9%	3.9%	7.4%	11.4%
	Earnings Revision	9.2%	9.1%	9.0%	8.0%	6.0%	17.1%	3.2%	10.0%	0.2%	23.8%	1.4%	6.0%	8.6%
	Sales Revision	5.6%	4.8%	-1.5%	5.1%	9.0%	13.3%	1.9%	1.7%	0.1%	6.6%	2.4%	4.2%	10.1%
	Sentiment Composite	**10.7%**	**10.7%**	**8.0%**	**9.1%**	**14.1%**	**19.5%**	**5.3%**	**8.3%**	**1.0%**	**15.9%**	**14.6%**	**10.0%**	**19.6%**
Others	12M Price Momentum	11.3%	10.5%	17.2%	8.1%	10.0%	13.4%	4.1%	25.3%	5.1%	11.2%	-8.6%	6.9%	15.9%
	Small Cap	-3.3%	-4.1%	-6.8%	-3.9%	-5.0%	-6.0%	-3.4%	-0.9%	0.0%	-8.2%	-3.7%	-3.7%	-5.8%
	Low Volatility	4.2%	1.2%	-5.6%	1.2%	0.1%	5.6%	7.2%	13.8%	5.6%	-11.5%	-8.5%	-1.2%	6.5%
	Low Beta	3.3%	1.8%	2.2%	-1.1%	1.8%	3.4%	3.1%	15.6%	2.5%	-6.5%	-0.8%	0.4%	12.6%

Source: FactSet, MSCI, Morgan Stanley Research

Appendix – Factor Definitions

Exhibit 103: Morgan Stanley Factor Definitions in Detail

Style Group & Factor Name		Definition
Value	Cheap P/B	Last reported book value of common equity / current market cap
	Cheap P/S	Trailing 12m total revenue / current market cap
	Cheap P/E	Trailing 12m earnings / current market cap
	Cheap Fwd P/E	IBES median time-weighted NTM EPS Estimate divided by Price
	High Total Yield	Dividend Yield plus Buyback Yield
	High FCF Composite	**Average of Z-score of FCF-to-EV and FCF Yield**
	Free Cash Flow Yield	Trailing 12-month Free Cash Flow (operating cash flow - net capex) / current market cap
	Free Cash Flow / EV	Trailing 12-month Free Cash Flow (operating cash flow - net capex) / EV
	MS Value Composite	**Average of Z-score of Free Cash Flow Sub Composite, 'Tangible Book/Price', Earnings Yield & Total Yield**
Growth	Dividend Growth	Y/Y Change in DPS (percent change of the latest reported 12m DPS compared to what it was 1 year ago)
	Long Term Growth Forecast	IBES mean 5-Year EPS growth forecast
	Y/Y Earnings Growth	Percentage change in the trailing 12-month Net Income over the last 1 year. Not used if Net Income 1-year ago were negative.
	Internal Growth	Retention rate times ROE
	MS Growth Composite	**Average of Z-score of Internal Growth, 'Y/Y Earnings Growth', 'Y/Y Dividend Growth' & 'Long Term Growth Forecast'**
Sentiment	1M Reversal	Reciprocal of 1m trailing Total Return
	12-1m Residual Momentum	12m Residual Momentum lagged by 1m
	Earnings Revision Sub Composite	**Average of Z-score of 'Earnings Revisions Breadth' & 'Earnings Estimate Revisions'**
	Earnings Estimate Revisions	Time-Weighted 1m change in the IBES median EPS estimate scaled by price
	Earnings Revisions Breadth	Median Time-Weighted NTM EPS Revisions
	Sales Revision Sub Composite	**Average of Z-score of 'Sales Revisions Breadth' & 'Sales Estimate Revisions'**
	Sales Estimate Revisions	Time-Weighted 1m change in the IBES median Sales estimate scaled by market cap
	Sales Revisions Breadth	Median Time-Weighted NTM Sales Revisions
	MS Sentiment Composite	**Average of Z-score of 'Earnings Revision Sub Composite', 'Sales Revision Sub Composite', '12m-1m Residual Momentum' & '1m Reversal'**
Quality	**Accruals Sub Composite**	**Average of Z-score of Accruals & 'Short-term Accruals'**
	Low Accruals	Y/Y change in Net Operating Assets /total assets a year ago, low values are favored
	Low ST Accruals	Y/Y change in Current Net Operating Assets /Average Assets, low values are favored
	Earnings Stability Sub Composite	**Average of Z-score of 'Estimate Dispersion', 'ROE Variability' & 'Sales Stability'**
	Low Estimate Dispersion	Std deviation of IBES EPS estimates divided by absolute value of mean IBES estimate, low values are favored
	Low ROE Variability	5-year std deviation of ROE divided by 5-year absolute mean of ROE, low values are favored
	Sales Stability	5-year std deviation of Y/Y Sales Growth
	Profitability Sub Composite	**Average of Z-score of ROE, 'Gross Profit-to-Assets', 'Gross Margin' & 'Opeating Leverage'**
	Gross Profit / Assets	(Trailing 12m Revenue - COGS) / total assets from 12m ago
	Gross Margin	Trailing 12m revenue minus COGS / trailing 12m revenue
	Operating Leverage	12m change in EBIT / 12m change in Sales
	Leverage Sub Composite	**Average of Z-score of 'Cash Flow Coverage' & 'Cash Flow-to-Debt'**
	Cash Flow Coverage	(Operating Cash Flows+Interest Expense)/Interest Expense
	Cash Flow-to-Debt	Operating Cash Flows / Total Debt
	Operational Efficiency Sub Composite	**Average of Z-score of 'Capex-to-Sales', 'Y/Y Change in Inventory/Sales' & 'Y/Y Change in Num of Employees'**
	Low Capex/Sales	Trailing 12m net capital expenditure / trailing 12m revenue, low values are favored
	Y/Y Change in Inventory/Sales	Difference between the most recent Inventory/Sales and Inventory/Sales from 12m ago
	Low Y/Y Change in Num of Employees	Y/Y percent change in number of employees
	MS Quality Composite	**Average of Z-score of 'Accruals Sub Composite', 'Earnings Stability Sub Composite', 'Profitability Sub Composite', 'Leverage Sub Composite' & 'Operational Effeciency Sub Composite'**
Others	Low Beta	36-month stock beta to the cap-weighted return of stocks, low values are favored
	Low Volatility	Standard deviation of the last 12m returns
	Size (Small-Large) - Total Mkt Cap	Total Market Cap
	12M Price Momentum	12m trailing Total Return

Source: Morgan Stanley Research

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Not-Rated/Hold	3	0%	0	0%	0%	1	0%
Underweight/Sell	634	17%	76	11%	12%	239	15%
Total	3,766		693			1584	

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