

Global Quantitative Investment Strategies
Conference 2008

The outlook for alpha – global comparisons

- Between DM Pacific ex-Japan and EM Asia

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Please read the important disclosures and
analyst certifications on pages 21-22. [gl](#)

We examine these factors

■ Using MSCI Standard Index universes in AC Asia Pacific ex-Japan

#	Factor	Definition
1	MarketCap *	Log of USD Market Cap
2	Price Momentum (1M)	Past 1-Month Local Currency Return
3	Price Momentum (3M)	Past 3-Months Local Currency Return
4	Price Momentum (6M -1M)	Last 6-month return less the last 1 month return in local currency
5	Price Momentum (12M -1M)	Last 12-month return less the last 1 month return in local currency
6	Long Term Price Momentum	Past 36 Months Local Currency Return
7	Volatility (36M)	Past 36-Months Price Volatility
8	Average Daily Traded Value	Monthly Traded Value in USD / Number of Traded Days
9	Trade Momentum (3M)	Difference Between Past 1-Month Trading Volume and Previous 3-Month Average Trading Volume
10	Dividend Yield	Actual Dividend Yield
11	Dividend Payout	Actual Dividends / Actual Net Profit
12	Forecast E/P	F12-Months Earnings Yield
13	B/P	Actual Net Assets / Market Cap
14	Sales/Price	F12-Months Sales / Market Cap
15	Cashflow Yield	F12-Months Net Profit + Actual Depreciation / Market Cap
16	EBITDA/EV	Actual EBITDA / EV
17	F12M EBITDA/EV	F12-Months EBITDA / EV
18	Revision Index	(Number of Upward Revision Analyst - Number of Downward Revision Analyst) / Total Number of Analyst Revisions
19	Earnings Yield Growth	3-Month Change In F12-Month Earnings Yield
20	Normalized E/P	Normalized F12-Month Earnings Yield
21	StarMine Predicted Surprise (12M)	(SmartEstimate F12-Months - Consensus Mean) / Max(divisor, mean)
22	Estimate Dispersion	Standard Deviation of FY1 Earnings Yield
23	Consensus Rating	Analyst Rating
24	Return On Assets	Net Profit / Total Assets
25	Return On Equity	Net Profit / Net Assets
26	Shareholders' Equity Ratio	Actual Shareholders' Equity / Actual Total Assets
27	Profit Margin	Actual Net Profit / Actual Sales
28	Asset Turnover	Actual Sales / Total Assets
29	Capex to Assets	Capital Expenditure / Total Assets
30	Capex to Sales	Capital Expenditure / Actual Sales
31	Default Probability *	Default Probability

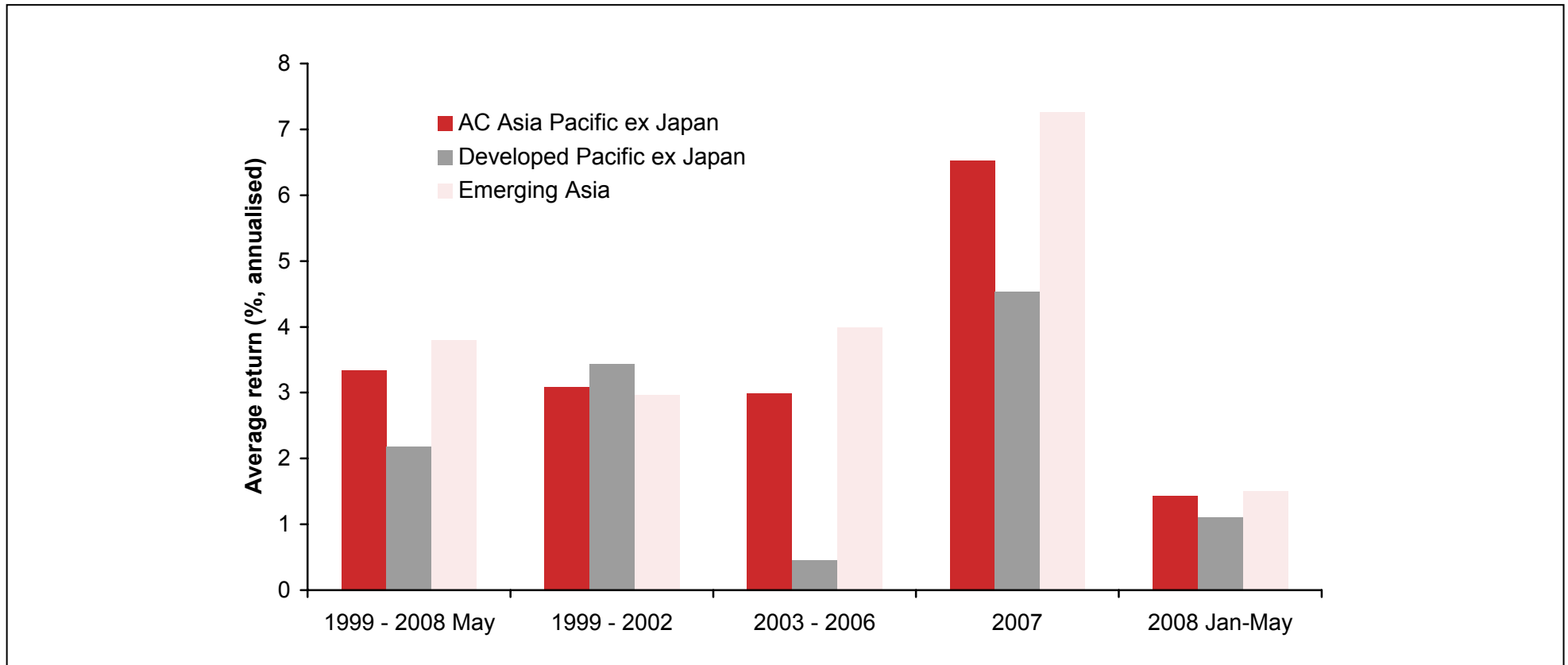
Notes: In this presentation we use primarily the MSCI All Country Asia Pacific ex Japan index and its component indexes Emerging Markets Asia (EM Asia) and Developed Markets Pacific (DM Pacific). Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly).

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

Emerging Asia outperformed DM Pacific

- In recent years, growth potential in Emerging Asia has delivered bigger factor returns

Average factor return in DM Pacific ex-Japan and EM Asia



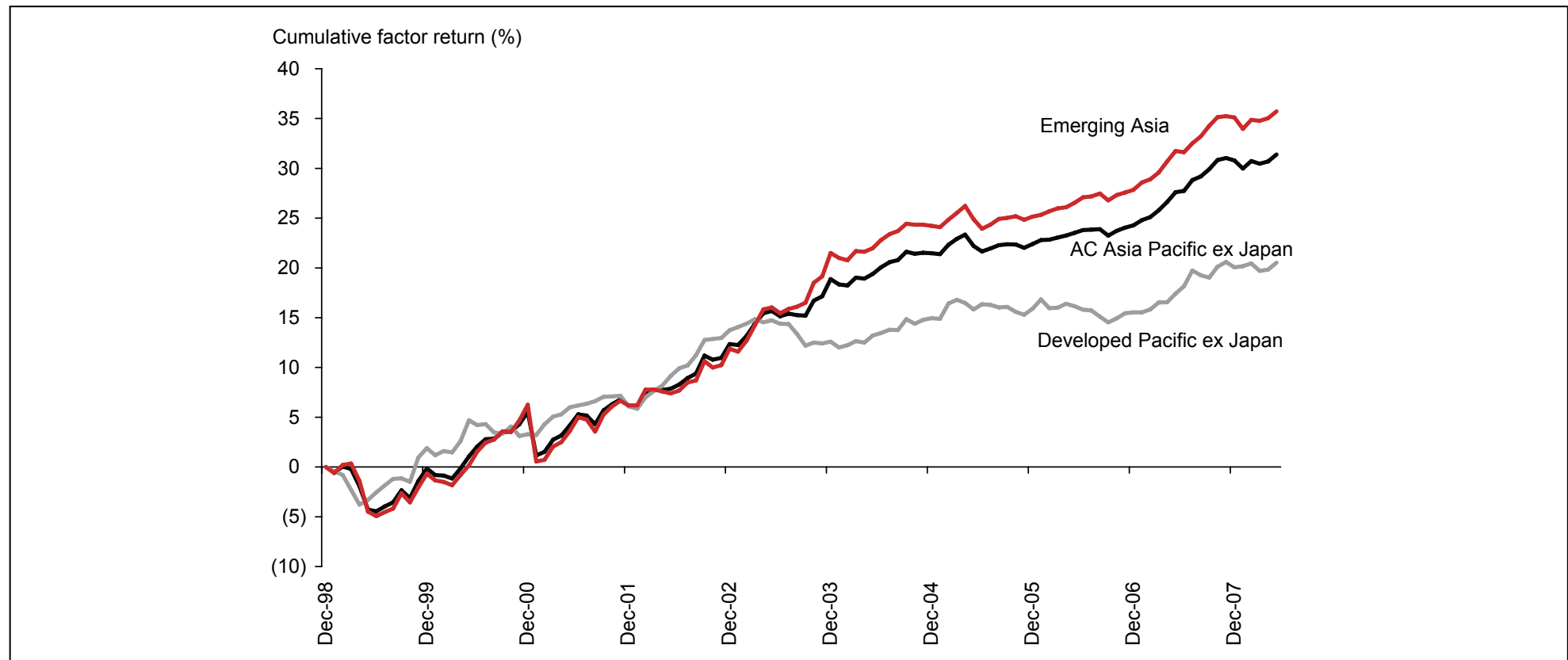
Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

A view on cumulative factor return

- Post IT bubble and SARS, Emerging Asia has delivered consistent alpha

Average factor spread return (long top/short bottom quintile)



Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

Factor return rankings

- Value-investing and analysts' revision factor work most consistently in Asia Pacific
- A shift from price momentum to return reversal, and from growth to value since credit crisis

DATE	199901 - 200805			199901 - 200212			200301 - 200612			200701 - 200712			200801 - 200805		
	APXJ	APXJ DM	APXJ EM	APXJ	APXJ DM	APXJ EM	APXJ	APXJ DM	APXJ EM	APXJ	APXJ DM	APXJ EM	APXJ	APXJ DM	APXJ EM
MarketCap *	16	15	15	8	17	6	18	5	22	24	28	19	26	27	25
Price Momentum (1M)	26	22	27	24	25	24	26	17	28	10	13	10	31	29	31
Price Momentum (3M)	20	11	21	26	13	27	11	20	10	5	6	4	29	8	29
Price Momentum (6M -1M)	3	1	3	13	5	15	2	8	2	2	3	3	10	12	9
Price Momentum (12M -1M)	5	6	5	17	14	16	3	7	3	1	5	1	14	3	20
Long Term Price Momentum	23	21	24	31	28	31	9	14	9	4	1	6	28	26	27
Volatility (36M)	19	19	20	20	31	18	17	4	20	7	11	7	30	24	30
Average Daily Traded Value	28	29	26	30	30	29	23	26	23	9	9	12	21	15	22
Trade Momentum (3M)	14	7	16	10	2	14	22	19	21	12	8	16	6	10	5
Dividend Yield	17	18	17	4	6	5	25	27	25	30	31	28	18	17	19
Dividend Payout	22	28	19	12	15	11	27	29	26	31	20	31	13	16	8
Forecast E/P	18	13	18	18	10	20	20	22	17	14	7	18	15	18	14
B/P	7	9	7	7	7	7	5	6	7	25	30	22	17	23	11
Sales/Price	4	4	4	2	3	2	12	10	15	15	17	14	12	7	15
Cashflow Yield	1	3	1	1	1	1	8	13	8	18	24	11	2	5	3
EBITDA/EV	9	10	8	5	8	4	13	18	12	11	14	13	4	6	7
F12M EBITDA/EV	8	5	9	6	4	9	10	12	11	8	16	9	9	4	16
Revision Index	2	8	2	9	20	8	1	2	1	3	12	2	1	2	6
Earnings Yield Growth	11	14	11	14	18	13	6	9	6	21	18	23	5	30	1
Normalized E/P	15	25	13	11	21	10	16	16	14	27	29	24	8	19	4
StarMine Predicted Surprise (12M)	6	2	6	16	9	17	4	3	4	6	10	5	3	1	10
Estimate Dispersion	10	12	10	3	19	3	15	1	19	17	27	8	23	25	21
Consensus Rating	12	16	14	22	23	21	7	11	5	13	15	15	16	22	12
Return On Assets	27	26	28	21	16	23	31	30	31	20	4	27	22	28	18
Return On Equity	21	20	22	19	24	19	24	25	24	16	2	20	20	14	22
Shareholders' Equity Ratio	31	24	31	29	11	30	30	28	30	29	23	30	19	20	17
Profit Margin	24	31	23	23	29	22	21	24	18	22	25	21	27	31	24
Asset Turnover	13	23	12	15	22	12	14	15	13	19	22	17	7	21	2
Capex to Assets	29	17	30	27	12	28	28	23	29	23	19	25	24	11	26
Capex to Sales	25	27	25	25	26	25	19	21	16	26	26	26	25	13	28
Default Probability *	30	30	29	28	27	26	29	31	27	28	21	29	11	9	13

Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Yellow highlight indicates top 8 ranked strategies; blue highlight indicates bottom 8 strategies in the given column (time period). Factor returns do not include transaction costs.

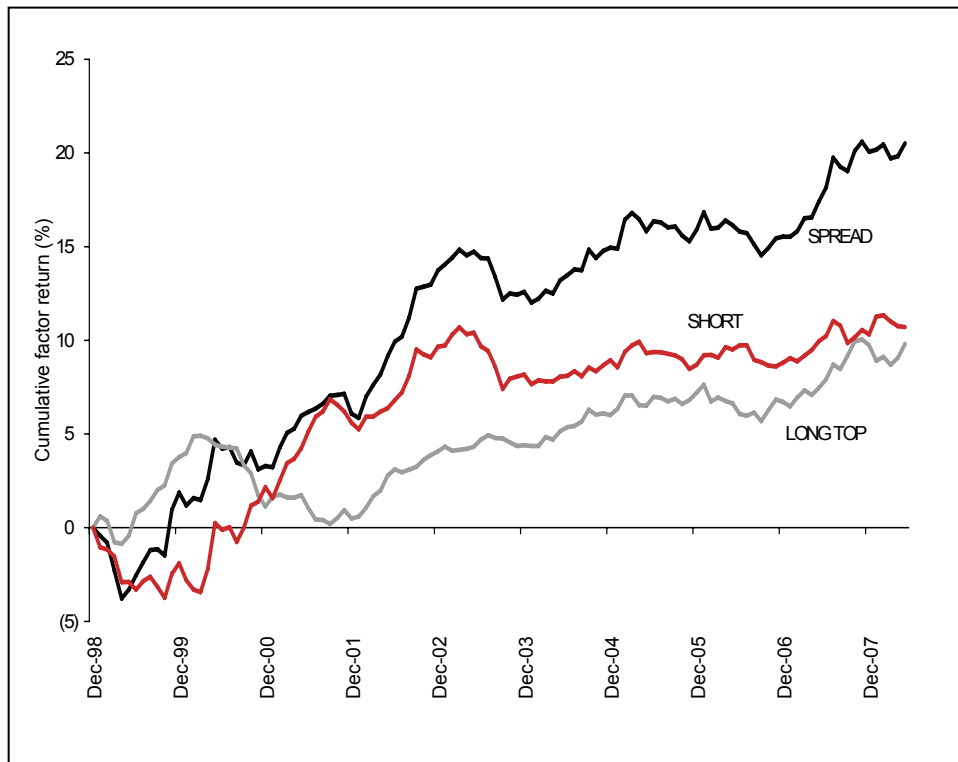
Data as of 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

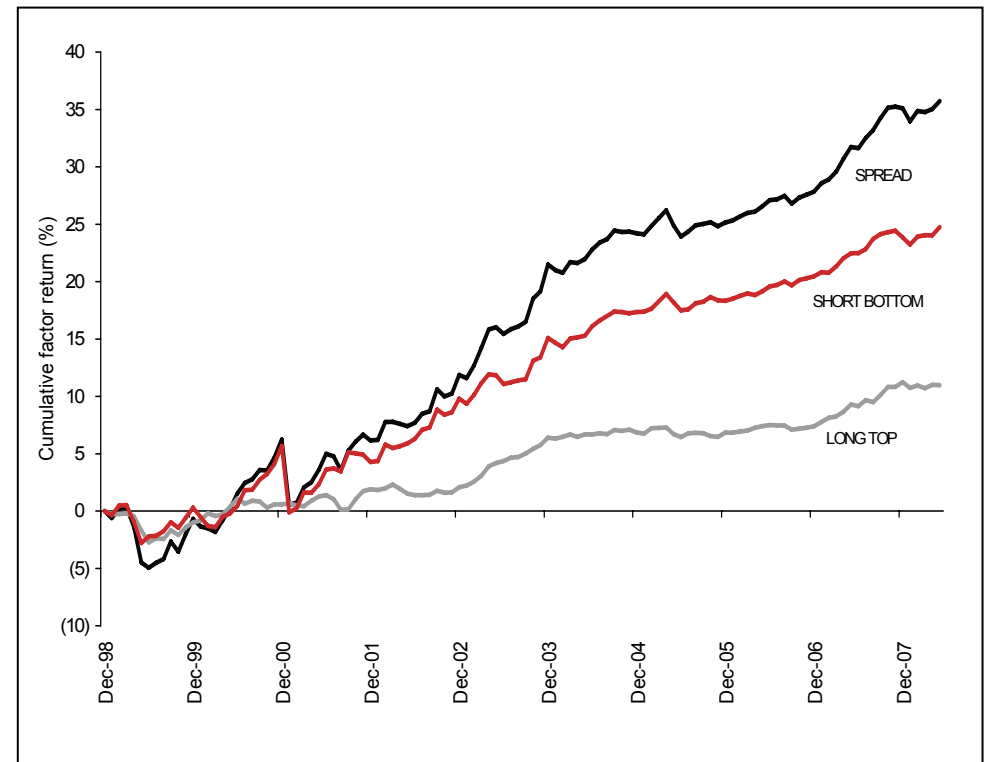
The source of alpha

- The source of alpha comes from both the long and the short sides
- Investors in Emerging Asia have enjoyed ample alphas since the tech bubble

Average long and short alpha: Pacific ex-Japan



Average long and short alpha: Emerging Asia



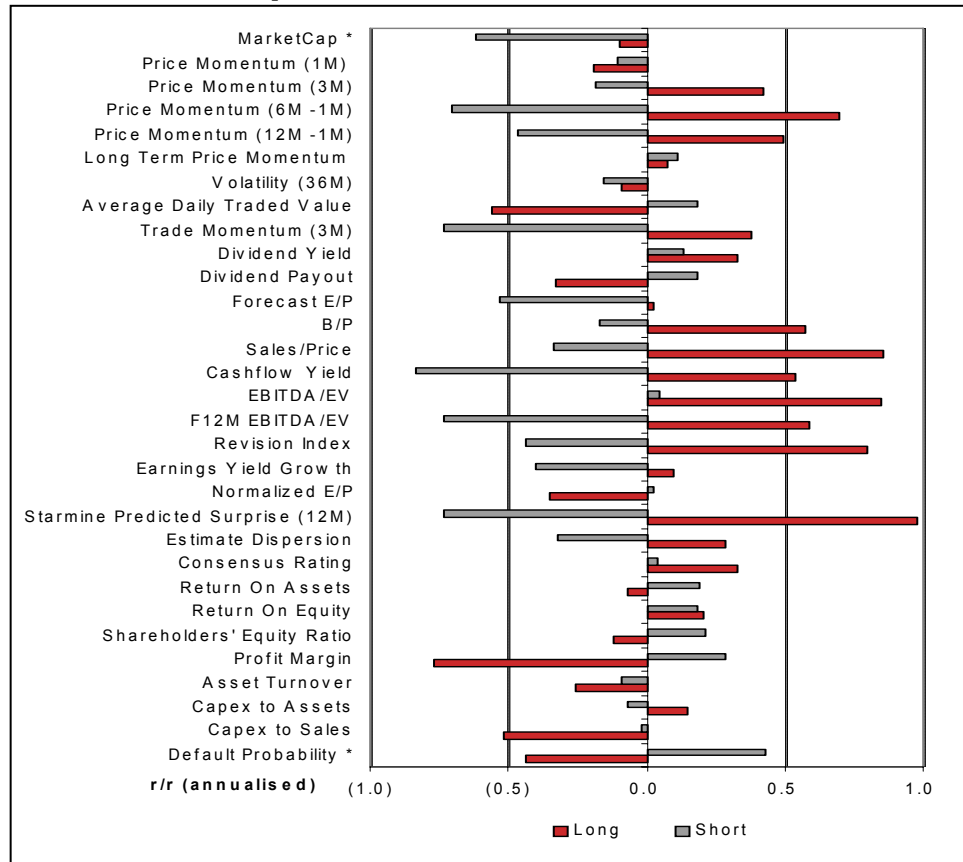
Notes: Average long alpha is calculated by averaging 31 factors' top quintile returns minus the equal weighted benchmark; average short alpha is calculated as the equal weighted benchmark returns minus the average of 31 factors' bottom quintile returns. Data run to 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

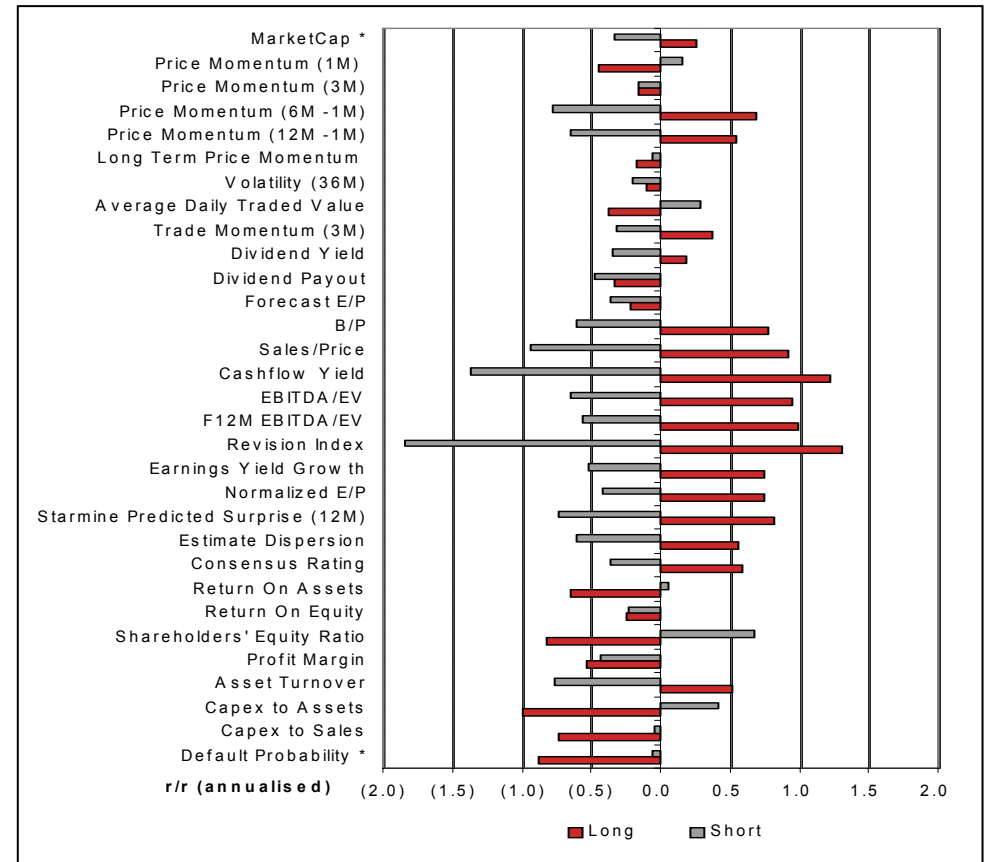
Factor asymmetry

- Correlation of average alpha on the long and short sides for Pacific ex-Japan has been -0.15
- Alpha looks more symmetrical on the long and short sides for Emerging Asia: correlation +0.22

Pacific ex-Japan



Emerging Asia



Notes: Period of calculation is Jan 1999 to May 2008. Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the lowest quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

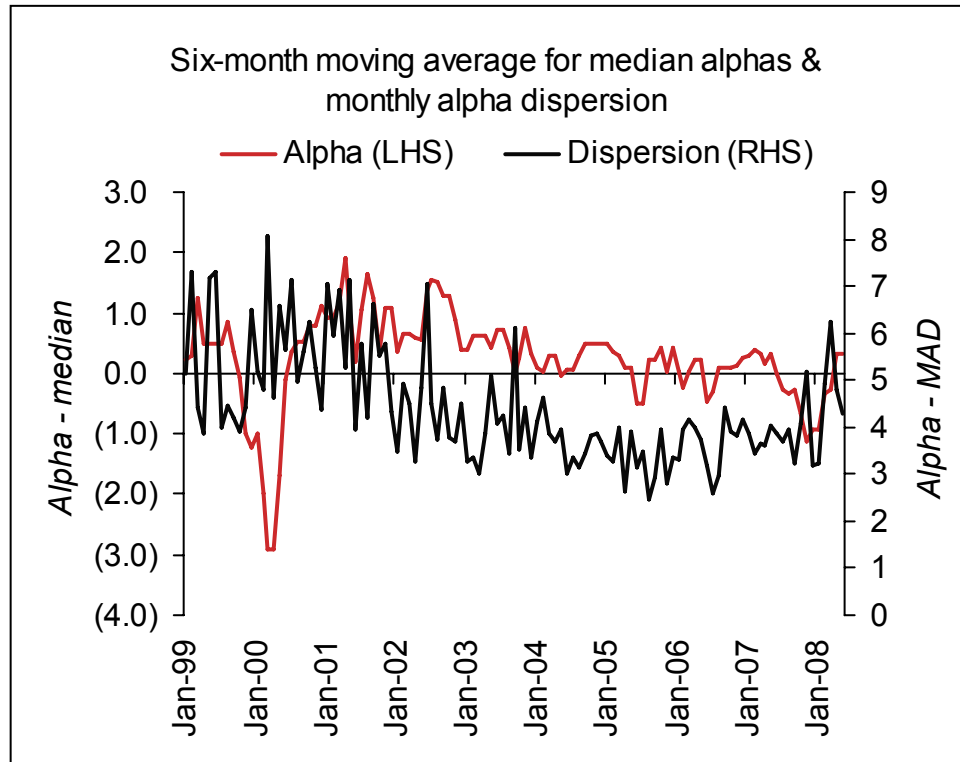
Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

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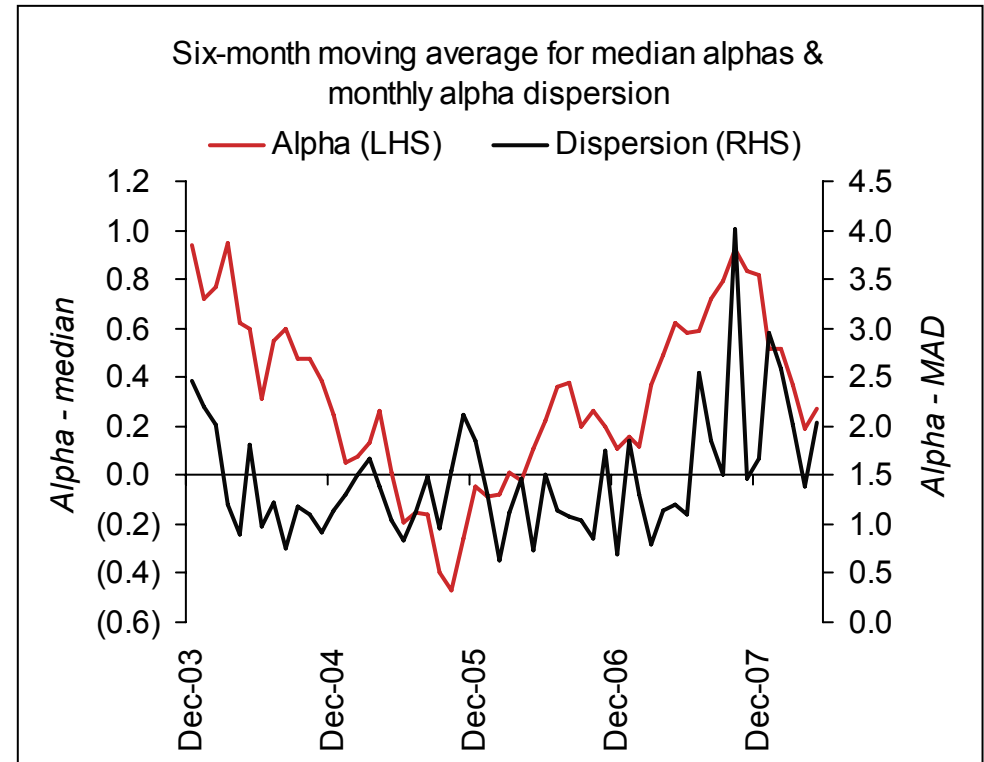
Realised alphas and dispersion of alphas

- Mean reversion happens: falling median alphas and rising alpha dispersion since last summer
- Alpha has been hard come by because of higher alpha dispersion
- Median alphas remain positive for EM Asia, but are still nowhere near pre-summer 2007 levels

Pacific ex-Japan



Emerging Asia

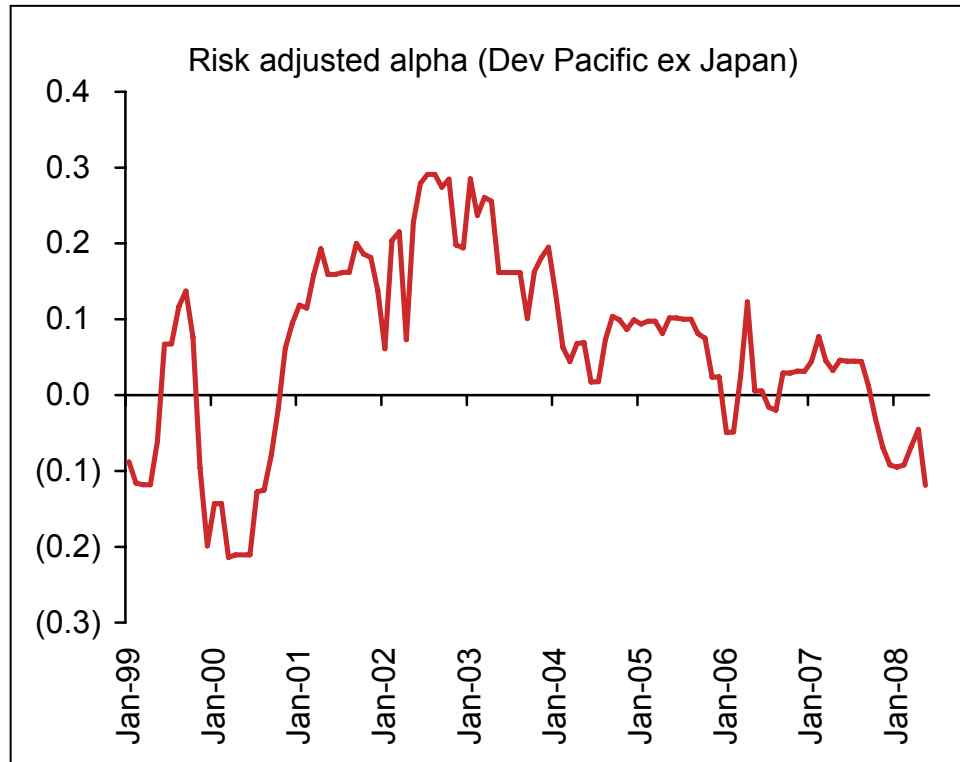


Notes: We take the return of a stock to be described by $r = a + \beta * (\text{market return}) + \epsilon$. The monthly residual return is the realised alpha used in these charts: $\text{alpha} = r - \beta * (\text{market return})$. Beta is estimated for each stock in the MSCI universe based on a five-year trailing monthly data, using a time-series regression with respect to the MSCI Index. Data run to 30 May 2008.
 Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

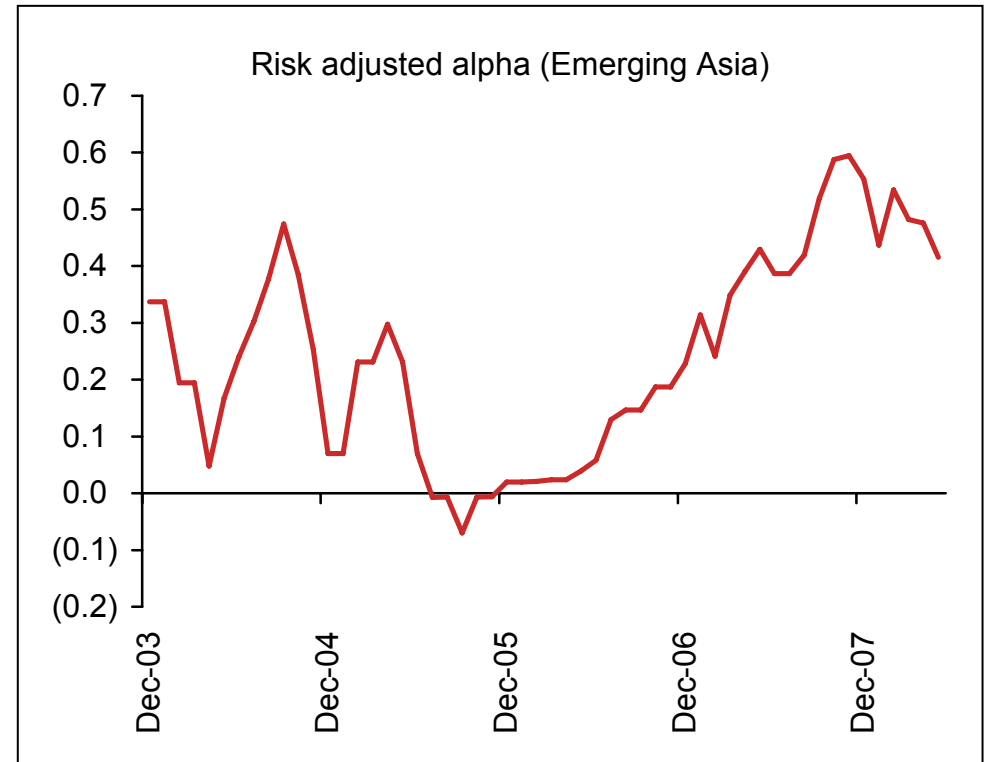
Risk-adjusted alphas in Asia-Pacific region

- Declining trend of risk-adjusted alpha continues; harvesting alpha is becoming more difficult
- Asset selection risk is trending higher; stock-picking has grown more important since the credit crisis

Pacific ex-Japan



Emerging Asia

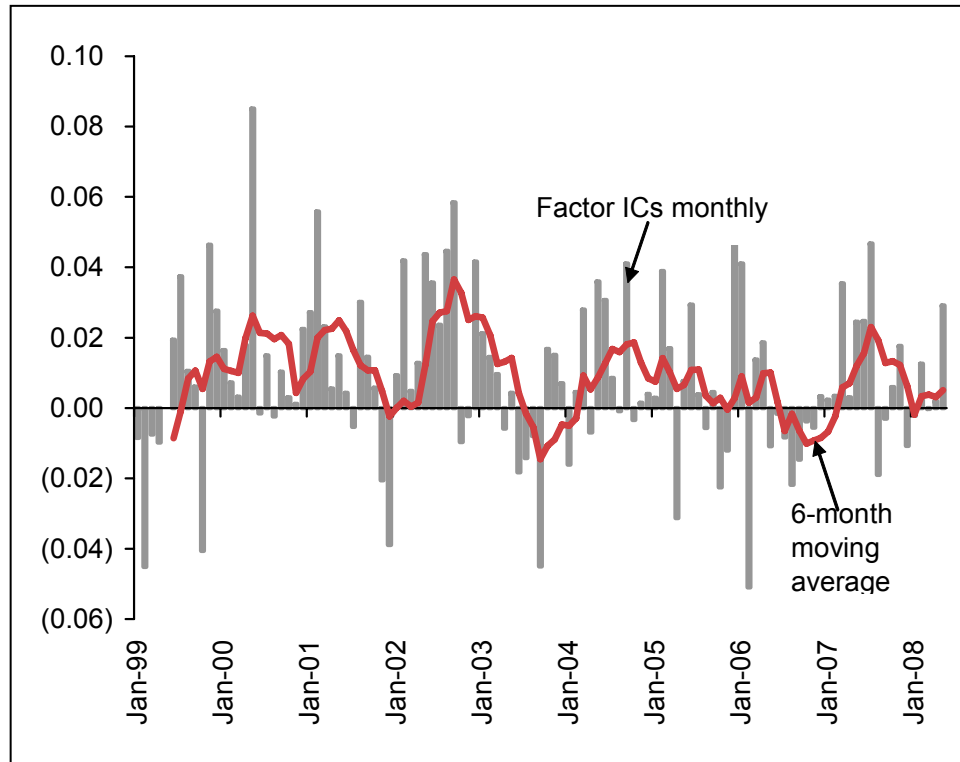


Notes: We take the return of a stock to be described by $r = a + \beta * (\text{market return}) + \epsilon$. The monthly residual return is the realised alpha used in these charts: $\text{alpha} = r - \beta * (\text{market return})$. Beta is estimated for each stock in the MSCI universe based on a five-year trailing monthly data, using a time-series regression with respect to the MSCI Index. Data run to 30 May 2008.
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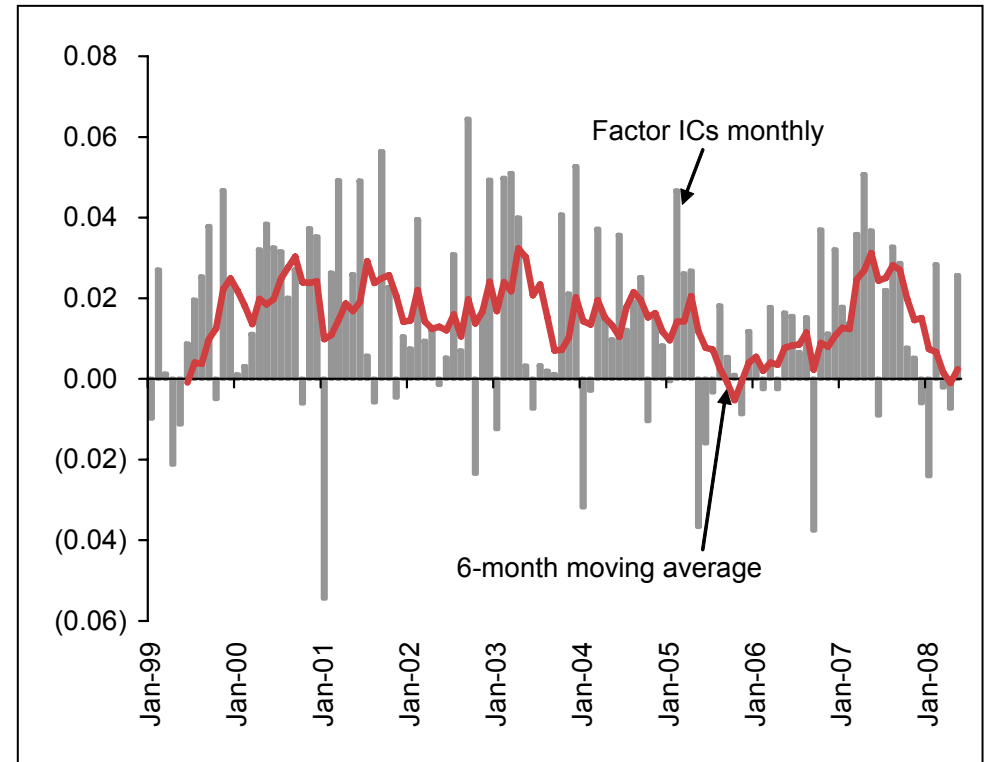
The outlook for alpha

- Positive values of the information coefficient (IC) mean that our representative set of quantitative factors are, on average, delivering returns — and vice versa
- The utility of quantitative factors for investing looks promising in Emerging Asia

Pacific ex-Japan



Emerging Asia



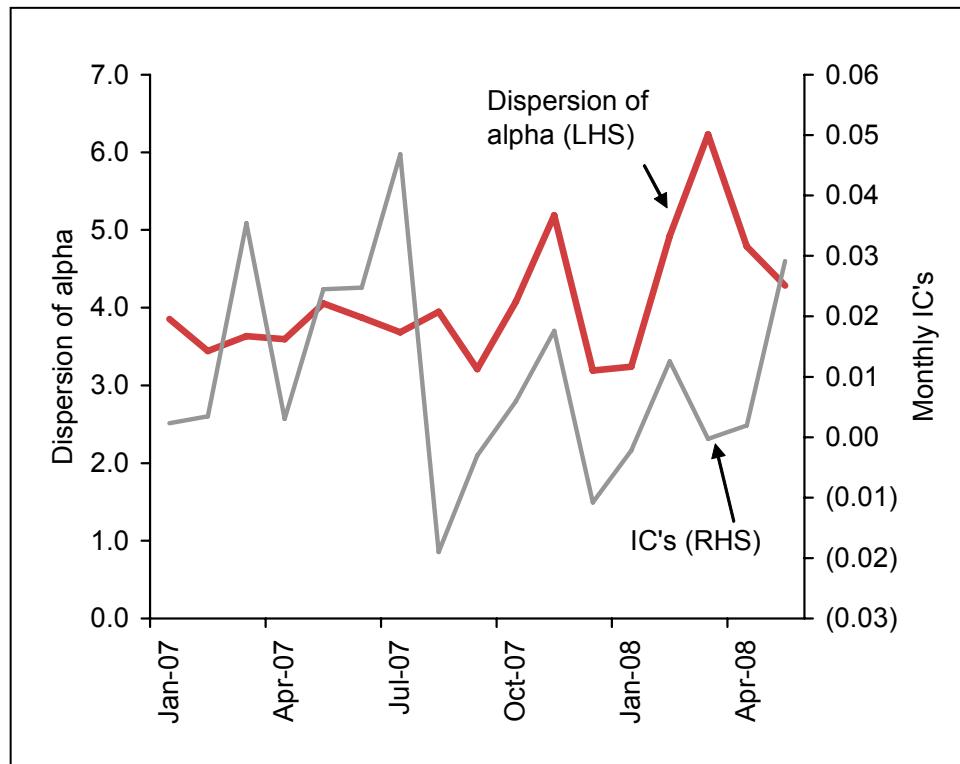
Notes: The information coefficient measures the correlation of the monthly ranking of stocks according to quantitative factors and the subsequent month's ranking of the returns of these stocks. Data run to 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited.

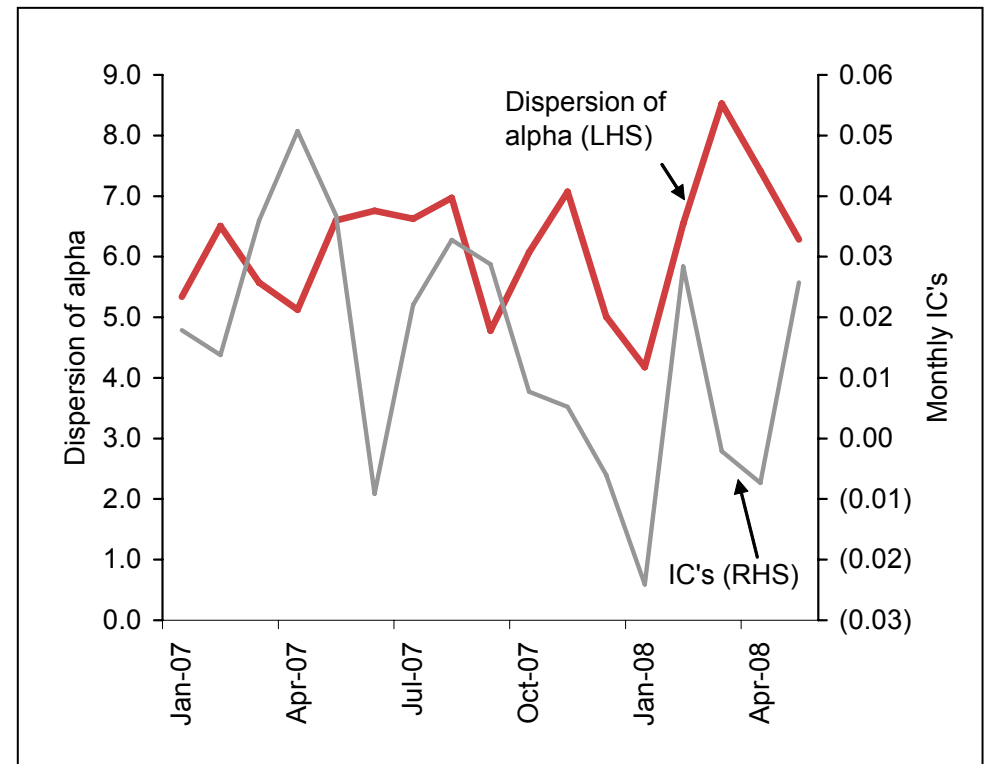
Recent factor IC and dispersion of alpha

- While an improvement in ICs points to a recovery in the efficacy of quantitative factors, the high alpha dispersion highlights the range of possible outcomes — and the penalty for being wrong remains high

Pacific ex-Japan



Emerging Asia



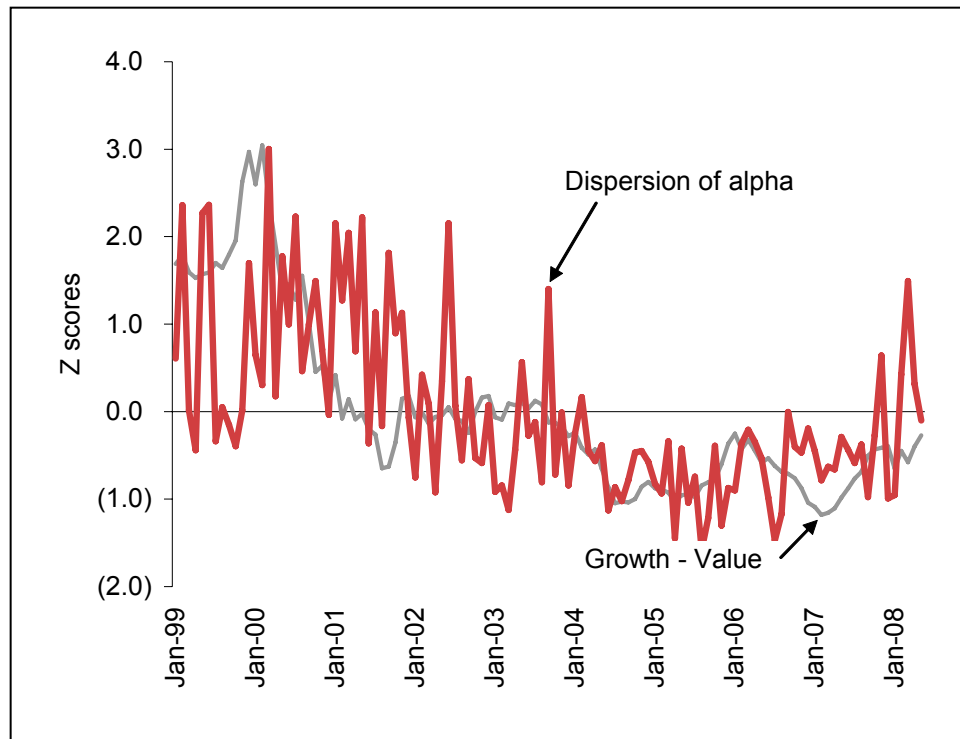
Notes: The charts show six-month averages of monthly dispersion of median alphas and average factor-return information coefficients (the correlation of the monthly ranking of stocks according to quantitative factors and the subsequent month's ranking of the returns of these stocks). Data run to 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

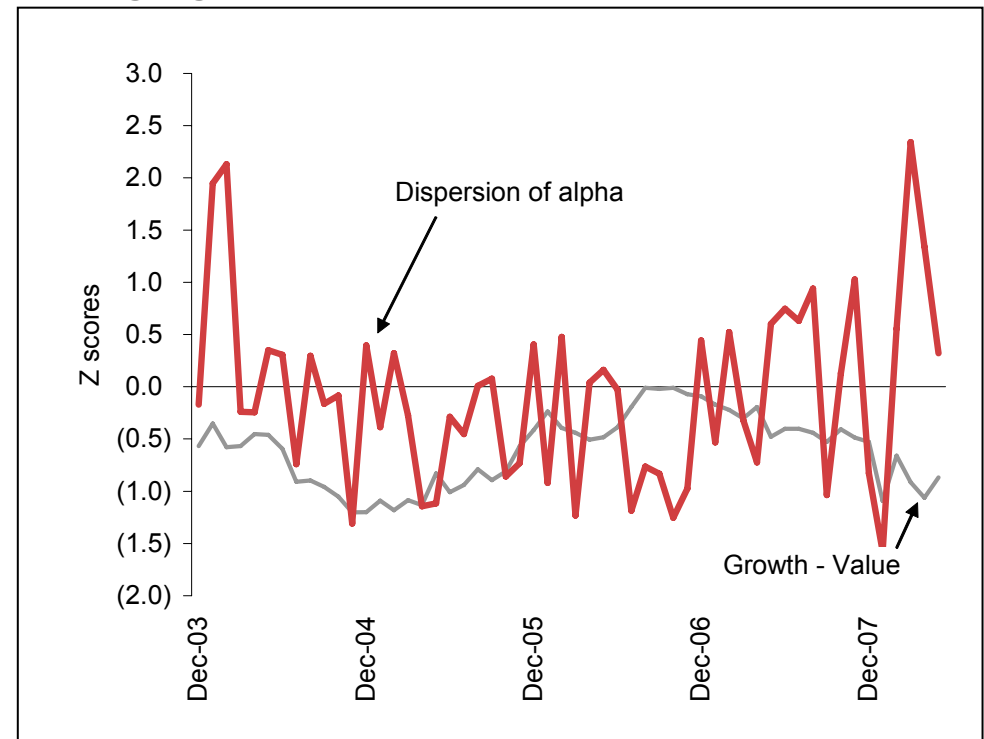
Dispersion of alpha related to growth/value tilt

- Similar to global markets, the dispersion of alpha in DM has generally related to the dominance of growth versus value. When growth beats value, alpha dispersion tends to increase — and vice versa
- Since 2007, a notable tilt towards value in EM Asia, while DM Pacific ex-Japan shows a growth tilt
- We think alpha dispersion will likely increase in EM Asia amid slowing growth, albeit with a lag

Pacific ex-Japan



Emerging Asia



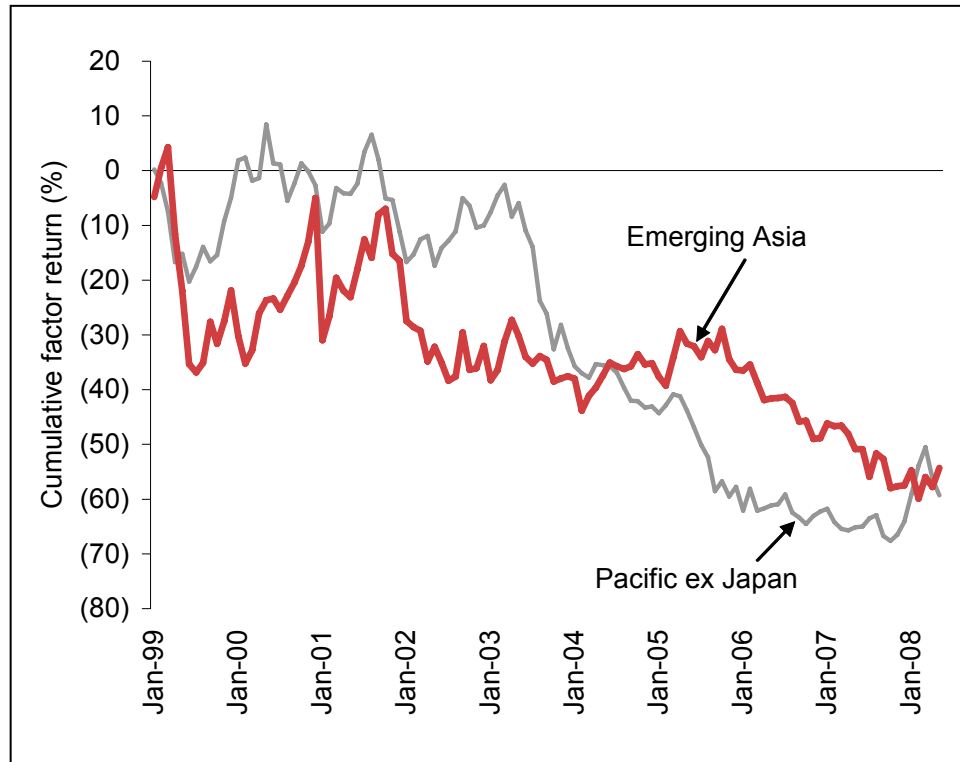
Notes: The charts display z scores of MAD (median absolute deviation) of monthly realised alphas and z scores of the de-trended cumulative difference between the MSCI growth and value indices. Data run to 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

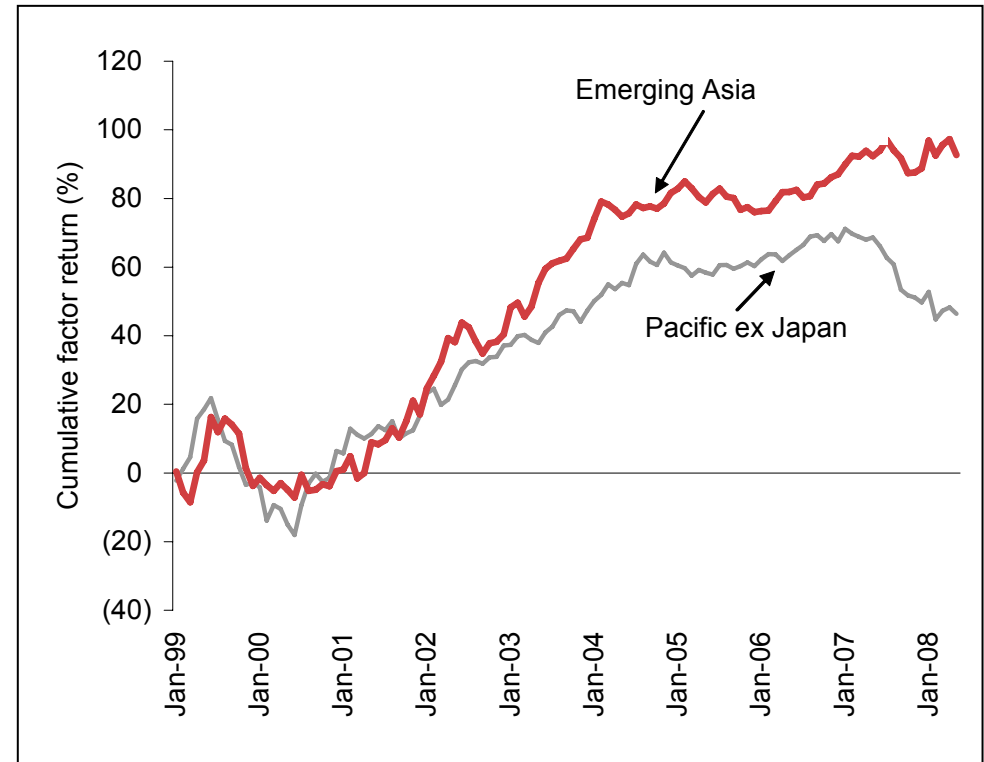
Default probability: a gauge of market's pricing of credit risk

- A rising line indicates an aversion to credit risk; a declining line means comfort with credit risk
- Growth outperformed value in DM Pacific during the credit crisis due to heightened default risk
- Returns to default probability show an easing of concerns in DM Pacific but not EM Asia

Default probability*



Book to price (a typical value factor)



Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data run to 30 May 2008.

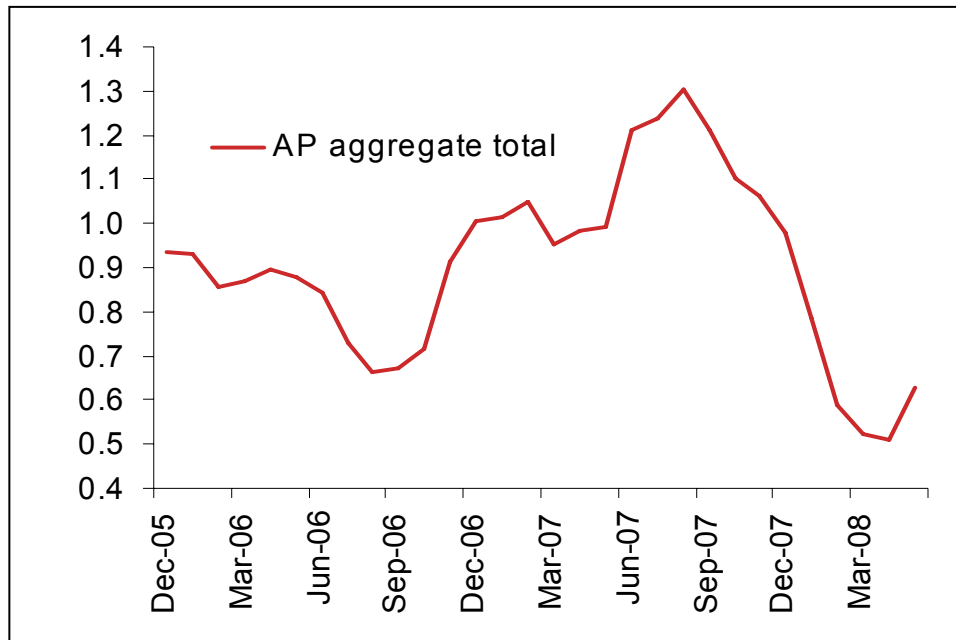
Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited

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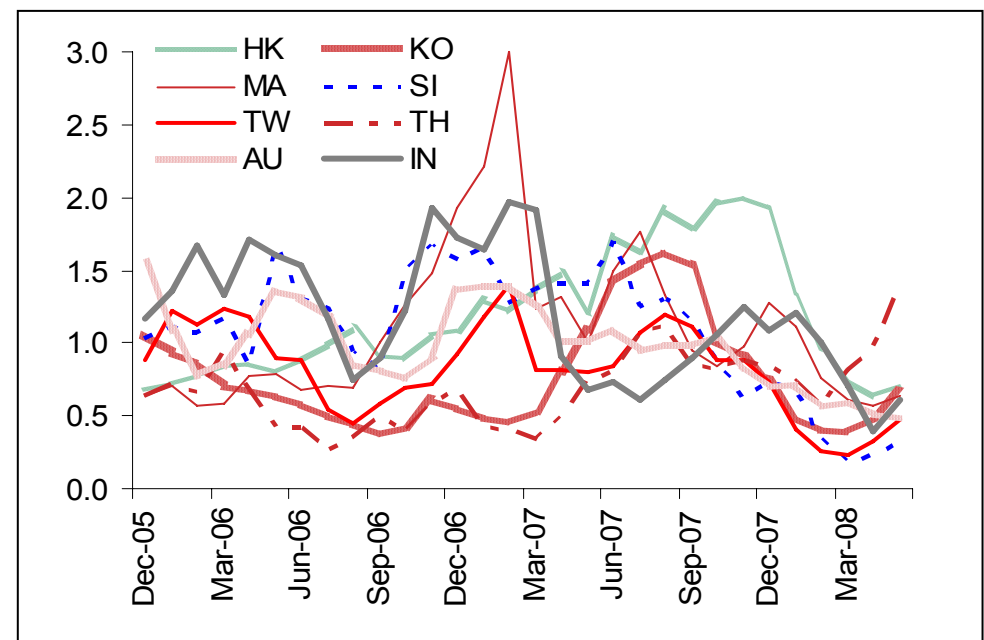
The best of earnings momentum is behind us

- Our regional earnings-revision indicator has slowed since last summer
- Is the worst behind us? Our analysis of StarMine predicted surprise scores indicates that, on average, seven out of eight regional markets (except Thailand) are likely to see more negative than positive earnings surprises over the next 12 months

Earnings momentum index



Earnings momentum index



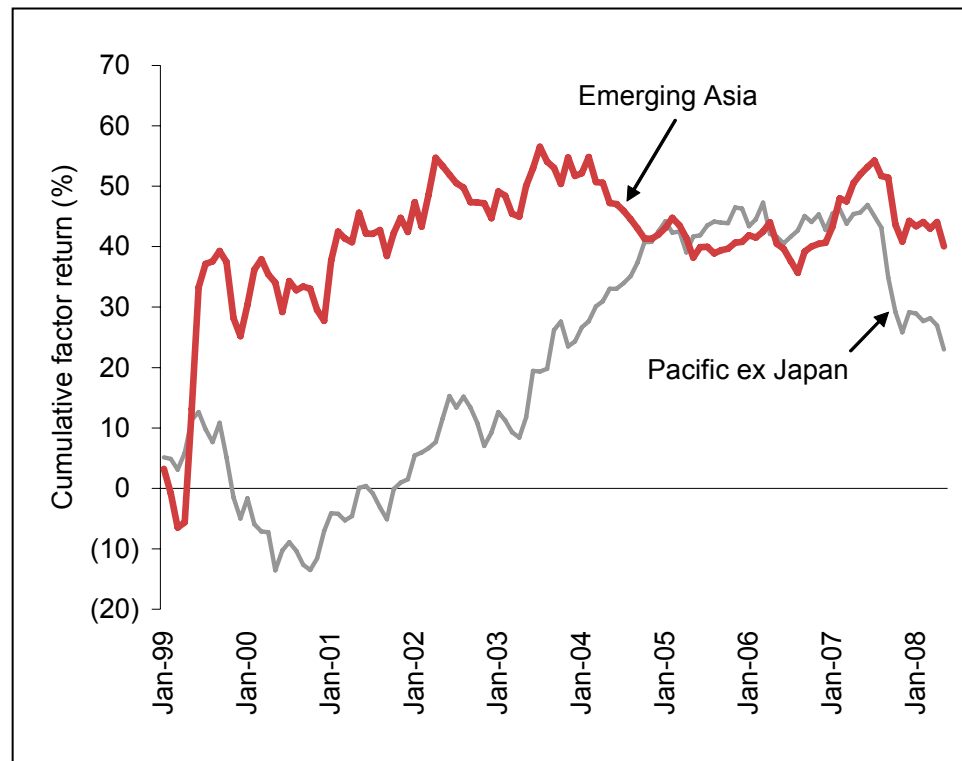
Note: Data as of 30 May 2008.

Source: I/B/E/S, Datastream, Nomura International (Hong Kong) Limited — Quantitative Research

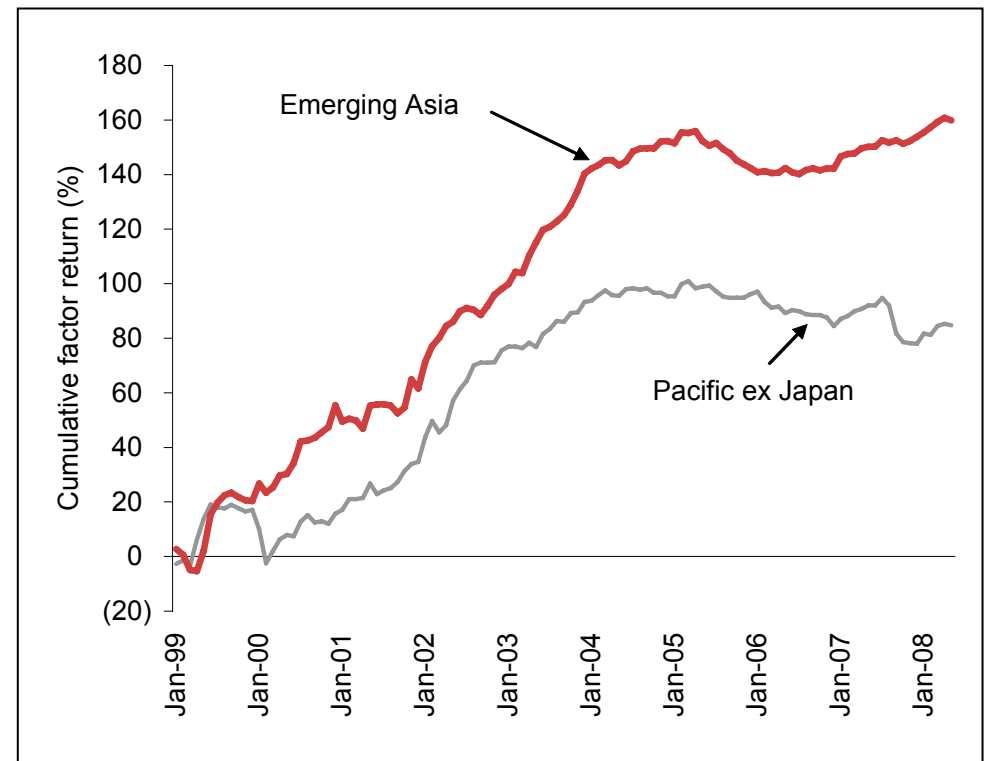
Garnering alpha in 2008: the pricing power

- Large caps outperform small caps amid rising input costs and eroding corporate margins
- Cashflow is king amid a slowdown in economic growth with rising inflation

MarketCap *



Cashflow yield



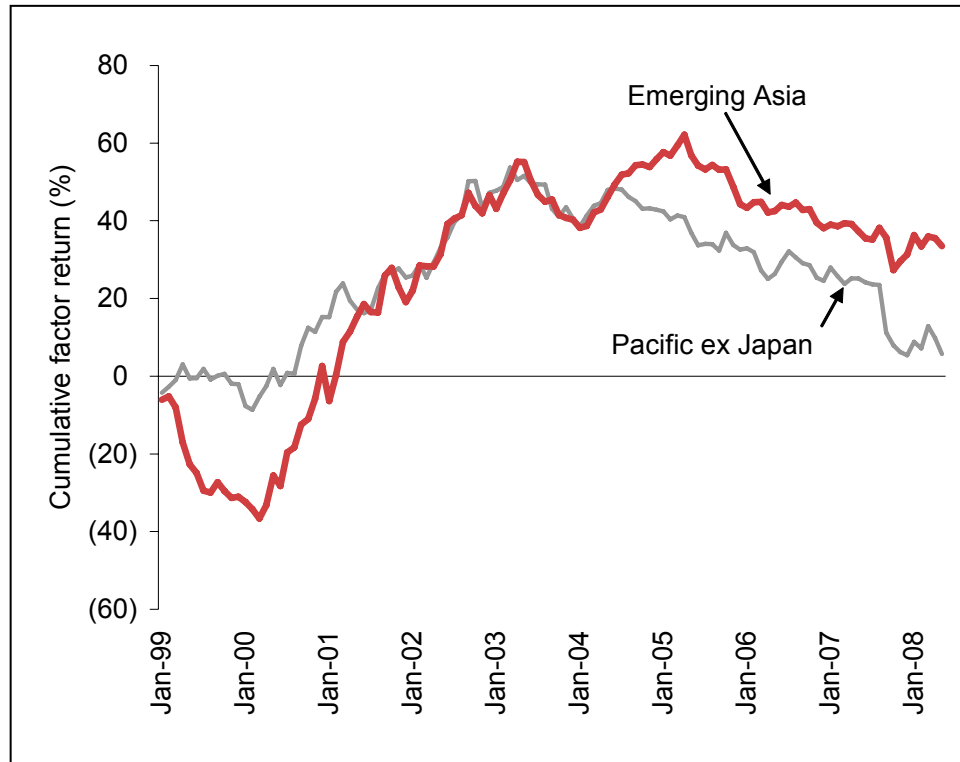
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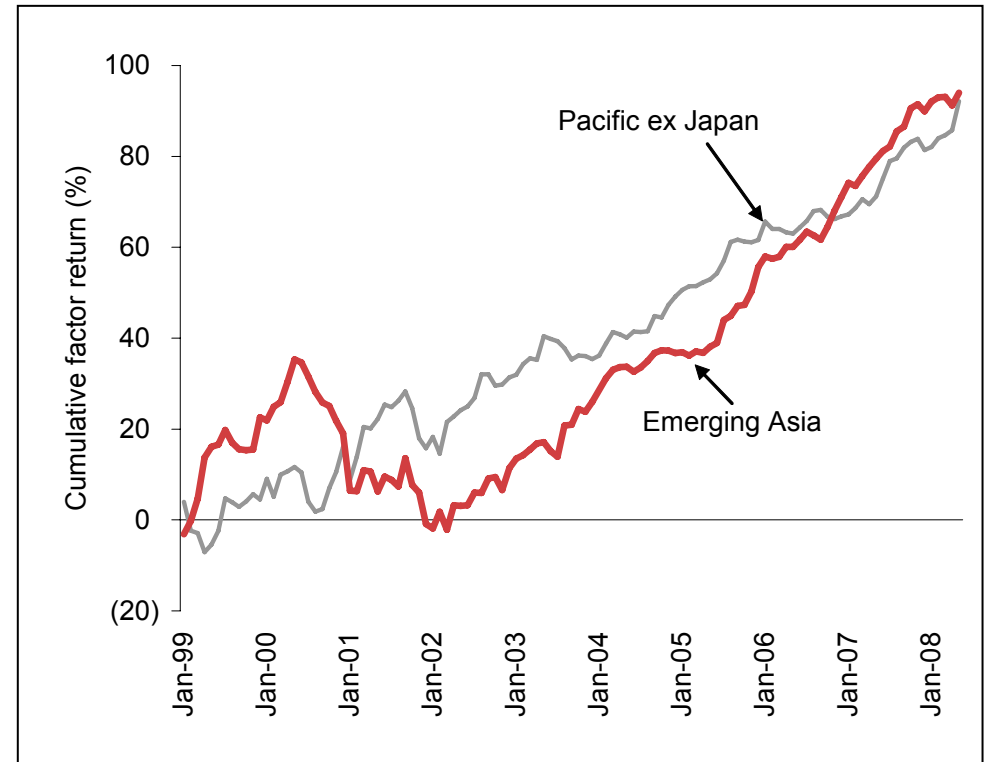
Garnering alpha in 2008: yield and surprises

- Falling US interest rates and a weakening US dollar should allow domestically focused companies to perform on a relative basis. Domestic-centric Asian high dividend yield stocks are worth monitoring
- In a period of slowing growth and higher alpha dispersion, stocks with positive earnings surprises will receive greater relative reward

Dividend yield



StarMine predicted surprise (12M)



Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

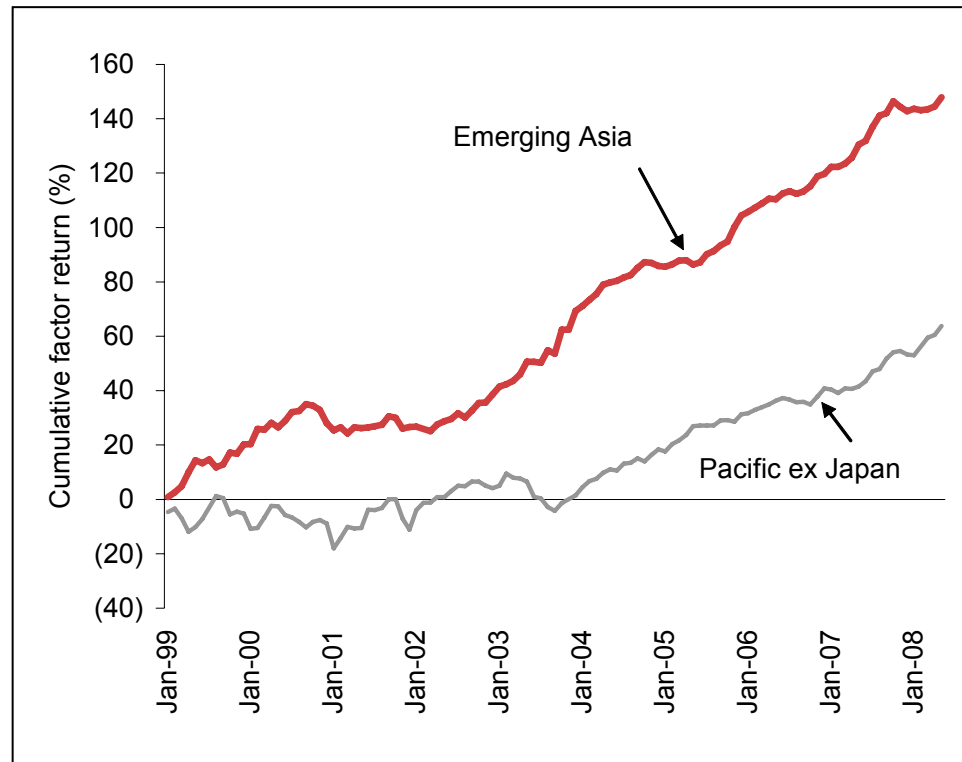
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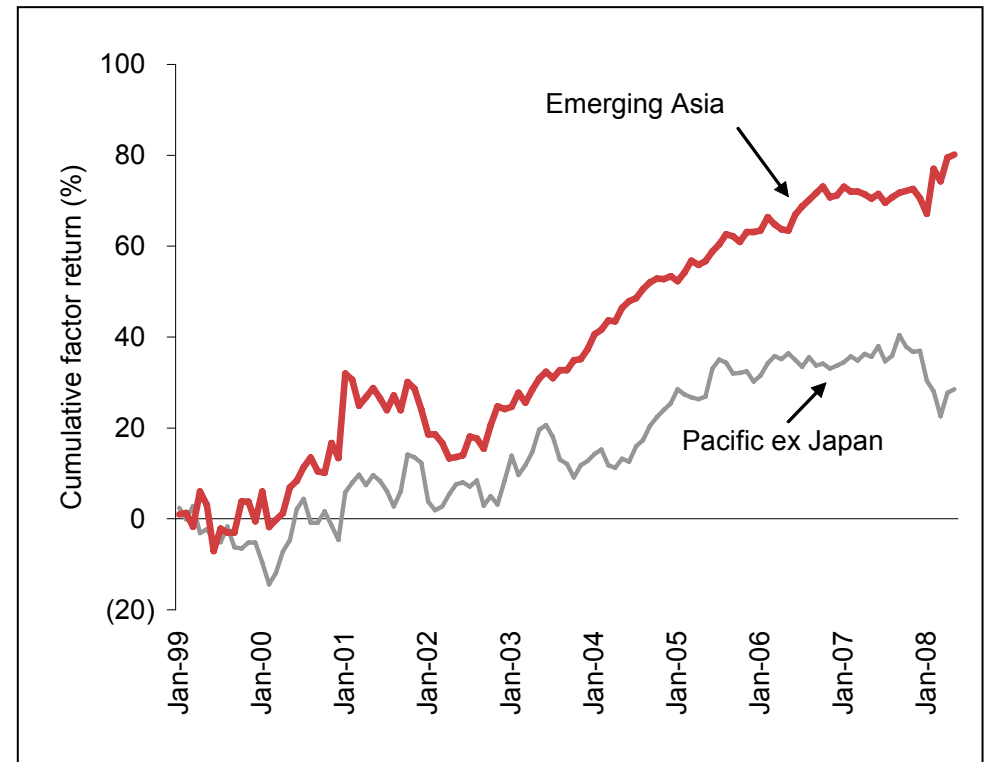
Garnering alpha in 2008: the earnings revisions

- Analyst revisions continues to be an effective quantitative factor
- Three-month change in earnings yield factor suffered in 4Q07 and 1Q08

Revision index



Earnings yield growth



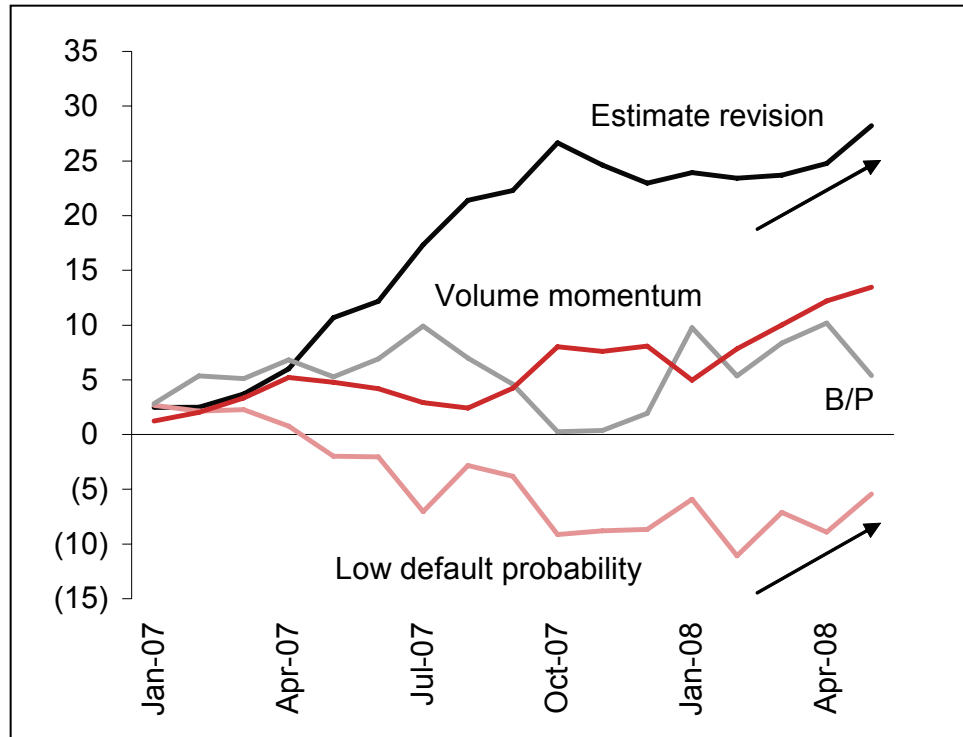
Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

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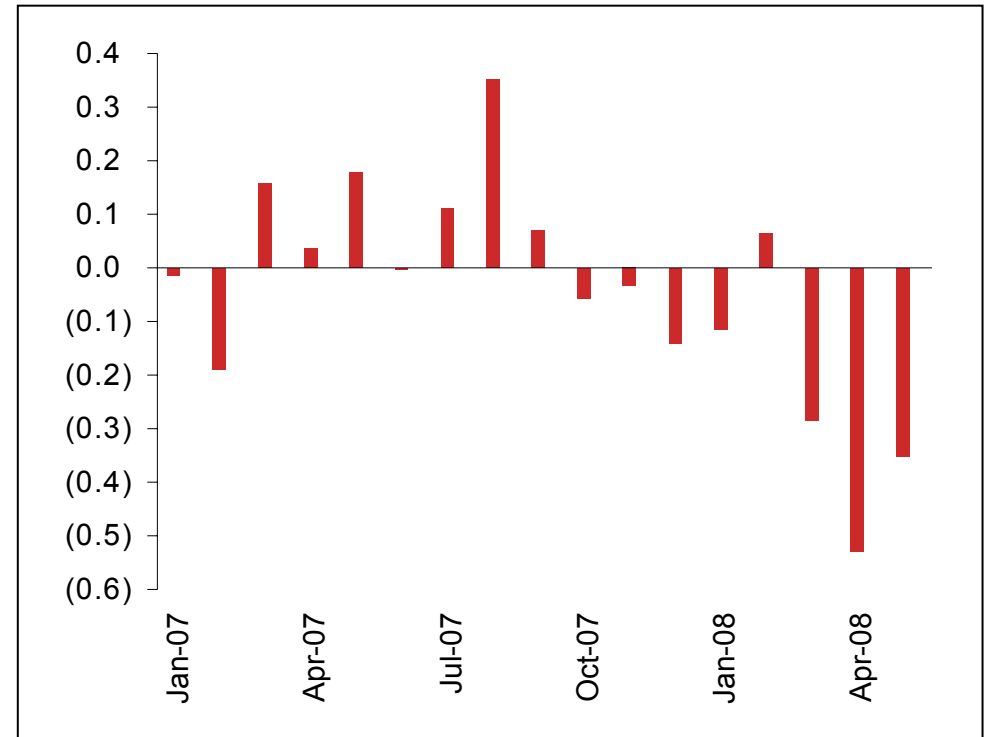
Coupling of revision and low default probability

- In EM Asia, estimate revisions and low default probability are showing a coupled movement recently
- More stocks with low default probability are included in companies with upward estimate revisions
- Impact of earnings yield growth will be positive amid a period of slowing growth and risk aversion

Monthly change of cumulative factor return (January 2007 to May 2008)



Difference of default probability medians between revision #5 and #1



Notes: Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly), except for the factors marked *, which are computed as the subsequent performance of an equal-weighted portfolio that is long the lowest quintile and short the quintile with the highest scores (rebalanced monthly). Factor returns do not include transaction costs. Data as of 30 May 2008.

Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura International (Hong Kong) Limited
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Summary

- Since the credit crisis, risk-adjusted alphas are falling in both developed and emerging markets in Asia-Pacific because of higher alpha dispersion, making stock-picking more difficult. Although the median alphas remain positive for EM Asia, they are still nowhere near the levels prior to the credit crisis.
- The ICs suggest that the utility of quantitative factors for investing persists, especially in Emerging Asia. The source of alpha comes from both the long and short sides.
- While the improvement in ICs points to a recovery in the efficacy of quantitative factors, the high alpha dispersion highlights the wide range of possible outcomes. The penalty for being wrong remains high.
- Alpha dispersion will likely increase further in EM Asia amid slowing growth. The best of the earnings momentum is behind us.
- What should investors do? To harvest alpha in 2008, we focus on large caps with good pricing power and strong cashflow. We also focus on dividend yield, StarMine predicted surprise, and analyst earnings revisions. These factors look more promising in terms of delivering risk-adjusted alphas in a period of slowing growth and heightened volatility.

Reference: Asian markets stock lending

Market	Short-selling allowed	Cost of stock lending (% pa)			Remarks (issues to be aware of)
		Large cap	Mid cap	Small cap	
Australia		0.32	0.42	1.56	
Hong Kong		0.47	0.79	1.70	
India		n/a	n/a	n/a	More active on equity swap market
Indonesia		n/a	n/a	n/a	Limited demand
Japan		0.30	0.43	0.72	
Korea		0.63	1.18	2.43	
Malaysia	Restricted	n/a	n/a	n/a	
New Zealand		n/a	n/a	n/a	Poor liquidity across all names bar top weight
Pakistan	Not allowed	n/a	n/a	n/a	
Philippines		n/a	n/a	n/a	Limited demand
Singapore		0.22	0.72	1.44	
Taiwan	Restricted	n/a	n/a	n/a	Lack of info due to swap market versus onshore market
Thailand		n/a	n/a	n/a	Poor liquidity across all names as need to trade for NVDR line

Notes: Large-cap definition is a rough top quartile of stocks in order of market cap, mid-cap is roughly the second quartile, small-cap is the third and fourth quartiles. Data as of 30 May 2008.
Source: Nomura International (Hong Kong) Limited — Stock Lending Desk

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