Quantitative Outlook in Asia and the New Quant Idea for Asian Equities

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2010 Outlook

Rebalancing: prepare for a new driver

■ YTD the success of value factors has narrowed with defensive DY scoring best, while earnings revision-related, ROE, and reported sales growth factors see rising impact. Return of risk factor has turned negative. One-year price momentum has resumed a positive impact, while one-month return reversal effect continued.

2009: Top 18 factors by absolute return %

| Rank	Factor	2009 annualised return (%)	Factor category
1	Default probability *	(28.79)	Financial strength
2	Cashflow yield	26.24	Valuation
3	B/P	25.39	Valuation
4	Price momentum (12M -1M)	(25.33)	Size, momentum & liquidity
5	Sales/Price	23.33	Valuation
6	Price momentum (6M -1M)	(22.76)	Size, momentum & liquidity
7	Long term price momentum	(21.14)	Size, momentum & liquidity
8	Earnings yield	19.59	Valuation
9	Estimate dispersion	18.66	Revision & chg in EY
10	Price momentum (3M)	(16.37)	Size, momentum & liquidity
11	Price momentum (1M)	(16.00)	Size, momentum & liquidity
12	Volume turnover ratio	15.39	Size, momentum & liquidity
13	EPS growth (FY1)	(15.25)	Growth
14	Volatility	14.70	Size, momentum & liquidity
15	Trailing EBITDA/EV	14.06	Valuation
16	Shareholders' equity ratio	(13.95)	Financial strength
17	Return on equity	(13.01)	Financial strength
18	Return on assets	(12.56)	Financial strength

YTD: Top 18 factors by absolute return %

Rank	Factor	YTD annualised return (%)	Factor category
1	Change in earnings yield	13.88	Revision & chg in EY
2	Dividend yield	12.12	Valuation
3	Revision index	11.67	Revision & chg in EY
4	Normalised E/P	11.39	Revision & chg in EY
5	Earnings yield	11.39	Valuation
6	Trade momentum (3M)	10.56	Size, momentum & liquidity
7	Return on equity	10.14	Financial strength
8	Sales growth (1Y)	9.55	Growth
9	Shareholders' equity ratio	(9.15)	Financial strength
10	Volatility	(8.70)	Size, momentum & liquidity
11	Change in ROE (FY1)	7.15	Growth
12	Price momentum (12M -1M)	6.48	Size, momentum & liquidity
13	StarMine predicted surprise	6.26	Revision & chg in EY
14	Earnings revision indicator (FY2)	5.87	Revision & chg in EY
15	Sales/Price	5.47	Valuation
16	Price momentum (1M)	(5.39)	Size, momentum & liquidity
17	Trailing EBITDA/EV	(5.16)	Valuation
18	Estimate dispersion	(5.15)	Revision & chg in EY

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 reverse-based. Factor returns do not include transaction costs. Universe is based on MSCI Standard Index in AC Asia Pacific ex-Japan. YTD performance data run to 31 May, 2010. Factor definitions are shown in Appendix I.
Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura Quantitative Strategies

Factor performance in Asia

■ Earnings revisions, growth and operational quality measures see improved returns in 2010.
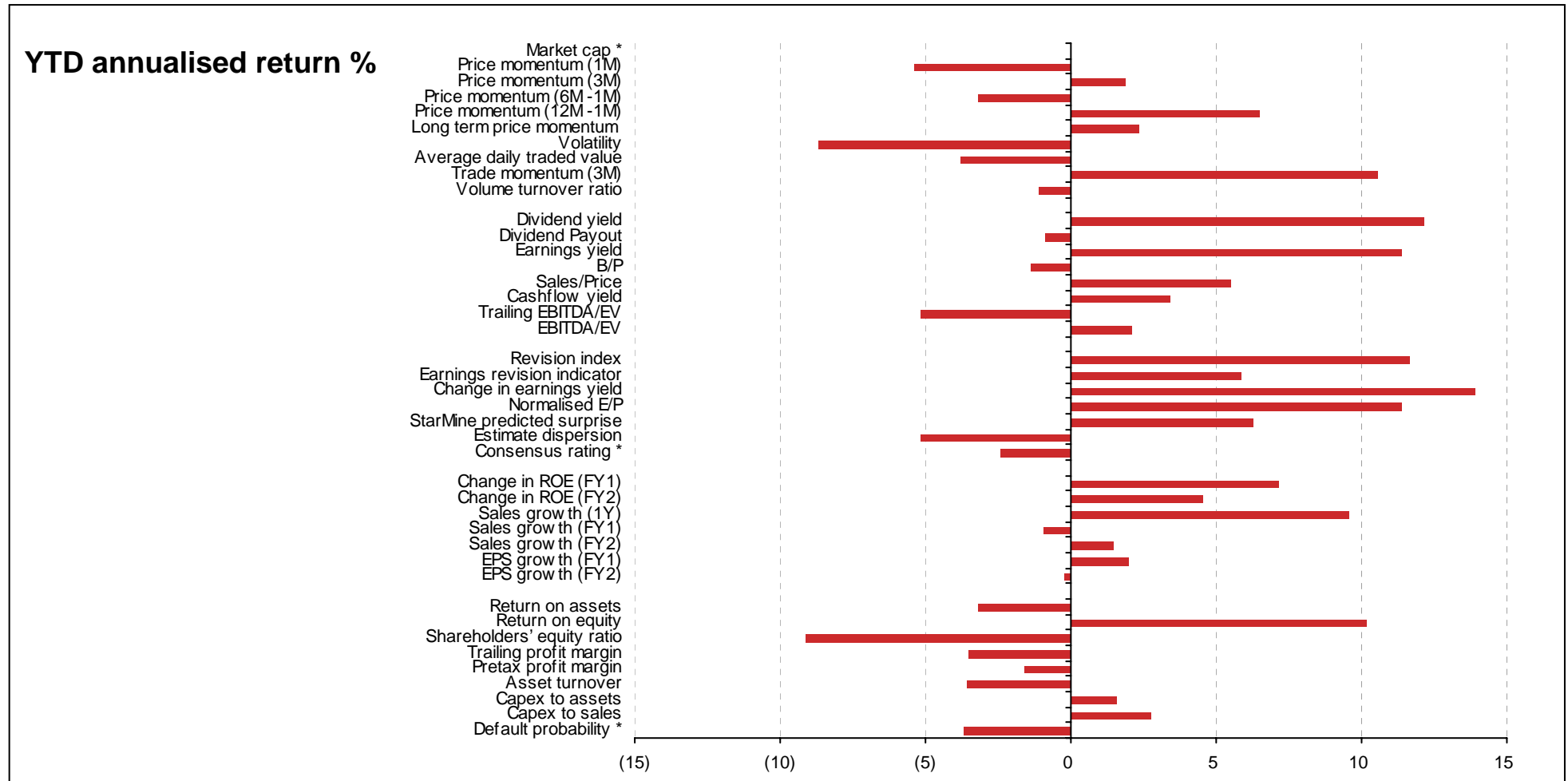

YTD annualised return %

Notes: Universe is based on MSCI Standard Index in AC Asia Pacific ex-Japan. Data run to 31 May, 2010. Factor definitions are shown in Appendix I.
Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura Quantitative Strategies

How risk appetite affects value stocks

- One prominent factor in the market's recovery was risk relief. The risk relief rally in 2009 boosted cheap stocks. Risk appetite has been priced in. While solvency issues surrounding Europe remain uppermost in investors' minds, the value spread between the low and high default probability stocks has not been widened significantly, to date.

**B/P of high and low default probability stocks (Asia Pacific ex-Japan)**
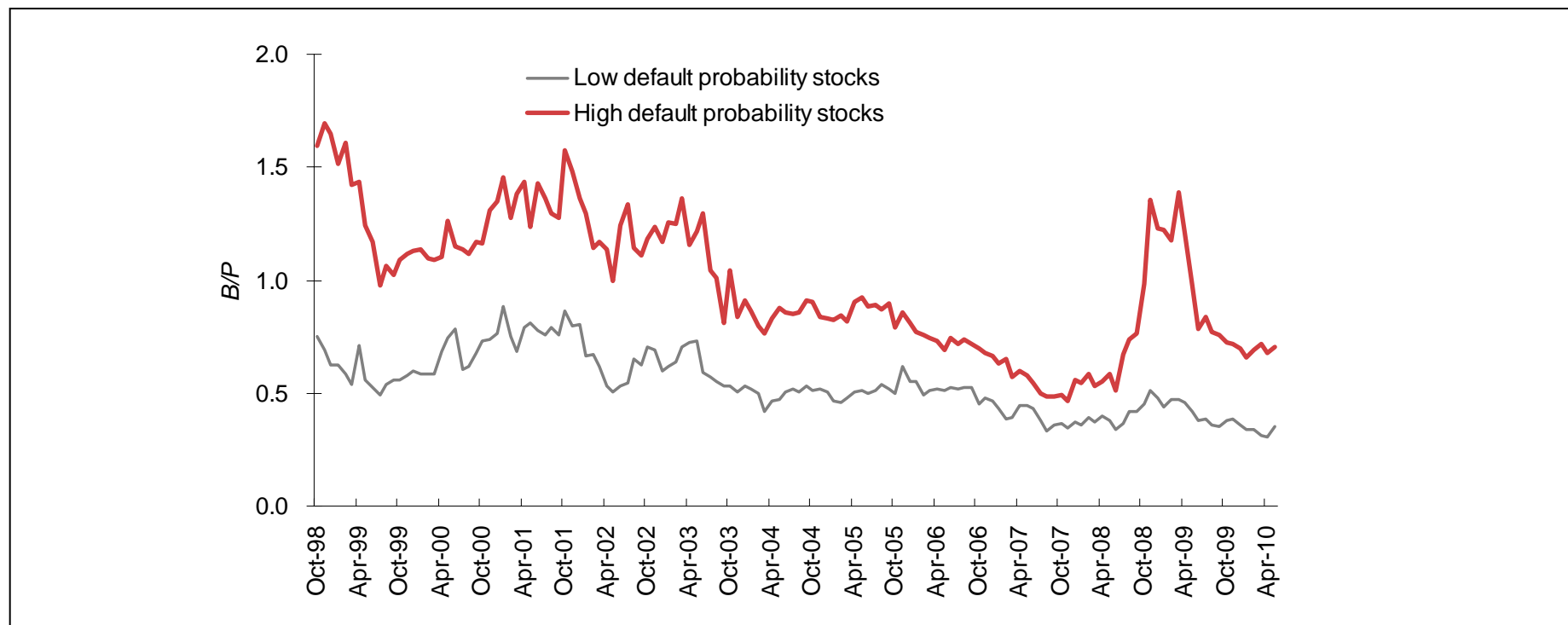
Notes: Red line shows the average B/P for the quintile group in the MSCI AC Asia Pacific ex-Japan with the highest default probability; grey line shows the average B/P for the quintile group with the lowest default probability. Data run to 31 May, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Correlation between quant factors

- When quant factors suffered in 2008, short-term average (absolute) correlation between factor returns of typical quant factors rose to an exceptionally high level. We observe a falling correlation of factor returns since mid-2009, implying that quant return is resuming more normal levels.

- Amid the recent financial turmoil in European credit markets, of late the correlation between factor returns is increasing again. Although the level of the average correlation is still not as high as during the credit crisis, we should keep an eye on whether this trend will continue.

Average correlation of typical quant factors versus cumulative return to B/P, E/P and revision factors
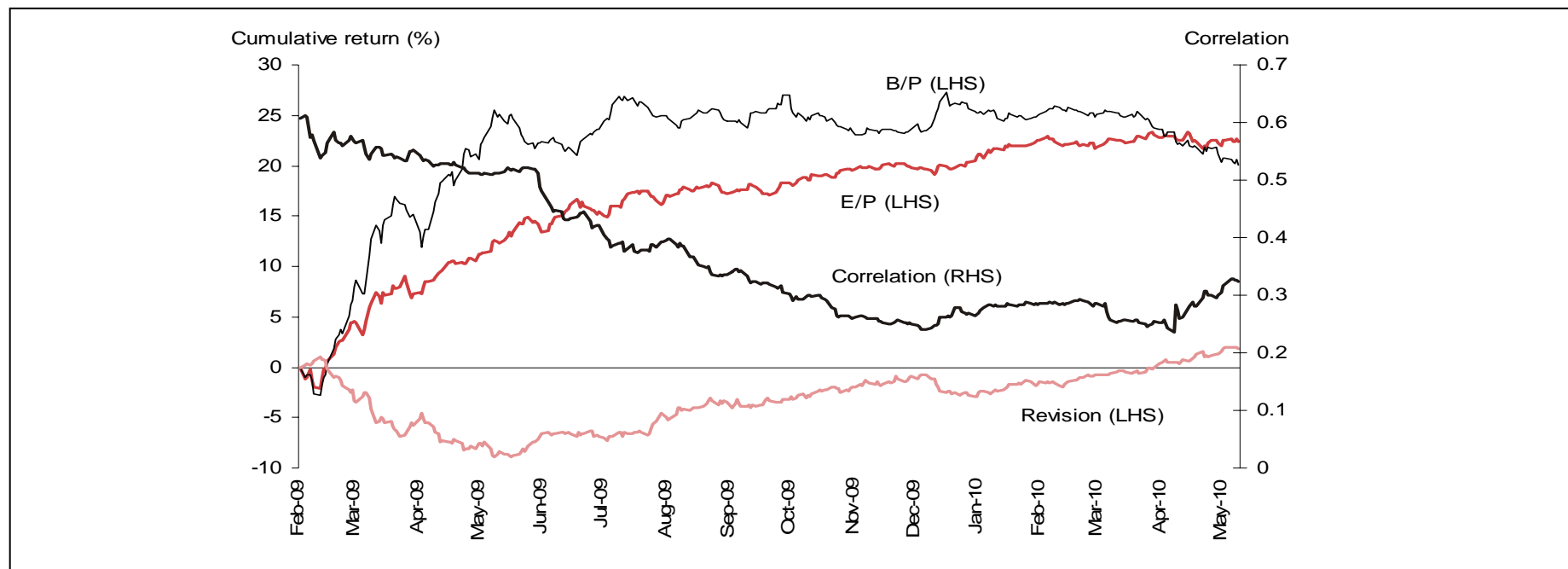
Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan. Performance is calculated by cumulating the return spread (in local currency) between group #3 and #1 by each factor. Portfolios are rebalanced monthly and grouping simulation is conducted with country diversification. For correlation, the chart shows short-term (60-day) rolling average (absolute) correlation of return for 12 typical quant factors. Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

DM and EM Asia: Quant factor returns

■ Since the credit crisis, quant factors have fared relatively better in Emerging Asia.

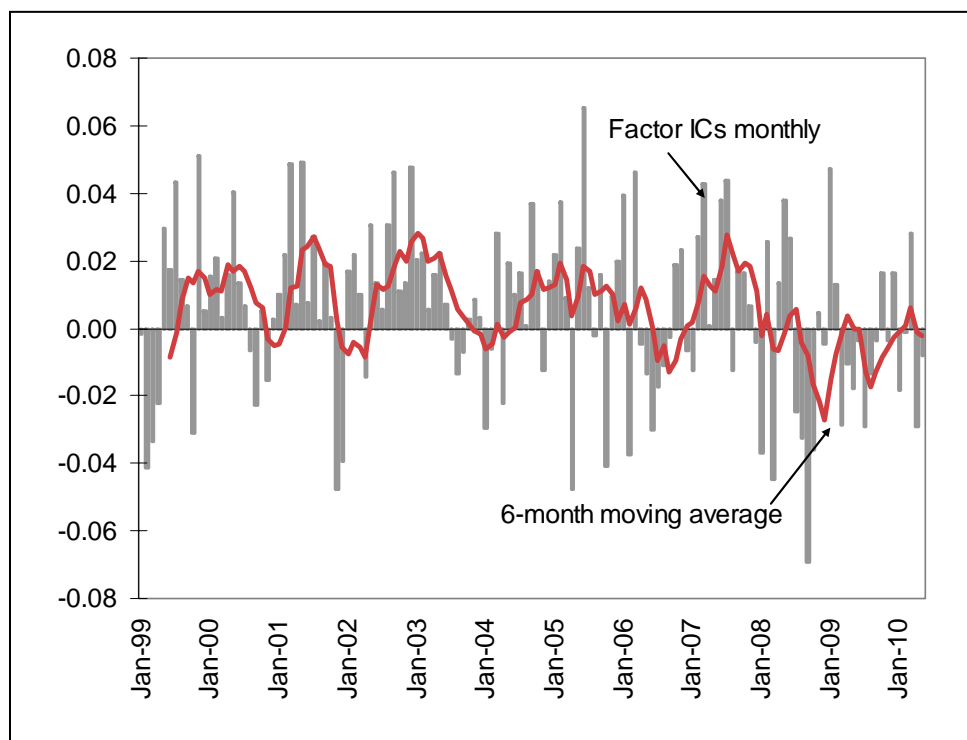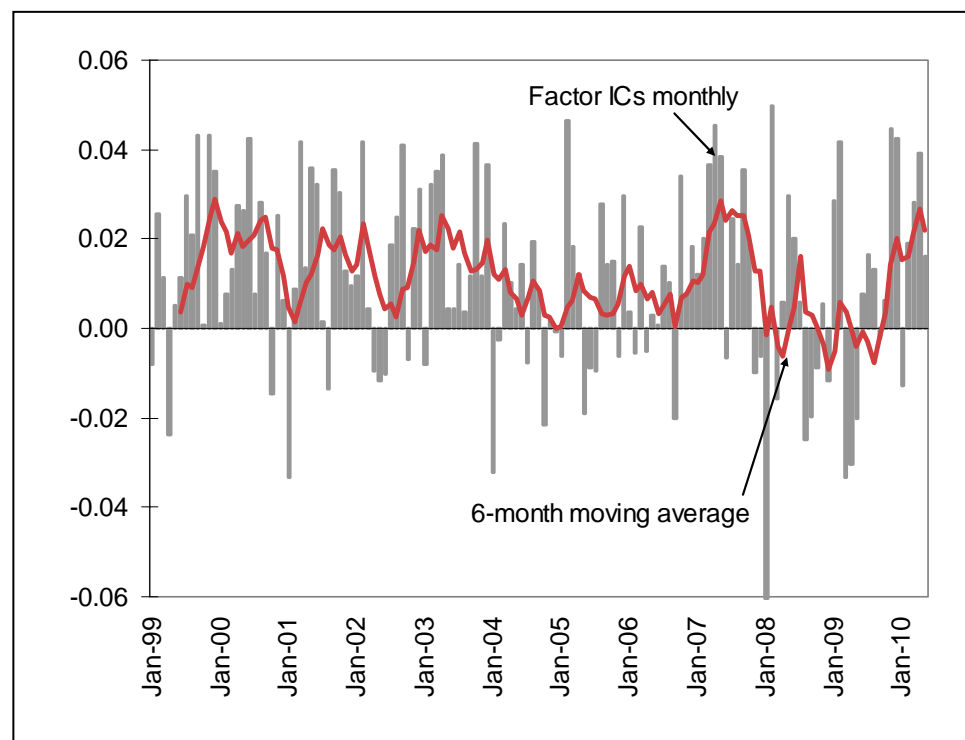**Average quant factor performance (long short return by quintile)**
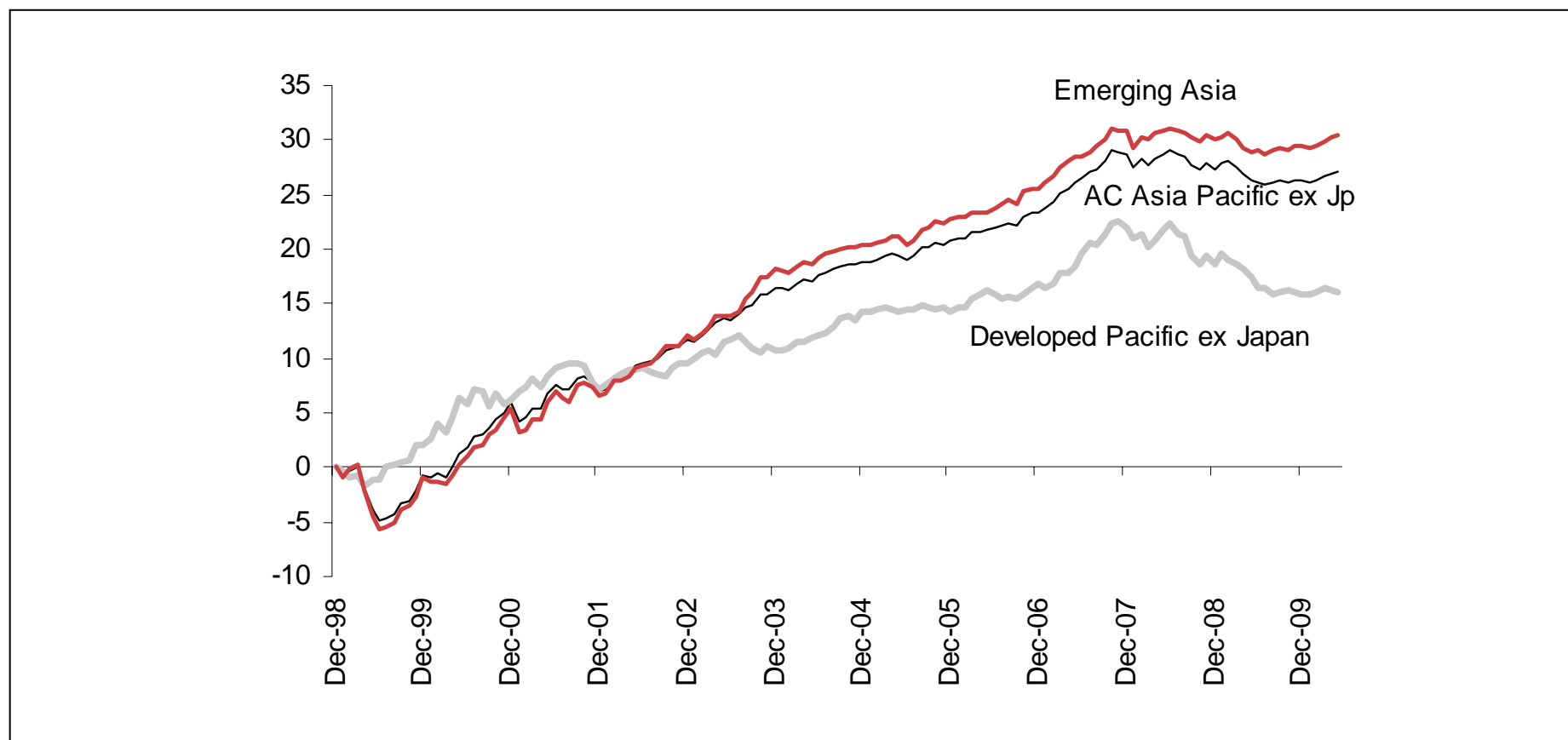
The outlook for alpha

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

Pacific ex-Japan

Emerging Asia

Notes: The information coefficient measures the correlation of the monthly ranking of stocks according to quant factors and the subsequent month's ranking of the returns of these stocks. Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura Quantitative Strategies.

The potential return of PBR factor

- From a quantitative perspective, the wider the value spread, the greater the potential return of value factors. When many value stocks are trading below book value, the PBR factor may gain investors' traction.

- Value stocks have become cheaper amid recent market tumble. But we still believe the success of B/P in 2010 could narrow compared with what we saw in early 2009.

Quarterly PBR factor return versus average PBR for value stocks
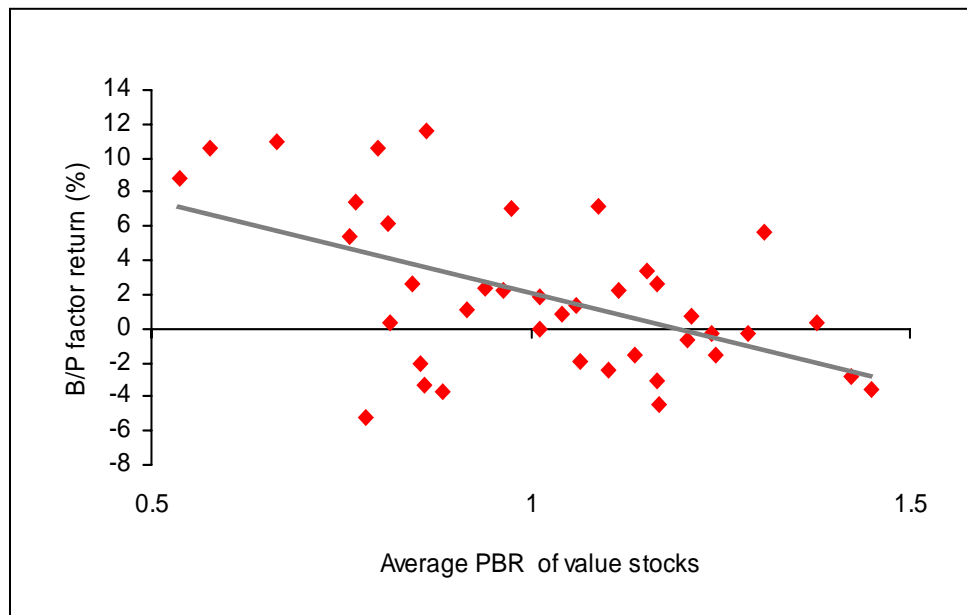
Average PBR for value stocks
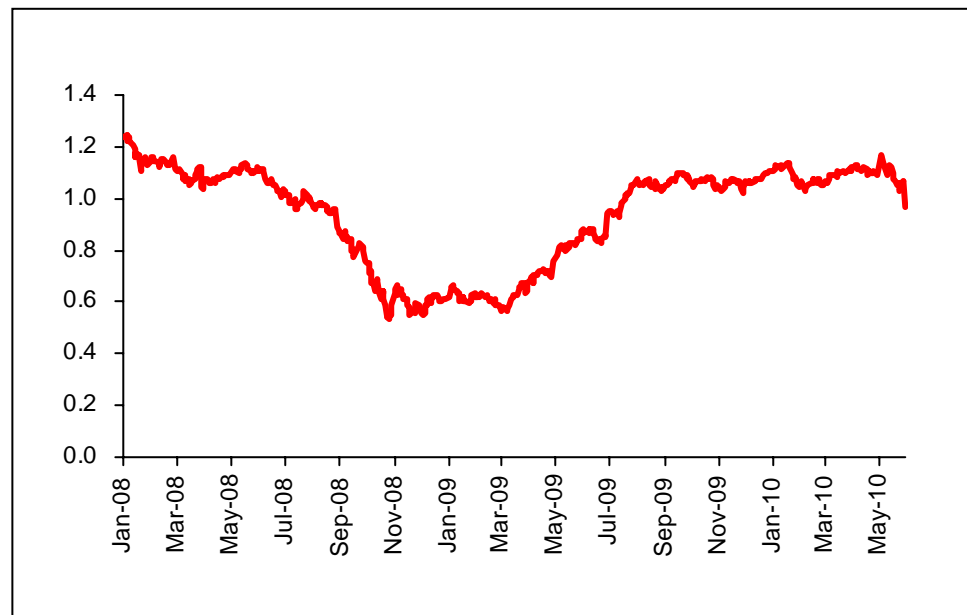
Notes: Value stocks are defined as the stocks in the bottom quintile ranked by PBR. Universe is based on the constituents of MSCI Hong Kong, Korea, Taiwan, Singapore and Australia.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Notes: Figures are market cap-weighted PBR for the bottom quintile portfolio by PBR. Universe is based on the constituents of MSCI Hong Kong, Korea, Taiwan, Singapore and Australia. Data run to 1 June, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Change in value leadership from B/P to E/P

- The revival of B/P efficacy in 2009 initially surpassed forecast E/P.

- Recent performance of valuation devices was mixed, with B/P faring worst and dividend yield and E/P delivering better performance. The increased risk aversion does not seem to have hurt all value factors in the same manner. The economic recovery and declining uncertainty of earnings in Asia are increasing the efficacy of E/P since late 2009.

Daily factor return — value factors
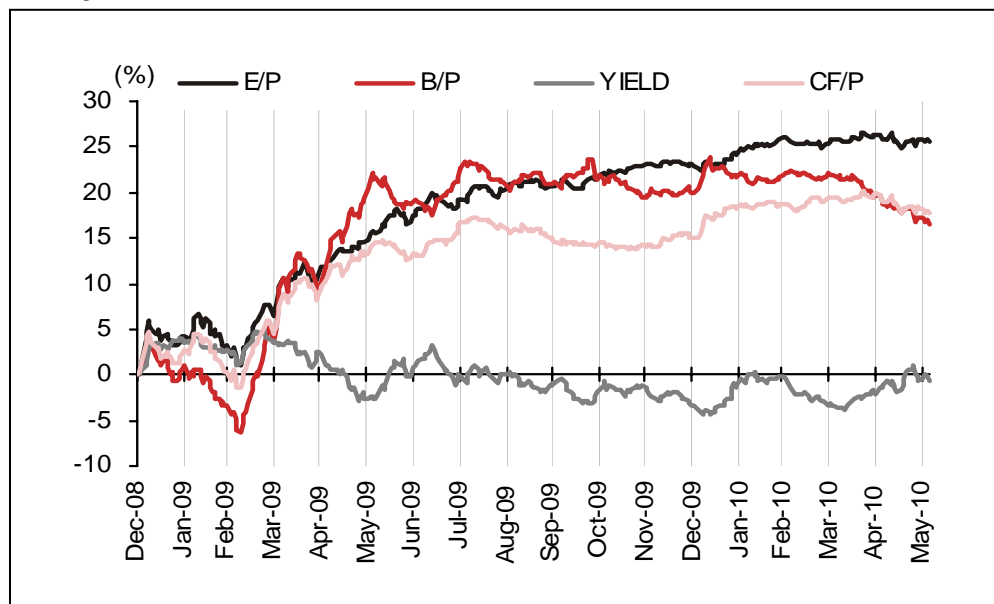
Correlation between factor return and market return

Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan. Portfolios are rebalanced monthly and grouping simulation is conducted with country diversification. Performance is calculated by cumulating the return spread (in local currency) between group #3 and #1. Data run to 4 June, 2010.
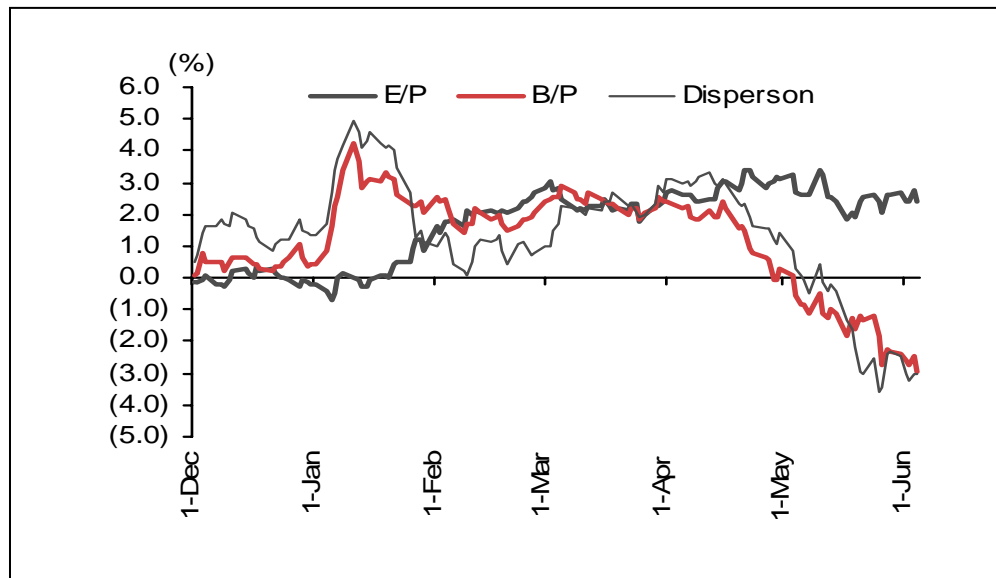Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies
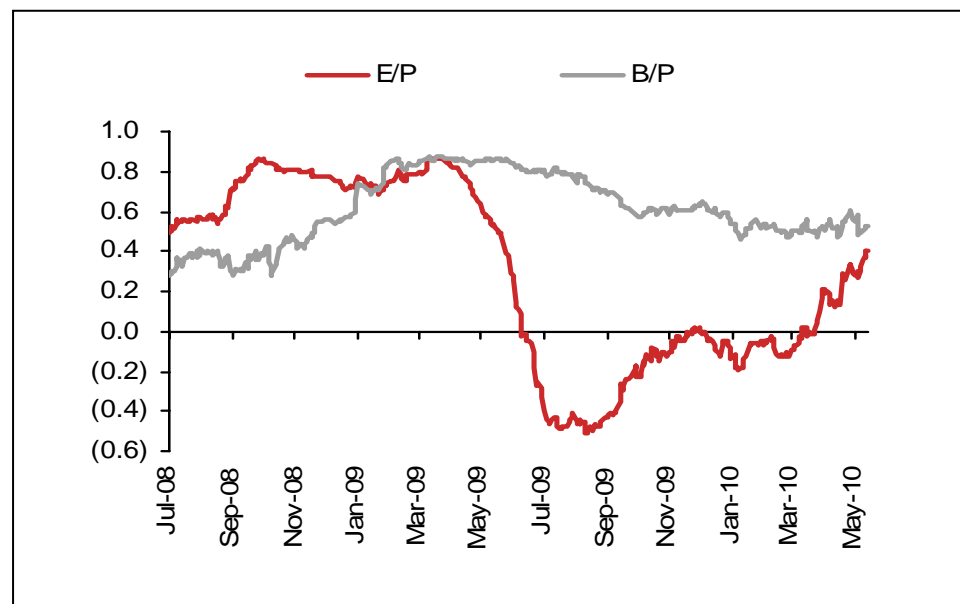
Note: The chart shows short-term (60-day) rolling correlation. Universe is MSCI All-Country Asia-Pacific ex-Japan. Data run to 4 June, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

# B/P is closely connected with estimate dispersion

- Performance of B/P is closely connected with estimate dispersion. That is to say, B/P outperformed when risk appetite was high, and underperformed amid rising risk aversion.

- Driven by domestic policy risk and Europe's solvency issues, recent sentiment has changed from risk-seeking mode in March to risk avoidance in April and May. B/P has under-performed E/P in recent months. Performance of B/P is likely to stay volatile in the near term amid rapid changes in risk appetite. If sovereign risk gets resolved and we see a resurgence in risk, there could be a short-term tactical case for B/P.

Factor return of E/P, B/P and dispersion

Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan. Portfolios are rebalanced monthly and grouping simulation is conducted with country diversification. Performance is calculated by cumulating the return spread (in local currency) between group #3 and #1. Data run to 4 June, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

**Correlation: B/P and E/P, B/P and dispersion**
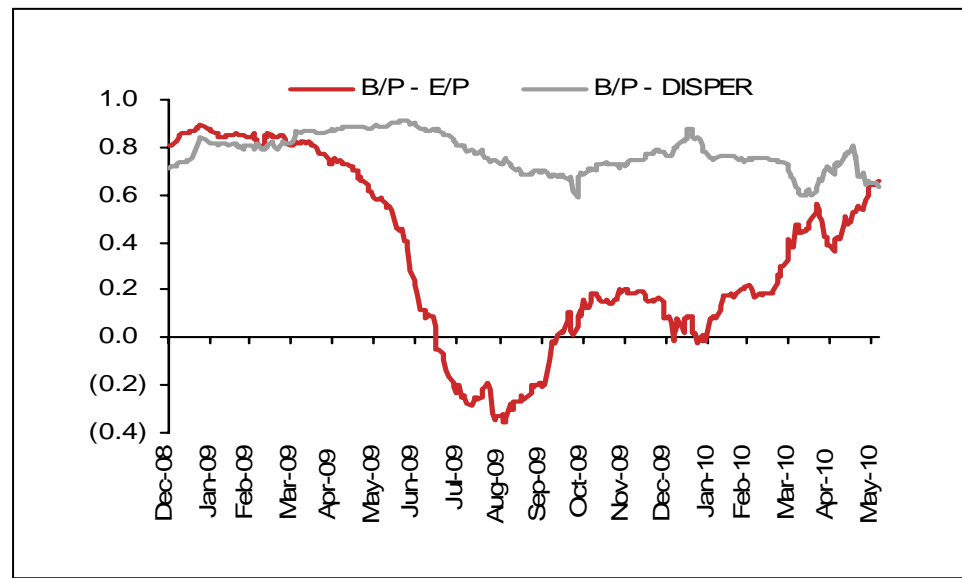
Note: The chart shows short-term (60-day) rolling correlation between factor returns. Universe is MSCI All-Country Asia-Pacific ex-Japan. Data run to 4 June, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Rising impact of earnings revision indicators

- The analyst revision index and StarMine-predicted surprise indicators are showing a rising impact in recent months, especially in Emerging Asia markets.

- Whereas in the past, investors tended to put emphasis on forecast E/P and revision-related factors in different circumstances, the fact that these factors have both fared relatively better recently indicates earnings prospects are still the main focus.

Daily factor return – revision indicators
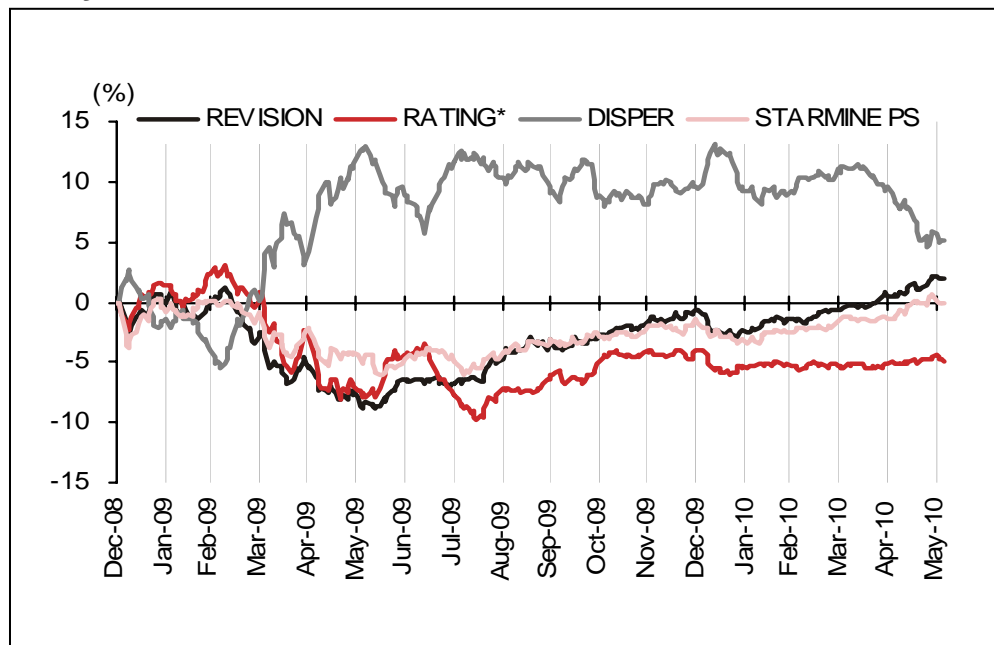
Revision and predicted surprises (DM versus EM)

Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan. Portfolios are rebalanced monthly and grouping simulation is conducted with country diversification. Performance is calculated by cumulating the return spread (in local currency) between group #3 and #1. Data run to 4 June, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies
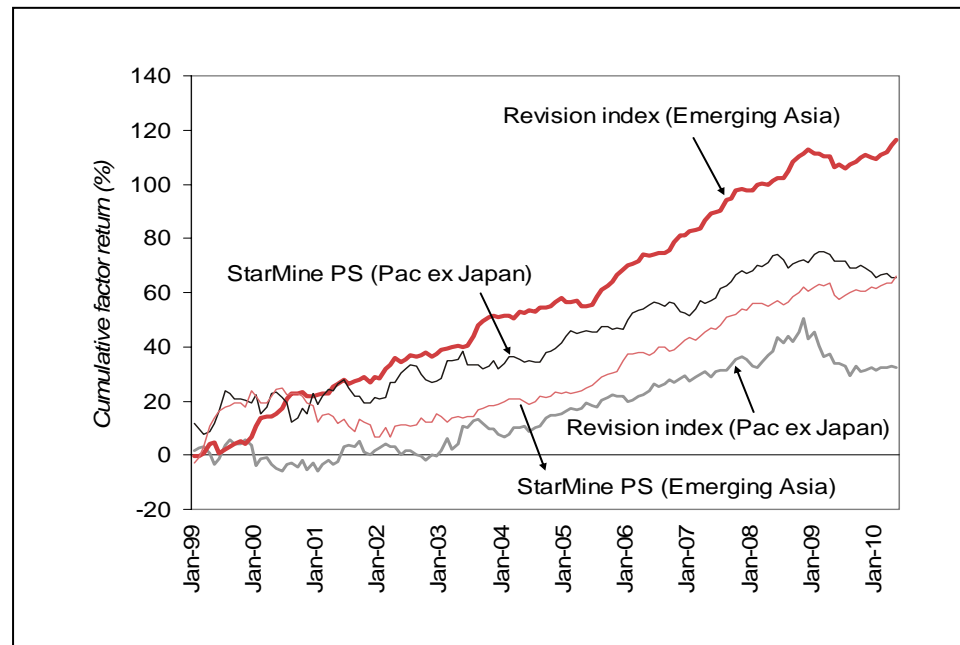
Notes: Universe is based on MSCI AC Asia-Pacific ex-Japan. Factor returns are generated by calculating the subsequent performance of an equal-weighted portfolio that is long the highest quintile and short the quintile with the lowest scores (rebalanced monthly). Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Improved returns on price momentum and growth

- In Asia, we observe short-term reversal and mid-term price momentum effect over the long run. Return of one-year price momentum is usually negatively correlated with B/P.
- The risk-relief rally in 2009 has greatly rewarded value stocks with high B/P, and at the same time the remarkable reversal wrecked the factor performance of one-year price momentum. Of late, one-year price momentum has resumed a positive impact. Reported sales and ROE growth factors also see improved performance.

Z-scores of cumulative return to one-year price momentum and B/P factors
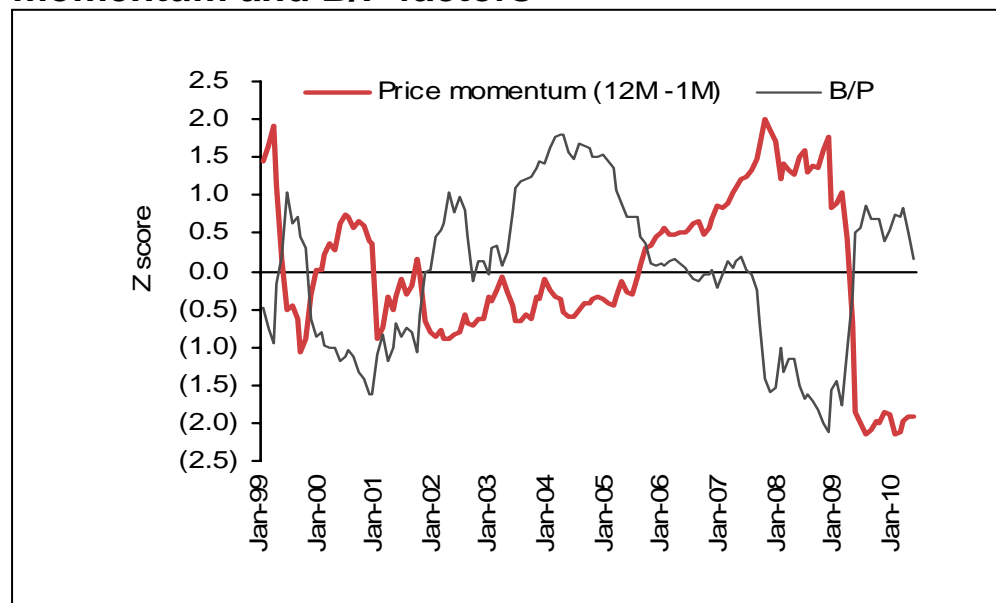
Note: Z-scores (based on deviations from the trend) of cumulative return to price momentum and B/P factors. Data run to 31 May, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Performance of mid-term momentum, B/P, actual sales growth and capex to sales
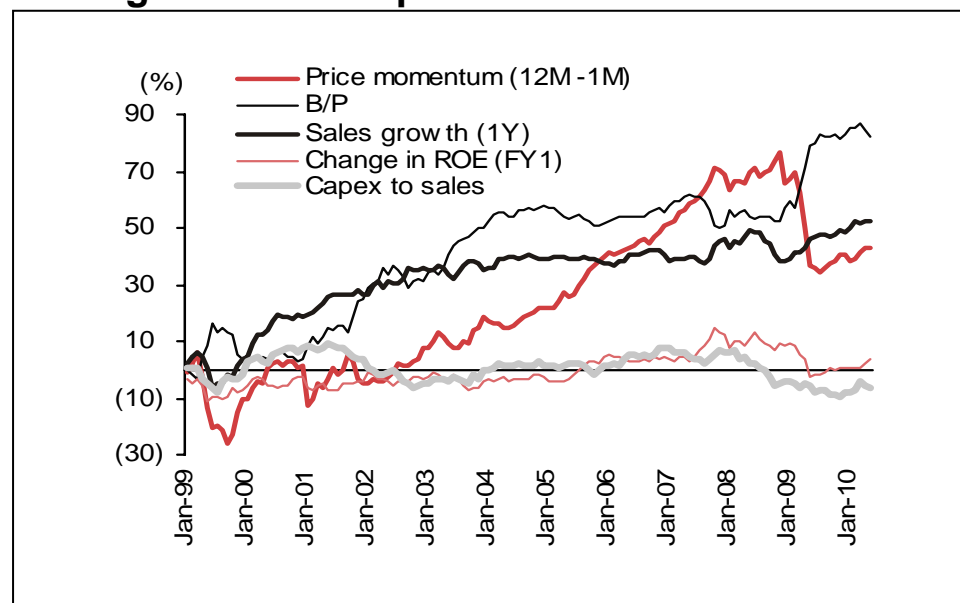
Note: The chart shows cumulative long-short performance since January 1999. Universe is MSCI All-Country Asia-Pacific ex-Japan. Data run to 31 May, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

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Earnings momentum as return driver

- Another prominent factor in the market's recovery is the earnings growth rebound. Global growth has been led by intra-emerging market trade and improving demand in the US could spur further growth.
- A theme running through our recent research is that the scope for further large upgrades may narrow as the year proceeds. And this is how it has panned out of late. Our Asian earnings momentum index is declining, though still remains positiv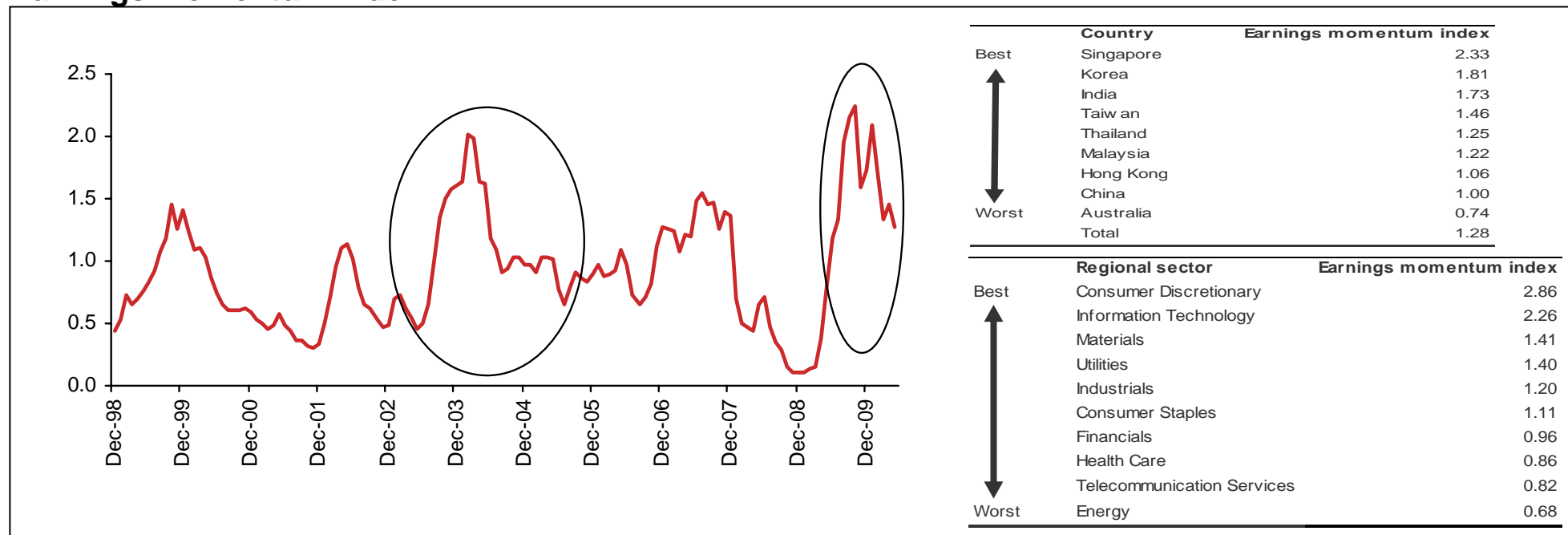e overall. Diminishing trade surpluses, wage pressures, increasing costs and ceilings on utilisation suggest that Asia earnings momentum will increasingly depend on margin stability, earnings quality, and an ability to sustain growth.

Earnings momentum index

	Country	Earnings momentum index
Best	Singapore	2.33
	Korea	1.81
	India	1.73
	Taiwan	1.46
	Thailand	1.25
	Malaysia	1.22
	Hong Kong	1.06
	China	1.00
Worst	Australia	0.74
	Total	1.28

	Regional sector	Earnings momentum index
Best	Consumer Discretionary	2.86
	Information Technology	2.26
	Materials	1.41
	Utilities	1.40
	Industrials	1.20
	Consumer Staples	1.11
	Financials	0.96
	Health Care	0.86
	Telecommunication Services	0.82
Worst	Energy	0.68

Note: Earnings momentum index is defined as: % of companies with +ve Revi,t / % of companies with -ve Revi,t. Data run to 31 May, 2010.
Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Reality check on earnings, quality and growth

- Current earnings revision cycles resemble the crisis recovery in the post IT bubble and SARS period.
- History tells us that when the market moves out of a recessionary trough and the rate of earnings upgrades is slowing, investors focus not only on stocks with reasonable valuations and positive earnings revisions, but also on those backed by an ability to sustain quality and growth.

| Factor return rankings	Period 1: Jun 03-Mar 04 APXJ	Period 2: Apr 04 - Sep 04 APXJ	Period 3: Oct 04 - Oct 05 APXJ
Market cap *	18	40	21
Price momentum (1M)	38	39	41
Price momentum (3M)	27	35	24
Price momentum (6M -1M)	7	31	3
Price momentum (12M -1M)	13	16	1
Long term price momentum	28	12	18
Volatility	12	36	38
Average daily traded value	34	34	23
Trade momentum (3M)	33	20	27
Volume turnover ratio	14	37	30
Dividend yield	32	3	11
Dividend Payout	40	21	10
Earnings yield	4	7	25
B/P	5	19	40
Sales/Price	2	28	36
Cashflow yield	1	14	39
Trailing EBITDA/EV	8	6	37
EBITDA/EV	3	5	35
Revision index	11	13	5
Earnings revision indicator (FY2)	10	4	2
Change in earnings yield	15	1	4
Normalised E/P	17	2	22
StarMine predicted surprise	22	26	6
Estimate dispersion	9	41	33
Consensus rating *	21	17	8
Change in ROE (FY1)	25	23	7
Change in ROE (FY2)	23	27	16
Sales growth (1Y)	20	18	31
Sales growth (FY1)	30	38	13
Sales growth (FY2)	29	22	17
EPS growth (FY1)	24	32	14
EPS growth (FY2)	6	30	20
Return on assets	37	9	19
Return on equity	26	11	15
Shareholders' equity ratio	35	25	26
Trailing profit margin	39	8	9
Pretax profit margin	36	10	12
Asset turnover	31	24	28
Capex to assets	16	33	29
Capex to sales	19	29	34
Default probability *	41	15	32

➔ Ironically, in a period of slowing pace of upgrades, we expect investors to pay higher premium for stocks with positive earnings surprises and sustainable 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 reverse-based. Pink highlight indicates top 10 ranked strategies; grey highlight indicates bottom 10 strategies in the given column (time period). Factor returns do not include transaction costs. Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura Quantitative Strategies

A flight to quality?

- Operational quality factors such as ROE have recently shown improved performance.
- Interestingly, even before the recent weak market sentiment, accruals factors have shown improved returns since late 2009, suggesting investors' growing concerns over earnings quality.

Daily factor return – quality and growth factors (Asia Pacific ex-Japan)
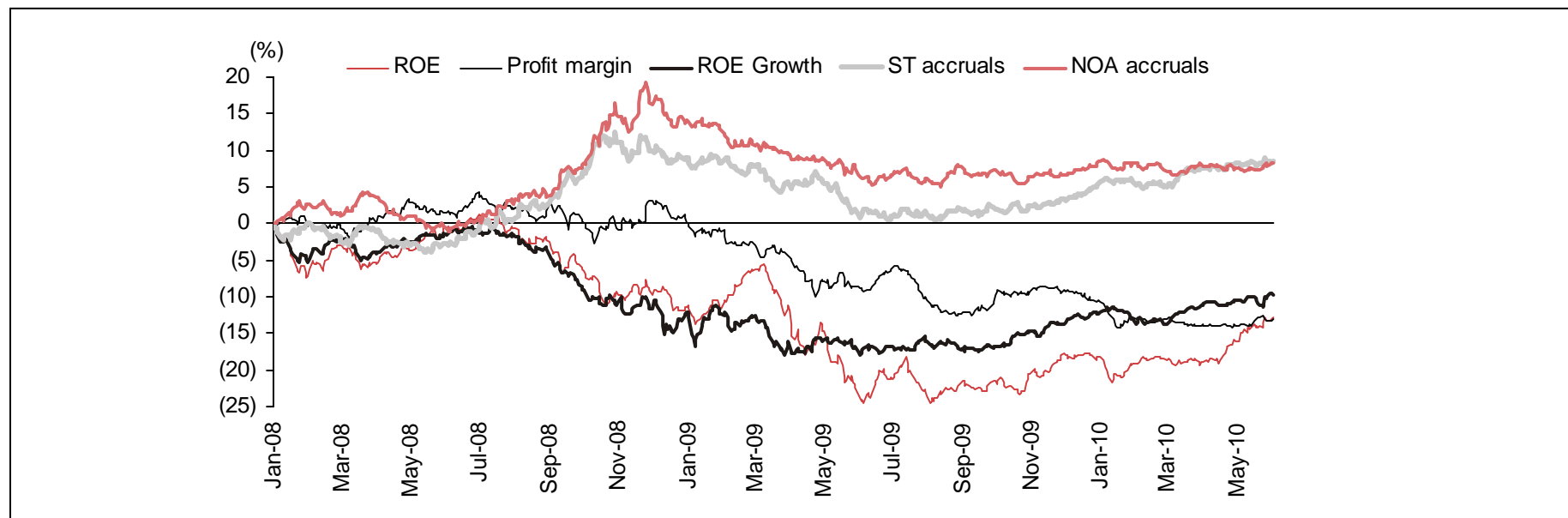
Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan and for accrual factors are ex financials. Portfolios are rebalanced monthly and grouping simulation is conducted with country diversification. Performance is calculated daily by cumulating the return spread (in local currency) between group #3 and #1. ST accruals = ($\triangle$ (Current Asset - Cash) - $\triangle$ (Current Liability - Short Term Debt & Current Portion Of Long Term Debt) - Depreciation) / Total Assets. NOA accruals = ($\triangle$ (Total Asset - Cash - Investments & Other Assets) - $\triangle$ (Total Liability - Short & Long Term Debt)) / Total Assets. Data run to 2 June, 2010.
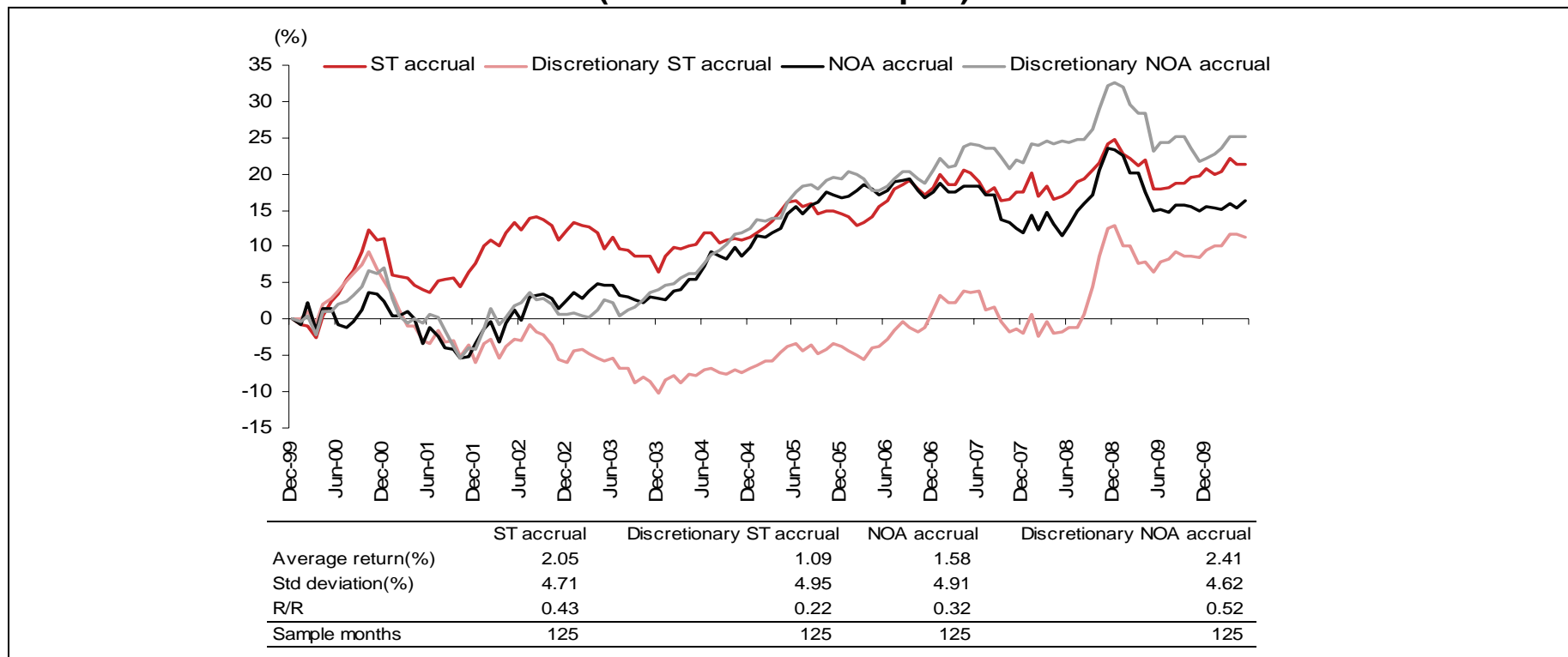Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

Our ideas for typical quant factors

- Earnings quality – application of accruals in investment strategy
  - We reiterate that a strategy combining P/E and accruals is good not only from the standpoint of expected return, but also from the perspective of risk diversification.
  - Accruals work better for high dispersion stocks during periods of rising earnings uncertainty (when median estimate dispersion is high).
- RCVB-based composite value strategy
  - Applying the Rank Correlation coefficient between the Value measure and Beta (RCVB) to create composite alphas when combining different value factors in a value strategy can enhance return.
- Enhanced earnings-revision strategy
  - Investors can make better use of analysts' earnings-revision information by quantifying market signals and factors — such as valuations, predicted surprises and price/volume momentum — that reinforce the impact of earnings revisions.
- Low-dispersion return-reversal strategy
  - To identify stocks that are likely to revert faster from overreaction, we analyse residual return and also focus on those stocks with low analysts' earnings estimate dispersion.

Use of accruals as an indicator of earnings quality

- Companies with large accruals suggest that their accounting earnings are overstated relative to cashflow, thus implying the risk of earnings sustainability later on.
- There are different ways to define accruals. But overall, use of accruals as a single-factor investment strategy has limited long-term impact in Asia.

Performance of accruals measures (Asia Pacific ex-Japan)

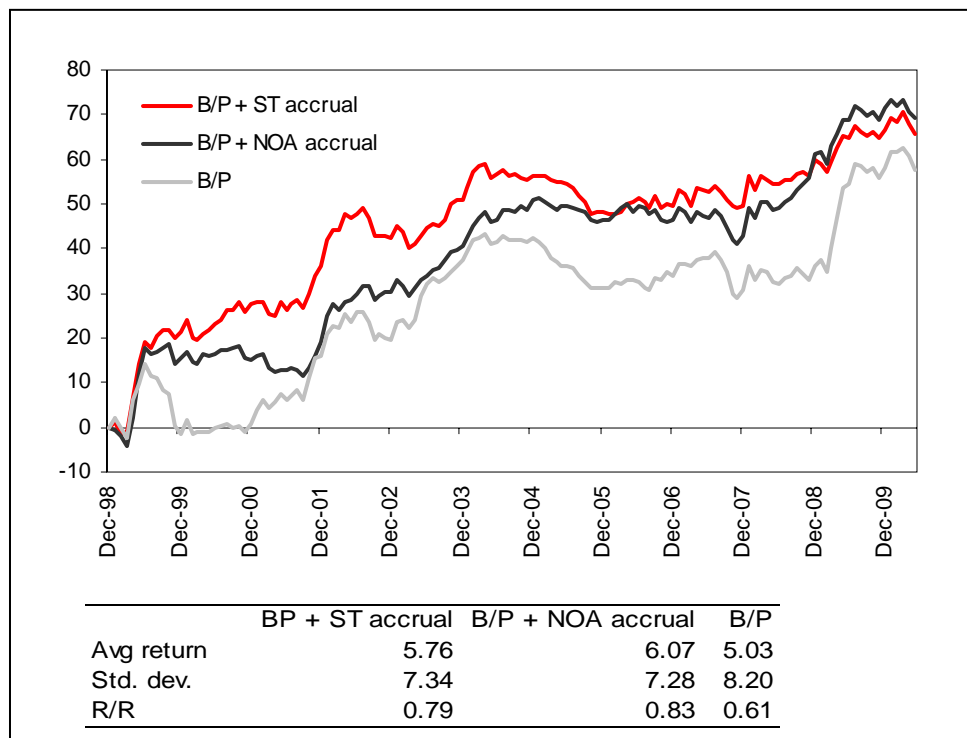|	ST accrual	Discretionary ST accrual	NOA accrual	Discretionary NOA accrual
Average return(%)	2.05	1.09	1.58	2.41
Std deviation(%)	4.71	4.95	4.91	4.62
R/R	0.43	0.22	0.32	0.52
Sample months	125	125	125	125

Note: Universe is based on MSCI All Country Asia-Pacific ex-Japan and also ex financials. Portfolios are rebalanced monthly and grouping simulation is conducted with country and sector diversification. Performance is calculated by cumulating the monthly return spread (in US$ currency) between group #3 and #1. We break down the total accruals into non-discretionary accruals and discretionary accruals using the modified Jones model (see report: *Quantifying accounting and management quality*, 20 May 2010). Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies
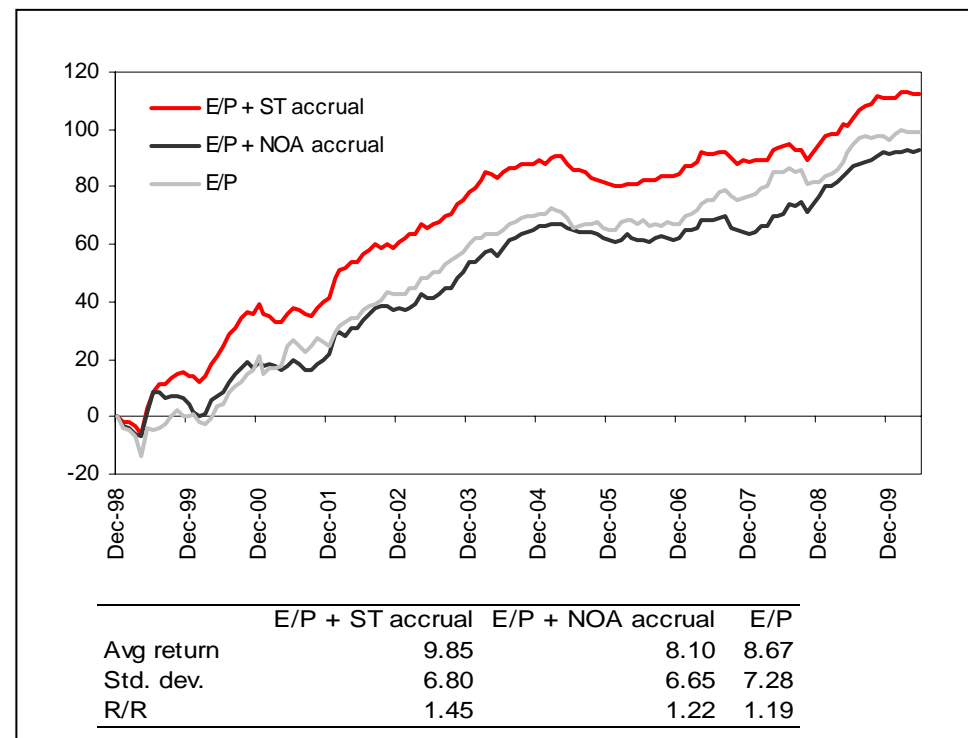
Combining accruals with value factors

- Reference report: *Analysing value: the impact of accruals and the flight to quality*, 29 April, 2009
- We reiterate that a strategy combining E/P (or B/P) with accruals is good not only from the standpoint of expected return, but also from the perspective of risk diversification.

Performance comparison (B/P + accruals)

Legend:
- B/P + ST accrual
- B/P + NOA accrual
- B/P

	BP + ST accrual	B/P + NOA accrual	B/P
Avg return	5.76	6.07	5.03
Std. dev.	7.34	7.28	8.20
R/R	0.79	0.83	0.61

Performance comparison (E/P + accruals)

Legend:
- E/P + ST accrual
- E/P + NOA accrual
- E/P

|	E/P + ST accrual	E/P + NOA accrual	E/P
Avg return	9.85	8.10	8.67
Std. dev.	6.80	6.65	7.28
R/R	1.45	1.22	1.19

Note: Universe for all factors is based on MSCI All Country Asia-Pacific ex-Japan and also ex financials. Portfolios are rebalanced monthly and grouping simulation is conducted with country and sector diversification. Performance is calculated by cumulating the monthly return spread (in US$ currency) between group #3 and #1. We break down the total accruals into non-discretionary accruals and discretionary accruals using the modified Jones model (see report: *Quantifying accounting and management quality*, 20 May, 2010). Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies

# Accruals work better for high dispersion stocks

- ST accrual works better for high dispersion stocks during periods of rising earnings uncertainty (when median estimate dispersion is rising).

- Hence if the earnings uncertainty (as reflected in estimate dispersion) is expected to increase, checking the accrual factor in high dispersion stocks is recommended.

Quarterly ST accrual factor return in high dispersion group versus median estimate dispersion
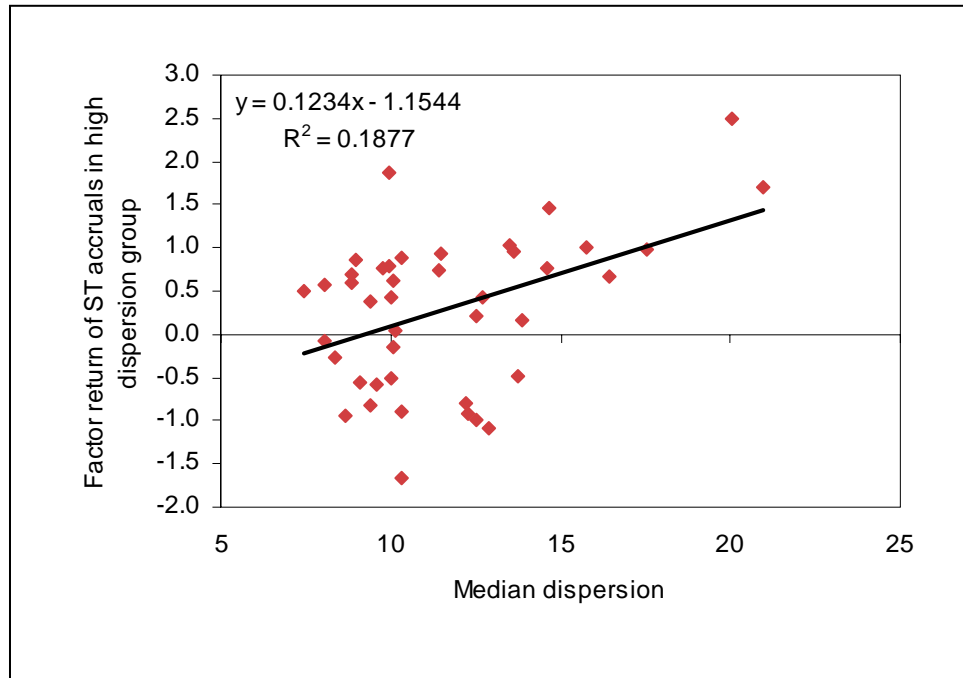
Quarterly ST accrual spread factor return between high and low dispersion groups versus median estimate dispersion

Note: Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, MSCI, Nomura Quantitative Strategies
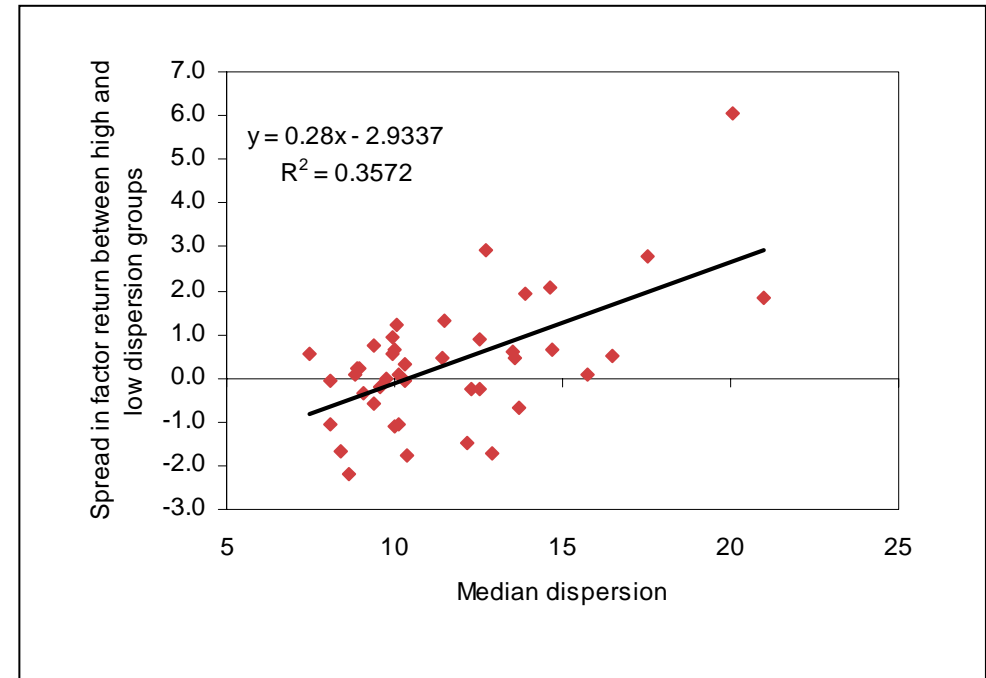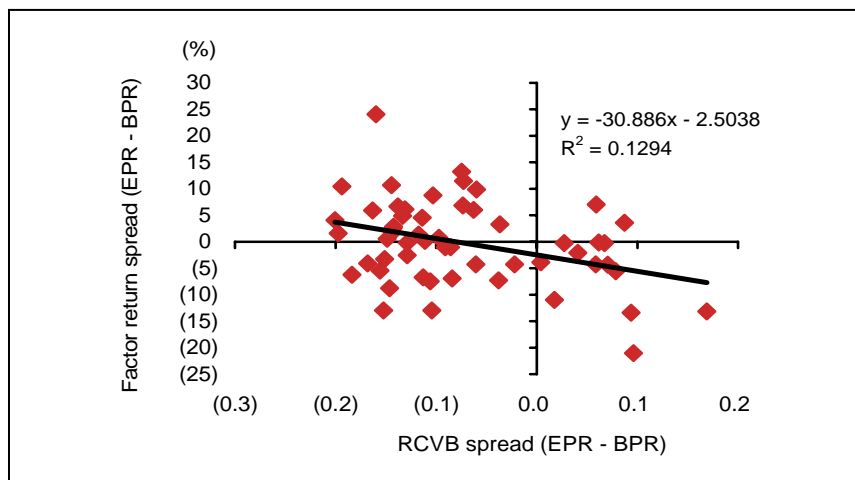
RCVB-based composite value strategy

■ Reference reports: 1) *Enhanced value strategy using RCVB*, 10 March, 2009; 2) *China Quantitative Strategy - Towards the futures*, 5 March, 2010

■ The Rank Correlation coefficient between the Value measure and Beta (RCVB) can help to determine whether individual valuation indicators are likely to be effective at any given time. RCVB can also be applied to create composite alphas when combining different valuation indicators in a value strategy.

■ Since high-risk stocks should have higher discount rates, their earnings yield should be higher than that of low-risk stocks in the fair market, assuming other conditions being equal. As beta is one risk measure, high-beta stocks should have higher earnings yield in the fair market, and there should be a positive cross-sectional correlation between earnings yield and beta. A stock with high earnings yield does not always mean it is undervalued if its beta is high.

■ If the RCVB for earnings yield is high, it would be difficult to use the earnings yield factor alone to decide whether a stock is under- or over-valued, and in turn, using the factor as an investment indicator is less likely to be effective. Similar logic can also apply for B/P.

■ Thus, we expect investment strategies based on earnings yield to be less effective than those based on B/P when RCVB for earnings yield is higher than RCVB for B/P, and vice versa.

Methodology – example of China A research

- In line with our hypothesis, there is a negative correlation between RCVB spread (earnings yield – B/P) and the factor return spread between earnings yield and B/P, indicating that performance is better if we dynamically adjust the factor exposure between earnings yield and B/P based on the RCVB spread.

Methodology: RCVB-based composite value strategy

- Calculate beta versus CSI 300 Index (use Nomura AP China if not available) using 36-month monthly returns;
- RCVB is defined as the cross-sectional rank correlations between earning yield (or B/P) and beta, and
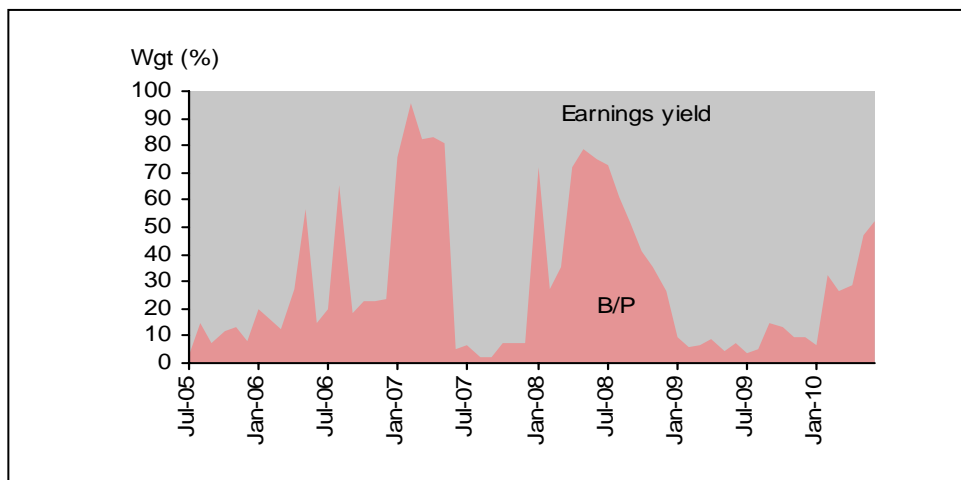
$$RCVB_{spread} = RCVB_{EPR} - RCVB_{BPR}$$

- Normalise earnings yield and B/P within the CSI 300 universe;
- Composite value alpha is defined as

$$Composite\ factor = \left(1 - \Phi\left(\frac{RCVB_{spread}}{\sigma}\right)\right) \times Normalized\ EPR + \Phi\left(\frac{RCVB_{spread}}{\sigma}\right) \times Normalized\ BPR$$

where Φ is the cumulative distribution function of the standard normal distribution and we set $\sigma = 0.1$

RCVB spread (EPR-BPR) versus factor return spread (EPR-BPR)

$y = -30.886x - 2.5038$
$R^2 = 0.1294$

Source: Worldscope, I/B/E/S, Nomura Quantitative Strategies

Allocation between E/P and B/P using composite factor

Note: Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Performance summary (CSI 300 value model)

- Over the testing period, the RCVB-based value model of China A-share equities has delivered better information ratio than a simple earnings yield or B/P strategy.

	RCVB composite value	Earnings yield	B/P
Average return(%)	21.78	10.91	14.76
Std deviation(%)	13.89	15.43	18.36
R/R	1.57	0.71	0.80
Sample months	59	59	59

Note: Figures are annualised statistics. Source: Nomura Quantitative Strategies

Performance (L-S) of RCVB-based value strategy versus earnings yield and B/P
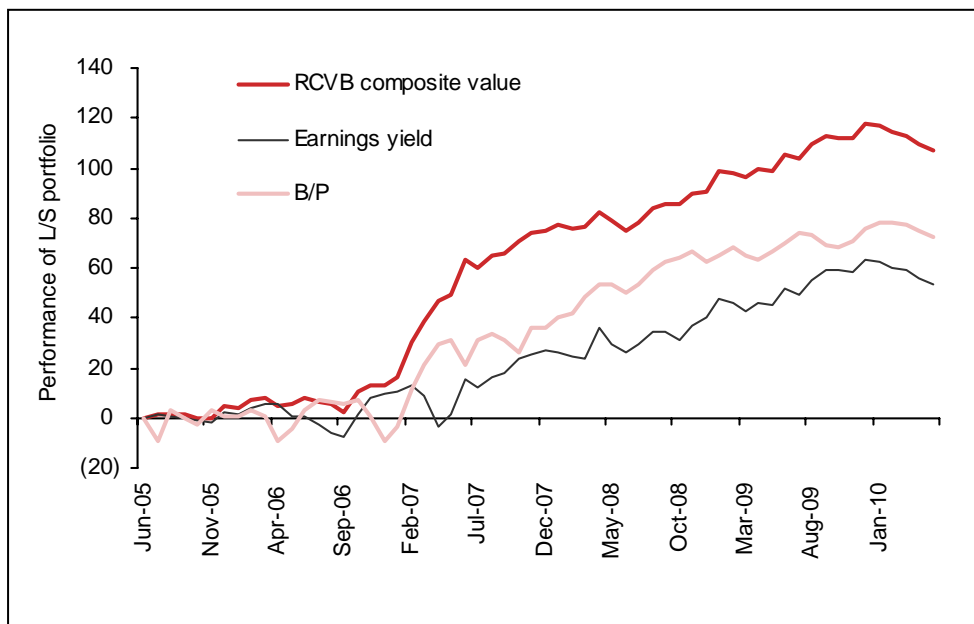
Note: Data run to 31 May, 2010. Source: Worldscope, I/B/E/S, Nomura Quantitative Strategies

Cumulative long and short performance of RCVB-based composite value strategy
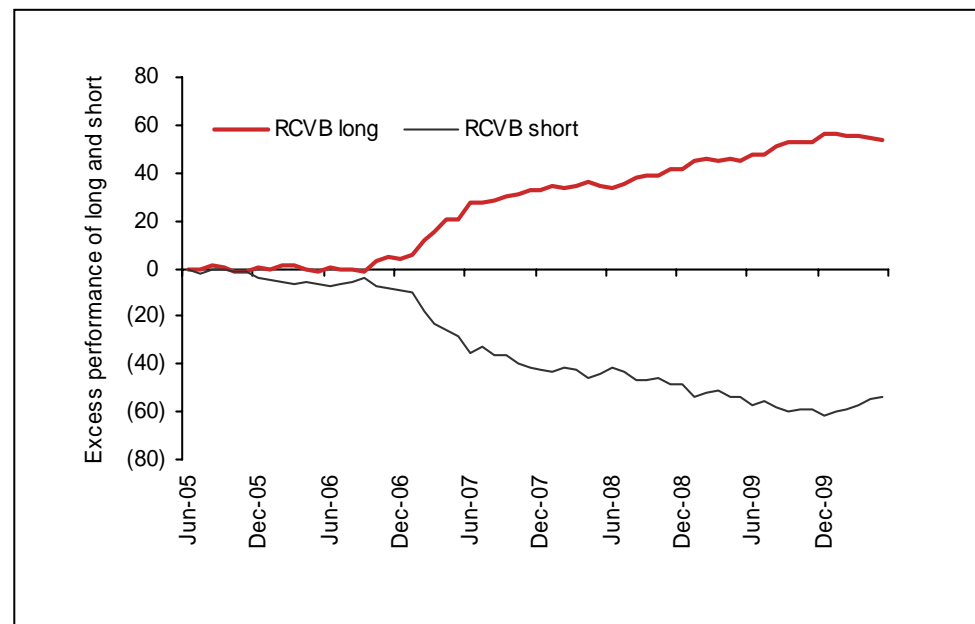

Note: Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Enhanced earnings-revision strategy

- Reference reports: 1) *The long and the short of beating the herd: An enhanced earnings-revision strategy*, 25 September, 2009; 2) *China Quantitative Strategy - Towards the futures*, 5 March, 2010.

- Our earnings-revision indicator: $ERI_{i,t} = \dfrac{FY2EPS_{i,t}}{(FY2EPS_{i,t-1} + FY2EPS_{i,t-2} + FY2EPS_{i,t-3})/3} - 1$

- Concept: Investors can make better use of analysts' earnings-revision information by quantifying market signals and factors — such as valuations, predicted surprises and price/volume momentum — that reinforce the impact of earnings revisions in each market.

Image of enhanced earnings-revision strategy
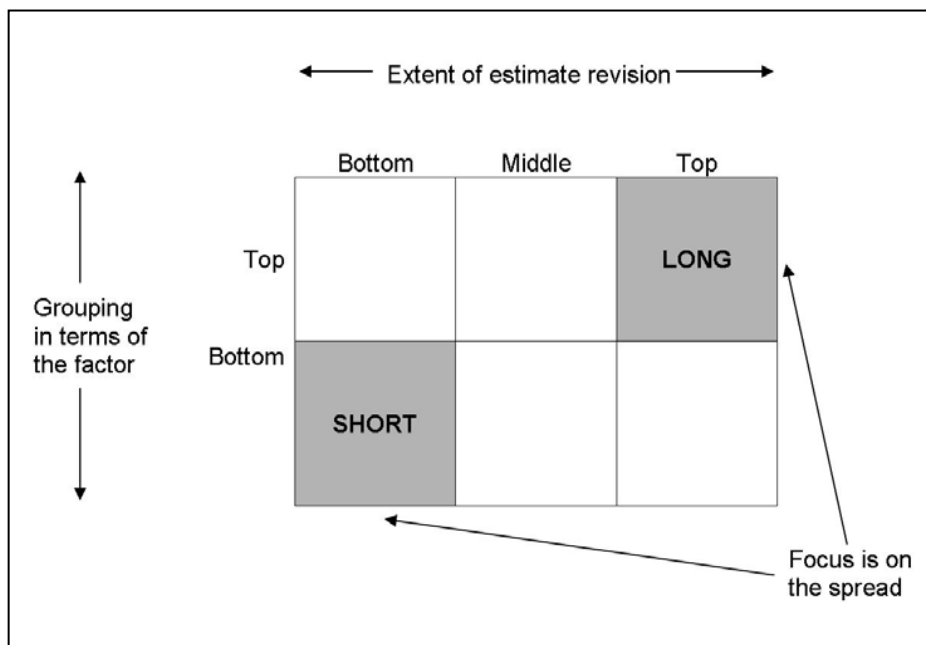
Grouping simulation results for factor (example: CSI300)

Factor	Expected Impact	Bottom ER (Factor: Top-bottom) Mean (%)	t-stat	Top ER (Factor: Top-bottom) Mean (%)	t-stat	Top-bottom ER (Factor enhanced) Mean (%)	t-stat
	Hypothesis:						
Log of market cap in US$	Negative	-5.8	-1.38	-10.4	-2.39	15.5	4.47
Turnover	Positive	5.8	1.32	10.2	2.18	12.2	3.42
Book value to price ratio	Positive	13.7	3.53	6.1	1.33	16.3	4.52
Forecast earnings to price ratio	Positive	11.7	3.36	7.2	1.91	14.2	3.64
Dividend yield	Positive	-0.3	-0.09	5.3	1.64	6.4	1.67
Forecast dividend yield	Positive	3.9	1.27	0.1	0.03	5.7	1.26
Past one-month return	Negative	-15.9	-3.76	1.4	0.32	16.7	3.85
Past three-month return	Negative	-9.0	-2.11	1.6	0.33	11.9	2.76
Change in turnover	Positive	-9.0	-2.91	2.2	0.62	10.6	2.44
Liquidity impact	Negative	-7.9	-1.73	-14.8	-4.23	17.5	3.40
Price volatility	Positive	1.6	0.38	-2.0	-0.49	8.8	2.29
Analyst coverage (FY1)	Positive	1.0	0.29	7.2	1.34	11.2	1.80
Analyst coverage (FY2)	Positive	2.4	0.63	3.3	0.66	7.2	1.17
Earnings estimate dispersion (FY1)	Positive	-0.5	-0.14	4.1	1.16	4.0	0.85
Earnings estimate dispersion (FY2)	Positive	1.7	0.40	1.9	0.45	7.0	1.57
StarMine predicted surprise (FY1)	Positive	1.0	0.27	8.3	3.23	9.2	2.01
StarMine predicted surprise (F12M)	Positive	5.1	1.49	7.2	2.37	10.0	2.27
Analysts' recommendation revision	Positive	-3.9	-1.27	2.8	0.73	6.9	1.82
Consensus rating	Negative	0.7	0.23	-5.7	-1.82	10.1	2.25
Change in consensus rating	Negative	-10.4	-4.05	-5.9	-2.03	14.8	3.48

Note: Shaded five factors are selected to form a composite factor. Source: Worldscope, I/B/E/S, StarMine, Nomura Quantitative Strategies

Top five factors, by country

■ Results are mixed at the market level: typically for companies with more attractive valuations, turnover increases, positive consensus ratings, positive StarMine predicted surprise, higher price volatility, higher earnings estimate dispersion, and for those that recently underperformed, our analysis suggests that they tended to react more strongly to earnings upgrades, and vice versa.

Country		Factor	Weighting	Country		Factor	Weighting
Australia	F1	Analysts' recommendation revision	1	China	F1	Change in consensus rating	-1
	F2	Analyst coverage (FY2)	1		F2	Book value to price ratio	1
	F3	Change in consensus rating	-1		F3	StarMine predicted surprise (FY1)	1
	F4	Liquidity impact	-1		F4	Log of market cap in USD	-1
	F5	Forecast earnings to price ratio	1		F5	Price volatility	1
Hong Kong	F1	Analysts' recommendation revision	1	India	F1	Analysts' recommendation revision	1
	F2	Change in turnover	1		F2	Dividend yield	1
	F3	Consensus rating	-1		F3	Past one-month return	-1
	F4	Past three-month return	-1		F4	Book value to price ratio	1
	F5	Forecast earnings to price ratio	1		F5	Consensus rating	-1
Korea	F1	Past one-month return	-1	Malaysia	F1	Analysts' recommendation revision	1
	F2	Past three-month return	-1		F2	Analyst coverage (FY2)	1
	F3	Book value to price ratio	1		F3	Forecast earnings to price ratio	1
	F4	StarMine predicted surprise (FY1)	1		F4	Change in consensus rating	-1
	F5	Analysts' recommendation revision	1		F5	Book value to price ratio	1
Singapore	F1	Turnover	1	Thailand	F1	Price volatility	1
	F2	Book value to price ratio	1		F2	Earnings estimate dispersion (FY1)	1
	F3	Analysts' recommendation revision	1		F3	Turnover	1
	F4	Price volatility	1		F4	Past one-month return	-1
	F5	Change in consensus rating	-1		F5	Change in turnover	1
Taiwan	F1	Past three-month return	-1	China	F1	Book value to price ratio	1
	F2	Past one-month return	-1	CSI 300	F2	Log of market cap in USD	-1
	F3	Book value to price ratio	1		F3	Forecast earnings to price ratio	1
	F4	Dividend yield	1		F4	Change in consensus rating	-1
	F5	Forecast earnings to price ratio	1		F5	Turnover	1

Note: Weighting with 1, or -1 refers to the factor has a positive, or a negative impact to earnings revision in our hypothesis. Source: Nomura Quantitative Strategies

Performance summary (Asia ER models)

■ Using these five factors, we then construct a composite factor (CF), with a predefined weight of 1 (or -1) based on the expected positive (negative) impact.

$$composite\_factor_{i,t} = \sum_{n=1}^{5} normalised\_factor\_n_{i,t} * weighting$$

■ Long potential outperformers (high CF) in top earnings revision group; short potential underperformers (low CF) in bottom earnings revision group.

|	Asia-Pacific	Australia	China	Hong Kong	India	Korea	Malaysia	Singapore	Thailand	Taiwan
Average return(%)	18.87	10.32	13.77	22.18	18.19	21.51	24.16	20.80	25.74	20.21
Std deviation(%)	6.06	11.51	19.44	20.34	17.33	18.60	12.03	19.27	24.16	12.75
R/R	3.11	0.90	0.71	1.09	1.05	1.16	2.01	1.08	1.07	1.58
Sample months	137	137	137	137	137	137	137	137	137	137

Note: Figures are annualised statistics. Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Results of portfolio optimisation simulation back test
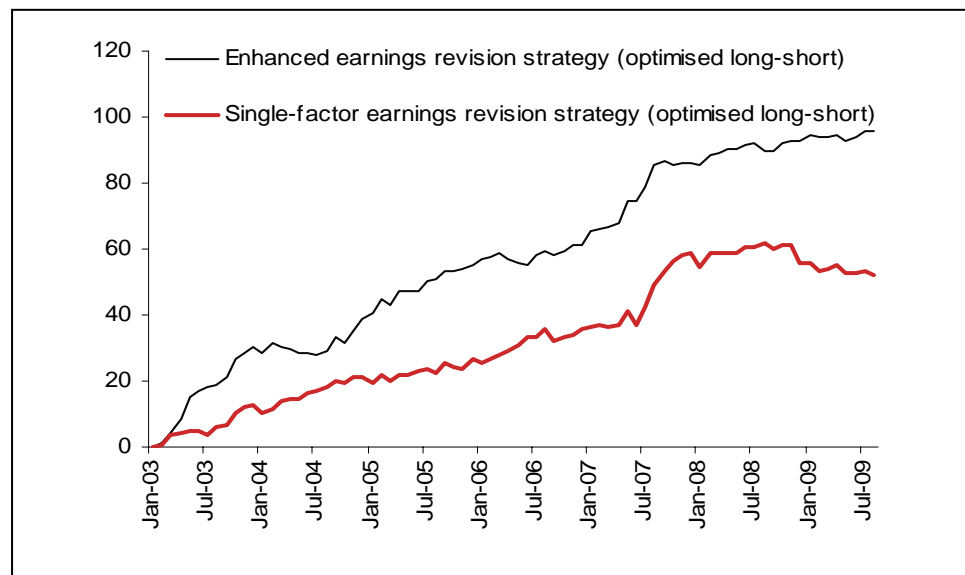
Note: Back test with 20% turnover and 8% risk control. Source: Nomura Quantitative Strategies

Performance of enhanced earnings-revision strategy
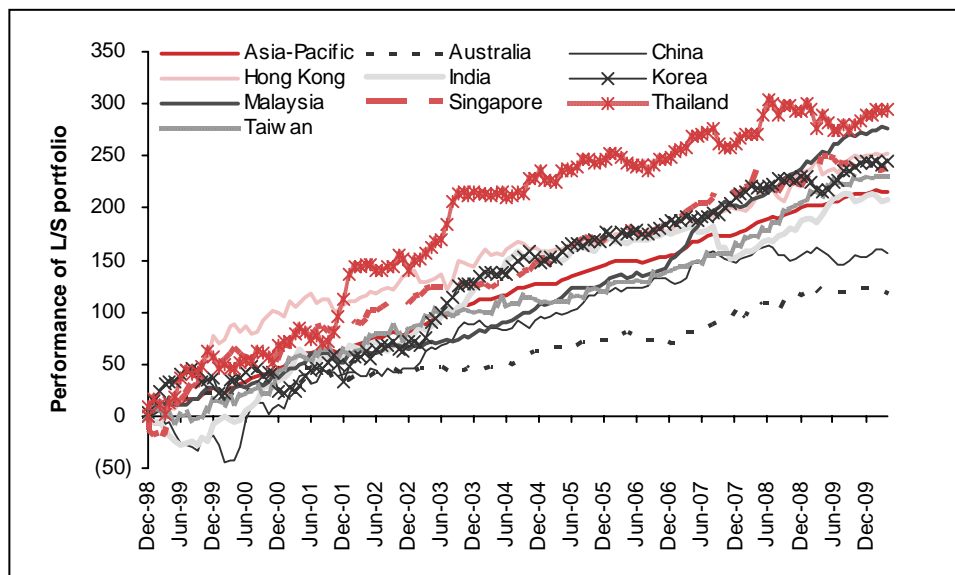
Note: Universe is based on the MSCI constituents. Source: Nomura Quantitative Strategies

Performance summary (CSI 300 ER model)

- Applying the same methodology for China A-share equities, the results demonstrate that consideration of stock-specific signals as well as analysts' traits in an earnings-revision strategy yields a better return with lower risk.

	Enhanced ER (L-S)	Single-factor ER (L-S)
Average return(%)	18.65	8.27
Std deviation(%)	9.24	13.84
R/R	2.02	0.60
Sample months	56	56

Note: Figures are annualised statistics. Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Enhanced ER vs single-factor ER (CSI 300)
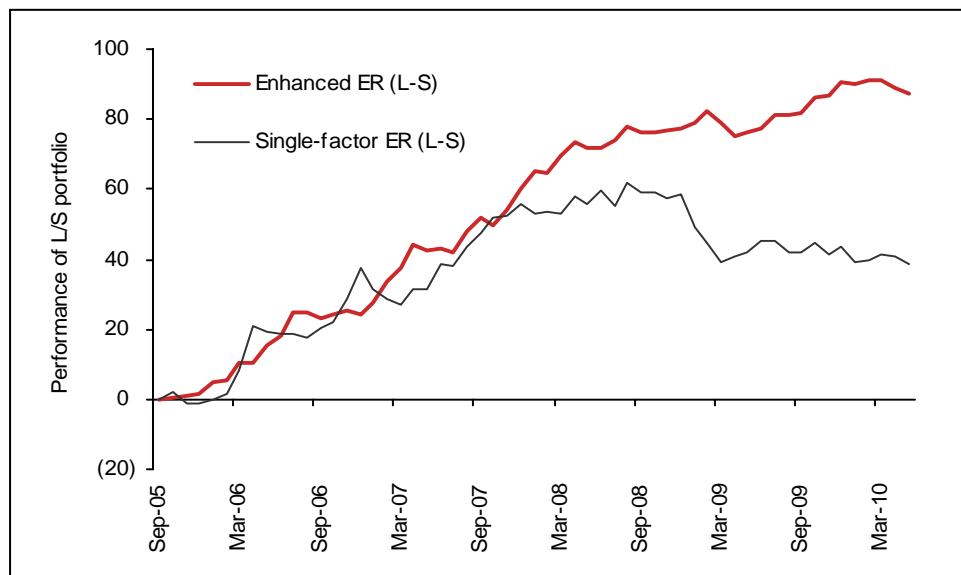
Note: Chart shows equal-weighted performance. Source: Nomura Quantitative Strategies

Enhanced earnings-revision strategy (CSI 300)
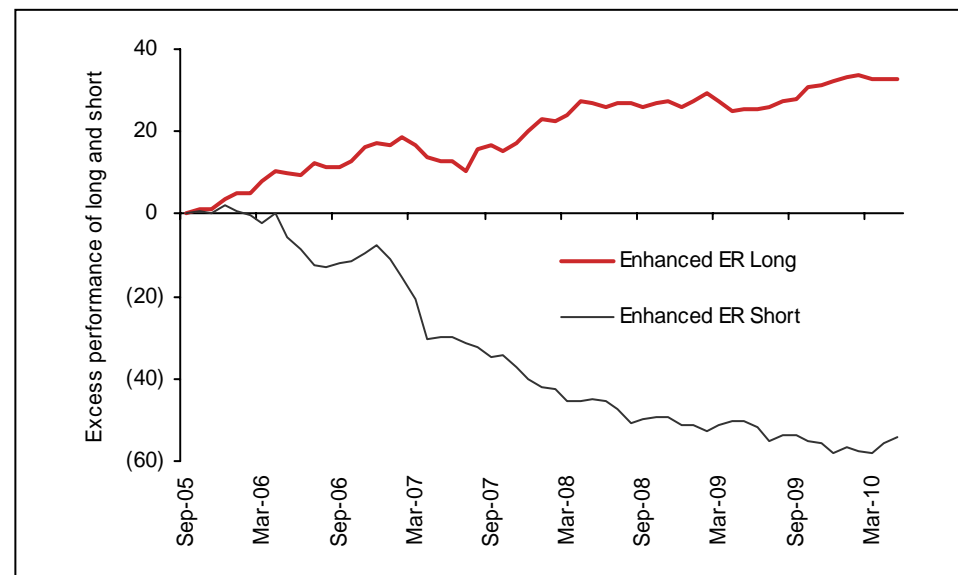
Note: Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

NOMURA

Low-dispersion return-reversal strategy

- Reference reports: 1) *Return reversal: catching the swing*, 7 December, 2009; 2) *China Quantitative Strategy - Towards the futures*, 5 March, 2010.

- Concept: We look at two potential fine-tuners for a one-month return-reversal strategy. First, to identify stocks that are more likely to revert from overreactions, we focus on those with low analysts' earnings estimate dispersion. Second, we attempt to remove the proportion of raw price returns that can be explained by fundamental factors, to analyse residual return as a purer technical estimate of overreaction.

Image of low-dispersion return-reversal strategy
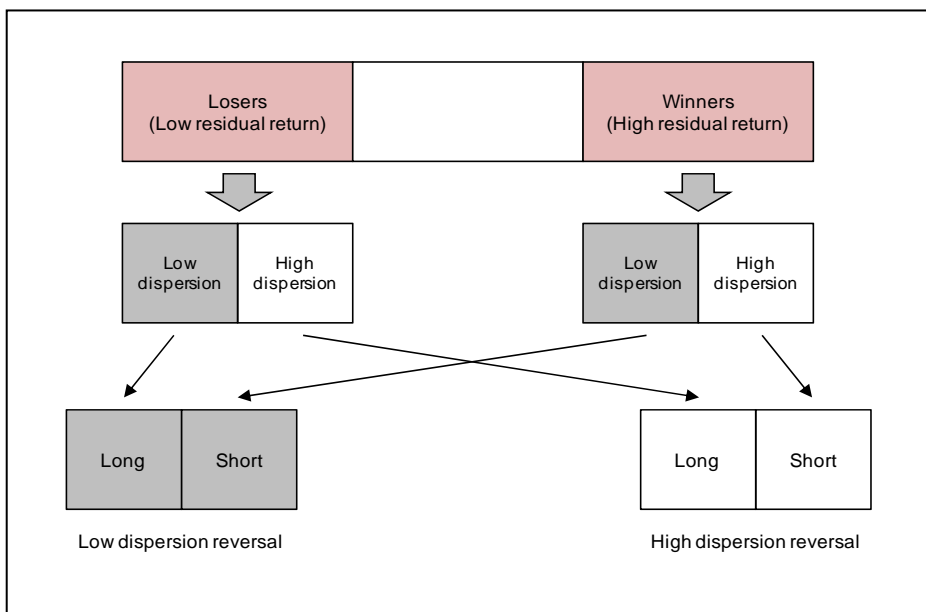
Calculation of the residual returns

- Perform cross-sectional regression for each market with the following fundamental factors as independent variables and add a sector dummy to neutralise the sector effect.

  - Market beta (36-month sensitivity against the index)
  - Size (log of market cap)
  - Value (forward 12-month E/P)
  - Momentum (12-month return)
  - Sector dummies (GICS 1)

$$r_s = a + \sum_i b_i X_i + \sum_j d_j I_j + \varepsilon$$

- The residual return is calculated by the following equation:

$$r_r = r_s - \sum_i b_i X_i - \sum_j d_j I_j$$

Source: Nomura Quantitative Strategies

Performance summary (Asia LDRR models)

- Our analysis indicates that stocks with low analyst estimate dispersion have a tendency to revert faster from investor overreaction than the high dispersion group, especially for undervalued (loser group) stocks.

- Using residual return (the excess return that is not explained by typical fundamental factors) can enhance the return predictive power of a short-term return reversal strategy.

Performance of high- and low-dispersion reversal

	Low earnings dispersion	High earnings dispersion
Annualised return	15.06	7.65
Risk	8.91	10.17
IR	1.69	0.75

Performance of Low Dispersion Reversal Strategy
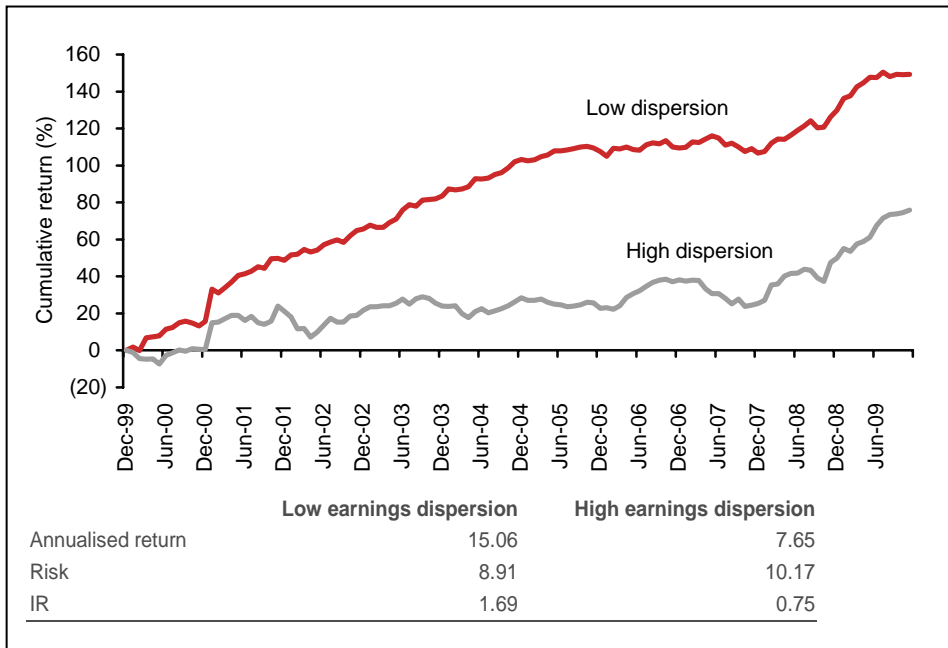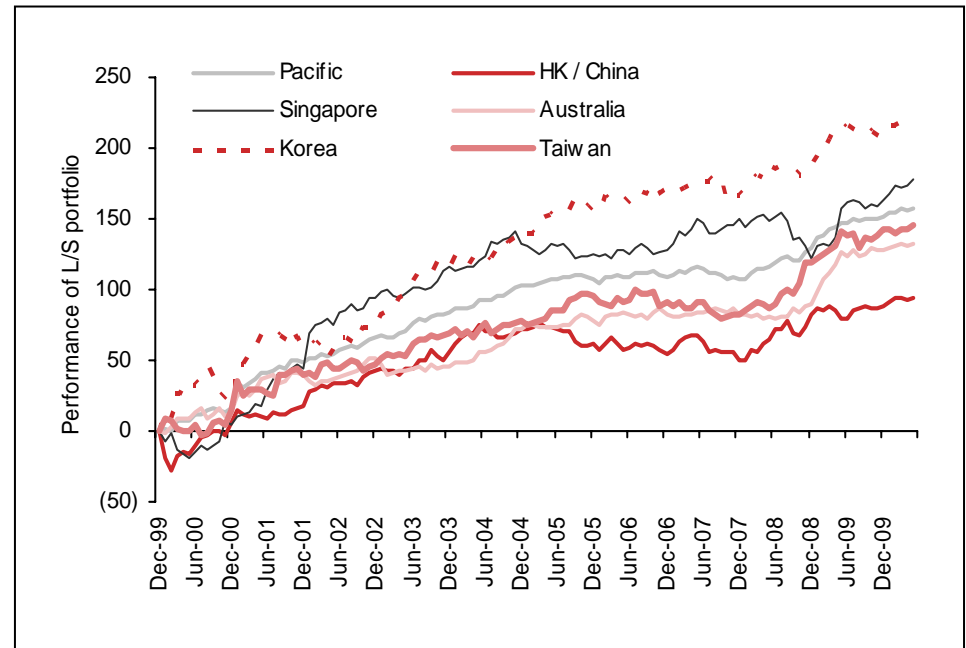
Note: Back test dated December 2009. Universe is based on the constituents of MSCI Hong Kong, China (HK listed), Korea, Taiwan, Singapore, and Australia. Source: Nomura Quantitative Strategies

Note: Universe is based on the constituents of MSCI Hong Kong, China (HK listed), Korea, Taiwan, Singapore, and Australia. Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Performance summary (CSI300 LDRR model)

- Similar to Asia markets, by using residual return and focusing on low-dispersion stocks in a return-reversal strategy, China A-share investors can effectively screen for stocks that are more likely to show a price reversal after overreaction.

- Returns from the strategy are contributed more by the short side, perhaps reflecting: 1) the lack of mechanism for investors to exploit short opportunities in the past; and 2) returns of both long and short side could be negatively affected by the small-cap size effect in China.

Performance of high- and low-dispersion reversal
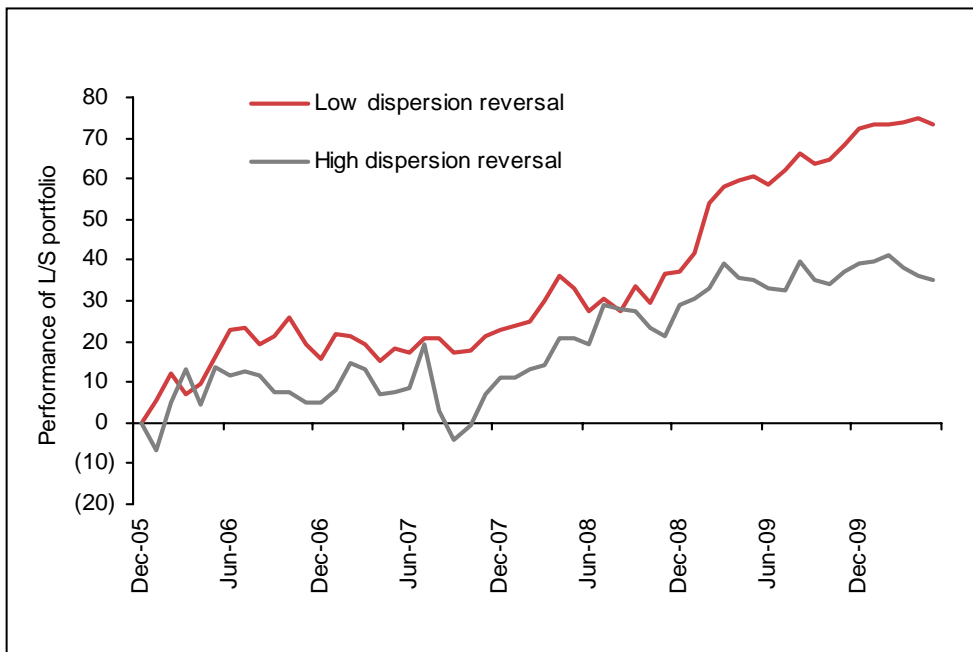
Note: Universe is based on the constituents of CSI 300 Index. Cumulative performance in US dollars. Data run to 31 May, 2010. Source: Nomura Quantitative Strategies

Annualised performance statistics (CSI 300)

	Low dispersion reversal	High dispersion reversal
Average return(%)	16.61	7.93
Std deviation(%)	13.51	18.09
R/R	1.23	0.44
Sample months	53	53

Source: Worldscope, I/B/E/S, StarMine, Nomura Quantitative Strategies

Low-dispersion reversal strategy (long and short)
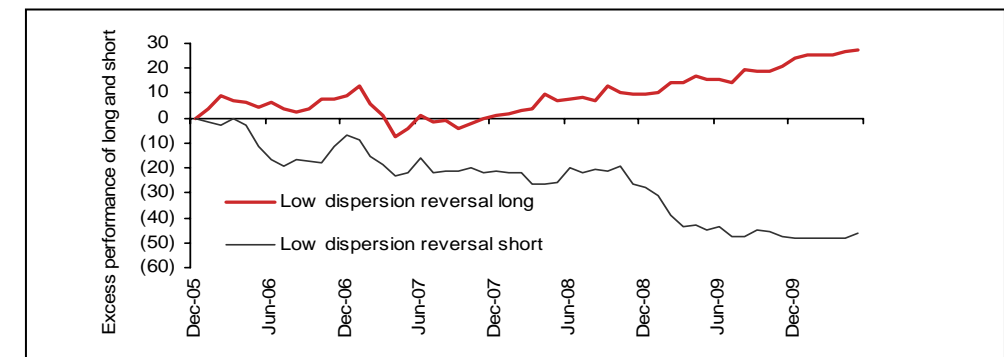
Note: Universe is based on the constituents of CSI 300 Index. Cumulative performance in US dollars. Source: Nomura Quantitative Strategies

Conclusion

- Quant factor performance has to some extent recovered in Asia. The utility of quant factors for investing looks more promising in Emerging Asia.

- Earnings prospects are still the main focus. A theme running through our recent research is that the scope for further large upgrades may narrow as the year proceeds. We believe Asia earnings momentum will increasingly depend on margin stability, earnings quality, and an ability to sustain growth. Current market circumstances seem to favour quality and earnings revision/surprise factors.

- We present ideas to enhance Asia quant factors' performance:

  - We look at a practical application of accruals in a value strategy. Accrual factors also work better for high dispersion stocks during periods of rising earnings uncertainty.

  - Applying the RCVB approach to create composite alphas when combining different value factors in a value strategy can dynamically adjust the factor exposure between value factors and enhance performance versus a simply value strategy.

  - Consideration of stock-specific signals as well as analysts' traits in an earnings-revision strategy yields a better return with lower risk.

  - By using residual return and focusing on low-dispersion stocks in a return-reversal strategy, investors can effectively screen for stocks that are more likely to show a price reversal after overreaction.

Appendix I: Definition of factors

#	Factor	Description
1	Market cap *	Log of US$ market cap
2	Price momentum (1M)	Past 1-month local currency return
3	Price momentum (3M)	Past 3-month 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-month local currency return
7	Volatility	Past 36-month price return volatility
8	Average daily traded value	Monthly traded value in USD / number of traded days
9	Trade momentum (3M)	Past 1-month trading volume - previous 3-month average trading volume
10	Volume turnover ratio	Past 1-month trading volume / shares outstanding at month-end
11	Dividend yield	F12-month DPS / stock price
12	Dividend Payout	Actual dividends / actual net profit before extraordinary items
13	Earnings yield	F12-month EPS / stock price
14	B/P	Actual BPS / stock price
15	Sales/Price	F12-month sales per share / stock price
16	Cashflow yield	F12-month cashflow per share / stock price
17	Trailing EBITDA/EV	Actual EBITDA / (market cap + interest-bearing debt - cash - short-tern marketable securities)
18	EBITDA/EV	(F12-month net profit + actual interest expense + actual depreciation) / (market cap + interest-bearing debt - cash - short-tern marketable securities)
19	Revision index	(Number of upward analyst revisions - number of downward analyst revisions) / total number of analysts' estimate
20	Earnings revision indicator (FY2)	FY2 EPS / previous 3-month average FY2 EPS
21	Change in earnings yield	F12-month earnings yield - past 3-month average earnings yield
22	Normalised E/P	(F12-month earnings yield - average earnings yield in past 36 months) / standard deviation of the earnings yields in the past 36 months
23	StarMine predicted surprise	(SmartEstimate F12-month - consensus mean) / max(divisor, |mean|)
24	Estimate dispersion	I/B/ES FY1 consensus EPS standard deviation / absolute value for FY1 consensus EPS
25	Consensus rating *	I/B/E/S consensus analyst rating
26	Change in ROE (FY1)	FY1 ROE - actual ROE
27	Change in ROE (FY2)	FY2 ROE - FY1 ROE
28	Sales growth (1Y)	Actual sales / previous year actual sales
29	Sales growth (FY1)	FY1 sales / actual sales
30	Sales growth (FY2)	FY2 sales / FY1 sales
31	EPS growth (FY1)	FY1 EPS / actual EPS
32	EPS growth (FY2)	FY2 EPS / FY1 EPS
33	Return on assets	Actual net profit / actual total assets
34	Return on equity	F12-month net profit / actual shareholders' equity
35	Shareholders' equity ratio	Actual shareholders' equity / actual total assets
36	Trailing profit margin	Actual net profit / actual sales
37	Pretax profit margin	F12-month pretax profit / F12-month sales
38	Asset turnover	Actual sales / actual total assets
39	Capex to assets	Actual capital expenditure / actual total assets
40	Capex to sales	Actual capital expenditure / actual sales
41	Default probability *	Default probability estimated using Merton model

Note: The factors marked with * are reverse-based. Source: Worldscope, I/B/E/S, StarMine, MSCI, Nomura Quantitative Strategies

Appendix II: Regional valuation

Country	Index universe*	PER (x)		PBV (x)		P/CF (x)		P/S (x)		Revision index **
		2010F	2011F	2010F	2011F	2010F	2011F	2010F	2011F	May-10
Australia	AOI	12.7	10.6	1.7	1.6	8.7	7.4	1.4	1.3	0.7 →
China	CSI 300	13.9	11.7	2.1	1.9	8.9	7.1	1.1	1.0	0.6 ↓
Hong Kong	HSI	12.4	10.6	1.6	1.5	8.1	7.3	2.1	1.9	1.2 →
	HSCCI	12.8	11.8	1.9	1.7	7.0	6.3	2.1	1.8	0.3 ↓
	HSCEI	11.1	9.4	2.0	1.8	7.3	6.7	0.9	0.8	0.8 ↓
	HSCI	13.1	11.2	1.7	1.6	8.3	8.0	1.8	1.5	0.6 ↓
India	SENSEX	15.7	13.2	2.8	2.3	11.3	9.0	1.9	1.6	1.1 →
Indonesia	JCI	14.0	12.0	2.8	2.5	9.5	8.6	2.0	1.8	1.5 ↑
Korea	KOSPI	9.0	8.3	1.2	1.1	6.5	6.1	0.8	0.7	1.7 →
Malaysia	KLCI	14.8	13.2	2.0	1.8	8.6	7.8	1.8	1.7	1.1 ↓
Philippines	PASHR	12.9	11.5	1.8	1.7	7.7	7.4	1.6	1.5	2.0 ↓
Singapore	FSTAS	13.1	12.0	1.4	1.4	8.2	7.6	1.2	1.1	1.0 ↓
Taiwan	TWSE	12.5	11.1	1.6	1.5	7.7	7.2	0.9	0.8	0.4 ↓
Thailand	SET	10.9	9.3	1.5	1.4	6.5	5.9	0.7	0.7	0.3 ↓

Country	Index universe*	EPS growth (%)		Dividend yield (%)		ROE (%)		ROA (%)	
		2010F	2011F	2010F	2011F	2010F	2011F	2010F	2011F
Australia	AOI	11.7	19.2	4.4	5.0	13.6	15.2	9.6	12.6
China	CSI 300	29.3	19.5	2.5	3.0	16.4	17.6	7.5	7.7
Hong Kong	HSI	22.1	17.2	3.6	4.1	13.6	14.7	7.4	7.8
	HSCCI	11.9	9.3	3.1	3.3	15.7	15.6	9.6	9.5
	HSCEI	25.3	19.0	3.6	4.2	19.4	20.2	6.4	6.9
	HSCI	24.0	16.8	3.1	3.5	13.5	14.7	7.1	7.5
India	SENSEX	17.2	18.5	1.5	1.6	17.4	17.1	8.1	10.4
Indonesia	JCI	22.2	19.5	2.7	3.4	22.8	23.4	8.4	12.9
Korea	KOSPI	36.1	8.0	2.2	2.6	14.5	14.1	8.4	8.3
Malaysia	KLCI	26.3	12.2	3.6	4.0	13.1	13.9	6.6	6.9
Philippines	PASHR	17.1	12.5	3.3	3.6	14.3	15.3	5.3	7.8
Singapore	FSTAS	13.2	9.6	3.0	3.5	9.9	10.8	5.2	5.7
Taiwan	TWSE	52.3	13.2	4.5	5.1	11.6	12.7	8.5	9.2
Thailand	SET	18.4	17.1	4.5	4.9	15.0	15.9	8.0	9.1

Note: Data as of 31 May, 2010. All valuation ratios are calculated using a share-weighted and ex-negative approach based on available I/B/E/S consensus. ** Revision Index is defined as: for FY2 (next fiscal year) sum of no. of analysts making upward revisions / sum of no. of analysts making downward revisions.
Source: Bloomberg, Thomson Reuters Datastream, I/B/E/S, Nomura Quantitative Strategies

Appendix III: Technicals highlights

Medium-term Technical Resistance / Support Levels

Countries/Indices	Code	Next Resistance	Primary Resistance	Current	Primary Support	Next Support	Technicals Comment
Australia							
S&P/ASX200 Index	AS51	**5,025**	4,805	4,317	4,176	**4,079**	**Weakening momentum**
China							
CSI 300 Index	SHSZ300	**3,699**	3,095	2,683	2,470	**2,210**	**Downward channel remained intact for past eight months**
Hang Seng China Enterprises Index	HSCEI	**13,864**	12,900	11,033	10,567	**8,774**	**About to test the 104-week moving average line as support**
ishares A50 China Tracker-ETF	2823 HK	**15.54**	13.62	11.70	10.46	**9.71**	**Similar to the CSI300, downward channel remained intact for seven months**
Hong Kong							
Hang Seng Index	HSI	**23,100**	22,389	19,313	18,714	**17,185**	**About to test the 104-week moving average line as support**
India							
Sensex 30 Index	SENSEX	**20,238**	18,895	16,726	15,651	**13,219**	**Weakening momentum**
Nifty Index	NIFTY	**6,012**	5,545	5,015	4,675	**3,919**	**Weakening momentum**
Korea							
KOSPI Composite Index	KOSPI	**1,902**	1,758	1,631	1,519	**1,467**	**1,519-1,758 has been a trading range for the past 10 months**
Malaysia							
FTSE Bursa Malaysia KLCI Index	FBMKLCI	**1,525**	1,450	1,284	1,244	**1,224**	**Weakening price and volume momentum**
Singapore							
FTSE STI	FSSTI	**3,602**	3,270	2,751	2,666	**2,425**	**A newly formed upward channel is intact**
Taiwan							
Taiwan TAIEX Index	TWSE	**8,396**	8,140	7,136	7,032	**6,575**	**6,575 is the 104-week moving average line**

Note: Pricing as at 7 Jun 2010(around 12:00 p.m. HKT)

Sources: Nomura International (HK) Ltd- Quantitative Strategies

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Appendix IV: China new market initiatives

■ The first batch of four CSI 300 Index Futures was listed on 16 April, 2010. The initial launch, though, has taken a conservative stance, marks a new era for China's capital markets. These initiatives will facilitate trading and hedging tools and offer a short sale mechanism that should help improve management of market risk and reduce market volatility over the long term.

■ The minimum trading margin of the CSI 300 index future is set to be 12%, which is one of the highest among major markets in the Asia ex-Japan region.

CSI 300 Index futures contract specifications

Type	Index Future
Underlying	CSI 300 Index
Currency	Renminbi (RMB)
Contract size	300 RMB x Index Point
Tick size	0.2
Tick value	60 RMB
Contract months	Spot month, next calendar month, and next two calendar quarter months
Trading hours	AM: 09:15 – 11:30, PM: 13:00 – 15:15
Trading hours for the last trading day	AM: 09:15 – 11:30, PM: 13:00 – 15:00
Daily price fluctuation limit	+/- 10% of previous close
Margin	Spot month and next calendar month: 15%; next two calendar quarter months: 18%
Minimum trading margin	12% of contract value
Last Trading Day	The Third Friday of the Contract Month
Final Settlement Day	The Third Friday of the Contract Month
Settlement Type	Cash
Trading code	IF
Handling fee	Trading: 0.005 % Delivery and settlement: 0.01 %
Holding disclosure	Disclosure on single side holding with more than 10,000 hands and the top 20 holding members for a single contract after each trading day
Exchange	China Financial Futures Exchange (CFFEX)

Note: Information as at 7 May, 2010. Source: CFFEx, Nomura Quantitative Strategies

➔ According to the mutual consensus that has been reached in the Second Meeting of the US-China Strategic and Economic Dialogue on 25 May, 2010, China agreed to allow both foreign joint ventures in China and QFIIs to participate in Stock Index Futures. This shows China will continue to liberalise by allowing more foreign participation and will help QFIIs to hedge their positions.

Appendix V: Update on China pair trading (1)

■ On 22 February, 2010, the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) announced the eligible stocks for margin trading and securities lending. The number of eligible stocks is limited (50 constituents in the SSE 50 Index and 40 in SZ Component Index) during the pilot scheme, mainly focusing on major blue chips with high daily trading volume.

■ On 19 March, 2010, the CSRC announced the first six eligible local securities firms to participate in the margin trading and securities lending pilot testing programme. The pilot testing programme was launched on 31 March, 2010.

■ The CSRC has drafted the interim provisions on QFIIs participating in index futures and is soliciting industry opinions. Of late, QFIIs are not allowed to participate in the margin trading and securities lending pilot scheme. However, investors should pay attention to the new development in infrastructure and progress in the A-share market to be better prepared until the drafting of relevant regulations for QFIIs.

■ The current securities lending rate proposed by the first six eligible local securities firms is quite high, ranging from 7.86% to 9.86% pa.

Appendix V: Update on China pair trading (2)

- We generate potential stock pairs from the large-cap and liquid stock universe (market capitalisation greater than US$1bn and average daily turnover larger than US$5mn), with the short candidates limited to the 90 eligible stocks. Of late, there are approximately 1,000 qualified pairs.

- We run pair trading back-tests on the potential pairs, starting from 22 February 2010 when the eligible stocks for securities lending were announced.

- Trading signals are generated and returns are calculated using the below rules:

  - Calculations: 1) moving average and standard deviation of the price ratio are calculated using rolling 130-trading day prices; and 2) price ratio is calculated by:

    ln [price of A / price of B]

  - Open signals: price ratio broke +/- 2 standard deviation bands, a minimum of 5% expected return criteria is imposed.

  - Close signals: price ratio mean-reverted within +/- 0.5 standard deviation bands.

  - Stop loss and maximum holding period: trades are closed whether return has reached -20% or holding period has exceeded a maximum of 80 trading days.

  - Performance: we use next day opening prices for opening and closing of a trade; all prices/returns are in local currency.

  - Additional filter: we apply the *Augmented Dickey-Fuller test* to determine if the price relations of the pairs have mean-reverting properties in statistics over the past six months. We open a pair trade position only if the price ratio series is stationary.

Appendix V: Update on China pair trading (3)

■ With DF test filter, the average return per trade is 1.9% over an average of 15 trading days.

Before transaction costs performance	All trades			With DF test filter		
	Closed	Outstanding	Total	Closed	Outstanding	Total
Average return per trade (%)	4.88	(2.43)	(0.19)	4.60	(3.14)	1.91
Hit rate (%)	87.67	35.76	51.68	93.33	25.00	69.57
Number of trades	73	165	238	15	8	23
Maximum trade return (%)	18.56	15.33	18.56	9.45	4.32	9.45
Minimum trade return (%)	(22.66)	(20.98)	(22.66)	(20.34)	(13.82)	(20.34)
Average trade duration (no. of trading days)	16.56	12.12	13.48	13.80	15.38	14.35
% of trades closed due to stop loss	9.59	-	3.78	6.67	-	4.35
% of trades closed due to maximum holding days	0.00	-	0.00	0.00	-	0.00

■ We estimate the one-way transaction costs as 50bps and the securities borrowing costs as 7.86% pa. After deducting estimated costs, the average return per trade is 0.48% with DF test filter. Once the short sale mechanism has been fully established and the cost of borrowing is coming down, we expect returns should be improved in the long run.

After transaction costs performance	All trades			With DF test filter		
	Closed	Outstanding	Total	Closed	Outstanding	Total
Average return per trade (%)	3.38	(3.80)	(1.60)	3.19	(4.61)	0.48
Hit rate (%)	86.30	26.67	44.96	93.33	25.00	69.57
Number of trades	73	165	238	15	8	23
Maximum trade return (%)	16.80	14.24	16.80	8.12	3.20	8.12
Minimum trade return (%)	(23.81)	(22.76)	(23.81)	(22.61)	(15.96)	(22.61)
Average trade duration (no. of trading days)	16.56	12.12	13.48	13.80	15.38	14.35
% of trades closed due to stop loss	9.59	-	3.78	6.67	-	4.35
% of trades closed due to maximum holding days	0.00	-	0.00	0.00	-	0.00

Note: Figures are pair trading back-tests using the selected pairs over the period from February 2010 to May 2010.
Source: Thomson Datastream Reuters, Nomura Quantitative Strategies

Appendix VI: Publications and models

- Asian Equity Quantitative Research reports
  - Quantitative Outlook 2010
  - Asia Pacific Quantitative Insight
  - Quants Factor Dynamics, Quants/Technicals Bulletin
  - Asia Pacific Fundflow Insight, Asia Technical Analysis Focus
  - Index reshuffle projection research [coverage: MSCI Asia Pacific ex-Japan, HSI/HSCEI, S&P/ASX 200 (pending for license), FTSE STI, KOSPI 200, FTSE Xinhua China 25/A50 Indices]
  - Asia Pair Trade Monitor (statistical) / Asia Trading Places (statistical + fundamental)
  - Event-driven strategy: Buyback announcement signals value
  - Hong Kong Short-Selling Activity
  - Asia Earnings Results Monitor
  - Earnings revision turning point
  - Asia Pacific Quantitative Landscape - A basic guide for investors
  - Global Market Guide (Annual)
- Monthly update on Asia Equity/China A Quant Models & daily factor performance (presentations)
- Asian Quant models reports
  - Consensus Rating Strategy – Cornering the market on ratings
  - Mid-term Momentum Strategy – Boosting the power of the Big Mo
  - Downside Beta Strategy – Fishing in the wind
  - Value-based Accruals Strategy – The impact of accruals and the flight to quality
  - Enhanced Earnings Revision Strategy – The long and the short of beating the herd
  - Low Dispersion Return reversal: catching the swing
  - China Quantitative Strategy – Towards the futures
  - Asia Pacific Statistical Pair Trading – Managing the ups and downs

Appendix VII: Organisation of Nomura Global Quant Strategy

Tokyo — **Hong Kong** — **London** — **New York**

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Trading Research Group

Derivative Products Research Group

Corporate Finance Research Group

Index Products Group

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Stocks:

A rating of "1", or **"Buy"**, indicates that the analyst expects the stock to outperform the Benchmark over the next 12 months.
A rating of "2", or **"Neutral"**, indicates that the analyst expects the stock to perform in line with the Benchmark over the next 12 months.
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A "**Bearish**" stance, indicates that the analyst expects the sector to underperform the Benchmark during the next 12 months.

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Stocks:

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A "**Buy**" recommendation indicates that potential upside is 15% or more.
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Stocks:

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A rating of "2", or **"Buy"**, indicates that the analyst expects the stock to outperform the Benchmark by 5% or more but less than 15% over the next six months.
A rating of "3", or **"Neutral"**, indicates that the analyst expects the stock to either outperform or underperform the Benchmark by less than 5% over the next six months.
A rating of "4", or **"Reduce"**, indicates that the analyst expects the stock to underperform the Benchmark by 5% or more but less than 15% over the next six months.
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Stocks:

Stock recommendations are based on absolute valuation upside (downside), which is defined as (Fair Value - Current Price)/Current Price, subject to limited management discretion. In most cases, the Fair Value will equal the analyst's assessment of the current intrinsic fair value of the stock using an appropriate valuation methodology such as Discounted Cash Flow or Multiple analysis etc. However, if the analyst doesn't think the market will revalue the stock over the specified time horizon due to a lack of events or catalysts, then the fair value may differ from the intrinsic fair value. In most cases, therefore, our recommendation is an assessment of the difference between current market price and our estimate of current intrinsic fair value. Recommendations are set with a 6-12 month horizon unless specified otherwise. Accordingly, within this horizon, price volatility may cause the actual upside or downside based on the prevailing market price to differ from the upside or downside implied by the recommendation.
A "**Strong buy**" recommendation indicates that upside is more than 20%.
A "**Buy**" recommendation indicates that upside is between 10% and 20%.
A "**Neutral**" recommendation indicates that upside or downside is less than 10%.
A "**Reduce**" recommendation indicates that downside is between 10% and 20%.
A "**Sell**" recommendation indicates that downside is more than 20%.

Sectors:

A "**Bullish**" rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a positive absolute recommendation.
A "**Neutral**" rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a neutral absolute recommendation.
A "**Bearish**" rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a negative absolute recommendation.

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