

Research

8 May 2012 | 32 pages

Quantitative Market Profile

Japan – Market Activity, Style & Performance Review

- **Market profile** — In the monthly issue of the quant market profile, we look at recent flow data, style trends, changes in style bias in consensus recommendations and risk decomposition of style composites in Japan. CIO's, Portfolio Managers and Strategists can use QMP as a quick reference to have a look at current themes in the market.
- **Style Performance** — Risk and Size style were down for the month, indicating large cap beta stocks did not outperform their small cap low risk counterparts. Profitability styles continued to work for the second straight month and Quality style was the best performing style in the month of April. Long term momentum factor did well after a long period of underperformance.
- **Risk profile** — Macro risk in all styles except Profitability ticked down. In Profitability macro factors are starting to increase their impact. The proportion of total variance explained by stock specific factors was higher in April– indicating that stock picking is more important relative to systematic factors. The crowdedness monitor does not indicate that risk of crowded positions is extreme. Taken together, these measures continue to support our recommendations to remain constructive on Quality style and High Dividend names.
- **RAM monitors** — Market is pricing in falling Commodity ex-oil, rising Oil prices, a higher JPY and lower JGB Yields indicating a somewhat softer stance on growth.
- **Ownership Trends** — Overall trading activity ticked down slightly in April. Proprietary accounts in particular were seen to be active sellers in the last month while Foreigners and Individual accounts were net buyers. Institutions were net sellers.
- **Consensus recommendations** — The consensus recommendation bias stays positive on Value and Quality, negative on Growth, Momentum and Size, neutral on Risk.
- **Correlation** — Both cross correlation and excess correlation measures continue to exhibit stability at levels supportive of stock picking and the volatility picture remains benign.

■ Equities

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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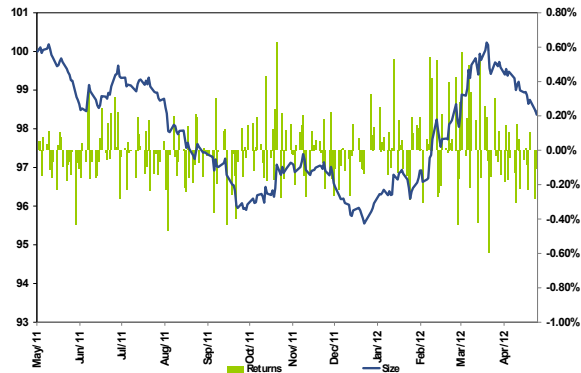
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What's working in the markets?

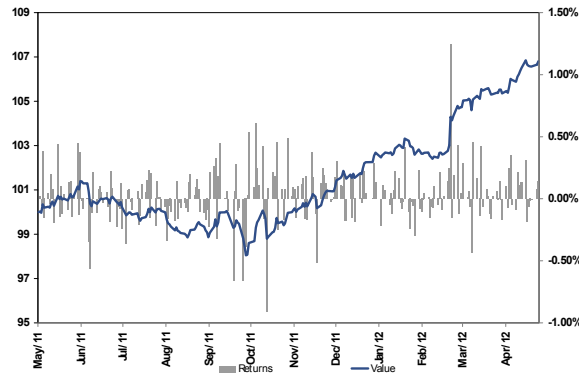
QuantIFI Style Performance

Figure 1. Size over last one year



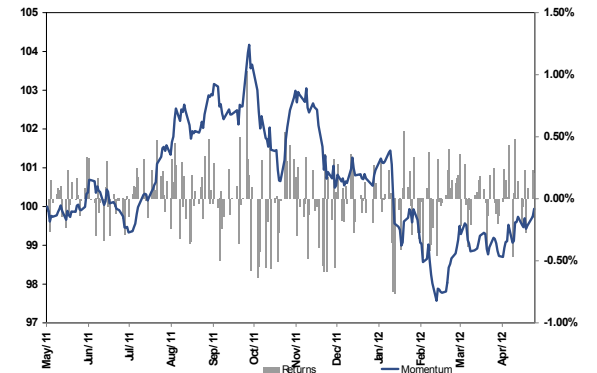
Source: Citi Investment Research and Analysis.

Figure 2. Value over last one year



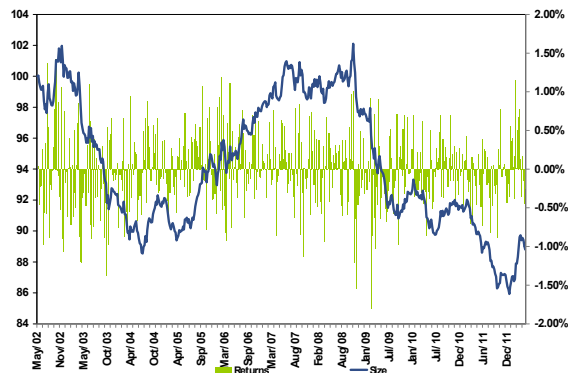
Source: Citi Investment Research and Analysis.

Figure 3. Momentum over last one year



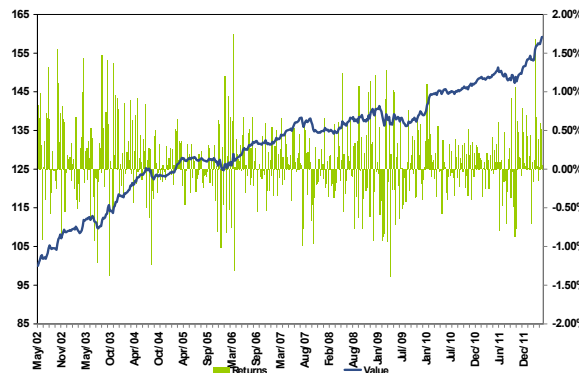
Source: Citi Investment Research and Analysis.

Figure 4. Size over last ten years



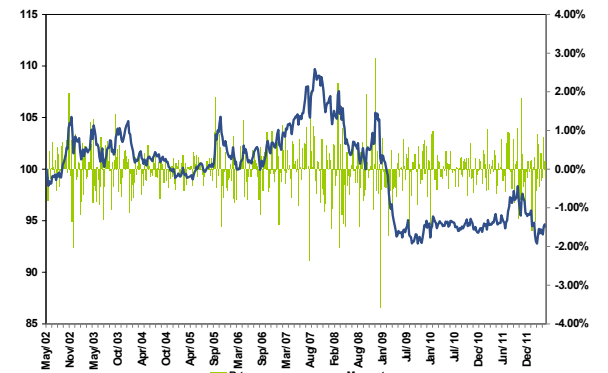
Source: Citi Investment Research and Analysis.

Figure 5. Value over last ten years



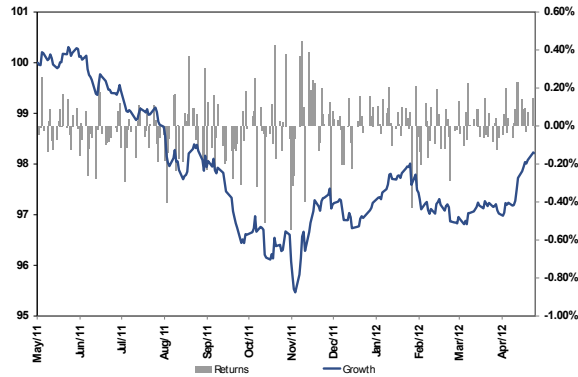
Source: Citi Investment Research and Analysis.

Figure 6. Momentum over last ten years



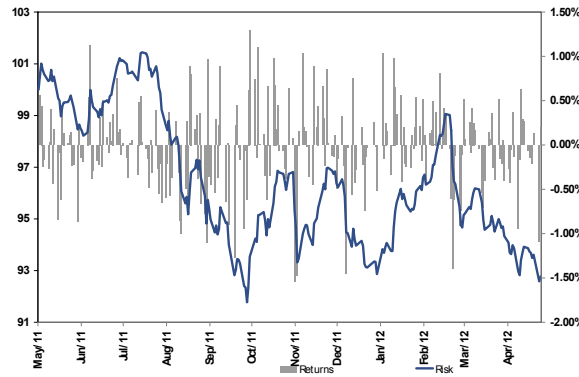
Source: Citi Investment Research and Analysis.

Figure 7. Growth over last one year



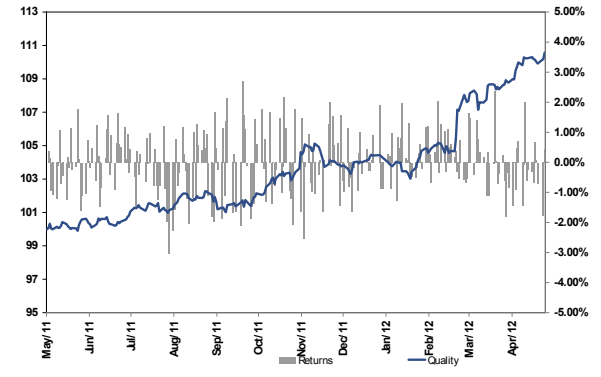
Source: Citi Investment Research and Analysis.

Figure 8. Risk over last one year



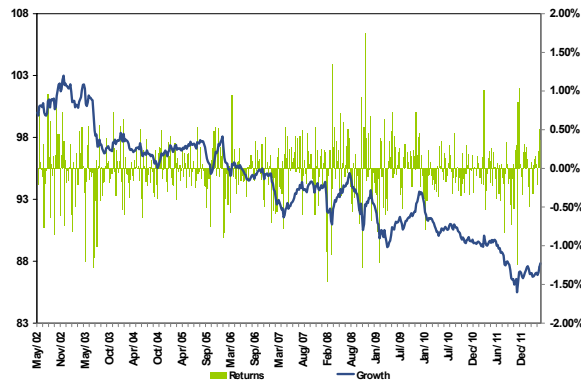
Source: Citi Investment Research and Analysis.

Figure 9. Quality over last one year



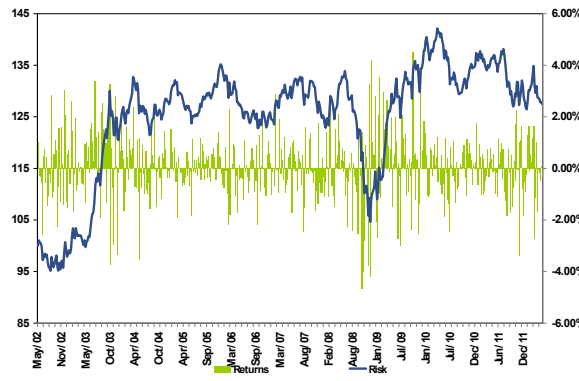
Source: Citi Investment Research and Analysis.

Figure 10. Growth over last ten years



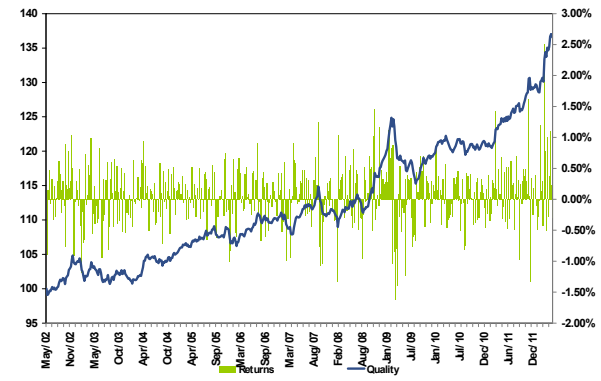
Source: Citi Investment Research and Analysis.

Figure 11. Risk over last ten years



Source: Citi Investment Research and Analysis.

Figure 12. Quality over last ten years



Source: Citi Investment Research and Analysis.

Factor Performance (Unrestricted)

Figure 13. Factor Performance – Japan (Unrestricted)

	Returns														IR's								
	1m		3m		6m		1y		2y		5y		10y		1y		2y		5y		10y		
Valuations																							
Dividend Yield	-1.1	(18)	2.9	(7)	7.2	(4)	13.9	(2)	10.3	(4)	13.1	(3)	15.1	(3)	1.8	(3)	1.2	(4)	1.1	(3)	1.2	(4)	
Price/Cash Flow	-3.3	(24)	-1.6	(19)	2.4	(8)	6.2	(10)	7.1	(11)	7.0	(7)	12.0	(5)	1.0	(6)	1.2	(5)	0.6	(8)	1.2	(5)	
Trailing PE	1.8	(10)	2.7	(8)	6.1	(6)	11.8	(6)	12.7	(2)	5.3	(9)	13.2	(4)	2.3	(2)	2.2	(1)	0.6	(9)	1.3	(3)	
F'Cast PE (12m F'rwrd)	2.2	(8)	9.1	(1)	11.0	(1)	13.8	(3)	14.8	(1)	-6.8	(23)	4.6	(11)	1.4	(4)	1.9	(2)	-0.4	(20)	0.4	(14)	
Price/Sales	-1.2	(19)	-0.2	(11)	8.5	(2)	19.5	(1)	11.2	(3)	13.3	(2)	15.4	(2)	2.9	(1)	1.5	(3)	1.1	(2)	1.4	(2)	
Price/Book	-5.1	(26)	-2.1	(22)	8.2	(3)	13.2	(4)	9.4	(7)	19.5	(1)	20.0	(1)	1.1	(5)	0.9	(9)	1.4	(1)	1.6	(1)	
Profitability																							
Reported ROE	2.4	(7)	3.0	(6)	-1.4	(16)	1.2	(13)	2.9	(13)	-4.7	(20)	-3.7	(23)	0.1	(13)	0.4	(13)	-0.5	(22)	-0.4	(23)	
Forecast ROE	5.4	(1)	8.4	(2)	5.2	(7)	6.7	(9)	7.9	(10)	-13.7	(26)	-10.3	(26)	0.6	(11)	0.9	(10)	-0.9	(26)	-0.8	(26)	
Net Margin (Trailing)	1.0	(12)	1.1	(9)	-4.1	(23)	-6.2	(22)	-2.6	(22)	-5.4	(22)	-3.8	(24)	-1.1	(25)	-0.3	(20)	-0.6	(24)	-0.4	(24)	
Net Margin (F'Cast)	2.8	(5)	3.8	(5)	1.2	(12)	-2.0	(17)	-0.9	(16)	-14.0	(27)	-10.7	(27)	-0.3	(17)	-0.1	(17)	-1.0	(27)	-0.9	(27)	
Earnings Certainty & Quality																							
Cashflow to Earnings	-0.1	(15)	-2.5	(23)	1.7	(11)	3.7	(12)	3.7	(12)	2.7	(11)	3.1	(13)	0.6	(12)	0.5	(12)	0.3	(10)	0.4	(11)	
Earnings Est. Variability (Hist)	1.4	(11)	-0.4	(13)	-1.4	(17)	-1.8	(16)	-2.2	(20)	-0.3	(14)	-1.6	(21)	-0.5	(20)	-0.8	(25)	-0.1	(14)	-0.3	(22)	
Earnings Est. Dispersion FY1	-0.6	(16)	-0.7	(15)	0.0	(13)	6.0	(11)	2.3	(15)	5.1	(10)	2.4	(16)	0.6	(10)	0.3	(14)	0.6	(7)	0.3	(15)	
Earnings Growth																							
Historical EPS Growth	2.9	(4)	-1.5	(18)	-4.3	(24)	0.9	(14)	2.3	(14)	-2.1	(17)	-2.0	(22)	0.1	(14)	0.3	(15)	-0.2	(18)	-0.3	(21)	
1Y EPS Growth	0.6	(14)	0.4	(10)	-2.8	(22)	-3.9	(20)	-2.1	(19)	-4.3	(19)	-0.2	(19)	-0.8	(24)	-0.4	(21)	-0.6	(23)	0.0	(19)	
Earnings Revisions Ratio	2.1	(9)	4.1	(4)	6.7	(5)	9.7	(7)	10.1	(5)	2.4	(12)	6.5	(9)	0.8	(9)	1.1	(6)	0.2	(12)	0.6	(8)	
PEG Ratio	-1.9	(21)	-1.7	(20)	-1.7	(18)	-5.3	(21)	-1.7	(18)	-0.2	(13)	3.4	(12)	-0.7	(23)	-0.3	(19)	0.0	(13)	0.6	(10)	
Long Term PEG Ratio	-1.7	(20)	-1.4	(17)	-4.4	(25)	-7.3	(23)	-1.0	(17)	-0.9	(15)	3.0	(14)	-1.1	(26)	-0.1	(16)	-0.1	(15)	0.4	(13)	
Price Momentum																							
% Price Change (1M)	2.8	(6)	6.9	(3)	-2.5	(20)	-1.0	(15)	-6.1	(24)	-1.5	(16)	0.4	(18)	-0.1	(15)	-0.4	(22)	-0.1	(16)	0.0	(18)	
% Price Change (3M)	-0.7	(17)	-3.9	(26)	-0.9	(15)	-3.4	(18)	-7.2	(25)	6.0	(8)	8.0	(8)	-0.2	(16)	-0.5	(24)	0.2	(11)	0.4	(12)	
% Price Change (6M)	0.8	(13)	-4.3	(27)	-5.7	(26)	-8.4	(26)	-15.6	(27)	-9.7	(25)	-0.7	(20)	-0.5	(19)	-1.1	(27)	-0.5	(21)	0.0	(20)	
% Price Change (12M)	4.9	(2)	-0.4	(12)	-2.5	(21)	-8.0	(25)	-5.4	(23)	-5.3	(21)	1.8	(17)	-0.5	(22)	-0.5	(23)	-0.2	(19)	0.1	(17)	
First 11 of Last 12M	4.4	(3)	-0.6	(14)	-0.6	(14)	-7.6	(24)	-2.3	(21)	-4.1	(18)	2.5	(15)	-0.5	(21)	-0.2	(18)	-0.2	(17)	0.1	(16)	
260D Trading Value	-2.3	(22)	-3.5	(24)	-11.1	(27)	-17.9	(27)	-12.7	(26)	-9.6	(24)	-6.8	(25)	-1.4	(27)	-1.0	(26)	-0.8	(25)	-0.6	(25)	
Radar																							
Radar Composite Score	-4.7	(25)	-1.9	(21)	2.2	(9)	9.5	(8)	9.3	(8)	8.8	(5)	10.0	(6)	0.9	(7)	1.0	(7)	0.9	(4)	1.0	(6)	
Radar Relative Value	-5.1	(27)	-3.6	(25)	-1.9	(19)	-3.4	(19)	9.8	(6)	7.9	(6)	6.1	(10)	-0.4	(18)	0.9	(8)	0.8	(5)	0.6	(9)	
Radar Composite Momentum	-2.8	(23)	-0.8	(16)	1.8	(10)	12.8	(5)	8.2	(9)	9.7	(4)	10.0	(7)	0.9	(8)	0.7	(11)	0.7	(6)	0.8	(7)	

Source: Factset, I/B/E/S, WorldScope, Citi Investment Research and Analysis.

Factor Performance (Sector Neutral)

Figure 14. Factor Performance – Japan (Sector Neutral)

	Returns														IR's							
	1m		3m		6m		1y		2y		5y		10y		1y		2y		5y		10y	
Valuations																						
Dividend Yield	-0.8	(17)	2.5	(7)	6.1	(4)	12.7	(4)	8.3	(6)	13.1	(2)	14.2	(3)	1.8	(4)	1.1	(4)	1.2	(2)	1.3	(4)
Price/Cash Flow	-2.9	(24)	-0.3	(13)	3.4	(9)	7.0	(8)	6.3	(7)	7.7	(4)	11.7	(5)	1.2	(6)	1.2	(3)	0.8	(3)	1.4	(3)
Trailing PE	1.5	(10)	2.5	(8)	5.3	(5)	10.1	(5)	11.3	(2)	6.3	(6)	18.1	(2)	1.9	(2)	2.1	(1)	0.7	(4)	2.1	(2)
F'Cast PE (12m F'rwrd)	2.0	(9)	7.2	(2)	10.0	(1)	13.3	(3)	11.5	(1)	7.2	(5)	4.7	(12)	1.9	(3)	1.9	(2)	0.6	(7)	0.4	(14)
Price/Sales	-2.6	(23)	1.0	(11)	10.0	(2)	19.0	(1)	8.6	(4)	8.8	(3)	12.7	(4)	2.4	(1)	1.0	(6)	0.7	(5)	1.1	(6)
Price/Book	-4.2	(26)	-0.8	(18)	9.3	(3)	14.9	(2)	9.5	(3)	0.0	(16)	3.9	(15)	1.4	(5)	1.0	(7)	0.0	(16)	0.4	(15)
Profitability																						
Reported ROE	2.1	(8)	2.8	(5)	-0.3	(13)	0.5	(15)	1.6	(13)	-4.6	(24)	-3.0	(26)	0.1	(15)	0.2	(13)	-0.6	(25)	-0.4	(25)
Forecast ROE	4.5	(1)	7.7	(1)	4.6	(7)	4.4	(9)	5.4	(8)	2.7	(12)	7.0	(9)	0.4	(10)	0.6	(8)	0.2	(12)	0.6	(10)
Net Margin (Trailing)	2.1	(6)	1.0	(10)	-3.5	(24)	-5.9	(23)	-0.8	(17)	-2.0	(19)	-2.2	(25)	-0.9	(25)	-0.1	(17)	-0.2	(21)	-0.3	(24)
Net Margin (F'Cast)	3.4	(4)	4.4	(4)	2.2	(11)	0.7	(14)	1.8	(12)	6.3	(7)	11.0	(6)	0.1	(14)	0.3	(12)	0.5	(8)	1.0	(7)
Earnings Certainty & Quality																						
Cashflow to Earnings	-0.8	(18)	-2.8	(26)	0.7	(12)	1.5	(13)	0.9	(14)	14.3	(1)	19.1	(1)	0.3	(12)	0.2	(14)	2.2	(1)	3.2	(1)
Earnings Est. Variability (Hist)	1.3	(12)	-0.7	(17)	-1.8	(20)	-1.3	(16)	-2.3	(22)	0.1	(14)	-1.7	(24)	-0.4	(19)	-0.8	(25)	0.0	(14)	-0.4	(26)
Earnings Est. Dispersion FY1	-0.7	(16)	-1.1	(20)	-0.7	(17)	3.9	(10)	2.4	(11)	3.1	(10)	1.2	(19)	0.5	(9)	0.4	(11)	0.5	(10)	0.2	(17)
Earnings Growth																						
Historical EPS Growth	2.1	(7)	-2.5	(23)	-5.5	(26)	-2.2	(18)	0.1	(16)	-2.0	(20)	-1.3	(22)	-0.3	(17)	0.0	(16)	-0.3	(22)	-0.2	(23)
1Y EPS Growth	0.6	(14)	1.3	(9)	-1.7	(19)	-1.8	(17)	-1.6	(21)	-4.1	(23)	-0.2	(20)	-0.4	(20)	-0.4	(21)	-0.6	(26)	0.0	(20)
Earnings Revisions Ratio	1.4	(11)	2.8	(6)	4.4	(8)	7.0	(7)	8.4	(5)	0.1	(15)	4.6	(13)	0.7	(8)	1.1	(5)	0.0	(15)	0.6	(11)
PEG Ratio	-1.7	(19)	-0.6	(15)	-0.7	(15)	-4.6	(21)	-1.1	(20)	-0.2	(17)	3.7	(16)	-0.8	(24)	-0.2	(20)	0.0	(17)	0.8	(9)
Long Term PEG Ratio	-2.2	(20)	-1.9	(21)	-3.1	(23)	-4.6	(22)	0.4	(15)	-0.7	(18)	7.5	(7)	-1.0	(26)	0.1	(15)	-0.1	(18)	1.2	(5)
Price Momentum																						
% Price Change (1M)	2.4	(5)	5.7	(3)	-2.3	(22)	-2.4	(19)	-5.6	(24)	-2.3	(21)	-1.0	(21)	-0.2	(16)	-0.5	(23)	-0.2	(19)	-0.1	(22)
% Price Change (3M)	-0.4	(15)	-2.3	(22)	-0.5	(14)	-4.1	(20)	-6.5	(25)	3.0	(11)	4.9	(11)	-0.3	(18)	-0.5	(24)	0.1	(13)	0.3	(16)
% Price Change (6M)	0.9	(13)	-3.8	(27)	-5.0	(25)	-9.4	(26)	-13.8	(27)	-9.7	(27)	-1.4	(23)	-0.7	(22)	-1.1	(27)	-0.5	(24)	-0.1	(21)
% Price Change (12M)	3.6	(2)	-0.6	(16)	-2.1	(21)	-8.1	(25)	-4.1	(23)	-5.7	(25)	1.4	(18)	-0.7	(23)	-0.4	(22)	-0.3	(23)	0.1	(19)
First 11 of Last 12M	3.5	(3)	-1.1	(19)	-0.7	(16)	-7.0	(24)	-1.1	(19)	-4.0	(22)	3.1	(17)	-0.6	(21)	-0.1	(19)	-0.2	(20)	0.2	(18)
260D Trading Value	-2.2	(21)	-2.8	(25)	-10.4	(27)	-15.3	(27)	-12.0	(26)	-8.7	(26)	-6.3	(27)	-1.2	(27)	-1.0	(26)	-0.7	(27)	-0.6	(27)
Radar																						
Radar Composite Score	-4.1	(25)	-0.4	(14)	4.8	(6)	8.9	(6)	4.4	(9)	5.4	(8)	7.2	(8)	1.0	(7)	0.6	(9)	0.6	(6)	0.8	(8)
Radar Relative Value	-4.2	(26)	-2.6	(24)	-0.9	(18)	2.1	(12)	4.0	(10)	2.0	(13)	4.1	(14)	0.3	(11)	0.6	(10)	0.3	(11)	0.4	(13)
Radar Composite Momentum	-2.3	(22)	-0.2	(12)	2.2	(10)	2.3	(11)	-0.9	(18)	4.5	(9)	5.1	(10)	0.3	(13)	-0.1	(18)	0.5	(9)	0.5	(12)

Source: Factset, I/B/E/S, WorldScope, Citi Investment Research and Analysis.

Payoff to Sector Selection

Figure 15. Payoff to systematic Sector Selection – Japan

	Returns														IR's							
	1m		3m		6m		1y		2y		5y		10y		1y		2y		5y		10y	
Valuations																						
Dividend Yield	-0.3	(20)	0.4	(10)	1.0	(3)	1.1	(10)	1.9	(9)	0.1	(17)	0.9	(18)	0.6	(8)	0.9	(7)	0.0	(17)	0.3	(17)
Price/Cash Flow	-0.4	(21)	-1.3	(25)	-1.0	(19)	-0.7	(21)	0.7	(13)	-0.6	(24)	0.4	(20)	-0.6	(22)	0.3	(13)	-0.2	(24)	0.1	(20)
Trailing PE	0.3	(11)	0.3	(13)	0.8	(6)	1.5	(8)	1.3	(12)	6.3	(3)	18.1	(2)	1.1	(5)	0.7	(9)	3.0	(2)	7.3	(1)
F'Cast PE (12m F'rwrd)	0.1	(13)	1.8	(1)	0.9	(5)	0.7	(13)	3.1	(4)	7.2	(2)	4.7	(6)	0.2	(13)	1.2	(3)	1.7	(3)	1.3	(8)
Price/Sales	1.4	(1)	-1.3	(24)	-1.5	(26)	0.2	(16)	2.4	(7)	3.9	(7)	2.2	(12)	0.1	(16)	0.7	(10)	0.7	(8)	0.5	(13)
Price/Book	-0.9	(25)	-1.2	(23)	-0.9	(18)	-1.4	(22)	-0.1	(16)	0.0	(18)	3.9	(8)	-0.5	(21)	0.0	(16)	0.0	(18)	1.3	(7)
Profitability																						
Reported ROE	0.3	(10)	0.2	(14)	-1.0	(22)	0.7	(12)	1.4	(11)	-0.1	(20)	-0.7	(26)	0.4	(11)	0.6	(12)	0.0	(20)	-0.3	(26)
Forecast ROE	0.9	(4)	0.8	(5)	0.7	(8)	2.2	(6)	2.4	(6)	2.7	(10)	7.0	(5)	1.2	(3)	1.3	(1)	0.8	(7)	2.3	(3)
Net Margin (Trailing)	-1.1	(27)	0.0	(15)	-0.7	(15)	-0.4	(18)	-1.9	(25)	-3.6	(27)	-1.7	(27)	-0.2	(17)	-0.6	(25)	-0.7	(27)	-0.4	(27)
Net Margin (F'Cast)	-0.6	(23)	-0.7	(19)	-1.1	(23)	-2.7	(24)	-2.6	(27)	6.3	(4)	11.0	(3)	-0.9	(25)	-1.1	(27)	1.1	(4)	2.1	(4)
Earnings Certainty & Quality																						
Cashflow to Earnings	0.7	(6)	0.4	(11)	1.0	(4)	2.3	(4)	2.9	(5)	14.3	(1)	19.1	(1)	1.3	(2)	1.2	(2)	4.8	(1)	7.1	(2)
Earnings Est. Variability (Hist)	0.1	(14)	0.3	(12)	0.3	(9)	-0.4	(19)	0.0	(14)	-0.4	(23)	0.1	(21)	-0.4	(20)	0.0	(14)	-0.3	(25)	0.0	(21)
Earnings Est. Dispersion FY1	0.2	(12)	0.5	(8)	0.8	(7)	2.2	(5)	0.0	(15)	2.0	(12)	1.2	(16)	0.9	(6)	0.0	(15)	0.7	(10)	0.4	(14)
Earnings Growth																						
Historical EPS Growth	0.7	(5)	1.1	(4)	1.3	(2)	3.2	(2)	2.3	(8)	0.0	(19)	-0.6	(25)	1.3	(1)	1.0	(5)	0.0	(19)	-0.2	(24)
1Y EPS Growth	0.0	(15)	-1.0	(20)	-1.1	(24)	-2.1	(23)	-0.5	(18)	-0.2	(21)	0.0	(22)	-0.9	(24)	-0.2	(19)	-0.1	(21)	0.0	(22)
Earnings Revisions Ratio	0.7	(7)	1.4	(2)	2.3	(1)	2.8	(3)	1.7	(10)	2.4	(11)	1.9	(13)	0.9	(7)	0.6	(11)	0.7	(11)	0.6	(11)
PEG Ratio	-0.2	(18)	-1.1	(22)	-1.0	(20)	-0.7	(20)	-0.6	(20)	-0.2	(22)	3.7	(9)	-0.3	(19)	-0.3	(20)	-0.1	(22)	1.6	(6)
Long Term PEG Ratio	0.5	(8)	0.6	(7)	-1.4	(25)	-2.7	(25)	-1.3	(24)	-0.7	(25)	7.5	(4)	-0.8	(23)	-0.4	(21)	-0.2	(23)	2.0	(5)
Price Momentum																						
% Price Change (1M)	0.4	(9)	1.2	(3)	-0.2	(12)	1.8	(7)	-0.3	(17)	1.1	(13)	1.6	(15)	0.5	(10)	-0.1	(17)	0.3	(13)	0.5	(12)
% Price Change (3M)	-0.3	(19)	-1.7	(27)	-0.3	(13)	1.1	(11)	-0.5	(19)	3.3	(8)	3.3	(10)	0.3	(12)	-0.2	(18)	1.0	(6)	1.0	(9)
% Price Change (6M)	-0.1	(17)	-0.4	(16)	-0.7	(16)	1.2	(9)	-1.9	(26)	0.3	(16)	1.1	(17)	0.5	(9)	-0.8	(26)	0.1	(16)	0.3	(16)
% Price Change (12M)	1.3	(2)	0.4	(9)	-0.1	(11)	0.4	(15)	-1.2	(23)	1.0	(14)	0.7	(19)	0.1	(14)	-0.4	(22)	0.3	(14)	0.2	(19)
First 11 of Last 12M	0.9	(3)	0.6	(6)	0.3	(10)	-0.4	(17)	-1.1	(22)	0.4	(15)	-0.2	(23)	-0.2	(18)	-0.5	(23)	0.1	(15)	-0.1	(23)
260D Trading Value	-0.1	(16)	-0.7	(18)	-0.8	(17)	-3.0	(26)	-0.7	(21)	-0.9	(26)	-0.5	(24)	-2.8	(27)	-0.6	(24)	-0.6	(26)	-0.3	(25)
Radar																						
Radar Composite Score	-0.6	(24)	-1.6	(26)	-2.6	(27)	0.6	(14)	4.8	(3)	3.2	(9)	2.6	(11)	0.1	(15)	0.8	(8)	0.7	(9)	0.4	(15)
Radar Relative Value	-0.9	(25)	-1.0	(21)	-1.0	(21)	-5.4	(27)	5.7	(2)	5.7	(5)	1.8	(14)	-1.0	(26)	0.9	(6)	1.0	(5)	0.3	(18)
Radar Composite Momentum	-0.5	(22)	-0.6	(17)	-0.4	(14)	10.4	(1)	9.3	(1)	4.9	(6)	4.5	(7)	1.1	(4)	1.1	(4)	0.5	(12)	0.7	(10)

Source: Factset, I/B/E/S, WorldScope, Citi Investment Research and Analysis.

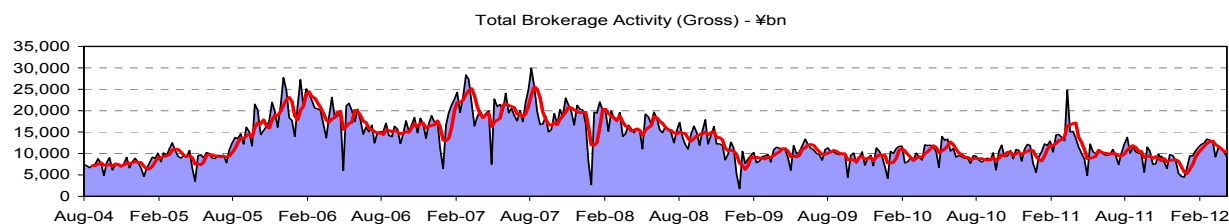
Environment – Market Activity, Volatility, Correlation and Dispersion

Japan Equity market activity monitor

Figure 16. Trading Value by Investor Type - Tokyo, Osaka & Nagoya (¥bn)

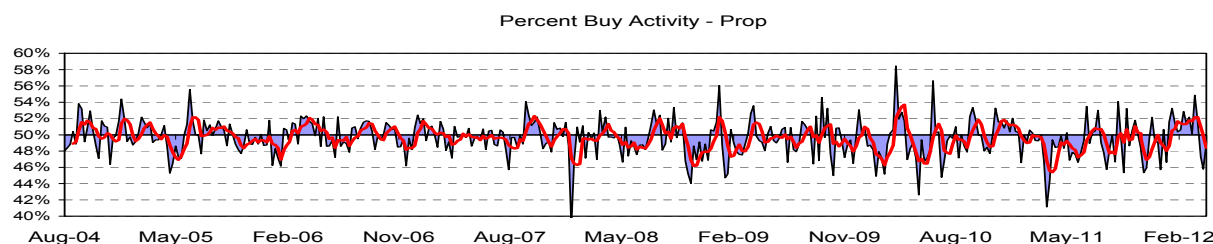
Total Gross Activity

	Buy (%Total)	Sell (%Total)	Gross	Net (Buy : Sell)
16 Apr 12 - 20 Apr 12	5,578.0	5,584.2	11,162.2	-6.3 50:50
9 Apr 12 - 13 Apr 12	6,588.9	6,600.6	13,189.6	-11.7 50:50
2 Apr 12 - 6 Apr 12	6,954.9	6,966.4	13,921.3	-11.4 50:50
26 Mar 12 - 30 Mar 12	7,086.6	7,085.0	14,171.6	1.6



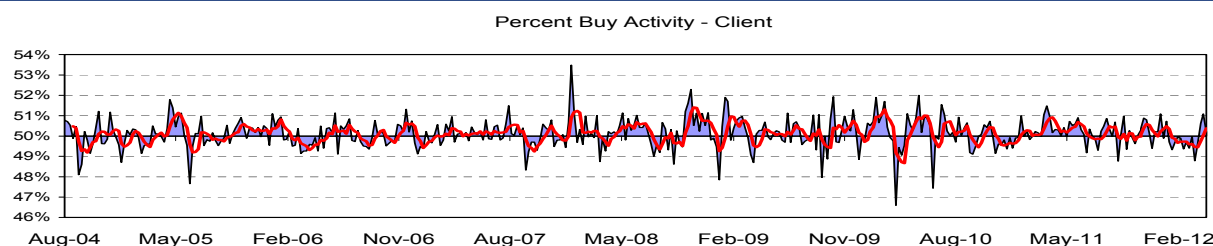
Proprietary Activity

	Buy	Sell	Gross	Net
16 Apr 12 - 20 Apr 12	972.2 17%	1,014.8 18%	1,986.9 18%	-42.6 49:51
9 Apr 12 - 13 Apr 12	1,285.6 20%	1,523.4 23%	2,809.0 21%	-237.9 46:54
2 Apr 12 - 6 Apr 12	1,318.2 19%	1,467.7 21%	2,785.9 20%	-149.6 47:53
26 Mar 12 - 30 Mar 12	1,413.1 20%	1,324.3 19%	2,737.4 19%	88.9 52:48



Client Activity

	Buy	Sell	Gross	Net
16 Apr 12 - 20 Apr 12	4,605.8 83%	4,569.4 82%	9,175.3 82%	36.4 50.2:49.8
9 Apr 12 - 13 Apr 12	5,303.4 80%	5,077.2 77%	10,380.6 79%	226.1 51.1:48.9
2 Apr 12 - 6 Apr 12	5,636.8 81%	5,498.6 79%	11,135.4 80%	138.1 50.6:49.4
26 Mar 12 - 30 Mar 12	5,673.5 80%	5,760.7 81%	11,434.2 81%	-87.2 49.6:50.4

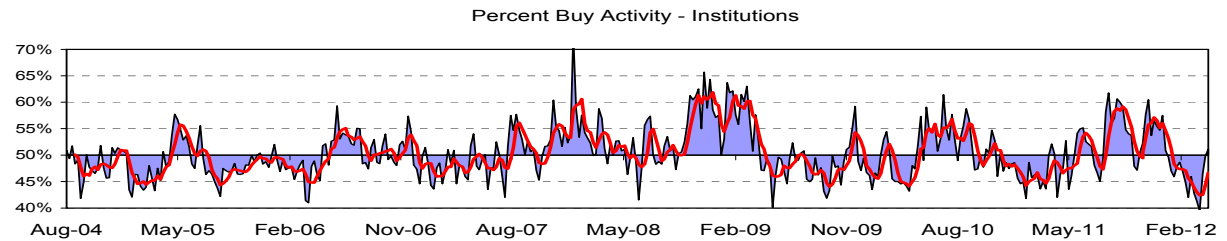


Source: Citi Investment Research and Analysis.

Figure 17. Trading Value by Investor Type - Tokyo, Osaka & Nagoya (¥ bn)

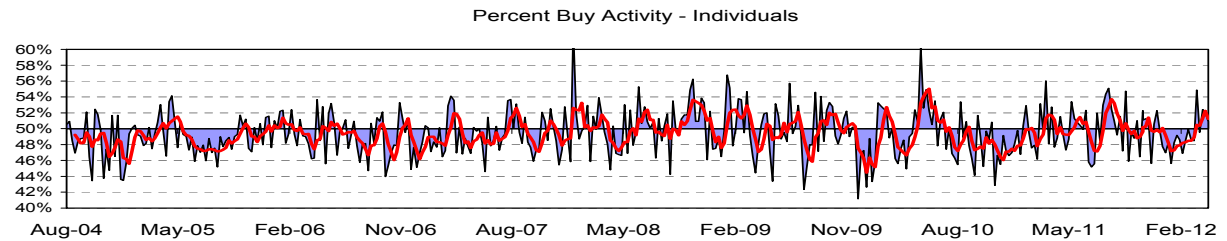
Activity by Institutions

	Buy (%Total)	Sell (%Total)	Gross	Net (Buy : Sell)
16 Apr 12 - 20 Apr 12	424.1	404.8	828.9	19.4
	8%	7%	7%	51.2 : 48.8
9 Apr 12 - 13 Apr 12	474.2	480.0	954.2	-5.9
	7%	7%	7%	49.7 : 50.3
2 Apr 12 - 6 Apr 12	542.8	626.1	1,168.8	-83.3
	8%	9%	8%	46.4 : 53.6
26 Mar 12 - 30 Mar 12	458.1	702.3	1,160.3	-244.2
	6%	10%	8%	39.5 : 60.5



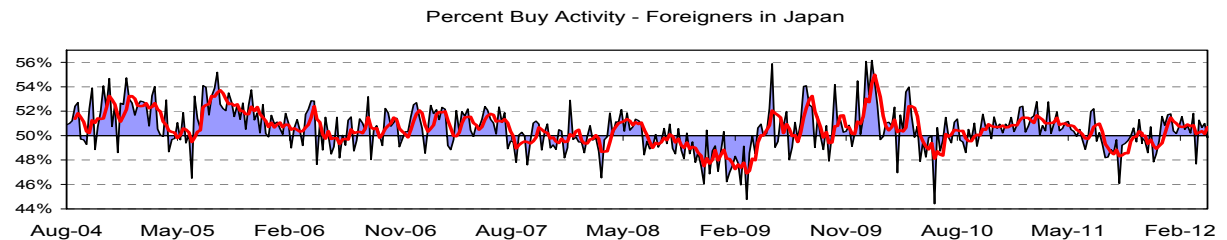
Activity by Individuals

	Buy	Sell	Gross	Net
16 Apr 12 - 20 Apr 12	992.4	957.4	1,949.7	35.0
	18%	17%	17%	50.9 : 49.1
9 Apr 12 - 13 Apr 12	1,078.9	993.5	2,072.4	85.4
	16%	15%	16%	52.1 : 47.9
2 Apr 12 - 6 Apr 12	1,269.8	1,151.8	2,420.9	117.4
	18%	17%	17%	52.4 : 47.6
26 Mar 12 - 30 Mar 12	1,369.9	1,394.0	2,763.9	-24.2
	19%	20%	20%	49.6 : 50.4



Activity by Foreigners

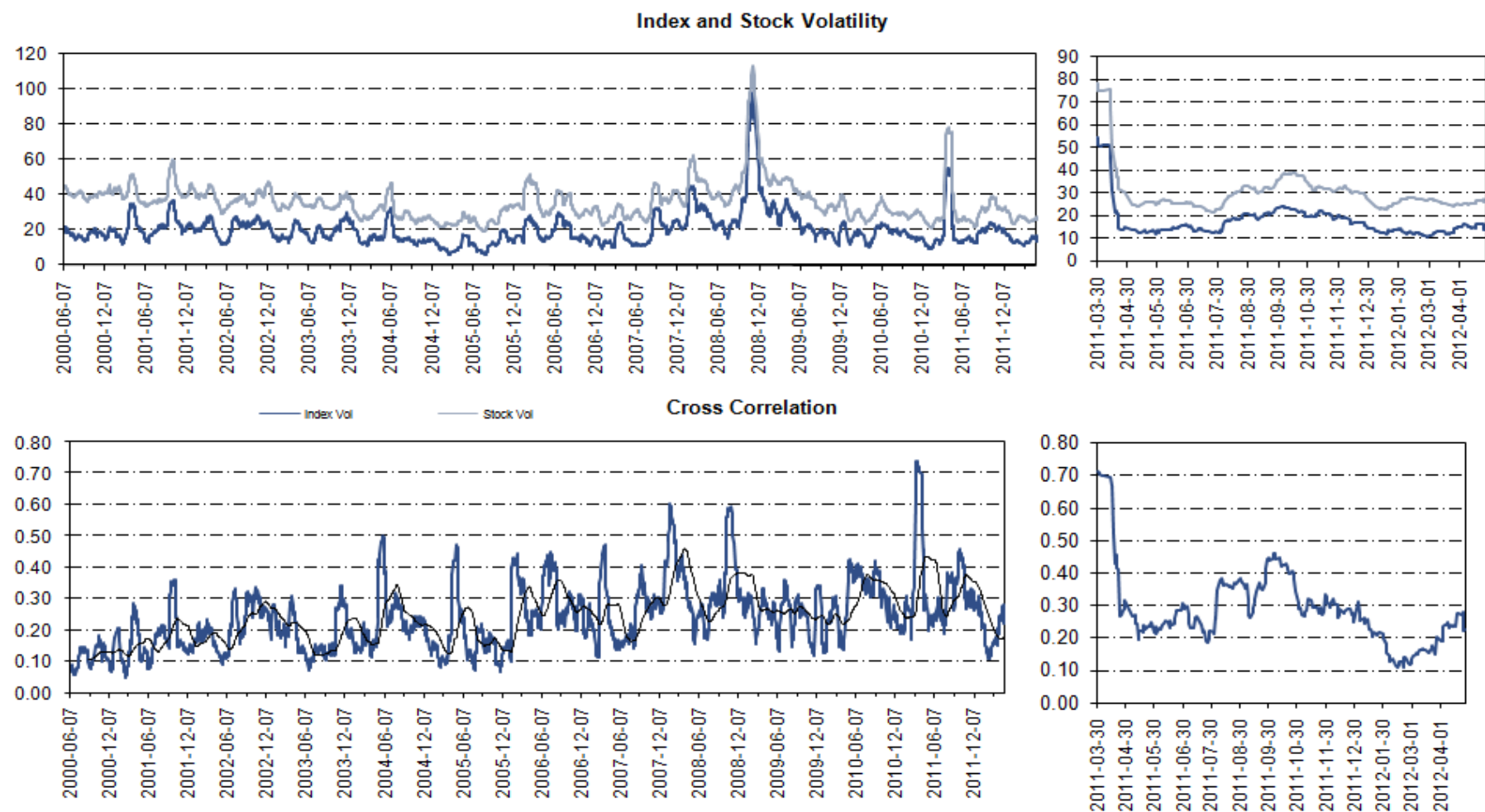
	Buy	Sell	Gross	Net
16 Apr 12 - 20 Apr 12	3,091.3	3,112.7	6,203.9	-21.4
	55%	56%	56%	49.8 : 50.2
9 Apr 12 - 13 Apr 12	3,646.3	3,503.5	7,149.8	142.8
	55%	53%	54%	51.0 : 49.0
2 Apr 12 - 6 Apr 12	3,706.2	3,608.1	7,314.3	98.1
	53%	52%	53%	50.7 : 49.3
26 Mar 12 - 30 Mar 12	3,729.6	3,545.0	7,274.6	184.6
	53%	50%	51%	51.3 : 48.7



Source: Citi Investment Research and Analysis.

Volatility Monitor I

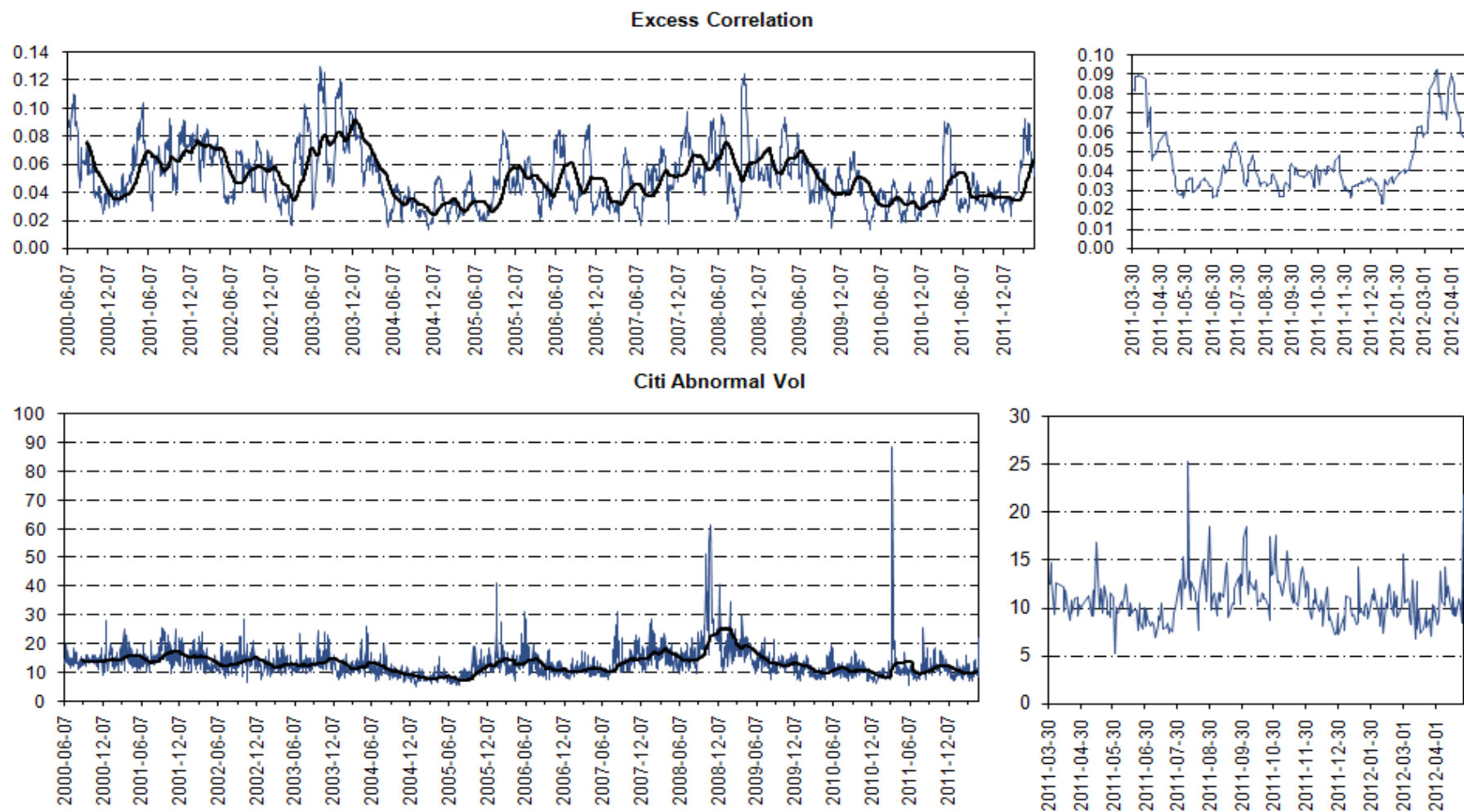
Figure 18. Volatility and Correlation



Source: Citi Investment Research and Analysis.

Volatility Monitor II

Figure 19. Abnormal Vol and Excess return correlation



Source: Citi Investment Research and Analysis.

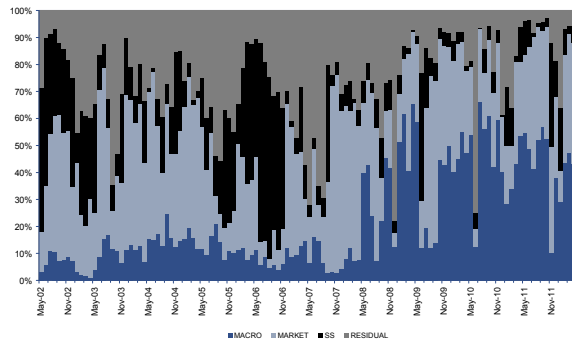


Risk Environment

Risk Decomposition various Investing Styles

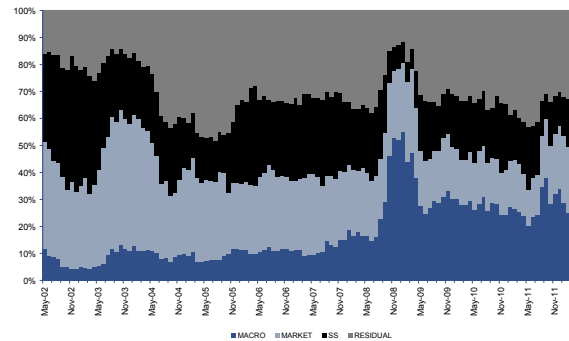
Macro risk in all styles other than Growth continues to dissipate

Figure 20. Risk Decomposition of Radar Composite



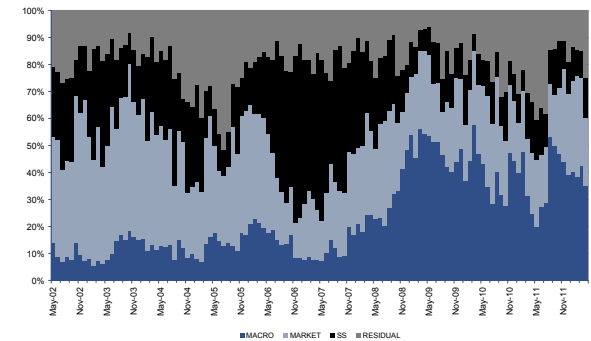
Source: Citi Investment Research and Analysis.

Figure 21. Risk Decomposition of Value Composite



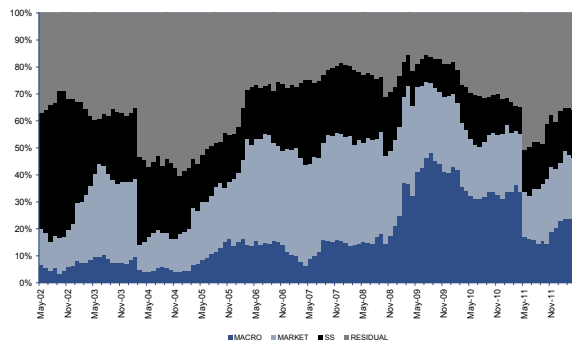
Source: Citi Investment Research and Analysis.

Figure 22. Risk Decomposition of Momentum Composite



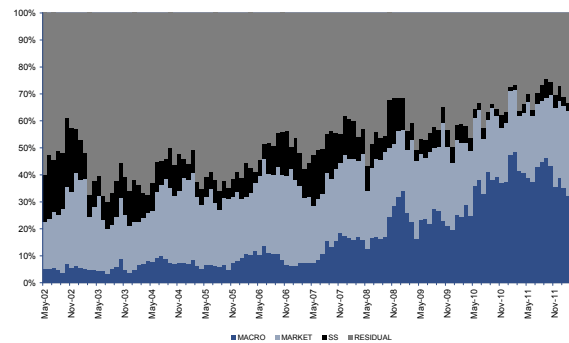
Source: Citi Investment Research and Analysis.

Figure 23. Risk Decomposition of Profitability Composite



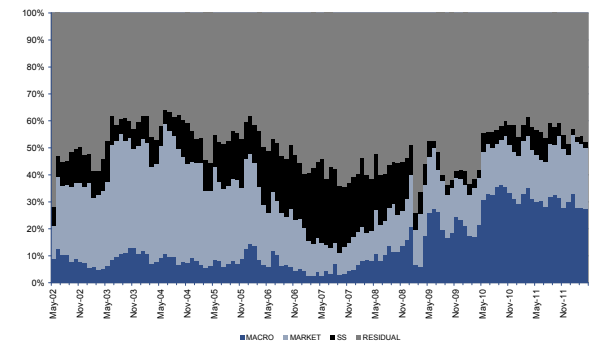
Source: Citi Investment Research and Analysis.

Figure 24. Risk Decomposition of Growth Composite



Source: Citi Investment Research and Analysis.

Figure 25. Risk Decomposition of Quality Composite

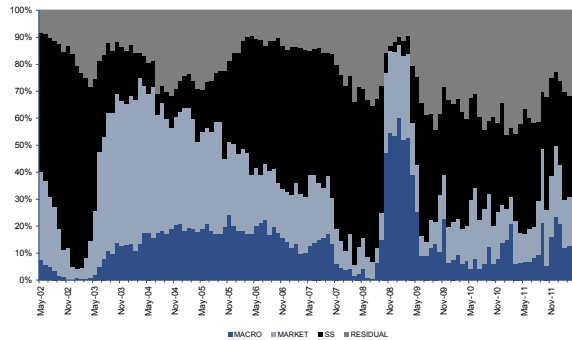


Source: Citi Investment Research and Analysis.

Risk Decomposition various Investing Styles (contd.)

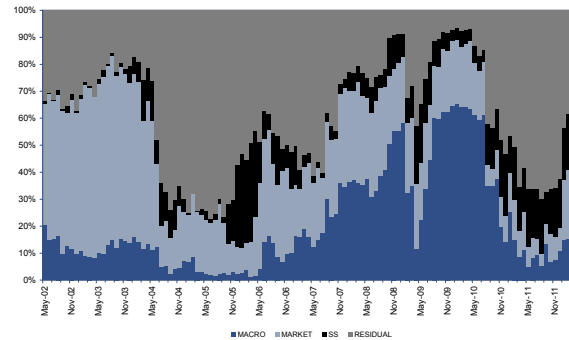
Same conclusion from looking at univariate styles

Figure 26. Risk Decomposition of Book Yield



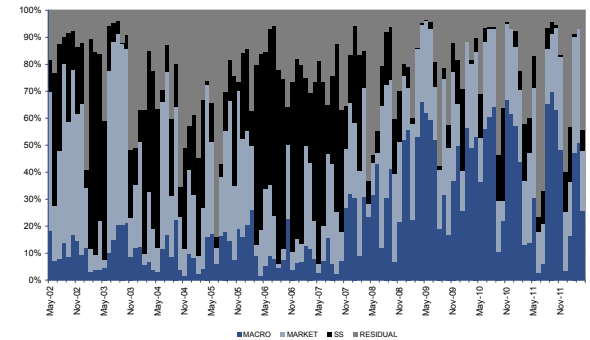
Source: Citi Investment Research and Analysis.

Figure 27. Risk Decomposition of Earnings Yield



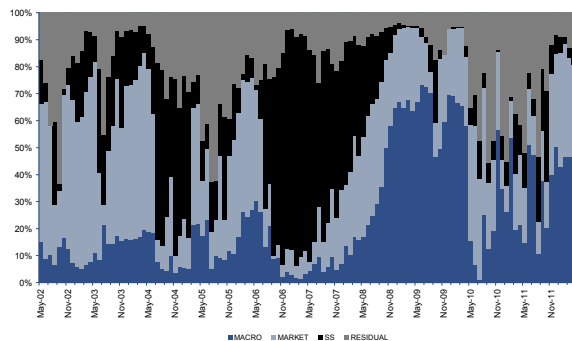
Source: Citi Investment Research and Analysis.

Figure 28. Risk Decomposition of 3 Month Momentum



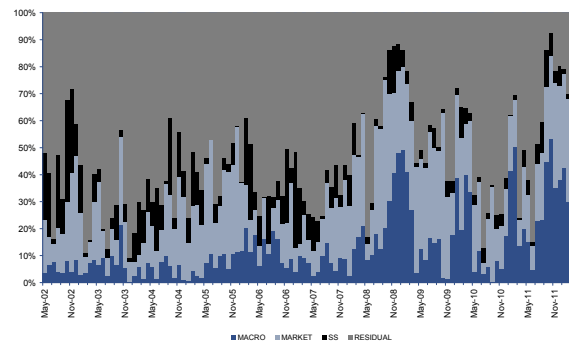
Source: Citi Investment Research and Analysis.

Figure 29. Risk Decomposition of 12 month momentum



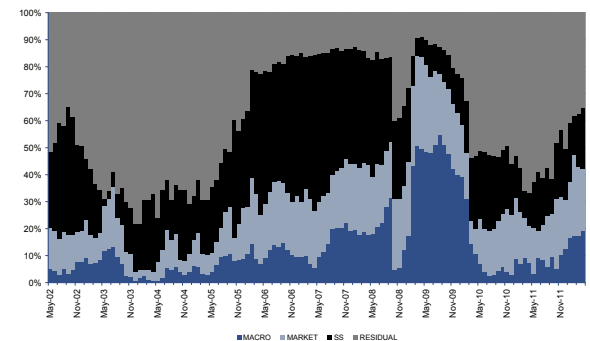
Source: Citi Investment Research and Analysis.

Figure 30. Risk Decomposition of Earnings revision



Source: Citi Investment Research and Analysis.

Figure 31. Risk Decomposition of Forecast ROE

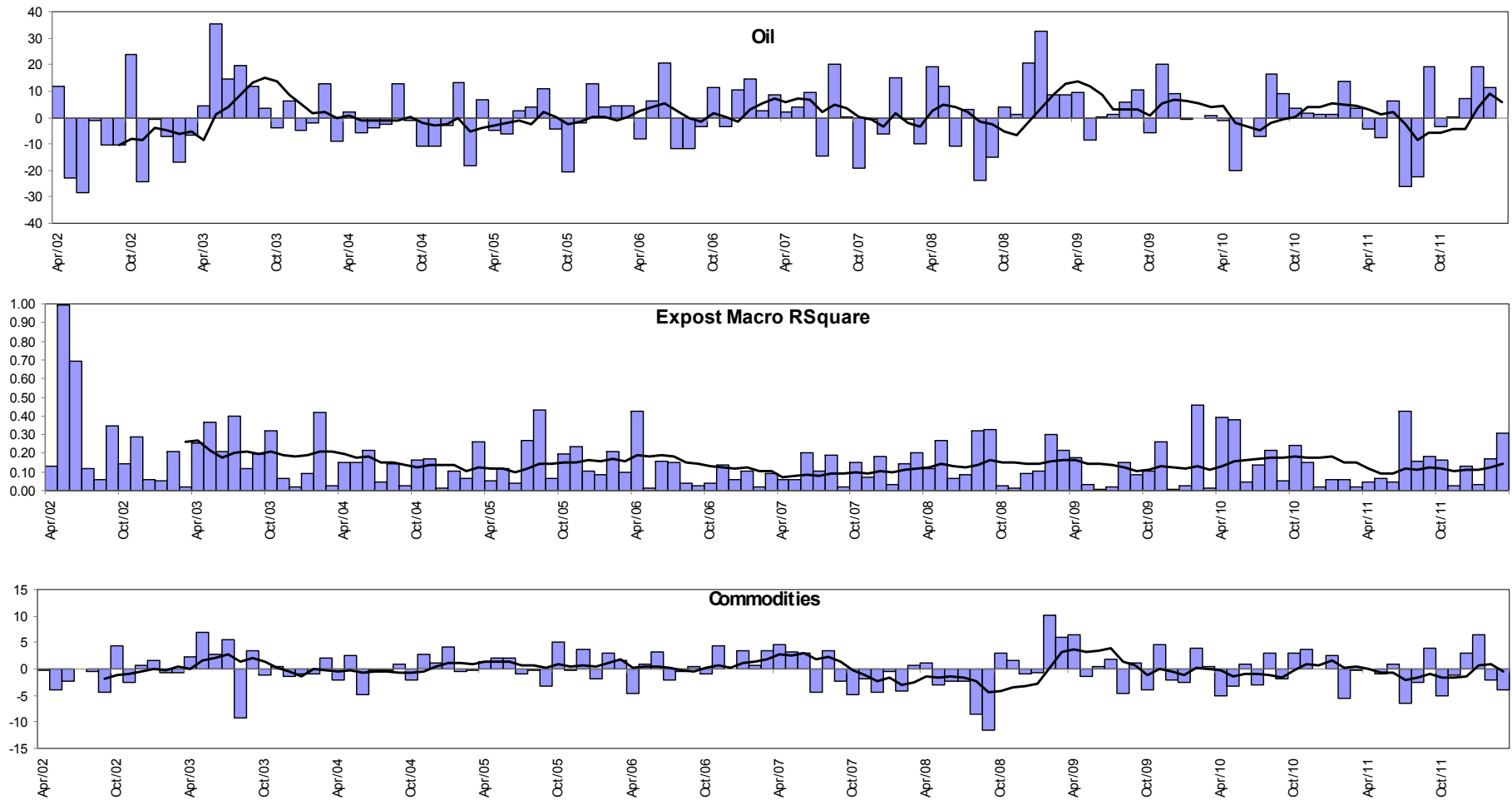


Source: Citi Investment Research and Analysis.

RAM Monitors

Market is pricing in falling Commodity ex-oil and rising Oil prices

Figure 32. RAM Monitor for Macroeconomic Factors

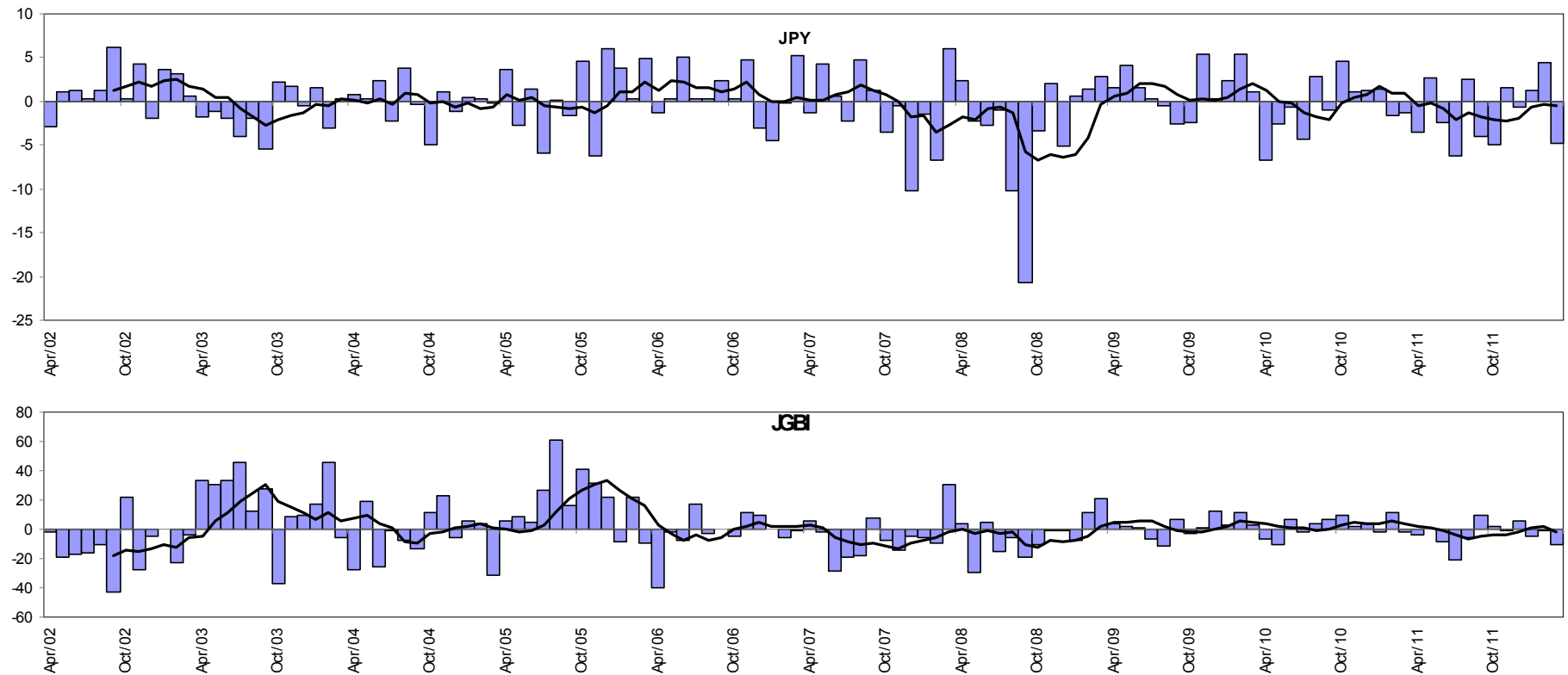


Source: Citi Investment Research and Analysis.

RAM Monitors (contd.)

... and a strengthening JPY and lower JGB 10 Yields

Figure 33. RAM Monitor for Macroeconomic Factors



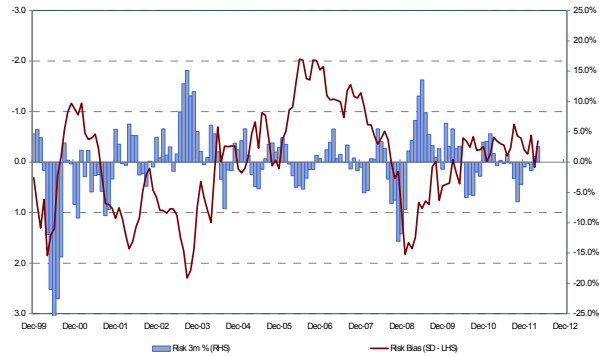
Source: Citi Investment Research and Analysis.

Analyst Biases

Analyst Style Biases

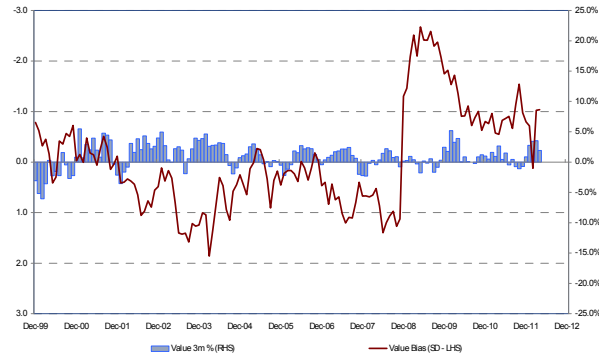
Positive on Value and Quality, negative on Growth and Momentum, neutral on Size and Risk.

Figure 34. Risk Bias



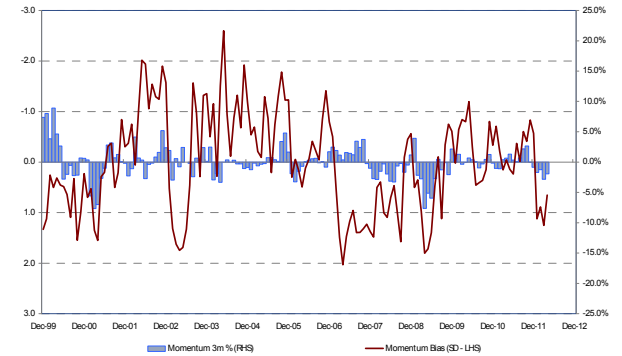
Source: Citi Investment Research and Analysis.

Figure 35. Value Bias



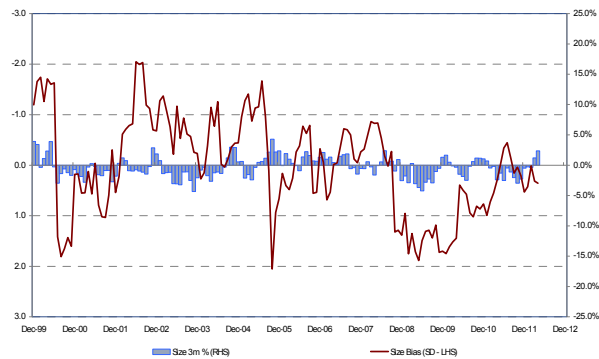
Source: Citi Investment Research and Analysis.

Figure 36. Momentum Bias



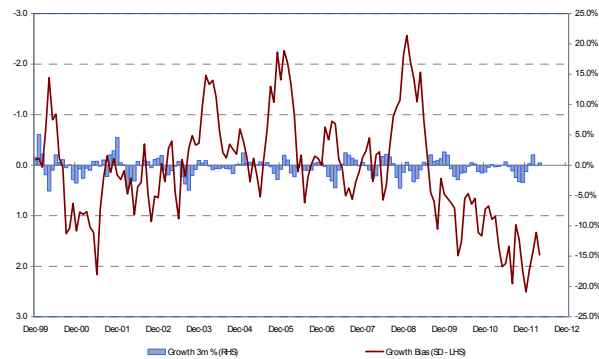
Source: Citi Investment Research and Analysis.

Figure 37. Size Bias



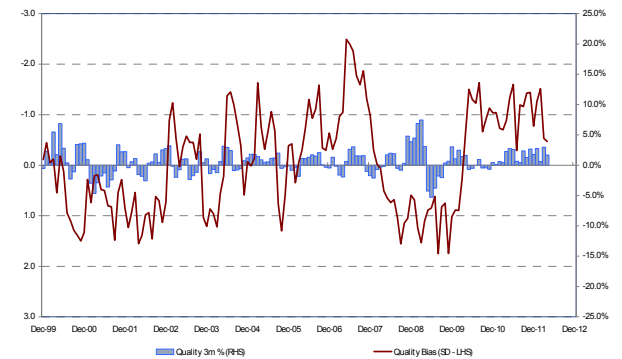
Source: Citi Investment Research and Analysis.

Figure 38. Growth Bias



Source: Citi Investment Research and Analysis.

Figure 39. Quality Bias



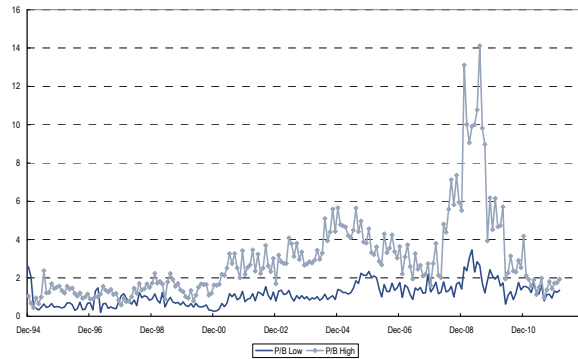
Source: Citi Investment Research and Analysis.

Factor Crowdedness

Average Short interest for major style portfolios

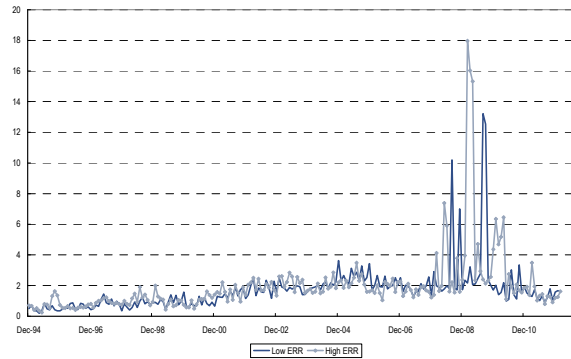
Not extreme on any styles ...

Figure 40. Price to Book



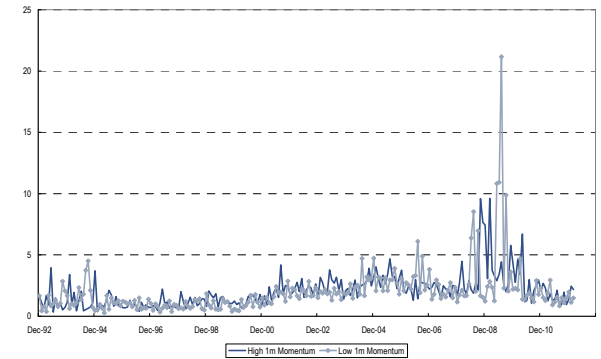
Source: Citi Investment Research and Analysis.

Figure 41. Earnings Revision Ratio



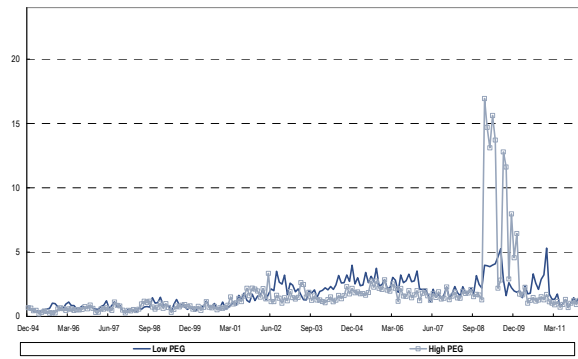
Source: Citi Investment Research and Analysis.

Figure 42. Short term Momentum



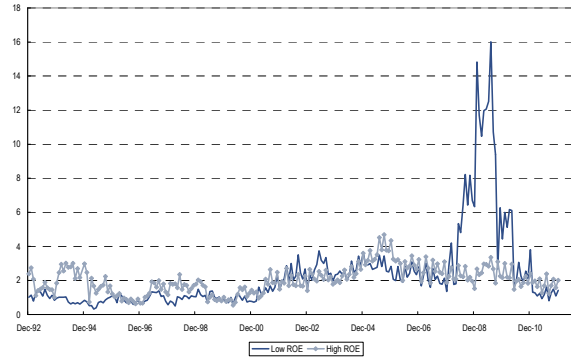
Source: Citi Investment Research and Analysis.

Figure 43. PEG Ratio



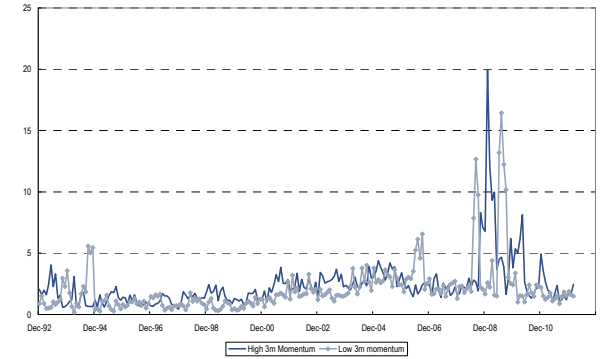
Source: Citi Investment Research and Analysis.

Figure 44. Return on Equity



Source: Citi Investment Research and Analysis.

Figure 45. Medium term momentum

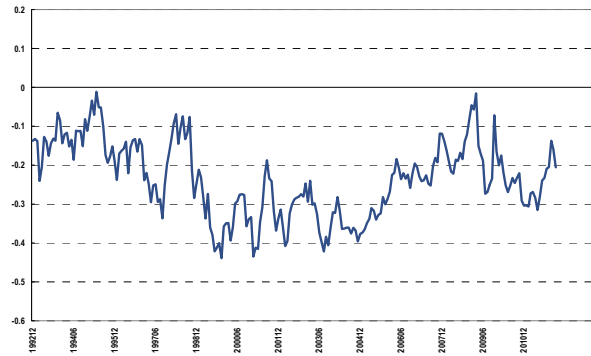


Source: Citi Investment Research and Analysis.

Rank Correlation for major style portfolios

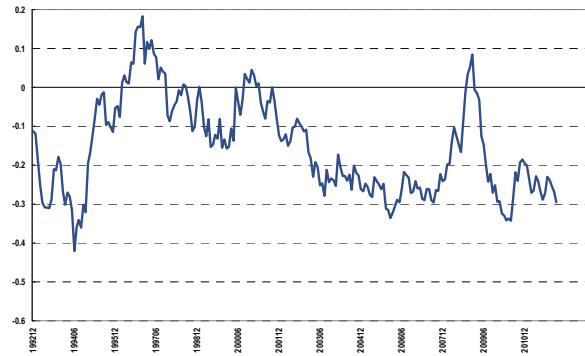
Not extreme on any styles ...

Figure 46. Price to Book



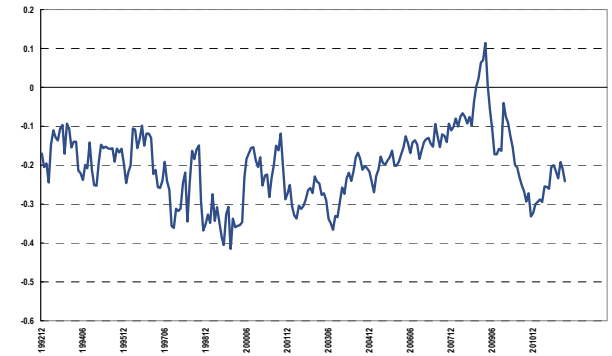
Source: Citi Investment Research and Analysis.

Figure 47. Price to Earnings



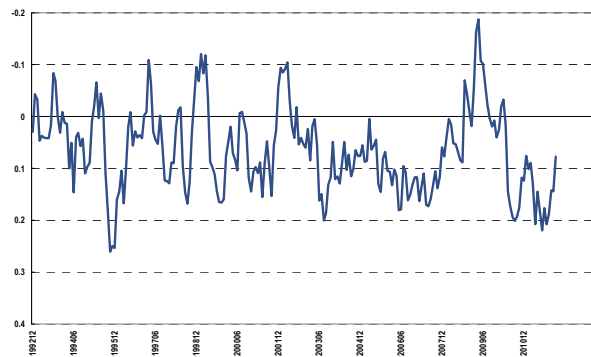
Source: Citi Investment Research and Analysis.

Figure 48. Dividend Yield



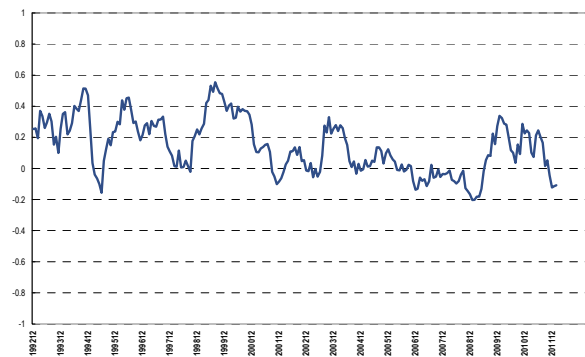
Source: Citi Investment Research and Analysis.

Figure 49. Earnings Estimate Dispersion



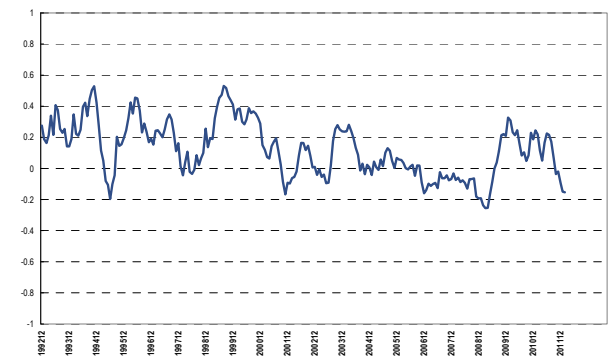
Source: Citi Investment Research and Analysis.

Figure 50. Long term momentum



Source: Citi Investment Research and Analysis.

Figure 51. Reversal (11 of 12 month momentum)



Source: Citi Investment Research and Analysis.

Quant Model Performance

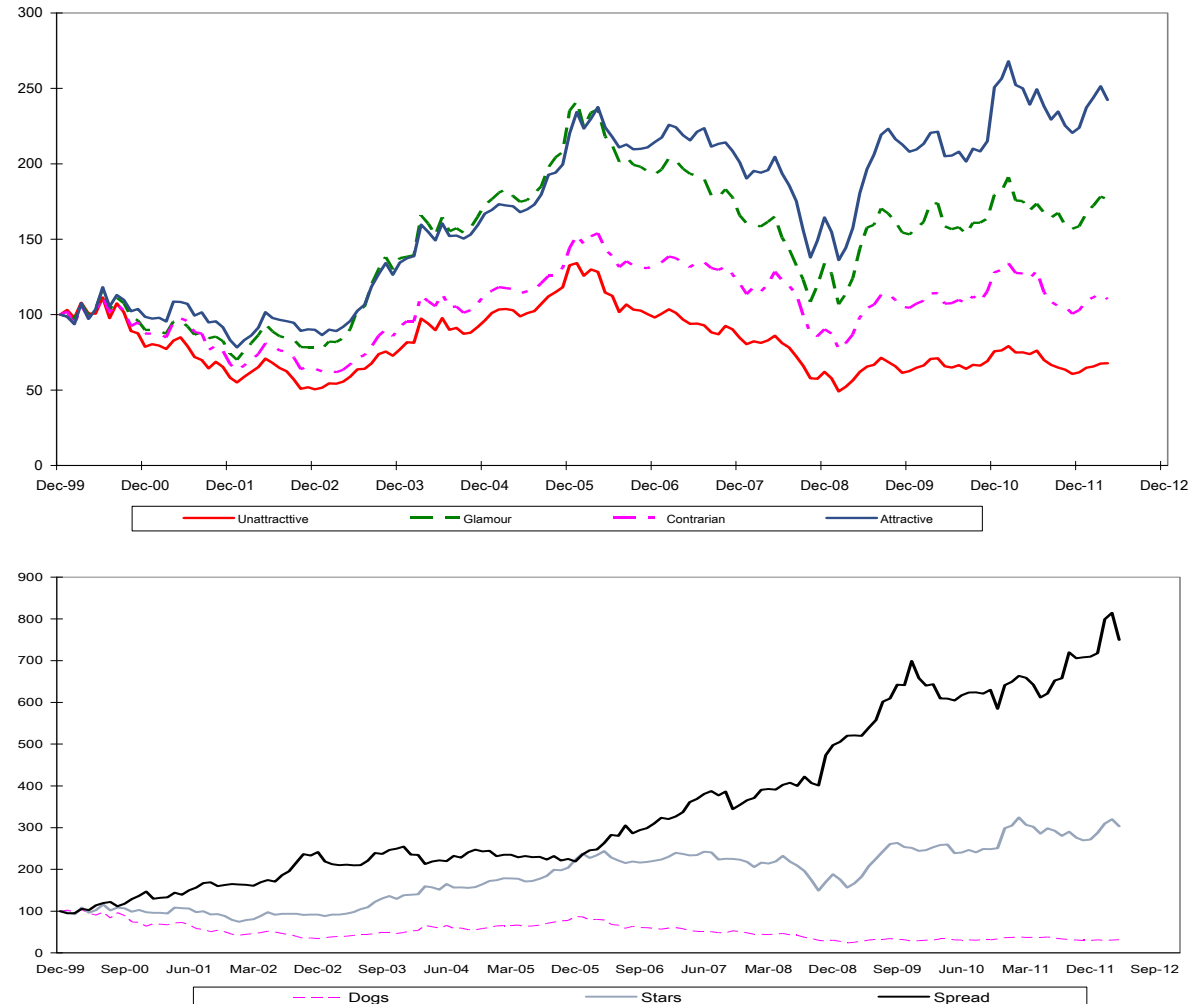
Radar Performance

Figure 52. Radar performance by universe (combination model)

Universe	1M	3M	6M	12M
JAPAN	-4.71	-1.94	2.17	9.49
Sectors				
AUTOMOBILES & COMPONENTS	1.56	17.69	17.58	23.95
BANKS	-3.81	3.99	11.91	10.47
ENERGY	-2.16	0.74	-8.43	1.07
FOOD BEVERAGE & TOBACCO	-4.75	-4.68	-2.17	-8.29
HEALTH CARE	-5.99	-7.33	5.82	8.40
HOTELS RESTAURANTS & LEISURE	-4.20	3.59	1.07	-5.80
INDUSTRIALS	-1.96	0.76	0.38	0.76
INSURANCE & OTHER FINANCIALS	-6.44	15.79	22.57	33.72
MATERIALS	0.22	7.79	15.33	17.26
METALS & MINING	-3.14	7.13	7.31	-7.07
OTHER CONSUMER	-7.16	-9.11	-9.49	-2.93
REAL ESTATE	-3.06	-4.29	-8.78	-4.38
RETAILING	-8.19	-5.37	1.17	-4.34
SEMICON & SEMICON EQUIPMENT	-8.03	-10.38	4.70	8.36
SOFTWARE & SERVICES	-3.51	8.06	20.48	43.92
TECH HARDWARE & EQUIPMENT	-3.24	-8.64	1.26	5.30
TELECOMS & MEDIA	-10.74	-10.34	-9.95	-9.91
TRANSPORTATION	-1.21	6.45	21.64	18.77
UTILITIES	-4.76	-3.10	6.61	5.63

Source: Citi Investment Research and Analysis.

Figure 53. Radar Performance (Quadrants) and Extreme Corner portfolios



Source: Citi Investment Research and Analysis.



Pairs Model Performance

Figure 54. Citi Stat Arb model (pairs) performance

Week Ending	Days Over	Stop Loss	Invalidated	Mean Reversion	Total
2011-08-19	13 trades: -1.30%:66d	11 trades:-16.01%:27d	45 trades: -5.99%:24d	59 trades: 8.37%:24d	128 trades: 0.24%:28d
2011-08-26	9 trades: -5.60%:66d	11 trades:-16.25%:18d	34 trades: -7.76%:21d	54 trades: 7.57%:28d	108 trades:-0.78%:28d
2011-09-02	8 trades: -4.12%:66d	5 trades:-15.62%:24d	23 trades: -5.61%:22d	27 trades: 7.28%:25d	63 trades:-0.69%:29d
2011-09-09	5 trades: -3.02%:66d	16 trades:-16.04%:20d	64 trades: -6.79%:18d	25 trades: 7.30%:24d	110 trades:-4.77%:22d
2011-09-16	8 trades: -2.56%:66d	3 trades:-15.09%:23d	40 trades: -7.23%:23d	45 trades: 8.22%:19d	96 trades: 0.15%:25d
2011-09-23	3 trades: -4.20%:66d	3 trades:-17.68%:30d	30 trades: -5.29%:21d	22 trades: 6.54%:23d	58 trades:-1.39%:24d
2011-09-30	5 trades: -4.09%:66d	12 trades:-16.45%:25d	76 trades: -6.95%:22d	71 trades: 7.84%:20d	164 trades:-1.15%:23d
2011-10-07	1 trades: -2.66%:66d	26 trades:-16.96%:27d	74 trades: -7.72%:21d	77 trades: 8.24%:15d	178 trades:-2.14%:20d
2011-10-14	5 trades: -4.21%:66d	5 trades:-16.60%:28d	29 trades: -3.03%:20d	91 trades: 8.37%:17d	130 trades: 4.38%:20d
2011-10-21	4 trades: -6.51%:66d	4 trades:-16.98%:30d	38 trades: -3.27%:19d	73 trades: 7.65%:22d	119 trades: 2.86%:23d
2011-10-28	1 trades: -0.92%:66d	3 trades:-15.60%:44d	34 trades: -4.64%:19d	93 trades: 8.76%:24d	131 trades: 4.65%:24d
2011-11-04	8 trades: -3.67%:66d	7 trades:-19.15%:17d	26 trades: -4.29%:23d	29 trades: 6.64%:22d	70 trades:-1.18%:27d
2011-11-11	3 trades: -3.99%:66d	5 trades:-16.93%:32d	58 trades: -5.21%:28d	75 trades: 7.50%:24d	141 trades: 1.17%:27d
2011-11-18	3 trades: -2.56%:66d	3 trades:-18.02%:32d	34 trades: -6.68%:27d	51 trades: 8.59%:25d	91 trades: 1.64%:27d
2011-11-25	7 trades: -4.44%:66d	11 trades:-16.45%:26d	37 trades: -5.29%:24d	40 trades: 7.90%:28d	95 trades:-0.97%:29d
2011-12-02	4 trades: -8.70%:66d	1 trades:-15.79%:21d	23 trades: -6.38%:23d	76 trades: 7.62%:36d	104 trades: 3.67%:34d
2011-12-09	6 trades: -2.05%:66d	NA	20 trades: -2.56%:24d	37 trades: 6.55%:28d	63 trades: 2.84%:30d
2011-12-16	8 trades: -5.31%:66d	NA	15 trades: -3.43%:27d	38 trades: 7.28%:32d	61 trades: 2.99%:35d
2011-12-23	5 trades: -4.05%:66d	1 trades:-16.12%:39d	17 trades: -3.24%:26d	26 trades: 7.36%:29d	49 trades: 2.04%:32d
2011-12-30	11 trades: -3.31%:66d	2 trades:-15.19%:34d	14 trades: -5.88%:37d	30 trades: 6.99%:26d	57 trades: 1.06%:36d
2012-01-06	11 trades: -2.10%:66d	2 trades:-17.02%:43d	12 trades: -6.62%:32d	21 trades: 6.49%:30d	46 trades:-0.01%:40d
2012-01-13	16 trades: -5.61%:66d	1 trades:-17.10%:36d	21 trades: -5.58%:30d	34 trades: 6.80%:32d	72 trades: 0.10%:39d
2012-01-20	4 trades: -3.91%:66d	2 trades:-15.59%:36d	22 trades: -6.84%:36d	64 trades: 6.25%:30d	92 trades: 2.21%:33d
2012-01-27	8 trades: -3.72%:66d	1 trades:-15.13%:59d	14 trades: -2.52%:24d	33 trades: 6.20%:27d	56 trades: 2.22%:32d
2012-02-03	6 trades: -3.77%:66d	NA	20 trades: -5.12%:25d	38 trades: 7.81%:28d	64 trades: 2.68%:31d
2012-02-10	13 trades: -2.79%:66d	1 trades:-15.61%:35d	18 trades: -4.59%:26d	59 trades: 6.25%:22d	91 trades: 2.58%:29d
2012-02-17	8 trades: -5.49%:66d	NA	16 trades: -5.57%:20d	49 trades: 7.18%:21d	73 trades: 3.00%:26d
2012-02-24	8 trades: -0.87%:66d	2 trades:-16.91%:12d	17 trades: -3.47%:20d	37 trades: 7.13%:19d	64 trades: 2.56%:25d
2012-03-02	10 trades: -3.95%:66d	3 trades:-15.96%:16d	22 trades: -4.85%:23d	45 trades: 6.54%:21d	80 trades: 1.25%:27d
2012-03-09	13 trades: -4.91%:66d	3 trades:-15.97%:45d	26 trades: -3.92%:22d	43 trades: 6.91%:22d	85 trades: 0.98%:30d
2012-03-16	9 trades: -6.33%:66d	2 trades:-16.74%:29d	29 trades: -5.34%:19d	18 trades: 6.43%:24d	58 trades:-2.23%:28d
2012-03-23	10 trades: -3.85%:66d	4 trades:-15.39%:33d	19 trades: -6.21%:21d	15 trades: 6.82%:27d	48 trades:-2.41%:33d
2012-03-30	2 trades: -8.40%:66d	5 trades:-16.59%:28d	38 trades: -6.64%:28d	33 trades: 6.29%:27d	78 trades:-1.85%:28d
2012-04-06	4 trades: -1.58%:66d	6 trades:-15.76%:44d	19 trades: -7.02%:26d	47 trades: 6.63%:26d	76 trades: 1.02%:30d
2012-04-13	9 trades: -7.55%:66d	5 trades:-15.54%:43d	28 trades: -4.66%:29d	49 trades: 6.52%:25d	91 trades: 0.48%:31d
2012-04-20	11 trades: -4.32%:66d	5 trades:-15.80%:45d	33 trades: -5.85%:33d	28 trades: 6.67%:24d	77 trades:-1.72%:35d
Grand Total	259 trades: -4.06%:66d	171 trades:-16.44%:28d	1085 trades: -5.66%:24d	1652 trades: 7.40%:24d	3167 trades: 0.7%:28d

Source: Citi Investment Research and Analysis.



Figure Descriptions

Short description of figures

Fig 1 to 12: These figures show performance of investing styles as defined in our QuantIFI indices over last one and ten years.

Fig 13 to 15: Performance of various style portfolios (defined as the long-short between the top and bottom quintile on each style, rebalanced very month). There are three tables: Unrestricted, Country-Sector neutral and the difference between the two.

Figure 16 to 17: These show Japan Market activity (trading value) by investor type for the last four weeks.

Figure 18 to 19: These figures show volatility and correlation indicators for Japan.

Figure 20 to 31: These figures have risk contribution of macro, market and styles to various investing styles. Investing styles are average of sub styles as mentioned in Figure 13 and 14.

Figure 32 to 33: These figures show RAM Monitors for JRAM. Monitors are essentially (Fama McBeth) regression coefficients of regressing observed monthly total returns of stocks on estimated factor sensitivities. They are the model's estimates of the factor values given the observed stock price behavior and the estimated betas. If an implied factor is large, then the model suggests that the market is pricing that factor, and stocks with large positive sensitivities to that factor are outperforming stocks with small or negative sensitivities.

Figures 34 to 39: These figures show the style tilts present in current analyst consensus positioning.

Figures 40 to 45: A measure of factor crowdedness, this shows the average margin sell ratio of monthly rebalanced factor tracking long and short portfolios against time

Figures 46 to 51: A secondary measure of factor crowdedness, this shows the rank correlation between stocks ranked on average margin sell ratio and ranked on the factor against time.

Figure 52 to 53: These figures show the performance summary of our flagship Radar Value-Momentum model.

Figure 54: This table has the recent most performance summary of Moneyball, our pairs trading model for Japan.

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Appendix A-1

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Data current as of 31 Mar 2012						
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