

Equities

5 March 2012 | 20 pages

Stock Market Country Selection

Tactical Market Allocation

- Quantitative Analysis
- Monthly

- **Benchmark performance** — The MSCI AC World index returned 5.1% in February, adding to the 5.9% in January. The EMU country index rose 6.52%. The US was up 4.4% as were the Asia Pacific ex-Japan and Japan benchmarks, gaining 5.3% and 5.05% respectively.
- **Model performance** — The model outperformed the benchmark by 0.6% and underperformed the bottom quintile by -1.0%. Outperformance with respect to benchmark can be mainly attributed to the relative outperformance of Austria and South Africa in February.
- **Top ranks** — Austria remains at the top of the rankings for a second month. On the back of strong earnings revisions and favorable yield gap, Germany (#2) replaces Brazil (#7) which falls out of the top ranked countries. Australia (#4), South Africa (#5) and Korea (#3) maintain their membership of this group.
- **Bottom ranks** — Spain and the US replace Hong Kong and Switzerland in the list at the bottom of the ranks this month, while Italy, Belgium and Mexico continue their membership. Unfavorable valuation (price to book and price to earnings) factors hurt the US ranking, while poor short-term momentum and negative earnings revisions drove Spain's move.

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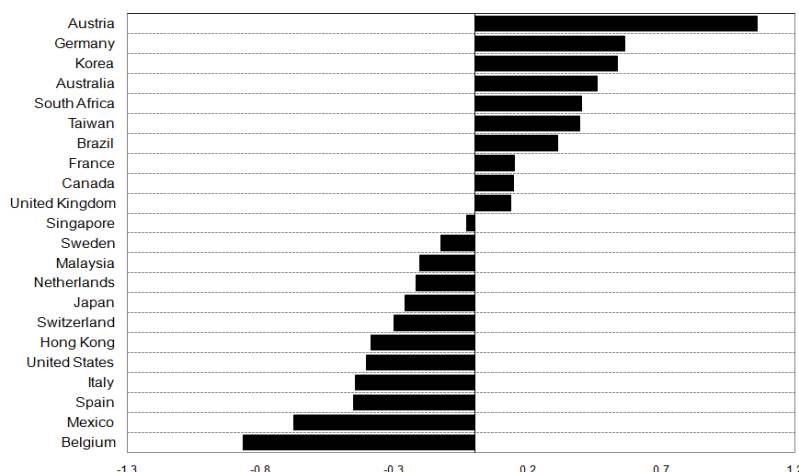
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Figure 1. Markets Ranked by Attractiveness Score



Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

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

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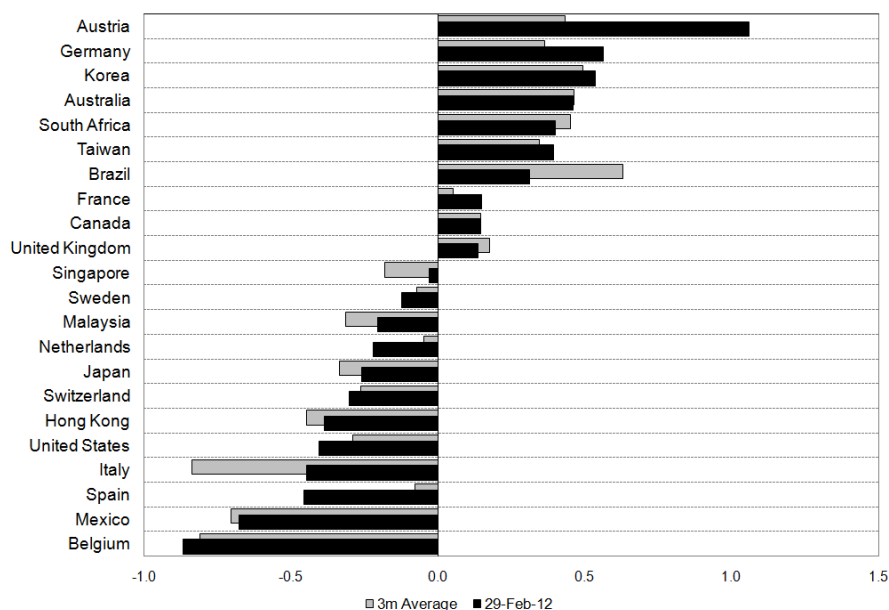
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Country Ranking

In June 2004, we introduced a market-ranking model that ranked 22 global markets for which exchange-traded funds were available. The model uses style and macroeconomic indicators as inputs. Data for 1990-98 were used to develop the model, which was tested for the out-of-sample, or holdout, period of 1999-2004. The figure below shows the current ranking of markets by attractiveness scores calculated by the model.

Figure 2. Global – Markets Ranked by Attractiveness Score



Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 3. Back-Test Perf.* (50bps Each-Way Txn Costs) to 29 Feb 2012

| | In-Sample Jan 90-Dec 98 | Out-of-Sample Jan 99 – Feb 12 |
|--------------------------|----------------------------|----------------------------------|
| After 50bps Costs | | |
| Return | | |
| Top Quintile | 26.2 | 10.3 |
| Bottom Quintile | -5.7 | 9.5 |
| Top-Bottom | 31.2 | 1.1 |
| Information Ratio | | |
| Top Quintile | 1.3 | 0.5 |
| Bottom Quintile | -0.3 | 0.5 |
| Top-Bottom | 1.6 | 0.1 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

*Past performance is no guarantee of future returns

Figure 4. Market Ranking — MSCI Index Universe

| Market | Country Score | | | For | Against |
|----------------|---------------|--------|------------|---|-------------------------------------|
| | 29-Feb | 1m Ago | 3m Average | | |
| Austria | 1.06 | 1.04 | 0.43 | Medium-Term Momentum | |
| Germany | 0.56 | 0.31 | 0.36 | Yield Gap | |
| Korea | 0.53 | 0.69 | 0.49 | Valuation | |
| Australia | 0.46 | 0.44 | 0.46 | Dividend Yield, Earnings Stability | |
| South Africa | 0.40 | 0.52 | 0.45 | Real Effective FX Rate and Earnings Revisions Ratio (ERR) | Cash Flow Yield |
| Taiwan | 0.39 | 0.40 | 0.35 | Yield Gap, Real Effective FX Rate | PE |
| Brazil | 0.31 | 0.60 | 0.63 | | Yield Gap |
| France | 0.15 | 0.06 | 0.05 | | FX Rate |
| Canada | 0.15 | 0.11 | 0.15 | | Analyst Coverage, ROE, PE |
| United Kingdom | 0.14 | 0.27 | 0.18 | | Price to Book |
| Singapore | -0.03 | -0.28 | -0.18 | | Dividend Yield, Valuation |
| Sweden | -0.12 | -0.02 | -0.07 | | Price to Book, Medium-Term Momentum |
| Malaysia | -0.20 | -0.22 | -0.31 | | |
| Netherlands | -0.22 | -0.03 | -0.05 | ERR | |
| Japan | -0.26 | -0.40 | -0.33 | | Dividend Yield, P/E |
| Switzerland | -0.30 | -0.43 | -0.26 | | ST Momentum, Cash Flow Yield |
| Hong Kong | -0.39 | -0.50 | -0.45 | | Valuations, Cash Flow Yield |
| United States | -0.40 | -0.25 | -0.29 | | |
| Italy | -0.45 | -1.18 | -0.84 | | ROE, Interest Rate Trend, ERR |
| Spain | -0.45 | 0.26 | -0.08 | | |
| Mexico | -0.68 | -0.55 | -0.70 | ST Price Momentum | Price to Book, Dividend Yield, ERR |
| Belgium | -0.87 | -0.97 | -0.81 | | |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 5. Global Markets – Top and Bottom Quintiles

| | 2006 | | | | | 2007 | | | | | 2008 | | | | | 2009 | | | | | 2010 | | | | | 2011 | | | | | 2012 | | | | | | | | | | | | | | | | | |
|----------------|------|---|---|---|---|------|---|---|---|---|------|---|---|---|---|------|---|---|---|---|------|---|---|---|---|------|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| Australia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Austria | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Belgium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brazil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Canada | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| France | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Germany | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hong Kong | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Italy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Japan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Korea | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malaysia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mexico | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Netherlands | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Singapore | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| South Africa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sweden | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Switzerland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Taiwan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| United Kingdom | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| United States | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Note: ■ = Top markets; □ = Bottom markets

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis estimates

Long-Short Performance Analysis

Figure 6. Back-Test Perf.* (50bps Each-Way Txn Costs) to 29 Feb 2012

| | In-sample Dec 89-Dec 98 | Out-of-Sample Jan 99 – Feb12 |
|-------------------------------|----------------------------|---------------------------------|
| Annualized Return | 31.2 | 1.1 |
| Standard Deviation | 19.5 | 10.7 |
| Information Ratio | 1.6 | 0.1 |
| Average Return in Up Market | 2.7 | 0.8 |
| Average Return in Down Market | 2.0 | -0.6 |
| Percent of months +ve Return | 68 | 53 |
| Best Monthly Return | 21.5 | 7.9 |
| Worst Monthly Return | -24.0 | -9.4 |
| Max Drawdown | -36.0 | -28.4 |
| Date | Oct-90 | Sep-08 |
| Date of High Water | Feb-90 | Feb-05 |
| Date High Water Breached | Jan-92 | - |
| Months to recovery | 23 | - |
| Return/Max Drawdown | 0.87 | 0.04 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

*Past performance is no guarantee of future returns

Figure 7. Monthly Performance History* (Top-Bottom Spread, 50bps Each-Way Transaction Costs)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Return |
|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|
| 1999 | -0.9 | 5.1 | 6.7 | 3.4 | 0.7 | 4.1 | -5.7 | 2.8 | -1.1 | 0.1 | 3.8 | 3.0 | 23.7 |
| 2000 | 4.2 | 1.5 | -1.0 | -1.5 | -0.5 | 2.1 | -2.0 | 3.4 | 0.0 | -6.2 | 2.0 | 7.9 | 9.4 |
| 2001 | -1.4 | 6.9 | 1.3 | 1.4 | -1.9 | -0.2 | 0.3 | 3.8 | -2.8 | 1.6 | 3.1 | 2.9 | 15.7 |
| 2002 | 5.4 | 0.3 | -1.2 | 5.0 | -3.0 | -3.7 | 0.2 | 5.2 | 3.2 | 3.3 | -0.7 | 6.3 | 21.5 |
| 2003 | -2.9 | 1.7 | 1.2 | 7.0 | -1.6 | -2.3 | -0.7 | -1.6 | -0.4 | 2.7 | 1.8 | -1.9 | 2.7 |
| 2004 | 2.3 | 1.3 | -2.4 | 0.1 | 1.3 | -0.5 | 4.3 | 4.4 | 1.9 | 0.1 | 2.1 | 0.8 | 16.6 |
| 2005 | 2.7 | 0.1 | -1.4 | -1.9 | -2.2 | 0.9 | 2.0 | -1.5 | 1.5 | -3.9 | -2.4 | 2.9 | -3.5 |
| 2006 | 0.0 | 0.4 | 0.4 | 0.7 | -0.7 | -2.4 | -1.8 | 0.7 | 1.8 | -0.2 | 0.9 | 2.0 | 1.7 |
| 2007 | -2.1 | 0.5 | -0.5 | -1.0 | -3.2 | 0.3 | -0.9 | -2.1 | 0.1 | 4.9 | -1.3 | -1.1 | -6.4 |
| 2008 | -4.0 | 0.7 | 0.8 | -1.9 | -2.6 | -0.2 | -3.9 | -4.4 | -6.0 | 2.4 | 2.1 | 2.2 | -14.3 |
| 2009 | -3.2 | 5.6 | -6.1 | 4.1 | -1.6 | 1.1 | 1.0 | -2.8 | -1.7 | -4.5 | -3.3 | -0.3 | -11.6 |
| 2010 | -3.3 | -5.9 | -1.4 | 0.3 | -6.5 | 0.0 | 3.1 | -5.5 | 1.7 | -0.3 | -9.4 | 0.7 | -24.1 |
| 2011 | 6.3 | 0.9 | -1.2 | 1.8 | -2.3 | 0.0 | -3.5 | -8.6 | 2.0 | 1.7 | -0.5 | -2.3 | -6.2 |
| 2012 | 3.2 | -1.0 | | | | | | | | | | | 2.1 |

*Past performance is no guarantee of future returns

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 8. Analysis of All Major Draw-Down Periods — Draw-Down Events Exceeding 300bps (Top-Bottom Spread)

| Ranks | Start Date | Trough Date | End Date | Length of Drawdown (Months) | Size (%) | High-water level | Length of Recovery (Months) | Total Period (Months) |
|-------|------------|-------------|----------|-----------------------------|----------|------------------|-----------------------------|-----------------------|
| 1 | 200502 | 201005 | NA | 64 | -43.2 | 2997.2 | NA | 64 |
| 2 | 200204 | 200206 | 200209 | 2 | -6.7 | 2197.2 | 3 | 5 |
| 3 | 200304 | 200309 | 200407 | 5 | -6.4 | 2601.3 | 10 | 15 |
| 4 | 200008 | 200010 | 200012 | 2 | -6.3 | 1676.7 | 2 | 4 |
| 5 | 199906 | 199907 | 199912 | 1 | -5.7 | 1539.7 | 5 | 6 |
| 6 | 200002 | 200005 | 200008 | 3 | -3.0 | 1671.2 | 3 | 6 |

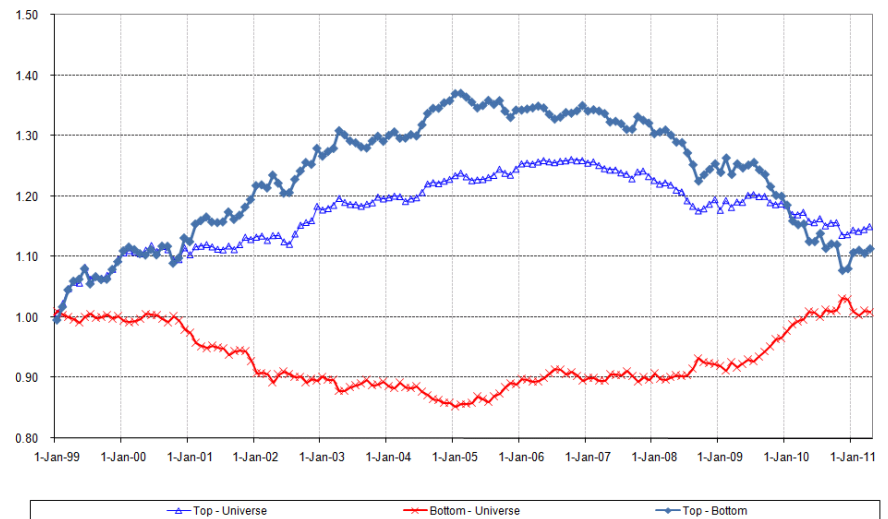
Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 9. Equally-Weighted Performance of Top and Bottom Quintiles



Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 10. Quintile Wealth Curves (Top–Universe; Bottom–Universe and Top–Bottom)



Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Long-Only Performance

The following tables show detailed performance of an equally weighted basket of top-ranked markets in isolation.

Figure 11. Back-Test Perf.* (50bps Each-way Txn Costs) to 29 Feb 2012

| | In-sample Dec 89-Dec 98 | Out-of-Sample Jan 99 – Feb 12 |
|-----------------------------------|----------------------------|----------------------------------|
| Annualized return | 26.2 | 10.6 |
| Standard deviation | 20.5 | 23.2 |
| Information ratio | 1.3 | 0.5 |
| Average return in up market | 4.4 | 4.8 |
| Average return in down market | 0.1 | -3.8 |
| Percent of months positive return | 71 | 61 |
| Best monthly return | 17.2 | 17.0 |
| Worst monthly return | -21.3 | -23.5 |
| Max drawdown | -26.4 | -62.7 |
| Date | Oct-90 | Feb-09 |
| Date of high water | Feb-90 | Oct-07 |
| Date high water breached | June-91 | - |
| Months to recovery | 15 | - |
| Return / max drawdown | 0.99 | 0.17 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

*Past performance is no guarantee of future returns

Figure 12. Monthly Performance History* (Top-Quintile Only, 50bps Each-way Transaction Costs)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Return |
|-------------|-------|------|------|------|-------|-------|-------|-------|-------|-------|------|------|---------------|
| 1999 | 0.2 | 3.1 | 11.6 | 12.2 | -4.6 | 13.4 | -5.6 | 2.5 | -2.7 | 4.9 | 7.6 | 14.1 | 69.7 |
| 2000 | -2.1 | 3.5 | 1.9 | -6.5 | -0.6 | 7.2 | -4.6 | 2.8 | -7.9 | -7.8 | -4.6 | 8.5 | -11.4 |
| 2001 | 3.4 | -3.1 | -8.8 | 6.0 | -3.0 | -3.2 | -1.5 | 0.2 | -14.2 | 5.0 | 10.2 | 3.3 | -7.8 |
| 2002 | -0.2 | 1.4 | 3.9 | 2.6 | -0.1 | -7.7 | -11.1 | 5.2 | -8.9 | 9.4 | 5.5 | 3.5 | 1.1 |
| 2003 | -2.9 | -2.1 | -0.2 | 12.9 | 4.9 | 2.1 | 4.1 | 2.3 | 2.7 | 7.6 | 4.7 | 6.1 | 50.1 |
| 2004 | 3.6 | 3.7 | -0.7 | -5.5 | 1.4 | 2.3 | 0.4 | 5.2 | 4.9 | 3.0 | 8.9 | 5.3 | 37.1 |
| 2005 | -0.2 | 6.6 | -5.0 | -3.8 | 1.9 | 2.7 | 5.9 | 1.8 | 7.6 | -5.8 | 3.5 | 6.5 | 22.9 |
| 2006 | 9.7 | 0.1 | 2.1 | 6.3 | -5.0 | -0.4 | 0.7 | 3.4 | 1.4 | 5.1 | 4.3 | 4.0 | 35.9 |
| 2007 | 0.1 | 0.4 | 2.6 | 4.3 | 2.7 | 0.4 | -1.2 | -2.6 | 5.3 | 8.7 | -4.8 | -2.9 | 12.8 |
| 2008 | -10.9 | 1.8 | -0.5 | 5.3 | -0.5 | -10.1 | -6.8 | -6.7 | -17.4 | -23.5 | -4.5 | 8.7 | -51.5 |
| 2009 | -12.3 | -5.1 | 7.6 | 17.6 | 13.8 | 1.7 | 11.3 | 3.3 | 6.3 | -3.7 | 2.7 | 2.4 | 50.2 |
| 2010 | -6.0 | -3.4 | 6.7 | 0.8 | -14.0 | -1.6 | 11.8 | -5.7 | 12.1 | 3.8 | -9.4 | 8.8 | 0.2 |
| 2011 | 3.6 | 0.9 | 2.1 | 6.6 | -4.0 | -0.8 | -5.0 | -12.5 | -12.6 | 13.9 | -5.6 | -3.0 | -17.8 |
| 2012 | 10.1 | 5.6 | | | | | | | | | | | 16.3 |

*Past performance is no guarantee of future returns

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 13. Analysis of All Major Draw-Down Periods – Draw-Down Events Exceeding 300bps (Top Quintile Only)

| Ranks | Start Date | Trough Date | End Date | Length of Drawdown (Months) | Size (%) | High-water level | Length of Recovery (Months) | Total Period (Months) |
|-------|------------|-------------|----------|--------------------------------|----------|------------------|--------------------------------|--------------------------|
| 1 | 200710 | 200902 | NA | 16 | -62.7 | 5568.0 | NA | 32 |
| 2 | 200003 | 200109 | 200309 | 18 | -33.9 | 1661.5 | 24 | 42 |
| 3 | 200502 | 200504 | 200507 | 2 | -8.6 | 2907.6 | 3 | 5 |
| 4 | 200402 | 200404 | 200408 | 2 | -6.1 | 2141.6 | 4 | 6 |
| 5 | 199906 | 199909 | 199911 | 3 | -5.8 | 1325.5 | 2 | 5 |
| 6 | 200509 | 200510 | 200512 | 1 | -5.8 | 3230.5 | 2 | 3 |
| 7 | 200604 | 200606 | 200610 | 2 | -5.4 | 3999.9 | 4 | 6 |
| 8 | 199904 | 199905 | 199906 | 1 | -4.6 | 1225.8 | 1 | 2 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Long – MSCI AC World Performance

The following tables show the detailed performance of the equally weighted basket of top-ranked markets relative to the MSCI A/C World Index.

Figure 14. Back-Test Performance (50bps Each-way Txn Costs) to 29 Feb 2012

| | In-sample Dec 89-Dec 98 | Out-of-Sample Jan 99 – Feb 12 |
|-----------------------------------|----------------------------|----------------------------------|
| Annualized return | 14.9 | 7.4 |
| Standard deviation | 13.7 | 10.4 |
| Information ratio | 1.6 | 0.1 |
| Average return in up market | 1.3 | 1.7 |
| Average return in down market | 1.2 | -0.7 |
| Percent of months positive return | 62 | 58 |
| Best monthly return | 12.0 | 8.4 |
| Worst monthly return | -10.2 | -7.2 |
| Max drawdown | -20.1 | -22.1 |
| Date | Dec-90 | Oct-08 |
| Date of high water | Feb-90 | Oct-07 |
| Date high water breached | Jun-91 | - |
| Months to recovery | 16 | - |
| Return / max drawdown | 0.74 | 0.34 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

*Past performance is no guarantee of future returns

Figure 15. Monthly Performance History* (Top-Quintile less MSCI A/C World, 50bps Each-way Transaction Costs)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Return |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|
| 1999 | -1.8 | 5.6 | 7.1 | 7.9 | -1.1 | 8.4 | -5.2 | 2.6 | -1.6 | -0.1 | 4.5 | 5.8 | 35.7 |
| 2000 | 3.3 | 3.1 | -4.6 | -2.1 | 2.0 | 3.8 | -1.7 | -0.3 | -2.4 | -5.8 | 1.5 | 6.8 | 2.9 |
| 2001 | 0.9 | 5.3 | -2.0 | -1.3 | -1.9 | -0.2 | 0.1 | 4.8 | -5.1 | 2.9 | 4.0 | 2.4 | 9.9 |
| 2002 | 2.5 | 2.1 | -0.6 | 5.7 | -0.2 | -1.6 | -2.7 | 5.0 | 2.0 | 2.0 | 0.0 | 8.2 | 24.3 |
| 2003 | 0.0 | -0.3 | 0.2 | 4.0 | -0.9 | 0.2 | 1.8 | -0.1 | 2.1 | 1.5 | 3.2 | -0.2 | 12.0 |
| 2004 | 1.9 | 1.9 | -0.1 | -3.2 | 0.5 | 0.3 | 3.5 | 4.6 | 2.8 | 0.5 | 3.4 | 1.4 | 18.9 |
| 2005 | 1.9 | 3.1 | -2.8 | -1.7 | 0.0 | 1.7 | 2.2 | 1.0 | 4.6 | -3.1 | -0.2 | 4.1 | 11.0 |
| 2006 | 4.8 | 0.2 | -0.1 | 2.9 | -1.1 | -0.4 | 0.0 | 0.8 | 0.2 | 1.4 | 1.4 | 1.8 | 12.4 |
| 2007 | -1.0 | 0.8 | 0.5 | -0.2 | -0.4 | 0.7 | 0.4 | -2.4 | -0.1 | 4.8 | -0.4 | -1.9 | 0.8 |
| 2008 | -2.8 | 1.5 | 0.9 | -0.4 | -2.1 | -1.9 | -4.2 | -4.6 | -5.0 | -3.7 | 2.0 | 5.0 | -14.7 |
| 2009 | -3.8 | 4.6 | -0.7 | 5.1 | 3.7 | 2.2 | 2.5 | -0.3 | 1.7 | -2.1 | -1.5 | 0.3 | 12.0 |
| 2010 | -1.7 | -4.7 | 0.3 | 0.6 | -4.7 | 1.5 | 3.6 | -2.2 | 2.5 | 0.2 | -7.2 | 1.4 | -10.3 |
| 2011 | 2.0 | -2.0 | 2.2 | 2.5 | -1.9 | 0.7 | -3.4 | -5.2 | -3.2 | 3.1 | -2.6 | -2.8 | -10.5 |
| 2012 | 4.2 | 0.6 | | | | | | | | | | | 4.8 |

*Past performance is no guarantee of future returns

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Figure 16. Analysis of All Major Draw-Down Periods – Draw-Down Events Exceeding 300bps (Top Quintile less MSCI A/C World)

| Ranks | Start Date | Trough Date | End Date | Length of Drawdown (Months) | Size (%) | High-water Level | Length of Recovery (Months) | Total Period (Months) |
|-------|------------|-------------|----------|-----------------------------|----------|------------------|-----------------------------|-----------------------|
| 1 | 200710 | 200809 | 200907 | 11 | -19.10 | 1267.49 | 10 | 21 |
| 2 | 200002 | 200010 | 200102 | 8 | -10.94 | 561.55 | 4 | 12 |
| 3 | 200909 | 201002 | NA | 5 | -9.47 | 1302.63 | NA | 5 |
| 4 | 200102 | 200109 | 200111 | 7 | -5.63 | 576.39 | 2 | 9 |
| 5 | 199906 | 199907 | 199912 | 1 | -5.15 | 498.60 | 5 | 6 |
| 6 | 200204 | 200207 | 200208 | 3 | -4.51 | 655.90 | 1 | 4 |
| 7 | 200502 | 200505 | 200508 | 3 | -4.46 | 1036.50 | 3 | 6 |
| 8 | 200402 | 200404 | 200407 | 2 | -3.31 | 861.39 | 3 | 5 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis

Factors and Weights

In the ranking model, factors and weights vary across markets. Factor definitions are covered in detail later in this document. Using cluster analysis as a guide, 17 factors are classified into 11 groups. Five factors are chosen for each market, with no more than one factor from each of these groups.

The weights assigned to these factors are determined by the size and strength of the relationship between a market's rank on a given factor and the subsequent performance rank of the country across the region. *(In technical terms, the factor weights depend on the t-stat of the correlation between the cross-sectional normalized factor values and the cross-sectional normalized one-month forward returns.)*

Unless data availability dictates use of a shorter time period, the correlations are measured for the period since the beginning of 1990.

Factor Values

The figure shows the current values of the indicators used in the model.

Figure 17. Factor Values

| | Australia | Austria | Belgium | Brazil | Canada | France | Germany | Hong Kong | Italy | Japan | Korea | Malaysia | Mexico | Netherlands | Singapore | South Africa | Spain | Sweden | Switzerland | Taiwan | United Kingdom | United States |
|-----------------------------------|-----------|---------|---------|--------|--------|--------|---------|-----------|-------|-------|-------|----------|--------|-------------|-----------|--------------|-------|--------|-------------|--------|----------------|---------------|
| Change in Analyst Estimates (%) | 4 | 6 | 3 | 5 | 9 | 2 | -2 | 5 | 1 | 2 | -23 | 0 | 9 | 1 | 11 | 10 | 3 | 3 | 1 | 6 | -1 | 3 |
| Dividend Yield | 4.9 | 3.8 | 2.9 | 3.7 | 2.7 | 4.6 | 3.6 | 2.7 | 5.5 | 2.3 | 1.2 | 2.8 | 1.2 | 3.2 | 3.4 | 3.0 | 7.7 | 3.4 | 3.5 | 4.2 | 3.6 | 2.0 |
| EY less IR for P/E FY0 | 4.8 | 8.6 | 1.1 | -1.6 | 5.5 | 5.4 | 6.9 | 5.5 | 5.9 | 5.4 | 4.9 | 2.9 | -0.5 | 5.1 | 7.1 | -0.9 | 7.6 | 5.4 | 6.0 | 5.9 | 6.2 | 3.7 |
| EY - IR for FY1 (IBES) | 4.8 | 6.6 | 2.1 | -0.4 | 6.1 | 6.1 | 6.9 | 5.1 | 5.1 | 4.9 | 6.4 | 3.4 | 1.3 | 6.0 | 6.9 | 0.4 | 7.0 | 5.4 | 6.9 | 5.1 | 6.8 | 4.5 |
| Return on Equity | 13.6 | 7.3 | 6.7 | 14.1 | 11.9 | 10.8 | 12.4 | 11.2 | 6.7 | 4.0 | 11.2 | 12.6 | 12.4 | 10.0 | 12.3 | 14.4 | 11.1 | 13.6 | 13.0 | 12.9 | 14.7 | 14.9 |
| Interest Rates Trend (%) | -34 | -7 | -5 | -33 | -26 | -6 | -27 | 16 | 27 | 8 | -9 | 16 | 7 | -24 | 12 | 5 | -2 | -32 | -21 | -42 | -35 | -32 |
| 260d Price Momentum (%) | -18 | -54 | -15 | -11 | -18 | -29 | -23 | -21 | -42 | -20 | -14 | -4 | 6 | -19 | -18 | 8 | -30 | -18 | -11 | -24 | -7 | -4 |
| 65d Price Momentum (%) | 2 | 26 | 15 | 13 | 7 | 14 | 19 | 19 | 12 | 13 | 10 | 7 | 3 | 11 | 15 | 6 | 4 | 17 | 9 | 16 | 10 | 12 |
| 20d Price Momentum (%) | 0 | 0 | 3 | 1 | 2 | 2 | 3 | 8 | 0 | 12 | 3 | 1 | 0 | 1 | 3 | 1 | -4 | 4 | 1 | 4 | 1 | 3 |
| Price to Sales | 1.7 | 0.5 | 2.7 | 0.0 | 2.1 | 0.7 | 0.8 | 4.4 | 0.6 | 0.6 | 0.9 | 3.0 | 2.0 | 1.0 | 3.3 | 2.1 | 0.8 | 1.8 | 1.7 | 1.5 | 1.7 | 2.0 |
| Earnings Stability | 27.9 | 42.0 | 60.8 | 76.5 | 35.7 | 33.7 | 72.8 | 45.3 | 35.2 | 202.6 | 53.4 | 30.1 | 61.8 | 39.2 | 26.0 | 304.4 | 20.7 | 43.6 | 36.7 | 66.0 | 35.1 | 31.9 |
| P/E FY0 (IBES) | 11.3 | 8.8 | 21.5 | 11.4 | 13.3 | 12.1 | 11.5 | 16.4 | 9.0 | 15.7 | 11.9 | 16.2 | 23.2 | 13.9 | 13.3 | 14.9 | 7.9 | 14.0 | 15.0 | 13.8 | 12.0 | 14.7 |
| P/E FY1 (IBES) | 11.3 | 10.5 | 17.8 | 10.0 | 12.4 | 11.2 | 11.5 | 17.5 | 9.7 | 17.1 | 10.1 | 14.8 | 16.5 | 12.2 | 13.6 | 12.5 | 8.4 | 13.9 | 13.3 | 15.6 | 11.3 | 13.2 |
| Price to Book | 1.8 | 0.9 | 1.5 | 1.6 | 1.9 | 1.2 | 1.4 | 1.4 | 0.8 | 1.1 | 1.3 | 2.2 | 2.7 | 1.4 | 1.6 | 2.5 | 1.1 | 2.0 | 2.2 | 2.0 | 1.7 | 2.2 |
| Price to Cash Flow | 8.2 | 2.5 | 10.1 | 5.9 | 9.5 | 6.7 | 6.6 | 17.9 | 2.7 | 5.4 | 4.1 | 12.9 | 10.3 | 11.2 | 9.6 | 9.5 | 4.0 | 9.9 | 11.8 | 8.4 | 8.3 | 10.7 |
| Earning Revision Ratio (%) | -30 | -8 | -6 | -4 | -15 | -4 | -2 | -4 | -6 | -12 | -4 | 3 | 5 | -18 | -6 | -5 | -21 | -11 | -16 | -3 | -13 | -3 |
| Chg in Real Effective FX Rate (%) | 7 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | -2 | 1 | 4 | -3 | 2 | -5 | 1 | -1 | -1 | -3 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis, IBES

Normalized Factor Values

Figure 18 shows the factors in Figure 17 normalized across the markets. Thus, Switzerland's Earnings Revision Ratio of 16% is 1 standard deviation below the universe average and translates into a factor score of -1.0

Figure 18. Factor Values (Normalized)

| | Australia | Austria | Belgium | Brazil | Canada | France | Germany | Hong Kong | Italy | Japan | Korea | Malaysia | Mexico | Netherlands | Singapore | South Africa | Spain | Sweden | Switzerland | Taiwan | United Kingdom | United States |
|----------------------------------|-----------|---------|---------|--------|--------|--------|---------|-----------|-------|-------|-------|----------|--------|-------------|-----------|--------------|-------|--------|-------------|--------|----------------|---------------|
| Change in # of Analyst Estimates | 0.2 | 0.5 | 0.1 | 0.4 | 0.9 | -0.1 | -0.6 | 0.4 | -0.3 | -0.1 | -2.5 | -0.4 | 1.0 | -0.2 | 1.2 | 1.2 | 0.0 | 0.0 | -0.3 | 0.6 | -0.5 | 0.0 |
| Dividend Yield | 1.0 | 0.2 | -0.4 | 0.2 | -0.5 | 0.8 | 0.1 | -0.5 | 1.4 | -0.8 | -1.6 | -0.4 | -1.6 | -0.2 | 0.0 | -0.3 | 2.5 | 0.0 | 0.0 | 0.5 | 0.1 | -1.0 |
| EY less IR for P/E FY0 | 0.1 | 1.4 | -1.3 | -2.3 | 0.3 | 0.3 | 0.8 | 0.3 | 0.5 | 0.3 | 0.1 | -0.6 | -1.8 | 0.2 | 0.9 | -2.0 | 1.1 | 0.3 | 0.5 | 0.5 | 0.6 | -0.3 |
| EY - IR for FY1 (IBES) | 0.0 | 0.8 | -1.3 | -2.4 | 0.6 | 0.5 | 0.9 | 0.1 | 0.1 | 0.0 | 0.7 | -0.7 | -1.6 | 0.5 | 0.9 | -2.0 | 0.9 | 0.2 | 0.9 | 0.1 | 0.9 | -0.2 |
| Return on Equity | 0.7 | -1.4 | -1.6 | 0.9 | 0.2 | -0.2 | 0.3 | -0.1 | -1.6 | -2.5 | -0.1 | 0.4 | 0.3 | -0.5 | 0.3 | 1.0 | -0.1 | 0.7 | 0.5 | 0.5 | 1.1 | 1.2 |
| Interest Rates Trend | 1.1 | -0.2 | -0.3 | 1.1 | 0.7 | -0.3 | 0.8 | -1.3 | -1.9 | -0.9 | -0.1 | -1.3 | -0.9 | 0.7 | -1.1 | -0.8 | -0.4 | 1.0 | 0.5 | 1.5 | 1.2 | 1.0 |
| 260d Price Momentum | 0.0 | -2.5 | 0.2 | 0.5 | -0.1 | -0.8 | -0.4 | -0.2 | -1.7 | -0.2 | 0.3 | 1.0 | 1.7 | -0.1 | -0.1 | 1.8 | -0.9 | -0.1 | 0.5 | -0.5 | 0.8 | 1.0 |
| 65d Price Momentum | -1.7 | 2.4 | 0.5 | 0.2 | -0.8 | 0.4 | 1.3 | 1.3 | 0.1 | 0.2 | -0.2 | -0.9 | -1.5 | -0.2 | 0.6 | -1.0 | -1.4 | 0.9 | -0.5 | 0.7 | -0.4 | 0.1 |
| 20d Price Momentum | -0.7 | -0.6 | 0.1 | -0.5 | -0.1 | 0.1 | 0.3 | 1.8 | -0.7 | 2.5 | 0.2 | -0.3 | -0.8 | -0.4 | 0.4 | -0.6 | -2.0 | 0.7 | -0.3 | 0.5 | -0.2 | 0.2 |
| Price to Sales | -0.1 | 1.0 | -1.0 | 1.5 | -0.4 | 0.9 | 0.8 | -2.5 | 1.0 | 1.0 | 0.7 | -1.3 | -0.3 | 0.6 | -1.6 | -0.5 | 0.8 | -0.1 | -0.1 | 0.1 | -0.1 | -0.3 |
| Earnings Stability | 0.5 | 0.3 | 0.0 | -0.2 | 0.4 | 0.4 | -0.2 | 0.3 | 0.4 | -2.1 | 0.1 | 0.5 | 0.0 | 0.4 | 0.6 | -2.5 | 0.6 | 0.3 | 0.4 | 0.0 | 0.4 | 0.5 |
| EY FY0 (IBES) | 0.5 | 1.8 | -1.5 | 0.5 | -0.1 | 0.3 | 0.5 | -0.8 | 1.6 | -0.7 | 0.3 | -0.8 | -1.7 | -0.3 | -0.1 | -0.5 | 2.4 | -0.3 | -0.6 | -0.3 | 0.3 | -0.5 |
| EY FY1 (IBES) | 0.5 | 0.9 | -1.5 | 1.2 | 0.0 | 0.5 | 0.4 | -1.4 | 1.3 | -1.3 | 1.1 | -0.8 | -1.2 | 0.1 | -0.4 | 0.0 | 2.3 | -0.5 | -0.3 | -1.0 | 0.5 | -0.3 |
| Price to Book | -0.4 | 2.0 | 0.1 | -0.2 | -0.6 | 0.7 | 0.1 | 0.2 | 2.5 | 1.1 | 0.3 | -0.9 | -1.3 | 0.3 | -0.1 | -1.2 | 1.0 | -0.7 | -0.9 | -0.7 | -0.4 | -0.9 |
| Price to Cash Flow | -0.3 | 2.5 | -0.6 | 0.2 | -0.5 | 0.0 | 0.0 | -1.0 | 2.4 | 0.4 | 1.0 | -0.8 | -0.6 | -0.7 | -0.5 | -0.5 | 1.1 | -0.5 | -0.7 | -0.3 | -0.3 | -0.6 |
| Earning Revision Ratio | -2.5 | 0.0 | 0.3 | 0.6 | -0.8 | 0.6 | 0.7 | 0.5 | 0.2 | -0.4 | 0.5 | 1.4 | 1.7 | -1.1 | 0.3 | 0.4 | -1.6 | -0.3 | -1.0 | 0.7 | -0.6 | 0.7 |
| Chg in Real Effective FX Rate | -2.5 | -0.4 | -0.7 | 0.2 | 0.0 | -0.1 | -0.2 | -0.1 | -0.4 | -0.7 | 0.0 | 0.0 | 1.2 | -0.3 | -1.3 | 1.4 | -0.4 | 2.1 | 0.0 | 0.6 | 0.4 | 1.6 |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis, IBES

Attractiveness Scores

Each factor's contribution to a market's outlook is measured by multiplying the factor value in Figure 17 with the factor weight in Figure 19. Adding up the contributions across factors provides the attractiveness score for each market. Figure 20 provides a detailed breakdown.

Figure 19. Factor Weights (Percent)

| | Australia | Austria | Belgium | Brazil | Canada | France | Germany | Hong Kong | Italy | Japan | Korea | Malaysia | Mexico | Netherlands | Singapore | South Africa | Spain | Sweden | Switzerland | Taiwan | United Kingdom | United States |
|----------------------------------|-----------|---------|---------|--------|--------|--------|---------|-----------|-------|-------|-------|----------|--------|-------------|-----------|--------------|-------|--------|-------------|--------|----------------|---------------|
| Change in # of Analyst Estimates | 29 | 3 | | | 28 | 13 | | | | | | | | | | 20 | | | | | | |
| Dividend Yield | 19 | | | | | | | 14 | | 20 | | 11 | 25 | | 34 | 16 | | | 27 | | 21 | |
| EY less IR for P/E FY0 | | | | | | | 34 | 26 | | 13 | | | | | | | | 20 | | 20 | | 21 |
| EY - IR for FY1 (IBES) | | | 15 | 5 | | 19 | | | 13 | | 17 | 22 | | | 6 | | | | | | 18 | |
| Return on Equity | 11 | | 23 | 20 | 18 | | | | 9 | | | | | | | | | | | | | |
| Interest Rates Trend | | | | | | | 16 | | 25 | | | 23 | | | | | | | | 15 | | |
| 260d Price Momentum | 17 | | | | | | | | | | 21 | | | 25 | | | | | | | | |
| 65d Price Momentum | | 36 | | 43 | 24 | | | | | 17 | | | | | 11 | | | 14 | | | 13 | 19 |
| 20d Price Momentum | | | 31 | | | 15 | | 11 | | | | | 6 | | | | 22 | | 16 | | | |
| Price to Sales | | 14 | | | | | | | | | 14 | | 38 | | | | 16 | 26 | 11 | 22 | | 20 |
| Earnings Stability | 24 | 10 | | | 18 | | | | 18 | | 27 | | | 17 | | | 12 | | | | | |
| EY FY0 (IBES) | | | | | 13 | | 16 | | | 33 | | | | | | | | | | 25 | | 19 |
| EY FY1 (IBES) | | | 15 | 10 | | | | 23 | | | 20 | | | | 29 | | | 14 | | | 21 | |
| Price to Book | | | | | | | | | | | | | 21 | 17 | 20 | | | 26 | | | 26 | 21 |
| Price to Cash Flow | | | | | | | | 26 | | 16 | | 14 | | | | 27 | 21 | | 27 | | | |
| Earning Revision Ratio | | 37 | | | | 18 | 16 | | 35 | | | 30 | 10 | 20 | | 16 | 28 | | | | | |
| Chg in Real Effective FX Rate | | | 16 | 22 | | 35 | 18 | | | | | | | 21 | | 21 | | | | 18 | | |

Source: Factset, MSCI, Datastream, Citi Investment Research and Analysis, IBES

Figure 20. Contribution to Final Scores

| | Australia | Austria | Belgium | Brazil | Canada | France | Germany | Hong Kong | Italy | Japan | Korea | Malaysia | Mexico | Netherlands | Singapore | South Africa | Spain | Sweden | Switzerland | Taiwan | United Kingdom | United States |
|----------------------------------|-----------|---------|---------|--------|--------|--------|---------|-----------|-------|-------|-------|----------|--------|-------------|-----------|--------------|-------|--------|-------------|--------|----------------|---------------|
| Change in # of Analyst Estimates | 0.07 | 0.01 | | | 0.25 | -0.02 | | | | | | | | | | 0.23 | | | -0.05 | | | |
| Dividend Yield | 0.19 | | | | | | | -0.08 | | -0.17 | | -0.05 | -0.41 | | 0.00 | -0.05 | | | 0.01 | | 0.02 | |
| EY less IR for P/E FY0 | | | | | | | 0.28 | 0.09 | | 0.04 | | | | | | | | 0.06 | | 0.09 | | -0.07 |
| EY - IR for FY1 (IBES) | | | -0.19 | -0.13 | | 0.10 | | | 0.01 | | 0.12 | -0.14 | | | 0.05 | | | | | | 0.16 | |
| Return on Equity | 0.08 | | -0.37 | 0.18 | 0.03 | | | | -0.14 | | | | | | | | | | | | | |
| Interest Rates Trend | | | | | | | 0.12 | | -0.47 | | | -0.30 | | | | | | | | 0.23 | | |
| 260d Price Momentum | -0.01 | | | | | | | | | | 0.06 | | | -0.04 | | | | | | | | |
| 65d Price Momentum | | 0.86 | | 0.10 | -0.18 | | | | | 0.03 | | | | | | | | 0.12 | | | -0.05 | 0.01 |
| 20d Price Momentum | | | 0.04 | | | 0.01 | | 0.20 | | | | | -0.04 | | | | -0.45 | | -0.06 | | | |
| Price to Sales | | 0.14 | | | | | | | | | 0.10 | | -0.12 | | | | 0.12 | -0.04 | -0.01 | 0.03 | | -0.06 |
| Earnings Stability | 0.13 | 0.03 | | | 0.07 | | | | 0.07 | | 0.04 | | | 0.06 | | | 0.08 | | | | | |
| EY FY0 (IBES) | | | | | -0.02 | | 0.07 | | | -0.23 | | | | | | | | | | -0.07 | | -0.09 |
| EY FY1 (IBES) | | | -0.23 | 0.12 | | | | -0.33 | | | 0.23 | | | | -0.12 | | | -0.07 | | | 0.10 | |
| Price to Book | | | | | | | | | | | | | -0.27 | 0.05 | -0.03 | | | -0.19 | | | -0.09 | -0.19 |
| Price to Cash Flow | | | | | | | | -0.27 | | 0.07 | | -0.12 | | | | -0.13 | 0.24 | | -0.20 | | | |
| Earning Revision Ratio | | 0.01 | | | | 0.10 | 0.12 | | 0.08 | | | 0.40 | 0.17 | -0.23 | | 0.06 | -0.44 | | | | | |
| Chg in Real Effective FX Rate | | | -0.11 | 0.04 | | -0.04 | -0.04 | | | | | | | -0.06 | | 0.29 | | | | 0.11 | | |
| Score | 0.46 | 1.06 | -0.87 | 0.31 | 0.15 | 0.15 | 0.56 | -0.39 | -0.45 | -0.26 | 0.53 | -0.20 | -0.68 | -0.22 | -0.03 | 0.40 | -0.45 | -0.12 | -0.30 | 0.39 | 0.14 | -0.40 |
| Rank | 4 | 1 | 22 | 7 | 9 | 8 | 2 | 17 | 19 | 15 | 3 | 13 | 21 | 14 | 11 | 5 | 20 | 12 | 16 | 6 | 10 | 18 |

Source: IBES, Factset, MSCI, Datastream, Citi Investment Research and Analysis, IBES

Factor Definitions

Factors

Earnings Yield based on FY0 IBES Earnings

One over the aggregate Weighted Medium IBES FY0 P/E for the Market calculated using Factset.

Earnings Yield based on FY1 IBES Earnings

One over the aggregate Weighted Medium IBES FY1 P/E for the Market calculated using Factset.

Cash Earnings Yield

One over the Weighted Medium Price to Cash Earnings for the market calculated using the Worldscope trailing 12m Cash Earnings (earnings excluding extraordinary items, plus depreciation).

FY0 IBES Earnings Yield less Interest Rates

Earnings Yield based on FY0 IBES Earnings less current domestic interest rate.

FY1 IBES Earnings Yield less Interest Rates

Earnings Yield based on FY1 estimates less current domestic interest rate.

Dividend Yield

MSCI calculated dividend yield based on trailing 12m Gross Dividends per share.

Price to Sales Ratio

Weighted medium market P/S calculated using Worldscope trailing 12m sales per share.

Price to Book Ratio

Weighted medium market P/B calculated using Worldscope trailing 12m book value per share.

RoE

An implied market RoE based on aggregate FY0 EPS and the most recent MSCI calculated market aggregate book values per share.

Interest Rate Trend

Ratio of the current (actual) domestic interest rate to the 12m (linear) trend interest rate forecast.

Long-Term (260d) Price Momentum

Slope of the 260d linear trend in country (MSCI) index prices.

Medium-Term (65d) Price Momentum

Slope of the 65d linear trend in country (MSCI) index prices.

Short-Term (20d) Price Momentum

Slope of the 20d linear trend in country (MSCI) index prices.

Earnings Stability

The market-cap weighted aggregate of stock-level IBES five-year Earnings Stability measure. This is the mean absolute percentage difference between actual reported EPS and a five-year historical EPS growth trend line, expressed as a percentage of trend line EPS.

Earnings Revision Ratio

A market-cap weighted aggregate of the ERRs – where the ERR is the number of upgrades less downgrades for FY1 and FY2 as a percentage of total number of forecasts.

Change in Number of Analyst Estimates

The ratio of the 3m average to the 12m average of the market-cap weighted aggregate number of IBES Analyst Estimates per company.

Change in Real Effective Exchange Rate

12m percentage change in the Real Effective Exchange Rates, which are in turn based on the Citibank Competitive Trade-weighted Exchange Rate Indices (CTERI)¹. For countries not included in the CTERI indices, we are using changes in Real Effective Exchange rates as calculated by the IMF. As this data is generally late, a six-month lag is introduced for back-testing purposes.

Raw Data Sources

P&L-related valuation data is the Factset-aggregated Weighted Medium value using the MSCI index weights and IBES (profit) and Worldscope (revenue) data. Balance Sheet-related data (i.e., P/BV/ROE) is taken from the MSCI index level valuations.

Real effective Exchange Rates are taken primarily from the Citigroup Economists (EMA). Where this isn't available, we use the IMF data series sourced via DataStream.

Local market Interest Rates are sourced from DataStream. Price momentum measures are calculated using Factset based on the MSCI country index data index data.

Aggregate IBES earnings revision ratios and aggregate Earnings stability are calculated using the IBES historical data on Factset.

¹For a full description of this measures of exchange rate values, please see the report, "Introducing CTERI: A New Guide to Currency Valuation" by Greg Berman and Adam LaVier – January 2001

Appendix A-1

Analyst Certification

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