Equities

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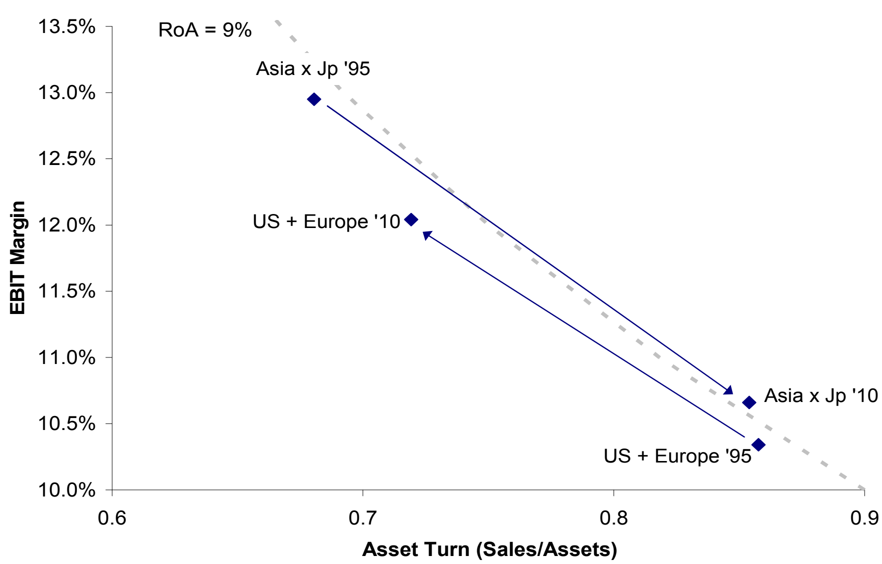
Global Equity Strategist

Margins Migrate West, Sales Migrate East

- **Margin Highs, Margin Lows** — Non-financial corporate profit margins in the US and Europe are near pre-crisis highs. Investors worry this is unsustainable. By contrast, Asia ex Japan margins are close to their lowest levels in two decades.
- **Globalisation At Work** — Asian companies have pursued a sales-maximising business strategy, which is consistent with lower margins. At the same time, US and European companies have adopted a margin-maximising strategy, which is consistent with lower turnover. Margins have migrated from East to West.
- **Competitive Advantages** — A sales-maximising business model allows Asian companies to exploit their competitive advantage of cheap labour. While US and European margins have been rising, there hasn't been much new capex to compete away these super-normal profits.
- **Margin Outlook** — Those waiting for the mean-reversion of US/European margins may be disappointed. We believe high Western margins are sustainable. Asia's wafer-thin margins make it sensitive to swings in global growth. The region should remain high beta until business models reverse. We believe Japanese companies are neither margin nor sales maximisers so the region deserves a discount rating.

Figure 1. Changing Business Models. Asset Turn vs EBIT Margin (Non-Fins). 1995 vs 2010.



* Asia ex Japan = China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. Source: Company Data, Factset, MSCI, CIRA.

■ Equities

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

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Margins Migrate West, Sales Migrate East

Despite a wounded financial system, ongoing deleveraging and weak growth, corporate profit margins in the US and Europe are again approaching multi-decade highs. Many investors worry this is unsustainable. At the same time, Asian margins have been falling. In this week's Global Equity Strategist, we analyse why there has been a structural increase in US and European margins, while Asian margins have declined.

East to West margin migration

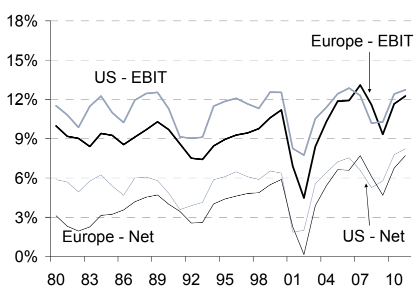
Changing business models mean that corporate profit margins have migrated from East to West. Following the banking and currency crisis in the late 1990s, Asian companies began to adopt a sales-maximising business model, which was consistent with lower profit margins. Meanwhile, companies in the US and Europe have undertaken a margin-maximising business strategy, which involves lower turnover. Business models are unlikely to reverse course soon, in our opinion. While margins are high in the West, capex is not competing these profits away. Low US and European equity valuations are preserving profitability by discouraging capex. Of course profit margins remain susceptible to cyclical risks, but there is little to suggest the structural increase in Western company margins will give way to a structural decrease anytime soon.

Margin Highs, Margin Lows

Despite de-leveraging and meager GDP growth, Western companies have delivered profit margins[1] many investors thought were out of reach. Rather than rejoicing, investors now worry these margins are unsustainable, especially given the obvious economic headwinds.

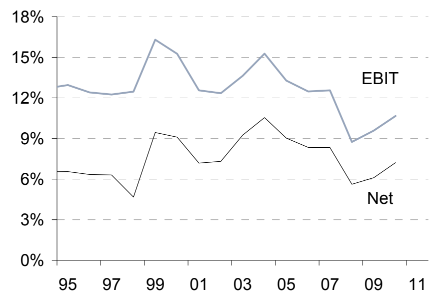
The recovery in profits since the global financial crisis has meant that US and Pan Europe non-financial EBIT margins are approaching pre-crisis peaks (Figure 2). The recovery in net profit margins has been even stronger. On this measure, US margins are around their highest level in 30 years. Investor caution is understandable. If margins revert back to long-term averages, non-financial company profits will have to fall by 30% to 40%.

Figure 2. US & Pan Europe Non-Fin Margins



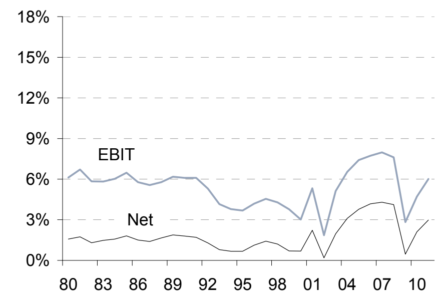
Source: Company Data, Factset, MSCI, CIRA.

Figure 3. Asia ex Japan Non-Financial Margins



Source: Company Data, Factset, MSCI, CIRA.

Figure 4. Japan Non-Financial Margins



Source: Company Data, Factset, MSCI, CIRA.

A number of factors have been cited as drivers of high margins in the US and Europe. Perhaps the most politically charged is that corporate profitability is rising at

[1] In this report the calculation of profit margins (and asset turn) is for companies in MSCI indices at a given date. If a company is removed from an MSCI index for a certain period, it is also removed from our margin (and asset turn) calculation. It is possible that our index level margin (and asset turn) calculations will change as index constituents change. This was the case around the Asian crisis when Malaysia left the MSCI Asia ex Japan index. However, our analysis shows that outside of the Asian crisis, constituent changes have been small drivers of margin (and asset turn) at the index level.

the expense of labour. Indeed the wage share of GDP has been falling in the US, while the profit share has risen. Also, falling interest, tax and depreciation expenses look to be driving net margins higher. This increase in margins has been achieved despite record commodity prices.

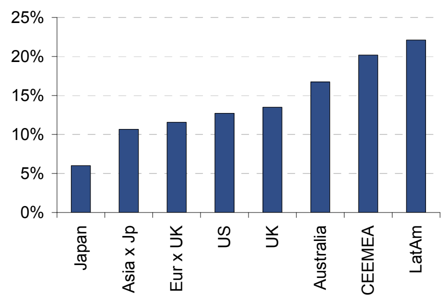
Margin lows in Asia ex Japan

While margins in the US and Europe have been on a structural uptrend over the last two decades, they have been heading the other way in Asia ex Japan[2]. In fact, Asian margins are below longer-term averages (Figure 3). The GDP recovery in Asia following the global financial crisis has been strong. But the margin recovery has been weak. Conversely, in the US and Europe, the GDP recovery has been weak but the margin recovery has been strong.

In Japan, margins have rebounded over the last few years, albeit from low levels (Figure 4). EBIT Margins here are back to the averages of the 1980s. Net profit margins are above long-term averages. Despite the increase in Japanese margins, they are structurally low when compared to other regions around the world.

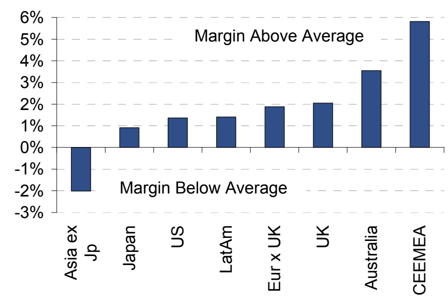
So an investor who believes margin mean-reversion is imminent is implicitly forecasting lower margins in the US and Europe and higher margin in Asia ex Japan. In Figure 6 we compare current margins for each region relative to their long-term averages.

Figure 5. Non-Financial EBIT Margins



Source: Company Data, Factset, MSCI, CIRA

Figure 6. EBIT Margin vs Avg Since 1995



Source: Company Data, Factset, MSCI, CIRA

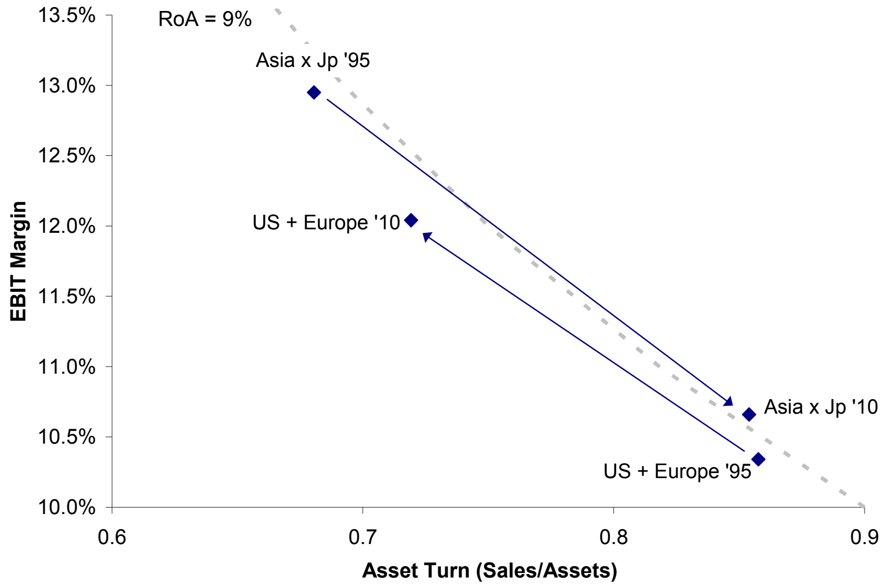
Margins Migrating West, Sales Migrating East

EBIT margins have fallen in the East just as they have increased in the West. How has this happened? We believe this helps illustrate globalisation at work[3]. In Figure 7, we adopt Du Pont industry analysis to highlight the migration of margins from Asia to the US and Europe. The fall in Asia ex Japan margins over the last 15 years has occurred while asset turn has increased. At the same time, margins in the West have increased as asset turn has decreased.

[2] Asia ex Japan currently includes China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand.

[3] Cit Global Perspectives and Solutions, Trade Transformed: The Emerging New Corridors of Trade Power, 18 October 2011, Willem Buiter, Ebrahim Rahbari

Figure 7. Asset Turn vs EBIT Margin (Non-Financials). 1995 vs 2010.



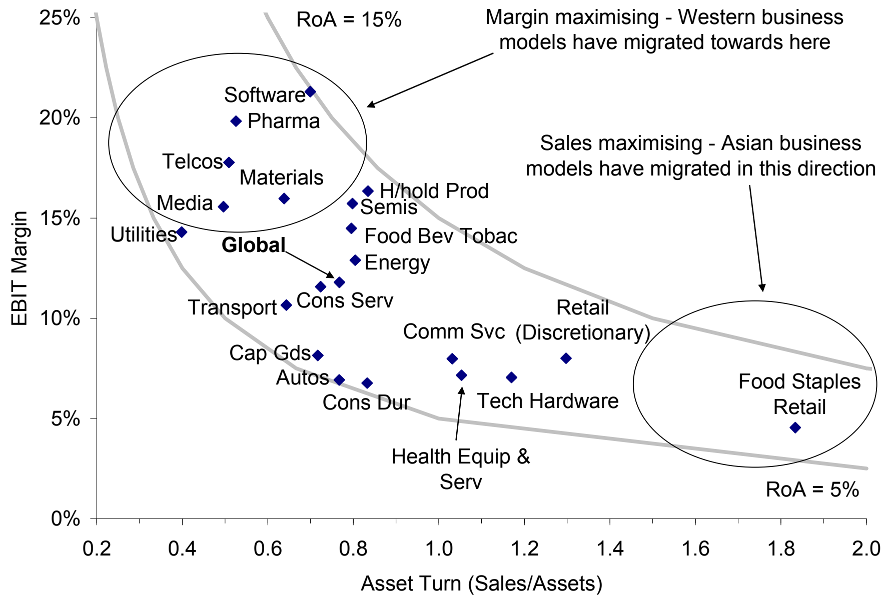
* Asia ex Japan = China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. Source: Company Data, Factset, MSCI, CIRA.

Trading places

What we have just experienced, at a global level, is a classic change in corporate strategy. Such changes are often the topic of textbook industry analysis[4]. Asian companies have adopted a turnover-maximising business model, which is consistent with lower margins. Companies elsewhere have pursued a margin-maximising business strategy, which is consistent with lower turnover. In Figure 8, we provide a snapshot of global industry margins and asset turn. The Eastern business model now looks more like a Grocery Store (Food Staples Retailing). Western business models look more like those of a Software or Media company.

[4] For more detail see “The Effects of Business Environment and Strategy on a Firm’s Rate of Return on Assets”, Thomas Selling and Clyde Stickney, Financial Analysts Journal, January-February 1989.

Figure 8. Global Industry Asset Turn vs EBIT Margin 2010

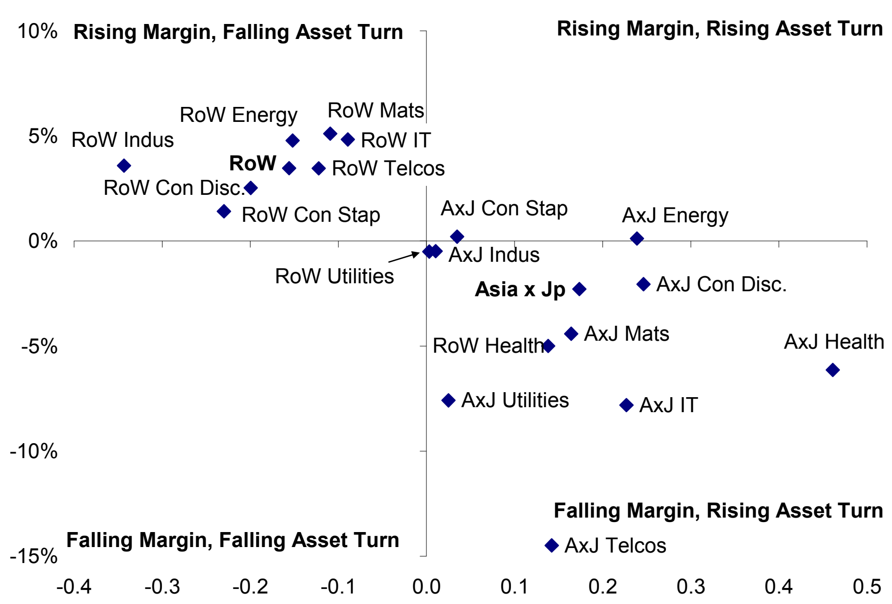


Source: Company Data, Factset, MSCI, CIRA.

So is the margin migration concentrated in just a few industries? No. In Figure 9 we look at the change in margin and asset turn for each major sector for Asia (AxJ) and the rest of the world. Asian sectors are almost exclusively found in the bottom right quadrant — they have increased asset turn and lowered margins since 1995. Meanwhile, most major sectors in the rest of world have decreased asset turn and increased margin. The obvious exception has been Health Care. Further analysis reveals that US Health Care companies have pursued more of a sales-maximising business model, while those in Europe have pushed on with a margin-maximising strategy.

Margin migration has been broad based

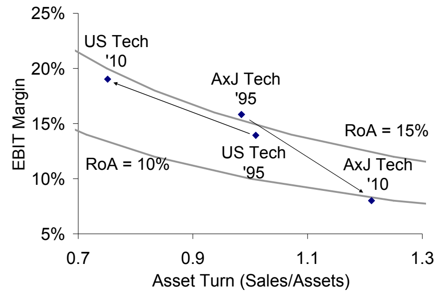
Figure 9. Change in Asia ex Jp (AxJ) & Rest of World (RoW) Margin & Asset Turn (1995-2010)



Source: Company Data, Factset, MSCI, CIRA.

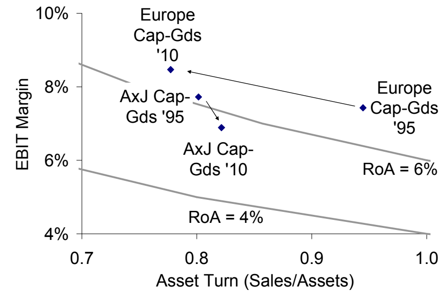
While the migration of margins has been broad-based, we can see it most clearly in tradable goods industries. For example, in Figure 10 we highlight the migration within the global IT sector. It seems that the rise in US Tech margins has occurred while Asian Tech companies have increased asset turn. We find something similar has happened between Asian and European Capital Goods (Figure 11).

Figure 10. Tech Margin & Asset Turn



Source: Company Data, Factset, MSCI, CIRA.

Figure 11. Cap Goods Margin & Asset Turn



Source: Company Data, Factset, MSCI, CIRA.

Through the Lens of the Asian Crisis

So why have business models changed in the East? The banking and currency crisis in the late 1990s was instrumental in leading Asian companies to rethink their business strategy. Along with cheap labour, weaker currencies allowed Asian companies to successfully adopt a sales-maximising strategy. First, this exploited one of the region's competitive advantages — cheap labour. This provided employment growth at a crucial time. Second, a sales-maximising strategy helped generate much-needed foreign trade and made it easier for current accounts to move into surplus. Surpluses helped protect against the next potential crisis. So Asian governments were happy to see their companies moving in this direction.

A textbook response

The textbook response to corporate Asia pursuing a sales-maximising business model is for companies elsewhere to adopt a margin-maximising strategy — consistent with lower asset turn. This is exactly what happened. Companies in the West moved their business model to where they didn't have to directly compete with the East. Of course, there are other drivers of why companies outside of Asia adopted such a strategy, we discuss these below.

Changing Business Models, Raising Margins

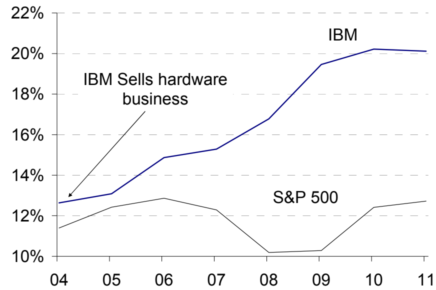
Companies in the West have realigned their business models in a number of ways. Many companies have sold off their high-turnover/low-margin businesses, often to Asian buyers. This has left a more profitable core business. This is the path IBM took in 2004 when it announced the sale of its lower-margin hardware business to Lenovo, the Chinese PC manufacturer. The deal allowed IBM to concentrate on its higher-margin remaining units including business services. IBM's EBIT margin and asset turn are 20% and 0.95x respectively. Lenovo's is 2% and 2.1x.

In addition to selling low-margin businesses, US and European companies have benefitted from the Asian supply chain. Tobias Levkovich, our US strategist, notes that US Tech companies, and their use of the Asian supply chain, have been important in driving overall S&P 500 profit margins higher[5]. The most obvious

[5] Monday Morning Musings, Curiously Conflicted Clients, 10 February 2012. Tobias Levkovich, Lorraine Schmitt, Andrew Ward.

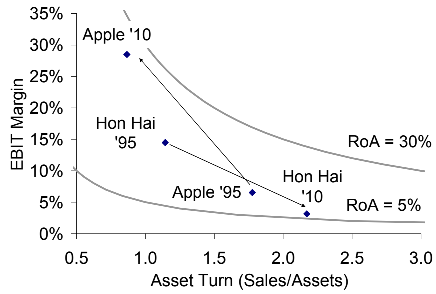
example here is Apple, which has realigned its business to take advantage of the opportunities in Asia. Apple is largely a designer of products and supply chain manager. Its EBIT margin is 30% and has an asset turn of 0.95x. The margin and asset turn of one of Apple's main suppliers, Hon Hai Precision Industry (trade name is Foxconn), are 3% and 2.2x respectively (Figure 13). However, the list does not end there. Scott Chronert, our US Small/Mid-cap Strategist, notes that many of his companies have either lowered costs by moving them to Asia or have sold off low-margin businesses to Asian counterparts.

Figure 12. IBM vs S&P 500 EBIT Margin



Source: Company reports and CIRAs

Figure 13. Apple vs Hon Hai 1995 to 2010



Source: Company reports and CIRA

Consolidation helps too

Of course the increase in margins in the West is not entirely a response to changing business strategies in Asia. Consolidation has also helped. Our European capital goods analysts, Mark Fielding and Natalia Mamaeva, note that industry consolidation has meant surviving companies now have considerable market share and are able to wield monopolistic power, which can be seen through higher margins. This has certainly been the case for the ball-bearing industry. This is where the top 5 players once controlled 50% of the market, but now the top 3 players control more than 50%. The industry leader, SKF, has increased its EBIT margin to 17% from 12% in 1995.

Companies are relying more on service and brand to drive margins higher. This is a classic margin-maximising strategy. The increasing importance of service and brand for companies in developed markets can be seen by the rise of intangible assets on corporate balance sheets. This includes the value of brands, patents, software, and customer lists, amongst other assets. As this portion of the balance sheet grows, it suggests companies are relying more on service and brand to help raise profitability. Indeed our European strategists, Jonathan Stubbs and Adrian Cattley, note that LVMH's strong brands allows it to generate 35% EBIT margin for its trademark leather goods.

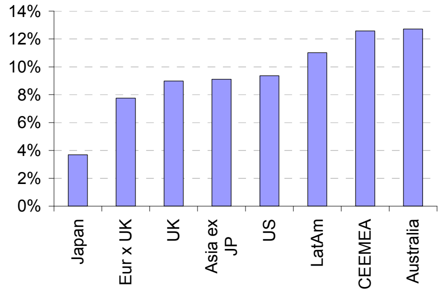
Our strategists in Australia, Russia, Brazil, South Africa[6] and the UK, also note that strong Asian commodity demand, in part because of the shift to a sales-maximising business model, has also helped drive margins higher for big sectors in their markets. Tony Brennan in Australia notes that Australian Resources sector EBIT margins have almost doubled to 30% in the last 10 years. In LatAm, Jason Press notes a strong increase in Brazilian commodity company margins. However, both Tony and Jason highlight that the Dutch disease has meant margins for other companies in their market have been weak.

[6] These are "CARBS" markets. Please see CARBS Make You Strong, The Impact of the Cycle on the World's Key Commodity Markets, 21 November 2011. Kingsmill Bond, Andrey Kuzetsov, Tony Brennan, Jason Press, Richard Schellbach.

Focus Is the Path to Higher Returns

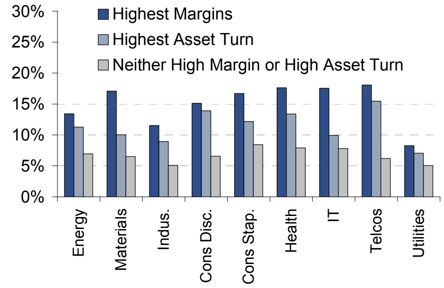
Neither the Eastern nor Western business model is right or wrong. We can see in Figure 14 that both Asian and US/European companies are generating similar RoAs. However, they are doing so using different business strategies. The end goal is to raise RoA and there is plenty of empirical evidence to suggest this can be done by focusing on either a sales- or margin-maximising business model.

Figure 14. Non-Financial RoA*



* RoA = EBIT Margin x Asset Turn.
Source: MSCI, Factset, CIRA

Figure 15. Median RoA* By Global Sector



* RoA = EBIT Margin x Asset Turn.
Source: MSCI, Factset, CIRA

Japan is caught in the middle

Companies caught in the middle, however, tend to lack focus and so generate lower RoAs. In Figure 15 we show the median return on asset (EBIT Margin x Asset Turn) in each global sector for (1) companies with the highest third of margins, (2) companies with the highest third of asset turn, and (3) companies with neither the highest margin nor asset turn. We find, without exception, companies with the highest margin or the highest asset-turn also generate the best RoAs. Companies from the US and Europe dominate those with the highest margins. Asia ex Japan companies are over represented in the group with the highest asset turn. Meanwhile, Japanese companies are over-represented in the middle — the group of companies that are neither margin nor sales maximisers. It should come as no surprise that Japanese companies tend to generate the lowest RoAs. They have not adopted a Western nor Eastern business model.

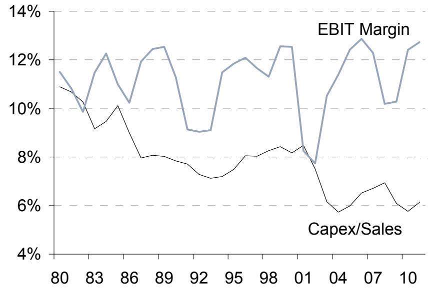
Global Margin Outlook

So US and European margins have been on a structural uptrend. Conversely, Asian margins have fallen. Japanese margins have risen but still remain low by international standards. Margins in commodity markets (which include CEEMEA, LatAm and Australia) are the highest in the world. What is the outlook for margins from here?

US/Europe — High margins to be sustained

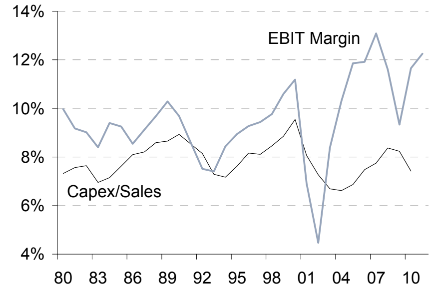
We can see how changing Western business models have also helped increase margins. But classic economic theory suggests new capital should compete away these super-normal profits. This has not occurred. As margins have risen, capex/sales ratios have been flat or declined in both markets. Despite high profitability and low interest rates, companies are reluctant to invest in new projects. As a consequence, companies that generate high margins don't face the competitive threat they would have if capex were higher.

Figure 16. US Capex vs EBIT Margin



Source: MSCI, Factset, CIRA

Figure 17. Pan-Europe Capex vs EBIT Margin



Source: MSCI, Factset, CIRA

This appears illogical. Surely high profits and low interest rates should trigger a capex boom that brings those profits down. But that has not occurred. We believe the lack of new investment is intertwined with the end of the equity cult[7] and associated derating of stock markets.. As investors continue to reallocate out of equities, the cost of equity has risen and discouraged capex. Instead companies are spending their cash on M&A and share buybacks. They are choosing to buy rather than build. Ironically, the de-rating of US and European equities over the last decade has helped to preserve profitability by discouraging capex. So while profits remain sensitive to the economic cycle, those waiting for the structural mean-reversion in margins will continue to be disappointed. And if investors don't buy the stock market, then companies will. De-equitisation is the logical consequence of an equity market where a much-anticipated structural fall in profits fails to materialise.

Asia — Operationally Geared

We believe Asia will slowdown on its sales maximising path, but business models are unlikely to reverse anytime soon. As Markus Rosgen, our Asia ex strategist, notes, there must be a limit to how much Asian companies are prepared to cut margins. They won't go to zero. Also, Markus highlights that wages in the region are rising, currencies are no longer depreciating, and transportation costs are increasing. All this makes Asia a little less competitive. While wages in China still remain low compared to what we see in the West (Figure 18), further wage inflation coupled with higher currencies and transport costs could be enough for China to lose some of its competitive advantage to other Emerging Markets like Mexico.

Asia's sales-maximising business model underlines why the equity market is so sensitive to changes in global economic momentum. Such a business model is highly operationally leveraged. A small fall in revenues will wipe out their wafer-thin margins. A moderate increase in revenues will make a substantial improvement in profits. Even though Asia has lower financial leverage than elsewhere, high operational leverage means Asian equities remain higher beta. Perhaps this is why Asian equities were as vulnerable to last year's European economic fears as European equities.

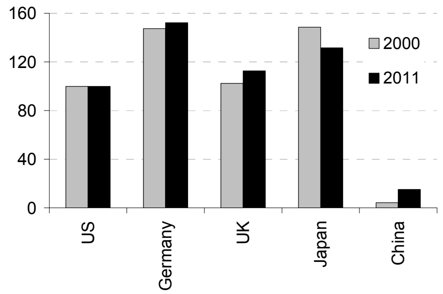
Japan — Lack of Focus

Japanese companies have the worst of both worlds. EBIT margins are lower than the rest of Asia, while asset turn is close to US and European levels. It seems like Japan Inc has held on to its sales-maximising business model, which was appropriate during industrialization, but it no longer enjoys the competitive

[7] See "Global Equity Strategy, The End of A Cult", 1 September 2010.

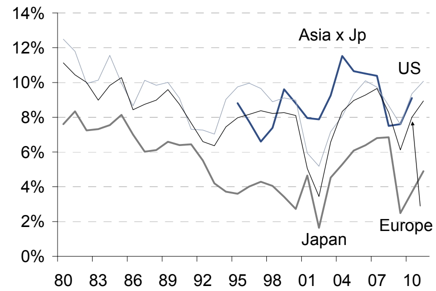
advantage of cheap costs. As a consequence, Japan operates on the lowest RoA in the world and so deserves a discount rating in our view. Japanese companies need to close the RoA gap with other regions to outperform on a sustained basis. With costs now up at Western levels, Japanese companies need to follow a more Western business model. They should sacrifice their Asian sales-maximising instincts to improve margins. They remain reluctant to do this.

Figure 18. Labour Compensation, in USD, Rebased to US Levels



Source: National Sources

Figure 19. Non-Financial Return on Asset



Source: Citi Investment Research and Analysis

CARBS

Some of the major beneficiaries' of Asia's development have been those commodity markets like Canada, Australia, Russia, Brazil and South Africa (CARBS). EBIT margins in these countries have risen while Asia pursued its sales-maximising commodity intensive business model. Commodity market margins have increased but asset turn has not fallen. Now these markets have some of the highest RoAs in the world. For now they are sales *and* margin maximising companies. However, our CARBS strategists note the real risk for these markets is if Asia backs away from its commodity-intensive business model. As asset turn fell in the US and Europe over the last 30 years, so did commodity consumption. Still, a reversal of Asia's sales-maximising business model does not seem imminent.

Strategy Outlook

Rising margins in the US and Europe are making investors nervous. Many believe they are unsustainable at these levels. However, while Western margins have risen significantly, they are falling in the East.

But we believe changing business models are responsible for much of the shift in margins. Asian companies have adopted a sales-maximising business model. This is consistent with lower margins and means Asian companies are highly operationally geared. At the same time US/European companies have embarked on a margin-maximising business model, which is consistent with lower turnover. Both business models exploit competitive advantages and do not look like they will be reversing soon.

While Western margins have increased, capex hasn't and so is not competing away these super-normal profits. Of course profit margins remain susceptible to cyclical risks, but there is little to suggest the structural increase in US/European margins will give way to a structural decrease anytime soon. Western margin bears will continue to be disappointed.

Macro Out-takes

We provide brief summaries compiled by Bruce Rolph in The Globaliser presenting our colleagues' most recent work. Please let us know if you would like more detail.

Regional Strategy

Asia Pacific
Markus Rosgen
12-March-12

Pan Asia Strategy: The Asia Investigator - Corporate Asia: Cashed Up, Looking for a Date

'2011 saw Asian M&A dip to 2005 levels', *highlights Asia Pacific Strategist Markus Rosgen*, 'but given the improved economic outlook, M&A levels most likely rise in 2012…Asian companies are long good balance sheets and cash flows but they are short brand recognition and intellectual property…also, a margin disadvantage of Asian companies vs those in mature markets means that most Asia-ex companies are price takers not settlers…on the other hand, the developed world is long brands, long corporate balance and long margins but public and private finances are not in as good as shape as in Asia-ex…as M&A offers a fast *r*oute to owning brands, we expect to see more Asian companies venture overseas in 2012 to gain brands and know-how'.

US
Tobias Levkovich
08-March-12

US Equity Strategy: Three Years Later…

'US stock prices have doubled from the March 9,2009 low', *announces US Strategist Tobias Levkovich*, 'and it is impressive that – despite all the claims of a new normal for American consumers who have lost jobs, lost homes and lost retirement funds – many discretionary consumer stocks have nearly tripled off the market bottom in 2009…but a five-year look, which allows one to see beyond the chaotic chasm that occurred during the 2007-2009 financial crisis period, presents numbers both fascinating and frightening…fascinating, in that many of the worst performers in the downdraft turned into the best ones when things turned around…and frightening, in that a five-year investment in Financials still turned into an almost 60% loss even as the overall S&P 500 was down marginally'.

Europe
Jonathan Stubbs & Adrian Cattley
08-March-12

European Portfolio Strategist: UK/Pan-European — Check Out Page 6

'European equities look cheap on most valuation metrics. This should provide a floor for share prices in 2012 and is a good reason for investors to buy the dips in our view. Absolute valuations look attractive, relative look more attractive. Europe also cheap versus US/world and should be playground for value investors. Building on CAPE work by our global team, European equities could enjoy annualized double-digit returns over next 10 yrs based on P/E, DY, P/B, CAPE. While equities look attractive, value trade has run hard. We would caution against naked value (risk & beta too); prefer to combine value & other factors. Four value-plus strategies: 1) growth at a reasonable price (GARP), 2) price/book relative to ROE, 3) PEG and balance sheet, and 4) CDS-adjusted DYs.'

Emerging Markets
Geoffrey Dennis
08-March-12

Global Emerging Markets Strategy - Earnings Turning?...Up

'Emerging markets EPS forecasts fell from 30% to 9% in the two years to January 2012', *notes Strategist Geoffrey Dennis*, 'which is the longest downtrend ever…however, last month we saw a bounce to 10.5% growth… earnings momentum has turned for Asia and Latam, around half of the countries, including all four BRICs, and among sectors, for Energy, Materials, Financials and IT…the recent pullback creates a new buying opportunity in EM equities…the key drivers – ample liquidity and valuations – remain and now earnings trends look better…we favor Brazil, China, Korea, and Peru'.

CEEMEA
Andrew Howell
12-March-12

CEEMEA Equity Strategy: Notes from the frontier- Pakistan: New political possibilities, acute macro challenges

'Pakistan is big and volatile', *admits Equity Strategist Andrew Howell*, 'indeed, Pakistan is the world's 6th largest country by population and one of the larger frontier equity markets, in 1980, Pakistan's per-capita GDP was 70% greater than China's; today it is 80% lower… and yet it would be a mistake to ignore Pakistan: its equity market is up 18.2% YTD, versus the +2.9% frontier market benchmark… yes, macro risks remain acute, but domestic politics could be reaching an inflection point, with the emergence of Imran Khan's party as a major force'.

Japan
Kenji Abe
11-March-12

Japan Equity Strategist: Japan's quake: Implications one year on - Could 2011 prove to be a turning point for Japan?

'We have asked our fundamental analysts to revisit their predictions at the time of the earthquake, contrast them with how events actually unfolded, and to discuss the potential for a rebound in 2012 and beyond. Finally, we asked what longer-term implications the events of 2011 might have for the sectors they cover. In an overview, our economist and strategist examine the macro consequences of the earthquake, our utilities analyst offers his views on nuclear and electricity policy in Japan, and we provide a global take on the technology supply chain impact.'

Russia
Kingsmilll Bond
13-March-12

Russia Equity Strategy: Higher dividends in Russia- Becoming a more conventional market

'The Russian government is contemplating changing the basis for dividend payment', *reports Russia Strategist Kingsmill Bond*, 'and changes being debated by the government have the potential to increase dividends from the MSCI Russia index by over 30%...we estimate that the dividend payout ratio if the changes were implemented would increase from 11% of profits to 16%...we believe one of the reasons that the Russian market has traded at a discount has long been the lack of dividends; higher dividends would thus make the market more attractive.'

Latam
Jason Press
07-March-12

Latin America Strategy: Latin America Rapid Response - Brazil Cyclical Easing Shifts into High Gear: Investible Takeaways

'With a larger-than-expected 75bp rate cut', *counsels Latin American Equity Strategist Jason Press,* 'the SELIC rates are now single-digit, at 9.75%... we see additional rate cuts to 8.5%... positive for Brazilian equities… moreover, and in stark contrast to most of Brazil's history, the investment tradeoff between equities and bonds in Brazil is now comparable…however, with Brazilians accustomed to receiving 10%+ on cash accounts, there is a sense of near panic…the search for other investment alternatives will likely see fresh flows into equities…this could fuel the next leg up in Brazilian equities.'

Empirical and Thematic Perspectives
Nathan Sheets
13-March-12

Empirical and Thematic Perspectives - How Much Is This Going to Hurt? – New Evidence on Global Adjustment to Oil Shocks

'How much is the (oil shock) going to hurt', *asks International Economist Nathan Sheets*, 'indeed, might a shock be different this time around?... importantly, US oil exports have risen significantly in recent years, to around 30% of value import values… the US external position is thus much better than it was several decades ago… on the other hand, our work on "stall speed" for the US economy gives us pause: shocks tend to have more severe effects when growth is already weak and confidence fragile… so given the global economy is still struggling to regain solid footing, the effects of a sustained rise in oil prices could be unusually severe'.

Market Outlook

Global equities are up 23% from their October lows. While stock markets are due a period of consolidation we expect more upside by year-end. While equities have rallied, core government bond yields have remained low. So higher bond yields are not yet choking off the rally like we have seen in the past. Current valuations imply equity investors are pricing in a 10% decline in global EPS. Our outlook is for profits to stall in 2012 and then resume growth in 2013, not turn down as markets imply. Our MSCI ACWI 2012 year-end target remains at 360 (currently 334).

Figure 20. Strategists' forecasts

Region	Index	Current Level (13 Mar)	End 2012 Target	Exp Gain (%)
US	S&P 500	1396	1425	2
Pan Euro	DJ Stoxx600	270	285	6
UK	FTSE 100	5956	6200	4
Japan	Topix	845	870	3
Asia x Japan	MSCI	530	575	8
Australia	S&P/ASX 200	4248	4750	12
GEMs	MSCI EM	1067	1225	15
LATAM	MSCI Latam	4224	4900	16
CEEMEA	MSCI EM EMEA	362	350	-3
World	**MSCI AC World**	**334**	**360**	**8**

Source: MSCI, Citi Investment Research and Analysis

Regional Strategy

Our key regional and global sector recommendations are summarised in Figure 19. We remain Overweight Global Emerging Markets. Despite a strong start to 2012, valuations are still attractive in EM and the asset class should benefit from easier monetary policy this year. We are also Overweight Japan. Despite the strong rally YTD Japanese stocks are only trading at 1x book value. We are Overweight the UK. UK companies have large international businesses and should continue to generate solid EPS growth, even if the UK economy falls into recession. Aggressive monetary policy from the BoE should also help. We remain Neutral on Europe ex UK. While sovereign concerns will continue to weigh on growth, ongoing liquidity provisions by the central bank should help support equity markets. We also remain Neutral Australia. We are Underweight the US. Stock prices should continue to rise but we see better gains elsewhere. US equities look expensive compared to other regions.

GDP	**2011F**	**2012F**	**2013F**
Global	3.0	2.4	3.0
US	1.7	2.0	1.8
Euro Zone	1.5	-1.3	-0.3
Japan	-0.9	1.2	1.4
EM	6.1	5.3	5.9
Asia	7.2	6.9	7.3
CPI	**2011F**	**2012F**	**2013F**
Global	3.6	3.0	2.9
US	2.4	2.2	1.8
Euro Zone	2.7	2.3	1.4
Japan	-0.3	-0.4	-0.1
EM	6.1	5.1	5.2
Asia	5.8	4.1	4.3
Interest Rates	**Current**	**3Q12**	**2Q13**
US Fed Funds	0.25	0.25	0.25
ECB	1.00	0.50	0.50
UK Base	0.50	0.50	0.50
Japan Call	0.10	0.10	0.10
10Yr Yield	**Current**	**3Q12**	**2Q13**
US	2.19	2.20	2.65
Euro Zone	1.90	1.50	1.50
UK	2.20	1.70	1.60
Japan	1.01	1.00	1.40
Ex Rates	**Current**	**3Q12**	**1Q13**
US$/€	1.30	1.30	1.26
£/US$	1.57	1.58	1.57
€/£	0.83	0.82	0.80
US$/¥	83	80	78

Source: Factset, Citi Investment Research

Sector Strategy

Our global sector strategy has a more cyclical/pro-beta tilt. This is consistent with our positive view on markets. We are Overweight Financials. Despite the strong rally YTD, the sector continues to trade at a discount to book value. We remain Overweight IT and Consumer Staples. These sectors have solid earnings momentum and they are strong de-equitisers. Consumer Discretionary is our least preferred cyclical. We are also Underweight Healthcare as valuations look unattractive. We are Underweight the Utilities sector. This defensive sector, hampered by regulatory issues, should continue to be left behind as markets rise.

Risk

The main risks to our outlook stem from Europe and potential secondary consequences for global growth.

Figure 21. Regional And Global Sector Recommendations

Overweight	**Neutral**	**Underweight**
Global Emerging Markets	Australia	US
Asia Pac ex-Japan	Europe ex-UK	
Japan		
UK		
Overweight	**Neutral**	**Underweight**
Consumer Staples	Energy	Consumer Disc
Financials	Industrials	Health Care
IT	Materials	Utilities
	Telecoms	

Source: CIRA

Global Market Intelligence

Figure 22. Global Market Intelligence by Region

09 Mar 12	Free MC	Wgt	P/E			EPS YoY %			P/B	ROE	Div Yld	EV/ Sales	EV/ EBITDA	Perf % (local)	
	US$bn	%	11E	12E	13E	11E	12E	13E	12E	12E	12E	11	11	Weekly	YTD
Global	**28,257**	**100**	**13.4**	**12.1**	**10.8**	**7.6**	**10.2**	**13.0**	**1.6**	**13.3**	**2.9**	**1.5**	**7.4**	**-0.3**	**9.4**
Developed World	24,500	86.7	13.7	12.4	11.0	7.0	10.6	13.2	1.6	13.1	2.9	1.5	7.5	-0.1	9.2
Emerging World	3,757	13.3	11.5	10.7	9.6	11.0	8.4	12.0	1.5	14.4	3.0	1.4	6.8	-1.3	11.0
North America	**14,115**	**50.0**	**14.4**	**13.0**	**11.6**	**15.0**	**9.6**	**12.7**	**2.0**	**15.3**	**2.2**	**1.7**	**7.9**	**-0.1**	**8.9**
USA	12,857	45.5	14.4	13.1	11.7	14.5	9.5	12.6	2.0	15.6	2.1	1.7	7.9	0.1	9.4
Canada	1,258	4.5	14.1	12.8	11.2	20.4	10.9	13.5	1.7	13.1	2.8	2.4	8.0	-1.3	4.5
Europe	**6,700**	**23.7**	**11.7**	**10.9**	**9.7**	**-1.2**	**8.1**	**11.6**	**1.4**	**12.8**	**4.1**	**1.3**	**7.0**	**-0.5**	**7.9**
United Kingdom	**2,349**	**8.3**	**10.9**	**10.4**	**9.4**	**12.5**	**5.6**	**10.4**	**1.6**	**15.0**	**4.1**	**1.3**	**8.1**	**-0.3**	**5.6**
Europe ex UK	**4,351**	**15.4**	**12.2**	**11.1**	**9.9**	**-8.0**	**9.6**	**12.3**	**1.3**	**11.7**	**4.2**	**1.3**	**6.6**	**-0.6**	**9.2**
France	966	3.4	11.0	10.5	9.4	-2.0	4.1	11.6	1.1	10.5	4.3	1.1	6.2	-0.3	10.8
Germany	878	3.1	11.5	10.5	9.5	-2.8	9.9	11.1	1.3	12.5	3.7	1.1	5.9	-0.5	16.4
Switzerland	873	3.1	14.4	12.7	11.5	-10.6	13.2	11.0	2.0	15.3	3.7	2.3	10.6	0.6	4.7
Sweden	329	1.2	14.2	13.1	11.9	-10.8	7.9	10.7	1.8	14.0	4.1	1.4	8.4	-1.3	11.1
Spain	309	1.1	9.6	9.4	8.3	-14.5	2.3	14.0	1.1	11.2	7.5	1.6	5.9	-3.3	-3.2
Netherlands	252	0.9	11.3	10.5	9.4	-3.7	8.0	11.4	1.4	12.9	3.8	1.3	8.4	-0.2	5.5
Italy	246	0.9	10.7	9.1	7.9	-20.6	22.3	15.0	0.7	8.0	4.6	1.4	5.0	-2.4	9.1
Denmark	118	0.4	22.6	17.7	14.0	-16.5	27.4	26.5	2.1	12.0	2.1	1.6	6.7	-0.2	16.5
Belgium	103	0.4	17.0	12.9	11.5	-12.3	32.0	12.5	1.4	11.2	3.5	2.7	8.0	1.8	12.8
Norway	101	0.4	11.5	10.6	9.5	12.3	8.8	11.2	1.5	13.9	4.6	1.1	4.6	-0.9	9.8
Finland	90	0.3	13.0	14.3	11.7	-18.2	-9.1	22.5	1.5	10.2	4.9	1.5	5.6	-1.3	11.5
Ireland	29	0.1	22.1	20.5	16.7	33.1	7.7	22.7	1.6	8.0	2.4	1.0	10.2	0.0	4.4
Austria	27	0.1	17.9	9.0	7.7	-48.1	99.7	16.5	0.8	9.2	3.9	0.8	5.5	-3.3	14.8
Portugal	21	0.1	12.7	11.7	10.4	-9.1	8.2	12.7	1.2	10.1	6.0	1.7	8.3	0.2	0.8
Greece	9	0.0	29.8	10.0	7.7	-81.1	199.2	29.1	0.8	8.3	3.0	0.9	4.2	1.6	15.4
Japan	**2,241**	**7.9**	**18.9**	**14.3**	**11.7**	**-10.6**	**38.7**	**25.3**	**1.0**	**7.0**	**2.4**	**1.0**	**7.1**	**1.2**	**17.1**
Asia Pac ex Jp	**3,578**	**12.7**	**12.9**	**11.7**	**10.4**	**4.6**	**10.8**	**13.3**	**1.6**	**13.4**	**3.4**	**1.4**	**7.4**	**-1.4**	**10.0**
Pacific ex Jp	**1,379**	**4.9**	**12.8**	**12.4**	**11.2**	**7.7**	**3.8**	**10.6**	**1.5**	**12.1**	**4.6**	**2.0**	**8.1**	**-1.5**	**7.0**
Australia	876	3.1	12.4	11.3	10.3	9.2	9.2	9.9	1.6	14.0	5.3	2.0	7.5	-1.3	3.2
Hong Kong	305	1.1	13.7	15.4	13.6	6.9	-11.1	13.1	1.3	8.3	3.0	2.5	15.3	-2.1	15.3
Singapore	185	0.7	13.6	13.6	12.3	2.2	0.4	10.7	1.4	10.4	3.6	1.6	8.3	-1.8	13.2
New Zealand	13	0.0	14.9	14.7	12.8	-2.2	1.8	14.3	1.5	10.3	5.6	1.5	7.7	2.1	6.9
Em Asia	**2,199**	**7.8**	**12.9**	**11.4**	**9.9**	**2.7**	**15.3**	**14.9**	**1.6**	**14.3**	**2.7**	**1.2**	**7.2**	**-1.3**	**11.9**
China	662	2.3	10.8	9.6	8.6	15.4	12.0	12.2	1.6	16.1	3.3	1.3	7.2	-2.1	14.5
Korea	558	2.0	11.4	9.9	8.6	-0.8	18.8	14.5	1.2	12.8	1.3	0.9	5.9	-0.4	11.3
Taiwan	406	1.4	17.1	15.6	12.6	-25.8	18.2	24.6	1.8	11.3	3.7	1.3	7.4	-1.6	11.5
India	246	0.9	16.3	14.1	12.3	12.6	15.5	15.0	2.3	16.2	1.6	2.2	10.4	-0.6	15.6
Malaysia	126	0.4	16.9	14.8	13.3	8.0	14.1	10.9	2.1	13.9	3.5	2.3	9.6	-0.5	3.1
Indonesia	97	0.3	14.8	13.2	11.5	21.9	12.5	14.3	3.1	23.4	3.0	2.5	8.1	-1.0	1.3
Thailand	75	0.3	13.4	11.6	10.0	18.2	15.8	15.4	2.1	17.7	3.7	1.2	7.3	-1.5	14.5
Philippines	28	0.1	18.3	16.7	15.0	1.1	9.9	11.4	2.6	15.2	2.3	2.8	9.8	-0.7	15.4
Latin America	**871**	**3.1**	**12.6**	**12.0**	**10.6**	**9.6**	**5.2**	**12.0**	**1.7**	**14.1**	**3.2**	**1.9**	**6.7**	**-1.3**	**9.4**
Brazil	571	2.0	10.9	10.7	9.6	9.4	1.9	11.0	1.5	13.7	3.7	1.8	6.1	-1.4	12.6
Mexico	169	0.6	19.4	16.2	13.4	7.6	20.1	17.5	2.4	14.8	1.9	2.1	8.0	-1.7	0.8
Chile	67	0.2	18.0	16.5	15.1	1.5	9.2	12.9	2.4	13.4	2.6	2.6	11.5	-0.8	7.1
Colombia	40	0.1	17.9	15.8	12.3	28.1	13.7	13.7	2.5	18.6	3.3	3.0	12.4	-0.9	6.2
Peru	24	0.1	12.9	11.4	10.4	22.7	13.0	8.9	3.0	25.2	3.2	4.7	9.2	0.6	10.8
CEEMEA	**687**	**2.4**	**8.0**	**8.1**	**7.8**	**34.1**	**-2.5**	**5.5**	**1.2**	**14.8**	**3.8**	**1.4**	**5.7**	**-1.4**	**10.2**
South Africa	289	1.0	13.6	11.1	9.8	20.6	22.5	13.0	2.0	18.2	4.0	1.6	7.6	-0.7	5.6
Russia	255	0.9	5.1	5.7	5.9	49.2	-12.8	0.5	0.8	13.9	3.2	1.3	4.6	-2.1	14.5
Poland	52	0.2	8.0	10.0	10.1	40.9	-20.1	-0.9	1.2	11.6	5.6	1.5	4.1	-1.5	6.4
Turkey	49	0.2	10.4	9.4	8.3	-3.4	10.9	12.9	1.4	15.3	3.5	1.4	8.0	-2.8	14.2
Egypt	14	0.0	11.3	10.1	9.6	6.5	12.0	8.9	1.3	12.4	3.6	2.3	7.5	1.0	50.0
Czech Republic	12	0.0	11.6	10.9	10.5	-14.7	6.7	3.6	1.8	16.1	6.5	2.6	5.2	-0.1	5.0
Hungary	11	0.0	10.3	9.0	7.4	-8.5	14.1	22.3	0.9	10.0	4.2	0.8	5.2	-2.9	12.5
Morocco	5	0.0	14.5	13.1	14.7	-3.6	10.7	1.4	4.1	27.4	5.5	4.2	6.8	-0.5	3.9
Israel	**65**	**0.2**	**8.8**	**8.3**	**7.6**	**8.6**	**6.0**	**9.6**	**1.4**	**16.9**	**3.3**	**2.7**	**10.3**	**-0.4**	**5.4**

Source: Citi Investment Research and Analysis, MSCI, Worldscope, Factset Consensus Estimates

Figure 23. Global Market Intelligence by Sector

09 Mar 12	Free MC	Wgt	P/E			EPS YoY %			P/B	ROE	Div Yld	EV/ Sales	EV/ EBITDA	Perf % (local)	
	US$bn	%	11E	12E	13E	11E	12E	13E	12E	12E	12E	11	11	Weekly	YTD
Global	**28,257**	**100**	**13.4**	**12.1**	**10.8**	**7.6**	**10.2**	**13.0**	**1.6**	**13.3**	**2.9**	**1.5**	**7.4**	**-0.3**	**9.4**
Sectors- Level 1															
Energy	3,349	11.9	10.4	10.2	9.3	26.8	1.5	10.2	1.5	14.4	2.8	1.1	6.1	-1.3	6.5
Materials	2,289	8.1	11.8	11.2	9.7	18.7	5.5	15.8	1.6	14.0	2.6	1.6	6.9	-2.2	9.6
Industrials	2,977	10.5	14.3	13.0	11.4	11.7	11.0	13.9	1.9	14.4	2.6	1.3	8.5	-0.3	11.3
Consumer Disc.	2,925	10.4	16.7	14.2	11.9	10.2	18.9	19.4	2.0	14.2	2.0	1.3	7.3	0.7	14.8
Consumer Staples	2,852	10.1	16.9	15.4	14.0	6.6	9.3	10.2	2.9	18.6	3.1	1.5	9.9	1.0	3.6
Health Care	2,480	8.8	12.6	12.2	11.3	9.1	3.3	8.1	2.3	19.3	2.8	2.0	8.9	0.6	4.1
Financials	5,483	19.4	12.4	10.6	9.4	-3.6	17.0	12.8	1.0	9.3	3.5	NA	NA	-0.9	13.7
IT	3,598	12.7	15.2	13.4	11.7	6.9	14.2	14.8	2.5	18.5	1.4	1.7	7.4	0.2	15.4
Telecoms	1,262	4.5	12.7	11.6	11.0	-1.6	5.1	9.5	1.6	13.6	5.9	1.8	5.8	-0.1	0.0
Utilities	1,041	3.7	15.0	14.2	12.7	-16.8	13.3	18.2	1.2	8.1	4.6	1.7	7.7	-0.2	1.7
Sectors- Level 2															
Energy	3,349	11.9	10.4	10.2	9.3	26.8	1.5	10.2	1.5	14.4	2.8	1.1	6.1	-1.3	6.5
Materials	2,289	8.1	11.8	11.2	9.7	18.7	5.5	15.8	1.6	14.0	2.6	1.6	6.9	-2.2	9.6
Capital Goods	2,214	7.8	13.3	12.2	10.8	17.5	9.2	12.7	1.9	15.2	2.7	1.2	8.7	-0.5	12.6
Comm Svc & Supp	205	0.7	18.1	16.6	14.7	8.5	9.0	12.8	2.4	14.7	2.7	1.6	8.9	1.4	10.2
Transport	558	2.0	18.8	15.4	12.8	-11.7	21.7	20.2	1.7	11.3	2.3	1.6	7.7	-0.3	7.2
Autos	738	2.6	11.0	10.1	8.4	16.7	11.7	19.9	1.2	12.3	2.1	0.9	6.0	0.5	22.5
Consumer Durables	419	1.5	45.8	19.4	13.9	-43.6	135.9	40.1	1.9	9.8	1.9	1.8	7.4	0.8	19.0
Consumer Services	410	1.4	19.2	17.8	15.6	16.7	7.8	14.3	3.4	19.0	2.3	2.1	9.8	0.1	6.7
Media	620	2.2	16.2	13.8	12.0	18.8	16.9	15.3	2.1	16.3	2.1	2.0	7.5	0.3	11.7
Retailing	739	2.6	19.0	17.0	14.7	13.2	11.8	15.1	3.1	18.1	1.7	1.1	9.1	1.5	12.8
Food & Staples	618	2.2	15.1	13.6	12.3	5.7	10.6	10.5	1.9	14.2	2.9	0.7	7.6	0.8	1.4
Food Bev & Tobac.	1,777	6.3	17.3	15.9	14.3	7.9	9.1	10.5	3.2	20.5	3.2	2.2	10.8	1.0	4.3
Household Products	457	1.6	18.0	16.6	15.3	2.9	8.1	8.6	3.6	21.4	3.0	2.1	11.0	0.9	3.6
Health Care	635	2.2	14.5	13.3	12.0	11.1	8.7	11.1	2.2	16.7	1.2	1.2	8.3	0.7	9.0
Pharma & Biotech	1,845	6.5	12.1	11.9	11.1	8.5	1.7	7.2	2.4	20.2	3.4	2.6	9.1	0.6	2.6
Banks	2,529	8.9	10.5	9.6	8.6	5.3	9.3	11.8	1.0	10.6	4.1	NA	NA	-1.0	12.3
Div Financials	1,172	4.1	12.8	10.5	8.8	-16.6	22.4	18.0	0.8	7.9	2.2	NA	NA	-0.5	20.3
Insurance	1,050	3.7	14.7	10.1	9.1	-16.5	45.6	10.7	1.0	9.6	3.6	NA	NA	-1.0	11.1
Real Estate	732	2.6	18.8	18.8	17.1	9.9	-0.4	10.8	1.3	6.7	3.7	NA	NA	-0.5	11.9
Software & Services	1,485	5.3	16.2	14.5	12.8	13.6	11.8	12.9	3.5	24.1	1.3	2.7	9.5	0.2	12.3
Tech	1,461	5.2	14.5	12.3	10.8	11.1	19.8	14.6	2.0	16.4	1.2	1.2	6.7	0.0	19.9
Semi & Semi Equip	653	2.3	14.4	13.6	11.4	-11.1	6.5	19.7	2.1	15.7	2.1	1.6	5.5	0.9	12.8
Telecom	1,262	4.5	12.7	11.6	11.0	-1.6	5.1	9.5	1.6	13.6	5.9	1.8	5.8	-0.1	0.0
Utilities	1,041	3.7	15.0	14.2	12.7	-16.8	13.3	18.2	1.2	8.1	4.6	1.7	7.7	-0.2	1.7

Source: Citi Investment Research and Analysis, MSCI, Worldscope, Factset Consensus Estimates

Figure 24. 2012 P/E Estimates by Region and Sector

09 Mar 12 P/E 12E	Global	DM	GEM	US	Eur ex UK	UK	Jap	Dev Asia	Em Asia	Lat Am	CEEMEA
Region	**12.1**	**12.4**	**10.7**	**13.1**	**11.1**	**10.4**	**14.3**	**12.4**	**11.4**	**12.0**	**8.1**
Sectors- Level 1											
Energy	10.2	11.0	7.4	11.3	9.6	8.9	9.8	17.2	9.7	10.1	5.1
Materials	11.2	11.6	9.9	12.8	13.3	8.5	15.0	10.3	10.9	9.3	9.1
Industrials	13.0	13.0	12.8	13.4	13.1	12.8	11.3	15.5	12.4	17.8	10.4
Consumer Disc.	14.2	14.6	11.4	15.7	11.3	12.6	16.6	15.5	10.3	15.2	14.5
Consumer Staples	15.4	15.1	19.6	15.2	15.7	13.8	16.5	13.7	18.5	21.0	19.3
Health Care	12.2	12.2	17.6	12.2	12.3	10.2	17.6	16.0	18.9	20.4	14.4
Financials	10.6	10.8	9.6	11.8	8.4	10.0	12.5	11.7	9.2	11.4	9.3
IT	13.4	13.3	14.1	12.9	16.1	24.8	16.4	19.4	14.0	16.3	11.1
Telecom Services	11.6	11.3	12.4	15.8	9.1	10.0	9.1	12.1	13.3	11.6	11.5
Utilities	14.2	14.5	12.6	14.6	10.0	12.2	-59.0	15.6	14.2	12.3	10.4
Sectors- Level 2											
Energy	10.2	11.0	7.4	11.3	9.6	8.9	9.8	17.2	9.7	10.1	5.1
Materials	11.2	11.6	9.9	12.8	13.3	8.5	15.0	10.3	10.9	9.3	9.1
Capital Goods	12.2	12.3	11.7	13.2	12.5	11.4	10.0	13.0	11.6	15.3	10.4
Comm Svc & Supp	16.6	16.6	13.4	16.6	16.2	15.8	19.4	16.5	13.4		
Transport	15.4	15.2	18.5	13.5	15.5		17.4	19.8	18.0	20.4	10.5
Autos & Components	10.1	10.4	9.0	9.2	7.9	8.5	13.8		9.0		9.2
Consumer Durables	19.4	21.2	10.7	18.6	16.5	22.1	68.4	10.1	14.7	8.0	8.5
Consumer Services	17.8	18.0	14.2	19.4	13.9	14.5	17.3	15.7	14.1	15.7	
Media	13.8	13.6	19.2	14.0	12.2	12.2	19.4	12.2	21.2	18.3	19.4
Retailing	17.0	17.1	16.2	17.9	19.1	10.5	14.3	17.6	13.8	27.1	13.2
Food & Staples Retailing	13.6	12.9	22.6	13.9	11.4	9.6	13.2	13.6	19.8	24.3	23.0
Food Bev & Tobacco	15.9	15.7	17.9	15.4	16.3	15.0	18.0	14.1	16.7	20.0	14.0
Household Products	16.6	16.2	24.1	16.1	17.0	14.6	19.0		26.2	19.6	
Health Care Equip & Svc	13.3	13.2	17.4	12.5	18.1	12.8	19.7	15.4	19.7	20.4	13.1
Pharma & Biotech	11.9	11.9	17.7	12.1	11.7	10.1	17.3	16.3	18.7		15.3
Banks	9.6	9.8	9.0	10.7	8.5	9.7	9.3	10.4	8.5	10.6	8.6
Div Financials	10.5	10.3	12.6	10.5	8.3	12.6	18.7	16.2	12.2	19.1	10.3
Insurance	10.1	9.9	12.7	10.0	7.9	9.3	24.7	12.6	13.6	9.6	10.8
Real Estate	18.8	20.7	9.8	35.7	14.1	18.0	19.8	13.5	8.5	23.3	12.5
Software & Services	14.5	14.3	18.5	14.0	15.8	14.0	20.2	15.4	19.2	16.3	11.1
Tech Hardware & Equip	12.3	12.1	15.2	11.5	16.7		15.3	51.3	15.2		
Semi & Semi Equip	13.6	14.6	12.4	13.7	16.0	40.9	29.8	19.2	12.4		
Telecom	11.6	11.3	12.4	15.8	9.1	10.0	9.1	12.1	13.3	11.6	11.5
Utilities	14.2	14.5	12.6	14.6	10.0	12.2	-59.0	15.6	14.2	12.3	10.4

Source: Citi Investment Research and Analysis, MSCI, Worldscope, Factset Consensus Estimates

Notes

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Appendix A-1

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