

## Corporate Securities Strategy

1 September 2010 | 32 pages

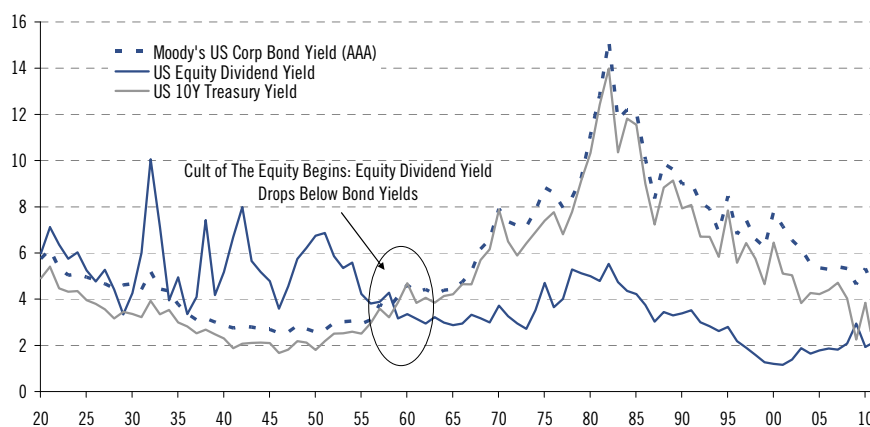
# Global Equity Strategist

Equity 

## The End Of A Cult

- **Equity Cult** — Global pension funds spent the second half of the 20<sup>th</sup> century raising their equity weightings to well over 50%, mostly at the expense of bonds.
- **Cult Reversed** — It has taken 10 years, and two 50% bear markets, to reverse this cult. European and Japanese equities are already trading on dividend yields above government bond yields. US equities are almost there as well. An immediate reincarnation of the equity cult seems unlikely.
- **Equity Overhang** — Global corporates, especially the mega-caps, rushed to exploit cheap financing as the equity cult inflated. They have been slow to redeem equity now that the cult has deflated. Equity oversupply remains a drag on share prices.
- **De-equitisation The Answer** — As conventional investors sell, so corporates have stepped in as the marginal buyer of global equities. Investors should tilt portfolios to exploit de-equitisation themes such as M&A and share buy-backs.
- **Emerging Markets The Exception** — The Emerging Markets equity culture remains robust. Companies can issue equity, capex is booming, and large-cap stocks are not under shareholder pressure to break up. Enjoy it while it lasts.

Figure 1. US Asset Yields (%)



Source: Global Financial Data, Datastream, Citi Investment Research

### Robert Buckland

+44-20-7986-3947

robert.buckland@citi.com

### Beata M Manthey, PhD

+44-20-7986-4349

beata.manthey@citi.com

### Orrin Sharp-Pierson

+44-20-7986-4087

orrin.sharppierson@citi.com

### Hasan S Tevfik, CFA

+44-20-7986-4110

hasan.tevfik@citi.com

### Themes Strategist

Michael Geraghty

### US

Tobias M Levkovich

### Europe

Jonathan Stubbs

Adrian Cattley

### Japan

Tsutomu Fujita, CFA

### Global Emerging Markets

Geoffrey Dennis

### Asia ex Japan

Markus Rosgen

### Latin America

Matthew Hickman

### CEEMEA

Andrew Howell, CFA

### Australia & New Zealand

Richard Schellbach

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

Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

## Contents

<b>The End Of A Cult</b>	<b>3</b>
<b>Bonds vs Equities Now</b>	<b>3</b>
<b>The Cult of the Equity</b>	<b>4</b>
<b>Why?</b>	<b>5</b>
<b>Cult Switch</b>	<b>6</b>
<b>Valuations</b>	<b>8</b>
<b>It Is What It Is</b>	<b>10</b>
<b>Use Debt/Cash Not Equity</b>	<b>10</b>
<b>1. De-equitisation</b>	<b>11</b>
<b>2. Capex</b>	<b>13</b>
<b>3. Mega-Caps</b>	<b>14</b>
<b>De-equitisation Strategies</b>	<b>16</b>
Share buybacks	17
<b>Conclusion</b>	<b>18</b>
<b>Macro Out-takes</b>	<b>19</b>
<b>Global Market Intelligence</b>	<b>23</b>
<b>Appendix A-1</b>	<b>28</b>

## The End Of A Cult

The investment debate continues to focus on the likelihood of a double-dip in the global economy and the implications for markets. However, we suspect that this overtly cyclical debate is occurring against an ongoing and profound reassessment of the merits of particular asset classes by both savers and borrowers.

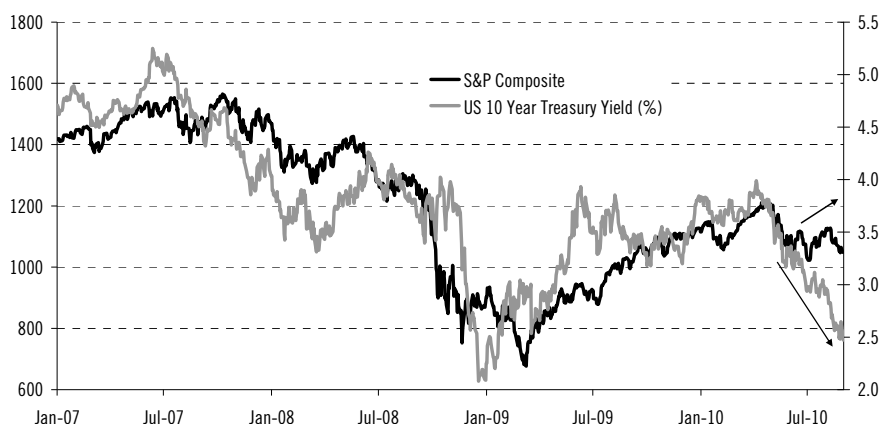
In this note, we revisit the global cult of the equity. Why did it occur and why is it now coming under such pressure? Is it being replaced by the cult of the bond? What is this doing to valuations? How do we expect the financing behaviour of companies to change in response? And what opportunities might that offer to equity investors?

## Bonds vs Equities Now

### The conundrum

In July, global equities rebounded despite continued falls in government bond yields. This defied the strongly positive relationship between equities and bond yields seen since 2000. Many equity investors worry that this decoupling will be resolved by the bond markets being proven “right”. The implications of this are worrying — the last time US treasury yields were down at these levels, the S&P (currently 1050) was nearer 800.

Figure 2. S&P Composite Against US Treasury Yield (%, RHS)



Source: CIRA, Datastream

### We think equities are right, others disagree

We have pointed out that equities actually have a decent track record when these decouplings have occurred in the past<sup>1</sup>. Certainly Citi's equity and bond market forecasts suggest that this current breakdown in the relationship is more likely to be resolved through rising bond yields than falling equity prices. However, we also understand that many investors think we will be proven wrong.

<sup>1</sup> Global Equity Strategist: An Old Conundrum, 18 August 2010

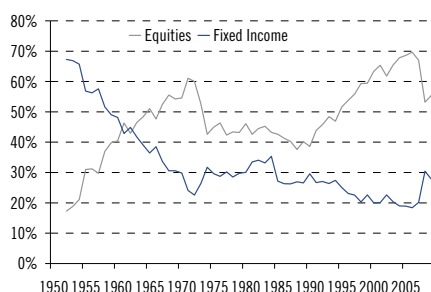
## The Cult of the Equity

We can't help but suspect that this hot debate about the relative attractions of bonds against equities — whether one is pricing in the double dip but the other is not, whether one is pricing in deflation but the other is not — is mere froth on top of a much more profound reassessment of the merits of the two asset classes. In particular, has the “cult of the equity” been replaced by the “cult of the bond”? To answer this we first take a look at the origins of the cult of the equity.

### Equity cult started in the 1950s

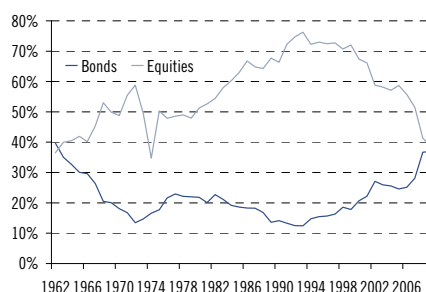
The rise of the cult of the equity is reflected in institutional asset allocations. Figure 3 shows the weighting of US private sector pension funds in equities and fixed income as derived from the Fed's Flow of Funds data. Back in 1952, US private sector pension funds held just 17% of their assets in equities compared to 67% in fixed interest. Over the next 50 years, these weightings reversed — at the peak in 2006, the same funds held 69% in equities and 18% in fixed interest. Of course, some of the increase in equities will reflect the outperformance over the period.

Figure 3. US Private Sect Pension Asset Wts<sup>2</sup> (%)



Source: Fed, Citi Investment Research

Figure 4. UK Pension Asset Weights (%)



Source: ONS, Citi Investment Research

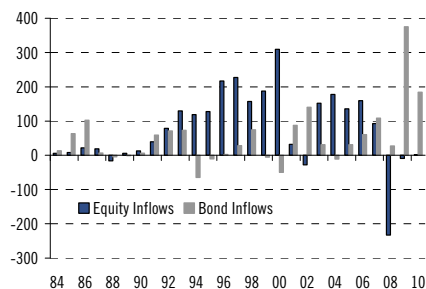
The picture looks similar in the UK (Figure 4). Back in 1962, ONS data suggest that UK pension funds held more in bonds than equities. That reversed in the 1960s, as equity weightings increased aggressively. At the peak in the early 1990s, UK pension funds held 76% of assets in equities compared to just 12% in bonds. It seems that UK pension funds embraced the cult of the equity more enthusiastically than their US counterparts, perhaps as a result of a desire to buy equities as a hedge against the UK's more significant inflation problems.

### Mutual funds tagged along

We can also see the rise (and fall) of the equity cult in mutual fund flows. Figure 5 shows US mutual fund equity inflows going back to 1984. These peaked above \$300bn in 2000. European fund inflows peaked in the same year at €180bn (Figure 6). US equity inflows recovered as markets rallied in 2003-07. European equity inflows did not.

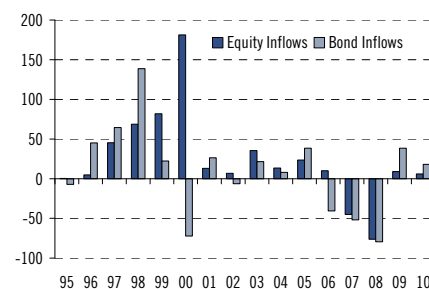
<sup>2</sup> We pro-rate mutual fund weightings in-line with equity/bond allocation across the rest of the fund

Figure 5. US Mutual Fund Inflows (\$bn)



Source: ICI

Figure 6. European Mutual Fund Inflows (€bn)



Source: National Mutual Fund Associations

## Why?

It seems that the cult of the equity began in the late 1950s. Why? Many justifications have been put forward. Most obviously, the 1950s marked the beginning of a welcome period of peace and prosperity following a tumultuous 50 years that included two world wars and a major economic depression.

The rise in equity weightings coincided with Markowitz's first considerations of modern portfolio theory. This promoted the belief that a well-diversified equity portfolio could achieve superior returns while helping to reduce risk. It was clearly the view of George Ross Goobey, manager of the Imperial Tobacco pension fund who was generally perceived to be the godfather of the cult of the equity in the UK. Ross Goobey liquidated his entire fixed interest portfolio in the 1950s and invested the proceeds in equities. This was highly controversial at the time — he was banned from teaching students at the UK Institute of Actuaries.

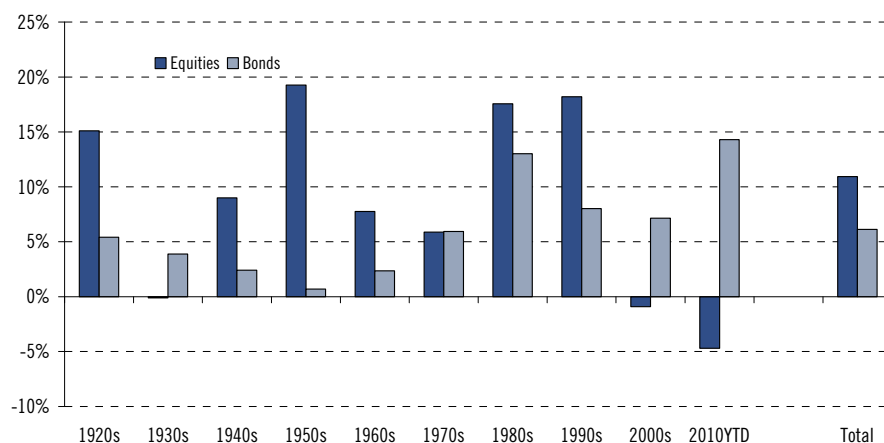
### Lots of reasons

Other factors may have helped to promote the cult of the equity. Most pension funds were relatively immature back in the 1950s, so giving them a better ability to absorb short-term equity volatility in search of longer-term returns. Equities were seen as a good match against the wage-driven liabilities of defined benefit pension schemes. Equities offered a decent inflation hedge long before index-linked bonds were ever invented. This characteristic was particularly attractive in the 1970s and 1980s. The list of academic justifications goes on and on.

## Performance-chasers

But perhaps most convincing is the argument that the cult of the equity was the product of a period of spectacular outperformance from the asset class. This became self-fulfilling. Pension funds bought more and more equities because they kept outperforming. Insurance companies (except in the US, where their exposure to equities has been limited by law) and retail investors couldn't resist the same trade. Figure 7 shows the annual returns from US equities and government bonds divided into decades since the 1920s. We also show the annual returns for the total period.

**Figure 7. US Annual Returns By Decade (%)**



Source: Global Financial Data, Datastream, Citi Investment Research

#### All about performance

Since 1920, even including the dreadful experience of the last decade, US equities have generated a healthy annual return of 10.9% compared to a bond return of 6.1%. The most spectacular equity performance (especially relative to bonds) was not in the roaring 1920s, 1980s or 1990s, but in the 1950s. Perhaps this is what brought investor attention back to equities. It took many years for the wounds of the 1929 crash to heal — US equities only managed to regain their pre-1929 crash levels in 1954. But from there, a new 40-year love affair with equities began. The 1970s were tricky, but equities did no worse than bonds. Indeed, by the end of the 1990s, the long-term outperformance of equities over bonds looked truly spectacular. \$100 invested in US equities in 1950 would have been worth \$58,380 at the end of 1999 versus \$1,651 in treasuries. Those two numbers probably say more about the cult of the equity than any long academic study.

## Cult Switch

The evidence suggests that the cult of the equity began in the 1950s and peaked in the late 1990s — that's a 40-year bull market. Since then, it seems that the investor love affair with equities has soured.

Many of arguments associated with the cult of the equity have since come under attack. Inflation seems much less of a problem. Equities have never been particularly good at hedging inflation anyway, and now index-linked bonds can do a much better job. The long duration of the equity asset class becomes less desirable for pension funds as populations mature and retirement dates approach. Defined contribution investors (where the individual takes the risk) may be less willing to tolerate volatile equity returns than the old defined benefit plans (where the employer takes the risk).

#### Poor performance batters equity cult

But most importantly, it is dreadful returns that are increasingly putting investors off equities. Since the end of 1999, global equities have returned just 4% in total. Not only have equity returns been trivial, but the volatility has been brutal. Having two 50% bear markets in one decade is enough to test the patience of the most determined equity cultist. Just as strong returns helped to build the cult of the equity in the 1950s, so weak returns are tearing it down now.

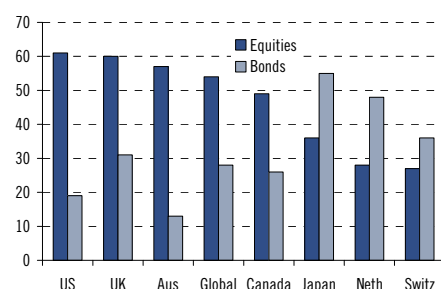
Investor appetite for global equities is falling. Figure 3 shows that in 2009 US private sector pension funds held 55% of total assets in equities compared to 70% in 2006. Figure 4 suggests that UK pension funds cut their equity weighting to 39% in 2009, down from the 76% high in 1993. The 2009 rebound in equity prices has helped to reverse some of this decline in equity weightings, but most investor intention surveys suggest that the secular reduction in equity weightings is likely to continue.

#### \$1900bn equity overhang?

How far could this go? A reduction in equity holdings back to pre-1959 levels (around 20% of total assets) would indicate considerable selling pressure to come. For US private sector pension funds alone, that would imply a further \$1900bn reduction in equity weightings. The story looks similar amongst retail investors. Equity inflows into US mutual funds have not recovered from the 2007-09 bear market (Figure 5). European equity inflows never recovered from the 2000-03 bear market (Figure 6).

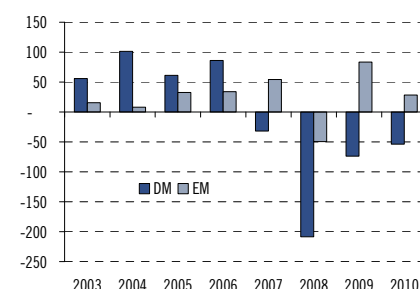
The evidence suggests that there could still be considerable institutional selling to come. Developed market pension funds have cut their equity weightings from peaks but there is still a long way before they get back down to pre-cult levels. For a broader global comparison, we look at the 2010 Towers Watson Global Pensions Assets Survey (Figure 8). Given different data samples, this might not correspond with the long-term historical data series that we have already shown for the US and UK, but it is a useful guide to regional variations.

Figure 8. Pension Fund Asset Allocation (%)



Source: Towers Watson

Figure 9. Global Fund Flows (\$bn)



Source: EPFR

#### Japanese pension funds down to 36% equities

Japan may be a useful guide to an unwinding equity cult. According to Towers Watson, in 1998 Japanese pension funds held 55% in equities, still remarkably high given the dire performance of the Japanese market through the decade. Japanese pension funds now hold 36% of total assets in equities and that number seems likely to head lower. Bonds have been the key beneficiaries of equity outflows. Elsewhere in the world, Australian pension funds have a high equity weighting although our local strategists have argued that the compulsory superannuation fund structure has embedded the equity culture more firmly than in other parts of the world. Continental European funds are already firmly tilted away from equities towards bonds, so the scope for further equity outflows might be more limited.

Emerging Markets remain one bright area amidst the gloom. Figure 9 shows annual global equity inflows as measured by EPFR. This confirms the sorry state of developed market inflows, but it also shows that the appetite for Emerging Markets equities has been much more robust.

## Cult Of The Bond

### Here comes the bond cult

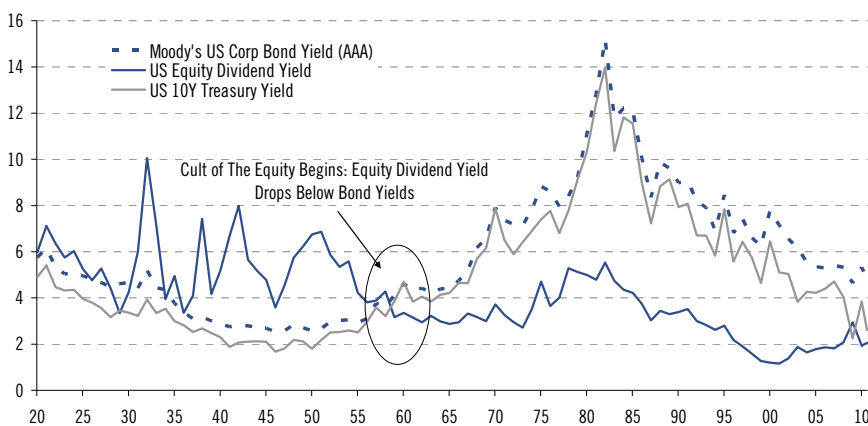
As the cult of the equity fades, it is being replaced by a new cult of the bond. It is argued that bonds are more appropriate in a world where deflation, not inflation, is the main threat. Liability Driven Investing (LDI) advocates usually promote the liability-matching benefits of bonds over equities. Ageing populations would seem to favour bonds over equities — most “lifestyle” pension schemes automatically switch equities into bonds as a worker approaches retirement age. Perhaps most importantly, bonds have handsomely outperformed equities in the past decade. Since 2000, global equities have returned 4% (0.3% per year), while global government bonds have returned 103% (6.9% per year). The list of factors favouring bonds is as long as that favouring equities back in the 1990s.

These arguments are reflected in rising pension fund bond weightings (Figure 3 and Figure 4). We can also see that mutual fund inflows now favour bonds, although not yet as consistently and heavily as they favoured equities in the late 1990s (Figure 5 and Figure 6).

## Valuations

So, the current debate about the cyclical merits of bonds of equities hides a more profound reassessment of both asset classes. This is being reflected in an equally profound structural shift in relative valuations. Figure 10 shows a comparison of US treasury, corporate bond (Moody's AAA rated) and equity dividend yields since 1920.

Figure 10. US Asset Yields (%)



Source: Global Financial Data, Datastream, Citi Investment Research



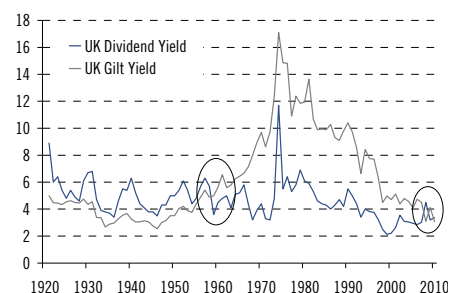
From 1920 to 1959 (i.e. even before the Great Depression), US equities consistently yielded more than treasuries. From 1940 to 1958, equities even yielded more than corporate bonds.

#### The reverse yield gap

As US investors first embraced the cult of the equity back in the 1950s, they pushed equity dividend yields below those on treasury and corporate bonds. The same was the case in other markets. UK, Japanese and German equity dividend yields also fell below government bond yields in the late 1950s. This was the beginning of the so-called “reverse yield gap”, which kept widening until the top of the late 1990s bull market. However, the reverse yield gap started to contract in the first great bear market of the 2000s and completely disappeared in the second. Following the collapse of Lehman Bros, dividend yields moved back above treasury yields for the first time in 50 years. This proved a useful buy signal — US equities rebounded strongly over the following 12 months.

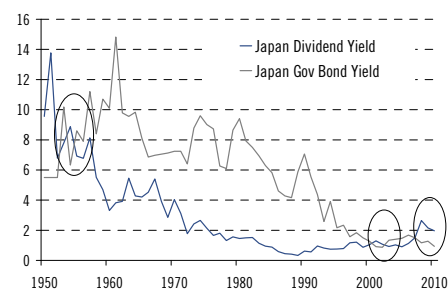
Strong bond and weak equity markets are threatening to eliminate the reverse yield gap again in 2010. Our European equity strategy team have highlighted dividend yields in their markets recently rising back above bond yields. UK equities now trade on a dividend yield of 3.4% compared to a 10-year gilt yield of 2.8% (Figure 11). German equities trade on a dividend yield of 2.9% compared to bunds at 2.1%. Japanese equities trade at a dividend yield of 2.0% compared to a JGB yield of 1.0% (Figure 12).

Figure 11. UK Asset Yields (%)



Source: Global Financial Data, Datastream, CIRA

Figure 12. Japan Asset Yields (%)



Source: Global Financial Data, Datastream, CIRA

The US is the one major market where the reverse yield gap has not disappeared. The S&P Composite index currently trades on a historic dividend yield of 2.2% compared to treasury yields at 2.5%. So, US equities would need to fall another 10% (or dividends rise 10%) for the reverse yield gap to disappear completely.

#### Emerging Markets the exception

If we take our definition of the cult of the equity as being when equities yield more than government bonds, then it is already dead in Europe and Japan. It is almost dead in the US. Only in Emerging Markets is it alive and well (equity yield 2.2% vs government bond yield of 5.7%).

And this is only focused on the government bond yield. If we were to see a true reversal back to early 1950s relative valuations, then equities would need to trade on a dividend yield above corporate bond yields. Right now, with the Moody's US corporate AAA benchmark yielding 4.3%, that would mean the S&P composite falling another 50%.

## It Is What It Is

Of course we can (and will) carry on arguing about whether bonds or equities will be proven “right” after the recent decoupling. We can (and will) carry on arguing about the likelihood of a double-dip in the global economy. We can (and will) carry on arguing about whether the developed world is heading into a Japan-style deflationary spiral. Each outcome should have meaningful implications for the direction of global equity and bond prices.

However, we can’t help wondering if this misses the point. With the notable exception of Emerging Markets, what is really going on is a long-term shift in investor appetite for equities and bonds. It will take more than the avoidance of a double-dip to turn the equity outflows around. Sure equity prices would probably rise in the short term if that were to happen, but a sustainable rerating could only be achieved if investors were to be attracted back to the asset class. Although likely to be painful in the short run, an inflation-inspired global bond sell-off would probably offer the best chance of that happening. That still seems pretty unlikely for now.

### Equities to stay cheap

The Citi view on the outlook for the global economy could be best described as “uninspiring, but not disastrous”. But rather than furiously arguing about whether that view is right and if it is already reflected in share prices, perhaps we would be better served by accepting that, from a valuation perspective, it is what it is. For all sorts of reasons, both cyclical and structural, equities are likely to remain “cheap” against bonds for some time yet.

So it is what it is. Investors are unlikely to pile back into global equities any time soon. It looks like they are likely to sell weightings down and move further into bonds. This is convenient for government bond issuers given that they have such vast amounts of bonds to sell. Equity and bond valuations will continue to reflect these flows. Maybe global equities can move higher with rising profits but, outside Emerging Markets, the prospect of a 1980/90s-style rerating still seems a very long way off.

### Here come the corporates

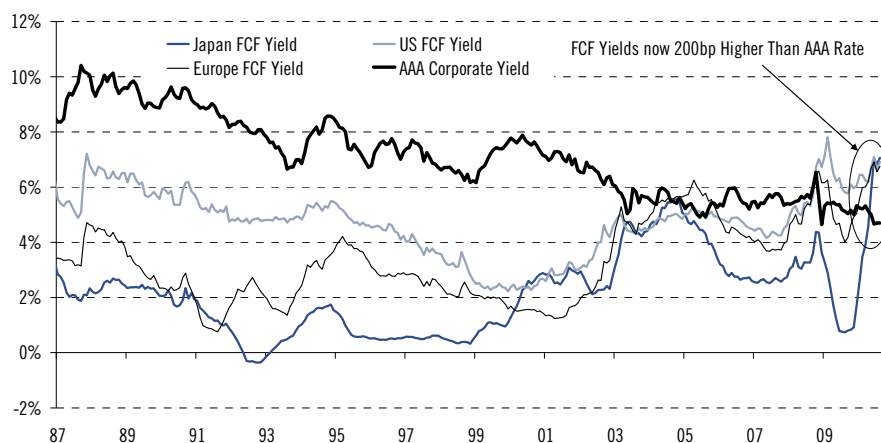
However, all is not lost. This discussion misses out one key dynamic in the global equity market — corporates. If investors are setting the cost of equity and debt capital and it is what it is, how will CEOs react? If the price-makers are offering capital at various rates in various markets, how will that affect the behaviour of the price-takers? And what implications might that have for the global economy?

## Use Debt/Cash Not Equity

A cheap capital market for investors means an expensive capital market for companies. And vice versa. Right now, it makes little sense for lowly valued developed market companies to use equity financing for investment projects. It makes much more sense to use debt.

To make this point, Figure 13 compares the free cash flow yield on global equity market to the Moody’s AAA US corporate benchmark. According to this index, it would cost a blue chip company just 4.3% to finance itself in the AAA debt markets. This is now well below 2006-07 credit boom levels and the free cash flow yield that the major equity markets are trading on. And Citi credit strategists suggest that this Moody’s benchmark is of a long duration (20-30 years) and so overestimates the cost of capital in the debt markets. BHP is hoping to finance the Potash bid at 3-4%. IBM managed to borrow shorter dated money at just 1% recently.

**Figure 13. Equity Free Cash Flow And US AAA Corporate Yields (%)**



Source: CIRA, Factset

The implication is obvious. Companies should borrow in the corporate bond market, buy assets in the equity market and immediately earn a spread. This logic prevails in all the developed markets (as long as cashflow generation holds up).

#### Using cash not debt

Despite this, global corporates are reluctant to gear up. This is entirely understandable given the collapse in credit availability seen in 2008. However, at the very least we might expect them to start investing the cash that has built up during the recent sharp profits rebound. Perhaps they could use this for capital expenditure, M&A or buy-backs. With rates so low, cash is a highly dilutive asset. While shareholders are unlikely to pressurise companies to take on significant debt, they are more likely to press management to utilise dilutive cash piles.

What does that mean for the global markets and economy? If corporates respond to the current high cost of equity financing, how will that shape the medium term outlook? If the equity saving cult is now dead amongst investors, what does it mean for the equity financing cult amongst companies? For the sake of brevity, we focus on the implications for three key drivers of global equity markets: de-equitisation, capex and mega-caps.

## 1. De-equitisation

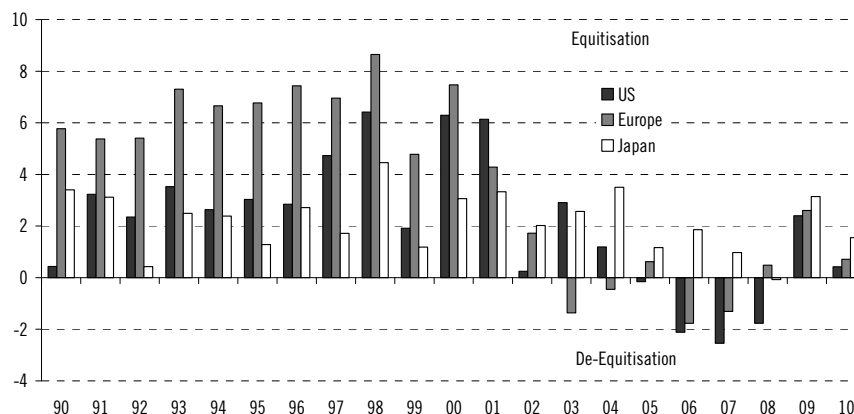
Put simply, the demise of the equity cult means that we have a demand/supply imbalance. If the demand for global equities falls, but the supply stays the same, then basic economics would suggest that prices will also fall. And while it seems that investors are unlikely to boost the demand for equities soon, maybe we could expect corporates to shrink the supply.

Figure 14 shows the equitisation of the major global equity markets since 1990. This measures the increase in the value of a stock market that is not attributable to the increase in the underlying price index. It will rise as a result of primary or secondary equity issuance. It will contract as a result of cash M&A or share buybacks. It is a crude measure of changes to the total share count.

## Equity binge

Unsurprisingly, at the peak of the cult, when financing was cheap (valuations expensive), equity supply was plentiful. US IT companies gorged on cheap equity capital. European governments privatized their Telecom monopolies at high multiples. Share counts expanded rapidly. However, that left a significant overhang once the demand for equity started to wane. Equity valuations fell accordingly.

**Figure 14. Annual Net Equity Issuance (% Change)**



Source: Datastream

US and European companies reacted logically to a sharp increase in the cost of equity financing — they started to shrink their share counts (de-equitise). Equity issuance fell and redemption increased. Cash/debt financed M&A (equity financed M&A has no effect on equitisation) retired over 2% of total US/European equity per year in 2005-08, partly as a result of an LBO boom. Companies also bought back increasing amounts of stock. Our US strategy team estimate that S&P Companies bought back around 4-5% of their total market cap at the peak in 2007. At the same time, UK companies bought around 3-4% of their shares back.

## Japanese don't de-equitise

Although Japanese companies have seen the greatest shift in the cost of equity against debt financing over the past 20 years, they have been reluctant to embrace the economic logic of de-equitisation<sup>3</sup>. Cash/debt financed M&A is virtually non-existent. Share buybacks lagged well behind those seen elsewhere. Perhaps this highlights the importance of shareholder activism and a live market for corporate control. Much of the de-equitisation in the US and Europe has resulted from cash M&A or shareholder pressure. The lack of both in Japan probably explains why companies there have been so slow to address equity oversupply problems.

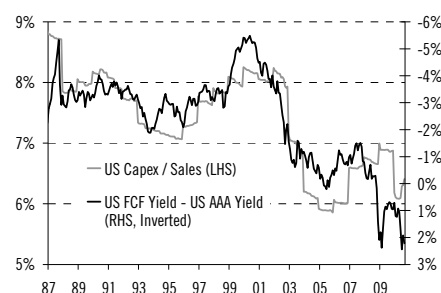
<sup>3</sup> Global Equity Strategist: Not Turning Japanese, 21 July 2010

Markets equitised again in 2009 as a result of distressed equity issuance amongst the Financials. However, we suspect that this is temporary and de-equitisation is coming back. Cheap equity valuations and negligible cost of debt financing means that buybacks and cash bids should be highly EPS accretive. And de-equitisation should provide desperately needed net buying for developed market equities at a time when core shareholders are still sellers. This should be a support for global share prices. If investors don't buy shares, then we believe that companies increasingly will. A \$40bn buy order for global equities (the BHP bid for Potash) financed in the bond markets represents an entirely logical response to the demise of the equity cult and the emergence of the bond cult. This will help to counter the demand/supply imbalance that has plagued global equities since 2000. This one deal alone would soak up all the 2010 net selling of developed market equities recorded by the 19,000 funds tracked by EPFR in Figure 9.

## 2. Capex

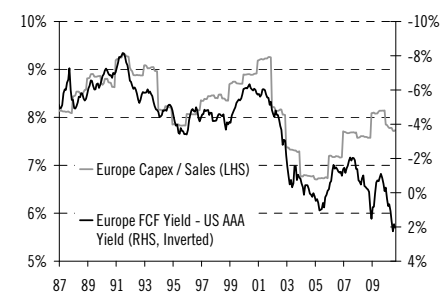
We suspect that the demise of the equity cult is also having a significant impact upon the shape of the current economic recovery. A slow pick-up in corporate capex (and associated job generation) remains a concern for policymakers around the world. However we can see lower capex rates as a logical response to the expensive cost of equity capital. At the peak of the cult, equity financing was relatively cheap and capex was high (Figure 15). Now, equity financing is expensive and capex is low. We can see a similar relationship in Europe (Figure 16), although capex rates have been boosted in recent years by the Mining stocks.

Figure 15. US Capex Vs Rel Cost Of Equity



Source: CIRA, Factset

Figure 16. European Capex Vs Rel Cost Of Equity



Source: CIRA, Factset

This suggests that cheap equity financing helped to drive a capex boom in the late 1990s. But cheap debt financing is not having the same effect now. Perhaps this is because equity investors (when they've got the capital available) are more likely to finance long-term capex projects. Bond investors want their pay-back earlier.

## Buy, don't build

We also suspect that the sharp de-rating of the equity against debt markets is encouraging companies to choose the “buy not build” option. Instead of building out its own potash operations, BHP is tapping cheap debt capital to buy into an established business. With equity valuations depressed, the temptation for companies to choose M&A or buybacks over capex are understandable, especially given the uncertain economic outlook. In effect, it seems that low equity valuations (a high cost of equity financing) are crowding out capex. Perhaps policy makers, frustrated by the slow capex cycle, should direct more attention to the predicament of the equity market, rather than lavishing their generosity upon the bond and credit markets.

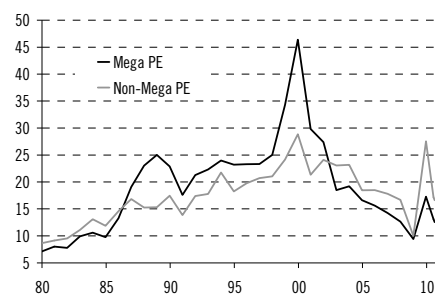
Most bull markets sow the seeds of their own destruction. The equity bull market of the 1990s helped to finance a capex boom, especially in the Tech and Telecom sectors. This excess capacity damaged profitability and created deflationary forces that undermined future equity returns and boosted future bond returns. Now, it seems that we may be heading in the opposite direction. Capital flows out of equities into bonds appear to be crowding out capex. This should eventually allow output gaps to close, so sustaining profitability and pricing power for companies. The resultant inflation could ultimately end up bringing down the present bond cult.

## 3. Mega-Caps

The cult of the bond cannot last forever, but it seems unlikely that it will be replaced by a new cult of the equity soon. Within the global equity market, we think that this will have continued implications for the beleaguered global mega caps. These are the world's biggest companies that had the most to gain from the cheap cost of equity financing seen at the top of the bull market. But they seem to be floundering now that the equity cult is over.

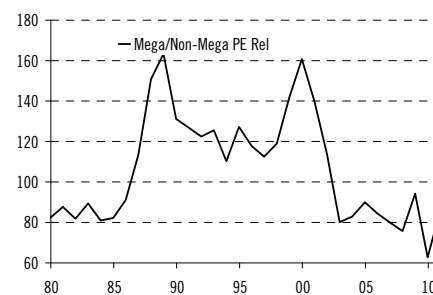
We define the global mega-caps as the top 3% of names by market cap each year in the MSCI AC World index. At the moment, these 72 huge companies have a total market cap of \$6947bn and account for around 30% of the total global index. On our definition, the largest mega-cap is now Exxon at \$300bn, while the smallest is ENI at \$72bn.

Figure 17. Global Trailing PE



Source: CIRA, Factset

Figure 18. Global Trailing PE Rel: Mega/Non Mega



Source: CIRA, Factset

### Rise and fall of the mega cap

Figure 17 shows that global mega-caps saw the biggest rerating in the 1980-90s bull market. Boosted by strong performance from global TMT companies, our mega-cap index peaked at a PE of 46x in 2000. CEOs plundered this (with hindsight) ludicrously cheap capital to boost capex. The premium relative to the rest of the market (Figure 18) made most equity-financed acquisitions of smaller competitors highly accretive. Big companies just kept getting bigger. Our mega cap index of the around 70 largest names got to 44% of the overall market in 1999. The mega-caps were both creations and beneficiaries of the cult of the equity.

That has now all changed. As the equity cult waned, so did the valuations of the mega-caps. Our index bottomed at a PE of just 10x. It still trades at a lowly 13x trailing earnings. Perhaps most importantly, mega-caps now trade at a significant discount to the rest of the market and the pressure is on to break-up.

This gives a different angle to the constant debate about the underperformance and low rating of the global mega-caps. Balance sheets may be strong, profitability may be robust, and exposure to global markets may be broad. But valuations remain depressed. Many mega-cap CEOs think that their low PE reflects market concerns about growth prospects. But maybe it is more basic than that. They (or more likely their predecessors) issued too many shares in the late 1990s when their equity valuations were high. They have been reluctant to redeem those shares now that their valuations are low. Consequently, there is an ongoing share overhang, which conventional equity investors just do not have the firepower to absorb. Until mega-cap CEOs recognise this and begin to buy back truly meaningful amounts of their equity (something that most remain reluctant to do), they will likely continue to languish at lowly valuations. For now, many are more inclined to buy their smaller competitors for cash, a strategy that will only further widen the valuation gap between them and the rest of the market. As our European strategy colleagues put it, “being long mega-caps is like being short M&A”. That doesn’t feel like a particularly comfortable trade right now.

### Mega traps

Of course, at any one time there will be individual mega-caps where share prices outperform the wider market, but maybe they will not outperform as an asset class until a new cult of the equity is born. That likelihood remains distant. In the meantime, equity investors should beware of the relative attractions of mega-caps. They may be value traps unless the CEO can be pressurised into realising that value. We watch events at Vodafone with great interest.

## De-equitisation Strategies

### M&A and buybacks

So, if we accept that the cult of the equity is unlikely to return soon and that the main net buyer of shares is likely to be companies themselves, how should an equity investor tilt a global portfolio to exploit the return of de-equitisation? We highlight two themes: M&A and share buybacks.

### M&A

In a recent note, we highlighted that the stage was set for an upturn in debt/cash financed M&A<sup>4</sup>. Figure 19 highlights companies that have some M&A risk according to media sources and are buy-rated by CIRA analysts.

**Figure 19. Companies With M&A Risk and Are Buy Rated**

Company Name	Country	Sector	Mkt Cap \$bn	2010-12 EPS CAGR	PE 2012	DY 2012	Rec.
EMC Corporation	US	IT	37.5	17.5	11.0	0.0	1M
Canadian Nat. Resources	Canada	Energy	35.0	35.3	7.8	1.2	1H
Tencent Holdings	HK	IT	33.5	28.9	16.8	0.9	1L
MTN Group	Sth Afr	Telecoms	30.6	12.8	10.2	2.4	1H
Celgene Corp	US	IT	23.6	38.1	12.6	0.0	1M
Prudential	UK	Financials	22.3	15.8	5.6	4.0	1H
Allergan	US	IT	18.6	13.5	15.3	0.7	1M
Tullow	UK	Energy	16.7	100.2	26.3	0.4	1H
NetApp	US	IT	14.4	34.0	15.7	0.0	1H
Juniper Networks	US	IT	14.1	25.8	13.7	0.0	1H
Northern Trst	US	Financials	11.2	18.8	11.2	3.3	1M
Santos	Australia	Energy	10.6	31.3	21.8	2.9	1M
Hynix	Korea	IT	10.3	-14.7	4.2	0.0	1M
Marvell Technology	US	IT	10.3	64.1	10.8	0.0	1H
Mitsub. Tanabe Pharma	Japan	Pharma	8.9	12.1	19.7	2.1	1M
Givaudan	Switz	Materials	8.8	18.6	14.0	2.6	1M
CheckPoint Software Tech	Israel	IT	7.3	6.5	12.5	0.0	1M
Sony Financial	Japan	Financials	7.2	-4.2	13.7	1.1	1H
Korea Exchange Bank	Korea	Financials	6.9	18.2	6.0	5.8	1L
NII Holdings	US	Telecoms	6.1	35.6	9.3	2.7	1S
United Utilities	UK	Utilities	6.1	-19.2	14.2	5.5	1M
Daihatsu Motor	Japan	Cons. Disc.	5.7	56.7	9.2	1.8	1M
Kyowa Hakko Kirin	Japan	Pharma	5.4	22.4	13.6	2.9	1M
Nvidia Corp	US	IT	5.4	n.a	15.5	0.0	1S
EDP Renovaveis	Spain	Utilities	4.9	57.3	14.7	1.4	1H
Lonmin	UK	Materials	4.9	53.4	12.9	0.2	1M
Weir Group	UK	Industrials	4.0	7.0	11.5	2.3	1H
Sonic Healthcare	Australia	Pharma	4.0	10.7	12.5	5.6	1M
SMA Solar Tech	Germany	Industrials	3.8	10.6	8.7	3.5	1H
TUI Travel	UK	Cons. Disc.	3.7	128.5	8.0	6.7	1H
Informa	UK	Cons. Disc.	3.6	18.2	9.5	4.2	1H
ITV	UK	Cons. Disc.	3.5	31.5	8.3	0.0	1H
OTE	Greece	Telecoms	3.4	18.8	7.4	4.6	1H

Source: CIRA

<sup>4</sup> Global Equity Strategist: Let's Make A Deal, 21 April 2010



## Share buybacks

We also consider a less immediately lucrative, but more predictable, way to play the return of de-equitisation: share buy-backs. Figure 20 screens for companies that have consistently bought back their stocks over the past 5 years and are buy or hold rated by CIRA analysts. Share buybacks offer two benefits for shareholders. At current valuations they are generally highly EPS accretive. They also provide a ready buyer for a company's equity when many of its traditional shareholders are still sellers. These are the companies that have shown the most willingness to mop up the stock overhang from the equity cult.

**Figure 20. Global Buyback Basket. Consistent Buybacks. Buy/Hold Rated**

			Mcap	Chg in Share Count (%)		FCF Yield (%)		Div Yield (%)	
	Country	Sector	(\$bn)	YoY	5yr Avg	2010	2011	2010	2011
Comcast	US	Cons Disc	12.3	-8.4	-41.2	11.8	14.9	1.6	2.4
Autozone	US	Cons Disc	6.2	-8.2	-40.5	7.4	8.8	0.0	0.0
Amerisourcebergen	US	Pharma	7.7	-7.4	-37.2	7.5	8.7	1.2	1.2
KPN	Neth.	Telecoms	23.7	-6.8	-34.6	9.8	12.7	7.0	7.7
Aetna	US	Pharma	11.5	-5.7	-29.8	17.5	17.1	0.0	0.0
Swedish Match	Sweden	Cons Staples	5.5	-5.4	-28.6	6.1	5.5	3.1	3.4
Next	UK	Cons Disc	5.7	-5.4	-28.5	11.7	8.9	3.3	3.6
Portugal Telecom	Portugal	Telecoms	6.8	-5.3	-28.5	7.9	11.4	6.3	6.3
Texas Instruments	US	IT	28.6	-5.4	-28.3	7.7	11.0	2.1	2.3
Philips Electrs	Neth.	Industrials	27.3	-4.8	-26.1	14.5	8.4	3.5	3.9
Lab Corp Of Amer	US	Pharma	7.6	-4.7	-25.0	9.8	9.8	0.0	0.0
Tnt	Neth.	Industrials	9.4	-4.3	-23.4	1.9	7.4	3.0	3.8
Korea Tobacco	Korea	Cons Staples	5.6	-4.2	-23.1	9.1	10.0	5.2	5.5
Sherwin-Williams	US	Materials	6.6	-4.2	-23.0	9.4	7.0	2.0	2.2
Amgen	US	Pharma	50.8	-4.2	-22.9	10.6	10.8	0.0	0.0
IBM	US	IT	160.1	-4.1	-22.5	13.2	14.4	1.7	1.8
Hewlett-Packard	US	IT	90.6	-4.1	-22.0	10.6	12.6	0.8	0.8
Fiserv	US	IT	7.6	-4.0	-22.0	9.4	10.3	0.0	0.0
Swisscom	Switz	Telecoms	9.1	-4.0	-21.8	8.6	9.4	6.1	6.6
Waters Corp	US	Pharma	5.7	-3.8	-20.8	6.3	6.4	0.0	0.0
Harley-Davidson	US	Cons Disc	5.7	-3.7	-20.6	7.9	9.1	1.7	1.7
Nokia	Finland	IT	32.1	-3.6	-19.7	4.0	6.6	4.7	5.2
Microsoft	US	IT	185.3	-3.5	-19.4	10.5	11.1	2.2	2.2
Akzo Nobel	Neth.	Materials	12.3	-3.3	-19.0	2.2	6.2	3.6	4.0
Target Corp	US	Cons Disc	36.2	-3.1	-17.6	10.8	9.4	1.4	1.7
Omnicom	US	Cons Disc	10.9	-3.1	-17.1	2.6	11.5	2.3	2.3
Ball Corp	US	Materials	5.0	-3.0	-16.5	6.5	10.2	0.7	0.7
BASF	Germany	Materials	48.6	-2.9	-16.4	4.5	7.2	4.6	5.0
Syngenta	Switz	Materials	21.9	-2.8	-16.0	4.1	6.4	2.4	2.7
Advance Auto Part	US	Cons Disc	5.2	-2.8	-15.7	6.6	7.4	0.4	0.4
Lockheed Martin	US	Industrials	22.2	-2.8	-15.6	10.1	11.1	3.7	3.7
Deere & Co	US	Industrials	26.7	-2.6	-14.8	5.9	4.5	1.8	2.0
Mcdonald'S Corp	US	Cons Disc	78.6	-2.5	-14.4	5.4	6.0	3.1	3.4
Munich Re.	Germany	Financials	25.3	-2.5	-14.0	n.a	n.a	5.9	7.4
Cisco Systems	US	IT	114.8	-2.4	-13.9	7.8	9.7	0.0	0.0
Deutsche Boerse	Germany	Financials	12.0	-2.2	-12.8	8.1	9.8	4.3	4.7

Source: Citi Investment Research and Analysis

## Conclusion

Equities in Japan and Europe trade on dividend yields higher than their respective government bonds. That is only 10% away on the S&P. Of course, this derating of equity against bonds reflects current double-dip and deflation fears, but it also a profound reassessment of both asset classes. The cult of the equity is dead. Long live the cult of the bond.

But all is not lost for global equities. While it seems that conventional investors could remain sellers for some time yet, corporates have the means to step in as buyers. The combination of low equity valuations, surplus cashflows and cheap debt financing means that global de-equitisation is likely to return. This will help to soak up the continued equity overhang from the late 1990s, but it will be a long process. At least it means that global equities will likely not settle at pre 1959 valuations — shareholders and corporates would not allow this to happen. The doubling of European equities in 2003-2007 showed how de-equitisation can help markets rise even when conventional investors are consistent sellers.

The demise of the equity cult will continue to have profound implications for the global economy and markets. It is likely to keep capex levels subdued. Why bother to build when you can buy existing assets cheaply? Mega caps are likely to trade at discount valuations until they show a more meaningful intention to address their equity oversupply problems, perhaps through buybacks or break-ups (or preferably both). They were quick to exploit the rise of the equity cult, but have been slow to respond to its subsequent demise. Investors should position themselves for a period where the marginal buyer of equity is the corporate, not other equity investors. This would imply tilting portfolios towards M&A and buy-back candidates. We would be very suspicious of serial equity issuers.

### Enjoy Emerging Markets

Emerging Markets remain a refreshing exception to these gloomy trends. Investor appetites for equity remain healthy. Equity financing is competitive relative to debt. Capex is booming. Larger-cap stocks are not under consistent pressure to break up. It all feels very 1990s — companies and investors should enjoy it while it lasts.

---

# 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**  
**30-Aug-10**

### **Asia ex-Japan Equity Strategy: M&A – Moneyed and Able But Unwilling in Asia**

'Globally, M&A has returned', proclaims Strategist Markus Rosgen, 'but don't expect much of it in Asia ex-Japan... while there are no legal reasons preventing M&A in Asia ex, ownership structures (mostly family held) and individual egos are hurdles... not a bad thing in itself, given the poor track record that M&A has in delivering returns to shareholders... also, just because the region lacks M&A does not mean it lacks interesting alternatives: Asia-ex is awash with free cash flow, which are now back at their 7% peaks... and cash flow investing, if we look at the return spread between cheap vs expensive stocks on P/CF, has been the 3rd best investment strategy over the last 5 years and the very best over the last 10 and 20 years... what's more, more free cashflow has led to a doubling in dividend payouts in the last decade - accounting for 46% of the region's total returns'.

**US**  
**Tobias Levkovich**  
**27-Aug-10**

### **US Equity Strategy: Monday Morning Musings – Pricing Power and the Deflation Debate**

'Much of the downward trajectory on bond yields recently', argues US Strategist Levkovich, 'reflects the abundance of cash running for perceived safety (vs volatile stocks) combined with quantitative easing and foreign buying... rather than a clear distinct message about deflation expectations... deflation is a rare event... and most surveys and TIPS spreads do not truly support the deflation view... the view deflation is affecting all parts of the economy also does not seem to hold up to scrutiny when focusing attention on services such as insurance, education and health care... that said, there is evidence that corporate margins could face challenges sometime next year and that is important for style investing... and be it from deflation pressures or wage developments, when margin pressures emerge, both small cap stocks & growth names tend to outperform'.

**Australia & New Zealand**  
**Richard Schellbach**  
**27-Aug-10**

### **Australia/New Zealand Reporting Season: An Even Match**

'After a shaky first half', concludes Australian Strategist Richard Schellbach, 'the final scorecard to this reporting season has seen positive & negative earnings surprises evenly matched... in terms of dividends, the news has been better, largely reflecting the cash rich, and lowly geared balance sheet of Australia Inc... our fear heading into this results season that '11 earnings forecasts could be subject to heavy downgrades on the back of cautious outlook statements, and US double-dip fears, also did not materialize... and overall, earnings grew by 9.5% over the last 12 months (FY'10)... looking ahead, with the market trading at just a 11.6x forward PE & 5.1% dividend yield, we see good value in Aussie equities'.

**Europe**  
**Jonathan Stubbs & Adrian Cattley**  
**26-Aug-10**

### **European Country Strategist: La Crème de la Crème**

'Further share price weakness is possible from here', whispers the European Country Strategist, 'perhaps on the back of further weakness in US macro data... but, investors need to be high conviction macro bears to aggressively sell equities down from these levels... absolute valuations do not look stretched, and relative valuations suggest European equities are excellent value... what's more, profit delivery is strong; balance sheets, robust; cash flows, impressive; cost restraint, common; and corporate action, on the rise (M&A, de-equitisation)... thus, we stick by our strategy of buying into weakness... and continue to back: 1) outperformance of EM exposure, 2) growth beating value, 3) high beating low quality, 4) ongoing underperformance of mega-caps, 5) corporate action including de-equitisation, and 6) country effect'.

**Japan**  
**Tsutomu Fujita**  
**25-Aug-10**

### **Comparing bubbles and deflation in the US and Japan: Japanese, US economic structures very different**

'Concerns the US could become the next Japan', reasons Japan Strategist Tsutomu Fujita, 'is pushing down the US long-term interest rate and weakening the dollar relative to the yen... the yen-dollar rate has dropped to the ¥85/\$ range, near the April 1995 low of ¥79.50/\$... and this, in turn, is having a significantly negative impact on Japanese equities... overdone, considering the Japanese economy and corporate earnings are relatively firm, and valuations for Japanese equities look low... moreover, the fundraising rush over 2H09 is over... and we are seeing share buybacks being revived as corporate earnings recover... thus, we continue to expect a rebound in Japanese equities from this autumn... favoring a well-balanced investment of both Asian plays and domestic-demand stocks'.

**Economics**  
**Willem Buiter**  
**18-Aug-10**

## **Economics & Quantitative Analysis**

### **Global Economic Outlook and Strategy: August 2010**

'A sustained but uneven global recovery', reports August's Global Economic Outlook & Strategy, 'continues to be our view, although the near-term outlook could be quite choppy... we do not regard a double-dip recession - that takes major economies back into a period of sustained negative growth - as likely... nevertheless, growth momentum has slowed in China, Japan and the US, and is unlikely to regain the vigour of late 2009 and early 2010 in the next few quarters... we are raising our 2010 growth forecasts for the UK, euro area, Sweden and Hong Kong, but cutting our forecasts for the US and Japan... for a slight tilt to the downside'.

**Economics**  
**Steven Weiting**  
**18-Aug-2010**

### **Inside the S&P500: Brighter Rearview Mirror, Rougher Road Ahead**

'Brighter rear-view mirror, rougher road ahead', quips US Economist Steven Weiting, 'of US earnings... for while corporate earnings in 2Q continued to dramatically beat our expectations as margins surges, we still see a sharp slowing in EPS growth ahead... our revised S&P 500 operating EPS growth for 2011 is for a slowing to +7% (versus consensus expectations of +14.6%) after a 36% gain in 2010... as the upward drivers of higher non-financial profits are waning... this, in turn, feeds back some on financial profits as well, as uncertainty has risen, slowing forward-looking financial activity'.

## Market Outlook

We think that current fears of a global double dip are overdone. A rollover in economic lead indicators and analyst earnings revisions is normal for this point in the cycle. We think that they predict an inevitable slowdown, rather than a reversal, of the global recovery that began last year. Therefore, we believe that analyst forecasts of double-digit earnings growth in 2011 are achievable and our market targets suggest that the recent setback in global equities represents a buying opportunity. As such we stick with our long-held MSCI AC World target of 330 at end-2010. We think that global equities can make healthy gains in 2H10 as investors become aware that the current rollover in lead indicators is a relatively normal early-cycle occurrence rather than an indicator of impending doom.

## Regional Strategy

Decent earnings and cheap valuations mean that we remain Overweight the UK. Of course UK economic performance is a concern, but 70% of FTSE 100 revenues come from overseas. Japan remains our preferred regional cyclical recovery play. We do not believe that it has resolved the evident structural problems, but we think that if there is one point in the cycle when Japanese corporates could outperform their global peers it is now. If Japan is our favored regional recovery story, Emerging Markets remain our preferred structural growth play. We think that talk of a deflating EM equity bubble is premature. The US remains Underweight. Valuation is the highest amongst the key regions and we can find better earnings momentum elsewhere. We downgraded Europe ex-UK to Neutral at the start of the year. Earnings momentum is uninspiring but cheap valuations keep us Neutral for now.

## Sector Strategy

Our earnings momentum tilt favours the more cyclical sectors. This reflects our view that concerns about a global double-dip are overdone. We back those cyclical sectors that are generating the strongest earnings momentum because we think it can be maintained. Right now, these are Consumer Discretionary, Materials and Industrials. Defensive sectors remain generally unattractive. We stay Underweight Utilities and Telecoms where cheap valuations are still not enough to counter poor earnings momentum. We also remain Underweight Consumer Staples, where valuations look expensive.

## Risk

The biggest risk to our outlook is that the emerging evidence of an economic and earnings recovery proves to be just a false dawn.

GDP	2009	2010E	2011E
Global	-1.9	3.6	3.2
US	-2.6	2.5	2.2
Euro zone	-4.1	1.4	1.2
Japan	-5.2	2.9	1.4
EM	1.4	6.7	5.9
Asia	5.8	8.4	7.4

CPI	2009	2010E	2011E
Global	1.4	2.6	2.9
US	-0.3	1.6	1.3
Euro zone	0.3	1.5	1.8
Japan	-1.3	-0.8	-0.1
EM	4.3	5.3	5.5
Asia	1.1	4.1	4.1

Interest Rates	Current	4Q10	2Q11
US Fed Funds	0.25	0.25	0.25
ECB	1.00	1.00	1.00
UK Base	0.50	0.50	0.50
Japan Call	0.10	0.10	0.10

10Yr Yield	Current	4Q10	2Q11
US	2.50	2.90	3.40
Euro zone	2.15	2.50	2.70
UK	2.85	3.17	3.37
Japan	1.02	1.20	1.40

Ex Rates	Current	4Q10	2Q11
US\$/€	1.27	1.26	1.28
£/US\$	1.53	1.56	1.49
€/£	0.83	0.81	0.87
US\$/¥	84	87	88

Source: Factset, Citi Investment Research

Figure 21. Regional And Global Sector Recommendations (Arrows show latest changes)

<b>Overweight</b> UK Global Emerging Markets Japan	<b>Neutral</b> Europe ex-UK Developed Asia	<b>Underweight</b> US
<b>Overweight</b> Consumer Disc. Materials Industrials ↑	<b>Neutral</b> Energy IT ↓ Health Care Financials	<b>Underweight</b> Consumer Staples Utilities Telecoms

Source: CIRA

---

# Global Market Intelligence

---

Figure 22. Global Market Intelligence by Region

30 Aug 2010	Free MC US\$bn	Wgt %	P/E			EPS YoY %			P/B	ROE	Div Yld	EV/ Sales	EV/ EBITDA	Perf % (local)	
			09E	10E	11E	09E	10E	11E	10E	10E	10E	09	09	Weekly	YTD
<b>Global</b>	<b>23,546</b>	<b>100</b>	<b>17.2</b>	<b>12.5</b>	<b>10.7</b>	<b>-5.2</b>	<b>39.1</b>	<b>16.8</b>	<b>1.6</b>	<b>12.9</b>	<b>2.8</b>	<b>1.5</b>	<b>8.6</b>	<b>-1.0</b>	<b>-5.5</b>
Developed World	20,370	86.5	17.4	12.6	10.8	-5.9	39.5	16.9	1.6	12.6	2.8	1.5	8.7	-1.0	-6.1
Emerging World	3,176	13.5	16.0	11.9	10.2	-1.0	36.9	16.2	1.8	15.1	2.6	1.6	7.7	-1.3	-1.4
<b>North America</b>	<b>10,938</b>	<b>46.5</b>	<b>17.1</b>	<b>13.0</b>	<b>11.2</b>	<b>0.0</b>	<b>32.7</b>	<b>16.2</b>	<b>1.9</b>	<b>14.4</b>	<b>2.2</b>	<b>1.8</b>	<b>9.0</b>	<b>-1.4</b>	<b>-5.4</b>
USA	9,870	41.9	16.9	12.7	11.0	3.9	34.0	15.5	1.9	14.8	2.1	1.7	8.9	-1.7	-5.9
Canada	1,068	4.5	18.9	15.9	12.8	-28.1	19.3	23.6	1.7	10.9	2.5	2.6	10.1	1.6	0.0
<b>Europe</b>	<b>6,012</b>	<b>25.5</b>	<b>15.0</b>	<b>11.1</b>	<b>9.6</b>	<b>-19.7</b>	<b>37.0</b>	<b>16.0</b>	<b>1.5</b>	<b>13.2</b>	<b>3.9</b>	<b>1.4</b>	<b>8.2</b>	<b>-1.0</b>	<b>-5.8</b>
United Kingdom	2,045	8.7	14.5	10.6	9.1	-32.3	37.2	16.0	1.6	15.5	3.7	1.4	7.9	-0.6	-4.1
Europe ex UK	3,967	16.8	15.3	11.4	9.9	-10.3	36.9	16.0	1.4	12.2	3.9	1.4	8.3	-1.2	-6.7
France	910	3.9	15.7	10.9	9.4	-32.2	43.5	15.8	1.2	11.1	4.3	1.3	7.9	-1.6	-9.3
Switzerland	759	3.2	15.5	12.3	11.0	435.9	25.8	12.2	2.1	17.2	3.4	2.1	10.8	-0.2	-4.7
Germany	711	3.0	17.6	10.8	9.5	-16.8	63.6	12.7	1.3	12.4	3.6	1.2	9.3	-1.6	-3.7
Spain	349	1.5	10.2	9.8	8.8	-11.1	3.7	10.6	1.5	14.9	5.9	2.1	7.4	-1.0	-15.7
Sweden	272	1.2	17.1	14.5	12.2	-1.2	17.9	19.2	1.8	12.4	3.3	1.4	11.9	-1.4	6.1
Italy	268	1.1	12.8	11.0	8.6	-37.1	16.3	27.0	0.8	7.7	4.6	1.4	5.3	-1.3	-14.2
Netherlands	239	1.0	21.5	10.3	9.2	3.9	108.3	13.0	1.5	14.6	3.2	1.3	9.3	-0.8	-2.8
Finland	98	0.4	14.7	13.3	11.3	-36.9	10.7	17.8	1.6	12.2	4.8	1.0	10.2	-1.7	-2.8
Denmark	93	0.4	31.0	17.3	13.2	-34.2	79.2	30.5	2.1	12.1	1.2	1.5	7.8	-1.0	21.6
Belgium	89	0.4	15.1	13.2	11.8	226.1	14.4	11.6	1.3	10.2	2.8	1.4	7.8	-0.3	1.6
Norway	72	0.3	15.2	11.0	8.8	-34.1	37.9	26.0	1.4	13.1	4.5	1.3	5.2	-1.1	-9.4
Austria	29	0.1	12.9	11.2	8.5	-36.4	15.2	30.8	1.0	9.3	3.1	1.3	6.9	-2.0	-3.8
Greece	29	0.1	7.1	11.6	8.5	-26.1	-39.1	35.9	0.9	7.4	3.0	1.2	5.0	-2.4	-32.4
Portugal	26	0.1	13.6	13.2	11.8	-6.6	2.7	12.3	1.5	11.3	4.5	2.0	7.7	0.1	-12.2
Ireland	22	0.1	21.4	20.8	22.9	-272.5	84.0	195.9	1.1	-5.2	2.8	1.1	10.5	-8.1	-21.4
<b>Japan</b>	<b>2,145</b>	<b>9.1</b>	<b>40.0</b>	<b>15.9</b>	<b>12.6</b>	<b>126.7</b>	<b>166.7</b>	<b>25.9</b>	<b>1.0</b>	<b>6.4</b>	<b>2.2</b>	<b>1.1</b>	<b>8.9</b>	<b>0.3</b>	<b>-9.4</b>
<b>Asia Pac ex Jp</b>	<b>3,056</b>	<b>13.0</b>	<b>17.6</b>	<b>13.1</b>	<b>11.5</b>	<b>10.6</b>	<b>36.1</b>	<b>13.1</b>	<b>1.8</b>	<b>13.9</b>	<b>3.1</b>	<b>1.5</b>	<b>8.5</b>	<b>-0.5</b>	<b>-2.7</b>
<b>Pacific ex Jp</b>	<b>1,197</b>	<b>5.1</b>	<b>17.5</b>	<b>14.1</b>	<b>12.2</b>	<b>-7.0</b>	<b>24.7</b>	<b>15.1</b>	<b>1.7</b>	<b>12.3</b>	<b>4.1</b>	<b>2.0</b>	<b>10.6</b>	<b>0.4</b>	<b>-5.7</b>
Australia	785	3.3	17.8	13.7	11.5	-12.0	30.0	19.0	1.9	13.6	4.4	2.0	10.3	0.5	-8.7
Hong Kong	242	1.0	17.7	15.1	14.7	14.9	17.2	2.8	1.4	9.3	3.1	2.5	14.1	-0.5	1.6
Singapore	160	0.7	16.6	14.7	13.1	-6.6	13.2	12.6	1.7	11.6	3.4	1.7	9.8	1.2	-0.2
New Zealand	10	0.0	13.7	14.3	12.7	-22.3	-4.5	12.9	1.5	10.7	5.9	1.3	6.8	0.6	-9.4
<b>Em Asia</b>	<b>1,859</b>	<b>7.9</b>	<b>17.6</b>	<b>12.5</b>	<b>11.1</b>	<b>26.3</b>	<b>43.6</b>	<b>12.0</b>	<b>1.9</b>	<b>15.1</b>	<b>2.5</b>	<b>1.4</b>	<b>7.9</b>	<b>-1.1</b>	<b>-0.7</b>
China	590	2.5	16.4	13.2	11.5	16.9	27.3	14.8	2.1	15.9	2.7	1.7	8.5	-0.8	-5.4
Korea	433	1.8	14.7	9.1	8.5	54.5	61.4	7.0	1.3	14.8	1.5	0.8	5.7	-0.2	3.5
Taiwan	344	1.5	21.7	12.9	11.8	46.7	84.2	8.0	1.7	13.8	4.2	1.6	9.3	-2.5	-7.5
India	250	1.1	23.1	18.8	15.3	2.5	22.6	23.1	2.9	15.5	1.2	2.2	11.0	-2.7	2.2
Malaysia	98	0.4	19.6	15.9	14.1	0.3	23.8	12.6	2.2	13.6	3.1	2.4	10.1	1.3	10.6
Indonesia	75	0.3	18.1	15.2	12.6	6.8	18.9	21.1	3.7	24.2	2.7	2.4	7.5	-1.3	12.8
Thailand	52	0.2	15.1	12.8	10.8	32.4	18.5	18.4	2.0	15.3	3.4	1.0	7.0	1.2	17.1
Philippines	16	0.1	19.2	15.8	14.1	12.5	22.0	11.6	2.5	15.9	3.3	2.2	8.0	-1.6	11.0
<b>Latin America</b>	<b>732</b>	<b>3.1</b>	<b>16.4</b>	<b>12.7</b>	<b>10.3</b>	<b>-23.3</b>	<b>29.5</b>	<b>24.1</b>	<b>1.9</b>	<b>15.3</b>	<b>2.8</b>	<b>2.4</b>	<b>8.3</b>	<b>-2.0</b>	<b>-4.7</b>
Brazil	496	2.1	15.3	11.3	9.2	-28.6	35.6	23.5	1.8	15.9	3.0	2.4	8.0	-2.6	-9.3
Mexico	130	0.6	17.9	16.7	13.1	4.9	8.1	27.7	2.3	14.1	2.3	2.2	8.3	-2.2	-2.4
Chile	55	0.2	21.9	18.7	15.8	-13.8	18.0	18.1	2.2	11.7	2.2	2.5	10.0	-1.2	19.6
Colombia	29	0.1	26.3	22.4	17.0	-36.6	17.7	31.7	1.8	7.7	2.1	3.3	11.8	2.5	22.4
Peru	21	0.1	19.9	16.0	12.1	25.1	24.3	32.0	4.3	26.7	3.0	8.6	18.4	5.1	14.2
<b>CEEMEA</b>	<b>585</b>	<b>2.5</b>	<b>12.2</b>	<b>9.5</b>	<b>8.0</b>	<b>-17.7</b>	<b>29.0</b>	<b>19.0</b>	<b>1.4</b>	<b>15.0</b>	<b>2.8</b>	<b>1.6</b>	<b>5.9</b>	<b>-0.7</b>	<b>0.0</b>
South Africa	234	1.0	16.2	12.8	10.2	-10.5	26.5	25.0	2.0	15.7	3.3	2.0	7.0	-0.6	1.2
Russia	202	0.9	9.4	6.6	5.7	-27.4	42.1	16.8	1.0	14.9	2.0	1.5	5.0	-0.8	-3.8
Turkey	55	0.2	11.6	10.1	9.1	20.5	14.9	11.1	1.8	17.7	2.6	1.5	7.6	0.8	11.9
Poland	47	0.2	14.5	12.7	10.6	-19.7	14.0	19.9	1.4	11.4	3.3	0.9	5.8	-2.0	1.1
Egypt	16	0.1	11.3	13.6	10.9	2.8	-16.9	24.5	1.8	12.9	3.2	2.1	6.3	0.0	6.4
Czech Republic	13	0.1	11.0	11.0	10.6	-5.2	-0.2	3.9	1.9	17.4	6.0	2.7	5.5	-2.1	-3.5
Hungary	13	0.1	12.1	11.1	8.6	-33.5	9.2	28.5	1.2	11.1	2.6	1.3	6.4	-0.9	-1.3
Morocco	5	0.0	16.7	15.2	13.7	1.1	9.5	11.3	4.5	29.3	4.8	4.2	7.0	2.1	10.2
<b>Israel</b>	<b>77</b>	<b>0.3</b>	<b>14.2</b>	<b>11.1</b>	<b>9.7</b>	<b>32.7</b>	<b>27.8</b>	<b>14.7</b>	<b>2.0</b>	<b>17.9</b>	<b>2.7</b>	<b>2.9</b>	<b>11.5</b>	<b>-1.0</b>	<b>-9.9</b>

Source: Citi Investment Research and Analysis, MSCI, World scope, Factset Consensus estimates



Figure 23. Global Market Intelligence by Sector

30 Aug 2010	Free MC US\$bn	Wgt %	P/E			EPS YoY %			P/B	ROE	Div Yld	EV/ Sales	EV/ EBITDA	Perf % (local)	
			09E	10E	11E	09E	10E	11E	10E	10E	10E	09	09	Weekly	YTD
<b>Global</b>	<b>23,546</b>	<b>100</b>	<b>17.2</b>	<b>12.5</b>	<b>10.7</b>	<b>-5.2</b>	<b>39.1</b>	<b>16.8</b>	<b>1.6</b>	<b>12.9</b>	<b>2.8</b>	<b>1.5</b>	<b>8.6</b>	<b>-1.0</b>	<b>-5.5</b>

**Level One**

Energy	2,498	10.6	14.0	10.2	8.8	-46.6	37.6	15.9	1.4	14.2	3.0	1.4	7.0	-1.2	-11.7
Materials	1,991	8.5	23.7	13.0	10.2	-47.6	82.3	27.2	1.7	13.3	2.2	1.9	11.1	-0.7	-5.8
Industrials	2,444	10.4	19.5	14.1	11.8	-29.6	38.0	19.5	1.8	12.7	2.4	1.3	10.1	-1.2	-0.7
Consumer Disc.	2,241	9.5	26.0	14.8	12.2	-9.2	80.5	21.2	1.7	11.7	2.0	1.2	9.3	-0.9	-0.1
Consumer Staples	2,375	10.1	16.6	14.9	13.4	4.0	11.7	10.9	2.7	18.3	3.1	1.5	9.7	-0.3	1.0
Health Care	2,030	8.6	12.2	11.2	10.4	6.8	8.8	8.4	2.3	20.6	2.8	2.2	8.8	-1.1	-8.4
Financials	5,007	21.3	18.2	12.0	9.8	254.4	59.9	23.2	1.1	8.9	3.0	NA	NA	-1.4	-6.7
IT	2,742	11.6	19.9	12.6	11.2	17.0	60.5	12.3	2.4	19.5	1.5	1.8	9.5	-2.0	-10.3
Telecoms	1,184	5.0	12.8	12.2	11.3	-8.6	5.0	7.7	1.7	13.9	5.3	1.9	5.7	0.0	-0.6
Utilities	1,034	4.4	13.1	12.6	11.9	5.6	3.3	6.1	1.3	10.5	4.5	1.8	7.5	0.1	-5.0

**Level Two**

Energy	2,498	10.6	14.0	10.2	8.8	-46.6	37.6	15.9	1.4	14.2	3.0	1.4	7.0	-1.2	-11.7
Materials	1,991	8.5	23.7	13.0	10.2	-47.6	82.3	27.2	1.7	13.3	2.2	1.9	11.1	-0.7	-5.8
Capital Goods	1,793	7.6	17.6	13.4	11.2	-26.8	31.2	19.2	1.8	13.2	2.4	1.3	10.2	-1.4	-1.3
Comm Svc & Supp	163	0.7	18.2	16.0	14.0	-13.7	13.7	14.3	2.2	13.6	2.7	1.3	9.3	-0.3	-6.2
Transport	487	2.1	33.8	16.8	13.7	-49.3	100.9	22.4	1.8	10.6	2.1	1.5	9.9	-0.5	3.8
Autos	522	2.2	229.4	12.4	9.8	-100.1	N/A	27.4	1.2	9.3	1.6	1.0	11.1	-0.9	-4.9
Consumer Durables	359	1.5	41.9	17.9	13.7	18.1	134.5	31.0	1.6	8.9	1.8	0.9	9.1	-1.4	-1.3
Consumer Services	301	1.3	19.2	16.4	14.3	-4.4	17.0	15.0	2.9	17.6	2.3	2.0	11.1	-0.1	8.6
Media	510	2.2	16.7	14.3	12.2	-6.4	16.5	17.4	1.7	12.2	2.4	1.8	7.5	-0.7	1.6
Retailing	549	2.3	18.9	15.6	13.6	8.1	21.2	15.0	2.5	15.9	1.9	1.1	8.7	-1.1	-0.3
Food & Staples	566	2.4	15.8	14.1	12.6	0.9	11.8	12.0	1.9	13.8	2.6	0.8	7.8	-0.8	-2.1
Food Bev & Tobac.	1,408	6.0	16.6	14.8	13.4	5.9	12.2	10.5	3.0	20.4	3.3	2.0	10.3	0.0	2.8
Household Products	401	1.7	17.9	16.4	14.8	2.1	9.5	10.3	3.5	21.3	2.9	2.1	10.8	-0.8	-1.0
Health Care	488	2.1	13.6	12.4	11.4	10.6	10.2	8.5	2.1	17.0	1.1	1.3	8.6	-2.5	-11.8
Pharma & Biotech	1,542	6.5	11.8	10.9	10.1	5.8	8.4	8.4	2.4	21.8	3.4	2.8	8.9	-0.6	-7.3
Banks	2,418	10.3	18.2	12.0	9.6	-18.3	59.9	26.7	1.2	9.7	3.3	NA	NA	-1.4	-5.8
Div Financials	1,132	4.8	32.4	11.0	8.9	129.0	194.9	24.6	1.0	8.6	1.6	NA	NA	-2.6	-10.6
Insurance	905	3.8	10.9	10.6	8.9	440.8	11.4	19.2	1.0	8.7	3.4	NA	NA	-1.1	-7.5
Real Estate	552	2.3	22.8	18.9	17.7	-9.5	20.4	7.0	1.2	6.4	3.7	NA	NA	0.4	0.1
Software & Services	1,103	4.7	15.7	13.9	12.4	9.5	13.1	12.2	3.6	25.9	1.3	2.7	9.5	-1.9	-10.6
Tech	1,160	4.9	22.6	13.1	11.1	16.0	74.3	17.1	2.0	15.5	1.2	1.4	9.6	-1.7	-9.6
Semi & Semi Equip	480	2.0	29.3	9.5	9.2	79.6	236.5	4.1	2.0	20.5	2.5	2.0	9.4	-2.8	-12.5
Telecom	1,184	5.0	12.8	12.2	11.3	-8.6	5.0	7.7	1.7	13.9	5.3	1.9	5.7	0.0	-0.6
Utilities	1,034	4.4	13.1	12.6	11.9	5.6	3.3	6.1	1.3	10.5	4.5	1.8	7.5	0.1	-5.0

Source: Citi Investment Research and Analysis, MSCI, World scope, Factset Consensus estimates

Figure 24. 2010 P/E Estimates by Region and Sector

30 Aug 2010

P/E 10E	World	US	Eur ex UK	UK	Japan	Asia Pac xJ	Dev Asia	Em Asia	Lat Am	CEEMEA
Region	12.5	12.7	11.4	10.6	15.9	13.1	14.1	12.5	12.7	9.5

**Level One**

Energy	10.2	11.1	8.9	8.3	7.1	12.9	23.0	11.4	9.7	5.7
Materials	13.0	14.9	13.2	8.9	15.2	12.1	12.3	11.8	11.8	12.9
Industrials	14.1	14.2	14.0	11.8	14.0	14.5	17.0	13.4	24.2	11.1
Consumer Disc.	14.8	14.6	13.5	12.9	19.7	12.7	16.6	11.5	16.3	14.2
Consumer Staples	14.9	14.0	15.4	13.2	20.0	17.1	16.8	17.5	20.5	18.5
Health Care	11.2	11.0	11.2	9.9	15.7	19.7	17.5	23.9		14.6
Financials	12.0	12.3	9.4	12.4	13.9	13.3	13.2	13.5	12.8	11.4
IT	12.6	12.3	14.9	21.1	18.3	10.9	16.7	10.9	11.1	11.0
Telecom Services	12.2	17.2	10.4	9.6	11.6	12.4	11.1	12.8	11.9	11.8
Utilities	12.6	12.3	9.8	12.2	24.6	16.5	16.8	16.3	11.4	12.1

**Level Two**

Energy	10.2	11.1	8.9	8.3	7.1	12.9	23.0	11.4	9.7	5.7
Materials	13.0	14.9	13.2	8.9	15.2	12.1	12.3	11.8	11.8	12.9
Capital Goods	13.4	13.7	13.8	10.4	12.5	13.5	14.2	13.2	20.8	11.5
Comm Svc & Supp	16.0	16.0	16.4	14.7	17.7	16.2	15.9	19.0		
Transport	16.8	16.1	14.3	18.6	19.4	17.6	22.6	13.9	28.4	7.1
Autos & Components	12.4	8.7	11.2		17.0	9.5		9.5		
Consumer Durables	17.9	14.5	17.8	22.0	34.1	13.1	12.1	13.4	11.6	8.0
Consumer Services	16.4	16.8	14.9	13.0	21.9	17.5	18.5	16.0		
Media	14.3	14.9	11.1	13.8	20.6	14.0	12.7	22.2	19.1	18.6
Retailing	15.6	15.1	18.7	10.5	17.6	18.5	17.5	19.9	31.5	12.7
Food & Staples Retailing	14.1	12.5	13.6	13.0	19.5	17.1	17.4	16.2	26.5	21.4
Food Bev & Tobacco	14.8	14.2	15.6	13.1	19.4	15.8	15.4	16.0	18.3	14.9
Household Products	16.4	15.4	17.0	14.8	22.6	28.7		28.7	22.9	
Health Care Equip & Svc	12.4	11.5	17.5	12.2	19.2	22.5	17.6	44.7		12.7
Pharma & Biotech	10.9	10.8	10.6	9.8	15.1	18.8	17.5	20.8		15.4
Banks	12.0	15.6	10.0	13.5	11.0	12.3	12.3	12.2	12.3	11.4
Div Financials	11.0	11.0	9.2	10.6	20.8	15.9	17.2	15.0	18.1	10.8
Insurance	10.6	9.8	8.2	9.2	17.9	17.4	13.1	21.8	10.3	11.5
Real Estate	18.9	37.1	14.0	17.3	21.3	14.3	14.4	14.1	24.1	12.7
Software & Services	13.9	13.2	16.0	16.0	18.0	22.4	15.8	22.9	11.1	11.0
Tech Hardware & Equip	13.1	12.1	16.0		18.5	12.7	97.5	12.6		
Semi & Semi Equip	9.5	10.0	10.6	39.8	17.0	8.2	10.1	8.2		
Telecom	12.2	17.2	10.4	9.6	11.6	12.4	11.1	12.8	11.9	11.8
Utilities	12.6	12.3	9.8	12.2	24.6	16.5	16.8	16.3	11.4	12.1

Source: Citi Investment Research and Analysis, MSCI, World scope, Factset Consensus estimates

Figure 25. Stocks Mentioned Within This Report

RIC Code	Stock	Price	Rating	Currency	RIC Code	Stock	Price	Rating	Currency
AAP.N	Advance Auto	55.54	2H	USD	LMI.L	Lonmin	16.07	1M	GBP
AET.N	Aetna	27.73	2M	USD	MRVL.O	Marvell Technology	16.23	1H	USD
AKZO.AS	Akzo Nobel	42.445	1M	EUR	MCD.N	McDonald's	73.88	2L	USD
AGN.N	Allergan	63.02	1M	USD	MSFT.O	Microsoft	23.77	1L	USD
ABC.N	AmerisourceBergn	27.98	1M	USD	4508.T	Mitsubishi Tanabe	1335	1M	JPY
AMGN.O	Amgen Inc	52.48	1M	USD	MTNJ.J	MTN Group Ltd	123.2	1H	ZAR
AZO.N	AutoZone Inc	213.81	2M	USD	MUVGn.DE	Munich Re	101.25	2M	EUR
BSY.L	B Sky B	7.12	1M	GBP	NTAP.O	Netwk Appliance	42.098	1H	USD
BLL.N	Ball Corp	57.48	1M	USD	NXT.L	Next Group	20.28	1M	GBP
BASFn.DE	BASF	42.305	1M	EUR	NIHD.O	NII Holdings	37.5	1S	USD
CNQ.N	Cdn Natural Rsc	33.1	1H	USD	NOK1V.HE	Nokia	7	2H	EUR
CEL.G.O	Celgene Corp	52.8	1M	USD	NTRS.O	Northern Trst	47.32	1M	USD
CHKP.O	Check Pt Sftwre	35.66	1M	USD	NVDA.O	NVIDIA	9.47	1S	USD
CSCO.O	Cisco Systems	20.44	1M	USD	OMC.N	Omnicom Group	35.57	1M	USD
CMCSA.O	Comcast Corp	18.055	1M	USD	OTEr.AT	OTE	5.52	1H	EUR
7262.T	Daihatsu	1128	1M	JPY	PHG.AS	Philips	23.265	2M	EUR
DE.N	Deere and Co	65.11	1M	USD	PTC.LS	Portugal Telecom	9.176	1H	EUR
DB1Gn.DE	Deutsche Boerse	49.23	1M	EUR	PRU.L	Prudential	5.8	1H	GBP
EDPR.LS	EDP Renovaveis	4.42	1H	EUR	STO.AX	Santos	14.29	1M	AUD
EMC.N	EMC Corp	18.65	1M	USD	SHW.N	Sherwin-Williams	70.68	2M	USD
FISV.O	Fiserv Inc	51.48	1M	USD	S92G.DE	SMA Solar Tech	85.95	1H	EUR
GIVN.VX	Givaudan	992	1M	CHF	SHL.AX	Sonic Healthcare	11.48	1M	AUD
HOG.N	Harley Davidson	24.8	2H	USD	8729.T	Sony Financial	279200	1H	JPY
HPQ.N	Hewlett-Packard	38.84	1M	USD	SWMA.ST	Swedish Match	173.1	2M	SEK
000660.KS	Hynix	20850	1M	KRW	SCMN.VX	Swisscom	396.2	1M	CHF
IBM.N	IBM	125.02	1M	USD	SYNN.VX	Syngenta	239.3	1L	CHF
INF.L	Informa	3.9700003	1H	GBP	TGT.N	Target Corp	52.06	1M	USD
ITV.L	ITV	0.5905	1H	GBP	0700.HK	Tencent	142.5	1L	HKD
JNPR.N	Juniper Netwrks	27.76	1H	USD	TXN.N	Texas Instrument	23.48	1M	USD
004940.KS	Korea Exch Bk	12850	1L	KRW	TNT.AS	TNT N.V.	20.68	1M	EUR
KPN.AS	KPN	11.405	1M	EUR	TT.L	TUI Travel Plc	2.164	1H	GBP
033780.KS	KT&G	61800	1L	KRW	TLW.L	Tullow Oil	12.34	1H	GBP
4151.T	Kyowa Hakko Kirin	804	1M	JPY	UU.L	United Utilities	5.82	1M	GBP
LH.N	Laboratory Corp	73.48	1L	USD	WAT.N	Waters	61.7	2M	USD
LMT.N	Lockheed Martin	70.16	1H	USD	WEIR.L	Weir Group	12.67	1H	GBP

Source: Citi Investment Research and Analysis. \*Prices as of 31<sup>st</sup> August 2010

## Appendix A-1

### Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of all or any identified portion of this research report hereby certifies that, with respect to each issuer or security or any identified portion of the report with respect to an issuer or security that the research analyst covers in this research report, all of the views expressed in this research report accurately reflect their personal views about those issuer(s) or securities. The research analyst(s) also certify that no part of their compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this research report.

### IMPORTANT DISCLOSURES

Citigroup Global Markets Korea Securities Limited (CGMK) performs the role of liquidity provider on the warrants of which the underlying asset is Hynix Semiconductor. As at 01 Sep 10 CGMK holds 1,614,460 Citi ELW 0215, 3,193,530 Citi ELW 0254, 3,399,490 Citi ELW 0255, 3,399,970 Citi ELW 0339, 3,399,860 Citi ELW 0380, 2,879,770 Citi ELW 0450, 1,797,550 Citi ELW 0482, 3,400,000 Citi ELW 0544, 1,513,010 Citi ELW 0580, 3,399,000 Citi ELW 0616, 3,168,030 Citi ELW 0654, 3,485,150 Citi ELW 0655, 3,396,700 Citi ELW 0694, 3,449,950 Citi ELW 0695, 3,496,000 Citi ELW 0696, 3,550,000 Citi ELW 0697, 3,600,000 Citi ELW 0698, 3,399,000 Citi ELW 0726, 3,000,000 Citi ELW 0738 Call warrants & 55,193 shares of Hynix Semiconductor.

Citigroup Global Markets Korea Securities Limited (CGMK) performs the role of liquidity provider on the warrants of which the underlying asset is Hyundai E&C. As at 01 Sep 10, CGMK holds 3,394,060 Citi ELW 0329, 3,398,480 Citi ELW 0361, 3,398,800 Citi ELW 0381, 3,399,990 Citi ELW 0451, 3,400,000 Citi ELW 0545, 3,394,130 Citi ELW 0581, 3,400,000 Citi ELW 0617 Call warrants & 468 shares of Hyundai E&C.

Citigroup Global Markets Korea Securities Limited (CGMK) performs the role of liquidity provider on the warrants of which the underlying asset is KT & G. As at 01 Sep 10, CGMK holds 3,390,000 Citi ELW 0248, 3,190,650 Citi ELW 0252, 3,376,720 Citi ELW 0354, 3,400,000 Citi ELW 0418, 3,400,000 Citi ELW 0471, 3,399,990 Citi ELW 0506, 3,399,990 Citi ELW 0568 Call warrants & 567 shares of KT & G.

Citigroup Global Markets Korea Securities Limited (CGMK) performs the role of liquidity provider on the warrants of which the underlying asset is Woori Finance. As at 01 Sep 10, CGMK holds 3,349,590 Citi ELW 0285, 3,187,480 Citi ELW 0574 Call warrants & 5,692 shares of Woori Finance.

A director of Citi serves on the board of Comcast Corporation. Citigroup Global Markets, Inc. is acting as a financial co-advisor to General Electric in its agreement to form a joint venture with Comcast.

Wenge Yang, Associate, holds a long position in the shares of Cisco Systems Inc.

A director of Citi serves on the board of Hewlett Packard Co.

Zeeshan Yusuf, Associate, holds a long position in the securities of Insurance Australia Group Ltd.

One or more directors of Citi serves on the board of IBM Corporation.

An employee of Citigroup Global Markets or its affiliates is a Sales Consultant of Next Retail Ltd.

An employee of Citigroup Global Markets or its affiliates is a trustee of Target Corp.

A consultant to Citigroup Global Markets or its affiliates is a chairman of a subsidiary of United Utilities Plc.

Adrian Cattley, Strategist, holds a long position in the securities of Prudential Plc.

A member of the household of Tobias M Levkovich, Strategist, holds a long position in the securities of Microsoft Corp..

Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Comcast Corp, EMC Corporation, Insurance Australia Group Ltd, Sonic Healthcare Ltd, Santos Ltd, TUI Travel Plc. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of Korea Exchange Bank, KT&G, Woori Financial Holdings, Hana Financial Group, Aetna, Akzo Nobel NV, Amgen Inc, Comcast Corp, Centrica PLC, Cisco Systems, Inc., Deere & Company, EDP Renovaveis, Harley-Davidson Inc, International Business Machines Corp, Kumba Iron Ore Ltd, Lonmin PLC, Lockheed Martin Corp., McDonald's Corp, Microsoft Corp., Omnicom, Sherwin-Williams Co, Target Corp, TUI Travel Plc.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from Korea Exchange Bank, Woori Financial Holdings, Hana Financial Group, Mitsubishi Tanabe Pharma, Daihatsu Motor, Sony Financial Holdings, Aetna, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, Ball Corp, Comcast Corp, Centrica PLC, Cisco Systems, Inc., Deutsche Boerse AG, Deere & Company, Givaudan AG, Harley-Davidson Inc, Hewlett-Packard Co, International Business Machines Corp, Kumba Iron Ore Ltd, Lonmin PLC, Lockheed Martin Corp., Bank Leumi, McDonald's Corp, Millicom Intl Cellular, Microsoft Corp., Munich Re, NII Holdings Inc, Nokia Oyj, Northern Trust Corp, Omnicom, OTE, Philips Electronics NV, Prudential Plc, SMA Solar Technology AG, Sherwin-Williams Co, SunTrust Banks Inc, Santos Ltd, Target Corp, TUI Travel Plc.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Woori Financial Holdings, Allergan Inc, Amgen Inc, Comcast Corp, Deutsche Boerse AG, Kumba Iron Ore Ltd, Laboratory Corp of America, Bank Leumi, Millicom Intl Cellular, MTN Group Limited.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Hynix, Hyundai E&C, Korea Exchange Bank, KT&G, Woori Financial Holdings, Tencent Holdings, Hana Financial Group, Kyowa Hakko Kirin, Mitsubishi Tanabe Pharma, Daihatsu Motor, Sony Financial Holdings, AmerisourceBergen Corp, Aetna, Allergan Inc, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, BG Group PLC, Ball Corp, British Sky Broadcasting Group PLC, Celgene Corp, CheckPoint Software Technologies, Inc., Comcast Corp, Centrica PLC, Canadian Natural Resources Ltd, Cisco Systems, Inc., Deutsche Boerse AG, Deere & Company, EMC Corporation, Fiserv, Inc., Givaudan AG, Harley-Davidson Inc, Hewlett-Packard Co, Insurance Australia Group Ltd, International Business Machines Corp, Informa PLC, ITV PLC, Juniper Networks, Inc., Kumba Iron Ore Ltd, KPN NV, Laboratory Corp of America, Lonmin PLC, Lockheed Martin Corp., Bank Leumi, McDonald's Corp, Millicom Intl Cellular, Marvell Technology Group Ltd., Microsoft Corp., MTN Group Limited, Munich Re, NII Holdings Inc, Nokia Oyj, NetApp, Inc., Northern Trust Corp, NVIDIA

Corp, Next Group PLC, Omnicom, OTE, Philips Electronics NV, Prudential Plc, Portugal Telecom, Swisscom AG, Sonic Healthcare Ltd, Sherwin-Williams Co, SunTrust Banks Inc, Santos Ltd, Syngenta AG, Target Corp, Tullow Oil PLC, TNT N.V., TUI Travel Plc, Texas Instruments Inc, United Utilities PLC, Weir Group PLC in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): Korea Exchange Bank, Woori Financial Holdings, Hana Financial Group, Mitsubishi Tanabe Pharma, Daihatsu Motor, Sony Financial Holdings, Aetna, Allergan Inc, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, Ball Corp, Comcast Corp, Centrica PLC, Cisco Systems, Inc., Deutsche Boerse AG, Deere & Company, Givaudan AG, Harley-Davidson Inc, Hewlett-Packard Co, International Business Machines Corp, Kumba Iron Ore Ltd, Laboratory Corp of America, Lonmin PLC, Lockheed Martin Corp., Bank Leumi, McDonald's Corp, Millicom Intl Cellular, Microsoft Corp., MTN Group Limited, Munich Re, NII Holdings Inc, Nokia Oyj, Northern Trust Corp, Omnicom, OTE, Philips Electronics NV, Prudential Plc, SMA Solar Technology AG, Sherwin-Williams Co, SunTrust Banks Inc, Santos Ltd, Target Corp, TUI Travel Plc.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: Hynix, Hyundai E&C, Korea Exchange Bank, KT&G, Woori Financial Holdings, Hana Financial Group, Kyowa Hakkō Kirin, Mitsubishi Tanabe Pharma, Daihatsu Motor, Sony Financial Holdings, AmerisourceBergen Corp, Aetna, Allergan Inc, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, BG Group PLC, Ball Corp, British Sky Broadcasting Group PLC, Celgene Corp, CheckPoint Software Technologies, Inc., Comcast Corp, Centrica PLC, Canadian Natural Resources Ltd, Cisco Systems, Inc., Deutsche Boerse AG, Deere & Company, EMC Corporation, Fiserv, Inc., Givaudan AG, Harley-Davidson Inc, Hewlett-Packard Co, Insurance Australia Group Ltd, International Business Machines Corp, ITV PLC, Juniper Networks, Inc., Kumba Iron Ore Ltd, KPN NV, Lonmin PLC, Lockheed Martin Corp., Bank Leumi, McDonald's Corp, Millicom Intl Cellular, Marvell Technology Group Ltd., Microsoft Corp., MTN Group Limited, Munich Re, NII Holdings Inc, Nokia Oyj, NetApp, Inc., Northern Trust Corp, NVIDIA Corp, Next Group PLC, Omnicom, OTE, Philips Electronics NV, Prudential Plc, Portugal Telecom, Swisscom AG, Sonic Healthcare Ltd, Sherwin-Williams Co, SunTrust Banks Inc, Santos Ltd, Syngenta AG, Target Corp, Tullow Oil PLC, TNT N.V., TUI Travel Plc, Texas Instruments Inc, United Utilities PLC, Weir Group PLC.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: Hynix, Hyundai E&C, Korea Exchange Bank, KT&G, Woori Financial Holdings, Tencent Holdings, Hana Financial Group, Mitsubishi Tanabe Pharma, Daihatsu Motor, Sony Financial Holdings, AmerisourceBergen Corp, Aetna, Allergan Inc, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, BG Group PLC, Ball Corp, British Sky Broadcasting Group PLC, Celgene Corp, CheckPoint Software Technologies, Inc., Comcast Corp, Centrica PLC, Canadian Natural Resources Ltd, Cisco Systems, Inc., Deutsche Boerse AG, Deere & Company, EMC Corporation, Fiserv, Inc., Givaudan AG, Harley-Davidson Inc, Hewlett-Packard Co, Insurance Australia Group Ltd, International Business Machines Corp, Informa PLC, ITV PLC, Juniper Networks, Inc., Kumba Iron Ore Ltd, KPN NV, Laboratory Corp of America, Lonmin PLC, Lockheed Martin Corp., Bank Leumi, McDonald's Corp, Millicom Intl Cellular, Marvell Technology Group Ltd., Microsoft Corp., MTN Group Limited, Munich Re, NII Holdings Inc, Nokia Oyj, NetApp, Inc., Northern Trust Corp, NVIDIA Corp, Next Group PLC, Omnicom, OTE, Philips Electronics NV, Prudential Plc, Portugal Telecom, Swisscom AG, Sonic Healthcare Ltd, Sherwin-Williams Co, SunTrust Banks Inc, Santos Ltd, Syngenta AG, Target Corp, Tullow Oil PLC, TNT N.V., TUI Travel Plc, Texas Instruments Inc, United Utilities PLC, Weir Group PLC.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

The Firm is a market maker in the publicly traded equity securities of Tencent Holdings, Sony Financial Holdings, Akzo Nobel NV, Amgen Inc, BASF SE, BG Group PLC, Celgene Corp, CheckPoint Software Technologies, Inc., Comcast Corp, Centrica PLC, Cisco Systems, Inc., Deutsche Boerse AG, Fiserv, Inc., Juniper Networks, Inc., KPN NV, Millicom Intl Cellular, Marvell Technology Group Ltd., Microsoft Corp., Munich Re, NII Holdings Inc, NetApp, Inc., Northern Trust Corp, NVIDIA Corp, Swisscom AG, TNT N.V., United Utilities PLC.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at [www.citigroupgeo.com](http://www.citigroupgeo.com). Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

#### Citi Investment Research & Analysis Ratings Distribution

*Data current as of 30 Jun 2010*

	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	54%	35%	12%
% of companies in each rating category that are investment banking clients	47%	45%	40%

#### Guide to Citi Investment Research & Analysis (CIRA) Fundamental Research Investment Ratings:

CIRA's stock recommendations include a risk rating and an investment rating.

**Risk ratings**, which take into account both price volatility and fundamental criteria, are: Low (L), Medium (M), High (H), and Speculative (S).

**Investment ratings** are a function of CIRA's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating.

For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings are: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return).

For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings are: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

Guide to Citi Investment Research & Analysis (CIRA) Corporate Bond Research Credit Opinions and Investment Ratings: CIRA's corporate bond research issuer publications include a fundamental credit opinion of Improving, Stable or Deteriorating and a complementary risk rating of Low (L), Medium (M), High (H) or Speculative (S) regarding the credit risk of the company featured in the report. The fundamental credit opinion reflects the CIRA analyst's opinion of the direction of credit fundamentals of the issuer without respect to securities market vagaries. The fundamental credit opinion is not geared to, but should be viewed in the context of debt ratings issued by major public debt ratings companies such as Moody's Investors Service, Standard and Poor's, and Fitch Ratings. CBR risk ratings are approximately equivalent to the following matrix:

Low Risk Triple A to Low Double A; Low to Medium Risk High Single A through High Triple B; Medium to High Risk Mid Triple B through High Double B; High to Speculative Risk Mid Double B and Below. The risk rating element illustrates the analyst's opinion of the relative likelihood of loss of principal when a fixed income security issued by a company is held to maturity, based upon both fundamental and market risk factors. Certain reports published by CIRA will also include investment ratings on specific issues of companies under coverage which have been assigned fundamental credit opinions and risk ratings. Investment ratings are a function of CIRA's expectations for total return, relative return (to publicly available Citigroup bond indices performance), and risk rating. These investment ratings are: Buy/Overweight the bond is expected to outperform the relevant Citigroup bond market sector index (Broad Investment Grade, High Yield Market or Emerging Market), performances of which are updated monthly and can be viewed at <https://fdirect.citigroup.com/> using the "Indexes" tab; Hold/Neutral Weight the bond is expected to perform in line with the relevant Citigroup bond market sector index; or Sell/Underweight the bond is expected to underperform the relevant sector of the Citigroup indexes.

#### NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Ltd	Robert Buckland, Beata M Manthey, PhD, Orrin Sharp-Pierson, Hasan S Tevfik, CFA, Jonathan Stubbs, Adrian Cattley, Andrew Howell, CFA
Citigroup Global Markets Inc	Michael Geraghty, Tobias M Levkovich, Geoffrey Dennis, Matthew Hickman
Citigroup Global Markets Japan Inc.	Tsutomu Fujita, PhD
Citigroup Global Markets Asia	Markus Rosgen
Citigroup Pty Limited	Richard Schellbach

#### OTHER DISCLOSURES

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to Korea Exchange Bank, AmerisourceBergen Corp, Aetna, Allergan Inc, Akzo Nobel NV, Amgen Inc, AutoZone Inc., BASF SE, BG Group PLC, Comcast Corp, Centrica PLC, Canadian Natural Resources Ltd, Cisco Systems, Inc., Deere & Company, Hewlett-Packard Co, International Business Machines Corp, KPN NV, Lockheed Martin Corp., Microsoft Corp., MTN Group Limited, Munich Re, Nokia Oyj, Next Group PLC, Omnicom, OTE, Philips Electronics NV, Prudential Plc, Portugal Telecom, Sherwin-Williams Co, Santos Ltd, Target Corp, TNT N.V., TUI Travel Plc, Texas Instruments Inc. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at [www.citigroupgeo.com](http://www.citigroupgeo.com).)

Citigroup Global Markets Inc. or its affiliates beneficially owns 10% or more of any class of common equity securities of Santos Ltd.

Citigroup Global Markets Inc. or its affiliates beneficially owns 2% or more of any class of common equity securities of EMC Corporation, Insurance Australia Group Ltd, Sonic Healthcare Ltd.

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Citigroup Global Markets Inc. or its affiliates acts as a corporate broker to Lonmin PLC.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

**Important Disclosures for Morgan Stanley Smith Barney LLC Customers:** Morgan Stanley & Co. Incorporated (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use [smithbarney.com](http://smithbarney.com) to view any available Morgan Stanley research reports in addition to CIRA research reports.

Important disclosure regarding the relationship between the companies that are the subject of this CIRA research report and Morgan Stanley Smith Barney LLC and its



affiliates are available at the Morgan Stanley Smith Barney disclosure website at [www.morganstanleysmithbarney.com/researchdisclosures](http://www.morganstanleysmithbarney.com/researchdisclosures).

The required disclosures provided by Morgan Stanley and Citigroup Global Markets, Inc. on Morgan Stanley and CIRA research relate in part to the separate businesses of Citigroup Global Markets, Inc. and Morgan Stanley that now form Morgan Stanley Smith Barney LLC, rather than to Morgan Stanley Smith Barney LLC in its entirety. For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to [www.morganstanley.com/researchdisclosures](http://www.morganstanley.com/researchdisclosures) and [https://www.citigroupgeo.com/geopublic/Disclosures/index\\_a.html](https://www.citigroupgeo.com/geopublic/Disclosures/index_a.html).

This CIRA research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of CIRA. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in Australia through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in Brazil by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of Canada by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. The Product is made available in France by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product may not be distributed to private clients in Germany. The Product is distributed in Germany by Citigroup Global Markets Deutschland AG & Co. KGaA, which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). Frankfurt am Main, Reuterweg 16, 60323 Frankfurt am Main. If the Product is made available in Hong Kong by, or on behalf of, Citigroup Global Markets Asia Ltd., it is attributable to Citigroup Global Markets Asia Ltd., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Product is made available in Hong Kong by The Citigroup Private Bank to its clients, it is attributable to Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. The Citigroup Private Bank and Citibank N.A. is regulated by the Hong Kong Monetary Authority. The Product is made available in India by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in Indonesia through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in Israel through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A., Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in Italy by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Foro Buonaparte 16, Milan, 20121, Italy. The Product is made available in Japan by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by Nikko Cordial Securities Inc. it is being so distributed under license. In the event that an error is found in a CGMJ research report, a revised version will be posted on the Firm's Global Equities Online (GEO) website. If you have questions regarding GEO, please call (81 3) 6270-3019 for help. The Product is made available in Korea by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 110-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Malaysia by Citigroup Global Markets Malaysia Sdn Bhd, which is regulated by Malaysia Securities Commission. Menara Citibank, 165 Jalan Ampang, Kuala Lumpur, 50450. The Product is made available in Mexico by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comisión Nacional Bancaria y de Valores. Reforma 398, Col. Juárez, 06600 Mexico, D.F. In New Zealand the Product is made available through Citigroup Global Markets New Zealand Ltd. (Company Number 604457), a Participant of the New Zealand Exchange Limited and regulated by the New Zealand Securities Commission. Level 19, Mobile on the Park, 157 Lambton Quay, Wellington. The Product is made available in Pakistan by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in Poland by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul. Chalubinskiego 8, 00-630 Warszawa. The Product is made available in the Russian Federation through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gashka Street, 125047 Moscow. The Product is made available in Singapore through Citigroup Global Markets Singapore Pte. Ltd., a Capital Markets Services Licence holder, and regulated by Monetary Authority of Singapore. 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192. The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Citigroup Global Markets (Pty) Ltd. is incorporated in the Republic of South Africa (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in Spain by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in Taiwan through Citigroup Global Markets Taiwan Securities Company Ltd., which is regulated by Securities & Futures Bureau. No portion of the report may be reproduced or quoted in Taiwan by the press or any other person. No. 1, Songzhi Road, Taipei 110, Taiwan. The Product is made available in Thailand through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangkok, Bangkok 10500, Thailand. The Product is made available in Turkey through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the U.A.E, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different CIRA

ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in United Kingdom by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in United States by Citigroup Global Markets Inc, which is regulated by FINRA and the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to CIRA's Products can be found at [www.citigroupgeo.com](http://www.citigroupgeo.com). Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations. The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted. Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

---

© 2010 Citigroup Global Markets Inc. Citi Investment Research & Analysis is a division and service mark of Citigroup Global Markets Inc. and its affiliates and is used and registered throughout the world. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure is prohibited by law and will result in prosecution. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUESTEU00901C

---