

European Strategy

27 September 2010

**Bonds more popular now than equities were
in 2000**



MORGAN STANLEY RESEARCH

Main Author:

Matthew Garman, CFA

Matt.Garman@morganstanley.com

+44 207 425 3595

European Equity Strategy Team:

Graham Secker

Ronan Carr, CFA

Matthew Garman, CFA

Catharina Luebke-Detring

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+ = Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to NASD/NYSE restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Summary

Matthew Garman, CFA

In the US, the current pace of inflows to bond mutual funds is even greater than retail inflows into equities during the TMT bubble. In the 12 months leading up to September 2000, US equity funds saw cumulative inflows of \$340bn. In the equivalent period up to April 2010, US bond funds recorded net inflows of over \$410bn. We note that extreme fund flows often work as a contrarian signal around significant market turning points. For context, we have also looked at the relative size of bond and equity markets - at the peak of the TMT bubble, the size of developed market debt and equity markets were almost identical, but now DM equity markets are just 40% of the size of DM debt markets.

Please see pages 4 to 9 for more details.

Broader measures of sentiment are giving mixed signals. In general most high frequency measures of sentiment remain mixed. While measures such as the AAIL survey and hedge fund exposure have reached relatively bullish levels in recent weeks, in aggregate data suggest that positioning is still relatively cautious and there is little conviction. Net exposure of European hedge funds has risen to its highest levels since May, reaching 58%, but this has been almost driven entirely by short covering.

Please see pages 10 to 12 for more details.

Institutions have been net sellers of equities for the last decade, and they are unlikely to be the marginal buyer... There has been a structural shift out of equities in insurance, pension and mutual funds over the last decade. There have been many factors driving this reallocation: over-emphasis to equities in 2000, demographics, regulatory drivers and a greater emphasis on asset-liability management. Although many of these concerns remain, equity exposure of institutions has decreased meaningfully, and institutions also represent a much smaller proportion of equity ownership than a decade ago. While the implications of Solvency 2 may mean that insurance companies may be net sellers of equities in coming years, the reallocation from equities has already largely taken place, and the overall impact may not be that large for equity markets. Pension funds represent a potentially larger risk given European Commission discussions regarding the potential move to a Solvency 2 type framework for pension fund regulation. However, equity allocations in pension funds have already reached multi-decade lows.

Please see pages 17 to 25 for more details.

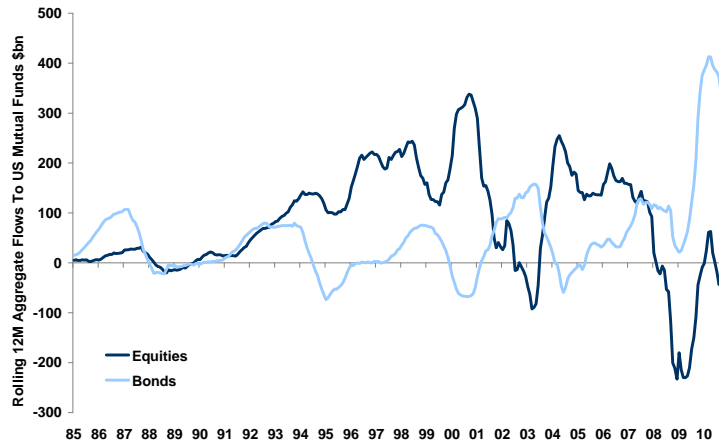
... but there are natural buyers of equities in the form of corporate M&A and buybacks. Equities are a relatively more expensive cost of capital than usual, with the dividend yield on European stocks at a record high relative to the yield on European IG credit. Corporates are able to obtain credit at record low rates, and are in the position to fund shareholder friendly activities such as buybacks or M&A. For example, already this year US buybacks amount to 6x the size of equity mutual fund outflows, while M&A has averaged 8% of market per annum since 1990.

Please see pages 13 to 16 for more details.

Investment conclusion: Our analysis of trends in investment flows and allocations supports the view that this is not a secular bull market, but several cyclical upside risks remain. Structural factors are such that institutions are still unlikely to be the net buyers of equities in coming years. Many investors are asking "who will buy equities?". However, the relative dependence on traditional institutions to provide the marginal bid is much diminished, and equity exposures are already low. Any element of flows improving on the back of performance chasing, increased hedge fund long exposure, corporate activity and SWFs all suggest the potential for upside risks to equities. In particular buybacks and M&A could meaningfully impact the net demand for equities in the next 12-18 months.

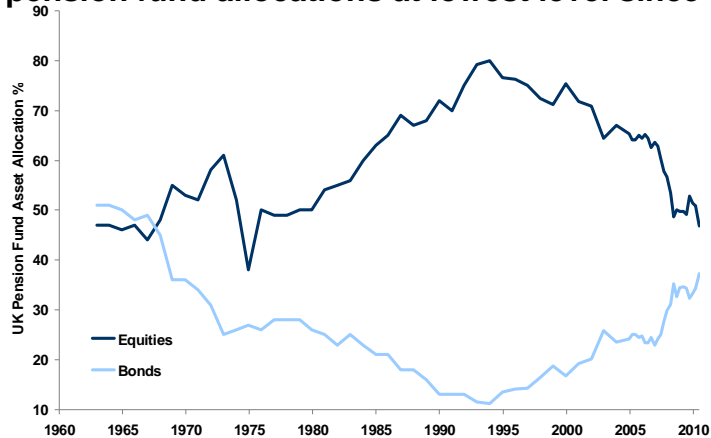
Summary – the four key charts

Bonds more popular now than equities were in 2000



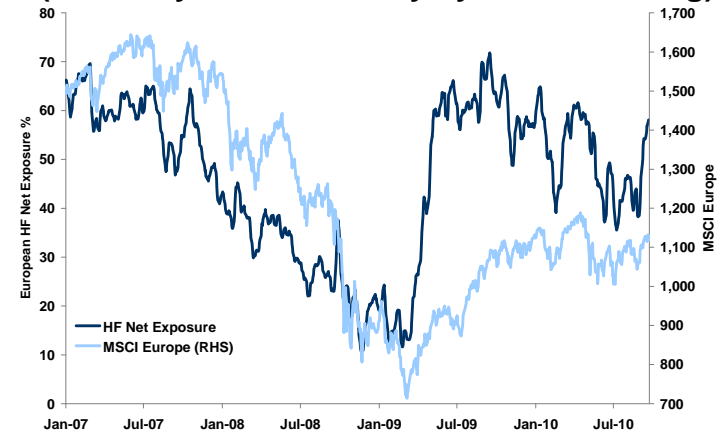
Source: ICI, Morgan Stanley Research

Institutional equity exposure in Europe is low - e.g. UK pension fund allocations at lowest level since 1974



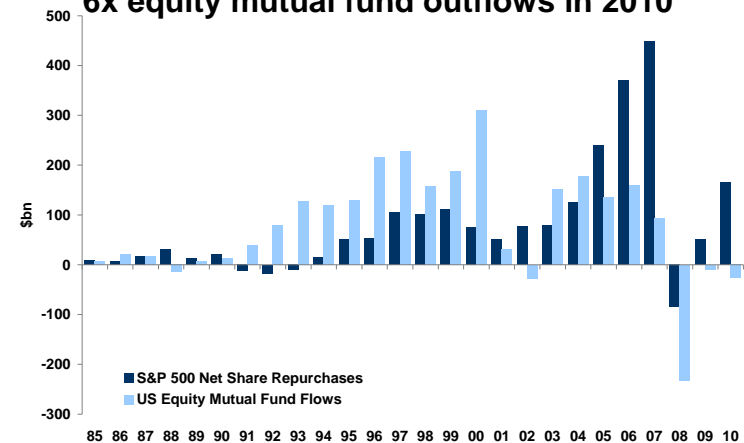
Source: WM Company, Morgan Stanley Research.

Hedge fund net exposure at highest levels since May (driven by almost entirely by short covering)



Source: MSCI, Morgan Stanley International Prime Brokerage, Morgan Stanley Research. See page 10 for further details.

Corporates can be the marginal buyer...US buybacks 6x equity mutual fund outflows in 2010



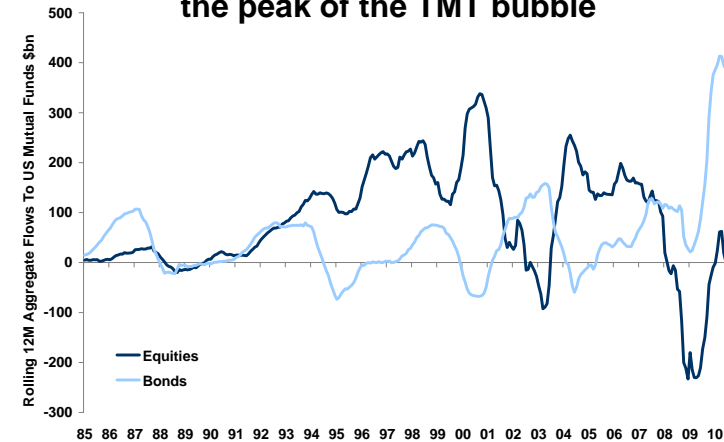
Source: ICI, Compustat, Morgan Stanley Research. Note: 2010 data is annualized.

The pace of inflows to US bond funds is greater than equity flows in the TMT bubble

In the US, the current pace of inflows to bond mutual funds is even greater than retail inflows into equities during the TMT bubble. In the 12 months leading up to September 2000, US equity funds saw cumulative inflows of \$340bn. In the equivalent period up to April 2010, US bond funds recorded net inflows of over \$410bn. If we look at the weekly ICI data, US equity funds have seen 20 consecutive weeks of outflows since May. We have to go back as far as 2005 since we last observed a month of outflows from US bond funds.

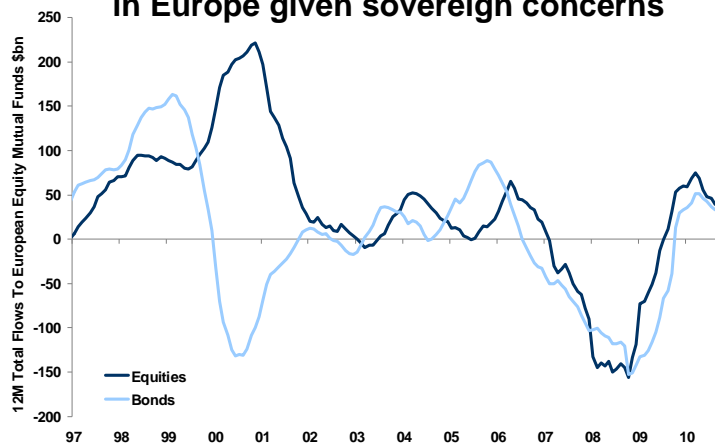
The divergence between equity and bond flows has been less apparent in Europe however. Equity funds have actually seen \$11bn of inflows YTD, while bond funds have recorded inflows of \$15bn. While the more muted flows to bonds is explained by the continued European sovereign concerns (and greater expectations of QE in the US), the equity flows are flattered by strong flows to international equities.

Flows to US bond funds exceed those to equities at the peak of the TMT bubble



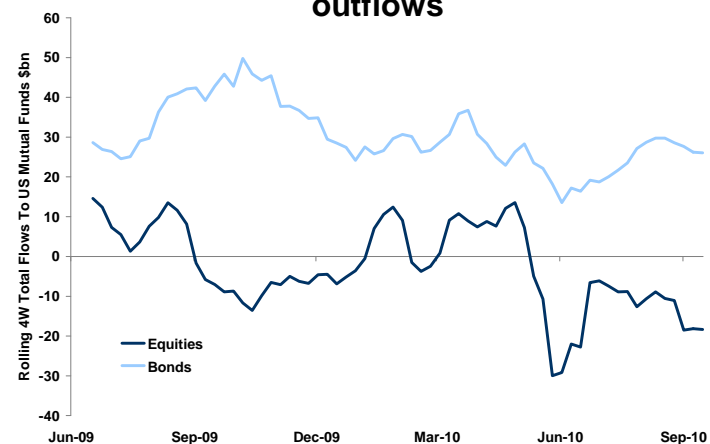
Source: ICI, Morgan Stanley Research

Disparity between equity and bond flows more muted in Europe given sovereign concerns



Source: Various national mutual fund associations, Morgan Stanley Research

US equities have seen 20 consecutive weeks of outflows



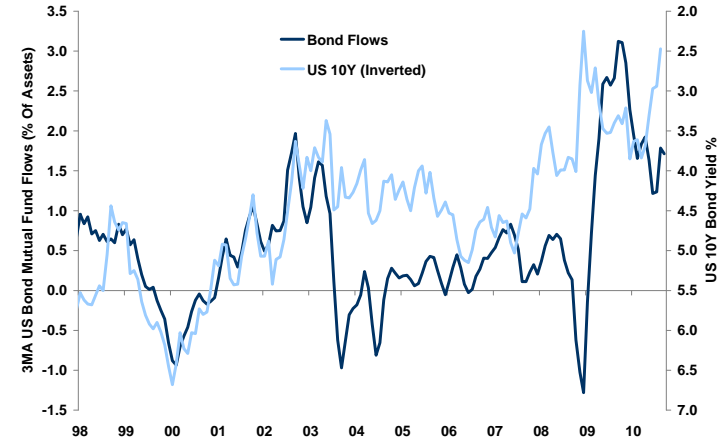
Source: ICI, Morgan Stanley Research

Extremes in fund flows has been a reasonably good contrarian indicator

At extremes mutual fund flows have been reasonable contrarian indicators. The peak of the TMT bubble coincided with extreme inflows into equity funds in both Europe and the US. In the first quarter of 2000, US equity funds saw inflows of almost 4% of assets which, in hindsight, clearly marked the zenith of the equity bubble. In addition, ahead of the market troughs in 2002 / 03 and 2009 we also saw significant mutual fund outflows from US equities. Note that, relying on mutual fund flows alone, one would have missed the 2007 equity peak.

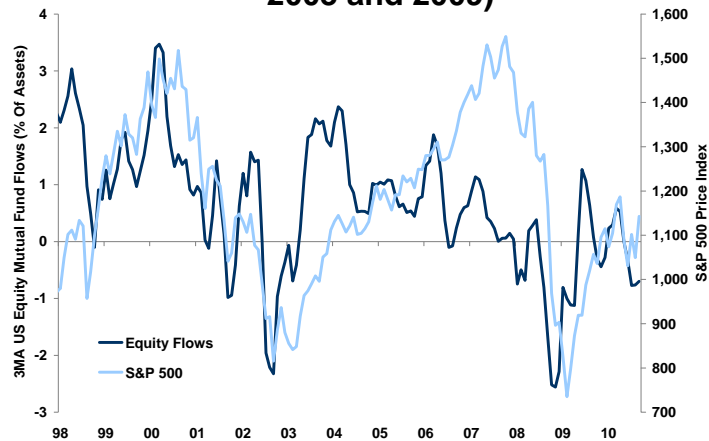
From a bond perspective we saw big mutual fund outflows in 2000 ahead of a strong bond rally, although subsequent periods of outflows haven't preceded similar moves.

US bond flows vs US 10Y Bond Yield



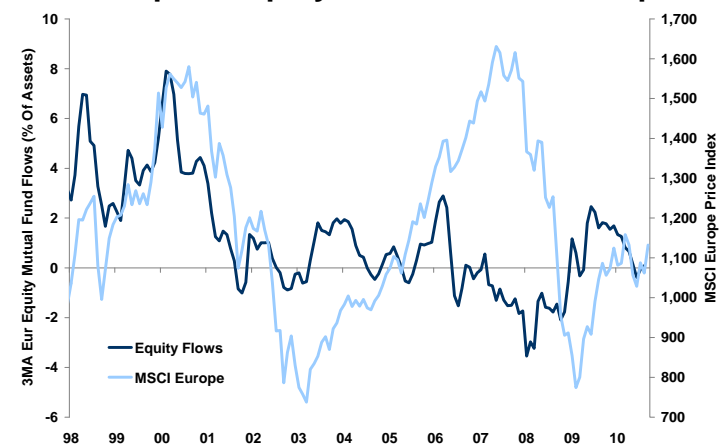
Source: ICI, Datastream, Morgan Stanley Research

US equity flows have tended to lead market performance around big turning points (e.g. 2000, 2003 and 2009)



Source: ICI, S&P, Morgan Stanley Research

European equity flows vs MSCI Europe



Source: Various national sources, MSCI, Morgan Stanley Research

Equity markets more sensitive to flows to / from bonds than 10Y ago

DM equity markets are 40% of the size of DM debt markets. One question we frequently get asked is how does the size of equity and debt markets compare? A combination of a) the outperformance of debt over equity markets and b) greater issuance of debt securities means that the relative size of these markets has changed dramatically over the last decade. At the peak of the TMT bubble, the size of developed market debt and equity markets were almost identical.

Ratio of size of US equity market vs treasuries now below long-run average. The cumulative value of the US equity market against the size of the market for US treasuries also tells an interesting story. In 2000, the equity market reached an unprecedented 6x the size of US treasuries. At the end of August this had fallen to less than 2x.

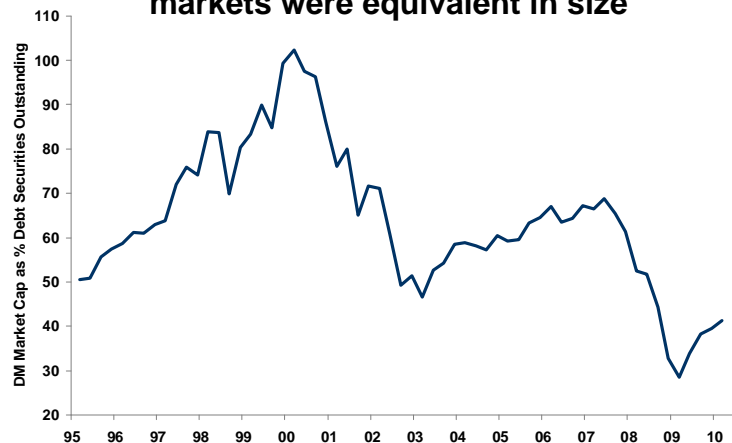
Given the relative market size, equities likely to be more sensitive to flows to / from bonds.

Size of developed market securities markets

| | Equity Market Cap (\$tn) | Debt Securities Outstanding By Issuer (\$tn) | | | | Debt Securities Outstanding As % Of Equity Market Cap | | | |
|---------------|--------------------------|--|-------|------|-------|---|-------|------|-------|
| | | Fins | Corps | Govt | Total | Fins | Corps | Govt | Total |
| Total | 31 | 41 | 9 | 31 | 80 | 132 | 28 | 101 | 262 |
| Europe | 9 | 20 | 3 | 10 | 33 | 213 | 36 | 107 | 356 |
| North America | 17 | 18 | 4 | 11 | 34 | 108 | 26 | 65 | 199 |
| Asia Pacific | 4 | 3 | 1 | 10 | 13 | 56 | 19 | 225 | 301 |

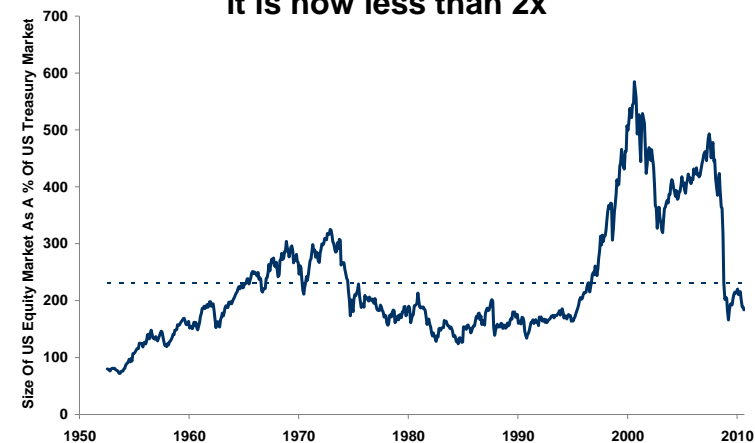
Source: BIS, Datastream, WFE, Nasdaq, NYSE, Haver Analytics, Morgan Stanley Research

At the peak of the tech bubble, DM equities and debt markets were equivalent in size



Source: BIS, Datastream, WFE, Nasdaq, NYSE, Haver Analytics, Morgan Stanley Research

US equities were 6x the size of the treasury market – it is now less than 2x



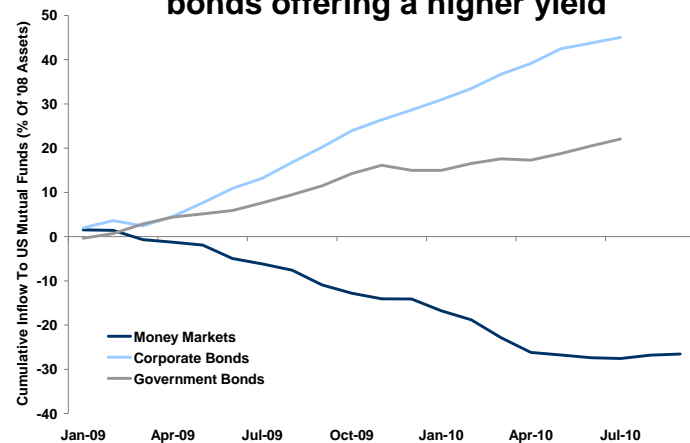
Source: US Treasury, WFE, Nasdaq, NYSE, Haver Analytics, Morgan Stanley Research

Flows are being driven by an appetite for yield

Continued macro uncertainty and muted risk appetite in a low rate environment have driven investors' attraction to yield. While money market funds have seen large outflows through the course of 2009-10, both government bonds and corporate credit have seen large inflows. Since the start of 2009 US money market funds have seen cumulative outflows of around 30% of assets, while there have been large inflows to both government bonds (22% of assets) and corporate bonds (45% of assets).

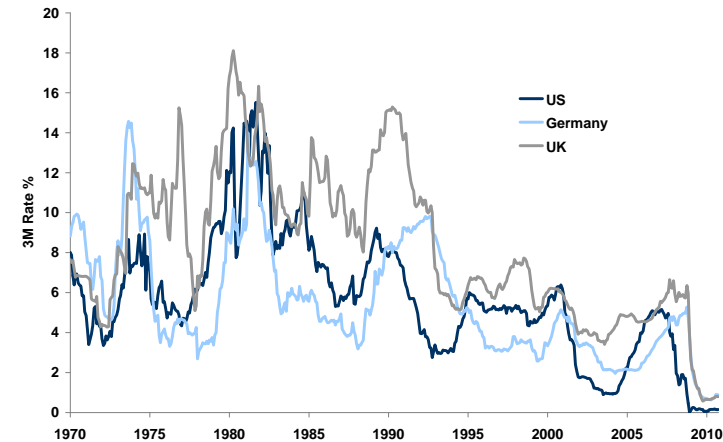
This phenomenon is also apparent in equity markets. Changes in ETF shares outstanding is a good proxy for flows. Looking at ETF shares outstanding, most developed market ETFs have seen outflows this year. However, dividend specific funds have actually seen large inflows YTD. We continue to recommend investors play the theme of stocks offering high and secure dividend yields (see *Looking for the best yield opportunities in Europe*, 23 August 2010 for more details).

... driving flows away from money markets and to bonds offering a higher yield



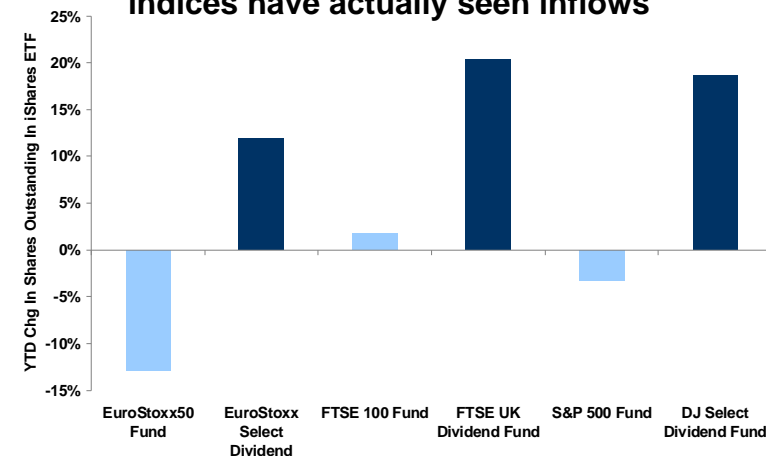
Source: ICI, Morgan Stanley Research

Short rates still remain at record lows...



Source: Datastream, Morgan Stanley Research

Equity ETFs have seen outflows YTD, but dividend indices have actually seen inflows



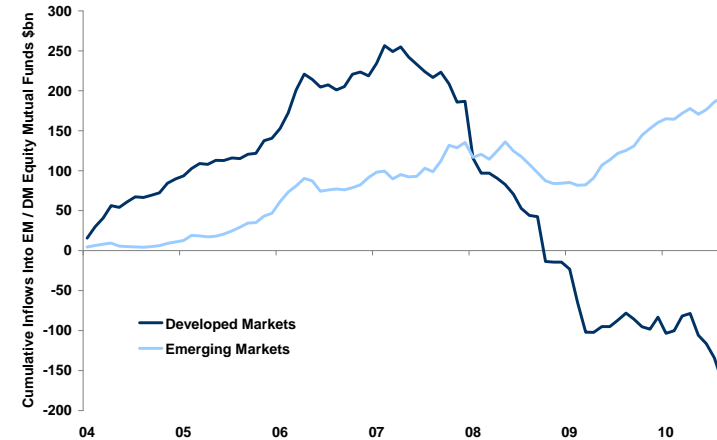
Source: iShares, Bloomberg, Morgan Stanley Research

EM equity flows remain strong

Flows to emerging market equity funds have consistently outstripped those to developed markets in the last few years. Based on EPFR data, developed market equity mutual funds have seen a total of \$420bn of outflows since February 2007. Over the same period, emerging market fund inflows have totalled \$92bn.

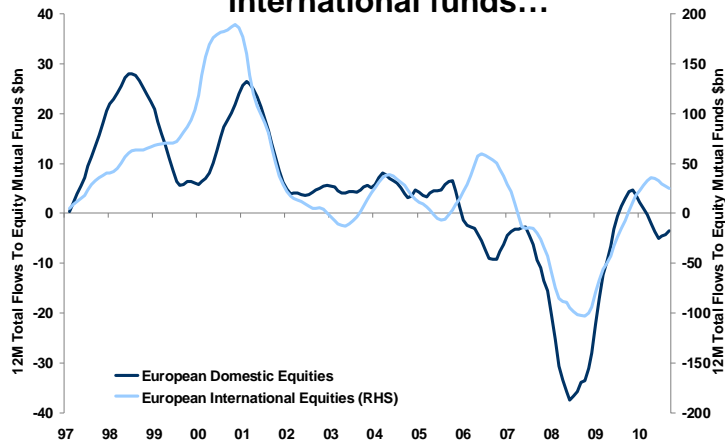
International equity flows much stronger than domestic equity flows in Europe and the US. The strength of EM flows is reflected in the fact that flows to both European and US equity mutual funds have shown a large diversion between flows to domestic equities vs those to international equities. Our data does not allow us to split out DM vs EM flows specifically within these figures, but EM equities will be accessed through international flows. Domestic European equity outflows amount to \$4bn this year, whereas international equities have had \$16bn of inflows. The same picture is present in the US – around \$50bn of outflows from domestic equities vs \$34bn of inflows to international equity funds.

Flows to Emerging Markets have continued unabated



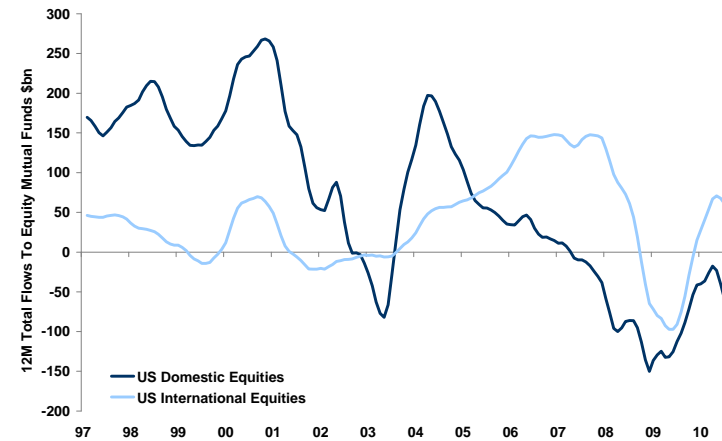
Source: EPFR, Morgan Stanley Research

European equity inflows driven entirely by flows to international funds...



Source: Various national mutual fund associations, Morgan Stanley Research

... and the picture is the same in the US



Source: ICI, Morgan Stanley Research

EM equity funds have seen a near-record 17 consecutive weeks of inflows

EM equity funds have seen a near-record 17 consecutive weeks of inflows. The only time that the current run has been exceeded was between November 2005 and March 2006, when dedicated EM funds saw a record run of 18 consecutive weeks of net inflows. While inflows have at times signalled excessive optimism, in the month following 18 weeks of inflows, MSCI EM was up 8.4%.

Backtest of EM flows data indicates that when there is a structural trend in place, inflows do not necessarily work as a tactical indicator. Flows to EM equity funds have been consistently more positive than those to DM, and it seems likely that some structural reallocation of capital towards EM is to be expected (see Jonathan Garner's note *EM Equities vs DM Equities – Fundamentals and Flows Deliver Outperformance*, 25 August 2010 for more details). On occasions, strong EM inflows have provided good tactical sell signals. Post readings of 10 consecutive weeks of positive inflows to dedicated EM equity funds in October 2007 and also April of this year, MSCI EM was fell by 17.6% and 7.1% over the next 3 months. However, in aggregate, the structural trend in EM equities has meant that using inflows as a tactical indicator has not really worked – following 10 consecutive weeks of EM inflows, MSCI EM has been up by 7.4% on average over the next three months, with EM equities rising 82% of the time.

Number of weeks out of the last 10 that have seen net inflows to EM equity funds



MSCI EM performance following readings of 10 consecutive weeks of net inflows to EM equity funds

| | Subsequent performance of MSCI EM following 10 consecutive weeks of net inflows to EM equity funds (%) | | |
|-----------|--|-----|------|
| | 1M | 3M | 6M |
| Average | 1.1 | 7.4 | 12.5 |
| Median | 1.1 | 9.3 | 16.5 |
| Hit Ratio | 63 | 82 | 70 |

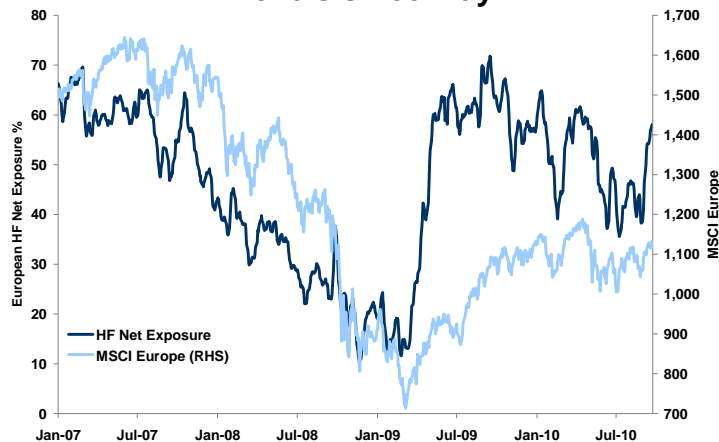
Source for both exhibits: EPFR, MSCI, Morgan Stanley Research. Note: Hit ratio indicates the number of observations for which EM equities were up in the subsequent period.

Hedge fund net exposure at highest levels since May but gross exposure still low

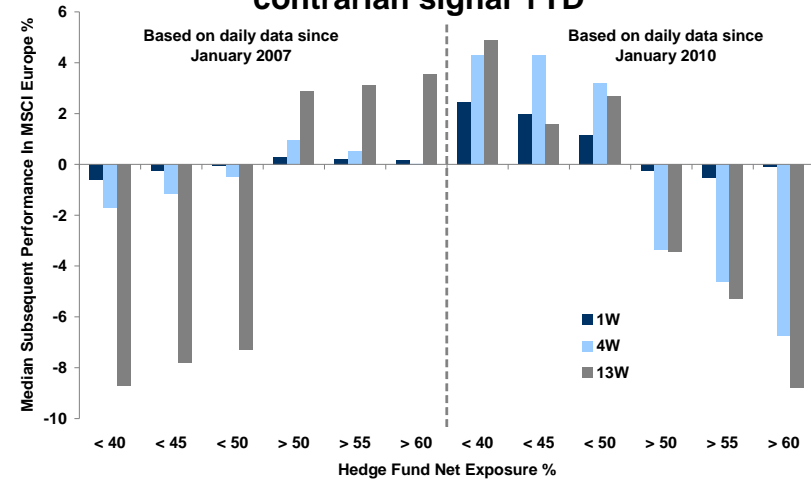
Net exposure of European hedge funds has risen to its highest levels since May, but this has been driven entirely by short covering. At the end of August, hedge fund net exposure had fallen to 38%, which is right at the low end of the range seen this year – this has since risen to 58%. The move was driven almost entirely by short covering – long exposure has risen by just 3%, whilst the short book has fallen from 46% to just 29%.

Hedge fund exposure has provided a reasonable contrarian signal. Although they were more nimble than most investors once equities turned, hedge fund positioning provided a strong contrarian signal at major turning points. At the peak's of the equity bull market in both July and October 2007, net exposure was above 65%. At the market lows in March 2009, net exposure was at its lowest levels of just 13%. In 2010's range-bound markets, buying at 40% and selling at 60% net exposure would have provided a near perfect market timing indicator.

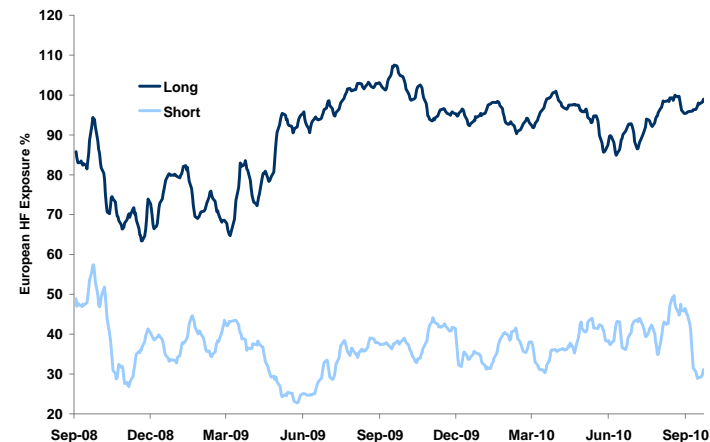
Net exposure of European hedge funds is at highest levels since May...



Hedge fund exposure has provided a reasonable contrarian signal YTD



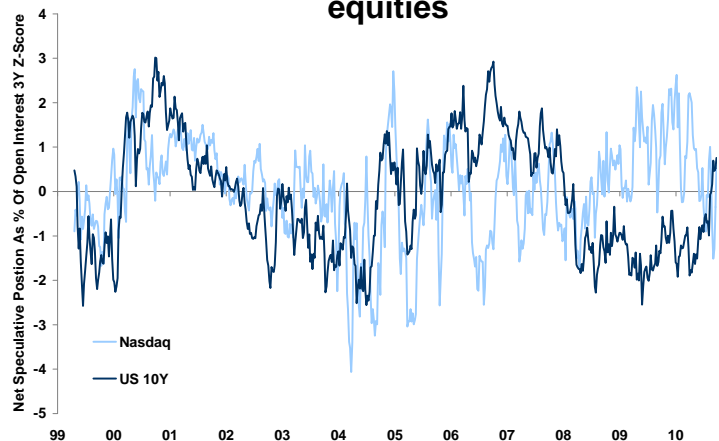
... but this rise has been driven by short covering



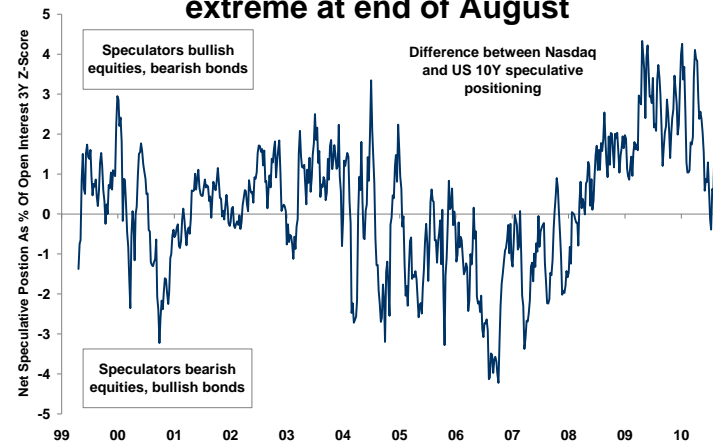
Source for all exhibits: MSCI, Morgan Stanley International Prime Brokerage, Morgan Stanley Research. Note: This data covers only those funds that are held with Morgan Stanley Prime Brokerage, and funds often have multiple prime brokers. Exposure data may not capture cash levels, as cash may be held elsewhere. Data is based on the exposure of the median fund, so small funds rank equally with large funds.

Futures positioning indicates speculative bullishness on US treasuries

Speculative positioning more bullish on bonds than equities



Relative bullishness on bonds vs equities reached 3Y extreme at end of August



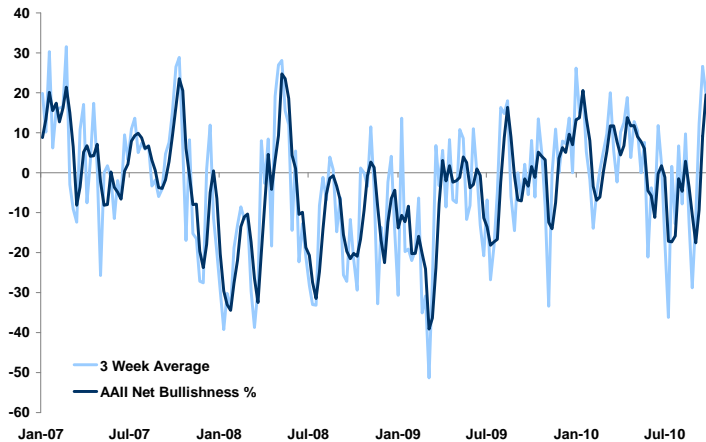
Backtest would suggest that speculative positioning on equities has given strongest historical contrarian signal

| | Median subsequent performance following net speculative position (as % of open interest) 3Y Z-score | | | | | | Hit ratio of subsequent performance following net speculative position (as % of open interest) 3Y Z-score | | | | | |
|---|---|------|-----|-----|------|------|---|------|-----|-----|-----|-----|
| | < -2 | < -1 | < 0 | > 0 | > 1 | > 2 | < -2 | < -1 | < 0 | > 0 | > 1 | > 2 |
| Nasdaq CFTC | | | | | | | | | | | | |
| Next 3M S&P 500 total return | 5.0 | 4.5 | 2.7 | 0.3 | 1.3 | 1.1 | 87 | 74 | 61 | 52 | 56 | 56 |
| Next 6M S&P 500 total return | 6.7 | 7.2 | 5.1 | 0.2 | -1.5 | -4.5 | 87 | 85 | 69 | 50 | 44 | 23 |
| US 10Y CFTC | | | | | | | | | | | | |
| Next 3M US 10Y total return | 3.2 | 1.3 | 1.2 | 1.1 | 1.0 | 3.7 | 85 | 62 | 63 | 65 | 66 | 92 |
| Next 6M US 10Y total return | 4.4 | 2.0 | 1.9 | 3.1 | 2.9 | 3.9 | 81 | 64 | 63 | 76 | 84 | 100 |
| Nasdaq CFTC less US 10Y CFTC | | | | | | | | | | | | |
| Next 3M S&P 500 total return relative to US 10Y | 4.4 | 2.2 | 0.8 | 0.3 | 2.1 | 4.4 | 74 | 60 | 54 | 51 | 59 | 70 |
| Next 6M S&P 500 total return relative to US 10Y | 4.9 | 3.0 | 1.4 | 0.7 | 3.0 | 8.2 | 74 | 61 | 54 | 51 | 57 | 64 |

Source for all exhibits: CFTC, S&P, Datastream, Morgan Stanley Research. Note: Hit ratio indicates the % of observations where the asset has seen positive returns in the subsequent period.

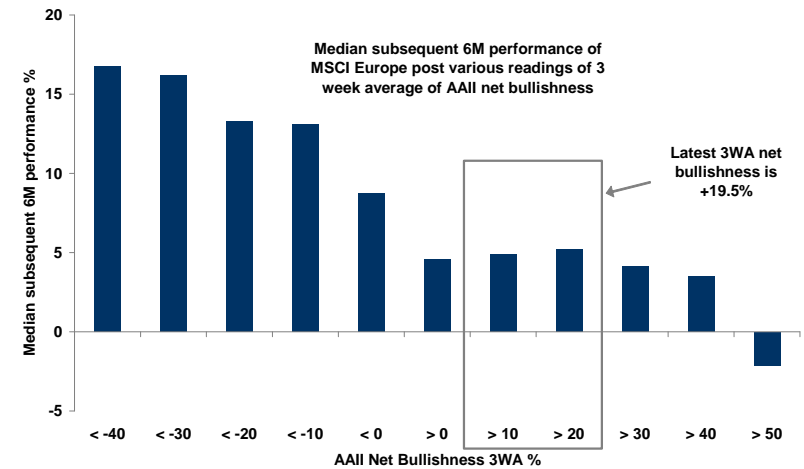
Mixed signals from other sentiment indicators

AAll survey shows 20% more bulls than bears...

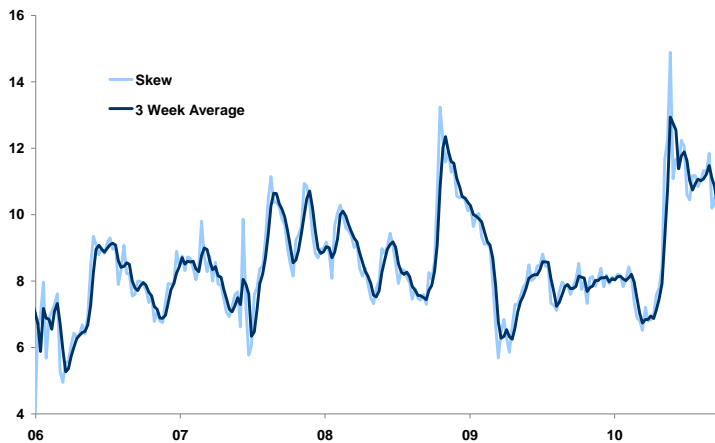


Source for both exhibits: American Association of Individual Investors, MSCI, Morgan Stanley Research

... which would suggest tactical caution

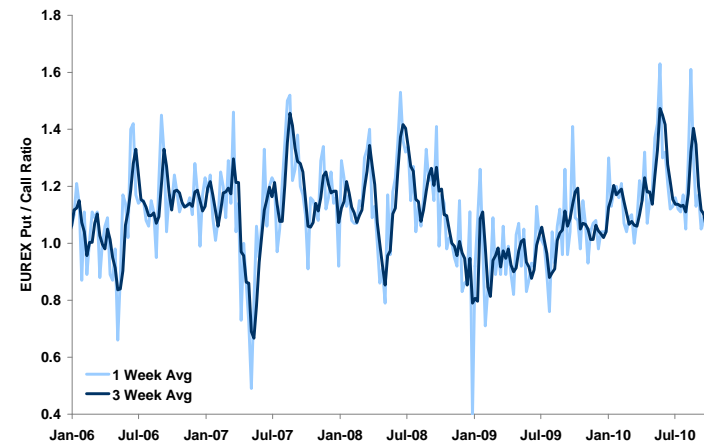


Skew still elevated...



Source: Bloomberg, Morgan Stanley Research

... while put / call ratios down from all-time highs



Source: EUREX, Morgan Stanley Research

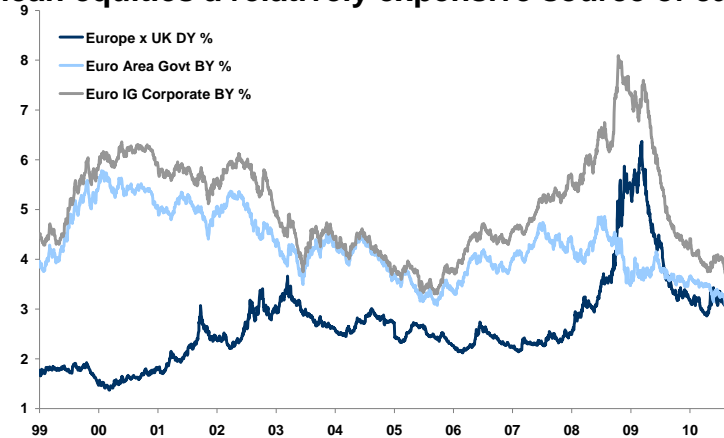
Corporates are in a position to undertake shareholder friendly buybacks and M&A

Equities are a relatively more expensive cost of capital than usual. The dividend yield on European stocks is at a record high relative to the yield on European IG credit. Corporates are able to obtain credit at record low rates, and are in the position to fund shareholder friendly activities such as buybacks or M&A.

Corporate balance sheets are robust and FCF generation remains strong. Net debt to equity for European corporates (excluding financials) is expected to fall to 51% by the end of this year – the lowest level in 13 years. At the same time, these companies are highly cash generative, with aggregate free cash flow yields of close to 6%.

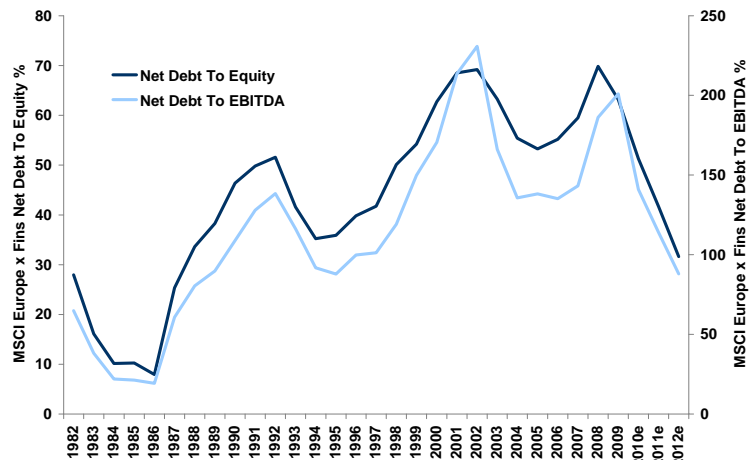
While continued macro uncertainty would argue for structurally higher cash balances, we anticipate returns to shareholders through a pick-up in both buybacks and M&A (see *Gearing Up For M&A*, 21 June 2010 for more details).

Low corporate bond yields and high dividend yields mean equities a relatively expensive source of capital



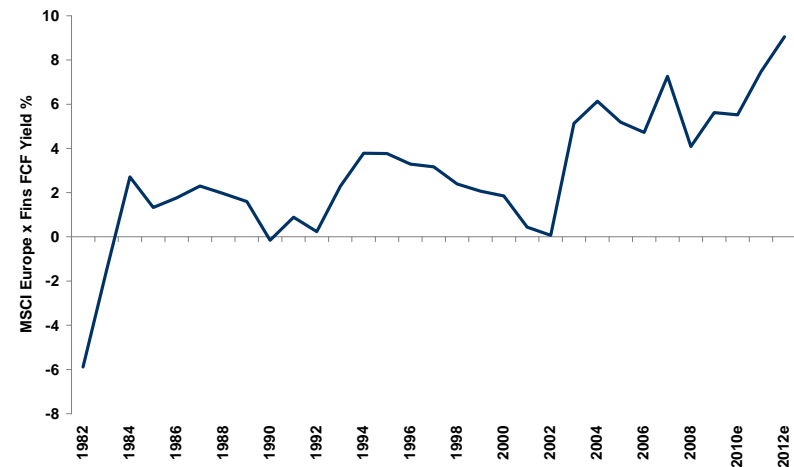
Source: Datastream, Morgan Stanley Research

Corporate balance sheets are strong and improving...



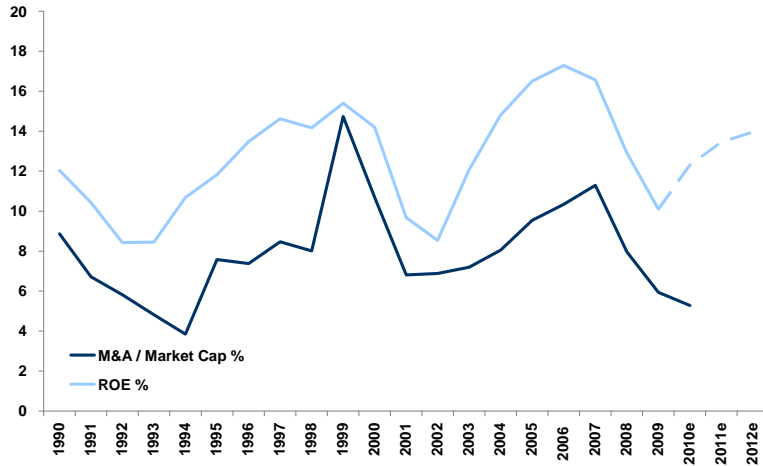
Source for both exhibits: MSCI, IBES, Worldscope, Morgan Stanley Research. Note: 2010-12e based on IBES consensus estimates.

... while corporates remain highly cash generative

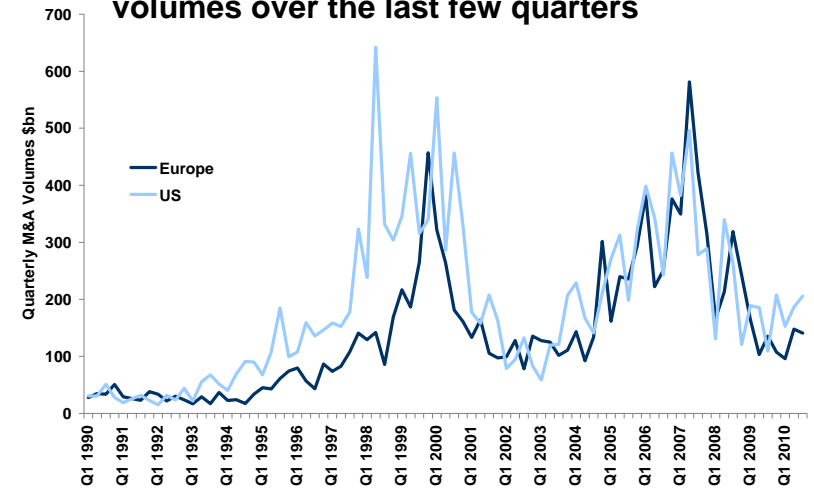


We expect a pick-up in M&A

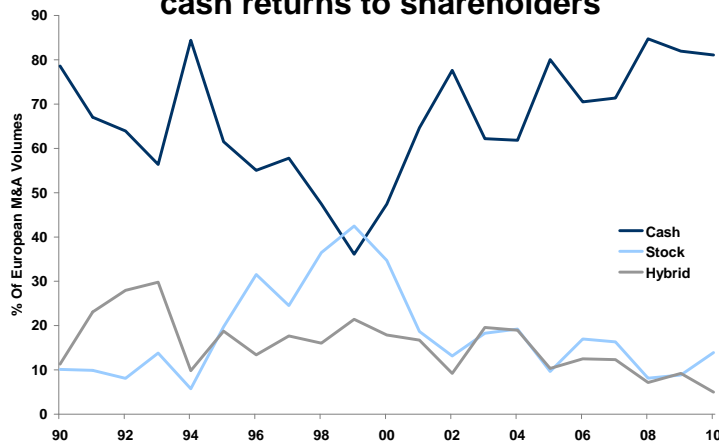
Corporate profitability drives M&A volumes



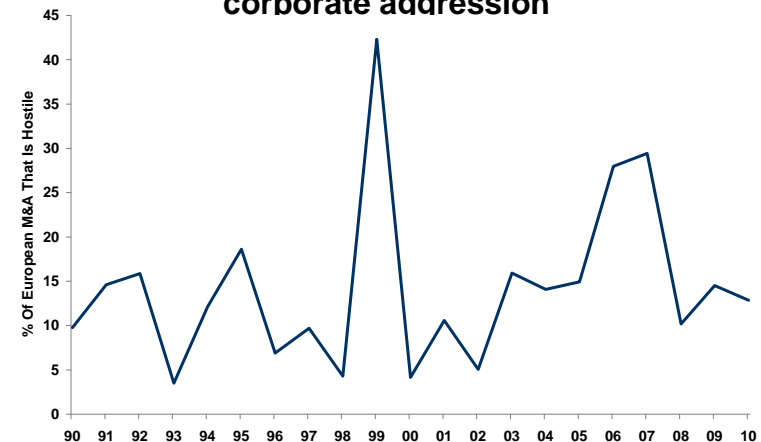
There has already been a modest increase in M&A volumes over the last few quarters



High proportion of cash deals means M&A providing cash returns to shareholders



Low proportion of hostile deals reflective of muted corporate aggression



Source for all exhibits: Thomson Financial, MSCI, IBES, Morgan Stanley Research. Note: FY 2010 / 3Q 2010 M&A data based on pro-rated data up to end of Aug. "e" indicates IBES estimates.

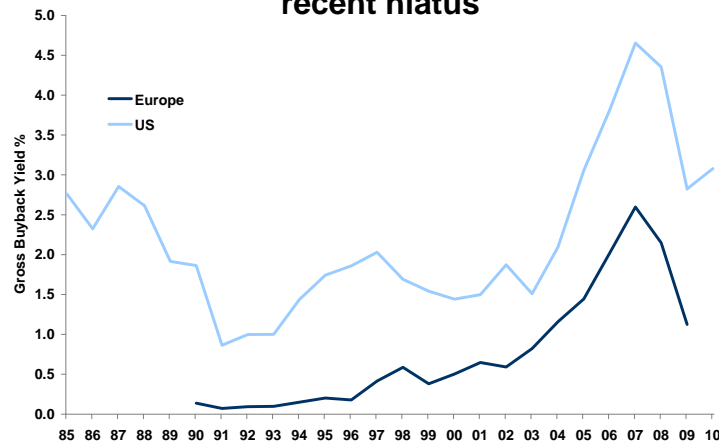
Buybacks are an increasingly important source of demand for equities

US buybacks amount to 6x the size of mutual fund outflows in 2010. In the first half of 2010, net share repurchases by S&P 500 companies have totalled to \$165bn at an annualised rate. US mutual funds are on track to see some \$27bn of outflows this year. Although mutual funds have not been the only net sellers of equities in recent years, it is noteworthy that it was only in 2008 where net buybacks failed to compensate from mutual fund outflows.

Europe has seen a structural rise in buybacks as a form of cash returns over the last decade. Even including the collapse in buyback levels in the bear market of 08-09, the gross buyback yield in Europe has been 1.3% this decade vs just 0.2% in the 90s. In the US these figures were 1.5% in the 90s vs 2.7% in the last ten years.

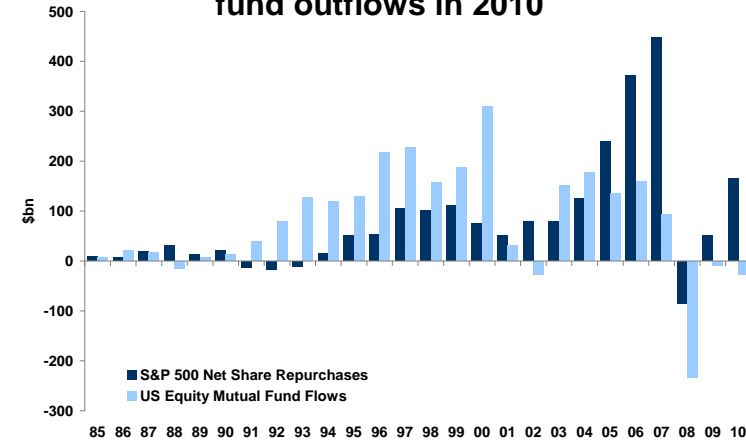
Buybacks in the UK remain muted. In Europe, the highest frequency data we have on buybacks is for the UK. Although volumes have ticked up at the margin, in the 12 months up to August 2010, the UK saw a total of just £2bn compared to £32bn in 2007.

Buybacks seeing structural rise in Europe despite recent hiatus



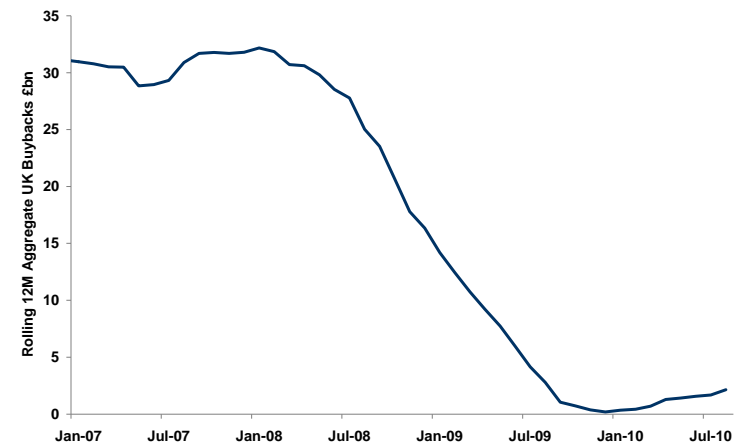
Source: Compustat, Worldscope, MSCI, Morgan Stanley Research.
Note: 2010 S&P data based on annualized 1H data.

US buybacks amount to 6x the size of equity mutual fund outflows in 2010



Source: ICI, Compustat, Morgan Stanley Research. Note: 2010 data based on annualized figures.

Buyback volumes remain extremely muted in the UK



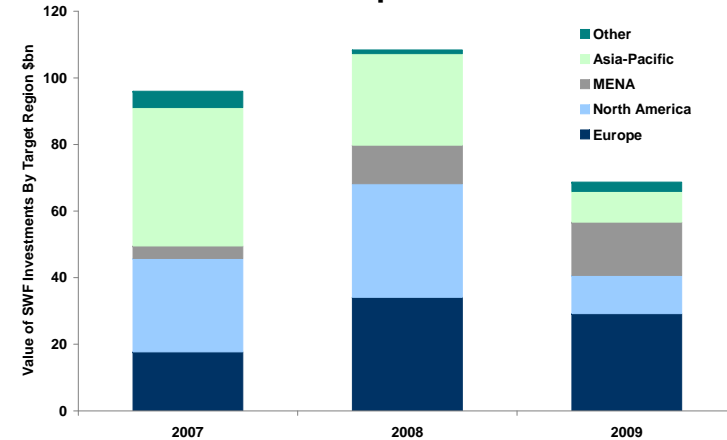
Source: LSE, Morgan Stanley Research

Sovereign Wealth Funds could be an incremental buyer of equities

Global SWF AUM amounts to almost \$3.8tn or around 4% of institutional assets. Although SWF assets are projected to grow by ~50% by 2010, assets under management are still an order of magnitude smaller than either of pensions funds, mutual funds or insurance funds.

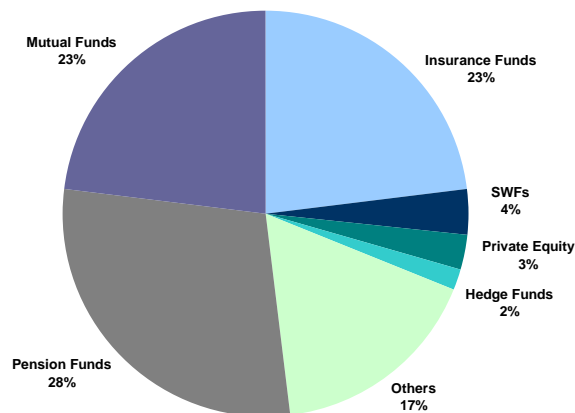
Between 2007 and 2009 Sovereign Wealth Funds invested a total of \$81bn in European markets. Although SWFs do have the potential to become an incremental buyer of equities, investments to date have represented a relatively small proportion of market cap. In the last three years, cumulative investments in European markets has amounted to less than 1% of market cap.

SWF investment in Europe totalled \$30bn in 2009



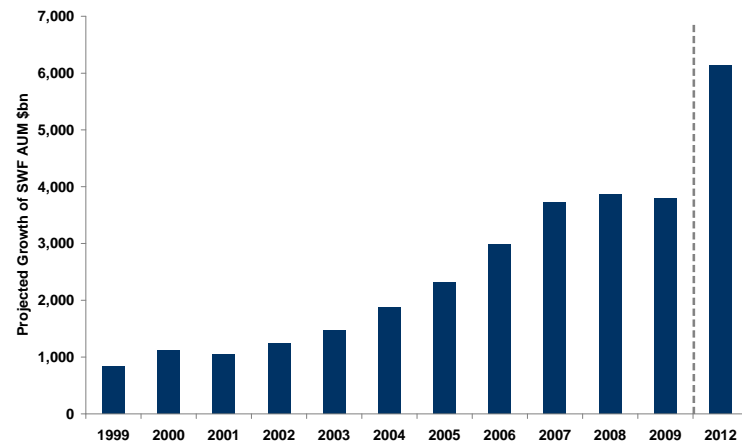
Source: Monitor-FEEM SWF Transaction Database, Morgan Stanley Research

SWFs constitute 4% of global institutional AUM...



Source for both exhibits: IFSL, Morgan Stanley Research

... and is projected to reach \$6tn by 2012

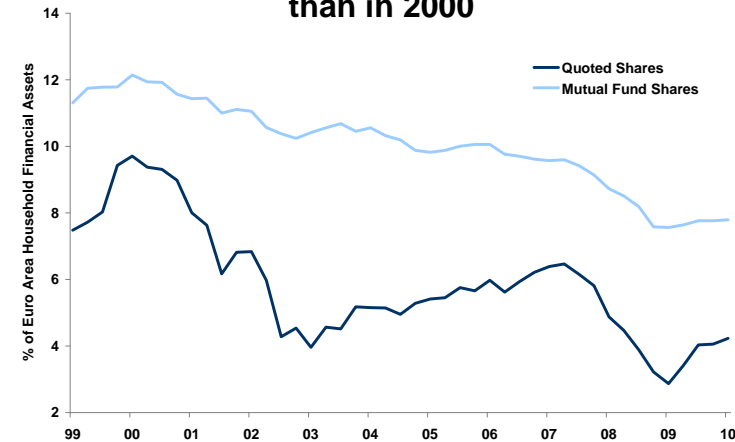


Equity exposure in Europe remains low across the board

Institutions have significantly cut equity allocations since 2000. A combination of poor equity returns and a number of structural factors have led to a sustained shift out of equities for pension funds, insurance funds and households alike. A decade of negative equity performance, high volatility, large equity exposures at the peak of the TMT bubble, a more difficult regulatory environment, demographics and a move towards ALM have all contributed to this reallocation.

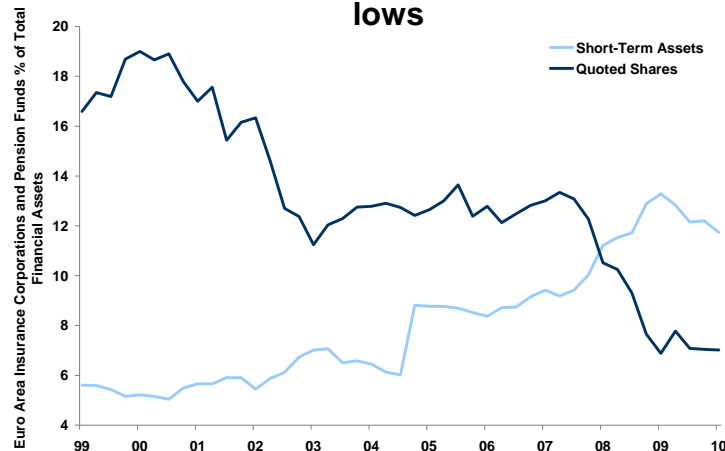
European equity exposure remains low across the board. Both insurance companies and pension funds have diversified away from equities significantly over the last decade – ECB data indicates in aggregate, the proportion of financial assets in equities has dropped by ~60%. There has also been a similar decline in the equity exposure of households, with equities accounting for just 4% of assets currently.

Household's allocation to equities over 50% lower than in 2000



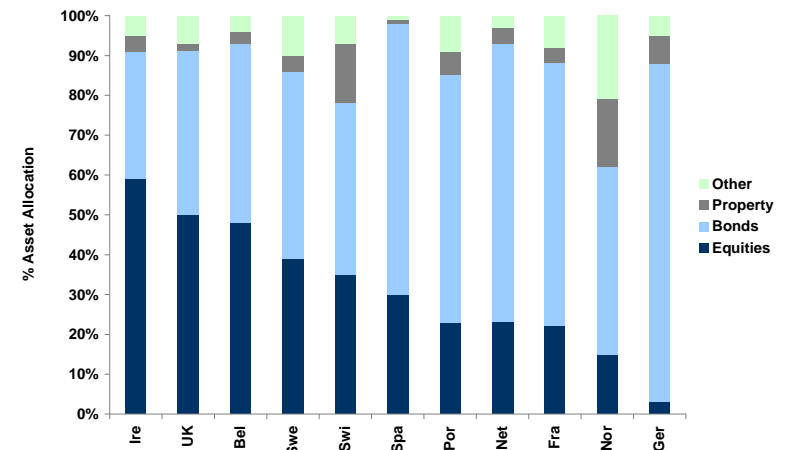
Source: ECB, Morgan Stanley Research.

Insurance and pension funds exposure at decade lows



Source: ECB, Morgan Stanley Research.

European DB pension fund equity allocations ~30%



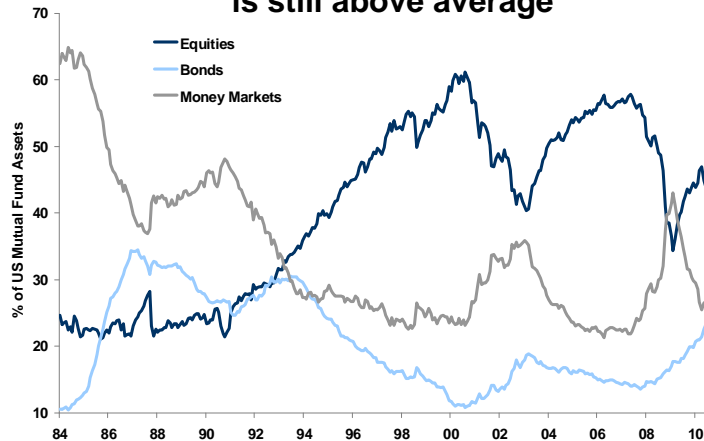
Source: Mercer, Morgan Stanley Research

Mutual fund equity allocations have fallen by 10-15% since 2007

The proportion of US mutual fund assets in equities is still above average. Even after a decade of lacklustre returns and three years of outflows, the proportion of US mutual fund assets in equities (45%) is still above the long-run average (40%). However, the long-run average of 40% is distorted by the structural fall in money market assets, partially caused by changes to US banking regulations in the 1980s. The average allocation to equities since 1990 has been just over 45% - right in-line with current levels.

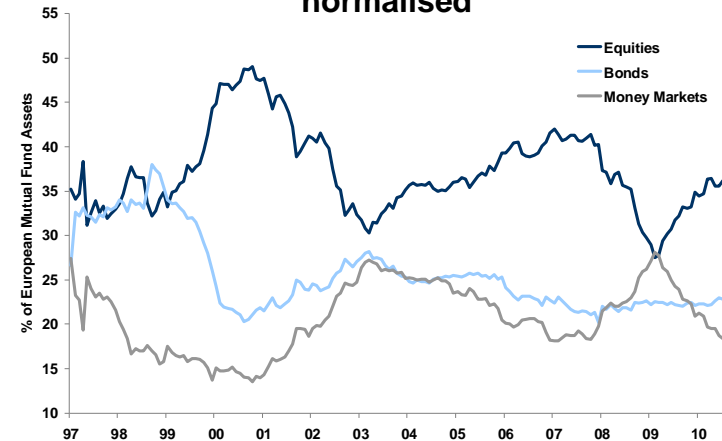
European mutual fund allocations have also normalised. The average proportion of European mutual fund assets in equities has been 37% over the last 14 years. Data up to the end of July was right in line with the historical average at 36%.

The proportion of US mutual fund assets in equities is still above average



Source: ICI, Morgan Stanley Research

European mutual fund allocation to equities has normalised



Source: National mutual fund associations, Morgan Stanley Research

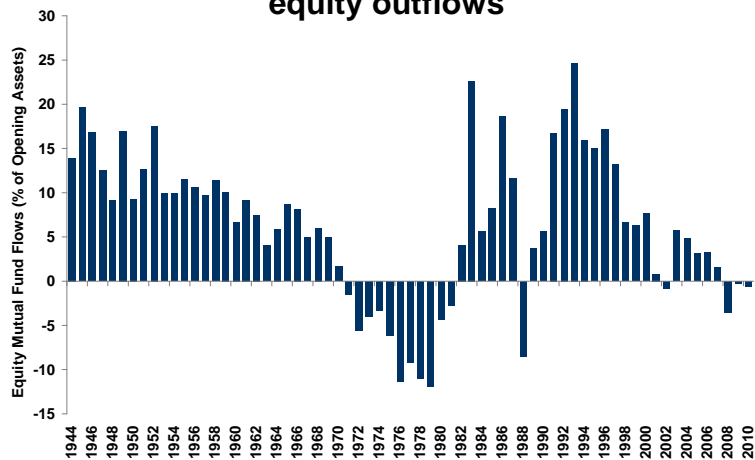
Lessons from the 1970s and Japan

US and European equity mutual fund allocations have normalised. However, a more bearish macro scenario than we expect would signal further downside:

The 1970s saw 11 consecutive years of equity outflows from US equity mutual funds. Flows to mutual funds have tended to be a function of both prior performance and levels of volatility. The range-bound and volatile equity markets of the 1970s resulted in over a decade of continual outflows from US equities. So far 2010 is on track to be the third concurrent year of equity outflows.

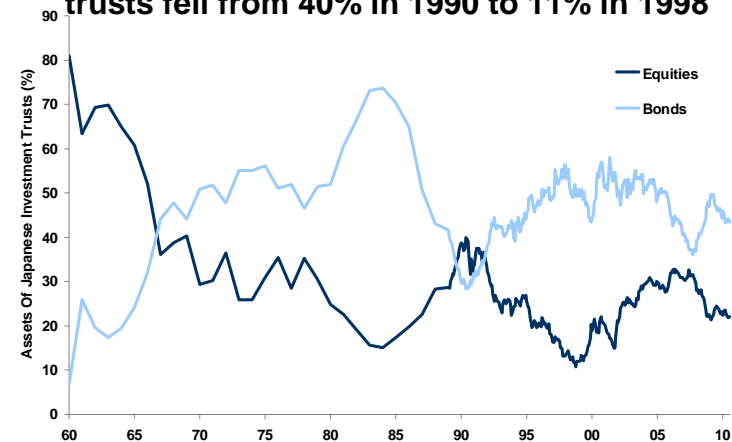
In Japan, the proportion of investment trust assets in equities fell from 40% in 1990 to 11% in 1998. Over the course of 8 years, the total amount of investment trust assets in equities fell by 78% from over ¥21tn in 1990 to less than ¥5tn in 1998. While two-thirds of this fall can be attributed to the dire performance of Japanese equities in the 1990s, the remaining 28% is largely explained by equity outflows. In the US, the three years of outflows we've seen so far have been relatively modest in comparison. Cumulative outflows between 2008-10 have amounted to less than 5% of assets.

In the 1970s equities saw 11 consecutive years of equity outflows



Source: ICI, Morgan Stanley Research

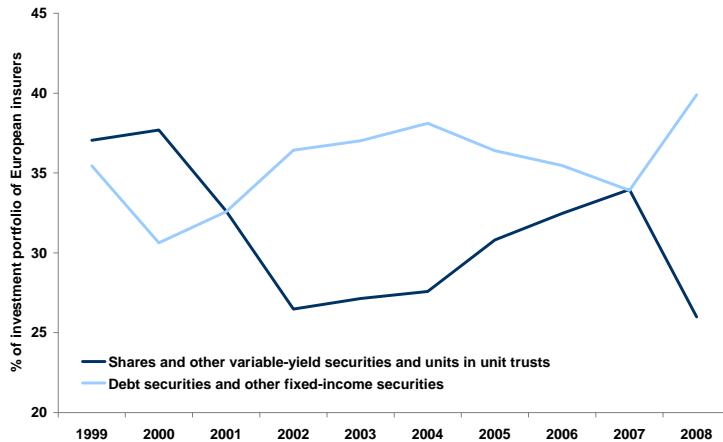
In Japan, the proportion of equities in investment trusts fell from 40% in 1990 to 11% in 1998



Source: The Investment Trusts Association, Morgan Stanley Research

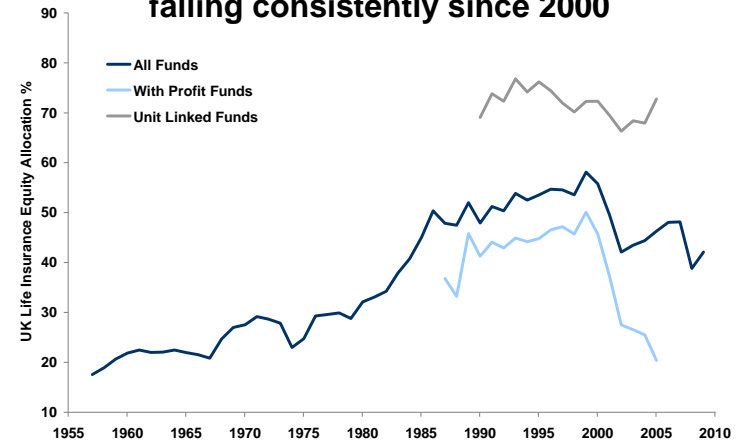
Equity exposure of insurance sector is relatively low

European equity exposure is back to 2002 levels



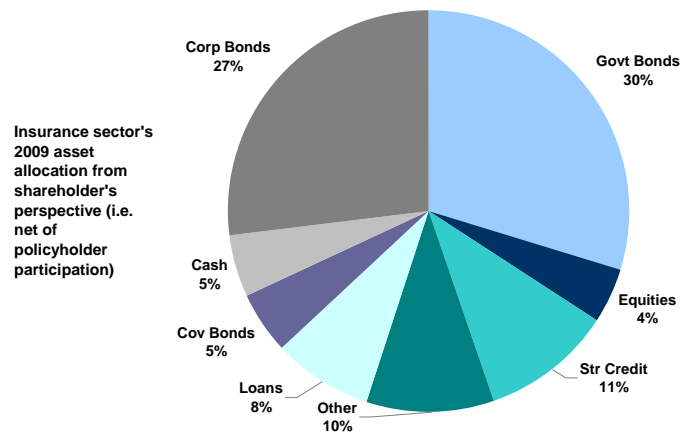
Source: CEA, Morgan Stanley Research

UK life insurance exposure to equities has been falling consistently since 2000



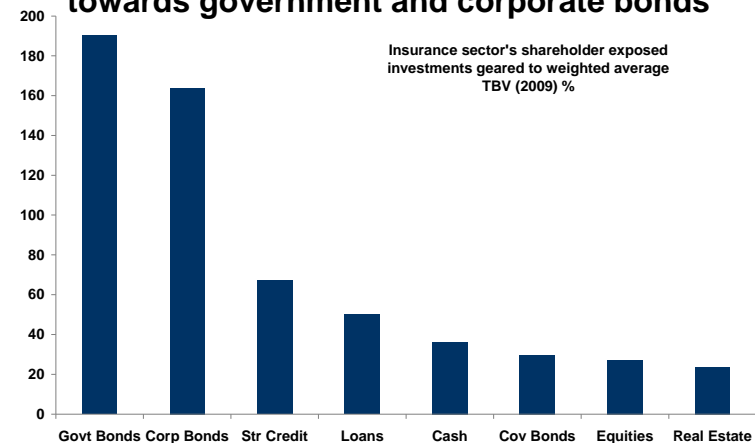
Source: ABI, Morgan Stanley Research

Insurance sector's equity allocation just 4% (net of policyholder participation)



Source: Company data, Morgan Stanley Research.

Insurance sector's tangible equity is mostly geared towards government and corporate bonds



Source: Company data, Morgan Stanley Research.

Solvency 2 may be a headwind to equities, but offset by already low equity exposure

Equity exposure of European insurance assets has fallen significantly over the last decade. Based on data from ABI, 42% of UK life insurance assets are in equities vs 58% in 1999, while pan-European data from CEA suggests that the proportion of investment portfolios of European insurers is back to 2002 lows.

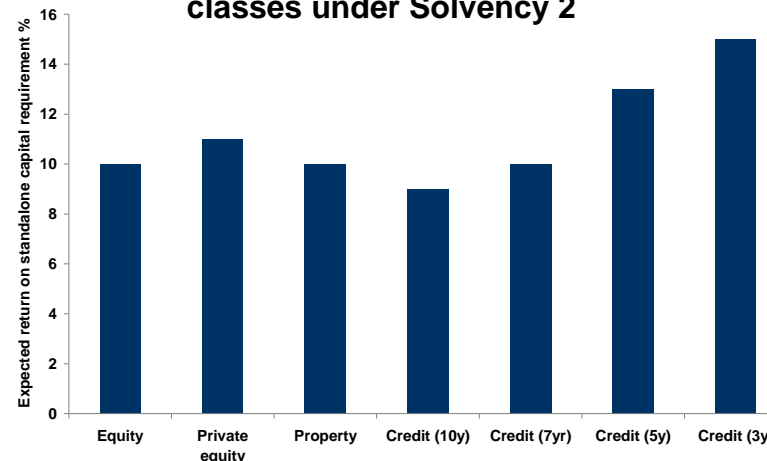
The sector is most geared to government and corporate bonds. For many insurers it is misleading to look purely at the gross value of assets on the balance sheet due to the effect of policy holder participation. The asset classes that most influence the sector's shareholder equity are government bonds and corporate bonds, which are far more important to the evolution of book values than equities or structured credit. In 2009, just 4% of assets from a shareholder's perspective were allocated to equities compared to around 30% in government bonds and 27% in corporate bonds.

Solvency 2 likely to be a net negative for equity markets... Our insurance team have recently published a detailed study, looking at the likely impact of Solvency 2 (see *Solvency 2: Quantitative & Strategic Impact – The Tide Is Going Out*, 22 September 2010 for more details). In terms of the implications for insurers' asset allocation decisions, there are four main conclusions:

- 1) Insurers are unlikely to markedly increase equity allocations given their less attractive return on Solvency 2 capital relative to bonds. In the longer term, exposure to equities may grow through unit-linked funds.
- 2) Demand for long-duration corporate bonds will likely decrease, affecting corporates' ability to issue longer maturity bonds.
- 3) Insurers may continue to have an appetite for longer duration swaps, swaptions and, importantly, government bonds, which carry no direct capital requirements
- 4) Government bonds are an attractive asset in those markets where government yields exceed swap rates.

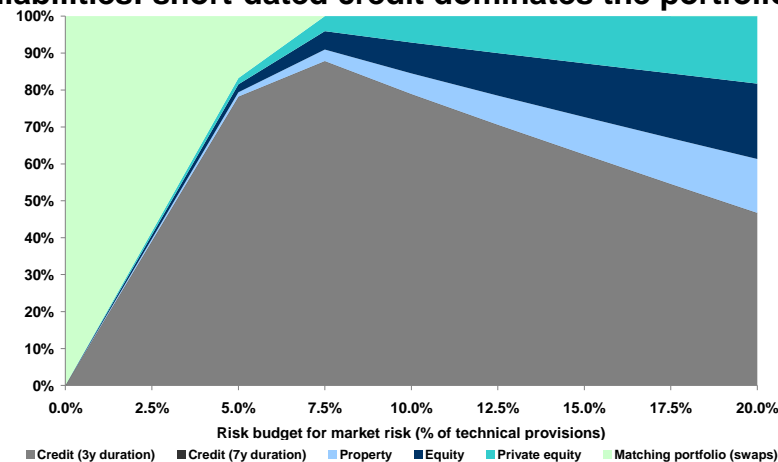
... but low equity exposure of insurance assets mitigates the overall effect. Solvency 2 may mean that insurance companies may be net sellers of equities in coming years. However, the combination of already low equity exposures and the fact that insurance companies constitute a much smaller proportion of equity ownership than a decade ago may mean the overall impact of Solvency 2 on equity markets may not be very large.

Risk-adjusted return on capital from different asset classes under Solvency 2



Source: Oliver Wyman, Morgan Stanley Research

Optimal investment portfolio for general account liabilities: short-dated credit dominates the portfolio



Source: Oliver Wyman, Morgan Stanley Research.

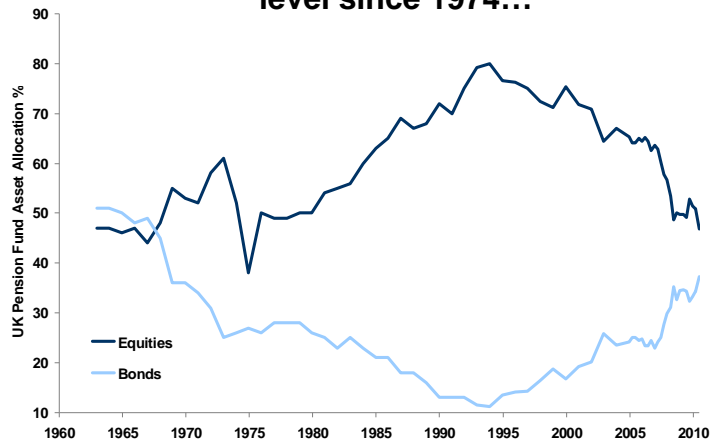
Pension funds have been net sellers of equities

The last decade has seen pension funds allocate away from equities. Based on a survey by Towers Watson, allocations to equities in worldwide pension assets have fallen by 7 percentage points since 1999 – equities accounted for 61% of assets in 1998, but by the end of 2009 this figure had fallen to just 54%.

UK pension fund allocations to equities at 30Y+ lows. At the end of the 2Q of 2010, the proportion of UK pension fund assets allocated to equities fell to its lowest levels in 36 years. Only in three years since 1962 has the equity allocation been lower than today.

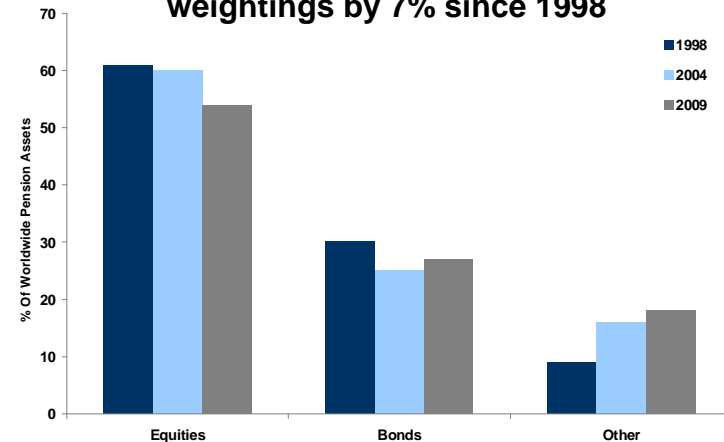
Survey of European DB pension funds suggest further selling. Based on Mercer data, a net 30% of European pension plans expect to decrease domestic equity allocations over the next 12 months. Even non-domestic equities are expected to suffer. Bonds and alternatives were expected to see the biggest increases in allocations.

UK pension fund allocations to equities at lowest level since 1974...



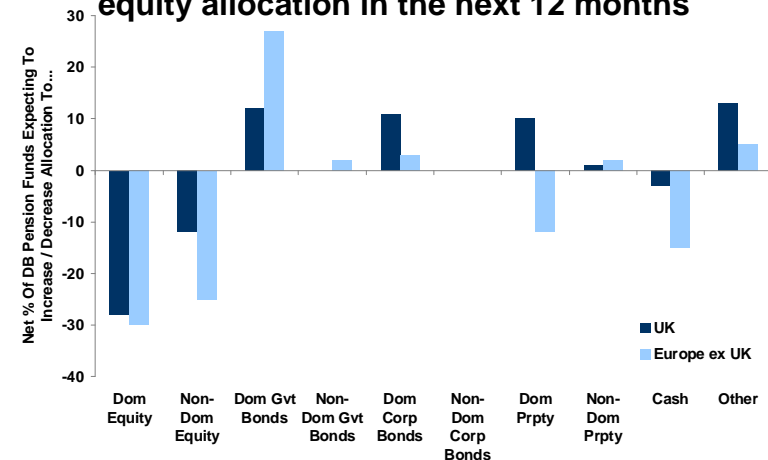
Source: WM Company, Morgan Stanley Research

Worldwide pension funds have reduced equity weightings by 7% since 1998



Source: Towers Watson, Morgan Stanley Research

... But a net 30% of plans expect to reduce domestic equity allocation in the next 12 months



Source: Mercer, Morgan Stanley Research

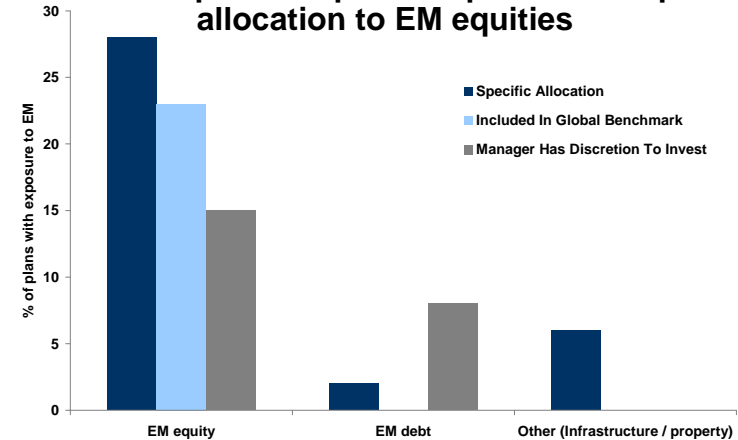
Pension funds have shifted balance of equity allocation away from domestic exposure

Overseas equities are a larger proportion of UK pension fund assets than domestic equities. Data for the UK shows that in 2007, the proportion of pension fund assets in overseas equities exceeded the amount in UK equities for the first time.

Pension funds have diversified their equity exposure away from domestic equities in the last decade. This is a global trend in developed markets. Data for Australia, Canada, Japan, Switzerland, UK and the US showing on average a net 14% increase in foreign equities as a percentage of overall equity assets in pension funds.

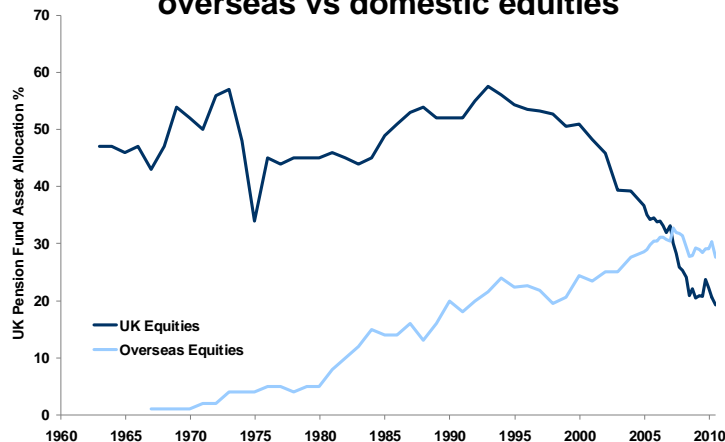
Over a quarter of European DB pension plans already have specific allocations to EM equities. Although surveys suggest equity exposure is likely to decrease going forward, this trend was less negative for non-domestic equities than domestic equities.

28% of European DB pension plans have specific allocation to EM equities



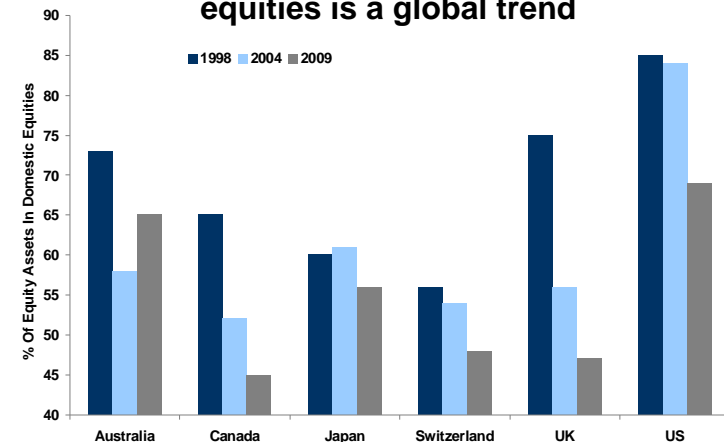
Source: Mercer, Morgan Stanley Research

UK pension funds now have large exposure to overseas vs domestic equities



Source: WM Company, Morgan Stanley Research

Reallocation from domestic towards international equities is a global trend



Source: Towers Watson, Morgan Stanley Research

Defined benefit (DB) vs defined contribution (DC) allocations

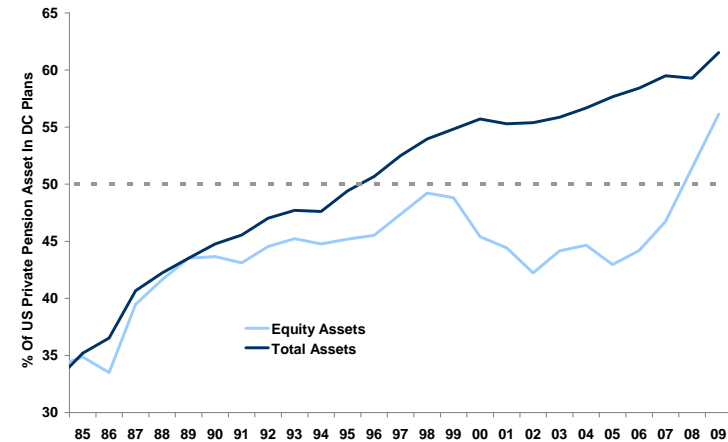
The proportion of US private pension fund assets allocated to equities has fallen from 48% in 2004 to just 34% today – the lowest levels since 1958. This has been caused by two phenomena:

1) Pension funds have been net sellers of equities in 13 out of the last 16 years. While both DB and DC plans have been net sellers of equities, these outflows have been dominated by DB plans.

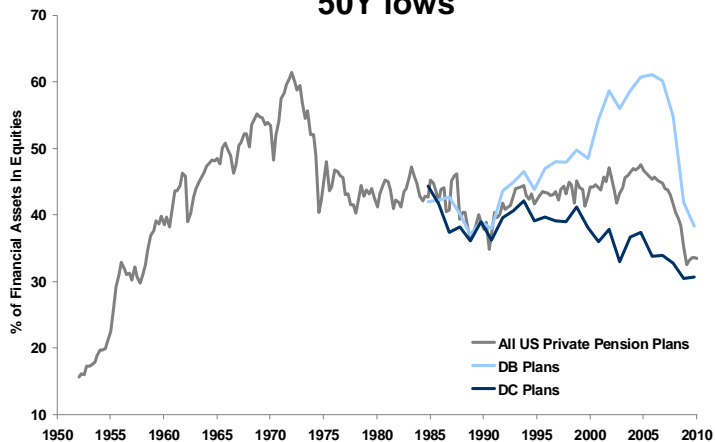
2) The migration towards DC plans. Assets in DC plans now exceed those in DB plans. DC plans seem to have a structurally lower allocation to equities than DB plans. Since 1984, DC plans have apportioned 37% of their assets to equities vs 47% for DB plans.

Low equity allocations and rising importance of DC plans could suggest less incremental selling from US pension funds.

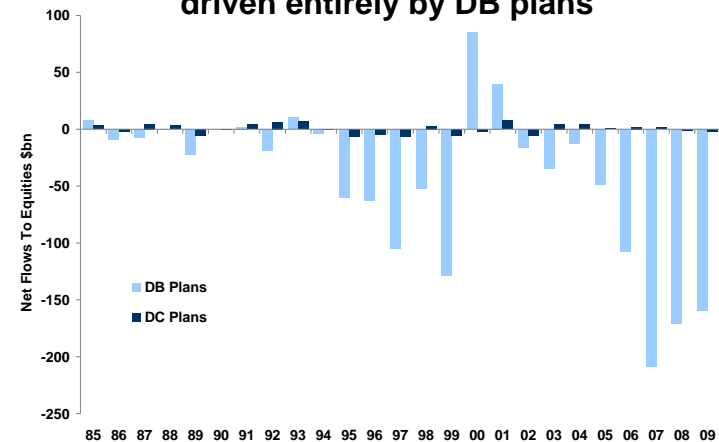
US DC plan assets now larger than DB



US private pension fund allocations to equities at 50Y lows



Net selling of equities by US private pension funds driven entirely by DB plans



Source for all exhibits: Federal Reserve Board, Haver Analytics, Morgan Stanley Research

The changing face of share ownership

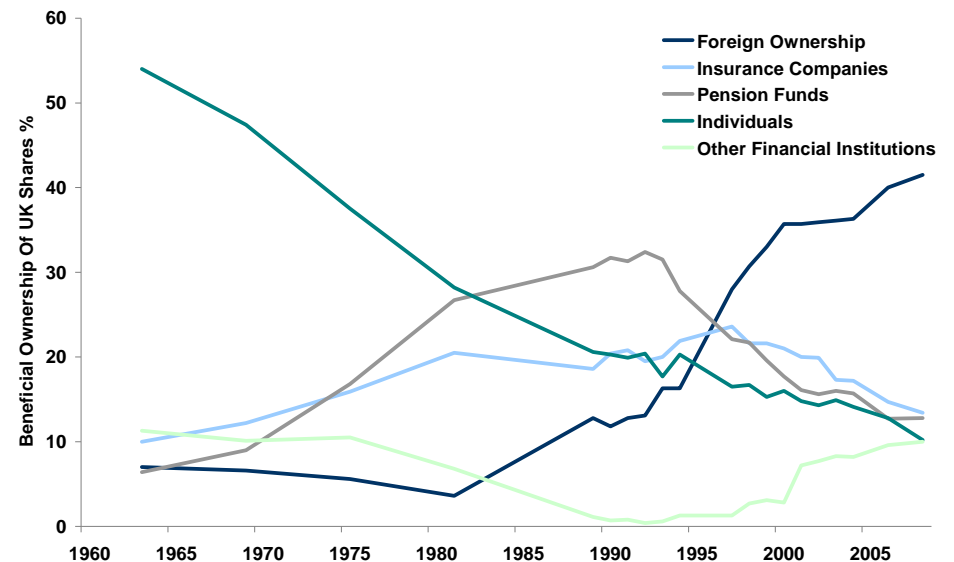
Using UK data, there have been a number of significant changes to the structure of share ownership over the last 20Y.

Institutional selling of equities has changed the face of share ownership over the last 20Y. In 1992, UK pension funds owned 32% of UK equities. By the end of 2008, this stood at just 13%. Similarly the proportion of UK shares owned by insurance companies peaked at 24% in 1997, and this has been falling steadily ever since to today's level of 13%.

Foreign ownership now the largest holder of UK equities. As recently as 30 years ago, less than 4% of the UK equity market was under foreign ownership. With the globalisation of capital markets, this has risen by a factor of 10x to over 40%, making foreign ownership the single largest component of UK share ownership.

Data shows the rising importance of hedge funds. In the ONS data on the ownership of UK equities, hedge funds fall into the "Other Financial Institutions" category. In 1994, these institutions had just a 0.4% share of the UK equity market. By the end of 2008, this figure had risen to 10% - now on a par with the size of the retail investor.

Beneficial ownership of UK shares



Source: Office of National Statistics, Morgan Stanley Research

Disclosures

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

Morgan Stanley & Co. International plc, authorized and regulated by Financial Services Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. As used in this disclosure section, Morgan Stanley includes RMB Morgan Stanley (Proprietary) Limited, Morgan Stanley & Co International plc and its affiliates.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Matthew Garman, Matthew Garman.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictolicies.

Important US Regulatory Disclosures on Subject Companies

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity and specialized trading, risk arbitrage and other proprietary trading, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

Morgan Stanley and others associated with it may make markets or specialize in, have positions in and effect transactions in securities of ETFs mentioned and may also perform or seek to perform brokerage and other services for those ETFs and may enter into transactions with them. Morgan Stanley participates in the creation and redemption of the securities covered in this report and as an authorized participant or otherwise, acquires such securities from the issuers for the purpose of resale. MSCI, an affiliate of Morgan Stanley, receives licensing fees from Barclays Global Investors, Vanguard and State Street with respect to a number of ETFs based on MSCI indices.

ETFs are redeemable only in Creation Unit size through an Authorized Participant.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution (as of August 31, 2010)

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

| Stock Rating Category | Coverage Universe | | Investment Banking Clients (IBC) | | |
|--------------------------|-------------------|------------|----------------------------------|----------------|----------------------|
| | Count | % of Total | Count | % of Total IBC | % of Rating Category |
| Overweight/Buy | 1082 | 42% | 381 | 43% | 35% |
| Equal-weight/Hold | 1145 | 44% | 402 | 46% | 35% |
| Not-Rated/Hold | 13 | 0% | 4 | 0% | 31% |
| Underweight/Sell | 364 | 14% | 91 | 10% | 25% |
| Total | 2,604 | | | 878 | |

Disclosures

Data include common stock and ADRs currently assigned ratings. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

Stock Price, Price Target and Rating History (See Rating Definitions)

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Citi Investment Research & Analysis (CIRA) research reports may be available about the companies or topics that are the subject of Morgan Stanley Research. Ask your Financial Advisor or use Research Center to view any available CIRA research reports in addition to Morgan Stanley research reports.

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC, Morgan Stanley and Citigroup Global Markets Inc. or any of their affiliates, are available on the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citigroupgeo.com/geopublic/Disclosures/index_a.html.

Each Morgan Stanley Equity Research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the Equity Research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Client Link at www.morganstanley.com.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them.

The fixed income research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The "Important US Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

Disclosures

Morgan Stanley may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

To our readers in Taiwan: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. Information on any securities/instruments issued by a company owned by the government of or incorporated in the PRC and listed in on the Stock Exchange of Hong Kong ("SEHK"), namely the H-shares, including the component company stocks of the Stock Exchange of Hong Kong ("SEHK")'s Hang Seng China Enterprise Index; or any securities/instruments issued by a company that is 30% or more directly- or indirectly-owned by the government of or a company incorporated in the PRC and traded on an exchange in Hong Kong or Macau, namely SEHK's Red Chip shares, including the component company of the SEHK's China-affiliated Corp Index is distributed only to Taiwan Securities Investment Trust Enterprises ("SITE"). The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

To our readers in Hong Kong: Information is distributed in Hong Kong by and on behalf of, and is attributable to, Morgan Stanley Asia Limited as part of its regulated activities in Hong Kong. If you have any queries concerning Morgan Stanley Research, please contact our Hong Kong sales representatives.

Morgan Stanley Research is disseminated in Japan by Morgan Stanley MUFG Securities Co., Ltd.; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents); in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore, which accepts responsibility for its contents; in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Smith Barney Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Canada by Morgan Stanley Canada Limited, which has approved of, and has agreed to take responsibility for, the contents of Morgan Stanley Research in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main and Morgan Stanley Private Wealth Management Limited, Niederlassung Deutschland, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin); in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that Morgan Stanley Research has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the United States by Morgan Stanley & Co. Incorporated, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized and regulated by the Financial Services Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. Morgan Stanley Private Wealth Management Limited, authorized and regulated by the Financial Services Authority, also disseminates Morgan Stanley Research in the UK. Private U.K. investors should obtain the advice of their Morgan Stanley & Co. International plc or Morgan Stanley Private Wealth Management representative about the investments concerned. RMB Morgan Stanley (Proprietary) Limited is a member of the JSE Limited and regulated by the Financial Services Board in South Africa. RMB Morgan Stanley (Proprietary) Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided in accordance with a contract of engagement on investment advisory concluded between brokerage houses, portfolio management companies, non-deposit banks and clients. Comments and recommendations stated here rely on the individual opinions of the ones providing these comments and recommendations. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data. The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Morgan Stanley Research is disseminated and available primarily electronically, and, in some cases, in printed form.

Additional information on recommended securities/instruments is available on request.

Disclosures

Morgan Stanley may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

To our readers in Taiwan: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. Information on any securities/instruments issued by a company owned by the government of or incorporated in the PRC and listed in on the Stock Exchange of Hong Kong ("SEHK"), namely the H-shares, including the component company stocks of the Stock Exchange of Hong Kong ("SEHK")'s Hang Seng China Enterprise Index; or any securities/instruments issued by a company that is 30% or more directly- or indirectly-owned by the government of or a company incorporated in the PRC and traded on an exchange in Hong Kong or Macau, namely SEHK's Red Chip shares, including the component company of the SEHK's China-affiliated Corp Index is distributed only to Taiwan Securities Investment Trust Enterprises ("SITE"). The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

To our readers in Hong Kong: Information is distributed in Hong Kong by and on behalf of, and is attributable to, Morgan Stanley Asia Limited as part of its regulated activities in Hong Kong. If you have any queries concerning Morgan Stanley Research, please contact our Hong Kong sales representatives.

Morgan Stanley Research is disseminated in Japan by Morgan Stanley MUFG Securities Co., Ltd.; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents); in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore, which accepts responsibility for its contents; in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Smith Barney Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Canada by Morgan Stanley Canada Limited, which has approved of, and has agreed to take responsibility for, the contents of Morgan Stanley Research in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main and Morgan Stanley Private Wealth Management Limited, Niederlassung Deutschland, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin); in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that Morgan Stanley Research has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the United States by Morgan Stanley & Co. Incorporated, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized and regulated by the Financial Services Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. Morgan Stanley Private Wealth Management Limited, authorized and regulated by the Financial Services Authority, also disseminates Morgan Stanley Research in the UK. Private U.K. investors should obtain the advice of their Morgan Stanley & Co. International plc or Morgan Stanley Private Wealth Management representative about the investments concerned. RMB Morgan Stanley (Proprietary) Limited is a member of the JSE Limited and regulated by the Financial Services Board in South Africa. RMB Morgan Stanley (Proprietary) Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided in accordance with a contract of engagement on investment advisory concluded between brokerage houses, portfolio management companies, non-deposit banks and clients. Comments and recommendations stated here rely on the individual opinions of the ones providing these comments and recommendations. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data. The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Morgan Stanley Research is disseminated and available primarily electronically, and, in some cases, in printed form.

Additional information on recommended securities/instruments is available on request.

The Americas

1585 Broadway
New York, NY 10036-8293

United States

Tel: +1 (1) 212 761 4000

Europe

20 Bank Street, Canary Wharf
London E14 4AD

United Kingdom

Tel: +44 (0)20 7425 8000

Japan

4-20-3 Ebisu, Shibuya-ku
Tokyo 150-6008

Japan

Tel: +81 (0)3 5424 5000

Asia/Pacific

1 Austin Road West
Kowloon

Hong Kong

Tel: +852 2848 5200