



10 July 2007

## Investment Advisory Group

# Credit Spreads and Equities: Dark Clouds?... Or Passing Clouds?

In light of the recent subprime fallout and emerging problems in the CDO market, in this article we present a distillation of views across our equity and credit research teams. We lead off with a feature article from DB's Head of US Quantitative Credit Strategy, John Tierney.

In our view, an excess of demand for credit products, but limited need for external financing by companies, has provided the basis for the growth of structured products over the last few years. Heightened risk aversion has increased spread volatility recently, as the market debates the prospect of further adjustments in the structured credit universe and the impact on private equity and M&A activity. However, this is occurring against a backdrop where corporate fundamentals remain strongly positive. Simply put, we do not believe the recent rise in bond yields, credit spreads, and equity market volatility heralds the end of this credit cycle, primarily because the outlook for underlying corporate credit fundamentals remains solid. The gap between corporate profitability and debt financing costs is large and the underlying global growth outlook is still largely intact. As such, we continue to expect corporate re-leveraging, M&A and private equity activity to remain dominant market themes.

While upward pressure on bond yields may exacerbate the subprime fallout even further, our base case from last summer remains that this will largely be a financial issue, not an economic one. The recent spike in implied equity volatility is likely a temporary risk aversion phenomena, as the commencement of the US reporting season is likely to shift investor focus back towards solid corporate fundamentals and away from financial risks. With much cash still sitting on the sidelines, an allocation shift back to equities and potentially even corporate bonds would come as little surprise given the strength of corporate balance sheets. Such a switch may come at the expense of reduced inflows to the more complex CDO/CLO market.

We believe a lack of Asian central bank duration buying has been one of the key drivers behind the recent sell-off and steepening in major bond markets. With significant assets having been directed to sovereign wealth funds, and these portfolios already heavily concentrated in long dated fixed income, the Emerging Market official sector is primed to extend out the risk curve into equities (offsetting much, if not all, of the housing related risk to stocks). In our view, whether Emerging Market central banks would now view subprime as attractive (following the aggressive sell-off) is a somewhat moot question for the broader market. There has been about \$US2.2 trillion of subprime ABS issuance since the start of 2002: that towers over the amount of central bank reserves, if any, that are likely to be allocated to sovereign wealth funds for the purpose of ABS investment.

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# Credit Outlook: No – the cycle hasn't turned yet

The recent volatility in the credit markets is sobering – but we think it reflects near term concerns about the subprime market rather than heralding a turn in the credit cycle.

In short, underlying credit fundamentals at most companies remain excellent, and there is little reason to anticipate a material rise in defaults. As such we expect credit spreads to remain within the trading range of the past year for the foreseeable future, although spread volatility may be higher for now.

One likely consequence of this episode will be to reprice and restructure the terms under which private equity deals are done. This in turn could end up slowing the deal machine a bit and extending the benign credit environment of recent years.

The new LCDX index has weathered a challenging launch. We believe the recent widening of the LCDX index is overdone. We recommend investors who expect the credit markets to settle down buy protection on the HY CDX index and sell protection on the LCDX index on a carry neutral basis.

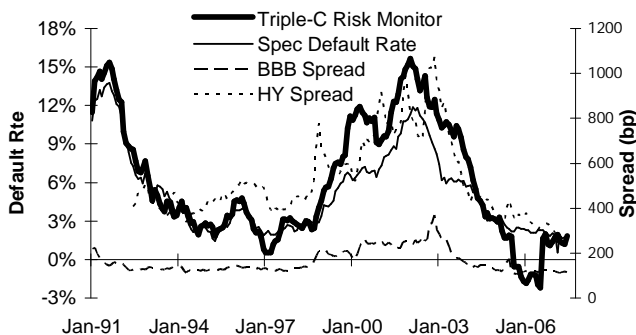
## Another selloff: another buying opportunity?

The burning question of the day has to be whether the credit market volatility of the past three weeks heralds the end of this credit cycle or not. In short, **we say no**.

*Underlying credit fundamentals will drive spreads in coming months*

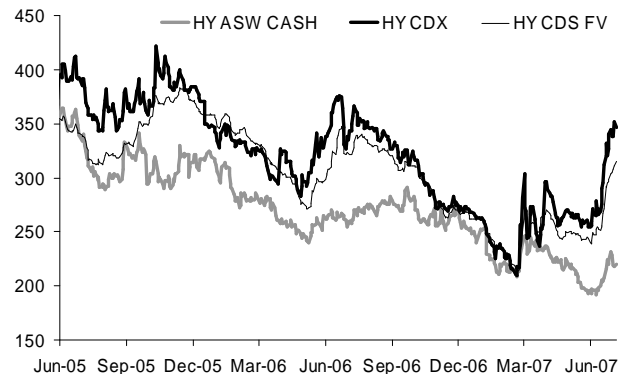
The primary reason for our still sanguine outlook is that underlying corporate credit fundamentals remain excellent. Investment grade companies have stabilized at the best credit quality levels seen in years, while the high yield market continues to eke out small improvements. Given this backdrop, it is difficult to see defaults rising materially in the foreseeable future, barring outright economic collapse (Figure 1).

Figure 1: Our Triple-C Risk Monitor shows no sign that default risk is rising



Source: DB Global Markets Research

Figure 2: The derivatives market is running away from the cash market again



Source: DB Global Markets Research

Since mid 2005, we have seen four significant sell-offs in credit (Figure 2). The first three were driven largely by concerns about Fed policy and the broader economy; the current one

adds to the mix the challenges of the sub-prime market and financing some highly aggressive private equity deals.

In each case, the high yield cash market has reacted far less than the derivatives market, and the derivatives market has eventually resumed its rally to ever tighter levels. In our view, the cash market has consistently "got it right". The reason is that cash investors focus on the granular details of the market – specifically the credit quality of real companies – and they see what we see in our US credit metrics analysis.

*The derivatives market has made a valid point too about market risk*

That's not to say the derivatives market hasn't made a fair point too. Looking at the current market, there is a risk - albeit small – that the sub-prime mess could drag the US economy into recession. However, we think the sub-prime risk is primarily financial, not economic. For example, there is a risk that Bear Stearns – or other large broker dealer – could be forced to shore up hedge funds, take a large hit to capital and have to shrink balance sheets quickly, possibly dumping large quantities of more liquid bonds into the market in short order. Likewise, with CDOs now being more accurately marked-to-market, levered funds could face increased margin calls and redemptions, along with higher haircuts. In turn, this could force them to de-lever by selling other securities, most probably the more liquid high yield bonds due to the illiquidity of the CDO market. Since some fund-of-funds use leverage, these funds are also facing margin calls from their banks, forcing them to de-lever via redemptions (if possible). Lastly there is a risk that the credit issues that are affecting sub-prime CDOs could arise in leveraged loan CLO's. But we also believe that these problems lie somewhat in the future.

The derivatives market (perhaps chaotically) has been discounting all these possibilities and in so doing, has provided us insight into how the cash and derivatives markets may price these systemic risks if their probabilities rise.

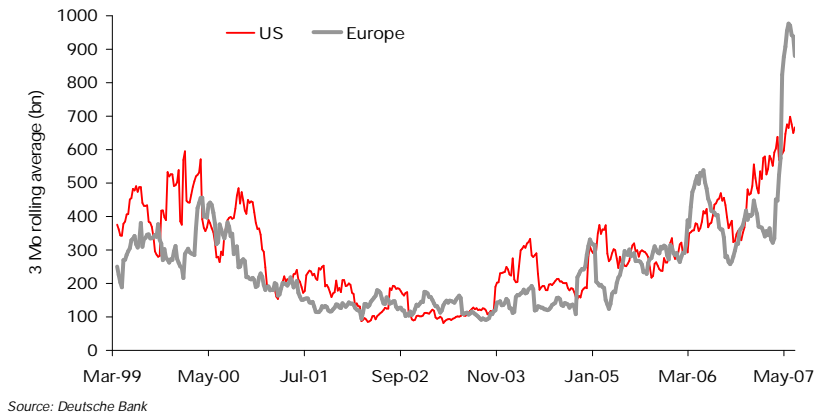
Meanwhile, if the likelihood of one or more of these systemic risk factors doesn't rise materially in the near future, we would expect derivatives investors to start unwinding what will prove to be expensive shorts, which will lead to tighter spreads. How much they tighten may depend on the extent to which hedge funds got outright short versus simply reduced long positions over the past couple of weeks. Another catalyst for credit spreads moving tighter will likely be a decline in equity volatility. It may also be some time before this scenario plays out. Finally, we anticipate that the flow of funds into structured products will slow going forward. While it is uncertain where these new funds will go, we would not be surprised to see these outflows going into high yield and equities.

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## Bond investors are still buyers at the right price

The rash of cancelled debt deals in the past week has also done much to stoke concerns that the current credit cycle is turning and that the wave of M&A and LBO activity is coming to an end. M&A and LBO activity may slow down for now from what are clearly elevated levels (Figure 3) but somehow it is hard to believe that private equity firms are going to give back much of the \$350 bn of capital that they have amassed over the past couple of years any time soon. Rather, it is just a matter of time before the deal machine starts up again. To us, the current hiatus may lead to a healthy repricing of private equity transactions, in terms of deal prices and financing terms. This in turn would do much to help prolong the current benign stage of the credit cycle.

Figure 3: M&A activity may have hit a near-term peak for now



### The LCDX makes a stirring debut

*The LCDX index faces a stiff test in its inaugural days*

If the selloff in the HY CDX index was surprising, it pales in comparison to what happened with the new-comer LCDX index (100 single-name Loan-only Credit Default swaps), which started trading May 22. For about two weeks, the HY CDX and LCDX indices traded at a steady ratio of about 2.35. But when the selloff started, the LCDX index started widening roughly in line with the HY CDX index on an absolute basis (Figures 4a and b). That is, the spread differential has remained roughly 150 bp, while the ratio spread has collapsed to about 1.9.

This recent trading pattern implies that the HY CDX and LCDX indices have essentially similar risk exposures. But they don't. The HY CDX index reflects 5Y unsecured risk on a pool of 100 high yield companies; the LCDX index reflects secured risk on a pool of 100 names (some 40 of which overlap with the HY CDX index); the nominal maturity is 5 years but the underlying loans are cancelable in some circumstances. The difference in composition and maturity should lead to some basis risk between the two indices, but the predominant pricing factor should be the *unsecured* versus *secured* feature.

Figure 4a: The LCDX index marched wider in line with the HY CDX index

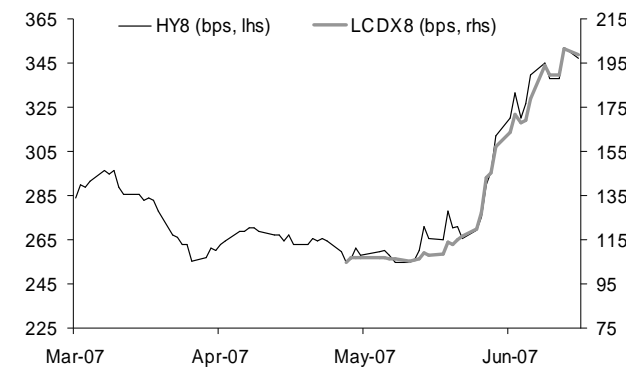
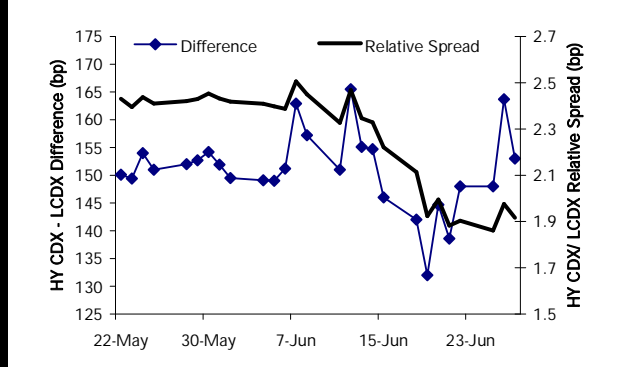


Figure 4b: Relative spread tightening between the HY CDX and LCDX indices is probably overdone



It would appear that the LCDX index has been trading partly as a substitute or proxy for the HY CDX index, and partly in reaction to concerns that subprime problems may affect leveraged loan funds.

*The markets are still sorting out how the LCDX index should trade vis a vis the HY CDX index*

Our view is that the market has not yet fully sorted out how the LCDX index should trade vis-à-vis the HY CDX. We don't have a firm view on what the "correct" relative spread or trading relationship should be, but we do think that the recent widening in the LCDX index is probably overdone.

*Sell the LCDX and buy the HY CDX index on a carry neutral basis*

If we are correct in our assessment that default risk in the leveraged loan market remains in the future, and if concerns about hedge fund liquidations of collateral abate in coming days or weeks, we would look for the LCDX index to outperform the HY CDX index on a spread change basis, especially if credit markets settle down. We caution it may take some weeks for this scenario to play out and near term volatility in the HY CDX / LCDX relationship could be high in the interim.

*John F. Tierney*

# USA: Effect on S&P 500

The elevated levels of equity market vol since late February and the recent spike up raise basic questions about whether or how much of the increase is here to stay and what the implications for equity markets are (Figure 5). Our take is simply that in light of the uncertainty about the potential implications of spillovers from the "Bear Stearns" issue, there was a relatively broad-based risk reduction across equity markets and to varying degrees other financial markets. Our call for some time had been that volatility was near a cyclical low and that, in the baseline of a soft landing for the U.S. economy, volatility would rise gradually across asset classes (See "What and will turn vol around?", November 2006). In the event of a hard- or no-landing (inflation risks and series of Fed hikes), volatility would rise faster. Quantified in the equity space, our call was that the VIX would rise gradually from its 10-12% range prevailing since October 2006 to around 20% over the next two years. In our view, the gradual up-trend in vol in a soft-landing scenario is neutral for equity markets. This reflects the view that the corporate re-leveraging cycle is still in its initial stages (See "Why are equity cash yields so high?"). Equity volatility has historically been related to corporate leverage. Higher volatility reflecting higher leverage (starting from low levels) is in our view neutral for equities since the higher leverage also implies higher returns on equity.

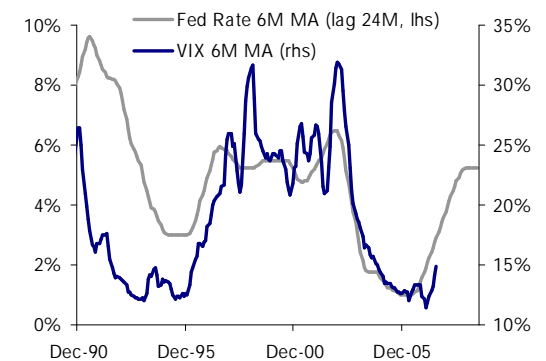
The trend component of the recent move up in vol is broadly in line with our call but the large spike is temporary (Figure 6). In our view, the recent spike up since concern about subprime mortgages entered the mainstream press, is largely temporary. We view the recent spike as reflecting a broad-based risk reduction in the face of uncertainty about possible spillovers from the subprime sector. Such episodes of risk-reduction have averaged 12 trading days historically. Coincidentally (or perhaps not so), the VIX started to decline on June 27, 11 trade days after Bear Stearns first started to liquidate its positions on June 13. But barring the discovery of hitherto unknown major losses (the rest of the iceberg) or rogue trading or mismanagement issues, the risk reduction will dissipate like past episodes. As such, we see no lasting implication for equity markets. However, we suspect investors are wondering in light of the subprime debacle, what other asset classes may have been bid up too far. Pressure not to get caught with over-valued securities for the second time is natural. But again, we believe this is unlikely to be an issue for equities since they are still cheap relative to bonds.

**Figure 5: VIX**



Source: Bloomberg, Deutsche Bank

**Figure 6: VIX vs. Fed Rate**



Source: Bloomberg, Deutsche Bank

**Bankim Chadha**

# Europe – Private Equity

We do not believe that the rise in bond yields, credit spreads and equity market volatility will end M&A, private equity activity and corporate balance sheet re-leveraging. The gap between corporate profitability and debt financing costs remains large and fundamentally the global growth story remains largely intact. This continues to call for leverage. With still a lot of cash waiting to be invested, we believe the most likely outcome is a re-thinking of the terms under which these deals are done. This might slow the process, which could actually be healthy, but is unlikely to end it, in our view.

M&A, Private Equity activity and share buybacks have in recent years created demand for European equities that is clearly exceeding the supply (both secondary and IPOs). This has clearly supported the equity market, and equity market performance has outpaced the increase in the market cap. How large is this effect since the start of the year? YTD, Euro470bn of M&A in European listed targets have been announced, equaling 3.9% of market cap (7.9% annualised). Buy-backs have been running at 0.75% of market cap annualised in H1, Private equity's demand for European listed targets ran at roughly 2% of market cap annualised in H1. Assuming dividends of 2.7% are fully re-invested and subtracting the issuance of 1.3% of market cap annualised, net demand in H1 was 12.05% of market cap annualised. This assumes that other investors than Private Equity neither net sell nor net buy equities.

Given this, one can judge what the effect of a complete loss of Private Equity demand going forward could be (assuming that they keep their existing holdings rather than trying to place them in the market). Net demand would drop by only 2%, everything else equal. The remaining 10% net demand would still be very supportive for the market.

*Bernd Meyer*



# Australia

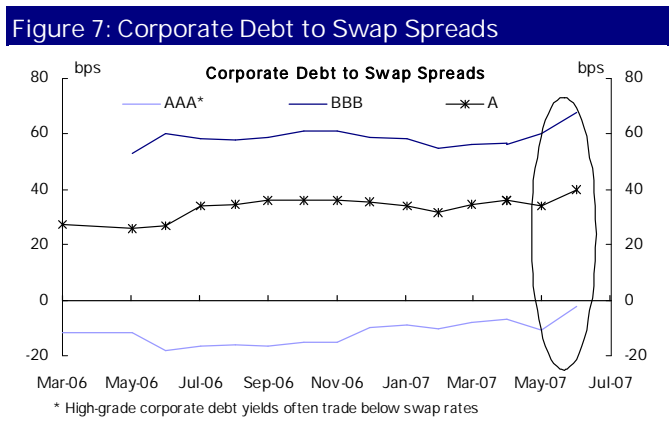
Over the past year in Australia there has been significant private equity activity, with several proposals to acquire all or part of the assets of a number of large listed companies. The breadth of these proposals has been perhaps rivaled that seen in any other developed market over this period, but to date the number of deals completed has been less than expected. In some instances the proposals have been rejected by the companies targeted and the deals have gone no further, because private equity firms typically need consent to be able to undertake extensive due diligence. Another issue has been that speculation of widespread takeover activity pushed up the prices of a lot of stocks ahead of formal private equity proposals, and the higher share prices then made it difficult for subsequent deals to generate an adequate return.

More recently the rise in global credit spreads has represented a further hurdle. Many of the private equity firms that have been active in Australia have global operations and have tended to raise the majority of their required debt offshore, owing to liquidity issues in the Australian corporate debt market (especially for lower-grade debt). Consequently, the rise in low-grade debt spreads overseas could become an issue for private equity activity in Australia if it is sustained (note credit spreads in Australia have also widened - Figure 7).

Over the past year, part of the rise in the Australian stock market has been driven by speculation of takeover activity across a wide range of stocks. If this activity occurs at a slower rate than originally anticipated, there is a risk stock prices retrace in a number of sectors, particularly those where fundamental conditions are otherwise not particularly strong. This has already been the case to some extent in the media sector, where a relaxation of ownership restrictions saw price-earning ratios rise significantly across a number of stocks, only to see them retrace the gains as the deals completed have come in shy of initial expectations.

More generally though, we remain upbeat on the outlook for the Australian market, with strong earnings growth expected to compensate for any pull-back in valuations. Resource earnings are expected to grow solidly as commodity prices remain higher than many analysts originally anticipated, and the long-awaited increase in mining output kicks in. Substantial upgrades to Australian economic growth of late should also buoy prospects for industrial stocks.

**Tony Brennan**  
**Tim Baker**



Source: Deutsche Bank

# Equities and Credit

In our view, a decoupling of the equity market (and the credit market for that matter) from a robust global growth backdrop is likely to be temporary while bond yields remain non-restrictive (as is presently the case). Earnings upgrades will likely continue. Valuations are close to fair value, but remain cheap vis-à-vis bonds. M&A, corporate re-leveraging and rising demand from EM central banks should continue to support the market. A move higher in inflation expectations and corresponding bear steepening in global yield curves is the major market risk to this positive long-term stance.

Shorter-term technical indicators strongly point to investor caution rather than exuberance in equity markets: implied volatility has bounced from its lows; implied volatility skew continues to trend higher, sentiment surveys show only marginal bullishness in the market; technicals such as RSI or distance to moving averages are anything but stretched; and finally, Directors' Dealings in Europe have become supportive again.

To understand the potential for credit contagion and what this could mean, an analysis of the root of the problem is in order. This is how we see it.

An excess of demand for credit products, but limited need for external financing by companies, has provided the basis for the growth of structured products over the last few years. On the demand side, following the bursting of the equity market bubble in 2001 and the increased regulatory focus on asset-liability matching by Insurers and Pension funds, many investors have been encouraged to take credit risks rather than equity risk. Foreign buying of US credit product has, in flow terms, outnumbered foreign buying of US equity products by a margin of 4 to 1 over the last few years, instead of 1:1 as had typically been the case for the previous two decades (Figure 8). This demand has compounded the problem of a lack of supply, as the equity market sell-off of 2001-03 initially saw investors place a premium on balance sheet consolidation and deleveraging in particular. Cash returns on assets, e.g. CROCI, are at record levels and have continued to rise rather than mean-revert. Equity issuance in Europe at 0.7% of market cap in H1 is the lowest in 18 years. The demand-supply imbalance in the credit market has had four consequences.

First, credit spreads have tightened while equity risk premiums have remained high. Credit spreads have been quite tight for some time, lowering the reward relative to longer-term default risks.

Second, investors have increasingly been willing to buy complex credit products outside of plain vanilla corporate bonds.

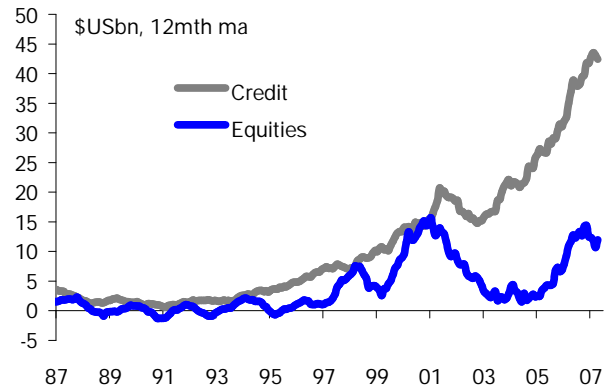
Third, lenders have made loans that either should not have been given, in the case of subprime, or made loans with aggressive spreads and covenant-lite terms, in the case of corporates. Originators and banks were easily able to sell this exposure in a packaged manner, lowering their overall risk.

Fourth, an excellent business opportunity had emerged for Private Equity funds, by seemingly effectively converting equity risks into credit risks (by buying cheap equity, which investors did not want, and selling expensive credit, which they wanted).

In short, we believe the problem is not one of excessive corporate leverage, but rather, more one of aggressive investor behaviour. With investors now beginning to see the merits of direct equity and corporate credit exposure, the outlook for Private Equity (and CDO/CLO issuers) should become relatively less favourable to the benign conditions in recent years. In

other words, an asset allocation switch may well come at the expense of reduced inflows to the more opaque CDO/CLO market. (Note that the CLO market is the primary source of funding for private equity, as institutions comprise 80% of the leveraged loan market, and CLOs comprise 58% of institutional funding). In such a scenario, private equity would either scale back investments or they would have to radically change their business model. Private equity has proved remarkably skillful at adapting to changing market conditions, and this could prove to be a minor blip, which we foresee in our base case scenario. Of course, the major risk to this view is tighter overall financing conditions and ultimately a global growth slowdown.

**Figure 8: Foreign buying of US Credit and Equities**



Source: TIC, Deutsche Bank

*Bernd Meyer  
Gerald Lucas  
Vinay Pande  
Brad Jones*

# Assessing the prospects for financial markets in H2-07

Financial markets ended Q2 with something of a bump. For the moment, the problems at Bear Stearns' two hedge funds appear to have been contained. And compared to the market downturn we saw at the end of February, the current episode still appears more modest overall. The S&P 500 fell 5.8% peak-to-trough in the February-March episode, compared to a more modest 3.2% fall from the recent peak; while in credit, 5Y EUR Crossover spreads (iTraxx Series 6) rose 70 bps trough-to-peak in February-March, compared to a more modest 60 bps rise from the recent trough. As Q3 begins, the net news-flow has improved somewhat, which makes it tempting to conclude that buy-the-dip should be the order of the day.

But recent revelations regarding market practices in the CDO market leave more questions than answers. Probably most worrying is the nagging suspicion that there is an overhang inventory that is not being appropriately marked to market, and that is masking the possibility of significant potential distress on the part of some market participants. In addition, such has been the frenetic recent pace of activity in the private equity and M&A markets that there is now a significant pipeline of predominantly HY debt that needs to be placed in the market during the summer months just to complete the financing of already agreed deals.

Slightly more generally, it is in our view useful to recognise just how strong liquidity conditions have been in global markets in the recent past, and how unlikely that makes it that they can improve much further in the months ahead. Q2 saw a flurry of innovation in new alternative asset classes gemstones, wine & art all saw the creation of new investment vehicles (anyone for tulips?!). This is not to say such investments would not be wise (the Li-Vex-100 Fine Wine index has risen 55% in the past year), but it is worth recalling that investment such as these will rightly be among the later recipients of investment capital in a financial cycle.

In addition, it is clear that the US housing slowdown, which was initially centred on the sub-prime end of the market, has not only yet to stabilise, but may be spreading. Existing home sales fell by 10% in the year to May, with the stock of unsold homes up by 24% during the same period. In fact, the stock of unsold homes has now doubled since 2004. In the UK, five out of the eight worst performers among the FT-SE 100 constituents (now all down 20% or more on an YTD basis) are real-estate-related companies (another, Northern Rock, was one of the more aggressive users of structured finance in recent years!). Among other homebuilders, George Wimpey and Taylor Woodrow have just reported US order-books down by 41% and 45% respectively in year-on-year terms (these two companies are now merging into what will become the UK's largest homebuilder). Interest rates may remain low in nominal terms, but the household debt servicing burden has risen in recent years to a level comparable with that last seen at the peak of the last housing market cycle in 1990. In Spain, four of the five worst performers in the Ibex-35 index are real-estate related companies. Spain seems particularly exposed to a downturn in the housing market, having built more than 800,000 homes in 2006 more than France, Germany & Italy combined!

Notwithstanding the aforementioned questions about structured finance and the house price cycle, other corporate fundamentals appear to remain strong. Not only is business continuing to operate at a high level of profitability, but by most traditional measures, it is underleveraged. In assessing the outlook for H2, herein lies the debate a negative drag from

housing and the likelihood of further adjustment in the market for Structured credit on the one hand, versus strongly positive corporate fundamentals on the other.

In our judgment, the ratio of negative factors to positive factors has increased during the course of H1, and is set to remain high in H2, in our base case. For these reasons, we begin H2 with a somewhat more sombre assessment of the prospects for the principal financial markets we track. We believe there is more than enough resilience in the global financial system to withstand the events that we have witnessed to-date, but the overhang of bad news is more likely to restrain significant further price appreciation during the summer months.

*Stuart Parkinson*

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