IRML

Market Risk Report
November 2007
Up or Down?

Executive Summary

- There were mixed signals during October. GDP numbers were strong in the US and UK, but US housing continued to weaken and US financials continued to report huge losses (especially Merrill Lynch and Citigroup). Another 25bp rate cut in the US helped the equity markets, but hurt the Dollar. Commodities and Emerging Markets were again the winners. Although volatility remained high, in general it was lower than during September. However, with the VIX at 23% on 2nd November, we should continue to expect shocks.
- Equity markets were mixed, with the Fed cut helping IT and Emerging Markets, but sub-prime continuing to weigh on Financials. Volatility was also mixed but in general lower than the previous month. The VIX remains very high; at 23% implying equity volatility will be very high over the next month.
- Yield curves in the UK and US steepened again as rates were cut in the US and a continued flight to quality kept short-duration yields low. Further rate cuts are expected in the US and UK. Spreads stayed very high. 10-Year bond volatilities stayed high during October and volatility in Europe hit a new 12-month high.
- The Dollar weakened to a new all-time low of $1.45/€, and also weakened against the Pound to $2.09/£. FX volatility fell slightly, and halved in Japan.
- Option volatility generally will have remained high during October as price movements were quite strongly positive and the volatility of implied volatility remained high.
- Commodities' prices rose yet again to new highs. Volatility remained low except for Oil which became volatile as it tested new all-time real highs.
- Real Estate (share) prices were flat or slightly down for the month. Volatility remained high.

Author: Niall O'Connor

Key News (Major Volatility-Driving Events)

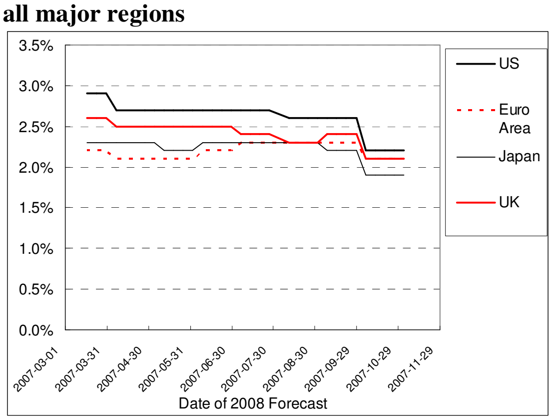
October: a month of conflicting signs

October gave us mixed messages: some strong actual economic data, but some weak outlooks, some good earnings reports but some very weak market data.

On the GDP front there were some surprisingly strong figures: US Q3 GDP growth came in at 3.9% (and non-farm payrolls remained strong) and UK GDP at 3.3% on a year earlier. Chinese economic growth rose to 11.5% in Q3: worries over inflation are starting now.

GDP estimates continue to be revised downwards.

2008 GDP growth estimates were revised down for all major regions



However, GDP figures are often viewed as rather backward-looking due to the time it takes to compile them. More contemporary and forward-looking figures were much weaker.

US sales of existing homes were down 8% in September after being 4.7% down in August. Median prices were down 4.2% on a year earlier.

The Euro area purchasing managers' survey fell to a 2-year low.

Sub-Prime hasn't gone away

Merrill dramatically announced losses of $8bn, before asking the CEO to retire.

Citibank shares have dropped 32% from their year-high, and the CEO "Chuck" Prince resigned amid suggestions that asset write-downs over the last month might come to as much as $11bn.

Fed cuts, Europe holds

The Fed cut rates again on the 1st November by 0.25% to 4.5%, but changed their stance to neutral, warning the markets not to expect further cuts. However, the market does still expect further cuts.

The ECB remains unlikely to cut rates as inflationary pressures remain in Europe, and in the UK rates stayed at 5.75% as the economy remains surprisingly strong.

The Dollar continued its fall

The Dollar continued to slide as the outlook for the US economy looked weaker and as another interest rate cut removed support for the currency. New 27-year lows were reached against the Pound (2.09), Euro (1.45) and Canadian Dollar (0.93)

Oil prices continue to rise

Oil prices rose again hitting a new high of $96 on the back of the continuing Turkish threat to invade Northern Iraq, the strong US Q3 GDP numbers and a weaker Dollar. Prices are now at historic real, as well as nominal, highs.

But equities didn't do badly

Reading the papers would lead you to believe that equities have done badly: but that is not the case at all. Equity markets were close to flat during October and Europe and North America were just a percent or two from year-highs (and the Dow from an all-time high) at the end of the month. While the financials have done very badly, IT and Energy stocks for instance have been doing very well.

Equities

Prices

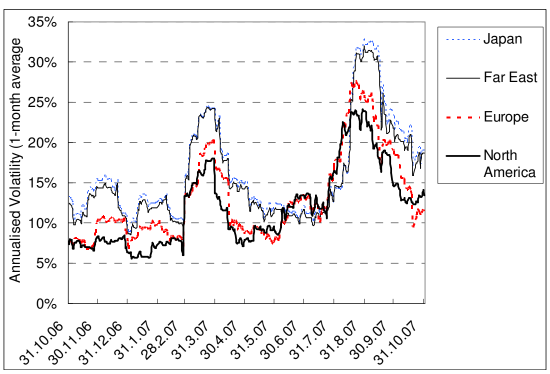
The further 25bp rate cut by the Fed provided a boost to markets, which were in general flat on the month of October, and despite all the doom and gloom remain close to all-time highs.

Volatility: Regions

Equity volatilities continued to fall during October, particularly so in Europe where volatility fell from 18.5% to 11.5%, and is actually below its 12-month average.

North American volatility rose above European for the first time this year as market turmoil continued.

Volatilities continued to fall, European volatility fell below North America

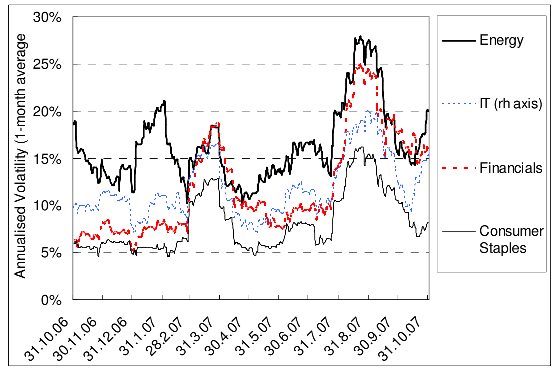


Note: based on MSCI regional indices

Volatility: Sectors

Sector volatilities were varied: Energy and IT rose (with increased uncertainty), while surprisingly Financials and Consumers fell, perhaps as price trended downwards.

Sector volatilities were mixed



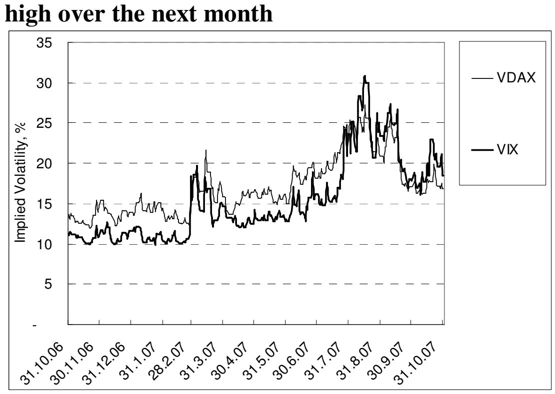
Implied Volatility (Market-Implied Near Term Outlook)

The VIX and VDAX indices show the implied (expected) volatility of the S&P500 and DAX respectively over the next 30 days based on options' prices.

Four months ago we suggested we had reached a new, higher, base level of around 13% for the VIX. In fact the VIX appears to have settled at a much higher level still, as it has not gone below 16% since June.

The current level of around 23% for the VIX is far above the 30-day historic level of the S&P500 of 15%, implying that the market is forecasting equity market volatility to increase over the next 30 days.

The VIX (US) and VDAX (Germany) are both implying that equity volatility will remain (very) high over the next month



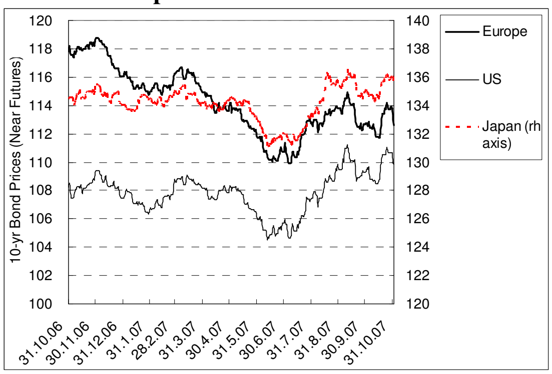
Fixed Income (10 Year Government Bonds)

Prices

Very short duration bonds continued to benefit from the "flight to quality" as worries over sub-prime debt led institutions to park money in (safe) treasuries.

However, at the long end of the curve there was less movement as the weakening economic outlook was offset by greater inflationary expectations as a result of the Fed cutting rates.

10-Year bond prices were flat on the month



Interest Rate Expectations

US markets are now suggesting rates could drop from the current 4.75% to as low as 4% over the next year. The market still seems to believe in the "Federal Reserve Put": the belief that if the stockmarket falls the Fed will step in to support it, effectively putting a floor under the stockmarket. This is despite the Fed explicitly trying to discourage this kind of thinking.

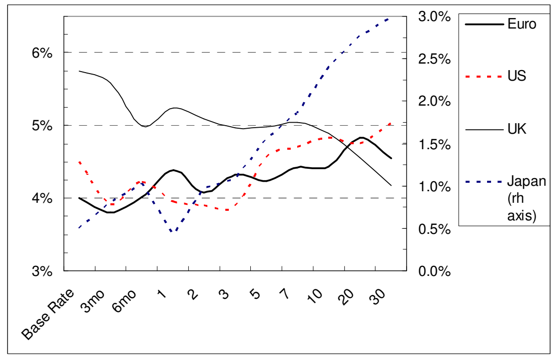
The market also expects the UK Bank of England to cut rates from 5.75% to around 5% over the next year.

However, we suspect that in both these markets some of the implied cut in rates may be due to short-term technical issues (short term treasuries being bought as safe-haven assets) and rate expectations are higher than those implied by yield curves at present.

In Europe the yield curve has flattened again with the short term rate at 4% and the long end barely higher: markets are not expecting any rate cuts, which in turn is supporting the Euro against the Dollar.

Only Japan still shows an upward sloping yield curve at the longer end, but rates are implied to rise to just 1% over the next 3 years.

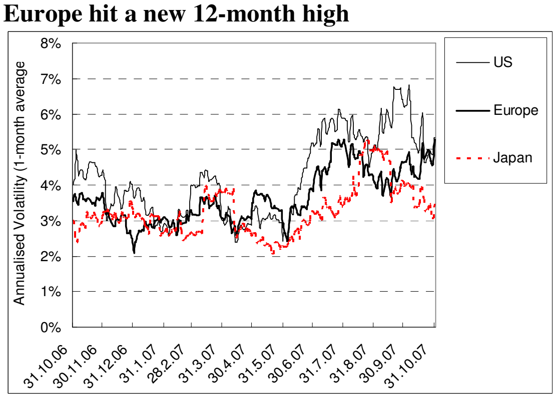
US and UK rates are expected to fall, European rates to stay flat. (Note these are not yield curves, but are future short term rates implied from yield curves)



Volatility

Bond price volatility remained high during September, with the Europe hitting a new 12-month high of 5.3%.

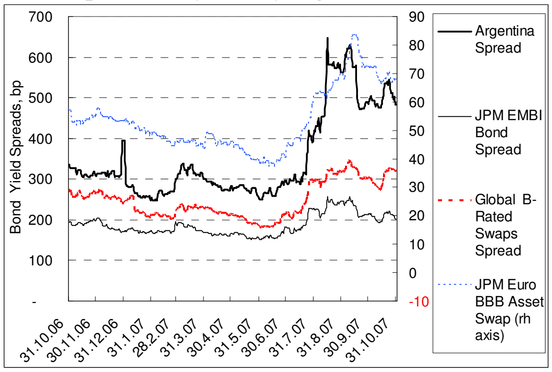
10-Year bond price volatility remained high, Europe hit a new 12-month high



Spreads

Spreads were largely unchanged in October from the very high levels of September: Argentinean spreads remained at just under 500bp.

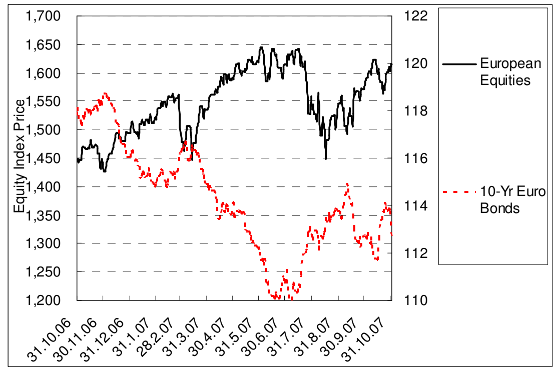
Credit spreads stayed very high in October



Correlation with Equities low, but negative

Bonds and equity prices remain negatively correlated since the start of this year when fears over a growth slowdown intensified. Recent moves in equities have remained negatively correlated with bonds, although the correlation has not been strong.

Bonds prices have been negatively correlated with equities since the start of 2007



FX

Prices

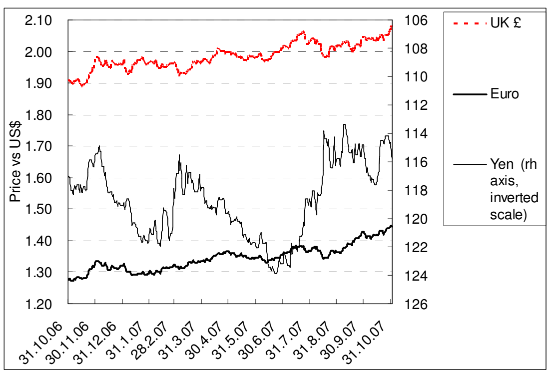
The 25bp cut by the Fed, and the expectation of more cuts to come, weakened the Dollar again. The unwillingness of the ECB to follow suit, and the continuing strength of the European economy (despite some lead indicators beginning to fall) kept the Euro strengthening to $1.45/€ (a new all-time high) during October.

The Pound also strengthened to $2.09 (a 26 year high).

Yen volatility fell and the rate was unchanged on the month at around ¥115/$.

Also of note was the Canadian Dollar, which in September passed up through parity against the Greenback for the first time since 1976. It continued its rise to C$0.93/$, driven by dual surpluses and booming commodities' prices.

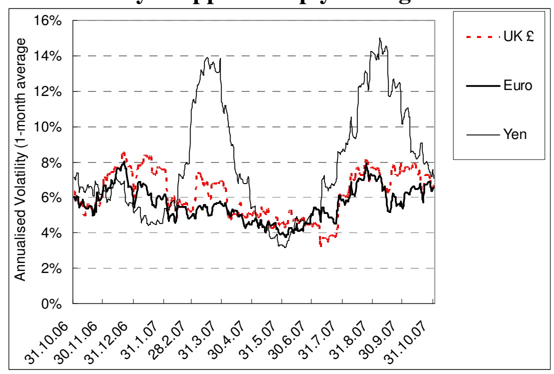
The Dollar continued to weaken



Volatility

Volatilities fell slightly on the month, except in Japan where the very high levels seen recently abated: from a 12-month high of 14.9% to just 7.1% at the end of the month.

Yen volatility dropped sharply during October



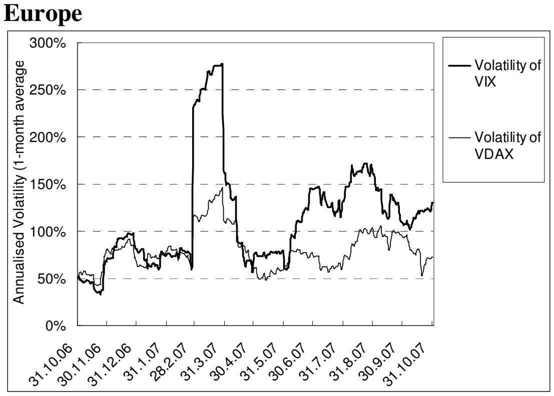
(Equity) Options

Volatility of Implied Volatility

The chart of volatility of implied volatility looks similar to the VIX and VDAX from which it is derived, showing a peak in spring 2007 and another spike in August 2007.

Volatility of volatility rose slightly in the US (VIX) but fell slightly in Europe (VDAX).

Volatility of volatility rose in the US but fell in Europe



These volatility of volatilities will have meant options prices would have had similar volatility in October as September.

(Equity) Price Swings

Equity prices have had a wild ride over the last three months.

During mid-August 30 day equity price movements were strongly negative in all regions. In Japan the market was down 17% over 30 days at one point, and the figure for the US was -9%.

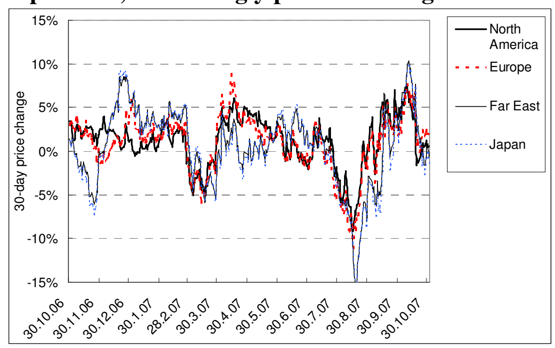
This suggests that (equity) option deltas would have strongly decreased for calls and strongly increased for puts.

By mid-September this was reversed: the Japanese market was up 5% over 30 days, and the US up 6%.

During most of October price movements were strongly positive in all regions.

Portfolios containing options would quite likely have seen quite large changes in both value and risk during the last three months.

30-day equity price changes were strongly negative mid-August in all regions but quite positive by mid-September, and strongly positive during October



Note on Treatment

Options show more complex behaviour than the other instruments we look at in this report, so we make some simplifying assumptions. As Calls and Puts are in effect polar opposites and in and out of the money options behave very differently, it is hard to generalise all options' behaviour. However, we look at the two key drivers: volatility of implied volatility and major price movements of the underlying security.

Implied volatility (via the option Vega) drives option prices, so a big indicator of option price volatility is the "volatility of implied volatility".

Of course the biggest driver of individual option prices is the movement of the underlying (via the option Delta): a move in either direction will cause the option to go in or out of the money (and a corresponding change in the option Delta and price volatility). As a proxy for this, we look at the 30-day price swing of equity market indices; options on bonds or FX could of course behave differently. Calls and Puts will respond in opposite fashions: calls becoming more volatile as prices rise.

Note on Convertibles

Convertibles are in effect a combination of a bond and a call option, with the bond portion usually making little contribution to the instrument volatility unless the option is out of the money. As such, convertible portfolios' volatilities will normally behave similarly to call option portfolios, and this commentary can be applied to convertibles as well as options.

Commodities

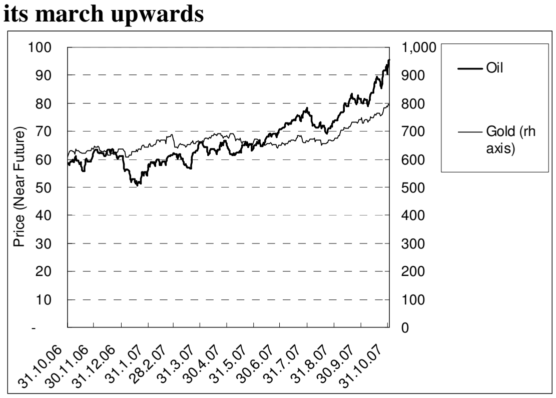
Prices

Global economic growth has remained very strong despite reduced forecasts for developed countries. This, combined with investors seeing commodities as safe-haven assets (and inflation hedges too), lead to a continued commodities boom. The weaker Dollar also pushed up prices.

Gold hit new recent highs: over $800 at the start of November.

Oil reached an all-time high in real terms (as well as nominal of course) of $96 at the start of November.

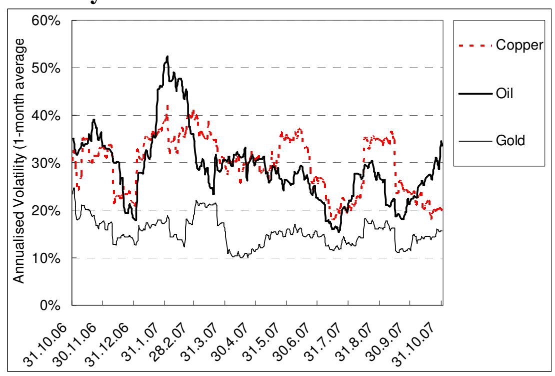
Oil prices rose again and the Gold price continued its march upwards



Volatility

Volatility remained relatively low during October, except for Oil which rose from 22% to 34% as prices went through new all-time real highs.

Volatility rose for Oil



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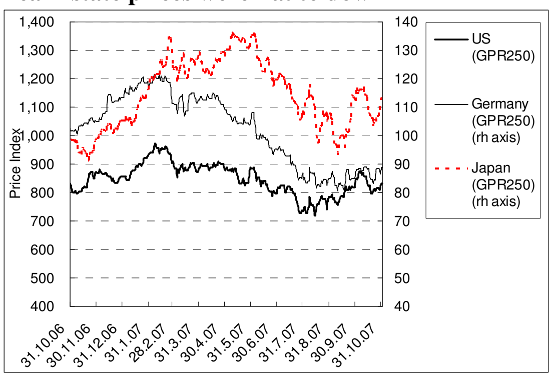
Real Estate (Real Estate Share Prices)

Prices

Perhaps surprisingly, property shares were actually only slightly down on the month, supported by US rate cuts.

Commercial property prices looked very weak in the UK, and the residential market showed the first serious signs of lack of growth.

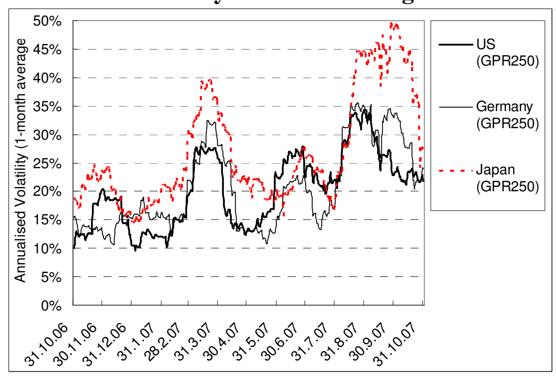
Real Estate prices were flat to down



Volatility

Real Estate volatility was extremely high in September. Japan made new 12-month highs of 49.4%: a new record volatility for an asset class in our reports. Volatility fell back in all regions during the end of October but remains above 12-month averages in all major regions at around 25% due to uncertainty remaining over the direction of prices.

Real Estate volatility levels remain high



Note

Note that for property we just look at indices of the share prices of property companies, and not the underlying property directly, for which little data is available. This is usually consistent with funds which tend to invest in property indirectly, e.g. via REIT's.

As REIT's are usually focussed on commercial property, residential housing may also follow a slightly different pattern to that discussed in this article.

Notes

Definitions

To avoid repetitions, the term volatility refers to annualised, 30-day average realised volatility in local currency unless otherwise specified. As such it may be lower than, and lag, shorter-term market volatility in times of high market volatility.

Charts show data up until 1st November 2007 and the commentary was written on or before 6th November 2007.

Disclaimer

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