

Market Risk Report

August 2007

Executive Summary

- Our subtitle for the June report was “Sell in May and go away” it should have been “Sell in June” and go away. Only bonds and Oil did well in July: just about all other assets saw a sharp sell-off on the back of credit fears starting in the US. A mini credit-crunch saw equities tumble and spreads rise. Volatility rose sharply across all asset classes except commodities.
- Equity markets were down sharply, with daily moves breaking 3-year records. Volatility levels rose, especially in Europe and the US. The VIX is implying volatility levels will rise further.
- Fixed income yields fell sharply over fears that real economies would be hit from the fall-out from the sub-prime crisis, and possibly from a shift of money out of equities. Volatilities nearly doubled during July, with the US hitting a new 12-month high of 6.1%. Spreads widened significantly. The strong negative correlation between equities and bonds returned.
- FX volatility rose as well, although levels remain well below 12-month highs.
- Option volatility generally will have changed significantly during July as equity prices dropped and bond prices rose. The volatility of implied volatility also rose strongly in the US, but not in Germany.
- Commodities’ prices rose again during July with Oil up to \$78, but volatility fell again reaching a new 12-month low.
- Real Estate prices continued to fall in all regions, however volatility remained moderate.

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Key News (Major Volatility-Driving Events)

A month of two halves

Contrasting news during July caused considerable market turbulence. For instance on the 23rd July good corporate profits results drove up the market, but on 24th poor results drove it down. The crunch point came on the 26th, when the failure of banks to offload debt related to LBO's of Chrysler and Alliance Boots led to biggest falls in the FTSE since 2003 for example. The only surprise about the sub-prime fallout is that it has taken so long to materialise.

Spreads have widened massively (the iTraxx spreads were up 50% in one month (US 68%) to mid-July) and the VIX continues its increase to 25%. US government bond price volatility doubled.

The US yield went up to 5.3% on a strong looking economy, then fell back to 4.8% as a result of sub-prime fears. Now the market is suggesting more than 50% chance of a rate cut by December.

Running slightly counter to all of this, commodity volatility actually fell, despite oil prices rising (again).

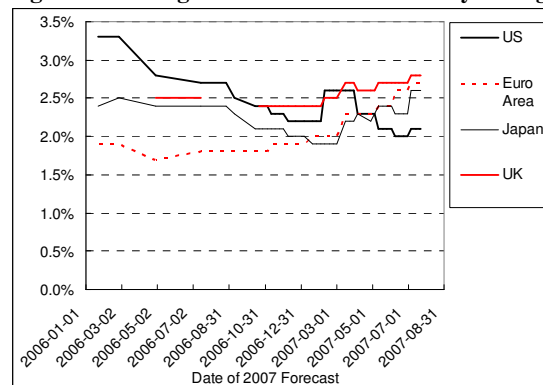
Economic news remains good

US economic data was mixed, but generally good. Consumer confidence hit a six year high in July despite May home prices showing the steepest monthly fall in 15 years. European data remained good with Germany continuing its 2-year trend of falling unemployment.

Global economic growth remains strong. Chinese GDP grew by an eye-watering 11.9% in Q2 2007,

and GDP estimates for the US and Euro area are being revised upwards, although the US is still forecast to lag the other three major regions this year with just 2.1% growth. US forecasts remain very high (and perhaps unrealistically so?) for 2008 at 2.7%.

2007 GDP growth estimates were revised up in all regions. Global growth continues to be very strong



The Dollar remained under pressure

The Dollar continued to fall rapidly, reaching \$2.06/£, \$1.38/€ and ¥122/\$. The New Zealand Dollar remained at 26-year highs against the US Dollar. The last week of the month saw a retracement, perhaps as speculators closed some short dollar positions.

Oil prices creep up

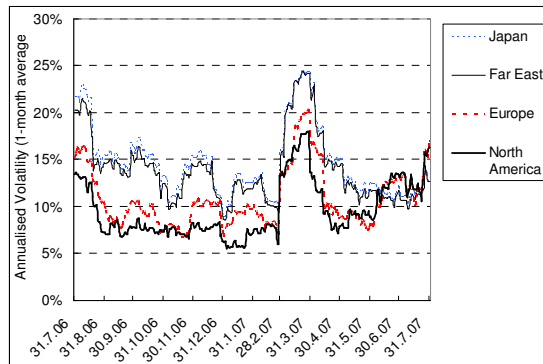
And the whole time the Oil price continued to rise: reaching over \$78. Again, little attention is being paid to it, but it could still become another catalyst for either a slowdown or market sell-off.

Equities

Volatility: Regions

During July volatilities rose again, with European (17.0%) and US equities (16.3%) rising above 12-month averages as a result of the sub-prime crisis.

Volatility rose in all regions but especially Europe and the US

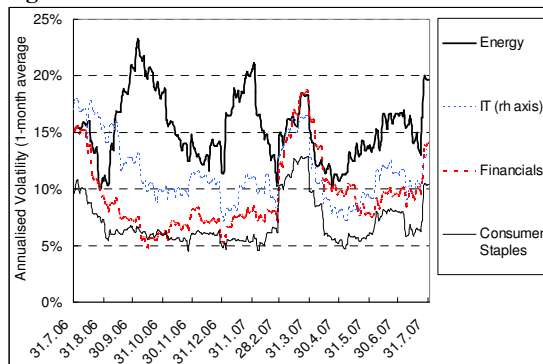


Note: based on MSCI regional indices

Volatility: Sectors

Sector volatilities spiked up in all sectors in July to above 12-month averages, although still well short of 12-month highs. Energy remained the highest as Oil prices marched upwards through \$78.

All sector volatilities rose: Energy remained highest



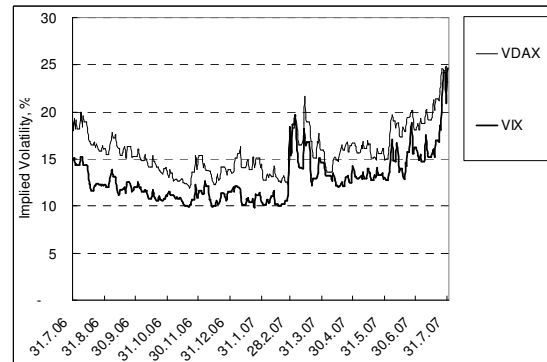
Implied Volatility (Market-Implied Near Term Outlook)

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.

Last month we suggested we had reached a new, higher, base level than before of around 13% for the VIX. Actually both indices romped up well above this, with the VIX reaching a new 12-month high of 24.7% and the VDAX a new 12-month high of 24.9%.

The current levels of around 25% for the VIX are much higher than the 30-day historic level of the S&P500 of 16.1%, implying that the market is forecasting equity market volatility to rise further over the next 30 days.

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

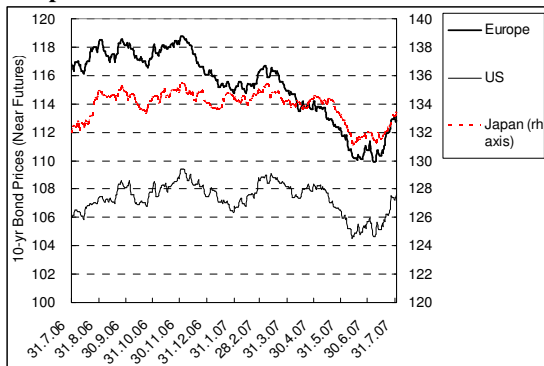


Fixed Income (10 Year Government Bonds)

Prices

Bonds benefited strongly from the worries over sub-prime debt. Concerns that a crisis might emerge lead to an increased belief that the Fed would cut rates, boosting bond prices. It also looks like a “flight to quality”, selling risky equities to buy safe bonds. The sub-prime concerns hit US markets disproportionately hard in other assets, but the rise in bond prices was uniform across regions.

10-Year bond prices rose as the markets reacted to sub-prime issues



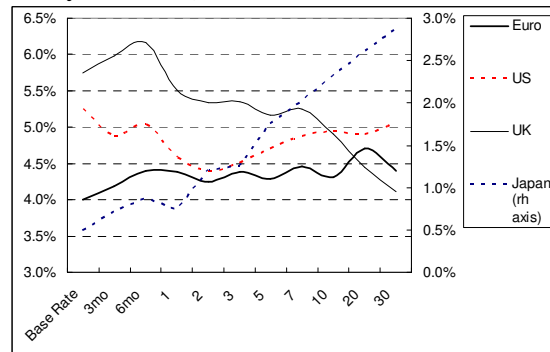
Interest Rate Expectations

US markets are now pricing in a rate cut within the next 2 months. Further fallout from the sub-prime markets could accelerate this process, although the Fed would probably be keen to avoid giving the impression of the existence of a “Fed put (option)” again.

In the UK the market still expects rates to reach over 6% within 6 months. There remains a 50% chance of rates reaching 6.25%. However, at later dates rates have been slowly dropping: the implied rate in 5 years time is now just over 5%.

In Europe the yield curve looks more “normal” (upward sloping) as the economies continue to show good growth. Rate rise expectations remain with rates expected to rise from 4% to 4.25-4.5% within the next 6 months.

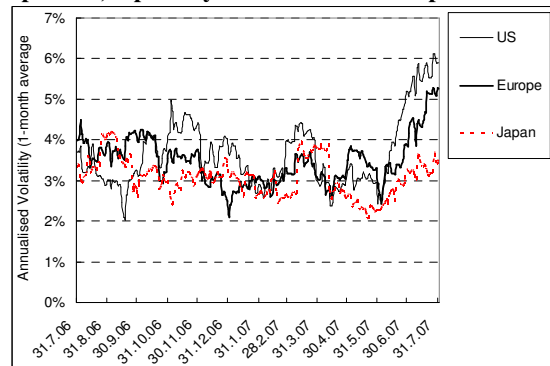
Euro and UK expected future rates are higher than today’s, the US lower (note these are not yield curves, but are future short term rates implied from yield curves)



Volatility

Bond price volatility spiked sharply upwards in July, reaching new 12-month highs in the US and Europe of 6.1% and 5.3%.

10-Year bond price volatility spiked sharply upwards, especially in the US and Europe



Spreads

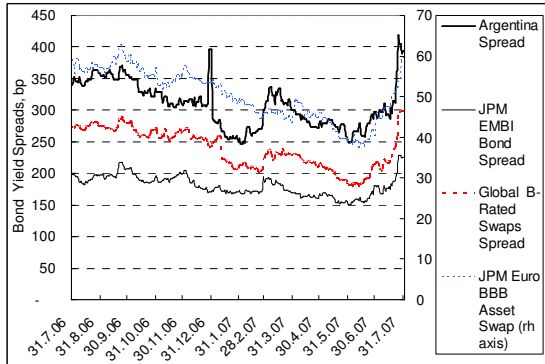
Complacency changed to fear during July, as can clearly be seen from spreads.

Emerging Market bonds over Developed (JPMorgan EMBI index) rose from a recent low of just 151bp to 229bp, Argentinean spreads from 259bp to 417bp. Similar rises occurred for single B and BBB corporate swaps spreads.

Finally some risk is being priced in!



Credit spreads widened significantly during July

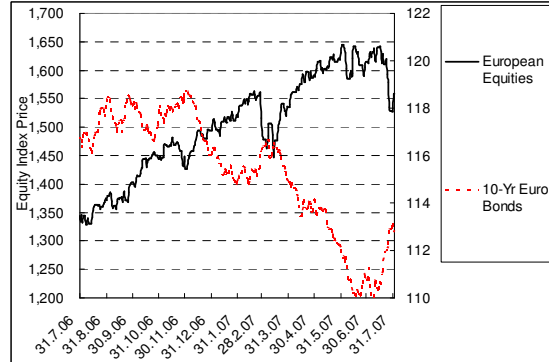


Correlation with Equities remains negative

Bonds and equity prices remain negatively correlated since the start of this year when fears

over a growth slowdown intensified. The recent sell-off in equities while bond prices rose (yields fell) continues that trend.

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



Prices

July was a month of two halves.

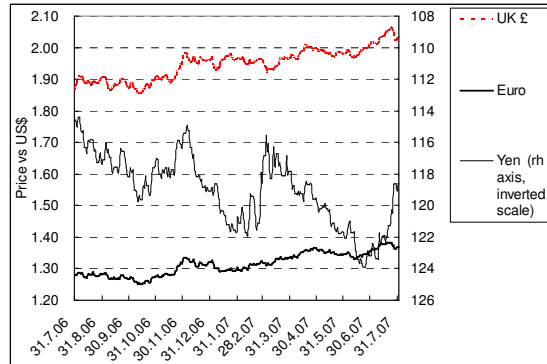
In the first half the Dollar hit a record low against the Euro after Home Depot issued a profits warning. The dollar weakened to \$2.06 against Sterling, and reached a 26-year low against the New Zealand Dollar.

In the second half two effects combined to reverse the strong weakening trend seen over the past 12 months: rising credit spreads from the sub-prime fallout and stronger US economic data.

The sub-prime crisis has increased spreads sharply (see Bond section), which will lead speculators to reduce leverage. It appears that much of the recent movement in FX prices has been momentum-driven, and cutting back positions has led to a reversal of recent trends. This is well illustrated by the weakening of the Dollar against the Yen as some of the carry trade looks to have unwound. Effectively, the voracious appetite for yield (at any cost!) has lessened.

US economic data was mixed, but generally good. Consumer confidence hit a six year high in July despite May home prices showing the steepest monthly fall in 15 years. European data remained good with Germany continuing its 2-year trend of falling unemployment.

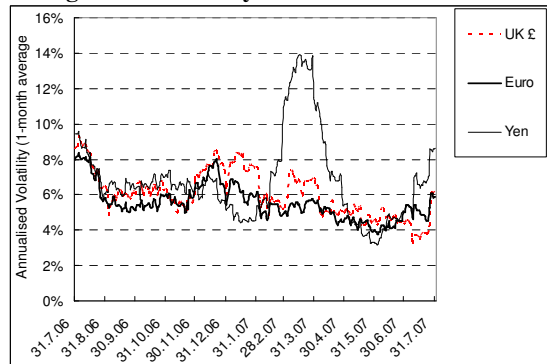
In the first half of July Sterling and the Euro strengthened, the Yen weakened. This was reversed in the second half



Volatility

Unsurprisingly given the reversal in directions during the month, FX volatility rose during July. All the major FX rates saw volatilities rise from 12-month lows to above 12-month averages. Yen/\$ in particular rose sharply to 8.6%.

Currency volatility rose again to above 12-month averages. Yen volatility rose most



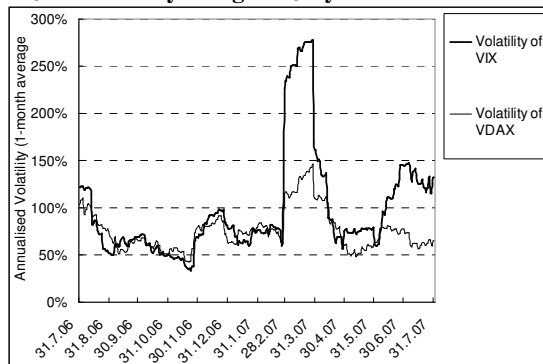
(Equity) Options

Volatility of Implied Volatility

Perhaps unsurprisingly, the chart of volatility of implied volatility looks similar to the VIX and VDAX, showing a peak in late June 2006 and a big spike in volatility in March 2007.

During July, the previous month's pattern of volatility of volatility continued: a strong rise in the US, but remaining flat in Germany, reflecting the US-centred nature of current market turbulence related to the sub-prime market.

Volatility of volatility spiked to 12-month highs in March, but fell sharply back in April and remained flat in May. US volatility of volatility rose sharply in June and stayed high in July



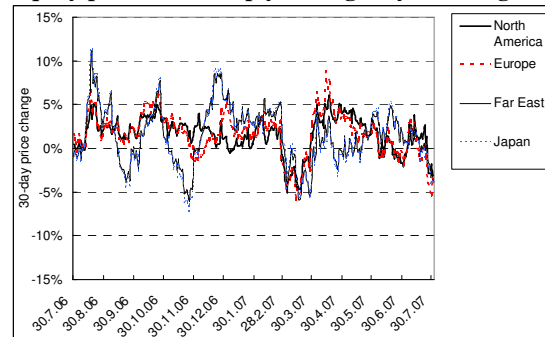
These volatility of volatilities will have meant options prices were relatively stable on European equities but volatile on US equities.

(Equity) Price Swings

During July equity price movements were quite strongly negative in all regions.

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

Equity prices fell sharply during July in all regions



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

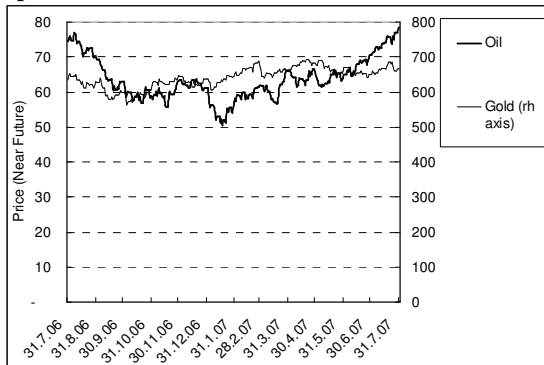
Global economic growth remains very strong, assisted by Chinese GDP growth of 11.9% in Q2 2007, and GDP estimates for the US and Euro area are being revised upwards.

This helped to push oil prices up again during July, and they crossed up through \$78 at the end of the month.

However, the equity and bond markets' focus still does not appear to be on Oil, and the impact of its recent rise in price was not felt elsewhere. We wonder how high it must get before the markets begin to take fright. The longer it takes, the worse the impact is likely to be.

Gold is still behaving like a safe-haven asset, and prices crept in July to finish at \$667.

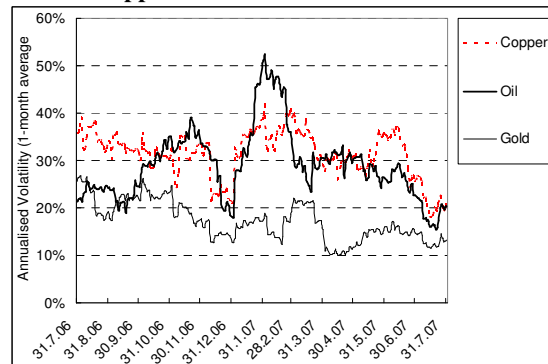
Oil prices rose again (again!); Gold prices drifted up



Volatility

Turbulence in other markets seemed to suck the volatility out of commodities. The volatility of commodities fell to surprisingly low levels during July, with Oil and Copper hitting 12-month lows of 15.4% and 17.9%.

Volatility levels for major commodities fell again: Oil and Copper hit 12-month lows



Real Estate (Real Estate Share Prices)

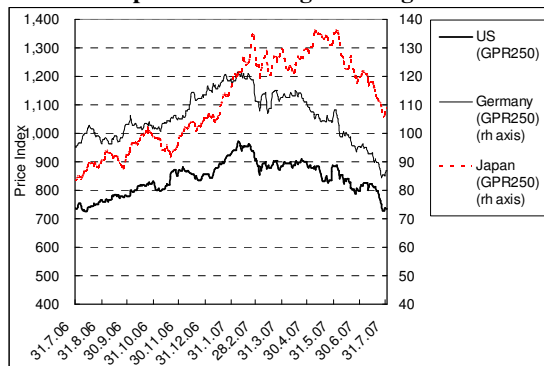
Prices

Property shares continued their slump during July, with all prices falling in all major regions (the Japanese market was relatively unaffected until June).

Of course the sub-prime fears continue to weigh on the market. What is more interesting is looking at the problem the other way around: property shares were falling several months before the sub-prime issue came to the attention of the markets.

Interestingly, the UK domestic market remained relatively buoyant (despite recent interest rate rises): house prices rose again in July by 0.1% according to Nationwide, meaning the annual rise is still 9.9%.

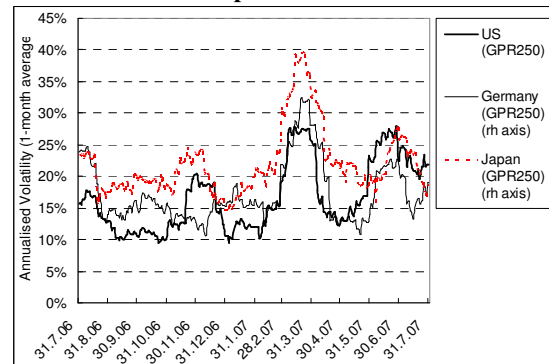
Real Estate prices are falling in all regions



Volatility

Volatility continues to suggest that we are seeing a process more like a sell-off than a crash: volatilities remain above 12-month averages but all regions were below 12-month highs during July.

Real Estate volatility levels remain high but did not reach new 12-month peaks



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 good data is available. This is usually consistent with funds which tend to invest in property indirectly, e.g. via REIT's. As REIT's can be more focussed on commercial property, residential housing may also follow a slightly different pattern.



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 August 2007 and the commentary was written on or before 2nd August 2007.

Disclaimer

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