



Current market turbulence and its implications

Tuesday, August 25, 2015

SUMMARY AND CONCLUSIONS

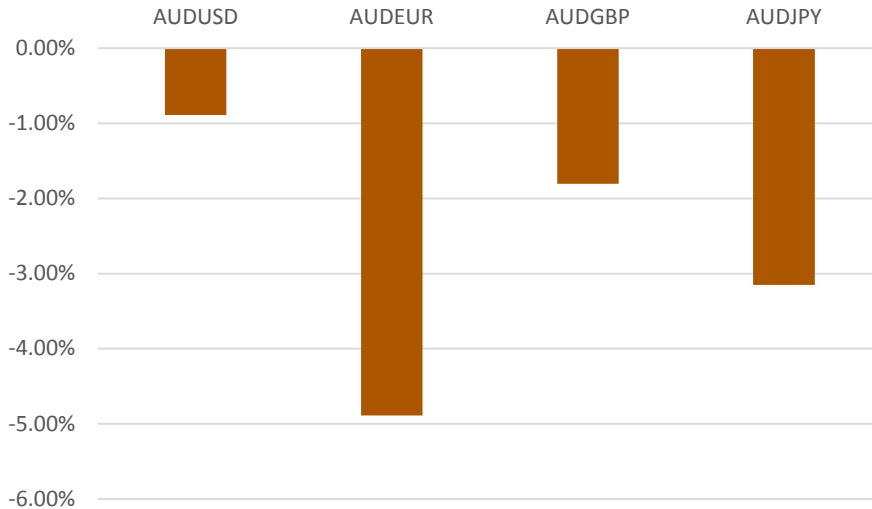
THIS SEEMS LIKELY TO BE SHORT TERM TURBULENCE

- We examine the current bout of extreme market turbulence and find that it appears to have been driven by China-related concerns – possibly fears of a China growth “hard landing”. We reach this conclusion because:
 - Commodity prices (oil in particular) have been most affected - China is a key source of commodity demand – as have commodity currencies such as the AUD
 - Inflation expectations have fallen sharply (likely due to expected slower global growth and lower oil prices)
 - Within global equity markets, the energy/commodity sectors have been most impacted
- Because the current turbulence appears to be China centric, we examine the latest Chinese growth trends and find that, while slowing, the Chinese economy is not slowing as precipitously as current market weakness might indicate
 - The recently announced changes to the Chinese Renminbi currency exchange rate determination process may have “spooked” investors along with signs of ongoing slowing in Chinese growth
- We examine the current financial and economic environment using our “Economic Distance Model”
 - We find that economic and financial market conditions today are most similar to conditions prevailing in late 2011. Following that episode, prospective equity market returns (12 months later) were positive
 - We find that current implied volatility in options pricing is extreme, suggesting a very elevated level of “stress”
 - **These findings suggest that, provided economic fundamentals do not deteriorate markedly from current levels, the current equity market volatility is likely not the beginning of a prolonged and deeper market correction**

RECENT MARKET PERFORMANCE

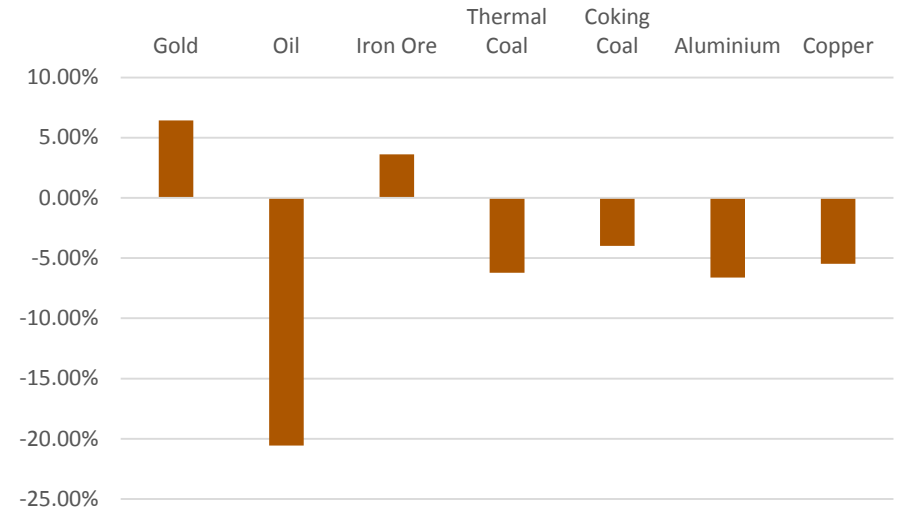
THE AUSTRALIAN DOLLAR AND COMMODITIES

AUD against major currencies (mth to August 25)



Source: Bloomberg

Commodities price changes (mth to August 25)



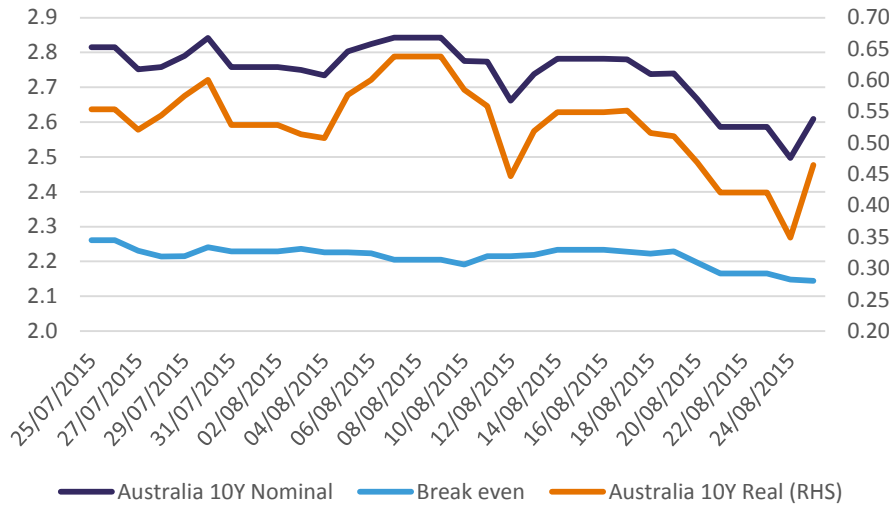
Source: Bloomberg

- Commodity currencies such as the Australian Dollar have been weakest over the past month. The AUD has depreciated against all key currencies
 - Over this period, the Euro has been the strongest major currency, followed by the Yen
- Among key commodities, the oil price can be seen clearly as having been most impacted over the past month, declining by around 20%

RECENT MARKET PERFORMANCE

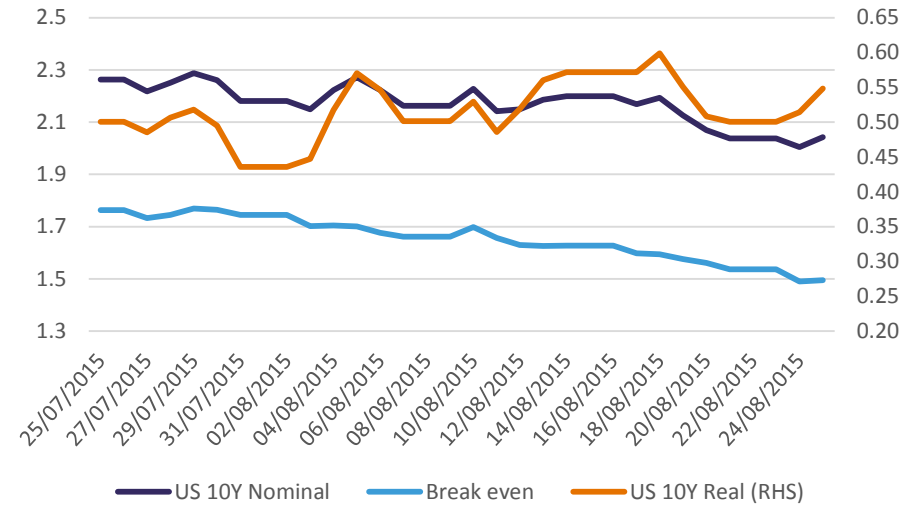
AUSTRALIAN AND US BOND YIELDS

AUS 10Y Yields - Nominal and Real



Source: Bloomberg

US 10Y Yields - Nominal and Real

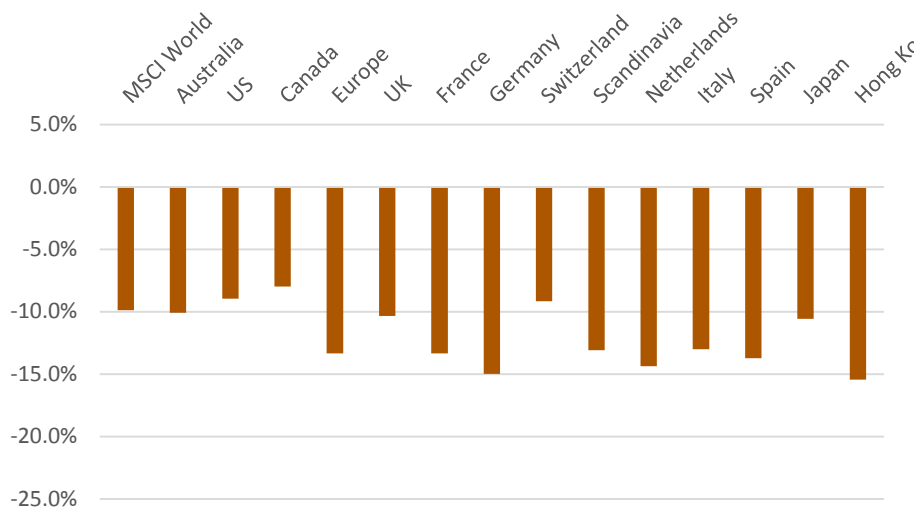


Source: Bloomberg

- The charts above display the change in 10 year government bond yields in Australia and the US over the month to August 25
 - 10 year nominal bond yields have declined over this period in both Australia and the US
 - 10 year “real” yields have fallen slightly in Australia, but have increased in the US
- The most significant development relates to inflation expectations which have fallen sharply (particularly in the US) over the past month (as measured by the difference between nominal and real yields)

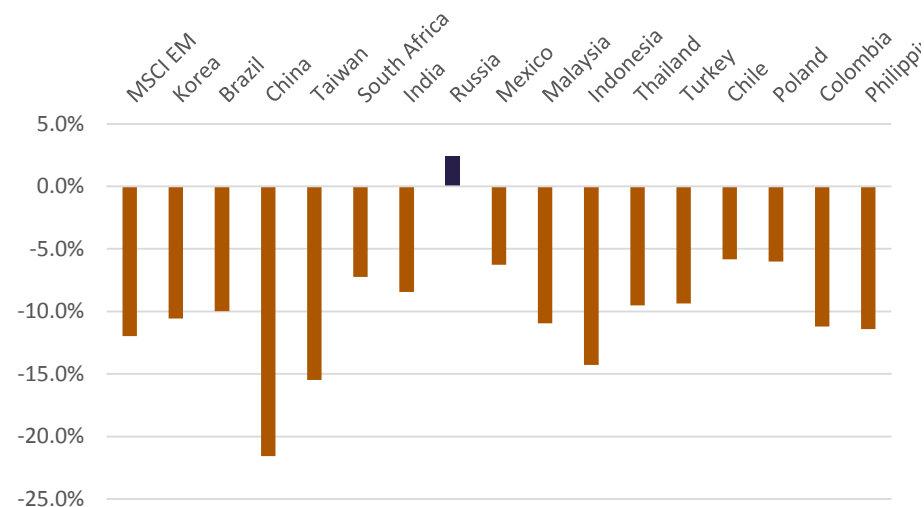
RECENT MARKET PERFORMANCE DEVELOPED AND EMERGING EQUITY MARKETS

DM Equities (LC) Monthly Return to 24 August



Source: Bloomberg

EM Equities (LC) Monthly Return to 24 August



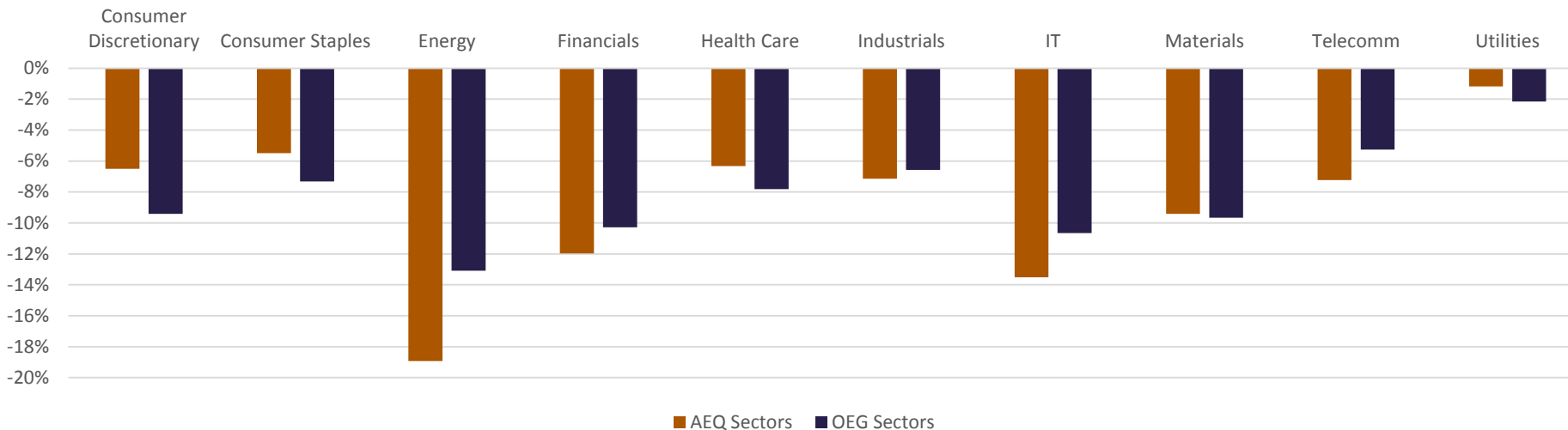
Source: Bloomberg

- The charts above display the performance (all in local currency terms) of a number of developed and emerging equity markets
 - The sell-off in equity markets has been very broadly spread with all markets (except Russia) having fallen sharply over the past calendar month

RECENT MARKET PERFORMANCE

AUSTRALIAN AND GLOBAL EQUITY SECTORS

Australian and global DM equity sector performance (month to 25 August)

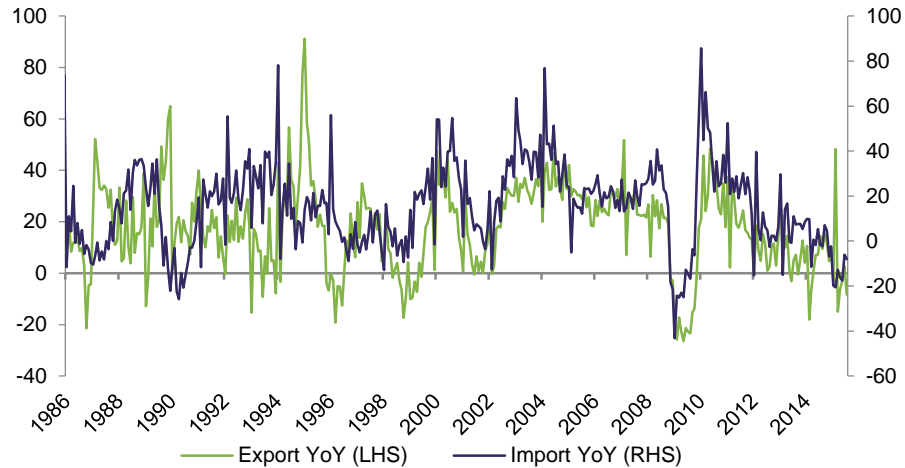


Source: Bloomberg

- The chart above displays the performance of the sectors within the Australian and global (DM) equity markets (in local currency)
 - As can be seen, the pattern of relative sector performance is similar in Australia and DM markets
 - The Energy sector has been weakest, while the defensive sectors of Utilities and Telecoms have been least impacted

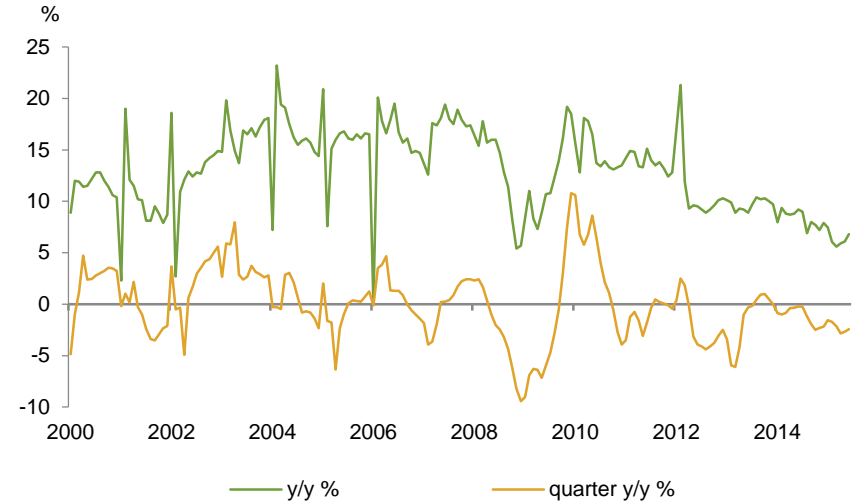
RECENT CHINESE ECONOMIC TRENDS – SLOWING, NOT COLLAPSING

Chinese exports and imports (annual %)



Source: DataStream

Chinese Industrial Production (% change)

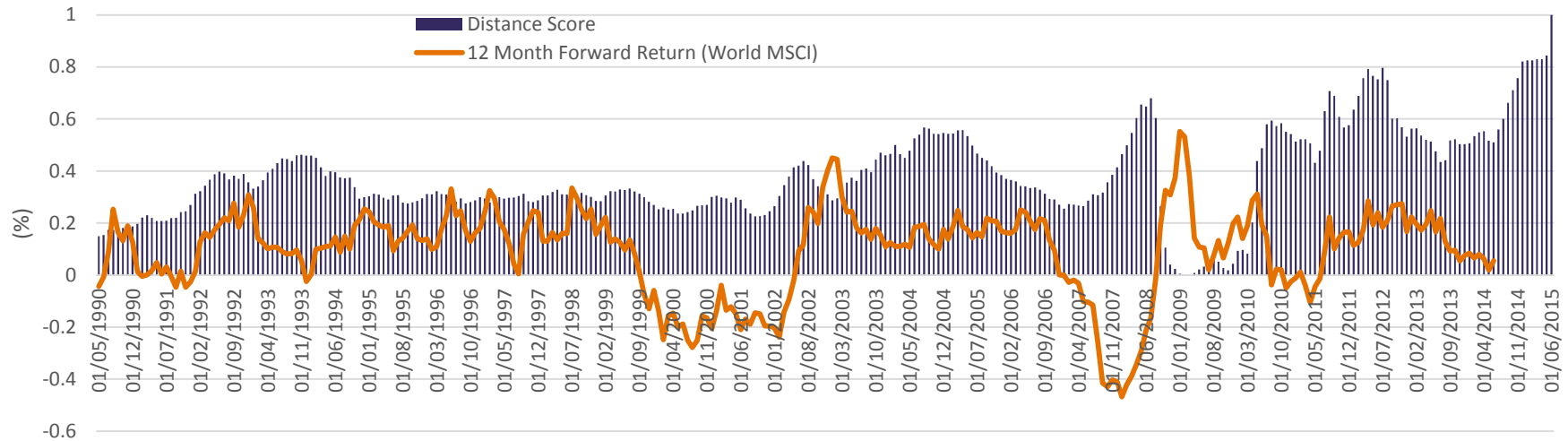


Source: DataStream

- The weakening trends in these key measures of the Chinese economy can be clearly seen in these two charts. This is likely to be a key factor currently “spooking” investors
 - It is very likely that part of the reason that Chinese authorities adjusted the method used to determine the currency exchange rate a couple of weeks ago was to assist a lowering of the RMB, in the hope of providing positive impetus to Chinese growth

WHEN HAVE WE EXPERIENCED SIMILAR PERIODS TO NOW? CURRENT MARKET AND MACRO CONDITIONS ARE SIMILAR TO 2012

Economic Distance model
Regime Analysis- Economic Similarities to Previous Periods

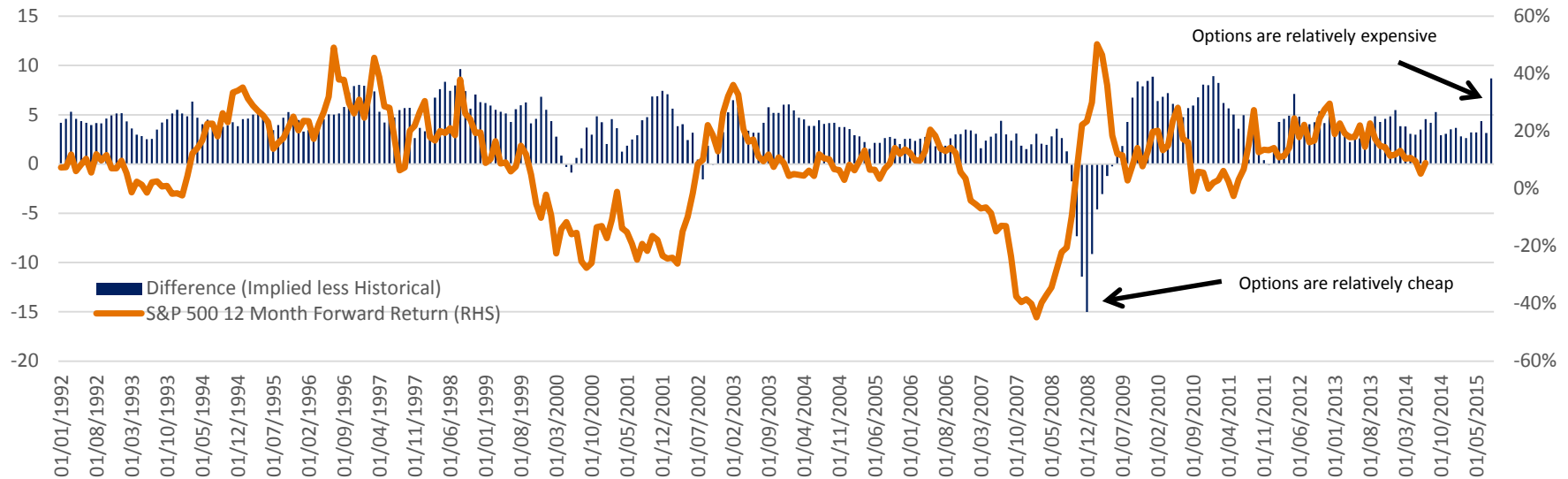


Source: Frontier, DataStream, St Louis Fed, ISM, Bloomberg. Based on an idea from Macquarie Quantitative Research and developed with its approval. The inputs for the economic distance model are the Fed funds rate, the US yield curve, VIX, G7 OECD leading indicator, ISM inventories and the 12-month change in (BBB-AAA) credit spreads

- The “Economic Distance model” uses a selection of macroeconomic and market factors to measure the similarity of historic time periods (from an economic and market point of view) compared with today’s conditions - today’s conditions are most similar to March to August 2012, which was positive for growth assets
 - Key similarities today with these prior periods are accommodative US monetary policy, an improving US economy, slowing global growth, deteriorating credit spreads and high market volatility

CURRENT OPTION PRICING IS USUALLY CONSISTENT WITH POSITIVE FUTURE EQUITY MARKET RETURNS

Implied vs Historical Volatility (30-Day) from Options Market



Source: Bloomberg, Frontier

- Option pricing dynamics can also be a good indicator of future equity market performance
 - Current option market pricing (in particular “expected” versus “historic” volatility) suggests that investors are VERY risk averse – this has traditionally been a positive signal for equity market prospects
 - Historically when option pricing have been at similar levels to today, 12 month forward returns were positive 5 out of 6 times (the exception being the period following September 11, 2001)

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