Equities

For equities although we have used slightly different methodologies the broad principles were the same. Essentially we first calculate a mean reverted price series. We do this by reverting real earnings back to their long-term trend line. We then mean revert the current PE ratio back to its long-term average. Combining the reverted earnings and PE ratios we can calculate a price. In order to calculate total returns we have assumed real dividends revert back to their long-term trend line. By combining the prices and the dividends we calculate total returns. As already mentioned we used two slightly different methodologies the specifics of which are outlined in the bullets below.

- Method 1: We revert earnings, PE ratios and dividends back to their long-term trend/averages using all available data back to 1871.
- Method 2: We revert earnings, PE ratios and dividends back to their long-term trend/averages based on data since 1958. As already mentioned, this recognises that earnings growth may have increased (albeit slightly) post 1958 and the previously discussed dividend crossover.

Treasury/Government bond mean reversion

For Treasuries and other Government bond series we have reverted to the long-term average real yield which has been calculated by subtracting YoY CPI from the nominal bond yield. We can then use these yields to calculate prospective returns.

Corporate bond mean reversion (IG and HY)

For corporate bonds we mean revert credit spreads to their long-term average level. These spreads coupled with the already calculated Treasury/Government bond yields give us an overall corporate bond yield that can be used to calculate possible future returns. We have used appropriate duration matched Treasury/Government yields for the various different corporate bond series.

For the iBoxx indices, which only have data back to 1999, we have created a longer-term spread series by regressing the iBoxx spread data against the Moody's long-term spread series. The results of the regression can be used to calculate a longer-term spread series, which can be used to calculate the long-term average level that is then used for mean reversion purposes.

For further details on how we have calculated bond returns (both Government and corporate) please refer to a previous version of this report (100 Year of Corporate Bond Returns Revisited, 5th November 2008).

US property and commodity mean reversion

For both US property and the various commodity series we have calculated a real adjusted price series and simply mean reverted to the long-term average level of these series.