An Explanation of the MEICAP Methodology

The MEICAP model is built on a population platform that takes live births and combines them with the year 2000 mortality curve (all statistics obtained from US Census Bureau). Immigration figures are added according to the age distribution of year 2000 immigrants. The platform calculates the exact number of people at every year of age starting in the year 1900 and projects forward all the way to 2120.

Projecting beyond year 2005, live births are calculated using a dynamic fertility rate that rises slightly during good economic times and falls slightly during difficult economic times (with a 2-year lag). The fertility rate is applied to the entire female population between the ages of 20 and 35 and modeled after actual statistics for the same group prior to 2005.

Immigration figures are also projected beyond 2005 although those figures have far less predictable qualities. Figures are modeled after actual historical statistics and projected as a percentage of total population. Immigration rates are not adjusted for economic activity.

Income and spending statistics (obtained from the US Census bureau) by age are applied to the population platform, yielding an age-specific macro “earn” and “spend” across the country’s population. The difference between the two (at each age) is that portion of the population’s annual savings (or lack thereof).

Savings is split between the stock market and the bond market according to a curve that favors stocks in the early years and bonds in the later years. For the years of negative savings, money is drawn from the pool of investment capital according to the accumulated proportions up until that point in the person’s life. If the negative savings occurs before any positive savings has accumulated, the proportions are pulled from the earliest years following the negative savings.

With the average American achieving positive savings between the ages of 27 and 62 combined with a growing population, every year has produced country-wide positive aggregate savings. However, the MEICAP model measures the annual contribution against the proportional contributions of past years, yielding a growing or shrinking annual contribution rate.

It is this growing or shrinking annual savings contribution rate that forms the foundation of the curve applied to interest rates and price/earnings rates.

In the stock market, prices are determined by applying the price/earnings ratio to the macro economic corporate earnings. Since the model already calculates the macro ‘spend’ and we know that consumer spending accounts for roughly 2/3 of economic activity, we can deduce total corporate revenues and, at least in terms of year over year proportions, corporate earnings.

The price/earnings ratio is directly affected by the Supply and Demand for investment capital and fluctuates either up or down according to the ratio of investment capital (invested in the stock market) to business opportunities in the economy. The resulting curve can be projected onto the Dow Jones to forecast future returns.

The model was not combined with the NASDAQ or the S&P500 because both were significantly affected by the dot.com bubble which was a short-term aberration fueled by unsustainable euphoria and valuations that doubled actual ‘expected’ earnings; one set coming from proven players and a second set coming from dot.com equivalents. With the Dow Jones comprised of predominantly large industrial companies, it was much less affected by this double valuation phenomenon.

Interest rates were calculated in much the same way P/E ratios were except in the reciprocal format. Interest rates were further broken down to the cost of money and inflation. This was done because inflation played a major role in the modeling of housing prices. The proportions allocated to each vary according to a dynamic ratio modeling historical trends. Incidentally, the rest of the model uses constant year 2000 dollars.

The calculation of housing prices incorporated a number of mortgage trends including “interest only” loans and expanding “debt-to-income” guidelines. Although these trends stretch homeowners beyond historical expense ratios, they also have a very real affect on the housing market and have served to drive up home prices in the process. We expect these trends to continue to a limit and then stabilize or even subside.

It’s important to note housing prices are nationwide and do not reflect regional variances. California and other coastal states are heavily expected to outperform nationwide statistics that fact is openly acknowledged here.