

Shiller's Snake Oil

In this issue

1 Overview

Shiller's Snake Oil

Anatole Kaletsky

2 United States

No Longer Cheap, But Keep Reaching For Yield

Will Denyer

3 Europe

It's All About Earnings, Not Valuation

François Chauchat

4 China

Uncertainty Is The Real Problem

Thomas Gatley

5 Asia

The Most Mispriced Risk

Joyce Poon

Like most aspects of the investment business, valuation is more art than science, which is why anyone proposing a single formula to 'prove' that equities or bonds are either cheap or expensive should be treated with the deference due to a snake-oil salesman. The most popular snake-oil today is Robert Shiller's 'Cyclically Adjusted P/E ratio' or CAPE.

There are many theoretical objections to Shiller's methodology. His arbitrary ten-year averaging takes no account of the length and depth of business cycles nor of accounting write-offs. The Shiller P/E will be biased upwards until 2019 by the longest recession in US history and the biggest-ever write-offs suffered by US banks. Even more damning is Shiller's failure to adjust earnings for accounting changes and the impact of inflation on inventory valuations, distortions which greatly exaggerated profits in the 1970s, producing under-stated P/Es. Worst of all is the absurdity of predicting mean reversion in any valuation measure that ignores changing interest rates, policies and technologies over 120 years.

But in the end it is experience that refutes Shiller's approach. His P/E has given only two, very weak, buy signals in the past 25 years. Even during the brief periods when it showed equities to be attractive, it never sent a clear signal. Instead it suggested bargain valuations in 1990 and 2009 were just below their 'mean-reverting' level, implying little upside. When Shiller published his 'discovery' in 1999 the average CAPE was 15.3, implying equities have been 'over-valued' in 291 of the past 300 months.

Even this sorry record flatters the Shiller P/E's predictive performance, which would have been almost as bad before 1990 as it has been since. Compare the reported CAPE with its 70-year moving average, the longest such data series available in the 1950s and therefore the level to which Shiller's theory would have predicted mean reversion (please see the chart in the [web version](#)). Using this benchmark, CAPE would have shown equities to be almost continuously 'overvalued' from 1955 until 1973. Only in January 1974 did CAPE fall below its 'long-run average' and send a buy signal. In other words, an investor following Shiller in the 1950s and 1960s would have missed the entire bull market and then started buying in January 1974, just in time to suffer a 40% loss in the next 12 months.

Can something useful nevertheless be salvaged from this dismal story? Maybe. Shiller is obviously wrong to claim CAPE is a mean-reverting series, because the post-1945 data show a clear upward trend. But this trend may provide some useful guidance. Today's reported CAPE is 26.1, marginally above this trend line, which is at 25. This supports the many reasonable calculations showing US equities to be near fair value, but probably slightly above. By contrast, some other markets seem to be below fair value—as we detail in the following pages.

Anatole Kaletsky
akaletsky@gavekal.com

United States

No Longer Cheap, But Keep Reaching For Yield

In 2012 and early 2013, it was easy to argue in favor of selling bonds and loading up on US equities on the basis of valuations alone. Equities were extremely cheap, bonds extremely expensive, and you would have been hard pressed to find standard metrics to indicate otherwise. Even Charles, who was anything but enthusiastic about the US policy mix, suggested overweighting equities and shunning bonds. Now the valuation call is no longer obvious, nor overwhelming.

Most measures we look at show US equities are now back around fair value relative to their own earnings. The example below shows that on average US equity sectors are close to their 25-year median P/E ratios.

Many disagree, arguing that equities are expensive. After all, Shiller's cyclically-adjusted P/E ratio for the S&P 500 is at 26—well above its 100-year median of 15 and now even above its 25-year median of 24.

We do not like Shiller's CAPE at the moment. It is not working as intended. Among other problems (see the cover page), by taking the average earnings of the last ten years, CAPE aims to smooth out the regular cyclicity of earnings. But the last 10 years include a cycle that is anything but regular. Using Shiller's CAPE assumes the great financial crisis and recession of 2008 will soon be repeated. We hope not!

Other bears point to high price-to-sales ratios as a reason to sell, arguing that when profit margins revert to their mean, price-to-earnings ratios will look just as high. Maybe. But what if a maturing recovery, healthier household balance sheets and a tighter labor market usher in stronger sales growth? Then, even if margins and/or multiples moderate, sales growth will drive earnings growth, which will likely drive equities higher. This is my core scenario.

Also, equities are still cheaper than bonds. The 10-year US treasury yield is less than 2.5% today. And while equity multiples have expanded, the earnings yield (the inverse of the S&P 500 12m forward P/E ratio) has only fallen to 6%. So the equity risk premium is still over 3%, which historically has meant good things for equity performance over the following 12 months.

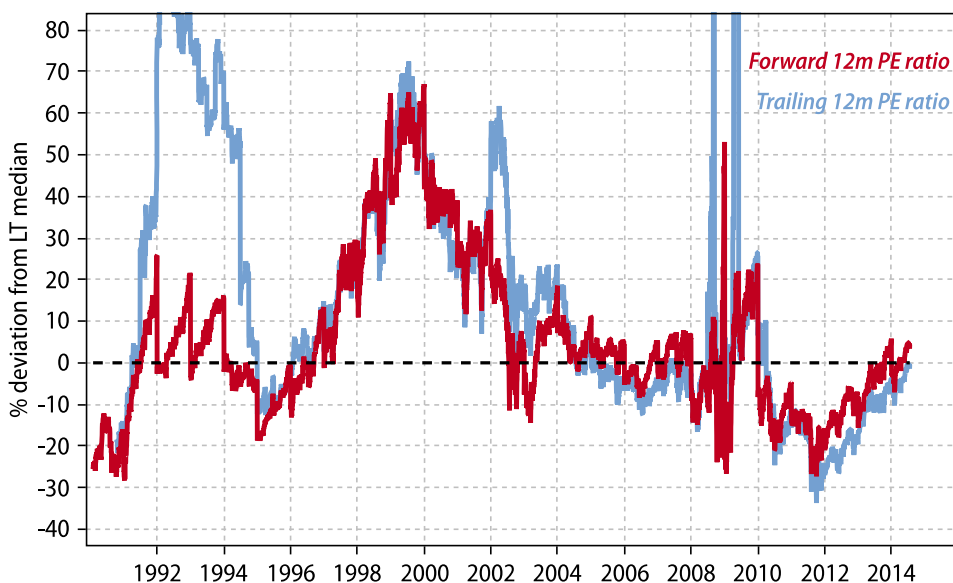
Granted, US equities are no longer a steal and the future is uncertain. So it makes sense to shop around for value (perhaps in Asia) and to hedge with 30-year treasuries (which offer a better yield than 10-year bonds). But, given my view that the next move for US earnings growth is up, I will keep reaching for yield with an overweight in equities, including US equities.

Will Denyer

wdenyer@gavekal.com

Average deviation of S&P 500 sectors from 25-year median P/E

S&P 500 sector P/E ratios; % deviation from median since 1990; equally weighted sector average



Bloomberg, Gavekal Data/Macrobond

This is a simple way of assessing the market P/E ratio without composition distortions (more info tech, less financials, etc). We look at how far the P/E ratio of each sector of the S&P 500 has deviated from its own median since 1990, then we take the equally-weighted average of those sector deviations.

By this measure, US sectors are on average exhibiting rather normal multiples for the last 25 years.

A similar exercise using price to cash flows excluding the financial sector gives a similar result, but with a reading just slightly more on the expensive side.

There are exceptions but most multiples suggest equities are no longer cheap, nor very expensive.

Europe

It's All About Earnings, Not Valuation

With continental European equities trading on a forward P/E ratio that is nearing a 10-year high of almost 14.5, compared with 8-10 in early 2012, valuation has clearly ceased to be a driver of market performance. European stocks may be 10% cheaper than their US equivalents, but compared with their average historical discount of 15%, they are not cheap.

So much for valuation metrics. A proper analysis of European equity valuations relies upon a proper understanding of earnings in relation to their medium-term potential. Two recessions in five years have pushed Europe's aggregate earnings per share almost 30% below its 40-year trend level. By contrast, US aggregate EPS is already back in line with its long-term trend. Using a cyclically-adjusted P/E measure yields a similar conclusion (*pace* Anatole and Will, who argue in this report against CAPE as a useful valuation tool). Hence, if earnings are going to climb back to trend, then European equities now look under-valued by about 30%.

But is it credible to assert a return to the mean? Debate will no doubt continue to rage whether Europe (i) is stuck in Japanese-style deflation which will inevitably create major earnings disappointments, or (ii) is on the cusp of a catch-up scenario whereby corporate Europe

capitalizes on decent global growth and increasingly reflationary policy settings. Settling this question will take time, but already it is worth noticing that:

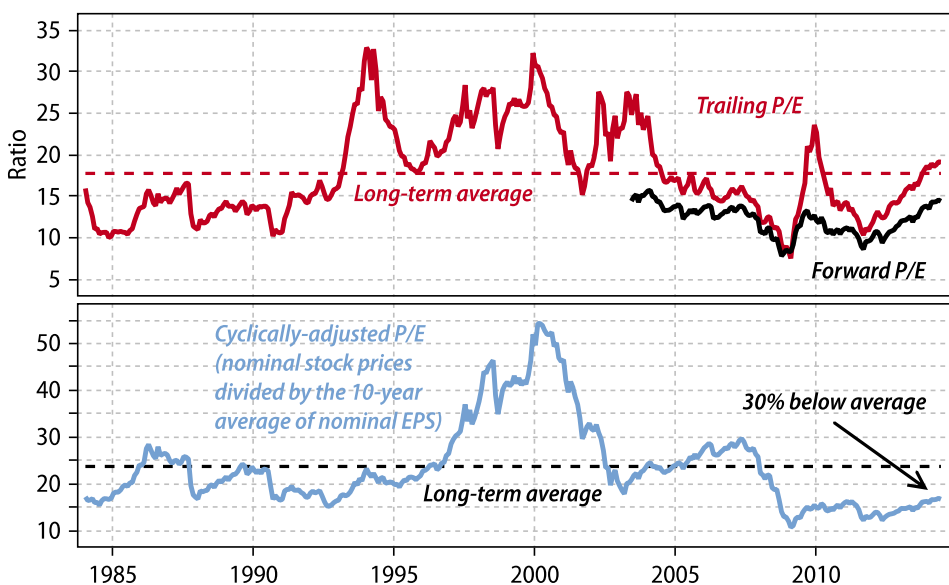
Firstly, that this year's underlying earnings story is less negative than usually appreciated (see [Europe's Profit Question](#)). The bearishness arises mainly from those 'zombie' telecoms and utilities sectors, where profitability has plunged for structural reasons. By contrast, cyclicals and small caps are seeing profits rise broadly in line with expectations, especially when corrected for exchange rate effects. This pick-up is confirmed by macroeconomic measures of profits, with the operating surplus for eurozone economies registering a 3% rise at the end of last year.

Secondly, the Japanese bear market of the 1990s started from an incomparably more expensive position than today's Europe. Investors in Japanese equities remained convinced (wrongly) for a long time that earnings could make up the ground lost in the early 1990s. Indeed, during this period the average P/E of MSCI Japan fluctuated between 25 and 100! At current forward P/Es of 14-15, European markets are far less vulnerable to bad news than Japan was 20 years ago.

François-Xavier Chauchat
 fchauchat@gavekal.com

Actual P/Es look normal, but the cyclically-adjusted P/E is very low

(MSCI Europe ex-UK)



Gavekal Data/Macrobond

Although hardly worrying—especially in comparison to the stellar levels of Japanese P/Es in the 1990's—actual measures of trailing or forward PEs in continental Europe are no longer low. The valuation argument in favor of European equities thus looks less compelling.

However, after two recessions in five years the very low level of 'E' in the P/E ratio suggests room for strong catch-up growth.

This potential can be measured by the cyclically-adjusted P/E (lower panel of the chart), which suggests that European equities are 30% undervalued, on the assumption that earnings will rise towards trend in the not-too-distant future.

China Uncertainty Is The Real Problem

Chinese equities look cheap, both in historical terms and compared with other markets. The price to earnings ratio for the Shanghai Composite has fallen from highs of more than 60 in 2007 to around 10, well below the MSCI World average of 15. But given the economic transition China is going through, neither its own history, nor other countries, are a good guide to whether current valuations are low. On examination, the earnings growth rates implied by current prices are in line with expectations for economic growth. In other words, China's domestic equities are not cheap.

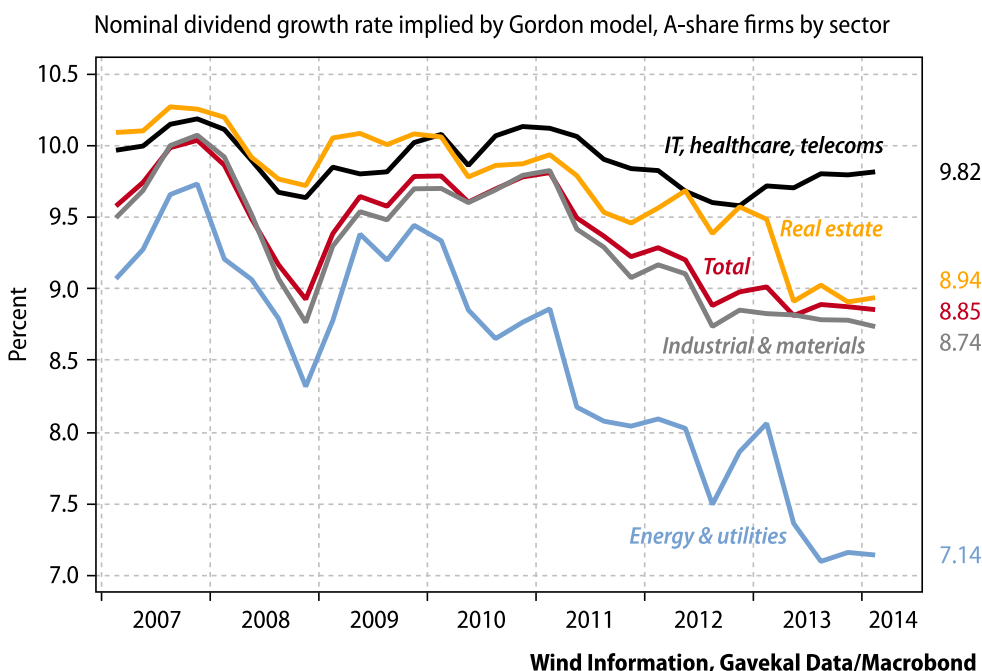
This finding is based on the Gordon growth model, one of the oldest equity valuation tools around. It takes the dividend, the expected dividend growth rate and the required return on equity for a stock and spits out a theoretical price. Equally, the formula can be rearranged to estimate the dividend growth rate implied by current prices and dividends. Since over the long term, dividend growth rates should approximate to earnings growth rates, which in turn should reflect GDP growth rates, this gives us a rough way of seeing how expectations for future growth are priced into the market. Applying this model to some 2,500 non-financial A-share firms shows the market is pricing in a dividend growth rate of around 9%. This is close to where nominal GDP growth is today, and is consistent

with real GDP growth of around 6% over the medium term (assuming 3% inflation). So it seems the market has reasonable expectations both for the future rate of growth and for its distribution, with services expected to grow faster than industry. Prices are therefore cheap only if you think China's growth will be much faster than this—which looks unlikely.

The key assumption in this model is the equity risk premium. I've used an academic estimate of around 6% for China, 100 bps higher than for the US. The risk premium is by its nature just an estimate, and it is also subject to change. The useful insight from the Gordon model is that if growth expectations don't change, then achieving higher equity valuations in China will require a contraction in the risk premium. In other words, investors will have to be convinced there is less risk to future earnings. Short term efforts to support growth won't persuade them. Only a substantial reduction in long term uncertainties will do the trick. This helps explain why the market has not embraced recent stimulus measures: what really worries investors is not next quarter's growth, but the probability that growth will be much lower in the future.

Thomas Gately
tgately@gavekal.com

China equity valuations imply reasonable rates of future growth



The Gordon growth model explains the price of a stock as a function of current and future cashflows to investors, discounted at a rate appropriate for their level of certainty about those cashflows. Since 2010 earnings and dividends in China have continued to grow while prices have stagnated, hence the plummeting PE ratios and rising dividend yields.

The stagnation in Chinese equity prices clearly reflects an adjustment in expectations as investors grapple with the idea that China's growth is slowing, and persistent uncertainty about where the slowdown will end. That uncertainty will have to be reduced before there can be any major rerating of the equity

Asia

The Most Mispriced Risk

When we are asked what is the most under-appreciated risk in Asia, one asset class jumps out: Japanese government bonds.

Japan's continuous decline in bond yields is at odds with an economy that is targeting an inflation rate of 2%, has managed to achieved half its target within a year, and despite April's sales tax hike has so far kept underlying consumer inflation (stripping out the tax hike's impact) from decelerating.

Prime minister Shinzo Abe may fail in his promise to galvanize the economy. But even if Japan only manages to maintain a nominal growth rate of 0% from now on, the historical relationship between economic growth and bond yields spells trouble for JGBs.

The recent convergence of GDP growth and bond yields (see the chart below) has prompted the Bank of Japan governor, who rarely comments on markets, to warn about the risks posed by excessively low yields.

So why are JGB yields so low? Japan is used to financial repression. As in most Asian countries, a few large institutions dominate the financial system, making it easy to hold down deposit rates and bond yields. Even now, with institutions dumping JGBs on the central bank, the process is managed—banks go first, then pension funds—to eliminate volatility.

Tokyo's ability to manipulate markets is also heightened by Japan's net creditor status. Unless there is a large financial outflow from the private sector, Japan's current account surplus means the capital markets will retain their domestic flavor, limiting the drive for price discovery.

But things are changing, as Abenomics is all about 'change'. If the prime minister's reform program succeeds, equities will begin to look more attractive, and bonds will get sold off as investors rotate into other domestic assets classes.

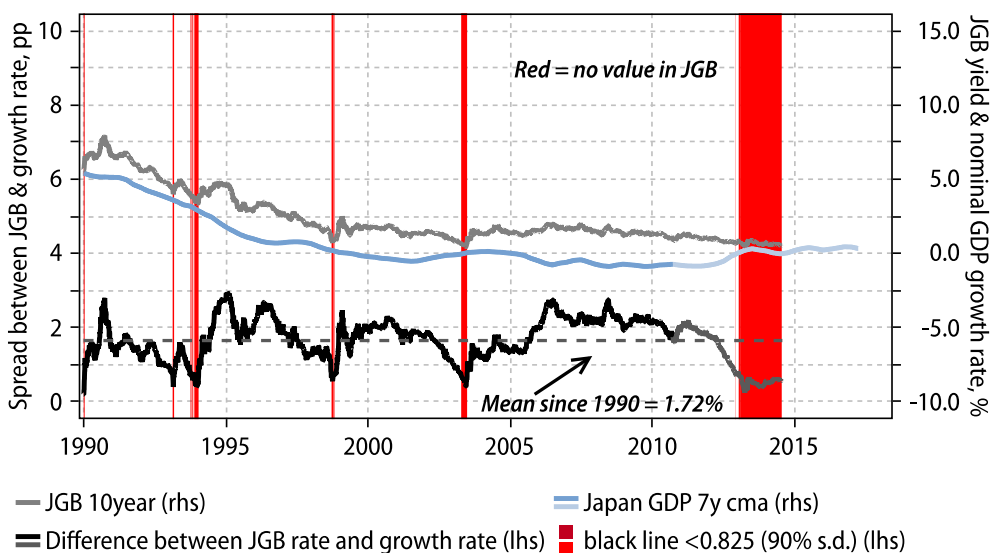
Alternatively, a failed program would be likely to push the current account into deficit, which would reduce Japan's ability to self-finance its fiscal deficit (see [Japan's Self-Defeating Mercantilism](#)). Bear in mind, this scenario assumes that Japanese investors retain their trust in the government and do not rush for the door. Their mentality could change. The Japanese fiscal system now resembles a giant Ponzi scheme, with tax revenue only sufficient to fund half the government's expenditure. Failure to revitalize the economy will guarantee a path of no return for Japanese public debt.

Joyce Poon

jpoon@gavekal.com

JGBs offer little value

Nominal growth is assumed to flatten from 1Q2014 onwards



The gap between the nominal rate of economic growth and bond yields has always tended to revert to the mean in the long run.

In the chart, the blue line shows Japan's structural growth rate (the seven-year centered moving average). The grey line is the 10-year JGB yield, which has fallen to 0.53%. The black line represents the difference between the two.

For 24 years JGB yields have been falling, as the market has adjusted to a declining economy. If you believe that Abenomics will at least prevent Japan's GDP from sinking further in nominal terms, then this historical relationship suggests the future trajectory of JGB yields will be

Gavekal Data/Macrobond