Renaissance Investment Management

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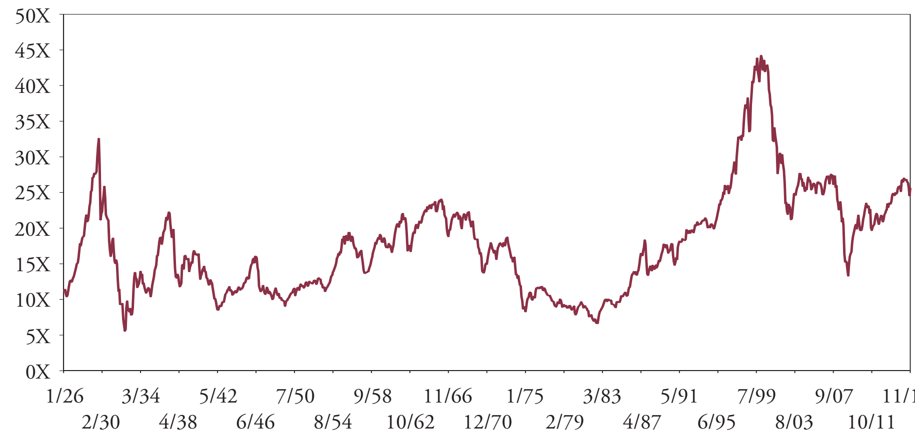
Beware the CAPEd Crusaders

The cyclically adjusted price earnings ratio (CAPE) has lingered above 25 for much of the past two years, raising ongoing concerns about the level of stock market valuation. While the CAPE is an interesting and possibly useful tool, we would caution against its use as a market-timing tool for a variety of reasons.

The CAPE is a price/earnings ratio based on average inflation-adjusted earnings from the previous 10 years. Originally developed and popularized by economists John Campbell and Robert Shiller, the CAPE calculation takes a long-term average of earnings and adjusts for inflation to forecast future returns. The long-term average smooths out the impact of short-term earnings volatility and business cycles in the economy from the "E" in the P/E ratio. Robert Shiller provides a wealth of historical data on the subject at his website at http://www.econ.yale.edu/~shiller/data.htm

Various criticisms of the CAPE concept have been raised over the years. Jeremy Siegel pointed out that the use of reported earnings data over a long period fails to take into account recent changes in the way earnings have been calculated under accounting rules. Other observers have objected that looking at CAPE values alone don't take into account their relative attractiveness (or unattractiveness) versus other investment alternatives, such as bonds or cash equivalents.

CYCLICALLY ADJUSTED PRICE EARNINGS RATIO (CAPE)[1]



Data ending 11/30/15

[1]The CAPE is a price/earnings ratio based on average inflation-adjusted earnings from the previous 10 years.

Source: Robert Shiller

Another serious problem with CAPE, however, is it seems that a structural shift has occurred in its readings. From 1926 through 1990, the average CAPE reading was 14.7X. However, from 1990 to the present the average reading has been 25.6X, 74% higher. This would suggest that stocks have been overvalued for 25+ years. However, this isn't borne out by performance data. From 1926 through 1990, the S&P 500 posted an annualized return of 10.0%. From the beginning of 1991 through November 2015, the Index posted an identical return of 10.0% despite trading at elevated CAPE levels throughout the period.

Nevertheless, the fact that the CAPE is at an elevated level relative to long-term history has raised concerns among some investors. A quick look at the CAPE chart above seems to illustrate that periods of very high readings, such as 1929 and 1999, have been very dangerous periods for stocks and that CAPE could be useful as a stock market timing tool.

To evaluate whether using CAPE as an allocation decision for investing in stocks would be effective, we performed a series of very simple tests. During months when the CAPE was above some defined level, we assumed a hypothetical portfolio was invested entirely in Treasury bills (cash). During all other periods, we assumed the portfolio was invested in the S&P 500. No charges were assumed for transaction costs or taxes. The resulting returns for the past 25 years and since 1926 for the various portfolio simulations are shown in the table below.

HISTORICAL TOTAL RETURNS (HYPOTHETICAL PERFORMANCE*)

	Entire Period (1926 to Present)	Last 25 Years (1991 to Present)
S&P 500 (Buy and Hold)	10.0%	10.0%
Go to Cash when CAPE > 15*	8.6%	3.7%
Go to Cash when CAPE > 20*	9.1%	5.8%
Go to Cash when CAPE > 25*	9.8%	8.3%

Data ending 11/30/15

Source: Ibbotson

As the data illustrates, going to cash when the CAPE is above some defined level is typically detrimental to returns. Going to cash when the CAPE is above 25 (as it is currently) would have resulted in annualized returns 0.2% below the S&P 500 since 1926, and 1.7% below over the past 25 years. Using lower CAPE values as a threshold yields even lower results.

CAPE methodology may in fact have some value in predicting very long-term returns from stocks. However, evidence of its effectiveness as a market-timing tool is hard to find.

DISCLOSURES

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