Market Commentary

How high is too high?

Among those arguing the U.S. stock market has entered a bubble, Yale professor Robert Shiller's cyclically adjusted price to earnings (CAPE) ratio is a favorite talking point. Popularized in Shiller's 2000 best-seller, *Irrational Exuberance*, the ratio compares the price of the S&P 500 Index to average inflation-adjusted earnings over the prior 10 years.

Today the CAPE ratio is near 26, a level surpassed only three times since 1880 — in the run-ups preceding the market downturns of 1929, 2000, and 2007. All else equal, the S&P 500 would need to drop 36% to return the CAPE ratio to its long-term norm of 16.6.

While all else is never equal, we also see specific reasons to question the CAPE ratio:

➤ **1880 is a long time ago.** Using the norm of the past 50 years, 19.6, the CAPE ratio implies the S&P 500 is 25% overvalued. Using the norm since 1980, the S&P 500 is 18% overvalued.

➤ **Reported profits have been unusually volatile over the past 10 years, with huge write-offs in the financial sector in 2008 and 2009.** If we use medians rather than averages to lessen the impact of extreme values, the CAPE ratio implies the S&P 500 is overvalued by 16% versus the norm since 1964 and 10% versus the norm since 1980.

Using trailing 12-month earnings, the S&P 500 is overvalued by 2% relative to the norm since 1964 and undervalued by 10% versus the norm since 1980. CAPE proponents argue that using 12-month earnings is unreliable, partly because they are so volatile and partly because investors tend to be most optimistic when corporate earnings are near a peak.

They make a good point. Still, it's worth noting that the CAPE model is calling the S&P 500 overvalued because its price is too high relative to 10-year average earnings — not because stock prices are too high relative to current earnings.

➤ **Inflation is low versus historical norms.** CAPE does not take the current inflation rate into account when determining how much an investor should pay for a dollar of earnings; instead, it assumes the amount investors have paid since 1880 is correct.

When inflation is low, more of the stock market's dividend yield and earnings yield (earnings/price ratio) represent a real return. Real returns are what matter for wealth creation, so we looked at earnings yield minus the trailing inflation rate.

The earnings yield on 10-year average inflation-adjusted earnings is 3.8%, while the trailing inflation rate is 2.4%. The current spread of 1.4% is narrower than usual, but a mere 12% price decline in the S&P 500 Index would return the spread to the norm since 1964.

➤ **The CAPE ratio makes no adjustment for the fact that one of the stock market's primary rivals for investors' money (the bond market) is offering puny returns.** Based on the spread between the earnings yield on 10-year inflation-adjusted earnings (3.8%) and the yield on 10-year Treasury bonds (2.4%), the S&P 500 is undervalued by 99% versus the norm since 1964. All else equal, T-bond yields above 4.3% would return the spread to the 50-year norm.

7 WAYS TO CALCULATE FAIR VALUE

	CAPE Ratio (P/E On 10-Yr. Avg. EPS)	*CAPE Ratio Based On 10-Year Median EPS*	*Trailing P/E Ratio*	*10-Year EPS Yield Minus Trailing Inflation*	*1-Year EPS Yield Minus Trailing Inflation*	*10-Year EPS Yield Minus 10-Year T-Bond Yield*	*1-Year EPS Yield Minus 10-Year T-Bond Yield*
Recent	**26.0**	**23.1**	**19.3**	**1.4%**	**2.8%**	**1.4%**	**2.8%**
Average since 1880	16.6	16.5	15.9	4.5	4.8	2.4	2.7
Average since 1946	18.4	18.3	17.5	2.5	3.2	0.7	1.4
Average since 1964	19.6	19.3	19.0	2.0	2.4	-0.5	-0.1
Average since 1980	21.3	20.9	21.2	2.2	2.5	-0.9	-0.7
Implied change in S&P 500 Index							
On average since 1880	-36%	-29%	-18%	-44%	-28%	-21%	0%
On average since 1946	-29	-21	-9	-22	-7	23	37
On average since 1964	-25	-16	-2	-12	9	99	122
On average since 1980	-18	-10	10	-17	6	149	192

Sources: Robert Shiller at www.econ.yale.edu and Standard & Poor's.

Conclusion

If you think earnings are headed lower because record-high profit margins are set to recede or because the world is coming apart at the seams, you can make a case that the S&P 500 is overvalued. But if you think profits are headed higher over the next 10 years, the bubble argument is hard to support — unless you expect inflation and interest rates to move sharply higher.

We'd like to see stocks move higher amid mild inflation numbers and a gradual rebound in bond yields. We'd also like to see the recent highs in the Dow Transports confirmed by a close in the Dow Industrials above 17,138.20. For now, our buy lists have 94% to 98% in stocks.