

DO BUBBLE MARKETS CHANGE VALUES?

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In the past, purchasers of owner-operated businesses have tended to follow rather different patterns from active investors in the stock markets. Owners put most, if not all their eggs into one basket, while investors generally believe in diversified portfolios. However, one of the well-established means of valuing closely held (private) companies is the Market Approach; this is based on using factors such as Price/Earning, Price/Revenue and Price/Book Ratios, developed from publicly traded comparables as guidelines.

This methodology was adapted from the almost universal use of market comparables by our cousins engaged in real estate appraisal. It is based on the concept that information from transactions in real markets is preferable to that from notional markets. Actual sales give a better idea of the activities of buyers and what they are prepared to pay, than theoretical sales, as reflected by investment based methods, such as the Discounted Cash Flow. Obviously, willing sellers take the maximum amount they can get.

Trends in Price/Earnings Ratios

The most common factor or value multiple obtained from stock market transactions, the Price/Earnings Ratio ("PER"), has shown substantial variation over the years. Since 1935, after the creation of the SEC and the establishment of GAAP, to the second quarter of 2002, the PER of the S&P 500 Index, using Trailing Twelve Month ("TMM") earnings, has averaged 15.6 times; this is equivalent to a Cap Rate of 6.4%. During the 62 years to 1996, on a quarterly basis, the PER had highs of 22 in 1961, 23 in 1987 and 26 in 1991; there were lows of between six and seven in 1948-49, 1974, 1979 and 1982.

In the second quarter of 1997, the pattern started to change; since then, there has not been one quarter when the PER was below 20; the peak was 46.5 (nearly three times the long term average) in the last quarter of 2001 and the first quarter of 2002.

Let's look at this phenomenon more closely since the 1989-90 recession. The span conveniently breaks into two six-year periods: the earlier (1991 Q1 to 1997 Q2) was a conventional Bull Market; the later (1997 Q3 to 2002 Q2) reflected the rise and fall of a Bubble Market:

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Bull Market				Bubble Market			
Year	Qtr	PER	S&P 500 Index	Year	Qtr	PER	S&P 500 Index
1991	1	18.0	375	1997	1	18.8	757
	2	19.2	371		2	21.8	885
	3	21.8	388		3	23.4 *	947
	4	26.2 *	417		4	24.4 *	970
1992	1	24.9 *	404	1998	1	26.0 *	1,030
	2	23.9 *	408		2	29.1 *	1,134
	3	23.2	418		3	26.7 *	1,017
	4	22.8	436		4	32.6 *	1,229
1993	1	18.6	452	1999	1	33.5 **	1,286
	2	19.1	451		2	33.5 **	1,373
	3	19.8	459		3	29.2 *	1,283
	4	21.3	466		4	30.5 *	1,469
1994	1	19.6	446	2000	1	29.4 *	1,499
	2	17.6	444		2	28.0 *	1,455
	3	16.9	463		3	26.8 *	1,437
	4	15.0	459		4	26.4 *	1,320
1995	1	15.4	501	2001	1	25.5 *	1,160
	2	15.8	545		2	33.3 **	1,224
	3	16.6	584		3	36.8 **	1,041
	4	18.2	616		4	46.5 **	1,148
1996	1	19.0	646	2002	1	46.5 **	1,147
	2	19.2	671		2	34.6 **	989
	3	19.1	687				
	4	19.1	741				

* Exceeds 150% of long term average of 15.6X (23.4X)

** Exceeds 200% of long term average of 15.6X (31.2X)

Bull Market

The high PERs in all of 1991, and Q1 & Q2 of 1992 reflected the normal Bull Market anticipation effect; in this, stock prices improve before EPS, resulting in high PERs early in a market cycle, followed by a "reversion to the mean"; this indeed happened, when later on, earnings caught up and PERs dropped to normal levels.

Bubble Market

However, in the second six year period things were different. In the immortal phrase of Alan Greenspan in December 1996, investors started to show "irrational exuberance". At that time, the

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S&P 500 stood at about 750; the highest price the Index ever reached was the peak of 1,535 in March 2000, a further 100% rise.

In every quarter during the last five years, from 1997 Q3 to 2002 Q2, the average PER was equal to or higher than 23.4 times (150% of the long term average); for seven quarters (35% of the period), the average PER equalled or exceeded 31.2 times (200% of the long term average).

This was not a normal situation. Investors appeared to become enthralled by the "new economy" and believed that stocks, were low risk holdings, because they had performed better than bonds over the longer term. The common belief then was that if equities are held for the long term, they can be safer investments than supposedly risk free assets, such as government bonds, whose value can be wiped out by inflation. For that reason, stocks could only rise. The short term Equity Premium (measured by deducting the T-bill return from the S&P 500's GAAP earnings yield) had been negative at the end of the recession in 1991; it rose steadily to 3.0% in 1994 Q1 and then fell again. That is a not unusual Bull Market pattern.

During the Bubble Market, from Q2 of 1997 to Q1 of 2001, the Equity Premium was consistently negative, which is not a situation normally expected in calculating Fair Market Value. As a result of the aggressive rate cuts of 2001, the Equity Premium became positive once again in Q2 of 2001 and has risen once more to 2.5% in Q2 of 2002; this level was last seen in Q2 of 1994.

Acquisition Prices

Not only investors, but also managements suffered from the ailment of irrational exuberance; for much of the bubble era, they persisted in making overpriced acquisitions with overpriced stock. For example, JDS Uniphase, a fibre-optics component firm in San Jose, CA, acquired Cronos Integrated Microsystems Inc. of Research Triangle Park, NC, for \$750 million of stock in April 2000; at that time, the shares were around \$100 each. In early August 2002, Cronos was sold to a small French firm, Memscap SA, for \$9 million, also paid in stock. Its apparent value had decreased by 98.8%, while JDS Uniphase's stock was down only 97.3%. At the recent price, the effective acquisition amount was about \$20.25 million, rather than the reported \$750 million, and the loss was merely 56%.

Impact of Other Factors

As discussed above, the risk premium fell and eventually became negative, while, leading up to the millennium, money became easily available at reasonable cost. From 1996 to 1999, T-bill yields varied from 4.3% to 5.1%, much lower than in the 1980s. At the same time, the US economy was now able to achieve significantly higher non-inflationary growth due to improved productivity.

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Optimists believed that this would result in faster long term gains in corporate profits. Therefore, required rates of return on equities dropped, investors were willing to look several years into the future for profits, and the acceptable PER was higher than ever before.

The Current Situation

The arguments mentioned above concerning the need for an equity risk premium, accelerated earnings prospects, demographic shifts and a spreading equity culture were uncritically accepted in the late 1990s. Now they are considered totally discredited, but, in our view, should not be ignored. Throughout the twentieth century, in nearly every market, stocks have been better investments than the normal risk premiums imply; while the improvement in American productivity in the late 1990s was overstated, its growth rate has increased, and some of this should flow through to corporate profits.

The question facing valuation analysts is: did stock prices during the Bubble Market of 1997-2002 represent Fair Market Value, even though they reflected actual transactions? In our view, the answer must be No. Many of the investors and traders that flocked into the market were uninformed, and due to the widespread application of the "greater fool theory" (buy high, sell higher to a greater fool), the prices realized did not occur in a fair market and therefore could not represent Fair Market Value.

For those reasons, in our view, prices from the Bubble Market of 1997-2002 should not be applied in valuing private companies.