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EDITORIAL COMMENTARY

Bubble Jr.

The current Bubble is a different phenomenon from any that has occurred previously, either in this country, or in Great Britain, France or Holland in the Seventeenth or Eighteenth Centuries. A common feature of all of these bubbles that spanned centuries and continents has been the enormous dichotomy between the prices paid for assets and their sharply lower values, often only months later. In Holland in the early 1630's the price of one rare tulip, the Semper Augustus, was worth as much as a stout sailing vessel which could pay for itself with one profitable voyage to the New World. In England in 1720, shares of the South Sea company soared eight fold before collapsing almost 90%. In the Great Bubble of 1997-early 2000 in this country, the prices of major dot.com and tech companies soared to unparalleled heights by the first month of 2000. Yahoo had skyrocketed 19,000% from its initial offering price, Qualcomm 8,000%, Amazon 9,000% and Lycos 6,400%. When the Bubble burst, prices plummeted from 70 to 85 percent, about the normal drop in the price of bubble stocks when rationality again prevailed.

What is different this time around is that many of the same stocks that soared to such incredible prices are shooting up again, albeit from much lower price levels. Never in market history have the same stocks that millions of investors believed would give them almost unimaginable wealth before imploding, risen from the ashes and hurtled to extremely high prices relative to their outlooks. The NASDAQ 100, which is heavily weighted by large tech and dot.com stocks, is up 66.7% at August 31 from its October 2002 low. From a behavioral standpoint, is this then just a normal recovery in a market that had overreacted on the down side, or is it something quite different?

To attempt to answer this question, first let's look at the Statistics in Table 1. Table 1 shows latest 12 month earnings, the earnings growth rates and the p/e multiples for four of the most popular high –tech and dot.com stocks for the three years up to the Bubble's peak in March 2000, and the same statistics in each case for the last 3 years, when the NASDAQ 100 was in a sharp bear market. As Table 1 indicates, Intel had a 15.3% annual rate of earnings growth rate in the 1998 to first quarter of 2000 period, and its price earnings ratio (p/e) rose from 22.2 for the 12 months ending 1998, to 30.6 for the 12 months ended 1999 to 56.4 or the 12 months ended March 31, 2000, the high point of the Bubble. (LTM in each case indicates latest 12 month reported earnings to the period referred to in Table 1.) The sharp increase Intel's P/E at the end of March 2000 occurred although its earnings growth rate in this latter period increased only modestly. Fast forwarding from the bear market period of 2001 to the first quarter of 2003, Intel showed an earnings loss of 26.2% annually for the 3 twelve month periods ending in March 2003. It's P/E at that time was 35, higher than the P/E of 30.6, when it was growing at 15% a year during the latter part of the Bubble. To justify this P/E Intel would have to grow at a 15-20% or higher rate for years. Yet surveys indicate the growth rate for 2004 are likely to be 6% at best, with little possibility of achieving approximately 10% earnings growth rate for years due to the slow climb in IT spending.

As Table 1 also indicates a second large technology company, Qualcomm showed earning growth of 84.6% in the buoyant period leading up to the Bubble. The market rewarded this growth with spectacular P/E's of 173 in the 12 months ending March 31, 1999, and 199 for the 12 months ending March 2000. The P/E's are enormously high by any market standard and can only be justified if there were a strong chance that earnings growth would accelerate to over 100% annual growth for years to come. Unfortunately instead of rapidly increasing earnings, earnings growth declined drastically. For the three years ended March 31, 2003 Qualcomm's earnings growth rate was a negative 5.1% annually. Yet Qualcomm still carries a P/E of 56 today, which would indicate a growth rate of at least 40-50% annually for years. As in the case of Intel, demand for Qualcomm's products is increasing only moderately, and it is highly unlikely that it will ever again produce the growth rates it showed during the 1997-2000 Bubble. The other three stocks in Table 1 tell much the same story.

As noted earlier, we are witnessing a curious and unprecedented phenomenon, namely, the current overpricing of Bubble stocks, subsequent to their sharp post Bubble decline, despite the lack of strong fundamentals to justify the rise. No previous Bubble has been fueled primarily with the same badly battered stocks that led the previous one. One possible contributor to this curious investor behavior is the Affect Heuristic.

Affect can be defined as the specific quality of goodness or badness demarking a positive or negative stimulus such as instant wealth or hatred (with or without consciousness). Affect responses occur automati-

Table 1. *Fundamentals of the Top NASDAQ Stocks Trailing Earnings From 1998–2003*

		Prior to March 2000				Post March 2000			
Company		**1Q98**	**1Q99**	**1Q00**	**Growth %**	**1Q01**	**1Q02**	**1Q03**	**Growth %**
Intel	LTM EPS	$0.88	$0.97	$1.17	15.30	$1.20	$0.26	$0.47	(26.2)
	P/E	22.2	30.6	56.4		21.9	117.0	34.6	
Amazon	LTM EPS	($0.15)	($0.57)	($2.88)	N/A	($3.78)	($0.98)	($0.36)	N/A
	P/E	N/A	N/A	N/A		N/A	N/A	N/A	
Dell	LTM EPS	$0.37	$0.58	$0.63	30.50	$0.80	$0.46	$0.86	10.9
	P/E	54.6	71.0	79.6		32.8	57.3	33.7	
Qualcomm	LTM EPS	$0.22	$0.09	$0.75	84.60	(0.04)	(0.14)	$0.64	(5.1)
	P/E	30.4	172.8	199.1		N/A	N/A	56.3	
Yahoo	LTM EPS	($0.07)	$0.00	$0.18	N/A	(0.02)	($0.24)	0.24	9.1
	P/E	N/A	N/A	926.4		N/A	N/A	100.1	
S&P 500	P/E	29.8	28.6	30.0		21.3	26.3	17.9	
Barra Value	P/E	23.4	21.0	20.8		16.9	21.8	14.9	
	As of 8/31/03								
S&P 500 2003 Forward P/E	18.5								
Barra Value 2003 Forward P/E	16.1								
NASDAQ 100 2003 Forward P/E	36.9								

cally, and often in the absence of cognitive reasoning. Listed below are four examples of how the affect heuristic can lead to investor error.

Insensitivity to Probability

A first example of the affect heuristic is one's insensitivity to Probability. Probability carries little weight when the consequences have sharp affective meaning. Loewenstein, Weber, Hsee, and Welch (2001) demonstrate that in purchasing a ticket, one's feelings toward winning the lottery are the same if the odds are one in ten thousand or are one in ten million. The strong correlation to the belief that one can make a fortune by buying dot.com stocks also appears to be similarly driven in part by insensitivity to probability. The investor in 1998 and 1999 believed such stocks were destined to go up many fold, regardless of how poor the fundamentals or the potential market actually were.

The authors further note that the insensitivity to probability in uncertain situations can cause small probabilities to carry very great weight. Other studies show that if the attractiveness of a gamble is emotionally powerful, the relative insensitivity to changes in probability are as great as .99 to .01, a hundredfold, a possible reason for the enormous disconnect between prices and fundamentals in the Bubble. Analysts' missed the proper valuations of these stocks by as much as 100 fold.

The Affect Heuristic in Risk and Benefit

Fischhoff, Slovic, Lichtenstein, Reid, and Coombs (1978) found the judgment of risk and benefit are negatively correlated. If large numbers of people like a stock, the risk is perceived as low. If they dislike it, the risks are perceived to be high. This is one explanation for the success of contrarian strategies, as well why both professional and individual investors were so sanguine during the Bubble and purchasing stocks with P/E ratios in the hundreds or even thousands. These findings might possibly call for a reassessment of the way investors perceive risk.

The Durability Bias

Gilbert, Pinel, Wilson, Blumberg, & Wheatley, (1998) observed a tendency to overestimate the length of time positive or negative affect will last after experiencing a pleasant or unpleasant event. This finding would seem to be helpful in explaining the superior performance of contrarian stocks, as well as the consistency of reactions to surprise by "best" and "worst" stocks. In each case investors extrapolated the positive or negative results much too far into the future. When the positive or negative results did not meet investors' overly optimistic or pessimistic expectations, there was a strong price reaction, negative if the expectations were too positive and vice-versa.

Temporal Construal

According to Trope and associates (2000, 2001), the greater the temporal distance, the more likely events are to be represented in terms of a few abstract or general features. The greater the temporal distance with "best or worst" stocks, for example, the more likely the investor is to focus on a few abstract or general features that convey the current important com-

pany characteristics today well into the future. Temporal Construal is a useful concept to help explain the behavior of professional and individual investors during the Bubble, in paying prices up to a hundred times actual fundamental value. One example would be the belief that billions of people would subscribe to AOL annually for years to come, another investors paying staggering prices for telecommunications companies because of their confidence in their unlimited growth. This affect heuristic also helps to explain the consistent superior returns of contrarian strategies.

Affect is certainly only one of numerous Behavioral Finance influences resulting in the gigantic disconnect in prices both in the Great Bubble, and in Bubble Jr., but it does provide useful insights on why the disconnects are so large.

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