III. Creative Defenses for the Price of Stocks Today

"Fine, I See the Math, But I am Bullish Anyway Because Of …"

What is the solution for the bullish analyst/strategist? They face a formidable dilemma. I first found that tremendously optimistic forecasts of long-term spectacular earnings growth are necessary to justify current stock prices (either that, or one must believe that investors are now perfectly happy with bond like returns on their equity investments). I then examined this possibility, and found that this spectacular sustained long-term real growth is highly unlikely going forward. This work was done on the broad market. The growth/tech sector is currently priced to even lower long-term returns despite using today's super optimistic earnings forecasts (remember the Cisco analysis). For the growth/tech sector, Wall Street's gigantic forecasts must actually be substantially exceeded before long-term returns become remotely acceptable. What is a bull supposed to do in the face of such mathematical torture?

Well, ignore the math of course! Just go ahead and set a high "price target" for one of a host of reasons. It is the paradox of this bull market that there is incredible focus on the short-term, all under the banner of long-term investing. Be bullish because the economy is currently great, because the Internet is the future (along with the children), because this quarter's earnings are rising fast, because the Fed has to stop ruining the fun soon, because we are "oversold", because earnings season will soon be upon us (or behind us), because summer's here and the rallying is easy, because prices have recently dipped, because despite the jump in standard CPI the core rate is still benign (switch core and standard CPI as needed), because we are in a Goldilocks economy[36], because someone somewhere just "reiterated" a strong buy, because all the bad news we ever hear is "company specific", because the earnings slowdown you heard about was only because parts and labor were not available not because sales are suffering[37], because the market is ready to put this Microsoft break-up stuff behind it, because we have reached a technical bottom, because this is a presidential election year, or, just because we are all having a good hair decade. But for God's sake stay away from the math.[38]

While it might seem more complicated than the above reasoning, the math boils down to evaluating stocks as you would the purchase of any private business. What is this

[36] In my version of the story the Goldilocks economy gets eaten by the bears.

[37] While probably better than having no customers, a shortage of parts and labor is a very big deal. Bottlenecks like these are part of the reason why extreme high earnings growth is very difficult to sustain over long periods, and thus these events should not be dismissed as a mere abundance of riches.

[38] Some analysts do claim to have valuation models that justify, say, a 100 P/E for a stock growing at 20% per year in a low inflation environment. The only way I can see this occurring is if you assume the 20% growth goes on for a really really long time (and far longer than I am willing to assume). Frankly, I just do not see how these strategists come up with assumptions that justify >100 P/Es on any stock other than one with a tiny market capitalization going through an exponential growth period or a distressed stock with temporarily near zero earnings. Other ways analysts try to analytically justify prices is through certain heuristic measures, for example the much discussed PEG ratio (the ratio of P/E to assumed growth – the lower the better). All of these measures are distorted ad hoc attempts to simplify IRR and discounted cash flow analysis. The PEG ratio suffers seriously from ambiguities in how long growth goes on, in whether a ratio is the right functional form to make this comparison, and in our lack of a benchmark for what constitutes a high or low number. As a quick one-stop measure perhaps the PEG ratio has use in relative value, but when it disagrees with thoughtful full analysis, it must be cast aside.

business worth in terms of the cash flow it will pay me over a long-horizon going forward? How does the value of this future cash flow compare to the price I must pay today? How does this compare with other alternative assets in terms of both expected return and risk? Note, this approach is not about what I can sell it for tomorrow, or next month, or next year.

Obviously, I am setting up a straw man as not all analyst/strategists brazenly ignore the math. Frankly, if an analyst does the math, but genuinely forecasts absolutely huge earnings growth, like the NASDAQ 100 growing 17x faster than real GDP growth for 20 years (and hence, eventually, hopefully, having dramatic growth in cash flow to shareholders) then I strongly disagree with them, but must respect their integrity and methodology. On the other hand, a bullish analyst who tells a story, but refuses to do the math, well, that is another thing entirely. This type of analyst is just focusing on the short-term (like those stories listed above) in order to avoid the uncomfortable unpopular conclusion that comes from the math. Personally, I wish this type of analyst would just come out and say, "I think earnings announcements and the Fed holding off are going to take this mania up a notch, so hop on board the momentum train", as it would be more honest. But, of course, they cannot do that (obviously this would pose some problems as they all claim to be long-term focused). Instead, they go on TV or write a report, extol how great things are and what wonderful times we live in, list many of the reasons above, and never, ever, ever, touch the math. Why, because the math says that although things are wonderful, they are not in the ballpark of wonderful enough, and buying into a mania is not a good long-term decision.

I will leave it to the reader to form their own opinion about whether most bullish analysts truly have done the math and are willing to make the long-term forecasts needed to justify today's prices, or are just spinning a short-term profitable yarn. As usual, I think my own opinion is obvious. However, please, when you watch a strategist talk bullish while presenting only short-term stories and vague references to how wonderful things are, and definitely not doing the math, at the very least be extremely cynical.

"We Recommend Stable Tech Stocks With Earnings, Not Speculative Internet Stuff"

Decrying the Internet bubble, while simultaneously advocating a flight to "safe" solid tech stocks with large and growing earnings is currently a very popular way to sound prudent and rational (i.e., avoid those stocks with no earnings) and aggressive (i.e., own lots of tech) at the same time. It is somewhat of the "in" opinion to have among strategists. Protect your reputation by being prudent, but do not prick the bubble your firm so depends upon. Neat trick. No need to give up the dream, just stick with the boys, and the groupthink, that got you there. Tech is the place to be, the driving force of the economy, you have to participate. Again, just do not do the math.

None of the analysis I have conducted in this book, or the stories I have been examining, have focused on Internet stocks. Often the Internet is mistaken for the entire stock market bubble (for those willing to call it a bubble). However, Internet stocks have little

to do with my ugly prognostications, or alternatively the extremely unlikely assumptions I find necessary to forecast good times for stocks going forward. Internet stocks provide a convenient scapegoat behind which to hide for those who want to avoid the math but still seem to prudently worry about valuation. In other words, if you want to look attractive, stand next to the truly ghastly. Again, given different and more aggressive assumptions, someone can disagree with my assertions about valuation. A strategist who recommends established big cap tech while eschewing the Internet, because he did the math and truly believes in phenomenal long-term earnings going forward for these companies, must be respected if not agreed with. However, do not let anyone avoid the math with this Internet trick.

Finally, in fairness I must say that a bearish strategist is in a real bind. A few years is not that long for a mania to last, but it can be career limiting or ending for a bearish strategist even if they are ultimately right. Thus, the pressure to appear bullish, by hook or by crook, in a mania must be acute. Steering your clients away from the most speculative, most dangerous stocks (i.e., perhaps the Internet), and maintaining your job, might appear to be the best course among difficult alternatives.

"The Days of Outsized Returns Are Over, Going Forward The Stock Market Will Return More Like the 10-12% It Has Throughout History"

Another version of this is simply saying that after years of outsized gains, the market is now "fairly valued", leaving the impression of historically reasonable expected returns going forward but judiciously avoiding an explicit forecast. These comments are close cousins in spirit to decrying the Internet bubble while recommending big cap tech stocks. They sound prudent and sober, but are obviously still very bullish. Well, not to be a broken record, but please do the math! For the S&P 500 I found about a 9% long-term IRR using very very optimistic assumptions. When compared to the last 125 years I find that these assumptions have to be deemed unrealistic. Using more reasonable assumptions I find IRRs in the 6.3% to 7.7% range (effectively a negative or near zero risk-premium). In either case, this is not 10-12%. Looking at Cisco, and also extrapolating to the similarly priced NASDAQ 100, I find IRRs in the mid 7% range, based again on Wall Street's very optimistic forecasts. Any less aggressively optimistic analysis would find expected returns on these growth stocks to be well below bonds and cash.

It sounds prudent to tell people to calm down, and not expect the heady gains of the past few years to continue (and in fact, this comment alone is prudent). Calling something "fairly valued" seems utterly reasonable (obviously those nuts screaming cheap or expensive are not reasonable). However, it is only the appearance of prudence and the absence of mathematics that explicitly or implicitly combines this sentiment with forecasts like a 10-12% return on the stock market going forward. Again, if a strategist wants to make this forecast, then please also include an incredibly optimistic forecast of sustained long-term earnings growth and an explanation of why it will occur. It is not

unreasonable to be an optimist, even an extreme one. However, it is unreasonable to skip the math in an effort to appear to be a prudent bull.

"We Have Just Lived Through A Bear Market"

Wall Street and the financial media would have us believe that having lived through the first half of 2000 we are all scarred grizzled veterans of a bear market. Implicitly, this means that stocks are beaten down, there are bargains everywhere, and the bubble has popped. That is, it is safe to go back in the water.

First, the analysis in this book has been done largely on prices holding near the end of this period. No convenient choosing of say, March 27th 2000 (the NASDAQ peak), was done here. If the very optimistic assumptions I have made earlier in the book are right, stocks are still priced way too high after the "bear market."

Second, speaking of conveniently choosing March 27th 2000, it is the Knights of Bull who would have us focus on the drop from the peak. Focusing on peak to trough drops is certainly the most dramatic way to examine the market, and conveys the strongest impression of low prices and hence bargains. However it is not the most useful way to examine the market. Suffice it to say that stocks are approximately unchanged in price for the first six months of 2000, and way up in price over any reasonably longer period. This does not constitute a bear market, by any acceptable definition, no matter what even sillier heights they might have hit in-between.

With the exception of some pure Internet stocks, there has so far been no correction in broad market stock prices, rather there has been volatility, and a pause in the market's advance.[39] The fact that so many are so easily convinced that they have lived through major trauma, is perhaps one of the scarier indicators of how spoiled and unrealistic investors have become. But, like any feel good Freudian, Wall Street and the financial media are more than willing to put investors on the couch, tell them it is not their fault, and counsel them on dealing with their "pain." Well, I certainly may be wrong about the valuation of the market today, but I am not wrong that the broad indices are about where they were six months ago[40], and much higher than any time further back.[41] No pain, just a lot of volatility, whining (admittedly, half of it from me), and noise, ultimately, signifying nothing.

---

[39] I will focus on this more later, but there has also been little or no correction in stocks' relative pricing. While the Internet has come way down, for the first six months of 2000 the S&P/BARRA Growth index has still beaten the S&P/BARRA Value index.

[40] Specifically, the total return from 12/31/99 to 6/30/00 of the S&P 500 is –0.4% and of the NASDAQ 100 is +1.5% (source Bloomberg).

[41] I do have to admit though, not everything is unchanged from six months ago. The Fed has sharply raised short-term interest rates, inflation seems to be stirring, and the economy seems to be slowing. However, we will see soon that the economy slowing is really good news.

"Tech Stocks Are Immune To Higher Interest Rates"

One of the main opponents of this expensive stock market has been rising interest rates. In defending the prices of technology stocks, many argue that interest rates really do not affect these stocks. This argument says that interest rates really only effect firms who finance themselves with bonds, or who's business depends on the price of money (like a bank). Well, this is not true.

There are two main reasons why interest rates can affect stock prices. One reason is because a rise in real rates makes future cash flows worth less. A second reason is because a rise in real rates presumably can slow the economy, and firms' earnings with it. Technology stocks should be immune to neither of these effects. Furthermore, they might in fact be very sensitive to both. One, because much of their growth is in the future, a rise in real discount rates should acutely affect their present value. Two, given how reliant their current pricing is on mammoth future earnings growth, any potential slowing of that growth should impact today's stock prices, probably seriously. With valuations so excessive these stocks do not have much room for even a small slowdown. The term often used, but perhaps too mild, is "priced for perfection." Simply put, tech stocks should be far from immune to the negative effects of higher interest rates.

A more difficult question is whether technology stocks are more or less sensitive to interest rates than so called "old economy" stocks. I have no definite answers here. Technology stocks are clearly more sensitive to the discount rate effect (longer dated cash flows), but perhaps (as many argue) less prone to an earnings slowdown as demand for their products is so strong. But again, given their valuations, any slowdown no matter how small might severely affect their stock prices. Also, one could certainly see much greater price pressure on tech companies in a slower economy (i.e., customers shopping around more). Frankly, I do not know how these opposing forces shake out.

One point I will address is the often heard idea that old economy stocks are more sensitive to interest rates since they finance themselves with bonds as opposed to the more equity biased technology stocks. The reasoning is that if rates rise, these firms will have to pay more in interest charges, and thus earnings will go down (note, as a side issue, this ignores that the firms can alter their capital structure – as one can presume tech companies have altered theirs towards equity as their cost of equity capital is so low). However, another effect is ignored. If you own a bond, and interest rates rise, you lose money, right? Well, if a firm has financed themselves with bonds, when interest rates rise, they should make money, right? The answer is yes, as they have shorted a bond. Think of a firm as a valuable set of assets (tangible and intangible). These assets are owned, literally divided up, by the stock and bond owners. Say interest rates rise, but for now, assume the assets maintain their value. Well, if the bonds go down in value, the equity has to go up! Simply put, they are short bonds, a declining asset.

On the other hand, there is a reason that old economy stocks may be more sensitive to interest rate hikes than technology ("new economy") stocks. By issuing more bonds, the equity of old economy stocks becomes a more levered claim on their assets. Thus, if the

assets fall the same amount for technology stocks and old economy stocks, while ameliorated by the value of their bonds going down (as discussed above), we expect the value of the old economy stocks to fall more as they are a more levered claim on the falling assets. Of course, we would expect this effect for any change in asset value, and the fact that old economy stocks are generally less volatile than new economy stocks might make us doubt this theory.

Bottom line, I do not know which type of stock is more interest rate sensitive. However, I do believe that all theory, and empirical fact, says that both old and new economy stocks should generally (all-else-equal) fall as real rates rise. Sometimes this happens, but recently we have often seen a "rotation" from old to new economy as rates rise, that actually causes the new economy stocks to go up. The story is often that investors are "fleeing to the less interest rate sensitive technology stocks." Amazingly, they rise in price as their fundamental value is almost undoubtedly falling. This is almost certainly the result of a host of forces that favor a "rotation" from one stock into another, rather than the selling of stocks for bonds and cash. For instance, equity mutual funds are loathe to own cash or bonds (ask Jeff Vinik) as they focus on "benchmark return/risk" not actual return/risk, individual investors do not want to give up the stock dream for boring cash or bonds, and Wall Street would much rather have you "rotate" than leave. To summarize, new or old economy stocks should (on average, and barring other news) go down as real interest rates rise. Which type should go down more, I do not know.[42]

"The Market, and Tech in Particular, Will Rally As Soon As The Fed Stops Hiking"

I included this in my earlier list of short-term reasons to be bullish despite the math, but it is really worthy of its own section.

It is somewhat ironic that as I write this (June 2000) the stock market, and the growth/technology sector in particular, is rallying sharply on the prospects of slower economic growth, and thus a greater chance the Fed will stay their hand. Many strategists and forecasters are jumping on the bandwagon, predicting better times ahead as soon as the Fed stops. The stock market rally of 1995-1999 is often pointed to as example, as it commenced once the Fed stopped its rate hikes begun in February of 1994. Of course, this argument follows on the heels of many bulls telling us that tech stocks are not affected by interest rates (discussed above). Apparently, having failed at this immunity argument, we are now to believe that the natural state of the market is continuous massive rally, only briefly interrupted by a nasty man named Alan. I see several problems with assuming that the rally recommences as soon as the Fed stops.

First, the reason to fear Fed rate hikes is largely that they may succeed in slowing the economy and raise discount rates on future cash flows. If the Fed stops raising rates it is because they believe they have slowed the economy enough. We should not fear Fed

[42] My favorite ridiculous comment of 1999 was when several analysts commented that Internet stocks should go up if rates rise, as they were sitting on a ton of cash whose yields would rise. I will not go through the math, but suffice it to say that whoever said this should be embarrassed. Well, at least these companies do not seem to have the problem of excess cash any more.

hikes as a cartoon monster or superstition, but for the real effects these hikes can cause. Thus, the current cheer resembles the old joke, "the operation was a success, but the patient died." It is only long-term spectacular real earnings growth that can come close to justifying current stock prices, and that is not going to occur without very strong economic growth. Perhaps the hope is that the slowdown is short lived enough to stay the Fed's hand, but not so much to really slow earnings, but then earnings will not pick up enough to stir up the Fed again, but somehow long-term earnings will still be huge enough to justify today's prices. Then the porridge will be just right. Watching the bullish cheer an economic slow down at these price levels does feel like we have entered a different dimension of sight, sound, and mind.

Second, the comparison to 1994 is exceptionally dicey (as of course is any reasoning by singular historical example, including my earlier analogy to 1929). At the start of 1995 the P/E (using the Shiller data which I extended for a few months as his data ends in early 2000) of the S&P 500 was about 20, and now at the end of June of 2000 it is about 44. I do not know what else to say that could make it clearer that the analogy to 1994-95 is faulty beyond this approximately 120% increase in valuation. Again, there is nothing wrong with asserting that the market today is fairly valued or attractive. However, at the risk of boring even myself with repetition, it must be based on the math, long-term forecasts of earnings, dividends, and discount rates. To come to a bullish conclusion an analyst must be wildly optimistic in these forecasts. It seems clear that rising real rates and a slowing economy would reduce not enhance this optimism.

Wall Street, the financial media, etc., have all obscured the issue of whether the market, and growth/tech stocks in particular, are wildly overvalued, with the short-term issue (circa June 2000) of when or how much more the Fed will raise rates, how much the market will rally when they stop, and which stocks it will affect the most. I guess these stories are more fun to discuss than the math, both because they are simpler, and because they can lead to a bullish conclusion. Furthermore, these stories might or might not have short-term validity (the stories might be self-fulfilling or self-defeating in the short-term, who knows?). However, they are close to irrelevant to the long-term investor.

"Surely You'd Admit That All The Mergers & Acquisition Activity is Bullish?"

First, I admit nothing. However, the logic here is almost compelling. The idea is that merger mania might be a sign that companies find it more attractive to buy than build, meaning they think other companies are undervalued. Perhaps managers, closer to the ground, betting their own companies' money, have a better perspective than any of us, and perhaps this all adds up to a very bullish verdict. As an example, many think the M&A boom in the 1980s was a response to equity values that by the early 1980s had gotten quite attractive vs. alternatives (like building something yourself). They believe the subsequent M&A boom was tied in with the 1980s bull market, and they may very well be right.

However, it seems that most of the mergers we hear about these days are stock for stock swaps. Now, I have not done a statistical study if this is true, and I do not know for certain if today differs markedly from the past. However, anecdotally, when you see a big merger, particularly in tech/telecom/Internet, it always seems to be one company swapping their stock for another's.

There is a time-honored idea in economics expressed as "Gresham's Law." The short way to describe it is "bad money drives out good." A classic example is a government on a precious metal standard, who then issues some coins with a lower mix of the precious metal, but still the same face value (i.e., a debased currency). While the government naively thinks consumers and companies will use the old and new coins interchangeably, what happens is that the old money (the good stuff) goes into mattresses, and the new money (the bad stuff) is the only thing used in circulation. So, the bad money drives out the good.

Now, imagine a company who knows their shares are tremendously overvalued, but so are their targets. What would an acquirer use for a merger? Well they would not use cash (good money) to buy something overvalued, rather they would use their stock (bad money). Just like consumers owning good money (the company's cash) and debased currency (the company's stock) the companies hoard the good money and spend the bad. Gresham's Law in action. In fact, for some companies, their very high assumed growth is actually intimately related to their assumed ability to grow by merger, buying up super expensive small competitors with their own super expensive stock. Neat idea. However, while I cannot prove it will fail, historically this type of strategy has been a bust since the firm of Ponzi merged with Scheme.

Why then are they doing these mergers if the assets they are buying are not undervalued? Well, many possible reasons. First, perhaps they really believe in the synergies the merger will bring. That is, the two companies are such a good fit that the combination will be worth more than the sum of the parts. Historically, it strikes me as the biggest real synergy in most mergers is laying off people and combining overlapping operations, and that does not seem to be the main driving force today. Rather, the synergies today are supposed to be about things like "networking effects" where hitting critical mass, bringing together diverse media, etc., all add in a non-linear way. Of course, the networking effects today may be real, and perhaps synergies are more important now than ever. On the other hand, historically the search for non-downsizing synergies through mergers has been only a bit more successful than the 1000+ year search for a way to turn lead into gold. However, rather than actually turning lead into gold, historically a far more successful endeavor has been convincing the market that years down the road you will do it. Finally, for the cynics out there (and in here), the funny-money merger boom might be at least partially driven by ego, empire building, the fact that mergers allow all kinds of creative accounting (how many firms now report superb earnings before merger costs?), and last but not least, the fat fees Wall Street makes on this activity.

While not directly on topic, I want to mention a few related corporate finance instances of bubble logic. How many firms have we seen planning to do an IPO, only to pull it when the market goes down? These firms never say, "we are waiting to sell until we get massively overvalued again", but rather the answer is always that they are pulling the IPO because of "too much volatility", as if they would have pulled it if the volatility were upward. Also, how many spin-offs do we see of high tech areas (e.g., wireless, Internet, media, etc.). The reasons given range from making it easier for Wall Street to value the company's separate parts compared to the difficulty of valuing the whole (while they are at it, perhaps they could use smaller words and bigger type in their annual reports), and being able to compensate the people in these divisions better. My favorite explanation was an executive (unnamed) who said in a statement that his company is exploring a tracking stock or spin-off of portions of its phone operations to "allow more efficient management and focus on business customers." Why on earth does this not apply to their divisions that are not so richly priced? I guess for these divisions inefficient management and a lack of focus on customers is fine. Of course, if the areas being spun-off are undervalued vs. the enormous growth opportunities (as the companies would undoubtedly tell you), the firms could just retain the divisions and implicitly reap the benefits of this undervaluation, as opposed to giving it away to investors. Again, a cynic might say that these firms know the stuff they are spinning off is massively overvalued, and are just getting out of Dodge (at least for the portion they sell).

Obviously, I have a fairly cynical view, but rather than bullish, much of the recent corporate finance activity strikes me as yet another indication we are in a mania.

"Valuation Schmaluation, If You Had Worried About Microsoft's Valuation 15-Years Ago You Would Have Missed Making A Fortune"

The idea here is simple. If you care at all about valuation (I am not talking full fledged distressed value investing, but just caring about what you are paying for a stock) then you would have missed investing in Microsoft (and some others). Thus, it is silly to worry too much about valuation! Now, this logic is precisely the same as pointing to the winner of a lottery and declaring that lotteries are a good investment. Everyone remembers the lottery player who won, and the super expensive growth stock that was really worth the price (or much more). On the other hand, a host of losers (lotteries and expensive stocks) fade from memory. A large litany of academic work shows that systematic high P/E investing is not a great long-term idea. Common sense knows that lotteries are usually not positive expected return investments. You can invest in them either for entertainment, or desperation, but be prepared to lose. Arguing by singular example (or a small handful of them) based on what has happened ex post, is very dangerous. The success of Microsoft no more proves that valuation does not matter, than it proves dropping out of Harvard is always a great idea.[43]

[43] Being from the University of Chicago I might just have to rethink this one.

"Do Not Try and Time the Market"

Well, one way to get people to ignore the current high price of the market is to explicitly tell them it is a sin to actively change their exposure to stocks. In fact, this is probably the most commonly heard piece of conventional wisdom on Wall Street. Avoid market timing! First, let me say that 99/100 times this is actually a very good piece of advice, and Wall Street probably does the investing community a service by popularizing it. The transactions costs, tax effects, and general unpredictability of the market, all make timing a dicey proposition for the individual and the professional. All else equal if I had to chose between giving a friend the above advice, or the opposite advice of "actively and often try and time the market" it is a no brainer, keep your hands off the portfolio.

However, let us put our cynical hats on for a moment. Wall Street (buy and sell side) is in the business of selling you stocks, and they do not want you leaving the market. Let us rephrase the advice "Do not Try and Time the Market" another way. How about, "Ignore the Price of What I am Selling You and Buy No Matter What." If you think about it, it is the same advice. If your salesman told you to ignore the price of any other purchase than common stocks because "it will all work out over the very long-run", you would run clutching your wallet. While perhaps usually good advice, "do not try to time the market" cannot mean ignore price entirely, as in the extreme this is obviously silly. However, making great long-term returns without any imposition of effort or vigilance (i.e., having to watch prices for opportunities or bubbles) is obviously a seductive siren's call. If being price sensitive means timing the market, and timing the market is a cardinal sin[44], then prices have no anchor to reality. If one is looking for possible causes of a financial bubble, then the "ban" on market timing must be a prime candidate.

In fact, the most common reasons Wall Street gives us for avoiding market timing are quite silly (the good reasons are listed above). Even if they lead to good outcomes, silly reasons should not be tolerated (we should not have to fool ourselves into doing what is right). Let us talk about two of the more common anti-market timing rationales.

Reason #1: If you timed the market and managed to only miss the few best days for the market, you give back all the positive returns of stocks while retaining most of the risk. This argument is found everywhere (mutual fund ads, stories in the media, advice from financial planners, etc.). It seems every firm has their own version of this parable.[45] The numbers are supposed to shock you, and on the face of it they do. You do not have to miss many of the best days to lose a lot of the return from being invested in stocks. However, this is really a very silly argument. First, it postulates a very wacky, extreme market timing strategy. Even those people who do try and time the market probably do not do it by going to all cash from 100% equities for just a few select single days. After postulating this ridiculous strategy, those who advance this line of reasoning against market timing then make the minor assumption that one then gets this timing pathologically wrong by choosing amongst the thousands of possible days, the literally

[44] Remember, the first step towards quitting market timing, is admitting you have a problem. Seeking help from a higher power also does not hurt (I do not mean Alan Greenspan).
[45] In particular, sometimes months are used instead of days.

worst possible ones to be out of the market. The analyst doing this exercise is then shocked, shocked to discover that pursuing this crazy extreme market timing strategy, and getting it astoundingly wrong, appears to seriously hurt returns (and is also shocked, shocked to discover gambling is going on in the market). Interestingly if one carries out these calculations assuming one only avoids the worst days for the market (the opposite of the normal calculation), long-term returns are increased by a similarly dramatic amount. This is not shocking, and fair. If one pursues an extreme strategy the consequences are high but relatively symmetric. Essentially, this argument against timing constitutes some very silly and intentionally selective mathematics, paradoxically supporting some good advice.

Reason #2: Even if you have perfectly terrible market timing, that is, investing your savings for the year on the worst possible day each year (i.e., the high day for the market that year), if you keep investing over a long horizon you still do much better than someone who might have much better market timing (i.e., investing on the low day for the year) but was in the market for a shorter time than you. Thus, the refrain is, "it is not the market timing, but time in the market that counts." This argument is more mathematical trickery. Where reason #1 used a market timing strategy that is way too extreme, reason #2 uses one that is way too tame. Assuming terrible market timing (investing on the worst day of the year) sounds pretty bad, but the only market timing going on here is on the new investment. The main portfolio (i.e., the compounded value of all old investments) is still invested in the market for the long-term, and very quickly the returns on this main portfolio come to dominate the timing done on the relatively small annual investments. I do not think that stocks must win over any long-term, but they certainly have done great over the period these tests are run over. Thus even with terrible market timing (on the relatively tiny additional investment each year) the person in the market longer generally won. Essentially, we are comparing someone in the market for a longer period but doing a tiny amount of terrible market timing, to someone in the market shorter doing a tiny amount of great market timing. Because the market itself was so strong over this period, and because the amount of true market timing was so tiny, the effect of being in the market for longer dominates. This is not really a test of market timing at all, but a restatement of how wonderful it has been to be invested in this bull market. Earlier, I talked about the long-run argument for stocks, and this is a subject for legitimate debate. However, adding literally a smidgen of market timing to this long-run argument, and discovering it does not matter much, is not exciting news, and is again, misleading mathematics.

What is really amusing is when you realize that reason #1 and reason #2 are the exact opposite in spirit and are often mentioned together or at least by the same firm! #1 says do not time the market because the consequences to a misstep are so severe, and #2 says do not bother because the consequences are so miniscule.

What do I think about market timing? Well first, it is generally a bad idea because it is very hard to forecast short-term market movements, and transactions costs and taxes (for taxable investors) will kill you. Second, I think it is very important to distinguish the short-term from the long-term. Perhaps some have effective systems for short-term

timing, perhaps not. I am reasonably cynical about the prospects, and thus, without substantial evidence to the contrary, would generally avoid short-term timing. However, over longer term horizons, I do think making conscious portfolio shifts based on the relative attractiveness of different asset classes can make sense, and especially so when extremes are reached. Note, Wall Street, home of "Do Not Try and Time the Market", implicitly agrees as their strategists are all running around with their changing recommendations for how much stocks, bonds, and cash to own. Looking ahead now, I have no idea what will happen over the short-term. However, over the longer term, it seems pretty clear that either (a) the risk-premium on stocks has permanently come way down, or (b) people are in for a very rude awakening when they realize they do not like holding stocks with very low expected returns, and prices then will sharply fall. Furthermore, I think this analysis applies particularly harshly to the growth/tech sector of the market. I do not know when it will happen, and nobody should ever be certain they are right over any horizon, but either way it looks like a pretty good bet to lighten up on equities now (this does not mean sell them all or go short). That is long-term market timing, and I think done occasionally in moderation it can make sense.[46]

"Dips Are Not to Be Feared, But Are A Buying Opportunity"

Ah, to buy on the dips, one of the most hallowed activities of the last few years. First, I had to put this one after "Do not Try and Time the Market" as often the same firm, and sometimes the same person at that firm, will give you both pieces of advice. That seems pretty contradictory to me, as buying on the dips is pure short-term market timing at its finest.

Some will argue that dip buying is not short-term market timing as they are simply looking when to enter a long-term investment. It is a common refrain to hear even bulls say they are rooting for the market to dip, "as they have cash to put to work." However, one must ask them what they are doing with the cash until they get their dip to buy? Clearly they believe that the money should be in stocks long-term, and they always have the option of investing now. If they think it is a good idea to hold some money back waiting for a dip, then they are forecasting the stock market's expected risk-adjusted return between now and the end of the dip to be below their alternative (presumably cash or bonds). It is 100% certain that there will be a dip eventually. But, in a long-term rising market (as every bull believes in) the dip might very well occur after the investor has suffered a large opportunity cost from sitting in cash waiting for it. In other words, in a long-term rising market, today's prices might never be seen again, even after some future dip. Thus, someone holding cash waiting for a dip is forecasting that this will not happen to them, and that some time in the near future prices will be lower than they are today. In other words, they are forecasting the short-term attractiveness of the market. I could not think of a better definition of market timing.

[46] This might be a good time to mention that there is nothing necessarily wrong with being short-term. Short-term strategies, and short-term momentum strategies in particular, might have validity (see for instance Jegadeesh and Titman (Journal of Finance, March 1993) and Asness (AQR Capital Management working paper, 1999)). However, these strategies are probably not very applicable to the average investor, and tend to go away or become wildly unstable if too many try to follow them. Clearly the majority of us should be focused on the long-term.

Now, if you just look at the success of buying dips in isolation, you will find it works as buying in general has worked for a long while. However, to evaluate if there is any content to the idea of buying dips, as opposed to just buying, you must show that after dips it is a better time than normal to buy (i.e., that it is an effective type of short-term market timing). You must show that what you gain or lose from being on the sidelines waiting for a dip, is more than made up for by your extra returns after buying a dip. Otherwise, you are just arguing again to invest more in stocks (an interesting, but separate argument). Although buying the dips is a simple short-term market timing strategy, I have not seen it analyzed as such (i.e., fairly judging whether can you do better buying the dips than an equivalently risky strategy) and I would be interested in seeing such a study (it might even work).

In my opinion, too many dip buyers think they are in fact value players, only their valuation model is not based on P/Es or IRRs. Their valuation model consists of "if a stock or market has dipped below its all-time high, it is cheap!!" This "buy the dip" mentality may indeed have contributed to the stability of equities we have seen for a few years as any dip is quickly erased. If permanent, it could mean equities really are less risky going forward (and also that their expected returns really are permanently lower). On the other hand, if only temporary, much like an infection not quite killed by an antibiotic, every dip that comes roaring back might make things far worse in the end.

Finally, if I hear one more person refer to buying a 200 P/E stock, that is up 200% in the last year, but is down 5% from its closing high two days ago, as "bargain hunting", I might have to start doing some hunting of my own.

"We Have Heard the Bears Wrongly Scream 'Over-valued' for So Long Now"

Finally, failing all else, we can forget arguing the merits and just laugh at the bearish for being wrong for so long. Well, as you might guess, there are several logical flaws with this plan (but, of course, it can still be pursued for pure entertainment purposes).

It has really not been that long. It was only in December of 1997 that P/Es (from my first figure) crossed their former high of September of 1929, and in fact only in January of 1995 when they crossed and remained above 20. While 3-5 years may seem like a very long time (it certainly does to me), it is not. In terms of markets, 3-5 years is a blip of time. One can certainly argue with the thesis that equities are overvalued, but a legitimate argument is not "you have been saying this for three years now." If one believes that we are in a bubble, then that argument simply uses the mania to justify itself. Argue the merits of the case going forward, but not the recent returns, as over short periods, returns are basically random. Furthermore, once you admit the possibility that the stock market can become overvalued, it becomes very difficult to discuss what limits there are on this overvaluation (again, short-term market timing is difficult). Neither the bulls nor the bears, if things should turn their way for only a short period, should point to recent returns as an indication that they are right regarding valuation.

"OK, So If You're So Smart, Why Doesn't This Bubble Pop?"

This is a darn good question. The prior section made it clear that it is incorrect to justify current stock prices simply by deriding the bears as being wrong so far. However, this should not let a bear off the hook either. Turning it around, while the bulls should do the math to justify their beliefs, a bear who believes the market is priced irrationally high should have a theory about why such irrationality can persist for so long. Barring such a theory, it is probably prudent to assume the market knows more than you do, and that stock prices today are rational. Of course, not surprisingly, I do have such a theory.

Actually, I borrowed the theory. An article called "The Limits of Arbitrage" by Shleifer and Vishny (Journal of Financial Economics, 1995) sheds some light on why irrationality can last. The article is complex, but essentially the authors postulate a true arbitrage situation, one in which you are guaranteed to make a risk-free return. However, the authors also postulate some real world complications, namely mark-to-market and bankruptcy risk. Meaning, because of interim fluctuations, you will not necessarily be around to see your arbitrage through to a successful conclusion. The authors go on to make the point that in the real world, even a true arbitrage is not necessarily instantly eliminated because of these risks. Now, to apply this to our question, imagine for a moment that somehow you privately knew for certain that the real return of the stock market would be negative over the next 20 years. What would you do now?

Well, if you run a mutual fund you might very well stay fully invested. Imagine you sell stocks and raise a significant amount of cash and the bubble expands still further (obviously a very real possibility over short-horizons, even if you know the next 20 years will be poor for stocks). When this happens, the marketplace has been quick to punish the under-invested mutual fund manager. However, imagine you do not raise cash and the market declines sharply. Well, you are in the pack, and while your industry might suffer, you will not necessarily suffer relatively (and we all seem to care at least as much about relative as absolute suffering).

If you run an endowment or pension fund you also might not raise that much cash. Much like a mutual fund's shareholders, an endowment's board does not have a 20-year time horizon. You will be evaluated at a far shorter frequency. If you are right, and a crash ensues, clearly you will be rewarded. But, if the mania rolls on, in a year or two you will find yourself out of a job, and branded a "maverick" (there is an actual term called maverick-risk). If you are right in the short-term, you get a pat on the back and maybe a little something extra in your envelope, but if you are wrong, back to the career drawing board. It is easy to see how even if you possessed a 20-year crystal ball, it might be difficult to act upon this knowledge (of course, you could always hope the crash does not happen for 19 years and 364 days, and then act swiftly and confidently with 24 hours to go).

If you are a sell-side strategist, or worse, a broker, then the incentives to stay bullish are probably more acute. Is there anyone who truly thinks that even the certain knowledge that stocks are priced to offer poor 20-year returns would turn the brokerage crowd bearish? If so, you have more faith than I. This is not necessarily a knock on their morals, but a knock on the incentives and asymmetric loss functions (a geek term for punishing them more for being bearish and wrong, than for being bullish and wrong) we as a group provide them.

Even if you are an individual investor, amazingly, you might still do little with your funds. 20 years is a long time. The mania can certainly continue in the short- to medium-term, and perhaps you think you can time when to get out? Worse, if it does go on who wants to admit to their friends at cocktail parties that they are missing the party. While this sounds extreme, and probably is, by no means is it certain that individuals, even given this distant foreknowledge, would immediately shed their equities.

Now, let us make the example more realistic and acknowledge that nobody knows for certain what will happen over 20 years, just that the odds are now far worse for equities than normal. Also, add that there is a large cadre of the marketplace seduced by the many fallacies we describe who seem to continue buying no matter what happens. It is quite easy to see how the prospect of poor long-term equity returns could have little immediate effect. Given the strong belief that equities will underperform inflation for the long-term, the rational thing, and the only act of a prudent fiduciary, would be to at least lighten your equity exposure. However, if it were realistic to think that "career risk", "maverick risk", and "asymmetric loss functions" might stay your hand even in a certain world, they certainly can stop you cold in an uncertain one. Frankly, all considering, it is quite easy to see irrationality persisting (and on some days hard to see it ending). Unfortunately, it seems very possible that we are all just doing a "dance macabre", gentlemen and fiduciaries all, waiting for the disaster we know is coming to strike, so we can all go down together.

Of course, the only bright spot is that the inability of many to act on long-term knowledge, even if relatively certain, only increases the long-term benefit to those who can act.

IV. Growth vs. Value Investing

"You Will Be O.K., Just Stick to Buying Great Companies"

This quote is related to the earnings growth = stock return fallacy I examined earlier, but because of its simplicity, is perhaps more widespread. A great company is clearly worth more than a crappy one (pardon the technical jargon). Recognizing a great company before the market does is clearly a way to get rich. However, buying a great company after the market knows about it is at best a wash if the market prices things rationally, and could be a negative if, as history (and academic study) seem to show, investors systematically overpay for perceived greatness. Looking at the long-term data (the longest data I have seen is for 1927-1999), and even including the last few years, value investing, or buying out of favor companies selling for cheap prices, actually outperforms buying expensive companies perceived to be "great." For instance, looking at data from 1929 to 1997, Davis, Fama, and French (Journal of Finance, forthcoming 2000) found that firms selling for higher prices (they defined higher prices in terms of the price-to-book ratio) on average underperformed those firms selling for lower prices. Presumably the higher priced firms were perceived to be "greater" than the cheap firms at the time. Similarly, Lakonishok, Shleifer, and Vishny (Journal of Finance, December 1994) found that firms priced expensively, and firms whose sales have been growing relatively quickly, on average make poorer investments than those firms not priced for greatness, or growing as fast. These examples are a drop in the bucket as there is a great body of literature on this topic, most of which finds that investing in cheap, slow growing "not great" firms has generally beaten investing in expensive fast growing "great" firms over the long haul.[47]

As always, any systematic strategy can have poor performance for periods of time (the last two years for instance has seen a great victory for investing in expensive firms). However, at the very least, the historical evidence is that you should not be able to beat the market simply by buying companies generally thought to be great. The simple lesson is that price matters! Please watch carefully as many investors and analysts love to discuss how "great" a company is, but again, do not want to do the math. This does not mean you should not pay up for growth or greatness, but it does mean you better be wary of the price you are paying and know that historically investors have probably paid up too much.

Finally, I have actually heard it said, by individuals and on occasion by recognized experts, that there are certain great companies you "have to own at any price." Well,

[47] While the researchers generally agree that investments in "great" firms have lost out over the long haul to cheaper firms, they do argue over why. Some argue that investors in expensive firms are making a mistake and over-extrapolating recent success too far into the future, and thus pay too much for these firms. Others argue that investors might not actually be overpaying for perceived greatness, rather, they might be willing to accept a lower expected return on these companies as perhaps these companies are less risky than their "non-great" counterparts. See Fama and French (Journal of Finance, June 1992) and Lakonishok, Shleifer, and Vishny (cited above) for two sides of this debate. Finally, some argue that the entire result itself is an accident of the data, and will not necessarily hold up going forward. See Black (Journal of Portfolio Management, Fall 1993) for an example of this point of view. In my opinion, this last argument might be difficult to support now that researchers have found the same effect in many countries, and in previously unexamined U.S. data from 1927-1963.

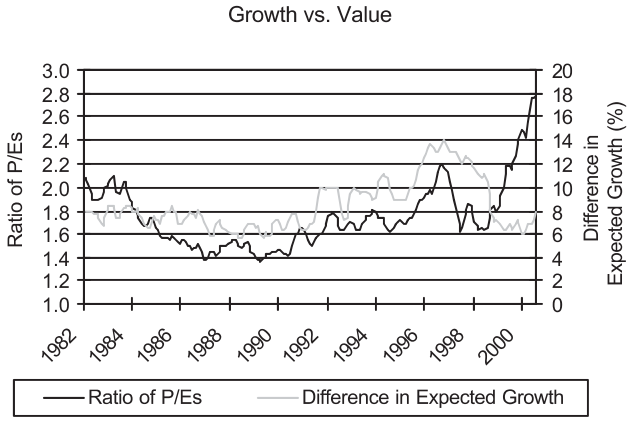
hopefully only once in this book will I dip from sarcasm to outright rudeness, but that is a dangerously foolish statement. If you hear someone say it, run screaming. Better yet, sell them something.

"Value Stocks Are Dinosaurs, I Would Steer Clear Of Them"

Alright, you got me. This quote is really the same as the prior one, just coming at it from the other side. However, it does give me a sneaky chance to examine this issue in more depth.

For several years now value stocks (cheap stocks perceived to have problems, poor growth opportunities, or exposure to some painful risk factor) have generally underperformed growth stocks (fast growing expensive stocks perceived to be "great" companies). Despite the long-term evidence that the opposite is true, many make the simple forecast that this trend will continue. Here I examine the medium-term prospects for value vs. growth using fundamentals, not simple extrapolation of what has been happening lately.[48]

In a recent study, Asness, Friedman, Krail, and Liew[49] (Journal of Portfolio Management, Spring 2000) try to build a model to forecast the medium-term returns of value vs. growth stocks. I will follow a similar methodology. First, I form stocks into five groups based on how expensive they are, taking care to make sure each industry is relatively evenly represented in each fifth (so I am not just examining tech vs. everything else, but cheap vs. expensive stocks within each industry). Examining the top one fifth (the most expensive growth stocks) vs. the bottom one fifth (the cheapest value stocks) I produce the following figure (ending 6/30/2000)[50]:



The dark line in the figure is the P/E of the median growth stock divided by the P/E of the median value stock. It is measured using the scale on the left, and obviously is always

[48] Also, see Laurence Siegel and John Alexander "The Future of Value Investing" (forthcoming in The Journal of Investing, 2000) for an excellent review of value's history, and a study of the forward looking prospects.
[49] Hereafter my worthy co-authors will be obnoxiously referred to as "et al."
[50] For presentation purposes, all numbers in this figure are quarterly moving averages.

greater than 1.0 (i.e., by construction growth stocks are always priced more expensively than value stocks). However, there is great variance in this number, and in particular note that recently it is at historical highs. In other words, growth is currently priced more expensively vs. value (by a large margin) than at any time over the last 20 years.

Now, the light line in the figure is the difference in expected (IBES median) 5-year earnings growth of the most expensive stocks (growth stocks) vs. the cheapest stocks (value stocks). Using the scale on the right we see that this differential is always positive, ranging from about 6% to as much as 14%. In others words, growth stocks are always expected to outgrow value stocks. Like the ratio of the P/Es, this number also varies through time. Sometimes growth stocks are expected to outgrow value by a large margin, and sometimes the expected margin is smaller. Now, if the reader will only cover up the last two years (oh, if only I could really do that) they will see that while not perfect, these two measures (the ratio of P/Es, and the differential in expected growth) do seem to move together. This is entirely rational. When the market is expecting growth stocks to outgrow value by more than usual, they have historically been priced more expensively than usual. What about the last two years? Well, lately the relationship seems to have broken down. Growth stocks are far more expensive than ever (for the 20 or so years I examine), but are not expected by Wall Street to outgrow value by more than usual.

What is the bottom line? Asness et al. first find, like other researchers, that on average value (by their definition) has defeated growth over these 20 or so years. However, this victory was by no means uniform or consistent. They found the best time for value vs. growth was when growth was the most expensive (i.e., the dark line in the above figure was high) but not giving up too much expected earnings growth (i.e., the light line in the above figure was not high). Furthermore, they found that this model was surprisingly powerful for forecasting value vs. growth at horizons of one year. Of the two effects, the relative valuation levels (dark line) matters more, but both matter. As of now we have a situation where value is priced incredibly cheaply vs. growth by historical standards. However, the valuation differential is not being ameliorated by higher than normal growth expectations.[51] Thus, the Asness et al. model forecasts that the expected return for value stocks is currently far greater than the expected return for growth stocks (and greater than anytime over the last 20 years). While recent value performance has been the worst of times, this model is now forecasting the best of times for the relative returns of value stocks going forward. Like most reasonable models, this forecast is made with far more confidence for medium-term time horizons (say 1-3 years) than for the short-term (say less than 1 year).

There are caveats of course. It is possible that the Asness et al. model is missing something that would justify the current relative price of growth vs. value stocks. Perhaps Wall Street analysts' 5-year forecasts, for some reason, do not express the

[51] Chan, Karceski, and Lakonishok (Working paper, March 2000) look at this in an alternative (and interesting) way. While Asness et al. look at IBES forecasts of future earnings growth, Chan et al. look at actual past growth in operating performance. However, while the approach is different, the answer is the same. They find that past growth in operating performance cannot explain the recent performance of growth vs. value stocks. Furthermore, they conclude "…the assumptions about the sustainability of high growth needed to justify large growth stocks' relative valuations are quite bold."

analysts' true optimism regarding the future earnings of growth vs. value companies. Or, perhaps the analysts do not get it, and the market is correctly pricing far larger and longer excess earnings for growth vs. value compared to what the analysts think will occur. Perhaps neither value investors, nor Wall Street analysts understand today's economy, but the little guy does.

Well, here I will apply a version of Occam's Razor, the idea that the simplest explanation is often correct. Value historically beats growth on average (for at least the 75 years or so we can examine it). Currently, value (as Asness et al. define it) is cheaper than it has ever been, but is giving up far less expected earnings growth than you would normally expect to see at these price differentials. While we can, and should, explore all kinds of stories that might justify this pricing, perhaps the simplest explanation is that history, and the above model, is correct. Perhaps investing in value stocks right now just looks a heck of lot better than investing in growth stocks. Recent popular discourse has made many of the investing fallacies I study more common than ever (e.g., earnings growth = stock return, great companies necessarily make great investments, price does not matter if you are long-term, etc.). All of these fallacies favor the broad market, and growth stocks in particular. While by no means a certainty, the prevalence of these fallacies makes it easier to believe that growth stocks are currently extremely overpriced vs. value stocks. In summary, which of the following is a simpler explanation? First, that value, which wins on average, looks much cheaper than ever today, and using Wall Street's own earnings forecasts is not worse vs. growth than normal, is being rationally shunned by investors who have their own, deeper and better forecasts of long-term earnings. Or second, that investors are caught up in a momentum driven mania, or afraid of being trampled by it, making value currently a historic opportunity for someone with even a medium-term outlook. As usual, our opinion (mine and Occam's) is obvious.

V. Miscellaneous Examples of Bubble Logic

"Technological Advances Make the Market Safer Today"

I want to switch gears now and talk a bit about the mechanical workings of the market itself. It is a common refrain that the individual in the market is made safer today because of the speed at which he/she can gather information and trade. I think this is mostly a myth. I think the myth comes from the fact that many investors believe that in the event of a crisis they can get out. I think many, implicitly or explicitly, know that they own some very overvalued securities, but, they are comfortable because the immediacy of information gathering, and the ability to trade near instantaneously, makes many feel they can nimbly avoid the bad times. In other words, there is an illusion of control.

However, what is missed is that near everyone possesses this same technological "advantage", and that getting out of the market before a crisis is a zero sum game. For anyone who gets out, someone has to get in. Put more graphically, in the aggregate, when the $#@! hits the fan, nobody gets out alive. Hearing about bad news quickly on a financial news cable station, or being able to trade immediately in your Ameritrade account, might make you a winner if you are the first, but there is a loser on the other side. If the market is way overvalued in the aggregate the ability to get instantaneous information, and the ability to trade on it quickly, is irrelevant for everything but the distribution of who gets killed.

To be balanced, I have to say that one hypothesis I must give credence to is that technology has led to a more informed investing populace, and a more informed investing populace is a more educated investing populace is a more stable and less prone to panic investing populace. Now, I give credence to this because it sounds plausible and I cannot refute it. It is possible that people are just more patient investors now, partially because of technology, and that the market is safer for this reason (i.e., from a change in psychology and education levels brought about by technology, not the real safety effects of the technology itself). However, to play devil's advocate, there really is no evidence for this, and what anecdotal evidence there is probably comes more from investors embracing the long-run argument for equities and a dip buying philosophy, than any technological edge. To be extreme, I defy anyone to spend any time on an Internet bulletin board related to stocks and then believe these people are making the market more rational (as a bear, the nicest thing I have been called on these boards is moron).

Finally, let us talk specifically about the on-line trading of one's own account. I do not know if many of you readers have played video poker in Las Vegas (or anywhere). I have, and it is addicting. It is addicting despite the fact that you lose over any reasonable length period (i.e., sit more than an hour or two and 9/10 times you are walking away poorer). Now, imagine video poker where the odds were in your favor. That is, all the little bells and buttons and buzzers were still there providing the instant feedback and fun, but instead of losing you got richer. If Vegas was like this, you would have to pry people out of their seats with the jaws of life. People would bring bedpans so they did not have

to give up their seats. This form of video poker would laugh at crack cocaine as the ultimate addiction. In my view, this is precisely what on-line trading has become over the last several years (with perhaps some lessons taught only very recently, and not necessarily learned). This is just my opinion, but I think it is very plausible that these "crackhead" traders might be an important part of a multi-year bidding frenzy taking stock prices well past the rational (and I will not even dwell on the paradoxical fact that this bull market, carried on the back of the long-term argument for equities, has spawned a subculture of high turnover day traders). In sum, it is highly arguable whether technological advances have made the market safer, and it may well be that the opposite has occurred.[52]

"Stock Splits Are A Great Buying Opportunity"

First, a joke. I am stealing this from somewhere (I do not remember where), but what is the best "pricing model" for an Internet stock? Well, at $50 it is cheap, at $100 it is fair value, but at $200 it is cheap again as it is about to split 4:1.

I am not going to insult my readers, and myself, by explaining for too long that a stock split is a paper transaction that means next to nothing. I am not going to dwell on the fact that when I overhear conversations about stocks, often times what is generating excitement is that a split might occur, or has just occurred.[53] I will mention that the companies splitting their shares know that for some reason people care a lot about this event, and the cynical among us might notice stock splits of late corresponding to times the company is just aching for some good news (and for some reason manipulating reported earnings is more difficult than usual).

Finally, let us not dwell on the fact that some investors have beepers to alert them when a stock is splitting, as such knowledge can only make us into misanthropes.

"You Can Believe Our Advertising"

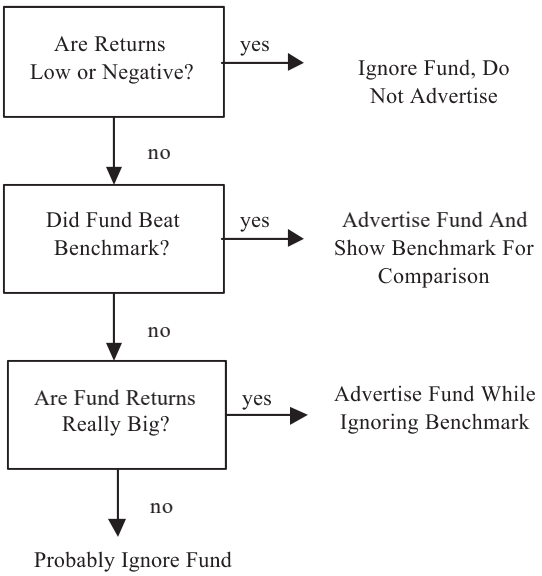
Another interesting characteristic of the bubble is how many mutual fund ads we have to read lately advertising triple digit returns. It is interesting to examine what mutual funds get advertised, and contrast that with the reasonably well established empirical fact that the average actively managed mutual fund underperforms the market.

I thought I might shed a little light on this subject by discussing my "formal" model for how a money manager decides which mutual funds to advertise (obviously, I am speaking in generalities as not all firms do this). Remember, mutual funds almost all

[52] Robert Shiller advances related, and much more fleshed out, arguments in Irrational Exuberance (and since he came first, obviously my thoughts were greatly influenced by his work).

[53] There is some academic evidence that a strategy of buying after a split might have validity (it is difficult to disentangle these results from other momentum trading strategies). However, while some self-fulfilling success might occur, the tiny statistical excess returns documented in academic studies are clearly not what all the excitement is about.

have benchmarks (passively managed indices representing their style which the funds are supposed to beat) so companies have three options: (1) do not advertise the fund, (2) advertise the fund without mentioning the benchmark, or (3) advertise the fund and show performance vs. the benchmark. My model for how this decision is made is the following (with the time horizon being approximately the last year):



Step one is obvious, if the fund has done poorly do not advertise it. Step two, if the fund beat the benchmark and has done well in absolute terms, then definitely advertise it and show it vs. the benchmark. Step three, if the fund has failed vs. the benchmark, but is doing very well in absolute terms, advertise it and leave out the benchmark! This happens all the time, and it is a good bet when you see a fund advertised with a good track record, but no benchmark present, the fund underperformed their benchmark. That is especially prevalent now with so many growth funds posting excellent results, but many not beating growth and NASDAQ/technology benchmarks. Not too many ads for value funds these days are there (even if they beat the benchmark)?

Why should you care about this selective advertising? Well, several reasons. One, there is only a tiny amount of evidence that winning mutual funds continue to win.[54] Thus, the proposition of just investing in the funds that have done well recently is very dicey. Two, by only examining the ads you get a very skewed view of how active management does vs. passive management, and how the broad market has done in general. A pretty big decision for an individual is whether they should go with index funds or actively managed funds (or some combination), and while the weight of the evidence seems to be in favor of index funds, selective advertising can definitely push you the other way. Of course, all of this begs the question of why there is a cottage industry of magazines, web sites, and consultants, devoted to telling you which mutual funds are winning lately? I cannot explain that, but then again, I also cannot explain why the newspaper keeps publishing my horoscope.[55]

[54] See Carhart (Journal of Finance, March 1997).
[55] Unfortunately so far, mine keeps saying "short more."

Finally, I see nothing really wrong with the fund industry's advertising practices. There is hardly a business in the world that insists on pushing its ugly tough-to-sell products as hard as its attractive ones. Furthermore, if investors insist on shunning anything doing poorly recently, and buying only recent winners, it would be very unfair to blame only the fund companies for the selective advertising practices I discuss. They should not be required to tilt at windmills. My only point, and the implicit point of many of my observations, is that investors should know this practice occurs and use that knowledge when making their decisions.

"It is Different This Time"

Welcome to the Granddaddy of them all. It is different this time, and the old rules (e.g., valuation) do not apply. Oh yes, the cast of characters is indeed different this time. The Internet, the on-line investor, the 401K, and so on, are all relatively recent developments. Frankly, it is always different all the time. However, what is the same is far more important than what is different. Earnings and dividends still matter. All else equal, paying more for a stock or stock market must reduce your expected return. The forces of competition still exist making limitless profit growth an unlikely event. In essence, A is A, math still works.

Of all the differences this time, the one I keep thinking about is that on a host of scales, we have never, ever, seen broad market stock prices (or growth vs. value prices) near this high. We are in uncharted territory, and if there is the slightest slip, or even the slightest failure to excel in an unprecedented manner, the long-run will not save us. Yes, come to think of it, perhaps we should be careful what we wish for, as if it really is different this time, it might not be a good thing.

Instead of "It is different this time", I prefer the French *Plus ca change, plus c'est la meme chose*.[56]

[56] Meaning, "The more things change, the more they remain the same." After holding out this long, the bubble has finally driven me to quote the French.

VI. Conclusion

Reading this book, one might conclude that I am anti-Wall Street. Nothing could be further from the truth. There is not one government regulation I would offer to fix any of the above. I believe in caveat emptor, and I believe Wall Street is, and should be allowed to be run as a business, selling a product. Furthermore, I strongly believe that we are all far better off with a free and unfettered Wall Street pursuing profits. In fact, it is one of our system's biggest advantages. Even if there are abuses (some of which I detail) I think the alternatives are uniformly worse. I simply believe it is very important for investors to recognize that Wall Street is not an independent source of academic research, rather they are a manufacturer with a huge vested interest in supporting their product. I also think it must be recognized that a host of financial media (e.g., financial T.V. networks, the latest personal finance magazine each week, etc.) are also much better off in an ongoing bull market, and perhaps act with a slant towards perpetuating this state.[57] We all act in our own interest and probably with a bias (intended or not) towards arguments that benefit us.[58] This book is no exception, and thus I do not condemn this activity, I simply point it out, and analyze some of the logic that flows from these observations. I come to the conclusion that these various forms of "bubble logic" have in all likelihood contributed to, or even led to, a situation where stocks are dangerously expensive.

The question of whether we are currently in the grip of a gigantic financial bubble, particularly in the growth/tech sector where I argue many investors have mistaken earnings growth for expected return and great companies for great investments, makes the issues I discuss of no small consequence to our collective prosperity. Put simply, there are really three possibilities for the broad market (with all three being more extreme for the growth/tech sector),

1) Investors understand and are now comfortable with a very low expected return on the stock market going forward.
2) We are in for an exceptionally long period of exceptionally high growth in real earnings that justifies today's market prices.
3) Most investors are not really thinking about either 1) or 2), but are engaged in wishful thinking, believing in hype and slogans, focused on irrelevant short-term stories, or forced to be in stocks by circumstance (e.g., many mutual fund managers), and all this is coming together causing a massive financial bubble. If true, this bubble can only end with a tremendous stock market crash, or a very long period of stagnation.

Earlier in this book I argued strongly that 1) and 2) are highly unlikely. Paraphrasing Sherlock Holmes, "when you eliminate the impossible, the improbable must be true." While "impossible" is far too strong a word, my rejection of 1) and 2) unfortunately leaves 3) as my favored candidate. In fact, while one is never able to prove an assertion

[57] One can imagine the chief of a financial news network telling a nay saying photographer not to worry, "you provide the pictures, I'll provide the bull market."
[58] Note, I think this bias occurs naturally and tacitly, I am not a conspiracy theorist. Alan Greenspan, Abby Cohen, and Colonel Sanders, are probably not meeting together in Geneva to plot the bubble's continued expansion over a bucket of extra crispy.

about the economy or the stock market as would a logician, when one does the math, the overvaluation of the market, and of the growth/tech sector in particular, is the closest thing to a proof we will probably ever see. Unless we see 20-year growth for the S&P far far in excess of anything ever seen for 125 years starting from similar good times, long-term S&P returns become quite ugly. If we do see such unprecedented growth, the long-term returns become merely acceptable. For growth/tech, if we do see future growth in-line with Wall Street's gigantic and unprecedented expectations, the long-term return to today's buy-and-hold investor is still exceptionally poor. If we go past perfection, and assume mythological growth for the entire growth/tech market, long-term returns might then achieve mediocrity. Yet, this math is still ignored, and short-term stories, greed, and ignorance still prevail.

I do think more voluntary intellectual honesty on many of the points of this book would benefit Wall Street's customers, and ultimately (perhaps not short-term, but long-term) Wall Street itself. Nevertheless, it is difficult for Wall Street to suddenly sound a siren call of warning when it is not what investors want to hear. It is far easier to focus on a bevy of distracting and ultimately irrelevant short-term phenomena (e.g., the Fed is stopping!, earnings this quarter are great!), rather than the math. However, the short-term matters little, and the long-term is too important a thing to be left to bubble logic.

Appendix I –Internal Rate of Return (IRR)

TBD