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HIGH PRICE-EARNINGS RATIOS & THE CONTROL OF RISK

Let us begin with an overview of the nature of risk in the ownership of common stocks:

THE DETERMINANTS OF RISK

The price of a common stock may be said to be determined by three factors:

(A) The perceived viability of the underlying company and the perceived reliability of some level of its future profits: Efforts are made to isolate and measure this component of risk, as with the *Standard & Poor's* common stock ratings.

(B) The perceived potential for growth in the profits of the underlying company: The *Value Line* "timeliness" ratings are a popular way of trying to get a handle on this dimension.

(C) The rates of interest (or expected rates of interest) at which the above levels of profitability are capitalized, discounted, or "evaluated" in the financial marketplace: If, for example, bank certificates of deposit are paying 10%, whatever profitability figures are arrived at for a common stock in A and B above will be of less value than if CDs were paying only 5%.

THE TYPES OF RISK

The element of risk in a common stock is typically broken down into two parts:

(1) The first is systematic or market risk which describes the risk inherent in the stock market as a whole. Any and all of the foregoing risk factors, A, B, and C, can influence the degree of systematic risk investors perceive in the stock market. If the investing public anticipates turbulent economic times, declining corporate profits, and rising interest rates, the stock market will surely decline and bring nearly all common stocks down with it.

If, on the other hand, investors anticipate a prosperous economy, rising corporate profits, and declining interest rates, the stock market is more apt to rise and, as does a rising tide, raise all ships with it.

(2) The second type of risk is called unsystematic or idiosyncratic risk. It describes the risk inherent in a particular common stock, over and above the risk in the market as a whole.

Idiosyncratic risk is also a function of the above risk factors, A, B, and C. If a company's anticipated rate of growth is downgraded by the public, the price of its common stock

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will take a hit; and, if a company's very viability is believed to be in jeopardy, the price of its common stock will suffer even more. Depending upon their lines of business, too, some companies, more than others, are impacted by changes in interest rates.

THE PHILOSOPHY OF COMMON STOCK INVESTING

At least one theory of investing (my own included) accepts market risk as inevitable and unavoidable (and so market timing futile). Market risk is perceived to be the price we are required to pay to enjoy the higher long-term returns historically available in common stock investing. Prudent investing, however, does involve trying to reduce idiosyncratic risk - that is, reducing the risk inherent in the ownership of individual securities. This objective can be pursued in any and all of three ways:

(1) The most common way to reduce the risks unique to an individual common stock is not to own too much of it. Broad diversification, then, is the first principle of modern portfolio theory.

(2) A second way to mitigate the severity of the calamities that frequently befall individual common stocks is to own high quality stocks.

Just as bondholders try to reduce the probability of their holding bonds that may default by owning high-quality bonds instead of junk bonds, common stock holders can try to reduce the probabilities that they will own companies that may succumb to difficult economic times by owning high-quality, as opposed to speculative, stocks.

(3) The third way to reduce the risk associated with the ownership of individual common stocks is to limit the premiums paid for risk factors A (reliability) and B (growth), above. It is a discussion of the rationale and implementation of such a policy that is the primary purpose of this paper.

PRICE-EARNINGS RATIOS

The absolute level of the price per share of a common stock conveys little information as to whether the stock is high-priced or low-priced. Price per share must be compared to some other per share parameter such as earnings per share, book value per share, sales per share, or cash flow per share. When making such comparisons we come up with such ratios as the price-to-earnings ratio, price-to-book ratio, price-to-sales ratio, and price-to-cash flow ratio. All may be useful in making judgments about the risk inherent in the price level of a common stock, but by far the most common, and arguably the most useful, is the price-earnings ratio (P/E) which is

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defined as the price per share of a common stock divided by the earnings per share of the underlying company. In short, a $20 stock selling at 40 times earnings is generally considered to be higher priced than a $40 stock selling at 20 times earnings.

THE EFFICIENT MARKET HYPOTHESIS

The efficient market hypothesis (EMH) asserts that the current price of a common stock is the best measure of the value of that stock that can be arrived at by any means known to man. In other words, the current price of a stock measures, and evaluates accurately, a company's viability and reliability, its potential for growth, and the value the financial markets should ascribe to these factors at any instant in time. As a faithful subscriber to the EMH, I personally accept these conclusions.

What the EMH does not, and cannot, address, however, is our own personal and individual tolerances for risk. As owners of common stocks we most easily address our tolerance for risk by owning broadly diversified portfolios of high quality securities. In this regard, however, it may also be useful to limit our exposure to risk by limiting our exposure to stocks with unusually high price-earnings ratios.

RELATIVE PRICE EARNINGS RATIOS (RP/E)

An important tool for assessing the vulnerability of a stock to an idiosyncratic collapse of its price-earnings ratio is a measure known as its relative price-earnings ratio (RP/E). The RP/E of a stock is its actual P/E divided by the P/E of the average stock (most commonly the average in the Standard & Poor's 500 Stock Index). If the average stock has a P/E of 20, a stock with a P/E of 10 has an RP/E of 0.50, a stock with a P/E of 20 has an RP/E of 1.00, a stock with a P/E of 30 has an RP/E of 1.50, and a stock with a P/E of 40 has an RP/E of 2.00.

The beauty of the RP/E is that it controls for the overall level of the market. In other words, though we can argue that a stock should have a higher P/E today than it had a decade or two ago because the price level of all stocks is higher, this argument does not apply to the RP/E. The fact that we have been in an extended bull market since 1982 provides no justification for a stock's RP/E to be above average today. Only idiosyncratic factors can account for such a premium.

We can make judgments about the RP/E of a particular common stock in either or both of two ways:

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PREMIUM (OR DISCOUNT) TO THE MARKET

If a stock sells at an RP/E of 1.50, we say that it sells at a 50% premium to the market. It presumably sells at such a premium because its future profitability is regarded as more reliable than that of the average company and/or its profits are expected to grow more rapidly than those of the average company.

In terms of risk, we can argue that, if the company were, all at once, to be perceived as having no more reliability and growth potential than that of the average company, it should immediately lose its 50% premium and so decline by one-third in price in the marketplace.

Similarly, if a stock sells at an RP/E of less than 1.00, it is presumably because its future profitability is regarded as less reliable than that of the average company and/or its profits are expected to grow less rapidly than those of the average company.

PREMIUM (OR DISCOUNT) TO THE PAST
THE RELATIVE RELATIVE PRICE-EARNINGS RATIO (RRP/E)

We may also compare a company's current RP/E to its median[1] RP/E for some arbitrarily selected period in the past[2]. If, for example, a stock has sold at a median RP/E of 1.20 over the past fifteen years and today it is selling at an RP/E of 1.80, we can say that it is selling at a 50% premium to its past. (1.80 is 50% greater than 1.20). If, then, the profits of this company were once again perceived to be no more reliable and/or promising than they were in the past (but still greater than that of the average company), the 50% premium to the past should disappear (the RP/E would return to 1.20), in which case the stock could lose one-third of its value.

To relate a stock's current RP/E to its historical RP/E over some arbitrarily selected period of time, we shall use here the term "relative relative price-earnings ratio (RRP/E)." A stock's RRP/E, then, is its current RP/E divided by its median RP/E over some period of time in the past. In our example above, the stock's RRP/E would be 1.50 (1.80/1.20).

Some further examples of the calculation of RP/Es and RRP/Es appear in the following table:

[1] The median is used in lieu of the average because of occasional outlier P/Es which would tend to distort the average more than the median. For example, a company for which average annual P/Es typically clustered around 20-to-1 over a period of years might have experienced a long strike in one year causing its P/E in that year to average 100-to-1. While use of the 100-to-1 figure might considerably inflate the average P/E over that period, it would probably have a negligible effect on the median P/E over the same period.

[2] *Value Line* provides the average RP/E for each of the past 16 years for most of the companies it covers; hence, where available and appropriate, medians for periods of up to 16 years may conveniently be used as a benchmark.

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Example	Current P/E	Median RP/E	Current RP/E	Current RRP/E
Average Stock[3]	20x	1.00x	1.00x	1.00x
Stock A	10x	1.00x	0.50x	0.50x
Stock B	20x	0.80x	1.00x	1.25x
Stock C	30x	1.25x	1.50x	1.20x
Stock D	40x	1.60x	2.00x	1.25x
Stock E	50x	1.25x	2.50x	2.00x

A Rationale

The ultimate return to a more typical P/E, either in terms of the market as a whole, or in terms of a company's historical past, should be regarded as more the norm than the exception.

Companies do enjoy spurts and sometimes extended periods of growth, and it is these periods that growth stock investors seek to exploit. Most industries and companies, however, at some point, also go through periods of consolidation and retrenchment and sometimes attain maturity or go into decline. Such periods for individual companies are frequently the consequence of competitive factors, even in industries that continue to grow dynamically.

The real question is not if a common stock is apt to return to a more normal relative price-earnings ratio but, rather, when it is apt to return to such a ratio. Because this question of when is a question of market timing and so, at least in this writer's belief, impossible to answer, the best way we have to protect ourselves against the devastation that can be wrought by the collapse of abnormally high relative price-earnings ratios is not to have too large commitments in stocks with such ratios.

The Nifty Fifty of the 1970s

For those of us with memories of the debacle of the "Nifty Fifty" in the first half of the 1970s, the risk inherent in abnormally high price-earnings ratios is very vivid indeed.

The Nifty Fifty was a collection of the most popular growth stocks of the late 1960s and early 1970s. These stocks were the favorites of institutional investors and often referred to as "one-decision" stocks, meaning that one purchased them to hold forever because it was believed that the only direction in which they could go was up.

[3] Note that, by definition, the Median RP/E, the Current RP/E, and the Current RRP/E of the average stock are always 1.00.

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The Nifty Fifty were large capitalization stocks with, for the most part, very high price-earnings ratios. At the peak of their popularity in December of 1972, their average relative price-earnings ratio was 2.22. A list of the Nifty Fifty is provided in the table at the end of this paper.

Also provided in the table is the depth of decline that each of the Nifty Fifty experienced between its high and its subsequent low during the 1970s. It will be noted that, while the market as a whole declined 48%, the Nifty Fifty declined an average of 62%.

The difference between seeing 62% of one's wealth disappear, as opposed to seeing 48% disappear, may not seem all that great. It is useful to note, however, that, for any set of numbers, the component below the average must be as great as the component above the average. In other words, to arrive at an average decline of 48%, there must have been another group of stocks during the 1970s, which we shall call the "Not-So-Nifty" Fifty, that declined, on average, only 34% (the average of 62% and 34% is 48%). Clearly it would have been significantly better during the 1970s to have owned the fifty that were not so nifty.

Let us carry this argument one step further. In examining the Nifty Fifty table, we determine that, while the decline of the 25 stocks with the lower P/Es averaged 57%, the decline of the 25 with the higher P/Es averaged 67%. To arrive at our average decline of 48% for the S&P 500, given that half the Nifty Fifty declined an average of 67%, there must have been a comparable component of our "Not-So-Nifty" Fifty that declined only 29%. Once again, losing 29% of one's wealth is considerably less painful than losing 67%.

The implication would seem to be that, at least in this earlier period, relative price earnings ratios were a pretty good measure of the idiosyncratic risk - the risk over and above the risk inherent in the market as a whole - associated with stocks with inordinately high price-earnings ratios.

CONCLUSION

For anyone eager to try to avoid the type of magnified stock market carnage that characterized holders of especially high P/E stocks during the first half of the decade of the 1970s, I suggest examining carefully the RP/Es, and especially the RRP/Es, of the stocks in one's portfolio.

Clifford G. Dow, Sr., CFA, CHFC, CFP®
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THE NIFTY FIFTY OF THE 1970s

#	Company	P/E	RP/E	% Decline in Early 1970s
1.	American Express	37.7x	1.99x	-75%
2.	American Home Products	36.7	1.94	-46
3.	American Hospital Supply	48.1	2.54	-66
4.	AMP	42.9	2.27	-61
5.	Anheuser-Busch	31.5	1.67	-70
6.	Avon Products	61.2	3.24	-87
7.	Baxter Laboratories	71.4	3.78	-61
8.	Black & Decker	47.8	2.53	-53
9.	Bristol-Myers	24.9	1.32	-63
10.	Burroughs	46.0	2.43	-52
11.	Cheesebrough Ponds	39.1	2.07	-71
12.	Coca-Cola	46.4	2.46	-70
13.	Digital Equipment	56.2	2.97	-63
14.	Disney (Walt)	71.2	3.77	-86
15.	Dow Chemical;	24.1	1.28	-27
16.	Eastman Kodak	43.5	2.30	-62
17.	Emery Air Freight	55.3	2.93	-68
18.	First National City	20.5	1.08	-59
19.	General Electric	23.4	1.24	-60
20.	Gillette	24.3	1.29	-69
21.	Halliburton	35.5	1.88	-47
22.	Heublein	29.4	1.56	-73
23.	International Business Machines	35.5	1.88	-59
24.	International Flavors & Fragrances	29.2	1.54	-60
25.	International Telephone & Telegraph	15.4	0.81	-82
26.	Johnson & Johnson	57.1	3.02	-46
27.	Kresge (S. S.)	49.5	2.62	-64
28.	Lilly (Eli)	40.6	2.15	-46
29.	Louisiana Land & Exploration	26.6	1.41	-70
30.	Lubrizol	32.6	1.72	-50
31.	M. G. I. C. Investment	68.5	3.62	-94
32.	McDonald's	71.0	3.76	-72
33.	Merck	43.0	2.28	-54
34.	Minnesota Mining & Manufacturing	39.0	2.06	-53
35.	Penney (J. C.)	31.5	1.67	-65
36.	PepsiCo	27.6	1.46	-68
37.	Pfizer	28.4	1.50	-59
38.	Philip Morris	24.0	1.27	-50
39.	Polaroid	94.8	5.02	-91
40.	Proctor & Gamble	29.8	1.58	-44
41.	Revlon	25.0	1.32	-52
42.	Schering	48.1	2.54	-53
43.	Schiltz (Joe) Brewing	39.6	2.10	-80
44.	Schlumberger	45.6	2.41	-47
45.	Sears Roebuck	69.1	3.66	-66
46.	Simplicity Patterns	50.0	2.65	-90
47.	Squibb	30.1	1.59	-65
48.	Texas Instruments	39.5	2.09	-58
49.	Upjohn	38.8	2.05	-71
50.	Xerox	45.8	2.42	-73
	Average	41.9x	2.22x	-62%
	Standard & Poor's 500[4]	18.9x	1.00x	-48%

Sources: Standard & Poor's and Stocks for the Long Run, 2nd edition, Jeremy J. Siegel

[4] The S&P 500 peaked at 119.87 on 1/5/73 and had declined to 62.34 on 10/4/74.