

THE IMPORTANCE OF BEING LONG-TERM

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The Importance of Being Long-Term

At Diamond Hill we consistently tell our clients that we aspire to achieve superior returns over periods of five years or longer. Our dedication to a long-term investment orientation is clearly articulated in our mission statement:

Committed to the Graham-Buffett investment philosophy, with goals (*over 5-year rolling periods*) to outperform benchmarks and our peers, and achieve absolute returns sufficient for risk of asset class.

Choice of time horizon is central to our culture at Diamond Hill. We evaluate and compensate our investment professionals based on rolling five year performance; we focus our research efforts on estimating five year normalized earnings and cash flows; and we try to set reasonable absolute return expectations based on a five year outlook. We believe that the combination of valuation discipline and long-term investment horizon gives us an edge over many of our competitors, and by clearly communicating our five year time horizon to clients we align expectations with our process and incentive structure.

That all sounds good, but over the five years ended 12/31/2008 the S&P 500 achieved a negative 2% annual return, and while our relative performance was good, many of our strategies fell short of absolute return targets. Simply stating that you have a long-term investment horizon clearly doesn't guarantee satisfactory outcomes. However, we can control our philosophy and process so that we give ourselves the best odds of achieving our return objectives and meeting our clients' needs. A five year time horizon is a critical aspect of our process, and we think it helps maximize the odds of success for our clients.

We did not choose a five year time horizon arbitrarily. Historically, five years is the minimum amount of time required for normal returns to be likely, and it is the minimum time required for the odds of negative returns to be remote. By "likely" we mean better than even (50/50) odds, by "normal" we mean returns that investors typically expect as compensation for the risk of owning equities (5-15% in surveys)¹, and by "remote" we mean less than a 10% chance. Five years is also what we consider the minimum time period required to have any statistical meaning when we measure our performance versus peers and benchmarks, and five years provides a reasonable amount of time for the gaps between intrinsic value and market price to narrow. Finally, a longer time horizon, perhaps 10 years, would provide more confidence in evaluating our results versus peers and absolute benchmarks, but we are conscious of the fact that there are limits to our clients' patience.

The History of Five Year Returns

There has been a great deal of academic and popular research examining the distribution of stock returns, much of it focused on one year returns. These studies have helped popularize the notion that stocks earn superior returns relative to bonds, and that there is an expected return on stocks equal to the yearly average of 10-11%. However, more than a cursory glance at the distribution of one year returns exposes the folly of anticipating a normal outcome in any one year period. Returns over a one year time horizon are highly volatile and investors who have expectations about one year outcomes are certain to be surprised often – both positively and negatively. Over the past 126 years realized returns have been between 5% and 15% less than 20% of the time². The historical distribution of one year returns, based on data from Yale Professor Robert Shiller's website, is shown in Figure 1 along with the bell-shaped Gaussian (Normal) distribution, which is often used as a model of stock returns³.

¹ www.ibefa.org/conferences/ahead2009 Presentation by Gene Amromin & Steven Sharpe, Chicago Fed and Federal Reserve Board.

² Returns between 5 and 15% occurred 22 times in 126 years, 17.5% of the time.

³ www.econ.yale.edu/~shiller/data.htm, Data based on Robert Shiller's book, *Irrational Exuberance* (Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005). The Shiller data is for the S&P 500 Composite Index, which is a proxy for large capitalization stocks.

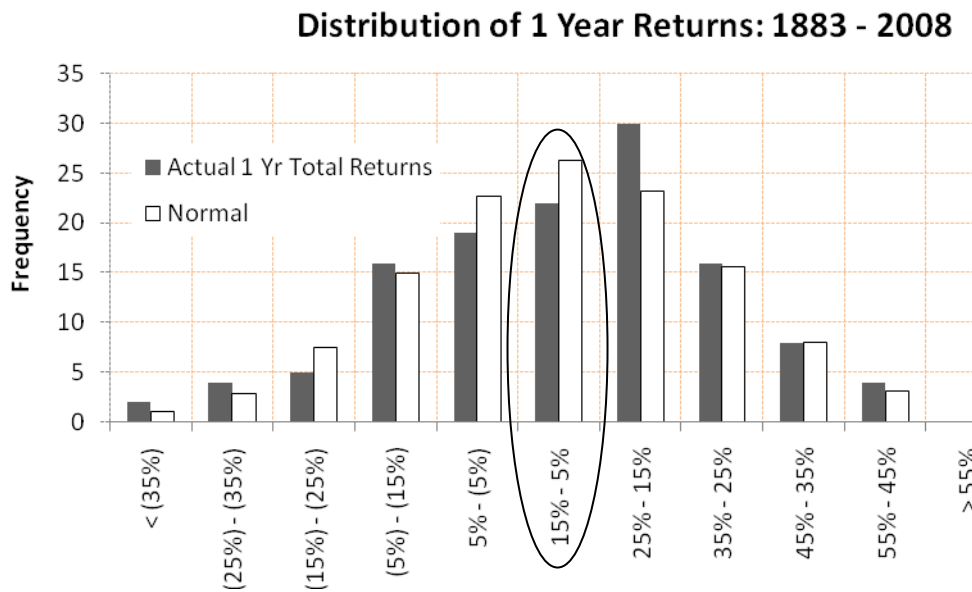


Figure 1: 1 Year Distribution of Returns, Mean = 10.4%, Std. Deviation = 18.9%

The historical distribution of one year returns exhibits “fat tails”, with more returns greater than one standard deviation +/- the mean return, and fewer returns between +1 and -1 standard deviations of the mean compared to the Normal distribution.

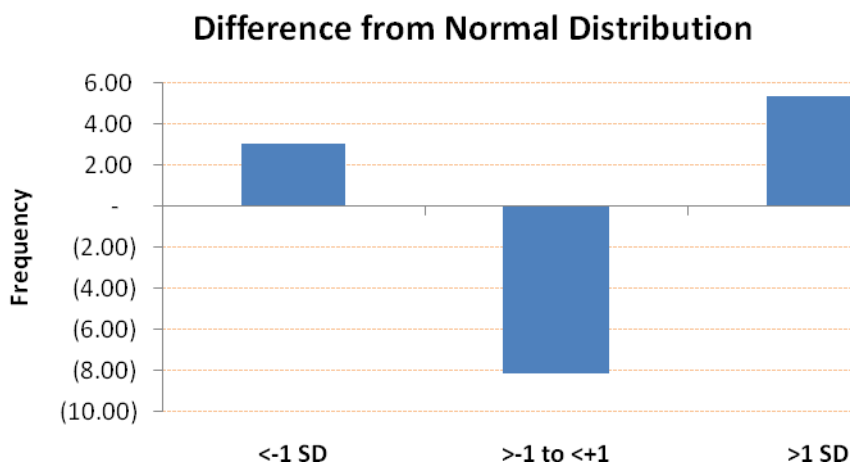


Figure 2: 1 Year Returns – Differences in frequency of observations vs. Normal distribution

There have been many attempts to better fit the historical pattern of one year returns using probability distributions other than the Normal distribution. However, in practice many investors’ return expectations are strongly influenced by the historical average, which in reality rarely occurs over any given one year period. Not only do normal gains of 5-15% happen infrequently over one year horizons, but the unexpected (negative returns) materializes quite often. Total returns of less than zero were realized more than 25% of the time between 1883 and 2008⁴.

⁴ Negative returns occurred in 36 out of 126 years, 28.6% of the time.

Fortunately the history of five year holding periods tells a different story. Investors still suffered losses in five year periods (we just lived through one of those periods) and there is still a wide range of outcomes. However, negative returns occurred far less frequently, and normal returns were much more likely over a five year horizon. The excess volatility of one year returns – the “fat tails” – disappear when looking at the history of five year returns, and in fact the more typical -1 to +1 standard deviation events become more likely than the Normal distribution predicts. The distribution of independent five year returns is shown in Figure 3 using the same data from Shiller.

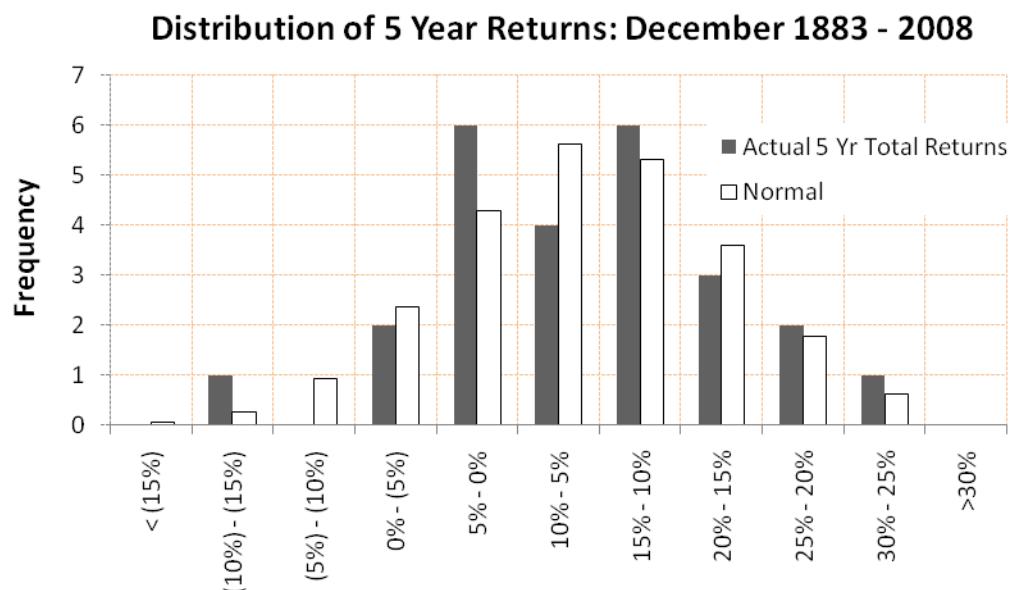


Figure 3: Distribution of Five Year Returns, Mean = 9.1%, Std. Deviation = 8.6%

The Normal distribution does not fit the actual return pattern particularly well, which in this case is at least partly due to the small sample size. Despite the limited size of the data set, we can observe that a much higher proportion of returns are in the 5-15% range over five year periods, and the range of outcomes is considerably smaller, with only three negative returns⁵.

One of the appeals of looking at the one year distribution of returns is that there are ample independent (non-overlapping) observations. Using the same data to analyze the distribution of five year returns yields only 25 independent periods (i.e., 1995-2000, 2000-2005). An aberrant five year return due to an extreme starting or ending price level has a bigger impact on the distribution than an extreme one year return that is part of a 126 data point series. To try to correct for the inordinate impact that extreme data points might have on the five year return series, different starting dates, using September, June and March, can also be considered⁶. The results are summarized in Figure 4, which shows that normal returns, those between 5-15%, have occurred about 50% of the time, while negative returns have occurred only 9% of the time⁷

⁵ Annual gains of 5-15% occurred 10 times in the 25 periods beginning and ending in December, 40% of the time.

⁶ The goal of this exercise is simply to check that our sample is not biased by one or two data points that were skewed by extreme starting or ending price levels. For instance the five year period beginning in December 1968 had a total return of about 1%. Starting just 9 months earlier in March the 1968 – 1973 period showed a nearly 8% annual gain.

⁷ These results are the sum of frequencies across four different quarterly start dates (100 total observations). There were 46 observations between +5-15% and 9 observations less than 0%.

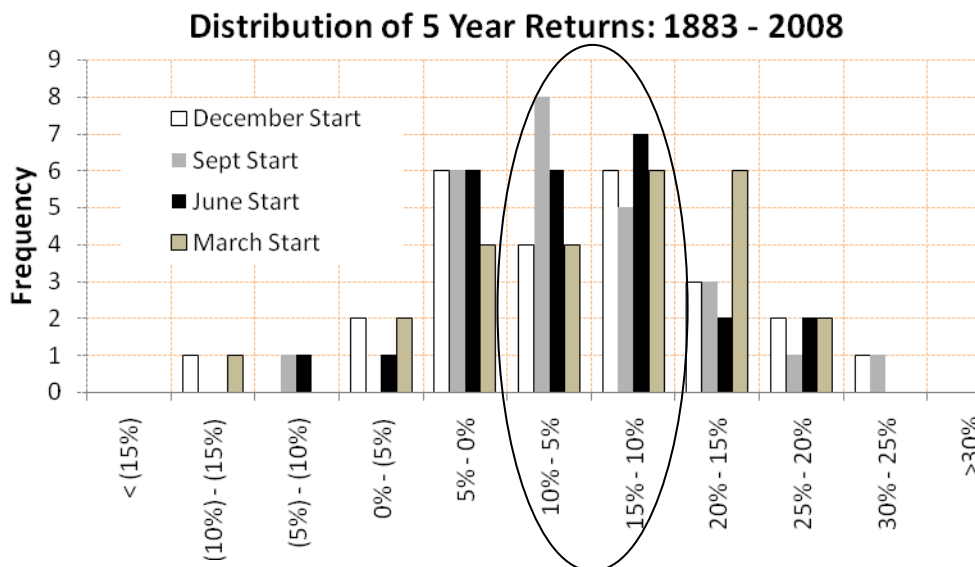


Figure 4: Distribution of Five Year Returns - Different Quarterly Start Dates

Based on history, five years turns out to be the minimum time horizon required for normal returns to be likely and for negative returns to be highly unlikely. Stock investors who maintain a five year horizon have a much more reasonable basis for anticipating 5-15% gains and also for being surprised if they achieve negative returns over any given five year period. We do not like to disappoint our clients, so setting reasonable expectations is important to us, and we believe there is solid evidence to support the view that five years or longer is an appropriate horizon to evaluate our returns.

The Fundamentals of Five Year Returns

We take comfort in the history of five year returns; however, we are active, intrinsic value focused managers and do not rely on the performance of any broad index to achieve our returns. We believe that companies have an intrinsic value based on the assets they own and the cash they distribute to shareholders. In the short-term, speculation, behavioral biases, and supply-demand imbalances may drive prices away from intrinsic value. In the long-run the weight of cash distributions, asset sales, and arbitrage between the public and private markets tends to drive prices towards fundamental values. As Benjamin Graham famously said, “in the short-run the market is a voting machine, but in the long-run it is a weighing machine.”

Incidentally, the history of stock returns provides empirical evidence that Graham’s weighing machine does indeed function better over the long-term. Over five year holding periods the fundamentals underlying business value have been more stable than over one year periods. Furthermore, those fundamentals have been weighed in a much more rational way over five year periods compared to one year periods. In the long-term extremes of valuation tend to revert to more normal levels, while in the short-term cheap (expensive) prices often become cheaper (more expensive).

Stock returns can be deconstructed into two components: 1) a fundamental return based on dividends paid and growth in normalized earnings power, and 2) a speculative return based on the change in the price-to-earnings multiple (P/E)⁸. Over a one year time horizon the fundamental return is not as volatile as stock returns, but ranges widely between -10% and +25%. In contrast, the five year fundamental return usually stays between +5 and +15%. The fundamental return can be thought of as the return that investors would earn if P/E multiples did not change over the investment horizon. If we can imagine a world where P/E multiples remain constant, the five year fundamental return is consistent with normal, 5-15%, gains and a very low probability of negative returns.

⁸ As a first approximation, the stock return can be thought of as: Div/Price + Earnings Growth + P/E change. For normalized earnings we use 10yr average earnings as calculated by Shiller.

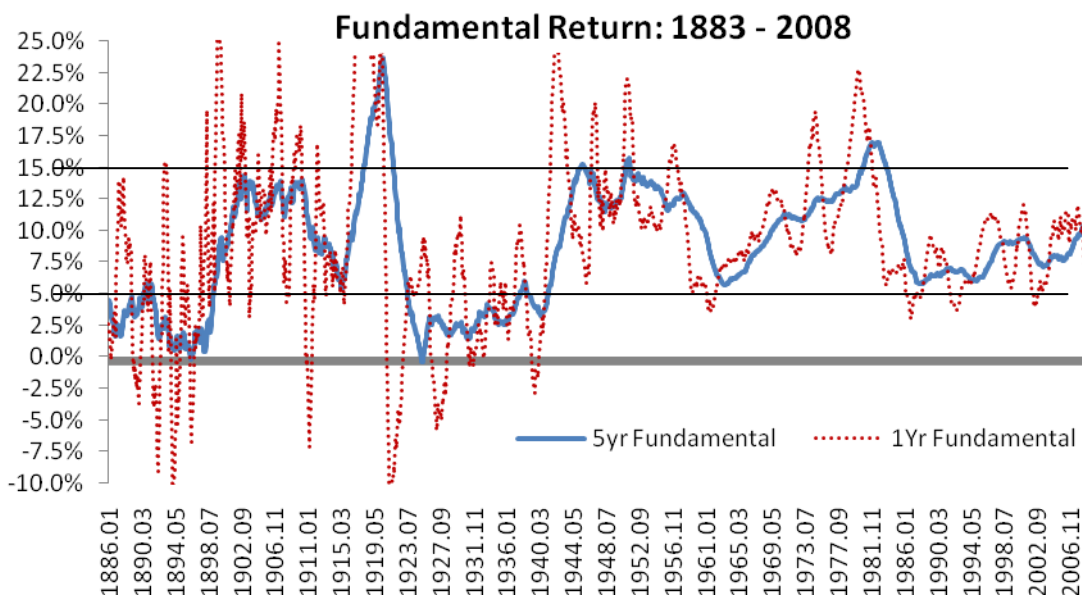


Figure 5: Fundamental Return: Dividend Yield + Normal Earnings Growth

So what about those P/E multiples? Over both one and five year horizons changes in P/E multiples are closely related to total returns, as shown in Figures 6 & 7.

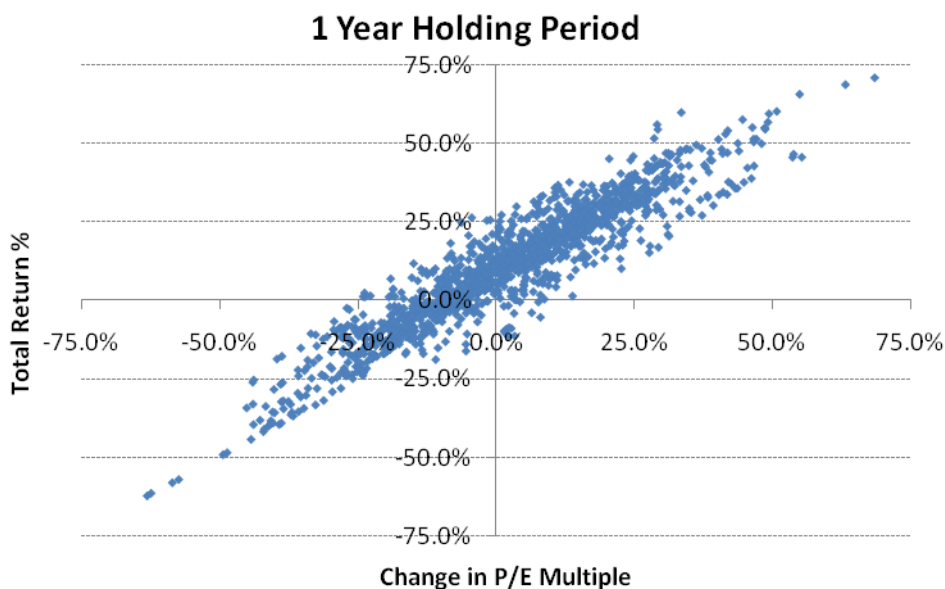


Figure 6: One Year Return vs. P/E change

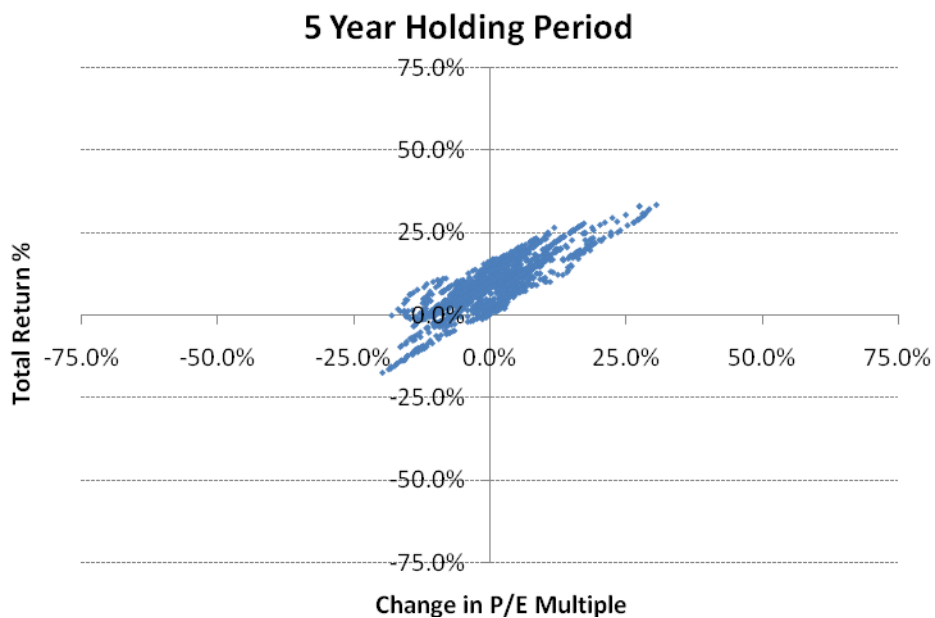


Figure 7: Five Year Return vs. P/E change

Aside from the obvious differences in volatility, there is a crucial distinction between one year and five year time horizons: over one year horizons it is difficult to foresee the direction of P/E changes, while over five year periods the direction of P/E changes, particularly at extremes (where it matters most), becomes much more predictable. Based on the last 126 years of stock returns, a P/E multiple of less than 10x had a 40% chance of decreasing over the next twelve months⁹. In contrast, over a five year horizon P/E multiples of less than 10x had less than a 10% chance of decreasing. Over periods of five years or longer the speculative component of stock returns becomes decidedly less speculative.

⁹ For example, a P/E of 9 going to 8.

5 Year Holding Period: Changes in P/E Multiples

<u>Beg. P/E</u>	<u>Monthly Observations</u>	<u>% of Observations</u>	<u>Annual Change in P/E Multiple</u>	<u>Hit Rate</u>
>25	100	6.8%	-6.57%	85.0%
20 - 25	196	13.2%	-1.93%	68.4%
15 - 20	498	33.6%	-0.56%	
10 - 15	458	30.9%	-0.06%	
5 - 10	228	15.4%	10.30%	93.0%
<5	1	0.1%	18.43%	100.0%
Total / Average	1,481	100.0%	0.69%	82.3%

1 Year Holding Period: Changes in P/E Multiples

<u>Beg. P/E</u>	<u>Monthly Observations</u>	<u>% of Observations</u>	<u>Annual Change in P/E Multiple</u>	<u>Hit Rate</u>
>25	140	9.5%	-4.33%	58.6%
20 - 25	204	13.8%	-4.29%	57.8%
15 - 20	467	31.5%	-0.26%	
10 - 15	441	29.8%	5.60%	
5 - 10	228	15.4%	9.40%	62.7%
<5	1	0.1%	27.80%	100.0%
Total / Average	1,481	100.0%	2.05%	60.0%

"Hit Rate" = # of times cheap (expensive) P/E multiples become more expensive (cheap)
Where "cheap" = < 10x and "expensive" = >20x

Over short time horizons undervalued assets and cash flows often lose value. However, the investor who has the ability to value assets and cash flows accurately *and* has a long term investment horizon can take advantage of the cheap becoming cheaper by lowering his cost and earning even higher returns as the weight of fundamentals begin to take precedence over speculation.

For equity investors to *consistently* achieve normal absolute returns over periods of one year or less they need to have superior information that hasn't been priced into the market, *and* they must be appropriately hedged against movements in speculative returns (i.e., unpredictable P/E multiples). We don't doubt that there are individuals or institutions that have executed on this model, but it is simply not the way we invest. The search costs associated with finding truly unique information are extremely high and the competition for such information is fierce. We are always looking for new information, or new ways to look at existing information, but as a part of the process of trying to understand the value of a business -- not an end in itself. Our goal is to find businesses that we can value and buy them at a significant discount to our estimates of intrinsic value. Because we have aligned all aspects of our process with a five year time horizon we are able to take advantage of speculative short-term movements in price and wait for the market to weigh the fundamentals of the business. By being value conscious we hope to limit downside over most time periods, but we recognize that speculative losses are difficult to overcome in the near-term but can be reliably defeated with patience and correct analysis.

Conclusion

Having a five year time horizon is not a panacea – losses will still occur – but investing is a probabilistic exercise, and having a five year horizon substantially increases the odds of achieving normal returns while reducing the chances of losing money. At Diamond Hill we have thoughtfully organized ourselves with a clear focus on achieving superior long-term results. We are not swayed by the excess volatility of stock prices in the short-run, preferring to let the weight of fundamentals determine our results over periods of five years or longer.



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