

# Yes, earnings *do* drive stock prices

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**Turner**  
investments

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### Our position in brief

We believe earnings drive stock prices. We think our belief is confirmed by our recent research that shows earnings growth is a persistent phenomenon that can lead to higher share prices. In our view, these findings bolster the validity of our 20-year-old growth-investment process, in which we look for companies with superior earnings power.

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**E**ver since Turner Investments was founded in March 1990, we've believed the essence of investing successfully in growth stocks is finding companies whose earnings will grow at an above-average rate. In short, we think superior earnings lead to superior investment returns. That belief is central to our growth-investment process, which has enabled all of our primary U.S., international, and global growth portfolio composites to outperform their benchmarks since inception, as of February 28, 2011.

In the wide world of growth investing, a company qualifies as a growth company because it typically generates a high level of earnings growth. But does that necessarily mean that a high level of earnings growth leads to outperformance by that company's stock?

The short answer to that question is, yes, it generally does. Through the years our growth-investment process has been validated by research done by us and others. Some of this research dates back to the 1970s. Other, more recent studies include our own research about the relationship between rising earnings and rising stock prices, which is a subject of this paper.

### Is the market efficient?

In the late 1980s, when we first developed the process that would become the foundation for growth investing at our firm, the work of Henry Latané, a finance professor at the University of North Carolina, proved especially influential. Professor Latané was among the first in academia to contest the long-held belief that the stock market is efficient -- that is, that stock

prices always reflect all available information, making it impossible to outperform the market because the direction and magnitude of changes in stock prices can't be reliably predicted.

In fact, an author of this paper, Bob Turner, considers himself fortunate that as a young analyst in the early 1980s he was associated with Professor Latané. And as a result of that association, Professor Latané's beliefs that the stock market was inefficient and that changes in earnings bring about changes in stock prices were incorporated into the investment process of the firm where Bob was employed, to the benefit of that firm's investment results. And those beliefs were subsequently integrated into our own growth-investment process -- again, to the benefit of investment results.

In theory, in a perfect world, the stock market *should* behave efficiently. If all information was accurate and disseminated and received simultaneously and if every investor responded immediately and in the same rational way, the market would be a paragon of efficiency. But the world *is* imperfect and inefficient. Information *isn't* always accurate, it's *not* always received by investors at the same time, and it's *not* responded to immediately or in the same way.

### Overcoming one's emotions

What's more, studies on behavioral economics, such as *Exploiting the Effects of Emotions on the Capital Markets* by Bernstein Research in 2003, indicate that investors, as imperfect human beings, have a limited ability to process information, have systematic biases, and often mindlessly and erratically rely on other's opinions. Bernstein concludes that the prime challenge in investing is "to overcome one's emotions, one's own powerful tendencies to behave in irrational ways. Those who can repress the emotional side -- resisting the tendency to panic, tolerating the pressure -- and give rein to the rational (the underlying facts and analyses) can find that there are excess returns to be reaped."

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In light of human emotion, it shouldn't be at all surprising that market history brims with examples of a disconnect between news about the earnings of companies and the performance of those companies' stocks in the short term. Alas, when a company's earnings beat Wall Street analysts' expectations, for instance, it doesn't *always* correlate with high returns for the issuer. Investor psychology and macroeconomic developments, among other catalysts, can throw a wrench into things.

Such was the case during the two most recent bear markets in the U.S.: in 2000-2001, when the dot-com bubble burst and the September 11 terrorist attacks were perpetrated, and in 2008-2009, when the subprime-mortgage crisis set off a sharp contraction in the U.S. housing market and a global financial crisis. In both bear markets, even the stocks of companies with stellar earnings were pounded. Energy stocks, for instance, lost nearly half their value in the second half of 2008 -- even though energy companies' earnings in aggregate were *growing* at double-digit rates.

### **Market efficiency limited**

So it seems obvious to us that if stocks don't always reflect fundamentals like earnings, then there's something flawed in the notion of the market's constant efficiency. We think an emotionally disposed stock market is neither perfectly efficient (especially in the short term) nor completely inefficient. We think the only reasonable conclusion that can be drawn is that the stock market is efficient to a certain extent.

Henry Latané, as noted, reached the same conclusion. His research in the late 1970s revealed an inefficiency -- a delay between companies' quarterly earnings reports and their impact on those companies' stock prices. His work also indicated a significant relationship between the size of an earnings surprise (earnings that beat Wall Street analysts' expectations) and the magnitude of subsequent changes in stock price. These findings pointed to pockets of inefficiency in the stock market and

lent credence to the idea that earnings eventually drive stock prices, given enough time. (For our part, we relish the stock market's imperfections and inefficiency because they give us the chance to outperform the market if we pick good stocks.)

As we've emphasized repeatedly in the past, nothing is certain in investing; you only have probabilities, and putting probabilities in your favor is what intelligent investing is all about. So to make sure that we put as many probabilities in our favor as possible -- and to confirm the relevance of past research and our own growth-investment process in the context of an ever-changing market -- we do research.

### **We explore two questions**

Recently we conducted a study that we hoped would answer two questions. One, do trends in earnings growth persist over time? And two, can those trends predict future stock returns?

The financial literature is replete with discussions of the relationship between company earnings and stock returns. But much of that literature is concerned primarily with earnings *estimates* and the effects that earnings surprises and revisions have on stock prices. In our study, we decided to instead focus on actual *past* earnings, as opposed to projected *future* earnings. We did so in the belief that historical earnings data is more reliable than earnings estimates, inasmuch as Wall Street analysts have often been prone to be overly optimistic -- and guilefully revisionary -- in their earnings estimates.

For example, a 2009 analysis by Alexander Ljungqvist of New York University, Christopher Malloy of Harvard Business School, and Felicia Marston of the University of Virginia documented that phenomenon. They discovered that since the 1970s Wall Street analysts have often made changes to their previous earnings estimates and stock recommendations *after* companies announce earnings that differ significantly from those estimates. The revisions

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***A stock is more likely to remain in the same quintile of earnings growth for one quarter (as shown in Panel A) or two quarters (Panel B) than it is to migrate to a different quintile, indicating that the rate of earnings growth tends to persist in the short term***

Migration of stocks from one earnings-based quintile to another

March 1990–November 2010

		Panel A: quintile ranking one quarter in the future				
Current quintile	1	2	3	4	5	
<b>1 (high earnings)</b>	<b>47%</b>	17%	8%	10%	18%	
<b>2</b>	16%	<b>31%</b>	22%	19%	12%	
<b>3</b>	8%	22%	<b>36%</b>	25%	9%	
<b>4</b>	11%	20%	22%	<b>30%</b>	17%	
<b>5 (low earnings)</b>	19%	12%	9%	17%	<b>44%</b>	

		Panel B: quintile ranking two quarters in the future				
Current quintile	1	2	3	4	5	
<b>1 (high earnings)</b>	<b>34%</b>	15%	9%	14%	29%	
<b>2</b>	15%	<b>25%</b>	20%	23%	16%	
<b>3</b>	9%	23%	<b>32%</b>	26%	11%	
<b>4</b>	14%	24%	22%	<b>25%</b>	16%	
<b>5 (low earnings)</b>	28%	16%	10%	15%	<b>31%</b>	

Source: Turner Investments. Past performance is no guarantee of future results.

are done, in our estimation, so that the analysts can save face.

### **Analysts alter 22% of data**

In investigating this topic, we were surprised to learn just how frequent and how marked those ex-post facto adjustments have been: since 1970, almost 22% of estimates and recommendations in the Institutional Brokers' Estimate System (I/B/E/S) database have been modified, added, or deleted retroactively by analysts trying to protect their hides after earnings came in differently from their expectations.

In effect, analysts game earnings estimates in retrospect, which obviously serves to skew the credibility and accuracy of any study that relies on earnings estimates. Garbage in, garbage out. It's not unlike allowing sports handicappers to adjust point spreads in pro-football games after the games have been played to tweak the betting odds. So to avoid this bias problem that's been fomented by analysts, we used actual earnings

data as the basis for analyzing earnings growth in our study.

The S&P 500 Index was chosen as our stock universe due to its high liquidity and its relatively comprehensive representation of the entire market: the S&P 500 stocks have a minimum level of liquidity (as defined by the ratio of the annual value of trades to market capitalization) of 0.30 and represent 75% of the total U.S. market's capitalization. We evaluated monthly S&P 500 Index statistics dating back to January 1990, along with 20 years of seasonally adjusted earnings data from I/B/E/S.

### **Prices and earnings compared**

To find out if trends in earnings growth persist, we analyzed the price movements of stocks in relation to specific ranges of earnings growth from month to month and quarter to quarter since 1990. We applied a curved trend line across all previous rolling four quarters of seasonally adjusted earnings data, using the slope of that

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***When all S&P 500 stocks are ranked according to the direction -- the increase or decrease -- of earnings changes over four quarters, stocks whose earnings rose each quarter returned the most***

**Relationship between average monthly returns and earnings-growth rankings**  
March 1990–November 2010

Step function ranking	Average monthly return	Average market capitalization, in billions	Average price-to-book ratio
1	1.01%	\$68	4.73
2	0.94%	\$67	4.86
3	0.69%	\$71	5.14
4	0.57%	\$66	4.93

Source: Turner Investments. Past performance is no guarantee of future results.

line to measure earnings growth. Next, for a given month, we classified all stocks in the S&P 500 in one of five quintiles, with stocks in the first quintile having the greatest earnings growth and the stocks in the fifth quintile earning the least. We then checked the migration of those stocks among the five quintiles each quarter.

If our thesis was correct -- that a positive or negative trend in earnings growth is persistent, at least in the short run -- a significant number of stocks should remain in the same quintile from one quarter to the next. In other words, stocks with a superior earnings-growth trend should maintain that level of growth and stay in the same quintile for some time. And indeed, that's what we found (*see display, page 3*).

As the highlighted diagonal numbers in the table on page 3 show, after one quarter, 47% of stocks in quintile one remained in that quintile; and after two quarters, 34%. Thereafter the persistence was clearly less strong, but there were still a greater percentage of stocks that remained in the same quintiles than the percentage of stocks that shifted to others.

So if a strong trend in earnings growth persists, does it follow that the stocks of issuers with strong earnings growth will record higher returns? To find out, we examined the last four quarters of adjusted earnings per share in two ways, then linked that earnings data to historical monthly returns.

### **Earnings leaders flourish**

First, for each period we divided the S&P 500 stocks into four groups, based on whether their earnings increased or decreased from one quarter to the next over the past four rolling quarters since 1990 (*see display, above*). If earnings increased each quarter, the stocks were given a ranking of one. Stocks whose earnings increased twice and decreased once were ranked a two. Stocks with earnings that decreased twice and increased once were assigned a three. And a pattern of continuously decreasing earnings resulted in a stock ranking of four. When we looked at the average monthly returns of each ranked group, we found their performance declined in descending order:

- stocks with a one ranking, indicating consistent quarterly increases in earnings, produced the highest monthly returns, 1.01%;
- stocks with a two ranking gained less, 0.94%;
- stocks with a three ranking made even less, 0.69%; and
- stocks ranked last produced the smallest gain of all, 0.57%.

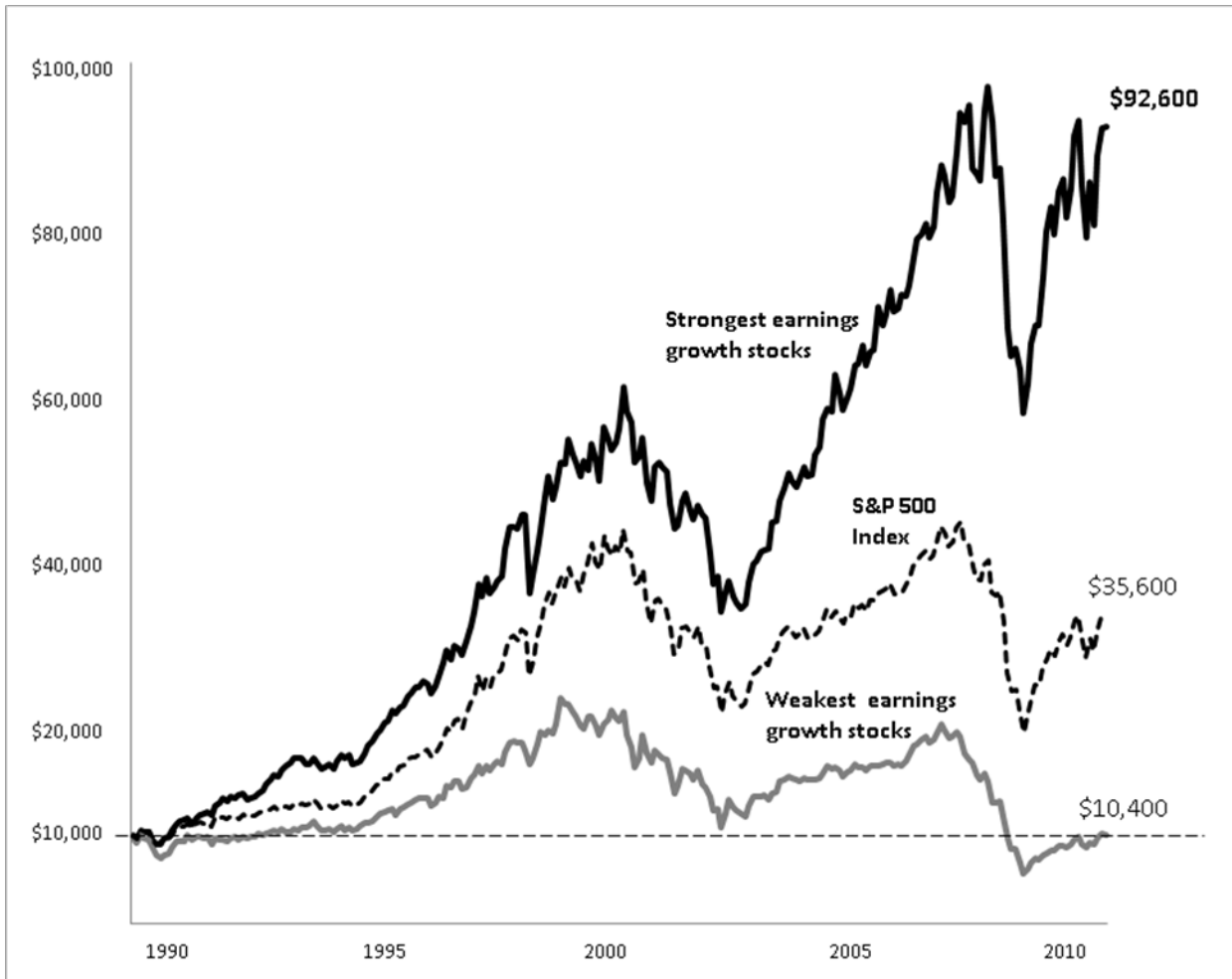
Interestingly, characteristics like the size of the company and the price-to-book ratio appeared to have no significant bearing on investment results. In short, earnings trumped all other considerations.

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**Over more than 20 years, the S&P 500 Index stocks with the most robust earnings growth gained more than eight times as much as their counterparts with the weakest earnings growth**

### Growth of \$10,000

March 1990–November 2010



Source: Turner Investments. Past performance is no guarantee of future results. This is a hypothetical example used for illustrative purposes only. The return figures are based on a hypothetical \$10,000 lump sum investment in an equally weighted portfolio of stocks possessing the strongest and weakest earnings growth in March 1990 and left invested through November 2010. The example does not represent or project the actual performance of any security or other investment. The hypothetical figures do not reflect the impact of any commissions, fees, or taxes applicable to an actual investment.

We realized that these rankings would only account for the *direction* of the earnings change from one quarter to another and not the *degree* of the earnings change, so it was possible that the rankings could misrepresent the earnings-growth trend of some stocks. So we applied the same trend-line method described previously. And when we compared the earnings-growth slope to the average monthly stock returns, we found a

positive correlation between future returns and past earnings growth. The stocks in the group with the steepest slope -- those with continuously improving earnings -- generated the highest returns, and those whose slope was flat or negative had the worst returns in the short term.

We found that the same patterns generally held true over the entire period we studied: persistent

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earnings growth tended to result in higher stock returns over the 20-year, nine-month period from March 1990 to November 2010. The stocks with the strongest trend in earnings growth returned an annualized 11.5%, while the stocks with the weakest growth trend gained only 1.5% annualized. In comparison, the S&P 500 Index returned 6.3%.

Here's what all this boils down to in dollars and cents: the difference in results from investing in the earnings leaders over the 20-year, nine-month period of our study is compelling (*see display, page 5*). A sum of \$10,000 invested in a portfolio of stocks with the strongest earnings-growth trend in March 1990 would have been worth \$92,600 in late 2010 -- a cumulative return of 826%. Conversely, \$10,000 invested in a portfolio of stocks with the weakest earnings trend over the same period would have been worth just \$10,400 -- a 4% cumulative return.

**S**o, based on our growth portfolios' record of outperformance over the past 20 years and on old and new research, we remain convinced of two things. One, earnings do in fact drive stock prices in the long run. And two, the focus of our growth-investment process on earnings is well placed. We've found that trends in earnings growth do persist, which can lead to higher stock prices. Accordingly, a key to our own investment success is to identify those growth companies that can sustain above-average earnings growth and invest in them early enough to capture the rising prices that may result. If we can do that, we believe we put the odds in our favor for maximizing the total returns of our clients' growth portfolios over time.

increase in share price. Past performance is no guarantee of future results.

Turner Investments claims compliance with the Global Investment Performance Standards (GIPS). To receive a complete list and description of Turner's composites and/or presentations that adhere to the GIPS standards, contact Debi Rossi at [drossi@turnerinvestments.com](mailto:drossi@turnerinvestments.com) or write Ms. Rossi at Turner Investments, 1205 Westlakes Drive, Berwyn, Pennsylvania 19312.

Turner Investments, founded in 1990, is an investment firm based in Berwyn, Pennsylvania. As of December 31, 2010, we managed more than \$17 billion in stocks in separately managed accounts and mutual funds for institutions and individuals.

For a quick rundown of Turner Investments' views on the stock market and growth-investment strategy, watch the *Quarterly Perspectives With Bob Turner* video at the *Welcome* page of our Web site, [www.turnerinvestments.com](http://www.turnerinvestments.com).

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