The expectations treadmill

Good companies haven't always been good investments. Total returns to shareholders may not necessarily be a good measure of management performance. How fast is your treadmill moving?

AUGUST 1998 • Richard F. C. Dobbs and Timothy M. Koller

The accurate measurement of company performance is the foundation of corporate governance and compensation planning. Yet despite its importance, performance measurement is poorly understood. Many people believe that total returns to shareholders (TRS)—that is, share price appreciation plus dividends—is the cleanest way to measure performance. Though TRS has many merits, we believe that it cannot be uniformly applied to all companies in all situations. Incorrectly used, as it often is, it can give rise to misunderstandings about performance that in turn distort management incentives, lead to bad decisions, and alienate outstanding managers.

The analysis of corporate performance cannot be boiled down to a single number, although it can be a systematic and rigorous process. It should consider the financial market's assessment of a company (which includes but goes beyond TRS), the company's underlying performance, and its expected future performance as reflected in its market value. When a company has taken all of these elements fully into account, it can proceed to build a solid foundation for the governance and compensation decisions that are so critical to success.

The flaws in TRS

Any performance measure must incorporate a company's share price performance. If they do nothing else, investors will look at how well a stock has performed for them. But a performance measure must do more than simply record how much a stock goes up (or down). It must cut through the noise of the market and provide an accurate picture of exactly how and why managers are creating value. Seen from this perspective, TRS has obvious shortcomings.

To begin with, share prices are driven by many factors other than management performance. During the period of one to three years over which TRS is usually measured for the purpose of evaluating performance, much of the movement in a company's share price will be driven by the market as a whole or by the industry sector in which it operates. Analysis of total shareholder returns for a sample of nearly 400 companies since 1962 shows that on average over 40 percent of the
returns during any one- or three-year period can be explained by market and sector movements. It follows that if performance is measured on the basis of TRS alone, managers are in effect being rewarded or penalized for events outside their control. Yet traditional share option schemes do just that, and the bull stock market of the past decade has rewarded option-holding employees in all but the most woefully underperforming companies.

The other side of the coin is a growing problem for the volatile high-technology industry. When a sector re-rating made share prices plummet, companies found they had to reprice their employee share option packages to retain key staff.

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To make things worse, share prices in the short term are driven more by differences between actual performance and market expectations and by changes in these expectations than by the level of performance per se; it is the delivery of "surprises" that produces higher or lower total shareholder returns compared to the market. As a result, companies that consistently meet high performance expectations but do no exceed them can find it hard to deliver high TRS. The market may believe that management is doing an outstanding job, but its approval has already been factored into the share price.

One way to understand the problem is by analogy with a treadmill. The expectations for future financial performance implicit in the share price are represented by the speed of the treadmill. If managers are able to beat these expectations, they accelerate the treadmill and so deliver above-average shareholder returns. However, as performance improves, the expectations treadmill turns more quickly. The better managers perform, the more the market expects from them; they have to pound the treadmill ever faster just to keep up.

Tina’s Dilemma

For outstanding companies, the treadmill is moving faster than for anyone else. It is difficult for management to deliver at the expected level without faltering. Accelerating the treadmill will be hard; continuing to do so will eventually become impossible (see sidebar, "Tina's dilemma").
This explains why extraordinary managers may deliver only ordinary share price increases in the short run. If their compensation is based substantially on TRS through stock options, they are likely to be insufficiently rewarded. This predicament illustrates the old saw about the difference between a good company and a good investment: in the short term, good companies may not be good investments, and vice versa.

In the case of companies of which less is expected, on the other hand, TRS-driven measures may overcompensate managers. During the early years of a recovery, for example, beating expectations may be relatively easy: the expectations treadmill is not moving fast. Since the market also gives credit for future performance by re-rating the share price to reflect changes in the performance expected in all future years, the net effect is that managers can deliver high TRS even when they have improved performance only marginally.

When a company is re-rated to reflect higher expectations of future performance, there is a considerable multiplier effect: the movement in share price reflects the present value of all the changes in expectations for all future years' cashflows. As a result, TRS could be well over 50 percent. Merely to announce a new CEO can be enough to shift a share price by more than 10 percent before he or she has even arrived, and certainly long before there has been any improvement in performance. On the day in 1996 that Credit Suisse announced the appointment of Lukas Mühlemann as CEO, for example, the bank's share price rose by about 20 percent, causing shareholder value to soar by about $3 billion.

**A complementary measure**

An alternative market-based performance measure, market value added (MVA), has gained popularity recently, especially with the publication of financial consultancy Stern Stewart's MVA rankings in *Fortune* magazine in the United States and in other financial publications around the world. MVA is calculated as the difference between the market value of a company's debt and equity and the amount of capital invested. A related measure expressed as a ratio is market-to-capital, the ratio of a company's debt and equity to the amount of capital invested.1

While MVA and market-to-capital ratio do pose difficulties of comparison and measurement because they rely on accounting data and are affected by asset ownership decisions, they provide a useful complement to TRS because they
measure different aspects of a company's performance. TRS can be likened to the speeding up or slowing down of the treadmill; it measures performance against the expectations of financial markets and changes in these expectations. In effect, it is a measure of how well a company beats the target set by market expectations—a measure of improvement, in other words. MVA and market-to-capital, on the other hand, can be likened to the current speed of the treadmill. They measure the financial market's view of future performance relative to the capital invested in the business, and therefore assess the expectations of the absolute level of performance.

To understand the contrast between MVA and TRS, consider the example of US retailers Sears and Wal-Mart. Over the five years ending December 31, 1997, Sears achieved an average TRS of 22 percent a year, while Wal-Mart managed 5 percent a year. Is Sears creating more value? Is it performing better?

The MVAs and market-to-capital for Sears and Wal-Mart are shown in Exhibit 1. On December 31, 1997, Wal-Mart's market capitalization (debt and equity) was $101.3 billion and its invested capital $32.1 billion. This resulted in an MVA of $69.2 billion, one of the highest anywhere in the world. At the same time, Sears' MVA was $11.8 billion, based on a market value of $42.5 billion and invested capital of $30.7 billion. If we then look at the market-to-capital ratio, Wal-Mart scored 3.2, Sears 1.4. In other words, every dollar that Wal-Mart had invested was valued by the market at $3.20, while every dollar Sears had invested was valued at $1.40.

Wal-Mart creates more value, so it has a high market-to-capital, but it was not able to exceed the market's performance expectations because its treadmill was already moving fast. Sears does not create as much value, so it has a lower market-to-capital, but during the substantial restructuring it has undergone over
recent years it has beaten market expectations. Its treadmill was moving slowly, and has speeded up. It could be argued that both companies have performed well over the five years, given their different starting points. Combining TRS and market-to-capital can provide interesting insights into the dynamics of a company's performance, especially when the period examined is shorter than 10 years. To illustrate, Exhibit 2 plots a number of leading retailers in terms of market-to-capital ratio and TRS. The companies fall into four quadrants.

Quadrant 1 companies are the corporate elite. They include US clothing retailer The Gap, US supermarket chain Kroger, and French supermarket chain Carrefour. These companies have earned exceptionally high TRS over the past five years and have high market value in relation to the amount of capital invested in them. Quadrant 3 companies are the opposite; they face a considerable performance challenge. They include US supermarket Great Atlantic and Pacific, US discount retailer Kmart, and German retailer Karstadt. In each case, TRS is low or negative, and market-to-capital is lower than for most retailers. Companies in this quadrant (and in quadrant 1) are easy to evaluate because both measures are low (or high).

Evaluating companies in quadrants 2 and 4 is more difficult. Quadrant 2 companies are recovering underperformers. This group includes Sears, US drugstore chain Rite Aid, and UK brewer and pub and restaurant chain Whitbread. These companies have high TRS but low relative market-to-capital.
Five years ago, when expectations of their performance were very low, their market-to-capital was even poorer. They have since demonstrated better than expected performance, accelerating their treadmill, but their market-to-capital ratios are still nowhere near those of excellent competitors.

Companies in quadrant 4 may have suffered from unrealistic market expectations, or they may be underachievers. They include Wal-Mart and Nordstrom. These companies have high relative market-to-capital but low TRS. Although highly valued, they have not exceeded—indeed, in some cases have not met—market expectations. Without detailed analysis, it is impossible to say whether this is the result of unrealistic performance expectations by the market at the beginning of the period, or of managers' inability to realize their companies' potential. The treadmills were simply moving too fast, and the companies have been unable to keep running at the required pace.

In these assessments, we used the relative measure of market-to-capital, but we can also use the absolute measure of MVA. Exhibit 3 shows the performance of the same retail companies using both absolute and size-adjusted measures. Relative to the amount of capital invested, the top retailer in our sample is The Gap. On an absolute basis, the winner is Wal-Mart. The Gap creates more value for each dollar invested, but Wal-Mart creates more absolute wealth. Which is better? It is impossible to say, and probably irrelevant. Both are star performers.
No stock market-based measure truly reflects a company's underlying financial performance. As we have seen, market measures tend to lump together actual performance and expectations of future performance. To separate historical and anticipated results, it is necessary to analyze underlying financial results with the aid of accounting-based measures. While such measures clearly have their limitations, we generally find they yield useful insights.

It is now generally accepted that market valuations tend to reflect a company's ability to generate cashflow over the long term. It is also possible to identify shorter-term indicators of a company's ability to generate value. There are two key drivers of cashflow (and ultimately value): the growth rate at which a company increases its revenues, profits, and capital, and its return on invested capital relative to its cost of capital.

These financial value drivers reflect common sense: a company that earns high profits for every dollar invested in the business will be worth more than one that earns low profits for every dollar invested. Similarly, a fast-growing company will be worth more than a slow-growing company that earns the same return on invested capital (providing the return on capital exceeds the cost of capital). In practice, we make a number of adjustments to accounting figures to calculate return on invested capital so that they better reflect economic performance, and to increase comparability across companies.

Exhibit 4 plots the revenue growth and return on invested capital for Sears and Wal-Mart between 1995 and 1997. (Before 1995, Sears' performance was distorted by its ownership of Dean Witter Discover and Allstate Insurance.) Over the period, Wal-Mart's revenue growth averaged 12.7 percent a year compared with 7.8 percent for Sears, and its return on capital averaged 13.1 percent against Sears' 8.2 percent. Both companies' cost of capital was around 8 percent. Wal-Mart achieved both higher growth and higher returns on capital.
Growth and return on capital do not take account of the companies' relative size. To do that, we use a measure called economic profit. Economic profit, also known as economic value added or residual income, measures the value created during a single year by taking a company's after-tax operating profit and deducting a charge for the capital employed. Growth in economic profit allows us to combine growth and return on invested capital into one measure. Exhibit 5 shows the calculation of economic profit for Sears and Wal-Mart. Wal-Mart's economic profit totals almost $4 billion for the years 1995-97, four times that earned by Sears. Moreover, Wal-Mart's economic profit is trending up, while Sears' is trending down.

How can it be that Sears earned higher TRS than Wal-Mart when its underlying performance was much poorer? The answer goes back to the treadmill. Sears was not expected to do well, but did better than expected. Wal-Mart, on the other hand, was the victim of high expectations. It probably earned more economic profit than any other retailer in the world, while sustaining its high growth. But the market expected even better.
Market expectations

Ultimately, a measurement system must find a way to link a company's stock market performance to its underlying financial performance. The way to do this is to start by estimating what the market's expectations for future performance are by reverse-engineering the current market value using a discounted cashflow model. This entails developing cashflow projections that when discounted at the cost of capital equal the share price in the market.

We can then draw a line showing the combinations of future growth and return on invested capital that are consistent with today's market value. These lines represent the level of performance needed to meet market expectations. If a company delivers this level of performance, its share price should rise in line with its cost of equity less the dividend yield (assuming the market as a whole moves in line with expectations). If it exceeds expectations, its share price should rise more quickly.

Exhibit 6 shows these lines for Sears and Wal-Mart, and also reveals how market expectations compare with recent performance. Wal-Mart is expected to perform considerably better than Sears, and even better than it has done recently. For Sears, the market appears to expect a similar level of performance as in the past.

Using the performance analysis

Once a company understands market expectations and its underlying financial performance, it has a solid foundation for making governance and compensation
decisions. These need to be based on two dimensions: stock market measures (such as TRS and MVA) and underlying financial performance.

Consider first the stock market dimension. To eliminate the effects of general movements in the market or sector, all measurements should be relative to the company's sector or to a peer group of companies. In addition, given that market measures such as MVA and TRS can award credit before performance is delivered, any executive compensation scheme linked to these metrics should allow for a period of vesting and clawback to ensure that credit is given only for results delivered and not for share price management.

To set companies with a high market-to-capital ratio and high market expectations (such as Wal-Mart) the goal of delivering a TRS higher than their peers are called upon to achieve may be unrealistic; their expectations treadmill is already moving fast. Instead, they should be made to focus on keeping their market-to-capital high against that of their peer group. In other words, they should be measured by whether they are continuing to deliver the performance that the financial community expects. Companies with lower market-to-capital ratios and market expectations than their peers (such as Sears) are running on a slower treadmill. Speeding it up is more realistic for them, and so TRS is an appropriate measure.

Managers must be judged by what they have actually delivered, not just on the basis of what the market believes they will deliver in future

In addition to the stock market dimension, we also need to think about underlying performance, measured by return on capital, growth, or growth in economic profit. Because of their short-term focus, these measures can, if used on their own, lead companies to make decisions that will not necessarily create value over time. Used properly, however, they can ensure that managers are measured on the basis of what they have delivered, as well as on the basis of what the market believes they will deliver in the future. In the case of an underperforming company, they can measure whether managers are closing the gap with its peer group. For higher-performing companies, staying ahead of the peer group may be a more appropriate target.

Performance management is a complicated subject, but it is essential that companies understand it. Managers must be judged by what they have actually delivered, not just on the basis of what the market believes they will deliver in future. Measures such as TRS are insufficient on their own. They must be
combined with a number of other ingredients: additional metrics such as market-to-capital, an understanding of the expectations of future performance that are implicit in the company's market value, and an assessment of underlying financial performance.

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Notes
1 Market-to-capital equals the market value of a company's debt and equity divided by the book value of its debt, equity, and equity-like reserves. By including both debt and equity, market-to-capital effectively neutralizes the impact of leverage differences across companies that can distort traditional equity-only market-to-book ratios.
2 For a full discussion of this model, see Tom Copeland, Tim Koller, and Jack Murrin, Valuation: Measuring and managing the value of companies, John Wiley, New York, 1994, pp. 137–42.

Do fundamentals—or emotions—drive the stock market?

Emotions can drive market behavior in a few short-lived situations. But fundamentals still rule.

MARCH 2005 • Marc Goedhart, Timothy Koller, and David Wessels

In This Article
• Exhibit 1: Price disparity in twin shares
• Exhibit 2: Trends for P/E ratios of listed companies in the United Kingdom and the United States

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There's never been a better time to be a behaviorist. During four decades, the academic theory that financial markets accurately reflect a stock's underlying value was all but unassailable. But lately, the view that investors can fundamentally change a market's course through irrational decisions has been moving into the mainstream.
With the exuberance of the high-tech stock bubble and the crash of the late 1990s still fresh in investors' memories, adherents of the behaviorist school are finding it easier than ever to spread the belief that markets can be something less than efficient in immediately distilling new information and that investors, driven by emotion, can indeed lead markets awry. Some behaviorists would even assert that stock markets lead lives of their own, detached from economic growth and business profitability. A number of finance scholars and practitioners have argued that stock markets are not efficient—that is, that they don't necessarily reflect economic fundamentals. According to this point of view, significant and lasting deviations from the intrinsic value of a company's share price occur in market valuations.

The argument is more than academic. In the 1980s the rise of stock market index funds, which now hold some $1 trillion in assets, was caused in large part by the conviction among investors that efficient-market theories were valuable. And current debates in the United States and elsewhere about privatizing Social Security and other retirement systems may hinge on assumptions about how investors are likely to handle their retirement options.

We agree that behavioral finance offers some valuable insights—chief among them the idea that markets are not always right, since rational investors can't always correct for mispricing by irrational ones. But for managers, the critical question is how often these deviations arise and whether they are so frequent and significant that they should affect the process of financial decision making. In fact, significant deviations from intrinsic value are rare, and markets usually revert rapidly to share prices commensurate with economic fundamentals. Therefore, managers should continue to use the tried-and-true analysis of a company's discounted cash flow to make their valuation decisions.

**When markets deviate**

Behavioral-finance theory holds that markets might fail to reflect economic fundamentals under three conditions. When all three apply, the theory predicts that pricing biases in financial markets can be both significant and persistent.

**Irrational behavior.** Investors behave irrationally when they don’t correctly process all the available information while forming their expectations of a company’s future performance. Some investors, for example, attach too much importance to recent events and results, an error that leads them to overprice
companies with strong recent performance. Others are excessively conservative and underprice stocks of companies that have released positive news.

**Systematic patterns of behavior.** Even if individual investors decided to buy or sell without consulting economic fundamentals, the impact on share prices would still be limited. Only when their irrational behavior is also systematic (that is, when large groups of investors share particular patterns of behavior) should persistent price deviations occur. Hence behavioral-finance theory argues that patterns of overconfidence, overreaction, and overrepresentation are common to many investors and that such groups can be large enough to prevent a company's share price from reflecting underlying economic fundamentals—at least for some stocks, some of the time.

**Limits to arbitrage in financial markets.** When investors assume that a company's recent strong performance alone is an indication of future performance, they may start bidding for shares and drive up the price. Some investors might expect a company that surprises the market in one quarter to go on exceeding expectations. As long as enough other investors notice this myopic overpricing and respond by taking short positions, the share price will fall in line with its underlying indicators.

This sort of arbitrage doesn't always occur, however. In practice, the costs, complexity, and risks involved in setting up a short position can be too high for individual investors. If, for example, the share price doesn't return to its fundamental value while they can still hold on to a short position—the so-called noise-trader risk—they may have to sell their holdings at a loss.

**Momentum and other matters**

Two well-known patterns of stock market deviations have received considerable attention in academic studies during the past decade: long-term reversals in share prices and short-term momentum.

First, consider the phenomenon of reversal—high-performing stocks of the past few years typically become low-performing stocks of the next few. Behavioral finance argues that this effect is caused by an overreaction on the part of investors: when they put too much weight on a company's recent performance, the share price becomes inflated. As additional information becomes available, investors adjust their expectations and a reversal occurs. The same behavior could explain low returns after an initial public offering (IPO), seasoned
offerings, a new listing, and so on. Presumably, such companies had a history of strong performance, which was why they went public in the first place.
Momentum, on the other hand, occurs when positive returns for stocks over the past few months are followed by several more months of positive returns. Behavioral-finance theory suggests that this trend results from systematic underreaction: overconservative investors underestimate the true impact of earnings, divestitures, and share repurchases, for example, so stock prices don't instantaneously react to good or bad news.
But academics are still debating whether irrational investors alone can be blamed for the long-term-reversal and short-term-momentum patterns in returns. Some believe that long-term reversals result merely from incorrect measurements of a stock's risk premium, because investors ignore the risks associated with a company's size and market-to-capital ratio. These statistics could be a proxy for liquidity and distress risk.
Similarly, irrational investors don't necessarily drive short-term momentum in share price returns. Profits from these patterns are relatively limited after transaction costs have been deducted. Thus, small momentum biases could exist even if all investors were rational.
Furthermore, behavioral finance still cannot explain why investors overreact under some conditions (such as IPOs) and underreact in others (such as earnings announcements). Since there is no systematic way to predict how markets will respond, some have concluded that this is a further indication of their accuracy.

**Persistent mispricing in carve-outs and dual-listed companies**

Two well-documented types of market deviation—the mispricing of carve-outs and of dual-listed companies—are used to support behavioral-finance theory. The classic example is the pricing of 3Com and Palm after the latter's carve-out in March 2000.

In anticipation of a full spin-off within nine months, 3Com floated 5 percent of its Palm subsidiary. Almost immediately, Palm's market capitalization was higher than the entire market value of 3Com, implying that 3Com's other businesses had a negative value. Given the size and profitability of the rest of 3Com's businesses, this result would clearly indicate mispricing. Why did rational investors fail to
exploit the anomaly by going short on Palm's shares and long on 3Com's? The reason was that the number of available Palm shares was extremely small after the carve-out: 3Com still held 95 percent of them. As a result, it was extremely difficult to establish a short position, which would have required borrowing shares from a Palm shareholder.

During the months following the carve-out, the mispricing gradually became less pronounced as the supply of shares through short sales increased steadily. Yet while many investors and analysts knew about the price difference, it persisted for two months—until the Internal Revenue Service formally approved the carve-out's tax-free status in early May 2002. At that point, a significant part of the uncertainty around the spin-off was removed and the price discrepancy disappeared. This correction suggests that at least part of the mispricing was caused by the risk that the spin-off wouldn’t occur.

Additional cases of mispricing between parent companies and their carved-out subsidiaries are well documented. In general, these cases involve difficulties setting up short positions to exploit the price differences, which persist until the spin-off takes place or is abandoned. In all cases, the mispricing was corrected within several months.

A second classic example of investors deviating from fundamentals is the price disparity between the shares of the same company traded on two different exchanges. Consider the case of Royal Dutch Petroleum and "Shell" Transport and Trading, which are traded on the Amsterdam and London stock markets, respectively. Since these twin shares are entitled to a fixed 60-40 portion of the dividends of Royal Dutch/Shell, you would expect their share prices to remain in this fixed ratio.

Over long periods, however, they have not. In fact, prolonged periods of mispricing can be found for several similar twin-share structures, such as Unilever (Exhibit 1). This phenomenon occurs because large groups of investors prefer (and are prepared to pay a premium for) one of the twin shares. Rational investors typically do not take positions to exploit the opportunity for arbitrage.
Thus in the case of Royal Dutch/Shell, a price differential of as much as 30 percent has persisted at times. Why? The opportunity to arbitrage dual-listed stocks is actually quite unpredictable and potentially costly. Because of noise-trader risk, even a large gap between share prices is no guarantee that those prices will converge in the near term.

Does this indict the market for mispricing? We don't think so. In recent years, the price differences for Royal Dutch/Shell and other twin-share stocks have all become smaller. Furthermore, some of these share structures (and price differences) disappeared because the corporations formally merged, a development that underlines the significance of noise-trader risk: as soon as a formal date was set for definitive price convergence, arbitrageurs stepped in to correct any discrepancy. This pattern provides additional evidence that mispricing occurs only under special circumstances—and is by no means a common or long-lasting phenomenon.

Markets and fundamentals: The bubble of the 1990s
Do markets reflect economic fundamentals? We believe so. Long-term returns on capital and growth have been remarkably consistent for the past 35 years, in spite of some deep recessions and periods of very strong economic growth. The median return on equity for all US companies has been a very stable 12 to 15 percent, and long-term GDP growth for the US economy in real terms has been about 3 percent a year since 1945.\(^5\) We also estimate that the inflation-adjusted cost of equity since 1965 has been fairly stable, at about 7 percent.\(^6\)

We used this information to estimate the intrinsic P/E ratios for the US and UK stock markets and then compared them with the actual values.\(^7\) This analysis has led us to three important conclusions. The first is that US and UK stock markets, by and large, have been fairly priced, hovering near their intrinsic P/E ratios. This figure was typically around 15, with the exception of the high-inflation years of the late 1970s and early 1980s, when it was closer to 10 (Exhibit 2).

Second, the late 1970s and late 1990s produced significant deviations from intrinsic valuations. In the late 1970s, when investors were obsessed with high short-term inflation rates, the market was probably undervalued; long-term real GDP growth and returns on equity indicate that it shouldn't have bottomed out at P/E levels of around 7. The other well-known deviation occurred in the late 1990s, when the market reached a P/E ratio of around 30—a level that couldn't be justified by 3 percent long-term real GDP growth or by 13 percent returns on book equity.
Third, when such deviations occurred, the stock market returned to its intrinsic-valuation level within about three years. Thus, although valuations have been wrong from time to time—even for the stock market as a whole—eventually they have fallen back in line with economic fundamentals.

**Focus on intrinsic value**

What are the implications for corporate managers? Paradoxically, we believe that such market deviations make it even more important for the executives of a company to understand the intrinsic value of its shares. This knowledge allows it to exploit any deviations, if and when they occur, to time the implementation of strategic decisions more successfully. Here are some examples of how corporate managers can take advantage of market deviations.

- Issuing additional share capital when the stock market attaches too high a value to the company's shares relative to their intrinsic value
- Repurchasing shares when the market under-prices them relative to their intrinsic value
- Paying for acquisitions with shares instead of cash when the market overprices them relative to their intrinsic value
- Divesting particular businesses at times when trading and transaction multiples are higher than can be justified by underlying fundamentals

Bear two things in mind. First, we don't recommend that companies base decisions to issue or repurchase their shares, to divest or acquire businesses, or to settle transactions with cash or shares solely on an assumed difference between the market and intrinsic value of their shares. Instead, these decisions must be grounded in a strong business strategy driven by the goal of creating shareholder value. Market deviations are more relevant as tactical considerations when companies time and execute such decisions—for example, when to issue additional capital or how to pay for a particular transaction.

Second, managers should be wary of analyses claiming to highlight market deviations. Most of the alleged cases that we have come across in our client experience proved to be insignificant or even nonexistent, so the evidence should be compelling. Furthermore, the deviations should be significant in both size and duration, given the capital and time needed to take advantage of the types of opportunities listed previously.

Provided that a company's share price eventually returns to its intrinsic value in the long run, managers would benefit from using a discounted-cash-flow
approach for strategic decisions. What should matter is the long-term behavior of
the share price of a company, not whether it is undervalued by 5 or 10 percent at
any given time. For strategic business decisions, the evidence strongly suggests
that the market reflects intrinsic value.

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Wiley & Sons, 2005.

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Notes
Volume 11, Number 4, pp. 429–37; and Nicholas Barberis and Richard H. Thaler, "A survey of behavioral finance," in
Handbook of the Economics of Finance: Financial Markets and Asset Pricing, G. M. Constantinides et al. (eds.),
2 Eugene F. Fama and Kenneth R. French, "Multifactor explanations of asset pricing anomalies," Journal of Finance,
1996, Volume 51, Number 1, pp. 55–84.
4 Owen A. Lamont and Richard H. Thaler, "Can the market add and subtract? Mispricing in tech stock carve-
outs," Journal of Political Economy, 2003, Volume 111, Number 2, pp. 227–68; and Mark L. Mitchell, Todd C. Pulvino,
5 US corporate earnings as a percentage of GDP have been remarkably constant over the past 35 years, at around 6
percent.
6 Marc H. Goedhart, Timothy M. Koller, and Zane D. Williams, "The real cost of equity," McKinsey on Finance,
Number 5, Autumn 2002, pp. 11–5.
7 Marc H. Goedhart, Timothy M. Koller, and Zane D. Williams, "Living with lower market expectations," McKinsey on
Finance, Number 8, Summer 2003, pp. 7–11.

Managing expectations for value

An increasingly significant part of active value management involves
generating long-term growth expectations. Unlike traditional performance
metrics, growth value maps reflect their importance.

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A higher market capitalization is now an important corporate objective,
both to drive perceptions of economic success and to help companies achieve
their strategic goals. As a metric for corporate performance, market capitalization
reflects both current performance and future expectations. If you split the
average market capitalization of the Eurostoxx50 into the perpetuity value of
current earnings per share¹ (the value of current performance) and residual
value² (the value of growth expectations), an interesting trend becomes apparent:
the proportion of the average Eurostoxx50 company’s market capitalization that is tied to market expectations of growth soared from 26 percent in 1995 to 70 percent in 1999. This suggests that building long-term growth expectations is more and more relevant for active value management—a reality that many companies haven’t yet begun to address systematically. Traditional corporate-performance metrics, such as price-to-earnings ratios, market-to-book ratios, and market value added, don’t explicitly reflect the importance of growth expectations. As a result, companies often pursue value-management approaches that neglect opportunities for growth, sometimes even risking the companies’ long-term survival.

A growth value map (Exhibit 1) is a diagnostic tool that can be used to assess strategic urgency and to point out the most promising strategic levers for creating value. Using a standard capital market indicator for corporate performance and publicly available data from such sources as Bloomberg, Datastream, and annual reports, as well as stock price data, the map makes it possible to benchmark a company’s performance against specific competitors or markets, taking three dimensions into account: overall performance (measured by M/B value), profitability, and growth. Applying the map to the Eurostoxx50 provides interesting insights about the performance of each company as compared with the index average and with relevant industry competitors.

The metric for current performance, running along the horizontal axis, is calculated by identifying the portion of a company’s share price that can be linked to the perpetuity value of current performance and dividing this figure by the
company’s book value. The metric for growth, plotted on the vertical axis, is the difference between market capitalization and the value of current performance as residual value, again normalized by book value.

Depending on the relative position of companies to a performance benchmark such as the Eurostoxx50, they will fall into one of four clusters:

1. **Excellent value managers.** The capital market expects excellent value managers to surpass their benchmarks in profitability and growth. In December 1999, Nokia, for example, far outperformed the Eurostoxx50, especially on growth expectations. A broad spectrum of industries surpassed the benchmark.

2. **Expectation builders.** The capital market expects relatively low profits from expectation builders in the short term but has enormous growth expectations for them. This is a risky position; how long will the market accept the growth "bubble" before becoming impatient and penalizing what it perceives as nondelivery?

3. **Traditionalists.** The capital market has low expectations of the growth potential of the traditionalists, even though they have superior profits in the short term. Are these low expectations due to weak management aspirations or to poor investor relations that make the market undervalue the company?

4. **Asset-loaded value managers.** Some companies seem to suffer along both axes. If their book values aren’t distorted by recent additions of new shares, their low market multiples reflect a failure to create value effectively. Such companies fail to excite their shareholders about either their short-term profitability or their long-term growth prospects and are priced accordingly. These companies need both to restructure and to establish a growth strategy. The danger: undermanaged companies can be taken over and stripped of assets. This segment covers a broad spectrum of industries in the Eurostoxx50.

Managing expectations is an increasingly important element of value management for both short-term profitability and longer-term growth. Growth value maps tie the market capitalization of a company to its past strategic moves and facilitate a structured analysis of potential strategic moves to create value.

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**Notes**

1 The adjusted average earnings per share of the current and following year, divided by the cost of equity determined through the capital asset-pricing model. This ratio relates to other well-known current-performance measurements—for example, return on capital.