

# McKinsey on **Finance**



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### **Measuring stock market performance 1**

TRS doesn't reflect a company's performance or health. What does?

### **Reducing the risks of early M&A discussions 5**

Used early in negotiations, a third-party clean team can help companies assess a deal and protect sensitive data.

### **Smoothing postmerger integration 11**

It takes less time than you think for a clean team to make valuable contributions to the integration of businesses.

### **Comparing performance when invested capital is low 17**

Return on capital is the benchmark for comparing performance between businesses. But new math is needed when a company's capital intensity is low.

### **What global executives think about growth and risk 21**

As globalization creates new markets and competitors, hopes contend with fears.

## Measuring stock market **performance**

TRS doesn't reflect a company's performance or health. What does?

**Richard Dobbs and  
Timothy Koller**

**In the previous issue** of *McKinsey on Finance*,<sup>1</sup> we explored how investors can assess a company by examining its past performance and its health—that is, its ability to sustain performance over the long run. In an ideal world, we would need only to examine a company's stock market performance to see how well it was doing. Yet this third measure is anything but easy to interpret.

The most common approach to measuring a company's stock market performance is to calculate its total returns to shareholders (TRS)<sup>2</sup> over time. This approach has severe limitations, however, because over short periods TRS embodies changes in expectations about a company's future performance more so than its actual underlying performance and health. Companies that consistently meet high performance standards can thus find it hard to deliver high TRS: the market may think that management is doing an outstanding job, but this belief has already been factored into share prices.

One way to understand the problem is by way of analogy with a treadmill whose speed represents the expectations of future performance implicit in a company's share price. If managers exceed them, the market not only raises the share price but also accelerates the treadmill. As the company's

performance improves, the expectations treadmill turns more quickly. The better these managers perform, the more the market expects from them; they must run ever faster just to keep up. This effect explains why extraordinary managers may deliver ordinary short-term TRS; conversely, managers of companies with low performance expectations might find it easy to earn high TRS. This predicament illustrates the old saying 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.

### **Overcoming the limitations of TRS**

Companies can compensate for the shortcomings of TRS by employing complementary measures of stock market performance. One of them is market value added (MVA): the difference between the market value of a company's debt and equity and the amount of capital invested. A related metric is the market-value-to-capital ratio—a company's debt and market equity compared with the amount of capital invested.

MVA and market-value-to-capital ratios complement TRS by measuring different aspects of a company's performance. TRS measures it against the financial markets' expectations and changes in them. MVA and the market-value-to-capital ratio, by contrast, measure the financial markets' view of a company's future performance relative to the capital invested in it, so they assess expectations about its absolute level of performance.

Let's examine home-improvement giant The Home Depot and the other large retailers in terms of their stock market performance. The market value of Home Depot's debt and equity (including capitalized operating

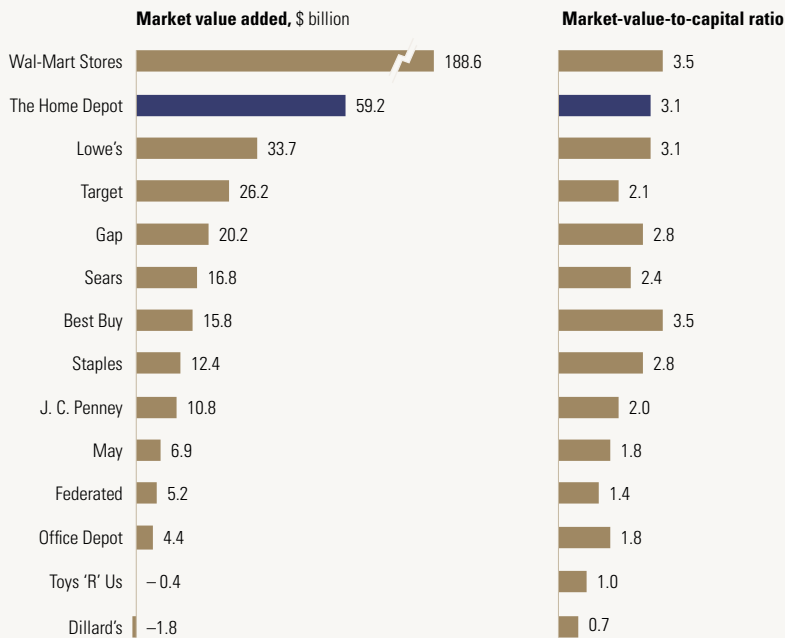
<sup>1</sup>Richard Dobbs and Timothy Koller, "Measuring long-term performance," *McKinsey on Finance*, Number 16, Summer 2005, pp. 1–6 ([www.mckinseyquarterly.com/links/18226](http://www.mckinseyquarterly.com/links/18226)).

<sup>2</sup>TRS is defined as share price appreciation plus dividend yield.

## EXHIBIT 1

## Absolute and relative measures

Dec 2003



leases) was \$88 billion at the end of 2003, when it had \$29 billion invested in operating capital (working capital, the capitalized value of operating leases, and property in plant and equipment). Home Depot's MVA was therefore \$59 billion and its market-value-to-capital ratio was 3.1.

The MVA of Home Depot was the industry's second highest, behind only Wal-Mart Stores and far ahead of the rest. Home Depot's market-value-to-capital ratio was also at the top end of the scale, though not as high as some other well-performing companies (Exhibit 1).

What about TRS? For the five years ending in 2003, Home Depot's—at -2.3 percent annually—was near the bottom of the group. The company did deliver the second-highest MVA, a strong market-value-to-capital ratio, and the second-highest

economic profit, but it had very low TRS. Evidently, Home Depot's performance over recent years wasn't up to what the market had expected at the start of the measurement period (1999).

Exhibit 2 illustrates the “expectations treadmill matrix.” The matrix plots market-value-to-capital ratios on the horizontal axis and TRS on the vertical axis, and the dashed lines represent the median for both measures. Companies in quadrant 1 have both a high TRS and a high market-value-to-capital ratio, while those in quadrant 3 are low on both measures. These quadrants are easy to understand because both metrics are high or low.

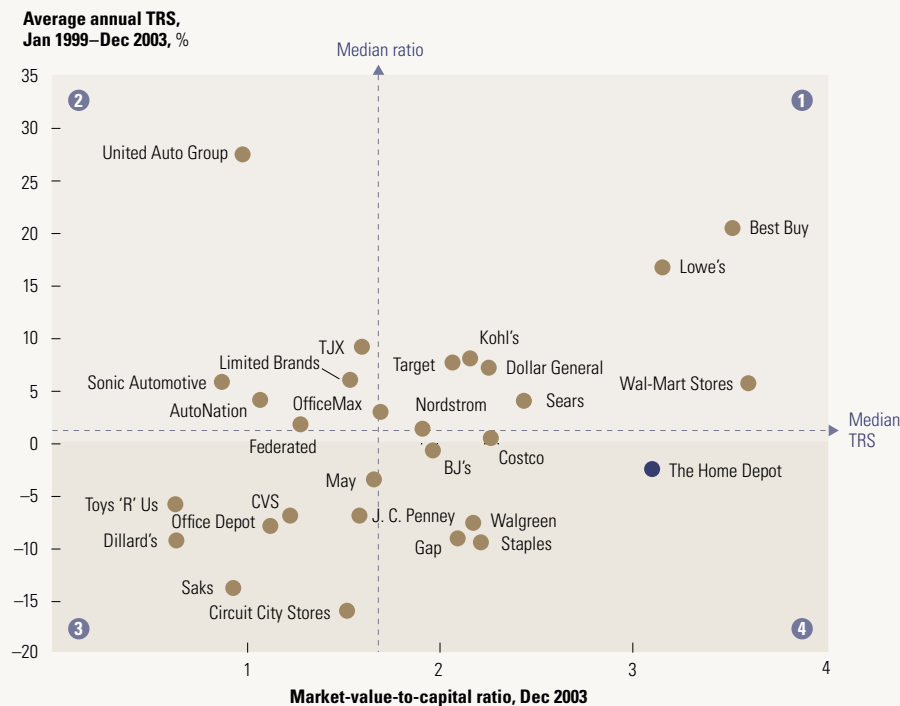
Recovering underperformers reside in quadrant 2: they have low market-value-to-capital ratios, which were even lower five years earlier. These companies have a high TRS because they have improved their performance relative to weak expectations—thus accelerating the treadmill, though their market-value-to-capital ratios remain below the median.

In quadrant 4 is Home Depot, with a low TRS but a high market-value-to-capital ratio, along with other retailers such as Gap, Staples, and Walgreen. Historically, these retailers have been some of the best in the United States. What's going on? It is impossible to say whether their position results from unrealistic market expectations at the beginning of the period or from the inability of managers to realize their company's potential. The treadmills may have simply been moving too fast for the companies to keep running at the required pace. But note that 1999, the beginning of our TRS measurement period, was near the top of the stock market cycle, when large-capitalization

EXHIBIT 2

**The expectations treadmill matrix**

Market-value-to-capital ratio and total returns to shareholders (TRS) for leading retailers



stocks had unreasonably high P/E ratios. The gap has since closed, but this example demonstrates one of the pitfalls of using TRS as a performance measure: the results are highly dependent on the starting date.

**Is a company's market value in line with its value creation potential?**

The final step in assessing performance is linking the company's market value to its intrinsic value creation potential. We can do this by reverse engineering the company's share price, essentially by using a discounted-cash-flow (DCF) model and estimating the required performance—growth and returns on invested capital (ROIC)—to calculate the current share price. We can then evaluate how difficult it will be for the company to achieve this result.

Home Depot's market value at the end of 2003 was consistent with the assumptions that it would continue to earn an ROIC of about 18 to 19 percent a year (the same as its 2003 ROIC, yet higher than its ROIC range of 15 to 16 percent over the three prior years) and that its growth would slow from its historically high rates. Revenue growth averaged 16.5 percent during the five years ending in 2003. Our projection assumed declining growth from approximately 12 percent in 2004 to 5 percent annually by 2013.

Is the market value consistent with Home Depot's intrinsic value creation potential? First, let's examine the required growth. Using the growth rates in our simple estimation leads to \$83 billion of new revenues by 2013. If Home Depot achieves same-store sales growth of 4 percent—a common assumption among analysts—it would need to add 900 stores over the next ten years (about 50 percent of its current base). Given estimates that the US market for home-improvement superstores was already nearly 80 percent saturated at the end of 2003, the growth rates in this scenario are plausible but difficult to achieve.

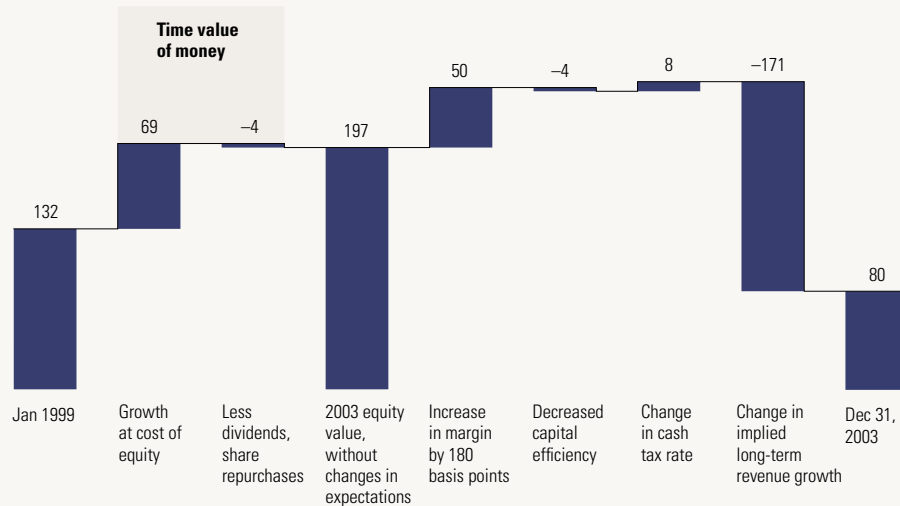
Second, consider whether Home Depot can maintain its ROIC at 18 to 19 percent. As Home Depot's growth slows and it focuses on core operations, some of its earlier challenges in managing growth should be easier to deal with. Competition with Lowe's could intensify, however, and Wal-Mart has been selling more and more of Home Depot's fast-moving items, potentially siphoning off customers.

In summary, the performance scenario consistent with Home Depot's market value at the end of 2003 appears to be challenging but not implausible.

## EXHIBIT 3

## Changing growth expectations result in reduction in market value

Change in market value for The Home Depot, \$ billion



We return to the company's negative five-year TRS. Exhibit 3 shows an analysis of the change in Home Depot's value over the five years through 2003. We start with the market value in 1999 of \$132 billion. If Home Depot had performed exactly as expected, its equity value would have increased by the cost of equity (less dividends and share repurchases), to \$197 billion at the end of 2003. The difference between that number and its \$80 billion market value is the result of changes in the market's expectations of the company's performance.

Assume that in 1999 the market forecast Home Depot's margins and capital turnover to remain at 1998 levels. Since its operating margins actually grew, the market *should have* increased the company's value by \$50 billion. The cost of equity, capital efficiency, and the cash tax rate did not change significantly during this period, so we attribute the remaining gap to changes

in expectations for revenue growth. In Home Depot's case, growth expectations declined significantly, accounting for a \$171 billion drop in value. At the end of 2003, we estimated the revenue growth consistent with Home Depot's share price to be about 8 percent annually for the next ten years. Investors in 1998 would have had to expect the company to grow at 26 percent annually to justify the market value at the time. Such high growth expectations would have required Home Depot to triple its store count over ten years—from 760 in 1998 to more than 2,300 in 2008—with continued healthy growth until at least 2013, far beyond the saturation level predicted by some market observers. From this analysis, we are tempted to conclude that Home Depot's poor TRS since 1999 results more from an overly optimistic market value at the beginning of the period than from ineffective management.

Measuring a company's performance in the stock market isn't as easy as looking at TRS, which is driven as much by how the company was valued at the beginning of the measurement period as by its performance. MVA and the market-value-to-invested-capital ratio help to put TRS in context, but to really understand a company's stock market performance, its value must be linked to historical and projected growth and returns on capital. **MoF**

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