The Next Frontier
Building an Integrated Strategy for Value Creation
THE 2004 VALUE CREATORS REPORT

The Boston Consulting Group

Amsterdam       Houston       Prague
Athens          Istanbul      Rome
Atlanta         Jakarta      San Francisco
Auckland        Kuala Lumpur Santiago
Bangkok         Lisbon       Sao Paulo
Barcelona       London       Seoul
Beijing         Los Angeles   Shanghai
Berlin          Madrid       Singapore
Boston          Melbourne    Stockholm
Brussels        Mexico City  Stuttgart
Budapest        Miami        Sydney
Buenos Aires    Milan        Taipei
Chicago         Monterrey    Tokyo
Cologne         Moscow       Toronto
Copenhagen      Mumbai       Vienna
Dallas          Munich       Warsaw
Dusseldorf      Nagoya       Washington
Frankfurt        New Delhi   Zurich
Hamburg         New York
Helsinki         Oslo
Hong Kong       Paris
The Boston Consulting Group is a general management consulting firm that is a global leader in business strategy. BCG has helped companies in every major industry and market achieve a competitive advantage by developing and implementing winning strategies. Founded in 1963, the firm now operates 60 offices in 37 countries. For further information, please visit our Web site at www.bcg.com.

The Boston Consulting Group has other publications on corporate finance that may be of interest to senior executives. Recent examples include:

- "The Right Way to Divest" Opportunities for Action in Corporate Finance and Strategy, November 2004
- "New Rules for European Antitrust" Opportunities for Action in Corporate Finance and Strategy, May 2004
- "Thinking Differently About Dividends" BCG Perspectives, April 2003
- "Managing Through the Lean Years" BCG Perspectives, February 2003
- "Taking Deflation Seriously" BCG Perspectives, January 2003
- "New Directions in Value Management" BCG Perspectives, November 2002
- "Making Sure ‘Independent’ Doesn’t Mean ‘Ignorant’" BCG Perspectives, October 2002
- "Treating Investors Like Customers" BCG Perspectives, June 2002

For a complete list of BCG publications and information about how to obtain copies, please visit our Web site at www.bcg.com.

To receive future publications in electronic form about this topic or others, please visit our subscription Web site at www.bcg.com/subscribe.
# Table of Contents

About this Report  
For Further Contact  
Executive Summary  
Lessons of the Top Performers  
The Case for an Integrated Value-Creation Strategy  
Improving Fundamental Value  
Exploiting Valuation Multiples  
Prioritizing the Uses of Free Cash Flow  
Five Steps for Building an Integrated Value-Creation Strategy  
Methodology  
The 2004 Global Rankings  
The 2004 Regional Rankings  
The 2004 Industry Rankings
About this Report

This research report is a product of the Corporate Finance and Strategy practice of The Boston Consulting Group. **Eric Olsen** is a senior vice president and director in BCG’s Chicago office and global leader of the firm’s Value Management topic area. **Daniel Stelter** is a senior vice president and director in BCG’s Berlin office and global leader of the firm’s Corporate Finance and Strategy practice. **Pascal Xhonneux** is a vice president and director in the firm’s Düsseldorf office and leader of the Value Creators research team.

Acknowledgments
The authors would like to acknowledge the contributions of BCG’s global experts in corporate finance and strategy:

**Kees Cools**, executive adviser in BCG’s Amsterdam office and global leader of research and marketing for the firm’s Corporate Finance and Strategy practice

**Gerry Hansell**, vice president and director in BCG’s Chicago office and leader of the firm’s Corporate Finance and Strategy practice in the Americas

**David Pitman**, vice president and director in BCG’s Sydney office and leader of the firm’s Corporate Finance and Strategy practice in Asia-Pacific

**Frank Plaschke**, manager in BCG’s Munich office and project leader of the Value Creators research team

**Brett Schiedermayer**, vice president at the BCG ValueScience Center in Mountain View, California, a joint venture of BCG and ValueScience Corporation that develops leading-edge valuation tools and techniques for M&A and corporate strategy applications

The authors would also like to thank **Martin Link** and **Kerstin Biernath** of BCG’s Munich-based Value Creators research team.

To Contact the Authors
The authors welcome your questions and feedback.

**Eric Olsen**
The Boston Consulting Group, Inc.
200 South Wacker Drive
Chicago, IL 60606
USA
Telephone: +1 312 993 3300
E-mail: olsen.eric@bcg.com

**Daniel Stelter**
The Boston Consulting Group GmbH
Dircksenstrasse 41
10178 Berlin
Germany
Telephone: +49 30 28 87 10
E-mail: stelter.daniel@bcg.com

**Pascal Xhonneux**
The Boston Consulting Group GmbH
Stadtchor 1
40219 Düsseldorf
Germany
Telephone: +49 211 30 11 30
E-mail: xhonneux.pascal@bcg.com
For Further Contact

The Corporate Finance and Strategy practice of The Boston Consulting Group is a global network of experts helping clients design, implement, and maintain superior strategies for long-term value creation. The practice works in close cooperation with BCG’s industry experts and employs a variety of state-of-the-art methodologies in portfolio management, value management, mergers and acquisitions, and postmerger integration. For further information, please contact the individuals listed below.

**The Americas**

**Alan Wise**  
BCG Atlanta  
+1 404 877 5200  
wise.alan@bcg.com

**Gerry Hansell**  
BCG Chicago  
+1 312 993 3300  
hansell.gerry@bcg.com

**J Puckett**  
BCG Dallas  
+1 214 849 1500  
puckett.j@bcg.com

**Balu Balagopal**  
BCG Houston  
+1 713 286 7000  
balagopal.balu@bcg.com

**Thomas Wenrich**  
BCG Mexico City  
+52 55 5258 9999  
wenrich.thomas@bcg.com

**Jeffrey Kotzen**  
BCG New York  
+1 212 446 2800  
kotzen.jeffrey@bcg.com

**Miki Tsusaka**  
BCG New York  
+1 212 446 2800  
tsusaka.miki@bcg.com

**Rohit Bhagat**  
BCG San Francisco  
+1 415 732 8000  
bhagat.rohit@bcg.com

**Walter Piacsek**  
BCG São Paulo  
+55 11 3046 3533  
piacsek.walter@bcg.com

**John Bogert**  
BCG Toronto  
+1 416 955 4200  
bogert.john@bcg.com

**Robert Hutchinson**  
BCG Washington  
+1 301 664 7400  
hutchinson.robert@bcg.com

**Europe**

**Kees Cools**  
BCG Amsterdam  
+31 35 548 6888  
cools.kees@bcg.com

**Yvan Jansen**  
BCG Brussels  
+32 2 289 02 02  
jansen.yvan@bcg.com

**Lars Terney**  
BCG Copenhagen  
+45 77 32 34 00  
terney.lars@bcg.com

**Stuart King**  
BCG London  
+44 20 7753 5353  
kings.stuart@bcg.com

**Juan González**  
BCG Madrid  
+34 91 520 61 00  
gonzalez.juan@bcg.com

**Thomas Lewis**  
BCG Milan  
+39 0265 5991  
lewis.thomas@bcg.com

**Stephan Dertnig**  
BCG Moscow  
+7 095 258 3434  
dertnig.stephan@bcg.com

**Asia-Pacific**

**Herbert Hsu**  
BCG Hong Kong  
+852 2506 2111  
hsu.herbert@bcg.com

**Andrew Clark**  
BCG Jakarta  
+62 21 526 7775  
clark.andrew@bcg.com

**Nicholas Glenning**  
BCG Melbourne  
+61 3 9656 2100  
glenning.nicholas@bcg.com

**Anurag Poddar**  
BCG Mumbai  
+91 22 2283 7451  
poddar.anurag@bcg.com

**Byung Nam Rhee**  
BCG Seoul  
+82 2 399 2500  
rhee.byungnam@bcg.com

**Roman Scott**  
BCG Singapore  
+65 6429 2500  
scott.roman@bcg.com

**David Pitman**  
BCG Sydney  
+61 2 9523 5600  
pitman.david@bcg.com

**Naoki Shigetake**  
BCG Tokyo  
+81 3 5211 0300  
shigetake.naoki@bcg.com
Executive Summary

After 2003’s double-digit returns, average total shareholder return (TSR) to date in 2004 is barely above zero. Companies across the world are experiencing a stock pickers’ market, where returns are a function more of a company’s individual performance than of across-the-board industry or macroeconomic trends. Creating value in such an environment poses tough challenges for senior executives, but in one respect, the new focus on individual company performance also represents an important opportunity. The ability of executives to shape their company’s value-creation performance lies squarely in their own hands. More than ever, investors place a premium on good long-term management.

The Next Frontier: Building an Integrated Strategy for Value Creation, the sixth annual report in the Value Creators series published by The Boston Consulting Group, puts these challenges and opportunities in a broader context. (For more information on the Value Creators reports, see the sidebar on page 7.) In these pages, we analyze the five-year market performance of nearly 600 global companies across 12 industries. We look behind the stock-market results to identify the sources of superior performance, and we propose key areas of focus for companies to deliver superior TSR in the future. Among the highlights of this year’s study:

- Despite last year’s strong returns, global capital markets have still not recouped the value lost in the steep decline since their 2000 peak. According to the Morgan Stanley Capital International (MSCI) World Index, five-year average annual TSR for the period from 1999 through 2003 was an anemic –0.9 percent.

- Global financial markets are continuing the “back to fundamentals” trend identified in last year’s study.1 The underlying economic value of the 596 companies in our global sample improved by 11 percent between 1999 and 2003, that of the top decile by 20 percent, and that of the global top ten companies by 28 percent.

- However, declining expectation premiums (the difference between a company’s market value and its underlying fundamental value) continue to be a major drag on world capital markets. After reaching unprecedented heights in 2000, global expectation premiums are fast approaching zero.

- At the same time that average expectation premiums have declined, the premiums of the top-performing companies have increased. The growing divergence in expectation premiums between average companies and the best reflects the above-average improvements in fundamental value of the top performers as well as the increasing discernment of investors in today’s stock pickers’ market.

- The decline in expectation premiums in high-growth industries such as technology and pharmaceuticals means that traditional old-economy industries are the best performers on average. For example, the pulp-and-paper sector posted the highest five-year average annual TSR of the 12 industries in our global sample: 9 percent.

- Distributions of free cash flow, in the form of debt repayment and dividends, are becoming a more important component of TSR for many companies. BCG surveys of more than 100 institutional investors suggest that they value such direct distributions more highly than in the past.

- Looking to the future, average annual TSR is likely to be somewhere between the abnormally high returns of the 1980s and 1990s (averaging about 16 percent) and the negative returns of the past five years. If market analysts are right, annual TSR will probably average between 7 and 9 percent over the next decade—slightly below the long-term average of 10 percent.

To succeed in a market characterized by more discerning investors and more modest returns, senior executives will need to make sure they are taking advantage of the full range of levers available for delivering TSR. And they must develop a more dynamic and multifaceted approach to value creation than they have typically taken in the past. We call this approach an integrated value-creation strategy. It has three main components:

Revisiting Priorities for Using Free Cash Flow. One of the most important strategic decisions senior executives face is what to do with the free cash flow their company generates. To what degree should they invest it internally, use it to fund acquisitions, or return it to investors either by paying down debt, paying out dividends, or buying back shares? In a stock market where expected returns are modest and direct distributions of free cash flow are becoming a more important component of the total TSR package, companies need to revisit their priorities for the use of free cash flow.

This year’s Value Creators report addresses the challenges and the benefits of creating a truly integrated value-creation strategy. In the pages that follow, we

- report on the rankings of the top-performers and analyze the sources of their success
- describe the key components of an integrated value-creation strategy and how it changes the way executives think about value management
- introduce new analytical techniques that executives can use to manage tradeoffs across the key drivers of value creation
- describe five steps for creating and managing an integrated value-creation strategy

Improving Fundamental Value. Long the focus of traditional value management, improving fundamental value remains at the core of an integrated value-creation strategy. And of all the factors contributing to fundamental value, by far the most important over the long term is profitable growth. BCG estimates that from two-thirds to three-fourths of a company’s TSR over the long term is due to profitable growth. This is a timely observation, because after a period of cost cutting and belt-tightening, many executive teams now face the challenge of rebuilding their company’s growth engine.

Exploiting Valuation Multiples. But companies also need to supplement their traditional long-term focus on fundamental value with a more sophisticated understanding of how external capital markets value a company in the short to medium term. Investor expectations—as reflected in a company’s valuation multiple relative to that of its industry peers—can be an important enabler of, or constraint on, a company’s value-creation strategy. In this year’s report, BCG introduces a new methodology that allows executives to identify empirically the drivers of valuation multiples in their industry; anticipate the impact of management actions on a company’s multiple; and, within limits, manage the multiple over time.

Improve Fundamental Value. Long the focus of traditional value management, improving fundamental value remains at the core of an integrated value-creation strategy. And of all the factors contributing to fundamental value, by far the most important over the long term is profitable growth. BCG estimates that from two-thirds to three-fourths of a company’s TSR over the long term is due to profitable growth. This is a timely observation, because after a period of cost cutting and belt-tightening, many executive teams now face the challenge of rebuilding their company’s growth engine.

Our past reports have consistently emphasized the central importance of improvements in fundamental value in long-term value creation. At the same time, we have introduced new perspectives over the years that go beyond traditional value management in order to develop insights on a range of issues such as the role of investor expectations, investor strategy, and dividend policy.

This year, we combine insights from past reports with new thinking and analytical tools to present an integrated value-creation model, one that emphasizes the all-important linkages across a company’s fundamental-value engine, its valuation multiple in the market, and its financial policies such as dividend payout and capital structure. We think this integrated approach is a distinct improvement on existing approaches to value management because it focuses managerial attention on the tradeoffs that executives must manage in what is a highly dynamic value-creation system. We also believe that this integrated approach holds lessons for all managers—irrespective of industry and starting position and of whether or not their companies currently happen to be top performers.
Lessons of the Top Performers

In the six years that we have been conducting the BCG Value Creators study, global capital markets have gone through a period of extraordinary volatility. Our first report in 1999 catalogued how long-term economic growth and unusually low costs of capital (due mainly to low interest rates) had led to a long boom in market values during the 1980s and 1990s. Subsequent studies tracked the development, and warned of the ultimate decline, of a financial bubble in which inflated investor expectations pushed market values to unsustainable heights. More recently, we have analyzed how companies have struggled with the combined impact of this deflation in market values and the post-9/11 recession, primarily by refocusing on improving fundamentals through cost cutting and operational improvement.

This year’s rankings reflect the continuing volatility of world capital markets. According to the MSCI World Index, global total shareholder return (TSR) averaged 25.5 percent in 2003—the first positive annual return since 1999. (For a detailed description of TSR, see the sidebar “The Components of Total Shareholder Return.”) In 2004, however, TSR averaged only 4.1 percent through mid-October. And over the five-year period from 1999 through 2003 (the time period we will use in this study), average TSR was actually a negative 0.9 percent per year. In other words, global capital markets have still not recouped the massive amount of value destroyed in the years after their 2000 peak.

What kind of improvement in TSR was necessary to achieve top-quartile status, given those market averages? Exhibit 1 arrays the 596 companies in our

---

**EXHIBIT 1**

**AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003**

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>20.4</td>
</tr>
<tr>
<td>Second</td>
<td>9.0</td>
</tr>
<tr>
<td>Third</td>
<td>2.1</td>
</tr>
<tr>
<td>Fourth</td>
<td>-6.8</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data; values shown for top ten companies only.
The Next Frontier

The most comprehensive measure of value creation is **total shareholder return** (TSR). TSR measures the change in a company’s market value, plus its dividend yield (including changes in the number of shares), over a given period of time. There are three basic ways to increase it.

- **By improving fundamental value.** Fundamental value represents the discounted value of the future cash flows of a business, based on its margins, asset productivity, growth, and cost of capital.

- **By increasing investor expectations.** A company can grow its share price by improving how the market values the company’s fundamental performance at a given moment. Investor expectations are measured by a company’s expectation premium and can be further analyzed by comparing a company’s valuation multiple to that of its industry peers.

- **By optimizing distributions of free cash flow.** A company can also improve TSR by distributing cash to investors. For example, dividends contribute directly to TSR. But dividends, share repurchases, and debt payments can also contribute indirectly by affecting a company’s valuation multiple.

Fundamental value, investor expectations, and free cash flow are integral parts of a dynamic value-creation system. Changes in any one area can have impacts on the others. The basic challenge of value creation is to understand the linkages among these three components and manage the tradeoffs across them to ensure that management actions are mutually reinforcing rather than contradictory.

**The Components of Total Shareholder Return**

The most comprehensive measure of value creation is **total shareholder return** (TSR). TSR measures the change in a company’s market value, plus its dividend yield (including changes in the number of shares), over a given period of time. There are three basic ways to increase it.

- **By improving fundamental value.** Fundamental value represents the discounted value of the future cash flows of a business, based on its margins, asset productivity, growth, and cost of capital.

- **By increasing investor expectations.** A company can grow its share price by improving how the market values the company’s fundamental performance at a given moment. Investor expectations are measured by a company’s expectation premium and can be further analyzed by comparing a company’s valuation multiple to that of its industry peers.

- **By optimizing distributions of free cash flow.** A company can also improve TSR by distributing cash to investors. For example, dividends contribute directly to TSR. But dividends, share repurchases, and debt payments can also contribute indirectly by affecting a company’s valuation multiple.

**The Drivers of Total Shareholder Return**

Source: BCG analysis.
performance of their top ten companies. The most successful industries, on average, are traditional old-economy sectors such as pulp and paper, industrial goods, and chemicals. When the sample is restricted to the top performers in each industry, growth sectors such as technology and pharmaceuticals and biotech move into the top ranks. But more traditional sectors like industrial goods, automotive, and pulp and paper are three of the top five.

The Continuing Decline in Investor Expectations.
There is a simple but powerful reason for what might be described as the revenge of the old economy: the continuing deflation of the late-1990s financial bubble as investors radically revise their expectations for high-growth sectors of the economy. Exhibit 3 depicts the long-term evolution of expectation premiums for selected companies of the U.S. S&P 400 between 1926 and October 2004. A company’s expectation premium is the difference between its actual market value and the value derived from an analysis of its underlying fundamentals.6

Two trends are worth noting. After reaching unprecedented highs in 2000, average expectation premiums have been dropping consistently to the point where fundamental values now account for the full market value of these companies. This decline in average expectation premiums has hit previously high-flying sectors like technology particularly hard and accounts for the fact that the long-term market performance of many old-economy industries looks much better than it did a few years ago.

What’s more, as the historical trend in Exhibit 3 shows, when expectation premiums decline, they tend to overshoot, eventually moving below zero. In other words, declining investor expectations push market values below underlying fundamental values. A continuing decline may well justify the more pessimistic estimates of future TSR below 5 percent per year.

The Growing Divergence of Expectations Between Average and Top Performers.
Does this decline in investor expectations confirm the movement “back to fundamentals” that we identified in our 2003 Value Creators report?7 In one important respect, yes. Exhibit 4 compares the trend in fun-

---

**EXHIBIT 2**
**AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY INDUSTRY, 1999–2003**

<table>
<thead>
<tr>
<th>Industry</th>
<th>TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample</td>
<td></td>
</tr>
<tr>
<td>Pulp and paper</td>
<td>9</td>
</tr>
<tr>
<td>Industrial goods</td>
<td>8</td>
</tr>
<tr>
<td>Chemicals</td>
<td>6</td>
</tr>
<tr>
<td>Multibusiness</td>
<td>3</td>
</tr>
<tr>
<td>Travel, transport, and tourism</td>
<td>3</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>2</td>
</tr>
<tr>
<td>Automotive and supply</td>
<td>2</td>
</tr>
<tr>
<td>Retail</td>
<td>1</td>
</tr>
<tr>
<td>Utilities</td>
<td>0</td>
</tr>
<tr>
<td>Pharmaceuticals and biotech</td>
<td>0</td>
</tr>
<tr>
<td>Media and entertainment</td>
<td>–2</td>
</tr>
<tr>
<td>Technology</td>
<td>–3</td>
</tr>
</tbody>
</table>

**Top ten performers**

<table>
<thead>
<tr>
<th>Industry</th>
<th>TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial goods</td>
<td>38</td>
</tr>
<tr>
<td>Technology</td>
<td>31</td>
</tr>
<tr>
<td>Automotive and supply</td>
<td>30</td>
</tr>
<tr>
<td>Pharmaceuticals and biotech</td>
<td>27</td>
</tr>
<tr>
<td>Pulp and paper</td>
<td>25</td>
</tr>
<tr>
<td>Chemicals</td>
<td>22</td>
</tr>
<tr>
<td>Travel, transport, and tourism</td>
<td>21</td>
</tr>
<tr>
<td>Retail</td>
<td>20</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>20</td>
</tr>
<tr>
<td>Multibusiness</td>
<td>16</td>
</tr>
<tr>
<td>Media and entertainment</td>
<td>14</td>
</tr>
<tr>
<td>Utilities</td>
<td>13</td>
</tr>
</tbody>
</table>

**SOURCES:** Thomson Financial Worldscope; Thomson Financial Datastream; Bloomberg; Annual Reports; BCG analysis.

1 Weighted average of respective sample.

6. For a detailed discussion of expectation premiums, see “Exploiting Valuation Multiples,” p. 29.

The Next Frontier

EXHIBIT 3
EVOLUTION OF EXPECTATION PREMIUMS AT SELECTED U.S. S&P 400 COMPANIES, 1926–2004

Sources: Moody’s Manual of Investments; Compustat; ValueLine; BCG analysis.

EXHIBIT 4
GROWTH IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.
damental values and expectation premiums for three groups: the 596 companies in our 12-industry global sample, the 60 companies in the top-performing decile of this sample, and the top ten global performers. The exhibit shows that improvements in fundamental value took place across the three groups and are a key differentiator of performance among them. On average, the total sample increased fundamental value by 11 percent per year between 1998 and 2003, the top decile by 20 percent, and the global top ten by 28 percent.

However, when one compares the trends in expectation premiums for these three groups, a more complex—and more interesting—story emerges. Even as expectation premiums have been falling on average, the divergence between average expectation premiums and those of the top performers has actually been growing. Premiums for the sample as a whole have actually decreased at a rate of 11 percent per year, and the percentage of overall market value attributable to investor expectations has declined from 43 percent to 20 percent. (So far, this trend has continued in 2004; as of October 13, expectation premiums for the entire sample accounted for 19 percent of total market value.)

For the top performers, however, expectation premiums have been growing. For example, the top-decile companies grew their expectation premiums by 36 percent, on average. In 1998, expectations accounted for 25 percent of total company value, and by 2003, they accounted for 38 percent, a ratio that has continued in 2004.

For the global top ten, the increase in expectation premiums is even more dramatic. For this group of the very best performers, average expectation premiums grew a whopping 92 percent. In 1998, they accounted for only 9 percent of the total market value of this group; by 2003, they accounted for 43 percent. Both the absolute value of these top performers’ premiums and their percentage of total market value have continued to increase in 2004. Some of this increase can be attributed to a cyclical rebound from these companies’ below-average starting point, but the rest is due to increased expectations consistent with their above-average improvements in fundamental value.

Put another way, the top performers continue to benefit from substantial expectation premiums, despite the fact that average premiums for the sample as a whole have declined substantially. This growing divergence between the best and the rest reflects both the above-average improvement in the fundamentals of these companies and the increasing discernment of investors in the current stock pickers’ market environment. The challenge for top performers in the years ahead, of course, will be to continue to live up to the high expectations currently embedded in their stock prices and to make sure that future expectations do not outpace the ability of these companies to deliver.

The divergence in expectation premiums is consistent across most of the industries we have analyzed for this year’s Value Creators report. In 7 out of the 12 industries studied, the absolute values of expectation premiums have declined on average but increased for the top ten industry performers. In an additional 3 industries, the absolute values of expectation premiums are growing on average, but growing much faster for the top ten. (For a detailed analysis of trends by industry, see “The 2004 Industry Rankings” on page 61.) These results suggest that the range of premiums in many industries is getting broader. In such an environment, it is important for companies to learn to identify the drivers of their premiums, relative to industry peers, and to understand the consequences for their value-creation strategies.

**Determining the Sources of TSR.** To dig deeper into the sources of the top performers’ success, BCG has developed an approach that breaks down a company’s TSR into six financial metrics commonly used by investors. Exhibit 5 categorizes these metrics according to the three key components of TSR—fundamental value, valuation multiple, and free-cash-flow yield. The combination of sales growth and change in margins (resulting in growth in EBITDA, or earnings

8. The average percentage of market value in 2004 attributable to expectation premiums is higher in Exhibit 4 than in Exhibit 3. This difference is due to the different samples analyzed in each exhibit. Exhibit 3 calculates expectation premiums for selected companies of the U.S. S&P 400, the only data set for which we have long-term historical data. Exhibit 4 calculates expectation premiums for the 596 companies in our 12-industry global sample. Since this second sample includes larger companies, on average, and since larger companies tend to benefit from higher investor expectations, the 2004 average expectation premium in Exhibit 4 is slightly higher.
before interest, taxes, depreciation, and amortization) serves as a rough indicator of a company’s improvement in fundamental value (box 1 in Exhibit 5). The EBITDA multiple is used as a measure of a company’s valuation multiple (box 2). Finally, dividend yield, change in shares outstanding, and net debt change are all forms of distribution of free cash flow to investors (box 3). Using this model, we can analyze a company’s TSR and determine how many percentage points of TSR can be attributed to each of these six factors. (For a discussion of the benefits of these investor-oriented metrics for managers, see the sidebar “Two Approaches to Analyzing TSR,” page 16.)

Exhibit 6, page 14, portrays this TSR decomposition profile for our 596-company global sample as a whole and for the top decile. For both groups, sales growth was by far the biggest contributor to TSR—accounting for 11.8 percentage points for the top decile and 5.6 percentage points for the sample as a whole. But margin improvement was an even bigger differentiator between the two groups: although it accounted for only 1.1 percentage points of TSR for the entire sample, it was responsible for 6.5 percentage points of TSR for the top decile. In other words, the best-performing companies were able to improve their margins even as they grew their businesses.

But the biggest differentiator between the two groups is the change in their levels of debt. Because the best-performing companies were generating additional cash, they were able to use some portion of that cash to reduce their debt—an action that was responsible for an additional 8.4 percentage points of TSR. The sample as a whole, by contrast, actually increased debt, which offset one percentage point of TSR. In other words, paying down debt turns out to be an important contributor to the superior returns of the top performers. (Of course, this is not to say that all increases in debt have negative impacts on TSR. It may be that some of the debt taken on by the entire sample was used for investments that contributed to profitable growth.)

Finally, it is interesting to note that the top decile was just as aggressive in paying out dividends as the average company. For both groups, dividend yield contributed 2.1 percentage points of TSR. Clearly, the significant margin improvement of the top performers has allowed them not only to

9. In past reports, we criticized some companies’ overreliance on EBITDA as a value-management metric. (See Succeed in Uncertain Times, BCG Value Creators report, November 2002, pp. 19–20.) Because it leaves out key expenses such as capital expenditures, EBITDA is a less reliable measure of profitability than cash-based measures like cash flow return on investment and cash value-added. And because it neglects the balance sheet, it is not really an accurate proxy for a company’s free cash flow. However, EBITDA is still commonly used by investors as an indicator of a company’s earnings-growth potential. As long as it is not a company’s sole or primary value-management metric for planning purposes, it still has analytic value.

10. The EBITDA multiple is the ratio of enterprise value (the market value of equity plus the market value of debt) to EBITDA and is frequently used by investors as a rough measure of a company’s future expectations. We have chosen to use the EBITDA multiple (rather than, say, a company’s P/E ratio) in this study because many of the companies in our sample posted negative earnings in some years of our study. For more detail on this issue, see the sidebar on p. 32.

11. Turnarounds represent a special case. When a company has low or negative earnings, it can have a relatively high EBITDA multiple simply because the denominator in the ratio is unusually low. As the company’s performance improves and earnings increase, its multiple will decline. But whatever penalty this imposes on its valuation multiple will be countered by the contribution to TSR of its improved earnings.
EXHIBIT 6
TSR DECOMPOSITION PROFILE, GLOBAL SAMPLE, 1999–2003

| Source: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
| Note: Bars show contribution of each factor in percentage points of five-year average annual TSR.

EXHIBIT 7
TSR DECOMPOSITION PROFILE, PULP-AND-PAPER INDUSTRY, 1999–2003

| Source: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
| Note: Bars show contribution of each factor in percentage points of five-year average annual TSR.
invest in new growth and pay down debt but also to return cash to investors in the form of dividends.

A Renewed Focus on Direct Distributions of Free Cash Flow. The commitment of the top performers to paying down debt and paying out dividends may represent the beginnings of a trend. In the double-digit TSR environment of the 1990s, direct distributions of free cash flow to investors constituted a relatively minor contribution to TSR. But in a market environment where average annual returns are apt to be in the single digits, dividends and other distributions of free cash flow are likely to become a far more important component of a company’s total TSR package. Historically, distributions of free cash flow in the form of dividends and share repurchases have represented roughly 35 to 45 percent of market-average TSR. And there has been a shift in investor sentiment in favor of low-risk, high-payout value-creation strategies that consistently produce returns slightly above the market average—as opposed to high-risk strategies driven by aggressive growth and aiming at top-quartile or better performance.12

For an example of an industry where distributions of free cash flow have played a significant role in generating TSR, consider Exhibit 7. It presents the TSR decomposition profile for the pulp-and-paper industry, which posted the highest five-year TSR in our 12-industry sample—9 percent, on average. The exhibit shows that dividend yield is responsible for an above-average share of TSR—3.6 percentage points, on average, for the sample as a whole, and a full 5.2 percentage points for the top ten performers in the industry. What’s more, debt repayments accounted for an additional 5.8 percentage points of TSR for the top ten. For these companies, in short, the combination of just two actions—paying out dividends and paying down debt—generated enough TSR to beat the industry average.

In the lower-return market environment of the future, companies will need to take advantage of the full range of drivers of TSR and develop an integrated approach for managing the tradeoffs among them. The next section makes the case for an integrated value-creation strategy.

12. For a more detailed discussion of these trends, see “Prioritizing the Uses of Free Cash Flow,” p. 37.
Both managers and investors see above-average TSR as the ultimate goal of value creation. However, each group analyzes TSR performance in a somewhat different way. This year’s Value Creators report blends the two approaches in an integrated methodology.

Over the last two decades, many companies have embraced the principles of value management as the best way to improve a company’s TSR. Value management focuses on the actions that will improve a company’s fundamental value. And its cash-based metrics—including cash flow return on investment (CFROI), cash value-added, economic profit, and total business return, among others—have become a standard part of the corporate-finance lexicon at many companies.

The exhibit below charts the financial performance of Qualcomm, this year’s number one large-cap top performer, using traditional value-management metrics. It shows that although Qualcomm’s TSR was highly volatile during the period from 1999 through 2003 (a function of the boom and subsequent crash in the technology sector), its superior performance—an annual average TSR of 53 percent—was based on a solid foundation of extraordinary improvement in CFROI. Qualcomm more than tripled its CFROI level during this time period, mainly through improvement in cash-flow margins. And although the company’s investment growth dropped significantly in the postboom recession, the company was still able to slightly outpace industry-average growth rates during the entire period.

Value management’s cash-based metrics have two great advantages. First, they track the source of fundamental value, which, research has shown, drives a company’s TSR over the long term. Second, they

**VALUE CREATION AT QUALCOMM, 1999–2003 (I)**

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Company values (bars) correspond to left axis; industry sample values correspond to right axis.
provide a way for companies to translate their TSR targets into operational metrics that line managers can actually influence. That’s why BCG has long championed value-management concepts and used cash-based metrics as the underlying foundation of the Value Creators reports.¹ In recent years, we have introduced important refinements in the system—for example, the concept of the expectation premium to help analyze that portion of a company’s market value that is not explained by its underlying fundamental value.

Investors also care about fundamental value and the expectations embedded in a company’s stock price, but they tend to rely on a more traditional set of metrics for assessing these contributors to TSR. They are relentless in assessing the outlook for revenue growth and margins. But they also spend considerable time and effort assessing a company’s valuation multiple—in an effort to determine whether a company is over- or undervalued and what its target multiple ought to be. And all but the most aggressive growth investors are also highly sensitive to how much free cash flow a company pays out in the form of dividends, debt repayment, or share buybacks. To track these aspects of value creation, they use a broader set of metrics, including revenue growth, margins, price-to-earnings ratios, and dividend yield, among others. (The exhibit below illustrates one version of this investor’s view of TSR.)

The exhibit on page 18 provides an alternative view of Qualcomm’s performance in terms of these investor-oriented metrics. It confirms that the company’s value creation was founded on margin ¹. For a more detailed discussion of fundamental-value metrics, see “Improving Fundamental Value,” on p. 25.

---

**AN INVESTOR-ORIENTED MODEL OF TOTAL SHAREHOLDER RETURN**

- **TSR**
  - **Capital gain**
    - **EBITDA growth**
    - **EBITDA multiple**
    - **Dividend yield**
    - **Share buybacks**
    - **Debt repayment**
  - **Free-cash-flow yield**
  - **Sales growth**
    - **EBITDA margin change**
    - **Growth variables** (e.g., asset growth)
    - **Profitability variables** (e.g., gross margin)
    - **Cost efficiency variables** (e.g., inventory turnover)
    - **Leverage variables** (e.g., debt-to-capital ratio)
    - **Other variables** (e.g., dividend payout)
    - **Industry specific variables** (e.g., R&D as % of revenue)

Source: BCG analysis.
improvement considerably above the industry average, not on sales growth, which was actually below the industry average for this period. It also allows us to calculate how many percentage points of TSR were due to sales, margins, multiple improvement, and dividend yield. For example, although the crash in the technology sector caused Qualcomm’s multiple to decline dramatically from 1999 to 2000, it still grew over the course of the entire 1999–2003 period and was responsible for a full 18 percentage points of Qualcomm’s average annual TSR. One key driver of this high multiple was the company’s major improvement in margins, which is an important signal for investors of the sustainability of future EBITDA growth.

To understand the value of combining these two sets of metrics, consider the analogy to human sight. Just as it takes two eyes to produce stereoscopic vision and accurate depth perception, so it takes both these analytical lenses to develop a rich understanding of what is driving value creation in a business. Managers can use these investor-oriented metrics to understand and manage dimensions of value creation, such as relative valuation multiples and free-cash-flow yield, that they have not typically considered a high priority in the past.

### Value Creation at Qualcomm, 1999–2003 (II)

<table>
<thead>
<tr>
<th>Qualcomm</th>
<th>Total technology industry sample, n = 81</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Graphs of Total Shareholder Return, Sales Growth, EBITDA Margin, EBITDA Multiple, Dividend Yield" /></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Industry calculation based on aggregate of entire sample.
2. Share change and net debt change not shown.
3. Industry calculation based on sample average.
Creating a robust value-creation strategy is a complex and multidimensional task. Executives need to ask questions about fundamental value, the underlying economic engine on which value creation ultimately rests. For example: “What level of profitability should we target?” “How much can we grow?” “Does the source of that growth matter?” “How does growth interact with our profitability goals?”

At the same time, they need to anticipate the likely responses of investors to the decisions they make and the impact of their choices on the company’s valuation multiple. For example: “Are we fairly valued today?” “How will our plans affect our future price-to-earnings ratio (P/E)?” “What level of growth is expected by investors and already embedded in our stock price?” “What is the tradeoff between growing our earnings and maximizing our P/E—and how should we manage that tradeoff?”

Finally, they need to develop a plan for the management and use of free cash flow and explicitly pose questions such as “How much debt should we carry and what should we use it for?” “What are the priorities for the use of cash?” “What should our dividend payout be?”

Thirty years ago, the prevailing view of how to manage the tradeoffs across these three drivers of TSR was extremely simple. Most strategies for value creation emphasized delivering growth in earnings per share (EPS). This approach made two key assumptions: first, that EPS growth was a reasonable proxy for improvements in the fundamental-value engine of a company, and, second, that the level of EPS growth was the primary driver of a company’s valuation multiple. Although executives recognized that payouts of free cash flow to investors also contributed to TSR, they tended to see them as a second-order priority. The EPS approach encouraged companies to take on debt in order to fund additional earnings growth or to buy back shares in order to boost EPS by shrinking the number of shares outstanding. Most companies paid dividends only when all avenues for EPS growth had been exhausted.

Over the past 20 years or so, the discipline of value management has developed a compelling critique of this simple value-creation strategy. Proponents of value management demonstrated that in fact there is little empirical correlation between growth in EPS and actual improvements in TSR. In addition, EPS growth is a poor proxy for improvements in the underlying fundamental-value engine of a company. Because EPS growth is an accounting construct, it is vulnerable to manipulations that make it look good at the expense of a company’s actual cash flow. And since any investments above the cost of debt grow EPS, the approach encourages companies to take on debt even for investments that generate returns below the weighted average cost of capital. Finally, it encourages any acquisitions that are accretive to EPS—even those that ultimately destroy shareholder value by shrinking a company’s valuation multiple.

To address these shortcomings, the field of value management proposed an alternative approach, one that emphasizes the generation not of earnings but of free cash flow. According to this view, a company’s fundamental value is determined by its actual discounted cash flow. And because capital markets are efficient, improvements in fundamental value translate into improvements in a company’s stock-market value over time. Value management developed a variety of new metrics—cash flow return on investment (CFROI), cash value-added (CVA), economic profit, total business return—that allow companies to more accurately measure and manage a company’s fundamental value.

From this new cash-based perspective, the hurdle for new investments is not the cost of debt but rather the weighted average cost of capital. Any growth below the cost of capital destroys value instead of creating it. Finally, acquisitions create value only if they are profitable over time (that is, if they produce a positive net present value, or NPV), not simply increase EPS on the date of transaction.

Value management has helped many companies focus internal decision-making squarely on increas-
It is extremely difficult for a company to beat the market average consistently, year after year. We looked at a broad sample of 1,727 global companies with a market valuation of more than $1 billion to see how many years they have beat their local market average. As the exhibit to the right illustrates, we found that only seven have done so in nine of the last ten years.

The Korean electronics giant Samsung is the only global top performer this year that is a member of this exclusive club. From 1999 through 2003, the company posted average annual TSR of 44 percent, putting it in the number two position in our large-cap top ten. As the first Samsung exhibit shows, Samsung was able to grow its fundamental value during this period by 20 percent per year—despite significant erosion in its CFROI, which declined from 27 to 12.3 percent. The company was able to overcome this drop in profitability through rapid growth. Samsung more than doubled
its gross investment during this period, and sales growth contributed a full 21 percentage points to its average annual TSR.

The second Samsung exhibit shows that another key source of Samsung’s superior performance was improvement in its valuation multiple relative to industry peers. In 1998, the company’s EBITDA multiple was less than half that of the industry average. But Samsung was able to grow its multiple despite the crash in investor expectations in the technology sector. By 2003, Samsung’s multiple was only slightly below the industry average. This improvement in the company’s relative multiple contributed ten percentage points of TSR per year.

From an investor’s perspective, there are several critical questions facing Samsung’s future value-creation strategy. How sustainable is the company’s recent revenue growth? Can the company maintain or even improve its margins—for example, by migrating to new higher-margin opportunities? How should the company manage the tradeoff between additional growth, margin improvement, and dividend yield? Can Samsung expect further improvements in its currently below-average EBITDA multiple?

**VALUE CREATION AT SAMSUNG, 1999–2003 (II)**

**Simplified five-year TSR decomposition**

**TSR contribution (%)**

- Sales growth
- Margin change
- Multiple change
- Dividend yield

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.
ing fundamental value. In many instances, it has improved the management of existing capital employed and brought a more explicit value-creation focus to incremental investment decisions. More recent BCG research and client work, however, have identified three important refinements of the traditional value-management model:

- Although improvements in fundamental value are the source of long-term improvements in TSR, how a company goes about improving fundamental value can have either positive or negative impacts on its valuation multiple. Executives need to anticipate these impacts and manage the subsequent tradeoffs. Otherwise, they may improve fundamental value only to see their TSR decline in the near term.

- A company’s valuation multiple, relative to industry peers, is an important signal of how investors evaluate risk, sustainability, quality, and competitive advantage over the long term. It can be a significant enabler of—or constraint on—a company’s value-creation strategy. A weak multiple can raise a company’s cost of capital. It can also put a company at a disadvantage when it comes to acquisitions (because its stock will be a relatively weaker acquisitions currency), thus precluding one important pathway to growth. Indeed, it can even increase the risks of takeover by signaling to competitors that a company is undervalued relative to its peers. Although managers tend to see their valuation multiple as something largely outside their control, in fact it is possible to identify the specific drivers of multiples in a particular industry and to predict how specific company actions will affect it.

- Investors have expectations not only for a company’s capital gains but also for how much free cash flow it ought to distribute to investors. Whether or not a company pays dividends, and at what level, can have a major impact both on its near-term valuation multiple and on its long-term strategy for improving fundamental value. For this reason, the use of free cash flow also needs to be an integral part of a company’s value-creation strategy.

By addressing these areas, managers can develop a truly integrated value-creation strategy, one that creates a balance between near-term and long-term value creation and allows them to manage the tradeoffs across the entire value-creation system. Let’s consider each area in turn.
Improving Fundamental Value

Improvements in fundamental value, long the focus of traditional value management, remain at the core of an integrated value-creation strategy. In previous Value Creators reports, we have consistently emphasized the centrality of fundamental value to long-term TSR. This year, we reaffirm that centrality—and address an additional set of tradeoffs that executives must manage in order to achieve a balance between short-term and long-term TSR.

Fine-Tuning the Fundamental-Value Engine. A company’s fundamental value is a function both of returns, measured by CFROI (cash flow return on investment), and of profitable growth in the asset base of the business. There are two ways a company can boost returns: either by increasing its cash flow margins or by improving the productivity of its existing assets—in effect, doing more with less.

Improving CFROI means that a company is producing more cash per dollar of investment. This boosts earnings and net present value. By making more cash available for investment, it also signals investors to expect increased value from future investments, thus raising not only a company’s cash value-added but also its valuation multiple.

The precise impact of improvements in CFROI on a company’s stock price depends, in part, on the industry context—in particular, whether investors will consider an increase in CFROI as transitory or sustainable. Consider the example of this year’s number four large-cap top performer, Nissan. In the late 1990s, Nissan was facing a severe financial crisis. The company was saddled with $30 billion in debt and had lost money in half of the previous ten years. In 1999, French automaker Renault took a 37 percent stake in the company and engineered

---

**Exhibit 8**

**Value Creation at Nissan, 1999–2003 (I)**

<table>
<thead>
<tr>
<th>Nissan</th>
<th>Total automotive industry sample, n = 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total shareholder return</td>
<td></td>
</tr>
<tr>
<td>TSR index (1998=100)</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
</tr>
<tr>
<td>CFROI (%)</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>7.1</td>
</tr>
<tr>
<td>5.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Cash flow margin</td>
<td></td>
</tr>
<tr>
<td>Cash flow/sales (%)</td>
<td></td>
</tr>
<tr>
<td>Nissan</td>
<td>Total automotive industry sample</td>
</tr>
<tr>
<td>5.0</td>
<td>6.6</td>
</tr>
<tr>
<td>4.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Cash value-added</td>
<td></td>
</tr>
<tr>
<td>Shillions</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1999</td>
</tr>
<tr>
<td>Shillions</td>
<td></td>
</tr>
<tr>
<td>1.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Investment growth</td>
<td></td>
</tr>
<tr>
<td>Gross investment index (1998=100)</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1999</td>
</tr>
<tr>
<td>100</td>
<td>110</td>
</tr>
<tr>
<td>Asset productivity</td>
<td></td>
</tr>
<tr>
<td>Sales/gross investment</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1999</td>
</tr>
<tr>
<td>1.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Sources:* Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Company values (bars) correspond to left axis; industry sample values correspond to right axis.
the appointment of Renault vice president Carlos Ghosn as Nissan’s first non-Japanese CEO. Ghosn instituted a sweeping reorganization of the company—closing inefficient factories, reducing the workforce, curbing purchasing costs, and sharing certain operations with Renault.

Exhibit 8, page 23, and Exhibit 9, below, capture the highlights of Nissan’s five-year financial performance under Ghosn’s leadership. Clearly, the company has put a priority on improving its below-average margins as opposed to growing the company. Between 1999 and 2003, Nissan more than doubled its cash-flow margins—from 4.4 percent to 9.8 percent. The resulting increase in CFROI helped fund an increase in dividend payout, which went from 0 in 1999 to 12 percent of earnings in 2003. The combination of improved fundamental value and increased dividends gave Nissan an average annual TSR of 30 percent during this period.

From 1999 through 2003, Nissan’s multiple remained flat and dropped somewhat below the industry average. It may be that investors are waiting to see, first, whether Nissan can sustain these high margins in the highly competitive auto industry, and, second, whether the company can capitalize on its above-average margins through profitable growth.

The Imperative of Growth. Over the past five years, Nissan has used increases in CFROI (driven largely by major improvements in margins) to achieve global top-performer status. And yet, on their own, such improvements are not enough to sustain superior TSR over the long term. It is extremely difficult to improve margins or increase asset productivity year after year. Margin improvements are often competed away. Once a company has harvested the low-hanging fruit, reductions in the cost of goods sold or in selling, general, and administrative expenses tend to have diminishing returns. Improvements in asset pro-

---

**EXHIBIT 9**

VALUE CREATION AT NISSAN, 1999–2003 (II)

- **Total automotive industry sample, n = 42**

---

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.
ductivity are also harder to achieve once a company has addressed the obvious opportunities such as optimizing working capital, raising asset utilization, and reengineering its supply chain. For companies that are approaching best practice in terms of operational efficiency, continued improvements in CFROI are likely to contribute a relatively modest 1 to 3 percent of TSR per year. Such gains may be important in a market delivering average returns of 7 to 9 percent per year, but on their own they are unlikely to carry a company into the top quartile.

That’s why, for improved CFROI to have its optimum impact on value creation, it must be translated into profitable growth. Investing in growth allows companies to compound the value of their CFROI by directing the cash they produce into new opportunities that earn returns above the cost of capital. Over the long term, growth is by far the most important contributor to a company’s TSR.

BCG’s methodology for breaking down TSR into its constituent parts suggests just how important. Exhibit 10 profiles the average annual TSR of the U.S. S&P 500 for the 20-year period from 1984 through 2003. The exhibit compares the relative contribution of the drivers of fundamental value—margins and growth—as well as the contribution of changes in valuation multiples and dividend yield. The chart on the top shows that for average TSR companies, growth is consistently the most important contributor to TSR over both the short and the long term, responsible for roughly three-quarters of the total. The chart on the bottom shows that for the top-quartile companies, other factors—in particular, improvements in multiples—can loom large in the short term, but that over a 20-year time frame, growth assumes a predominant role.

This basic historical trend is reinforced by findings from this year’s Value Creators study. For example, 28 percent of the companies in our global sample grew their gross investment by 10 percent per year, on average, between 1999 and 2003, but a full 43 percent of the companies in the top tenth of the sample did so—a sign that growth is a key to superior performance.

What’s more, other BCG research suggests that investors consider growth so important that they don’t care where it comes from—that is, whether it is the result of “organic” internal investments or

---

**EXHIBIT 10**


| Sources: Compustat; BCG analysis. 

---

**S&P 500 average**

<table>
<thead>
<tr>
<th>Time span in years</th>
<th>1</th>
<th>5</th>
<th>10</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR (%)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

**Top-quartile average**

<table>
<thead>
<tr>
<th>Time span in years</th>
<th>1</th>
<th>5</th>
<th>10</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR (%)</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

comes by way of acquisitions—as long as it is profitable. We recently compared the stock-market performance of 705 public U.S. companies for the ten-year period 1993 to 2002 based on their level of M&A activity. We found that, on average, high-growth companies generated higher returns no matter what type of growth strategy they pursued. Across the three strategies in our study—organic, acquisitive, and mixed—the fast growers outperformed the slow growers by roughly 6 to 7 percent, on average.13

For an example of a global top performer that has created value through above-average growth, consider the case of Sysco. Based in Houston, Texas, Sysco is North America’s largest food-service distributor and the number six large-cap top performer in this year’s study. The $26 billion company provides systems and services for “meals prepared away from home” operations such as restaurants (including major fast-food chains such as Wendy’s), nursing homes, hospitals, and other institutional customers.

One source for Sysco’s rapid growth has been its innovative “fold-out” expansion program in which the company turns profitable distribution centers serving new markets into stand-alone companies. Sysco’s innovative decentralized structure allows the company to combine high presence in local markets with the advantages of scale—it is by far the largest player in a highly fragmented industry. Another major source of growth is the company’s frequent acquisitions of local distributors of specialty food items serving growing niche markets.

As a wholesaler, Sysco has relatively low margins compared with the consumer-goods industry as a whole. But its very high asset turnover means it generates CFROI well above the cost of capital. (See Exhibit 11.) When these returns are combined with Sysco’s

---

**EXHIBIT 11**

**VALUE CREATION AT SYSCO, 1999–2003 (I)**

![Graph showing financial metrics of Sysco and the total consumer goods industry sample.](image)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Company values (bars) correspond to left axis; industry sample values correspond to right axis.

---

well-above-average growth rate, the result is an average annual TSR of 23.6 percent during the entire five-year period. Sysco’s high CFROI funds not only substantial growth but also its relatively high dividend payout of 34 percent of earnings. The overall dividend yield contributes an additional two percentage points of TSR, on average. (See Exhibit 12.)

Managing Tradeoffs Around Growth. Improvements in fundamental value—especially in profitable growth—are key to value creation in the long term. But in the short to medium term, a company must carefully weigh the tradeoffs between investments in growth and the impact of those investments on the other dimensions of TSR—the valuation multiple and alternative uses of free cash flow.

There are situations where profitable growth improves fundamental value but does not increase a company’s stock price by an equivalent amount. In some cases, the company’s TSR remains flat because the increase in fundamental value is simply justifying expectations that are already built into the company’s stock price. In more extreme cases, investor expectations have pushed the stock price so high that the company is unable to deliver. In either situation, companies must find additional sources of growth (whether organically or through acquisition), focus on other drivers of TSR (for example, improving margins or freeing up cash to pay out as dividends)—or resign themselves to living with a declining valuation multiple and therefore lower TSR.14

In other situations, the precise way a company grows can have a differential impact on its valua-

tion multiple. It’s important to realize that investors don’t only have expectations about a company’s level of growth. They also have expectations about the sustainability of that growth, its volatility, and its degree of risk, as well as about the company’s capital structure and brand strength. The company needs to focus not on any profitable growth but on the type of growth that is best suited to the specific drivers of valuation multiples in its industry and to its current mix of investors.

By way of illustration, consider the situation of a branded consumer-products company. Typically, investors in such companies require that growth be accompanied by strong gross margins, because they see strong margins as a sign of the long-term sustainability of the brand. When such companies grow—but at the cost of weakening margins—they may improve their fundamental value only to see their valuation multiple, and overall TSR, suffer. Alternatively, when these companies are able to combine strong growth with higher margins, they will see a double benefit—not only improved fundamental value but also a higher multiple.

Finally, every investment in growth also needs to be weighed against potential alternative uses of the same cash. Growth investments are not sure bets; projected returns are often highly uncertain. In many companies, it may make sense to assess the TSR impact of using the cash needed for the least promising 20 percent of a company’s growth initiatives to retire debt, pay dividends, or repurchase shares. Depending on the drivers of valuation multiples in the industry and a company’s investor mix, these alternative uses of cash may boost TSR more than investing in lower-return or higher-risk growth opportunities.

Arriving at the right combination of near-term and long-term moves is highly specific to the company and the industry. That’s why, although fundamental value is critical to long-term value creation, no company should focus on it exclusively—to the neglect of other components of its TSR package. In the short to medium term, there may be other opportunities to improve TSR that can discipline rather than erode its ability to improve fundamental value over the long term.
Exploiting Valuation Multiples

Fundamental value drives TSR performance over the long term. But at any particular moment in time, investor expectations can push a company’s stock price significantly above—or below—the company’s fundamental value.

In previous Value Creators reports, BCG introduced a new metric, the expectation premium, to measure the impact of investor expectations on a company’s stock price. The expectation premium measures the difference between a company’s actual market value and the value derived from an analysis of its underlying fundamentals.

After reaching historically unprecedented highs in 2000, average expectation premiums have been dropping consistently during the past three years, to the point where fundamental values and actual market values are roughly equivalent. (See Exhibit 3, page 11.) But that doesn’t mean that expectation premiums have ceased to be important. From a managerial perspective, what really matters is not the absolute value of a company’s expectation premium but the relative value compared with industry peers. Our analysis shows that the divergence between average expectation premiums and those of the top performers has actually been growing. (See Exhibit 4, page 11.) For companies with expectation premiums below the industry average, improving them in order to increase shareholder value in the near term may have a high priority—particularly in industries that are consolidating or where M&A is the preferred path for growth.

But to do so, executives need a way to identify—and influence—the drivers of relative expectation premiums. This year, in an extension of our expectation-premium work, we introduce a new methodology called comparative multiple analysis.

**Comparative Multiple Analysis.** Our approach uses a company’s valuation multiple as an indicator of investor expectations. We use statistical regressions to identify correlations between the range of multiples in a given industry and a comprehensive set of financial and operational variables—including growth, profitability, risk, sustainability, and uses of free cash flow. Using this approach, we have found it possible to accurately identify what differentiates multiples in an industry and, in this way, explain why different companies have different multiples.

Exhibit 13, page 30, portrays the results of the regression analysis for 3 of the 12 industries in our sample: consumer goods, industrial goods, and pharmaceuticals and biotech. We correlated the observed multiples in these industries from 1999 to 2003 against more than 100 different variables. The list of priority drivers shows the most important factors influencing the variation of multiples in each industry. So, for example, differences in gross margins are responsible for a full 97 percent of the variance in multiples in our consumer-goods sample, 37 percent in industrial goods, and 62 percent in pharmaceuticals and biotech. The scatter diagrams plot the actual multiples of the companies in each sample against the predicted multiples derived from the regression analysis. (Each dot represents a single company’s actual multiple plotted against its predicted multiple for one of the five years analyzed.) The correlation coefficients (R²s) for these analyses range from .70 for pharmaceuticals and biotech (in other words, the model predicts 70 percent of the actual variation of multiples in the industry) to .90 for industrial goods.

We can draw at least four conclusions from this analysis. First, the drivers of multiples in an industry can be quantified with a reasonably high degree of accuracy. Second, major differences in multiples within an industry are largely the result of factors that managers can control. Third,

---


17. For reasons of data availability, we have conducted this analysis on U.S. companies only and included companies below the industry market-valuation hurdles used in our 596-company global sample.
because our statistical model is based on five years of data, these drivers are relatively stable over time. Fourth, while many of the factors influencing multiples across industries are the same (for example, gross margins and net-debt ratios show up on the list for all three industries), the relative weight of these factors is significantly different—and some factors that are extremely important in one industry have little importance or none at all in others.

In consumer goods, for example, differences in gross margins dominate variations in multiples—a sign of the importance of strong brands in this industry, since high gross margins signal the presence of a strong brand. In industrial goods, margins remain important, but growth is also a key factor—most likely a reflection of the heterogeneity of segments within this broad industry category. In pharmaceuticals and biotech, an industry with a substantial number of small startups, company size has a significant impact on valuation multiples, as does the industry-specific factor of R&D spending as a percentage of revenue.

Exhibit 14 illustrates the major differences in multiple drivers across the 12 industries in our global sample. (The “Other” category includes industry-specific factors like R&D spending in pharmaceuticals and biotech.) What is particularly striking is the importance of margins as a differentiator of industry multiples and the relative unimportance of growth. At first glance, this may seem surprising. After all, growth is a key driver of TSR in the long term. And many managers assume that it is equally important to boosting a company’s valuation multiple. But keep in mind that Exhibit 14 shows what differentiates valuation multiples within a single industry, not what drives total TSR or what determines the absolute level of multiples across industries.

There are at least two reasons why growth is rarely a differentiator of a company’s valuation multiple relative to industry peers.

- A number of the industries in our sample (for instance, pulp and paper) are generating CFROI that is either below or just at the cost of capital. In such industries, investors do not anticipate that more growth will further increase shareholder value; consequently, they do not reward above-average growth in a company’s valuation multiple.

- Other industries (for example, consumer goods) do generate CFROI substantially above the cost of capital. These industries enjoy a higher absolute multiple than the low-CFROI industries. But growth is not a significant differentia-
tor of multiples within the industry—primarily because investors do not believe that above-average growth rates are sustainable given the historically strong competition to maintain brands and market share in the industry. Although above-average profitable growth is rewarded in TSR through growth in fundamental value, it is not further rewarded through improvement in the valuation multiple.

In some industries in our sample, growth is an important differentiator of valuation multiples. In utilities, for example, growth matters primarily because of the significant differences in growth and profit potential between the largely deregulated generation companies and the regulated distribution companies in this sector. (In a more narrowly defined sample that focused on either of these two segments alone, the importance of growth as a differentiator of multiples would be significantly reduced.) However, in some industries—pharmaceuticals and biotech, for example—the growth that really matters is not so much the current growth in earnings as the expected future growth as indicated by R&D as a percentage of sales. (For details about the specific drivers in each industry, see the analyses in “The 2004 Industry Rankings,” page 61.)

The differences across multiples for a selected group of companies become more pronounced and more granular as the group becomes more narrowly defined. For example, in a recent study for a securities brokerage company, the key differentiator turned out to be the ratio of self-service to full-service customers. A similar study in the confectionery sector demonstrated that the key driver of multiples was margin volatility. For a set of companies in the pulp-and-paper sector, the ability to generate and distribute free cash flow turned out to be the most important differentiator. (For more detail on comparative multiple analysis and how it extends BCG’s previous work on expectation premiums, see the sidebar “Expectation Premiums and Comparative Multiple Analysis,” page 32.) The bottom line: when executives develop a deeper understanding of what is really driving their multiple relative to their peers, they can start taking actions to influence it—
There are two steps to assessing the impact of investor expectations on a company’s valuation: first, quantifying them relative to fundamental value and, second, explaining the differences in expectations among the company’s peer set. Analyzing expectation premiums and comparative multiples are complementary techniques for performing these two tasks.

To arrive at a company’s expectation premium, we calculate the current value of the company’s businesses (based on margins, asset productivity, and risk), as well as the future value likely to be generated from those businesses over a given period through profitable investment growth. The difference between the company’s actual market value and the value derived from this analysis of its underlying fundamentals is its expectation premium. Expectation premiums quantify the size of the gap between a company’s fundamental value and its current market valuation. Quantifying the absolute value of a company’s expectation premium can be extremely useful in helping the company determine whether its current plans will be able to fulfill the expectations that investors have for its future performance.

But the question remains why one company in a given industry has a strong or weak expectation premium relative to its peers. To answer this question, BCG developed comparative multiple analysis. It starts with the current market value of a company and compares it with some key financial metric—for example, earnings in price-to-earnings (P/E) ratios, revenues in price-to-revenue (P/R) ratios, or EBITDA in EBITDA multiples. We compare these observed multiples within an industry with a broad range of financial and performance data and run statistical regressions in order to identify what differentiates multiples in a specific industry. By identifying the precise drivers of a company’s multiple, this approach allows managers to anticipate the impact of their actions on their company’s multiple.

Ideally, comparative multiple analysis should be applied to a narrowly defined and homogeneous group and focus on the multiple that is most appropriate given the type of companies being analyzed. For early-stage startups, a P/R multiple is generally the most appropriate; for high-growth, capital-intensive businesses, EBITDA multiples tend to work best; and for well-established average-growth companies, either EBIT multiples or P/Es.

For the purposes of this study, we have chosen to analyze EBITDA multiples in the 12 broad industry groups of our global sample.1 We have used EBITDA multiples because they are the most stable measure for a broad sample that includes many companies with one or more years of abnormally low or negative earnings. Because each industry group contains a wide range of companies, the results tend to have lower empirical correlations (R²’s) than do more focused peer groups. Still, our analysis produced correlations between .65 and .92 (where an R² of 1.0 represents perfect correlation).2

1. Because of a lack of available data, we have conducted this analysis on U.S. companies only and included companies below the industry market-valuation hurdles used in our 596-company global sample.
2. The relative multiple analyses in this report are for illustrative purposes only and, in and of themselves, should not be construed as an adequate basis for management action in any of the industries analyzed.
delivering modest but profitable organic growth. Senior executives at the company were concerned about how they were going to maintain the company’s relatively high P/E. They assumed that sustaining it required the company to grow far more rapidly than it had in recent years.

Management was well down the road toward a new acquisition and a major geographic expansion when it discovered that these big strategic bets were precisely what its dominant investors did not want. What the comparative multiple analysis showed was that investors rewarded consistent low-risk earnings growth. Revenue growth was not a key driver of the multiple. Because executives had too narrow a view of what really drove their multiple, the company’s initial plan ran the risk of alienating its major investors—and thereby damaging its P/E multiple rather than improving it. Once they realized the true dynamics underlying their P/E multiple, executives modified their course in order to pursue a less aggressive and less risky path to growth.

Credit Where Credit Is Due. In many situations, companies make genuine improvements in fundamental value—only to fail to see these improvements translate into higher stock prices. Often, financial factors prevent them from getting credit from investors for performance improvements.

This was the recent experience of a major industrial-goods company in a capital-intensive industry. In terms of fundamental value, the company’s performance looked excellent. The company consistently delivered a higher return on capital employed (ROCE) than its most direct competitor. And yet, for a decade, its multiple had been 25 percent below that of its chief rival. What explained this valuation gap?

By analyzing the economic characteristics of the two companies and using comparative multiple analysis to isolate the factors determining multiples for their entire peer group, managers were able to identify and quantify four key sources of the gap. (See Exhibit 15.) For one thing, the company’s high ROCE was accompanied by above-average volatility. As a result, value investors, who constituted the company’s dominant investor group, saw the stock as a relatively risky investment and discounted it accordingly.

Moreover, the company’s chief competitor was far more disciplined in its use of free cash flow. Our example company was replacing its assets at a rate 20 percent faster than that of its competitor—but without achieving enough productivity improvement to justify the investment. As a result, investors weren’t fully benefiting from the high ROCE—whether in dividends returned to shareholders or in more cash to reinvest in profitable growth.

The company also had a much higher debt-to-capital ratio than its competitor, which exacerbated volatility and added default risk. Finally, diversification gave the company an overly complex portfolio, which caused investors to discount the company’s stock even more.

Once corporate executives realized the true sources of their relatively low multiple, they were able to design a series of moves to address the key problems. The company reshaped its portfolio to increase focus and minimize volatility (even at the price of sacrificing some high-margin but relatively risky businesses). It used the proceeds from

EXHIBIT 15

QUANTIFYING THE SOURCE OF A VALUE GAP AT AN INDUSTRIAL GOODS COMPANY

Source: BCG analysis.
Note: Numbers are for illustrative purposes only.
ENGINEERING A SOFT LANDING

Many of the best performers in our study enjoy unusually high valuation multiples. As a result, they face the challenge of how to engineer a soft landing. Consider the case of the best-performing company in our entire 596-company global sample: Brazil’s Empresa Brasileira de Aeronáutica, or Embraer.

The number four global aircraft manufacturer behind Airbus, Boeing, and Bombardier, with the equivalent of $5 billion in revenues, Embraer makes small and midsize aircraft—turboprops and so-called regional jets—for both civilian and military customers. Since the mid-1990s, Embraer has captured approximately 40 percent of the booming regional-jet market, becoming one of the few emerging-market competitors in the aerospace industry. From 1999 through 2003, the company racked up an extraordinary average annual TSR of 109 percent.

Embraer was able to achieve this remarkable feat by using all the levers responsible for superior TSR performance. As the two Embraer exhibits show, the company’s cash-flow margin, asset productivity, and CFROI are all significantly above the average of our industrial-goods industry sample and have all improved modestly during the five-year period of our study. But where Embraer really outshone its rivals was in growth. The company’s asset-base growth was more than twice the industrial-goods industry average, and its sales growth more than three times the average. This rapid sales growth, fueled by the increasing popularity of the company’s regional jets for short-haul air travel, was responsible for no less than 43 percentage points of Embraer’s average annual TSR. Embraer’s extraordinary performance has carried its EBITDA multiple from significantly below average in 1998 to above average in 2003. This improvement in its multiple relative to industry peers was responsible for an additional 44 percentage points of Embraer’s average annual TSR.

VALUE CREATION AT EMBRAER, 1999–2003 (I)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Company values (bars) correspond to left axis; industry sample values correspond to right axis.
Looking to the future, it’s likely that Embraer will have to ask itself three key questions. First, how long can it sustain its remarkable growth? Second, are there actions it should be taking today to anticipate the time when this growth starts to slow, as it inevitably will? And third, are there other ways for Embraer to sustain its above-average multiple—for example, by improving its cash-flow margins, which are already well above the industrial-goods industry average?

![Graphical representation of Embraer's value creation from 1999 to 2003](image)

**VALUE CREATION AT EMBRAER, 1999–2003 (II)**

These divestitures to pay down debt. Finally, it revised its capital-allocation process to lengthen investment cycles and depreciation periods. Within six months, these moves contributed to closing the valuation gap, resulting in a 30 percent increase—totaling about $2 billion—in the market value of the company’s equity.

**Living Up to High Expectations.** A strong relative multiple is a signal of strong investor confidence in a company’s future and can often serve as an advantaged currency for acquisitions. But it also poses a challenge—and sometimes even a threat. The fact is, in order to continue to generate superior TSR, a company’s multiple needs to be sustainable—that is, a company has to be able to deliver on the expectations it generates.

One company, for instance, had such a high multiple that executives believed they would have to generate substantial annual increases in profits over the next five years to fulfill the expectations already embedded in the stock price. Unfortunately, existing company plans could
deliver at most half of the necessary earnings growth. How could executives close this value gap?

The comparative multiple analysis revealed that it wasn’t current earnings growth that really mattered so much as future earnings potential. And the critical indicator to investors of that potential was the level of spending on R&D. Once they understood these dynamics, executives realized that they could increase R&D and create other new platforms for future growth, even though these investments came at the expense of near-term earnings growth. Although earnings growth declined somewhat, the company avoided the collapse of its multiple. The company continues to deliver TSR substantially above the industry average.

In these situations, it is important to understand that maximizing multiples, per se, is not necessarily the goal. Rather, executives need to understand how various actions will affect the multiple and then manage the tradeoffs between the multiple and other components of the overall TSR package. (For an example of how one of this year’s top performers may face this challenge, see the sidebar “Engineering a Soft Landing,” page 34.)
Prioritizing the Uses of Free Cash Flow

Improving a company’s fundamental value generates cash. Companies face the choice either to reinvest that cash (through internal investments or acquisitions) or to distribute it to investors (through debt repayment, share buybacks, or dividends).

Distributing free cash flow has an impact that goes beyond its direct contribution to TSR. For example, increasing free-cash-flow payout can also raise a company’s valuation multiple by reducing risk, adding credibility to the quality of the company’s earnings, and signaling management’s commitment to value creation. What’s more, a meaningful payout of free cash flow can also serve as a disciplining mechanism for a company’s fundamental-value engine—by creating competition for cash and pressure to improve profitability, and by making it likely that only the most promising investment projects go forward.

For nearly two decades, most managers have seen distributions of free cash flow as a relatively unimportant contributor to overall TSR. In the long bull market of the 1980s and 1990s, returning cash to investors, especially in the form of dividends, was particularly easy to dismiss. With average TSR running in the high teens, a dividend yield of even 3 or 4 percent was a relatively minor contributor to above-average TSR. And in a market environment that seemed to value growth exclusively, many managers believed that returning cash to investors through dividends actually depressed TSR by undermining the expectations of investors, who often saw such distributions as a de facto admission that management had no growth agenda and couldn’t find attractive ways to reinvest in the business.

There are more and more signs, however, that the combination of low dividend yields and high capital gains that typified the 1980s and 1990s was a historical anomaly, unlikely to reoccur anytime soon. Over a longer time period, free cash flow has been an extremely important component of TSR, representing roughly 35 to 45 percent of the market-average TSR through dividend yield and share repurchase alone. In a market environment where average returns are likely to be in the neighborhood of 7 to 9 percent, a 3 percent dividend yield represents a substantial contribution to overall TSR, and for companies in low-growth industries, paying out dividends, or increasing them, can significantly reduce the revenue growth required to deliver superior TSR.

There are strong indications that investors today view high-payout value-creation strategies much more favorably than they have in the recent past. In interviews with more than one hundred global institutional investors, BCG has identified two parallel trends. Increasingly, investors are favoring low-risk value-creation strategies that produce returns modestly above the market average—as opposed to high-risk strategies characterized by aggressive growth aimed at top-quartile or better performance. At the same time, they are putting relatively more value on distributions of free cash flow as part of their lower-risk investment strategy.

This broad reevaluation of distributions of free cash flow is driven in part by the recent crisis in investor confidence as a result of the many governance and accounting scandals of recent years. Unlike accounting measures such as earnings per share, dividends are paid in cash. They can’t be faked. And once a company has committed to paying them, they are almost never reduced. Thus they send an unambiguous signal about real performance and management’s commitment to shareholder value. As one large-fund manager put it, “When I assess management’s confidence in their business and their plans, I look first at the trend in dividend payout.” What’s more, recent empirical research strongly suggests that higher payout ratios do not necessarily reduce corporate growth. In fact, companies with higher payout ratios have significantly higher long-term earnings growth rates than companies with lower payout ratios.18

In some cases, a high-payout strategy can even help a company achieve top-performer status. Take the example of the Swedish pulp-and-paper company Holmen. From 1999 through 2003, Holmen racked up an average annual TSR of 22 percent—a full 13 percentage points above the industry average—placing it at number six in the pulp-and-paper industry rankings. What’s more, it did so despite the fact that its CFROI was flat during this period. (See Exhibit 16.)

How did Holmen do it? By providing a dividend yield significantly above the industry’s already high average. In 1999, in 2000, and again in 2003, the company paid out a special dividend to investors, over and above its usual dividend. All told, Holmen’s dividend yield was responsible for 16 percentage points of average annual TSR—more than two-thirds of the total. (See Exhibit 17.)

These trends imply that how a company decides to use its free cash flow isn’t just a tactical issue but also an important strategic choice, one that can align all the elements of a company’s value-creation strategy. The decisions executives make about how to use free cash flow have profound implications for the TSR aspirations they set and for the way they balance short-term and long-term TSR.

In defining an appropriate payout strategy, executives should ask two sets of questions. The first concerns the relative impact of free-cash-flow payout—versus reinvestment in the business—on shareholder value. For example, would a higher payout compromise the company’s plans for future improvements in fundamental value? Or might it serve as a useful discipline on those improvements? How would a higher payout affect a company’s valuation multiple? What would a higher-payout strategy deliver in terms of short-term and long-term TSR?

Another set of questions concerns the relative priorities for payouts of free cash flow. For instance,

---

**EXHIBIT 16**

**VALUE CREATION AT HOLMEN, 1999–2003 (I)**

*Holmen Total pulp-and-paper industry sample, n = 29*

---

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

---

1Company values (bars) correspond to left axis; industry sample values correspond to right axis.
is the company’s debt-to-capital ratio at an optimum level or should a significant portion of free cash flow go to paying down debt? What would be the impact of increasing dividends on the company’s valuation multiple? Would it make the company’s stock more attractive to the types of investors that the company wants to target? Is the company currently so undervalued that share repurchases would improve future TSR? (For a discussion of share buybacks, see the sidebar “Share Buybacks Versus Dividends,” page 40.) What signals will different cash-distribution alternatives send to investors and analysts?

There are no universal answers to these questions. They depend on a variety of factors—the company’s current level of CFROI, its opportunities for profitable growth, whether its multiple is above or below the peer average, its existing (or desired) mix of investors, the risk profiles of the industry and the company itself, and the aspirations of the senior management team. Nevertheless, there are five situations where a high-payout strategy may make sense:

- **When management’s aspiration is to consistently deliver TSR at or slightly above industry averages.** Not all companies should aspire to top-quartile status. What’s more, not all investors expect them to. Many fund managers are quite happy with TSR performance that is consistently two to three percentage points above the market average. In a market environment where average TSR will likely be in the neighborhood of 7 to 9 percent, free-cash-flow distributions can make a major contribution to that goal.

- **When the average CFROI of the operating business units is not significantly above the cost of capital.** A company in this situation has yet to earn the
In the 1980s and 1990s, share buybacks became a popular way for some companies to distribute cash to investors. By reducing the number of shares outstanding, buybacks were a back-door means of improving earnings per share. And at a time when stock options were an increasingly important component of senior executive compensation, buybacks also raised the value of managers’ options (in a way that paying out dividends to investors did not).

Buybacks remain an advantaged way to distribute free cash flow when a company’s stock is clearly undervalued, because they spread the same total amount of future TSR over a smaller group of remaining investors. However, many of the reasons managers preferred buybacks to dividends in the past are no longer valid.

- The perceived benefits to managers of using share buybacks to grow earnings per share have been overshadowed by the benefits of using dividend payouts to demonstrate the quality and sustainability of earnings.
- Because many companies have announced buybacks but failed to follow through on them, such announcements increasingly lack credibility with investors.
- As companies shift their incentive systems to emphasize restricted grants of stock (as opposed to stock options), the incentive to use buybacks to boost the value of options has declined.
- Changes in U.S. tax law have eliminated the previous double taxation of dividends; the choice between buybacks and dividends is now tax neutral in the U.S. market.
- Finally, a number of BCG studies demonstrate that share buybacks have a neutral-to-negative impact on P/E multiples, whereas increases in dividend payout have a consistently positive effect.

right to grow. Its first priority should be to improve CFROI and profitability. Until the company has achieved that goal, it should probably maximize cash payout.

- When a company’s CFROI is above the underlying organic growth rate for its industry. Many companies, especially in mature industries, find themselves in a situation where they are generating considerably more cash than they can invest in opportunities for profitable growth. These companies can deliver value without growth by returning a substantial portion of the cash to investors.
- When a company’s valuation multiple is either low in absolute terms or relatively low compared with industry peers. Many managers associate a high P/E ratio with high expected earnings growth. But a low P/E is often less a signal about the absence of growth than a sign that investors are not willing to pay much even for current earnings. Investors may be concerned about the quality of earnings, their sustainability, or the value of reinvesting earnings in risky or low-return projects. Whatever the reason, paying out more earnings in dividends can be a way to signal management’s conviction that the earnings are real and sustainable, and to “force” a revaluation of current earnings as investors respond to the higher dividend yield. (For an example of one company pursuing this strategy, see the sidebar “Using Free Cash Flow to Improve the Valuation Multiple.”)
- When a company’s dominant—or desired—investors are value, income, or growth-at-reasonable-price funds. For these investors, dividend yield tends to be a critical component of their investment strategy. If such investors are a dominant part of the investor base, or if attracting such investors is an important part of a company’s value-creation strategy, then dividends will be an important driver of TSR.

Finally, whatever conclusions executives reach about how to use free cash flow, every company needs to have systems in place for how to manage it. Typically, companies have rigorous systems for managing earnings. But they don’t have equivalent systems for managing free cash flow. Often, they lack explicit targets for free cash flow and
detailed processes for managing it day to day. For example, final approval for big-ticket capital-expenditure projects often occurs outside the normal budgeting-and-planning process. Management of capital expenditure and working capital is not an explicit part of many incentive systems. Improving working capital happens only sporadically rather than consistently, year after year. And to the extent that management processes do focus on the generation of free cash flow, they often neglect its effective use. For all these reasons, the generation and use of free cash flow remains an underexploited but increasingly important lever at many companies.

As companies reconsider their priorities with regard to free cash flow, however, it’s important to emphasize that any decisions must be put in the context of the company’s long-term business strategy. The choices a company makes about free cash flow have consequences for its competitive strategy within its industry. Depending on the situation, a company’s competitive position can be enhanced or eroded by decisions to pay out more cash. In some cases, increasing distributions of free cash flow to investors serves as an important discipline on line managers, causing them to avoid questionable investments that erode competitive position. But in other cases, increasing payout can reduce the cash available for investments necessary to keep up with new technology or emerging growth opportunities. As with every decision about value creation, a company’s choices about free cash flow cannot be made in isolation.

**USING FREE CASH FLOW TO IMPROVE THE VALUATION MULTIPLE**

For an illustrative example of how a company’s decisions about free cash flow can affect its multiple, take the example of the U.S. restaurant chain Lone Star Steakhouse. In early 2000, Lone Star was paying no dividend and was trading at eight and a half times earnings. On April 13, the company announced that it would start paying out almost half its earnings as a dividend, creating a yield of 5.4 percent. Investors found this yield so attractive that they began buying the stock and bidding up its price. Over the next ten days, investors bid the company’s stock and P/E up by 18 percent to ten times earnings, driving the yield down to a more competitive 4.6 percent. The short-term impact of the new dividend was to raise the company’s P/E multiple and to increase TSR by 23 percent through a simple change in financial strategy. By 2004, Lone Star’s dividend payout had increased to 51 percent of earnings, its P/E ratio had increased from 10 to 19 (significantly above that of industry leader McDonald’s), and its TSR was four times the market average during this period.

**THE RELATIONSHIP BETWEEN DIVIDEND YIELD AND P/E, LONE STAR STEAKHOUSE, APRIL 13–23, 2000**

<table>
<thead>
<tr>
<th>Yield (%)</th>
<th>10</th>
<th>8</th>
<th>6</th>
<th>4</th>
<th>2</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/E ratio (x)</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Starting position**
   - Low P/E (8.5)
   - Low payout (0%)
   - Low yield (0%)

2. **Initial increase in dividend**
   - Payout raised to 46%
   - Yield rises to 5.4%

3. **Subsequent revaluation**
   - Investors bid stock up 16% over 10 days, driving P/E up to 10 and yield down to 4.6%

**Source:** BCG analysis.
In this year’s Value Creators report, we have made the case for an integrated approach to value creation, in which executives must manage the trade-offs among three key factors: fundamental value, valuation multiples, and distributions of free cash flow. But how does a company get started? There are five basic steps in designing and implementing an integrated value-creation strategy.

Step One: Know Your Starting Point. The first step is to develop a comprehensive fact base to inform the senior management debate. Companies should aim to develop detailed quantitative and qualitative data in at least five areas:

- **Historical TSR.** Break down the sources of your historical value creation. What has been the evolution of your underlying fundamentals, investor expectations, and free cash flow?
- **Current Company Plans.** Take a hard look at what your current business plans will deliver. What kind of TSR are you likely to achieve if you deliver on these plans? Are the plans really defensible given your internal capabilities and the likely responses of competitors?
- **Industry Trends.** Broaden your analysis to include the basic economic and competitive trends driving value creation in your industry. How have the top performers in your industry succeeded in the past? What are likely to be the most important drivers of value creation in the future?
- **Capital-Market Dynamics.** Understand how the capital markets put a value on performance in your industry. What explains the variations in valuation multiples among your closest competitors? Where does your company stand relative to peers and why?
- **Investor Mix.** Engage with your dominant investors in a rich two-way dialogue. Who owns your shares and what are their priorities? Are your current plans in sync with their investment style? Do existing or desired investors find your plans credible?

Companies need to integrate investors’ perspectives and capital-market dynamics with more traditional internal and industry viewpoints. When they do, they typically discover that savvy investors have strong—and often illuminating—views on all of the above questions. But it’s important to remember that becoming more knowledgeable about what investors really want doesn’t mean letting them determine your business strategy—any more than learning about what customers really want means letting them determine your product strategy. Rather, the goal is to ensure that a company’s strategy is informed by the perspectives and requirements of its investor base, and then to work over time to create alignment between strategy and shareholders.19

Step Two: Select an Appropriate TSR Target. Once a senior executive team has assembled a comprehensive fact base, it is in a position to establish an appropriate TSR target for the future. That’s not simply a matter of choosing an aggressive goal—for example, top-quartile status in the company’s peer group. By definition, relatively few companies will meet that hurdle and even fewer will achieve it consistently year after year. Setting the right target is more a matter of developing a healthy balance between stretch goals and goals that are consistently achievable. The challenge is to define a game plan that excites current and potential investors and that motivates the organization to be the best it can be.

One effective approach is to craft two or three competing scenarios for TSR performance and thoroughly debate them. For example, contrast a low-risk strategy designed to deliver modestly above-average TSR over the long term with a more aggressive strategy designed to achieve top-quartile status or higher in the near term. Should the business go for aggressive growth, or should it become a machine for generating free cash flow? Should the company maximize near-term P/E? EPS growth? Return on capital employed? CFROI?

In exploring the key choices, it’s important to remember that sometimes what look like hard-and-fast tradeoffs at first glance may, on closer examination, turn out to be unnecessary compromises waiting to be broken. In some situations, for example, paying out more cash to investors may be the best way to discipline the organization to invest in only the most promising—and profitable—growth opportunities. The result may be both a higher yield and equal or even higher profitable growth.

The purpose of debating such scenarios is to get senior managers to articulate their priorities and beliefs. Do they really believe that the organization can achieve top-quartile TSR in the next three to five years? Or is it more likely to achieve TSR that is consistently two to three percentage points above the peer-group average for the next decade? Where you finally end up is less important than considering all the alternatives and having a rigorous debate. The goal is to develop a target and a set of self-reinforcing actions for achieving it that the entire team understands and is willing to endorse.

**Step Three: Develop a Plan to Fill the Value Gaps.**

This target-setting exercise will identify gaps between senior management’s aspirations for TSR performance and what the company’s current plans purport to deliver. In some cases, plans may appear to meet the goal, but executives are not confident that the organization can really deliver. In other cases, the plans will actually fall short of the TSR goal. Although this is sometimes merely a sign of a healthy tension between existing plans and achievable stretch goals, it is often a signal that the company needs to expand its value-creation opportunity set.

Changes in financial strategy can be a near-term opportunity to narrow the gap. For example,

### Questions Every CEO Should Know How To Answer

1. **What fundamental value will your current plans generate?** Is that performance really defensible given the competitive dynamics of your industry? Is it enough to meet your TSR aspirations?

2. **What are the market expectations embedded in your stock price?** Is there a gap between what you can deliver and what investors expect? If so, do you have a plan for closing it?

3. **What drives valuation multiples in your industry?** Why is your multiple at its current level relative to industry peers?

4. **What are the key tradeoffs between improving fundamental value, optimizing your valuation multiple, and distributing free cash flow?** Do you have a plan for managing these tradeoffs?

5. **Who are the dominant investors in your company and what are their priorities?** Are your plans in sync with their investment goals? Do they find your value-creation strategy credible?

6. **What is an appropriate TSR target given your company’s situation?** Does your management team understand and own it?

7. **How will you close the gap between the TSR your current plans are likely to generate and the TSR targets that you have set?** What are the implications for your business strategy and financial strategy?

8. **What are the consequences of your company’s value-creation strategy for line managers and their business units?** Do they know what they must deliver to achieve your TSR target? Have you translated that target into operational metrics and goals that line managers can actually influence? Are they genuinely committed to reaching these goals?

9. **Are management processes such as planning and budgeting, resource allocation, and incentive compensation aligned with your value-creation strategy?** Do they surface the right tradeoffs for management discussion? Do they appropriately balance short-term and long-term priorities?

10. **Do you have a process in place for revisiting the company’s value-creation strategy as economic conditions and the company’s situation change?** Have you established explicit triggers for activating that process?
reducing a company’s debt-to-capital ratio can lower the cost of capital, improve P/E, and offer a stronger appeal to more risk-averse investors. And increasing dividend payout not only raises yield, sometimes it can also improve P/E and create greater internal discipline, forcing managers to free up cash from working capital or underperforming fixed assets.

But closing a significant value gap usually means that a company has to find new ways to create more fundamental value—with implications for competitive strategy. For example, will meeting your TSR targets require more growth? If so, where will that growth come from—how much from internal investments in organic growth, how much from acquisitions? What are the key priorities and trade-offs you need to manage—between growth and margins, between a plan to improve fundamental value and its likely impact on your valuation multiple or on free-cash-flow yield?

Sometimes, of course, the conclusion will be that there is no easy way to close the gap. In such a situation, managers confront the unwelcome choice of either revising their TSR targets downward or considering fundamental changes in their business portfolio. Depending on the circumstances, either move may be the right thing to do, but a company should choose neither until it has thoroughly assessed all other possible actions to close the gap.

Step Four: Translate Your Value-Creation Strategy into Concrete Operational Priorities. Part of the challenge in step four is communication—making sure all key corporate and business unit executives understand the strategy and know what its implications are for their areas of responsibility. Do line managers have a clear view of the priorities for their business units? Do they understand what levers of value creation they are responsible for? Do they know what the company’s financial strategy will mean for their use of capital?

But the biggest challenge is to translate high-level TSR goals into operational metrics and targets that managers can actually influence. Can you get where you need to go by using your existing metrics—operating income, say, or return on invested capital? Or do you need to introduce a set of more formal value-management metrics—say, cash flow return on investment, total business return, or cash value-added? Whatever set of metrics you choose, make sure to incorporate them in supporting processes such as planning and budgeting, resource allocation, investor communication, financial policies, and management incentives.

Step Five: Revisit the Strategy Often. Even when a company has done the hard work of designing and implementing an integrated value-creation strategy, executives often find that they must frequently revisit their assumptions and priorities. Circumstances change. A company’s starting point evolves continuously over time. In any given company, the requirements for superior TSR performance vary over time. At times, near-term growth will be critical; at other times, traditional sources of growth will be exhausted and a company will have to shift its focus to profitability and free cash flow in order to regroup and build the next growth platform. The key is knowing where you, your industry, and your investor mix are in the cycle at any moment in time, and what you need to do in order to shift the balance among the three dimensions of value creation. Being prepared to adapt strategy to a changing situation will enable a company to anticipate what drivers will be most important in the future and so avoid the common mistake of becoming trapped by legacy value-creation priorities that are no longer relevant.

Only when they have taken these five steps can executives really be confident that their company has an integrated value-creation strategy. Executives often find not only that they can take advantage of the full range of levers for generating TSR but also that they have created a powerful language with which to raise the quality of the strategic debate about value creation—between the senior team and the company’s board, between corporate and line management, between the company and its investors. Building an integrated value-creation strategy is the best way to keep pace with the challenges—and the opportunities—of today’s much tougher stock-market environment.

Methodology

The 2004 Value Creators study is based on the analysis of total shareholder return at 596 global companies for the five-year period from 1999 through 2003.

To arrive at this sample, we began with returns data for some 5,000 companies provided by Thomson Financial Worldscope. We eliminated all companies that were not listed on some world stock exchange for the full five years of our study or did not have at least 25 percent of their shares available on public capital markets. We also eliminated certain industries from our sample—for example, financial services. Finally, we further refined the sample by organizing the remaining companies into 12 industry groups and establishing an appropriate market-valuation hurdle to eliminate the smallest companies in each industry. (The size of the market-valuation hurdle for each individual industry can be found in the tables in “The 2004 Industry Rankings,” beginning on page 61.) The resulting 596-company sample is used for most of the analyses in the report.

We also applied one more filter to our sample to identify the best-performing large global companies: a market-valuation hurdle of $20 billion. This gave us 142 large-cap companies. In addition to our 596-company sample, we have also included rankings for the large-cap top ten in “The 2004 Global Rankings,” pages 46–51, and many of these companies serve as case studies in the report itself.

The global, regional, and industry rankings are based on five-year TSR performance from 1999 through 2003. We also show TSR performance for 2004, through October 13. In addition, we break down TSR performance into key operational and financial metrics. First, for every company and industry, we calculate the growth (or decline) in fundamental value and in expectation premiums for the five-year period from 1999 to 2003. Second, we break down TSR performance into the six investor-oriented financial metrics described on pages 12–13. Both analyses can be found in the rankings.

Finally, at a number of points in the report, we have included analyses of other samples where the lack of available data made it difficult to analyze our global sample. For example, we show historical data on expectation premiums at selected companies of the U.S. S&P 400. We limit our comparative multiple analysis to selected U.S. companies in our 12 industries, including some below the industry-specific market-valuation hurdles used in our 596-company sample. And we cite recent BCG research comparing the stock-market performance of 705 public U.S. companies for the ten-year period 1993–2002 based on their level of M&A activity. Finally, in one case (page 20), we analyze 1,727 global companies with a 2003 market valuation of more than $1 billion and for which we have ten-year TSR data, in order to see how many years each company has exceeded its local market average.

---

21. We chose to exclude financial services because measuring value creation in the sector poses unique analytical problems that make it difficult to compare the performance of financial-services companies with that of companies in other sectors. For BCG’s view of value creation in financial services, see The Path to Value Creation: Global Corporate Banking 2003, BCG report, November 2003.

22. TSR is a dynamic ratio that includes price gains and dividend payments for a specific stock during a given period of time. To measure performance from 1999 through 2003, 1998 end-of-year data must be used as a starting point in order to capture the change from 1998 to 1999, which drives 1999 TSR. For this reason, all exhibits in the report showing 1999-2003 performance begin with a 1998 data point.
### THE GLOBAL TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EMBRAER</td>
<td>BRAZIL</td>
<td>INDUSTRIAL GOODS</td>
<td>108.7</td>
<td>5.841</td>
<td>59</td>
<td>43</td>
<td>0</td>
<td>44</td>
<td>3</td>
<td>-4</td>
<td>22</td>
<td>-26.8</td>
</tr>
<tr>
<td>2</td>
<td>DERWAY MOTORS</td>
<td>HONG KONG</td>
<td>AUTOMOTIVE</td>
<td>87.8</td>
<td>3.728</td>
<td>84</td>
<td>20</td>
<td>-32</td>
<td>102</td>
<td>2</td>
<td>-19</td>
<td>15</td>
<td>-28.8</td>
</tr>
<tr>
<td>3</td>
<td>VOTORANTIM CELULOSE</td>
<td>BRAZIL</td>
<td>PULP AND PAPER</td>
<td>74.2</td>
<td>1.088</td>
<td>-16</td>
<td>38</td>
<td>14</td>
<td>12</td>
<td>4</td>
<td>-1</td>
<td>6</td>
<td>11.4</td>
</tr>
<tr>
<td>4</td>
<td>ARACRUZ CELULOSE</td>
<td>BRAZIL</td>
<td>PULP AND PAPER</td>
<td>99.6</td>
<td>2.133</td>
<td>35</td>
<td>52</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>6.8</td>
</tr>
<tr>
<td>5</td>
<td>LABORATORY CORP</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>60.8</td>
<td>5.287</td>
<td>2</td>
<td>13</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>-19</td>
<td>47</td>
<td>16.2</td>
</tr>
<tr>
<td>6</td>
<td>VOTORANTIM CELULOSE</td>
<td>BRAZIL</td>
<td>INDUSTRIAL GOODS</td>
<td>56.4</td>
<td>3.786</td>
<td>35</td>
<td>31</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>-1</td>
<td>-1</td>
<td>5.1</td>
</tr>
<tr>
<td>7</td>
<td>NDK</td>
<td>JAPAN</td>
<td>AUTOMOTIVE</td>
<td>53.3</td>
<td>6.133</td>
<td>69</td>
<td>5</td>
<td>6</td>
<td>31</td>
<td>2</td>
<td>0</td>
<td>9</td>
<td>7.9</td>
</tr>
<tr>
<td>8</td>
<td>QUALCOMM</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>53.0</td>
<td>43.148</td>
<td>50</td>
<td>4</td>
<td>32</td>
<td>18</td>
<td>0</td>
<td>-6</td>
<td>5</td>
<td>53.5</td>
</tr>
<tr>
<td>9</td>
<td>SYMANTEC</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>44.7</td>
<td>10.628</td>
<td>45</td>
<td>23</td>
<td>18</td>
<td>10</td>
<td>0</td>
<td>-5</td>
<td>-1</td>
<td>61.5</td>
</tr>
<tr>
<td>10</td>
<td>SAMSUNG ELECTRONICS</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>44.2</td>
<td>61.926</td>
<td>40</td>
<td>21</td>
<td>-3</td>
<td>10</td>
<td>3</td>
<td>-3</td>
<td>15</td>
<td>-0.1</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

1. Contribution of each factor is shown in percentage points of five-year average annual TSR.
4. Expectation premium as percentage of total 2003 market value.
5. Change in EBITDA multiple.

### AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data; values shown for top ten companies only.
**CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003**

**Total global sample**

- Value index
- 1998: 100
- 2003: 119
- 2004: 118
- 11% per year
- n = 596

**Top decile**

- Value index
- 1998: 100
- 2003: 299
- 2004: 319
- 35% per year
- n = 50

**Global top ten**

- Value index
- 1998: 100
- 2003: 47
- 2004: 637
- 32% per year
- n = 10

**SOURCES:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Market capitalization plus net debt, 1998 = 100.

2 Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

---

**VALUE CREATION AT THE TOP TEN VERSUS GLOBAL SAMPLE, 1999–2003 (I)**

**Top ten**

- Total shareholder return
- TSR index (1998 = 100)

- Profitability

- Cash flow margin

**Total sample, n = 596**

- Total shareholder return
- TSR index (1998 = 100)

- Profitability

- Cash flow margin

**Cash value-added**

- Shillings

**Investment growth**

- Gross investment index (1998 = 100)

**Acct productivity**

- Sales/gross investment

**SOURCES:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS GLOBAL SAMPLE, 1999–2003 (II)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market valuea (Billions)</th>
<th>Expect, premiumb (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple changec (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>QUALCOMM</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>53.0</td>
<td>43.148</td>
<td>50</td>
<td>4</td>
<td>32</td>
<td>18</td>
<td>0</td>
<td>−6</td>
<td>5</td>
<td>−24.2</td>
</tr>
<tr>
<td>2</td>
<td>SAMSUNG ELECTRONICS</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>44.2</td>
<td>61.926</td>
<td>40</td>
<td>21</td>
<td>−3</td>
<td>10</td>
<td>3</td>
<td>−3</td>
<td>15</td>
<td>−0.1</td>
</tr>
<tr>
<td>3</td>
<td>FOREST LABORATORIES</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>36.0</td>
<td>22.596</td>
<td>37</td>
<td>37</td>
<td>21</td>
<td>−19</td>
<td>0</td>
<td>−3</td>
<td>0</td>
<td>−24.2</td>
</tr>
<tr>
<td>4</td>
<td>NISSAN MOTOR</td>
<td>JAPAN</td>
<td>AUTOMOTIVE</td>
<td>29.8</td>
<td>51.632</td>
<td>20</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>−10</td>
<td>26</td>
<td>0.7</td>
</tr>
<tr>
<td>5</td>
<td>EBAY</td>
<td>UNITED STATES</td>
<td>CONSUMER GOODS</td>
<td>26.3</td>
<td>41.737</td>
<td>78</td>
<td>68</td>
<td>10</td>
<td>−48</td>
<td>0</td>
<td>−7</td>
<td>0</td>
<td>45.1</td>
</tr>
<tr>
<td>6</td>
<td>SYSCO</td>
<td>UNITED STATES</td>
<td>CONSUMER GOODS</td>
<td>23.6</td>
<td>24.093</td>
<td>62</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>−18.0</td>
</tr>
<tr>
<td>7</td>
<td>BOSTON SCIENTIFIC</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>22.4</td>
<td>30.112</td>
<td>65</td>
<td>10</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>−1</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>8</td>
<td>3M</td>
<td>UNITED STATES</td>
<td>MULTIBUSINESS</td>
<td>21.7</td>
<td>66.579</td>
<td>59</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>−5.6</td>
</tr>
<tr>
<td>9</td>
<td>RIO TINTO</td>
<td>UNITED KINGDOM</td>
<td>INDUSTRIAL GOODS</td>
<td>21.7</td>
<td>29.385</td>
<td>24</td>
<td>6</td>
<td>11</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
</tr>
<tr>
<td>10</td>
<td>BHP BILLITON</td>
<td>AUSTRALIA</td>
<td>INDUSTRIAL GOODS</td>
<td>21.1</td>
<td>34.482</td>
<td>25</td>
<td>−6</td>
<td>25</td>
<td>22</td>
<td>3</td>
<td>−21</td>
<td>−2</td>
<td>24.9</td>
</tr>
</tbody>
</table>

SOURCES: Thomson Financial Datastream; BCG analysis.
Note: n = 142 global companies with market valuation greater than $20 billion.
1Contribution of each factor is shown in percentage points of five-year average annual TSR.
3As of December 31, 2003.
4Expectation premium as percentage of total 2003 market value.
5Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>First quartile</th>
<th>Second quartile</th>
<th>Third quartile</th>
<th>Fourth quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>142</td>
<td>16.4</td>
<td>5.3</td>
<td>−9.9</td>
<td>−7.5</td>
</tr>
</tbody>
</table>

n = 142

Sources: Thomson Financial Datastream; BCG analysis.
Note: TSR derived from calendar year data.
Change in Fundamental Value and Expectation Premiums, 1999–2003

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

Value Creation at Top Ten versus Global Sample, 1999–2003 (I)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS GLOBAL SAMPLE, 1999–2003 (II)

**Total shareholder return**
- TSR index (1998 = 100)
- Sales growth
- EBITDA margin

**Simplified five-year TSR decomposition**
- TSR contribution (%)
- EBITDA multiple
- Dividend yield

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Industry calculation based on aggregate of entire sample.
2 Share change and net debt change not shown.
3 Industry calculation based on sample average.
## AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market value(^3) ($billions)</th>
<th>Expect. premium(^1) (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change(^2) (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SAMSUNG ELECTRONICS</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>44.2</td>
<td>61.926</td>
<td>40</td>
<td>21</td>
<td>–3</td>
<td>10</td>
<td>3</td>
<td>–3</td>
<td>15</td>
<td>–0.1</td>
</tr>
<tr>
<td>2</td>
<td>RELIANCE INDUSTRIES</td>
<td>INDIA</td>
<td>CHEMICALS</td>
<td>38.6</td>
<td>17.537</td>
<td>44</td>
<td>35</td>
<td>–6</td>
<td>9</td>
<td>3</td>
<td>–8</td>
<td>6</td>
<td>–5.0</td>
</tr>
<tr>
<td>3</td>
<td>NISSAN MOTOR</td>
<td>JAPAN</td>
<td>AUTOMOTIVE</td>
<td>29.8</td>
<td>51.632</td>
<td>20</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>–10</td>
<td>26</td>
<td>0.7</td>
</tr>
<tr>
<td>4</td>
<td>SK TELECOM</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>28.2</td>
<td>13.742</td>
<td>18</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>–2</td>
<td>1</td>
<td>–8.8</td>
</tr>
<tr>
<td>5</td>
<td>POSCO</td>
<td>SOUTH KOREA</td>
<td>INDUSTRIAL GOODS</td>
<td>24.1</td>
<td>12.171</td>
<td>–26</td>
<td>6</td>
<td>4</td>
<td>–3</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>13.4</td>
</tr>
<tr>
<td>6</td>
<td>BHP BILLITON</td>
<td>AUSTRALIA</td>
<td>INDUSTRIAL GOODS</td>
<td>21.1</td>
<td>34.482</td>
<td>25</td>
<td>–8</td>
<td>25</td>
<td>22</td>
<td>3</td>
<td>–21</td>
<td>2</td>
<td>24.9</td>
</tr>
<tr>
<td>7</td>
<td>TAIWAN SEMICONDUCTOR</td>
<td>TAIWAN</td>
<td>TECHNOLOGY</td>
<td>18.6</td>
<td>37.907</td>
<td>68</td>
<td>30</td>
<td>1</td>
<td>–9</td>
<td>0</td>
<td>–5</td>
<td>2</td>
<td>–22.5</td>
</tr>
<tr>
<td>8</td>
<td>CANON</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>16.4</td>
<td>41.035</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>–2</td>
<td>1</td>
<td>–18</td>
<td>1</td>
<td>7.1</td>
</tr>
<tr>
<td>9</td>
<td>RICOH CO</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>16.0</td>
<td>14.701</td>
<td>34</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>–1</td>
<td>6</td>
<td>4.3</td>
</tr>
<tr>
<td>10</td>
<td>TOKYO ELECTRON</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>13.8</td>
<td>13.718</td>
<td>75</td>
<td>0</td>
<td>–17</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>–30.6</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 56 global companies with market valuation greater than $10 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.


3 As of December 31, 2003.

4 Expectation premium as percentage of total 2003 market value.

5 Change in EBITDA multiple.


---

## THE ASIA-PACIFIC TOP TEN, 1999–2003

**TSR Decomposition\(^1\)**

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market value(^3) ($billions)</th>
<th>Expect. premium(^1) (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change(^2) (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SAMSUNG ELECTRONICS</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>44.2</td>
<td>61.926</td>
<td>40</td>
<td>21</td>
<td>–3</td>
<td>10</td>
<td>3</td>
<td>–3</td>
<td>15</td>
<td>–0.1</td>
</tr>
<tr>
<td>2</td>
<td>RELIANCE INDUSTRIES</td>
<td>INDIA</td>
<td>CHEMICALS</td>
<td>38.6</td>
<td>17.537</td>
<td>44</td>
<td>35</td>
<td>–6</td>
<td>9</td>
<td>3</td>
<td>–8</td>
<td>6</td>
<td>–5.0</td>
</tr>
<tr>
<td>3</td>
<td>NISSAN MOTOR</td>
<td>JAPAN</td>
<td>AUTOMOTIVE</td>
<td>29.8</td>
<td>51.632</td>
<td>20</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>–10</td>
<td>26</td>
<td>0.7</td>
</tr>
<tr>
<td>4</td>
<td>SK TELECOM</td>
<td>SOUTH KOREA</td>
<td>TECHNOLOGY</td>
<td>28.2</td>
<td>13.742</td>
<td>18</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>–2</td>
<td>1</td>
<td>–8.8</td>
</tr>
<tr>
<td>5</td>
<td>POSCO</td>
<td>SOUTH KOREA</td>
<td>INDUSTRIAL GOODS</td>
<td>24.1</td>
<td>12.171</td>
<td>–26</td>
<td>6</td>
<td>4</td>
<td>–3</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>13.4</td>
</tr>
<tr>
<td>6</td>
<td>BHP BILLITON</td>
<td>AUSTRALIA</td>
<td>INDUSTRIAL GOODS</td>
<td>21.1</td>
<td>34.482</td>
<td>25</td>
<td>–8</td>
<td>25</td>
<td>22</td>
<td>3</td>
<td>–21</td>
<td>2</td>
<td>24.9</td>
</tr>
<tr>
<td>7</td>
<td>TAIWAN SEMICONDUCTOR</td>
<td>TAIWAN</td>
<td>TECHNOLOGY</td>
<td>18.6</td>
<td>37.907</td>
<td>68</td>
<td>30</td>
<td>1</td>
<td>–9</td>
<td>0</td>
<td>–5</td>
<td>2</td>
<td>–22.5</td>
</tr>
<tr>
<td>8</td>
<td>CANON</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>16.4</td>
<td>41.035</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>–2</td>
<td>1</td>
<td>–18</td>
<td>1</td>
<td>7.1</td>
</tr>
<tr>
<td>9</td>
<td>RICOH CO</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>16.0</td>
<td>14.701</td>
<td>34</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>–1</td>
<td>6</td>
<td>4.3</td>
</tr>
<tr>
<td>10</td>
<td>TOKYO ELECTRON</td>
<td>JAPAN</td>
<td>TECHNOLOGY</td>
<td>13.8</td>
<td>13.718</td>
<td>75</td>
<td>0</td>
<td>–17</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>–30.6</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 56 global companies with market valuation greater than $10 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.


3 As of December 31, 2003.

4 Expectation premium as percentage of total 2003 market value.

5 Change in EBITDA multiple.

**Change in Fundamental Value and Expectation Premiums, 1999–2003**

![Graphs showing value creation at top ten versus regional sample, 1999–2003 (1)](image_url)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

2. Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

**Value Creation at Top Ten Versus Regional Sample, 1999–2003 (1)**

![Graphs showing value creation at top ten versus regional sample, 1999–2003 (1)](image_url)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS REGIONAL SAMPLE, 1999–2003 (II)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

---

**Top ten**

- **Total shareholder return**
  - TSR index (1998=100)
  - Total sample, n = 56
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Sales growth**
  - Sales index (1998=100)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **EBITDA margin**
  - EBITDA/revenue (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Simplified five-year TSR decomposition**
  - TSR contribution (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **EBITDA multiple**
  - Enterprise value/EBITDA (x)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Dividend yield**
  - Dividend/stock price (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

---

**Notes:**

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

---

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

---

**Top ten**

- **Total shareholder return**
  - TSR index (1998=100)
  - Total sample, n = 56
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Sales growth**
  - Sales index (1998=100)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **EBITDA margin**
  - EBITDA/revenue (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Simplified five-year TSR decomposition**
  - TSR contribution (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **EBITDA multiple**
  - Enterprise value/EBITDA (x)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

- **Dividend yield**
  - Dividend/stock price (%)
  - ‘98 ‘99 ‘00 ‘01 ‘02 ‘03

---

**Notes:**

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.
### THE EUROPEAN TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RIO TINTO</td>
<td>UNITED KINGDOM</td>
<td>INDUSTRIAL GOODS</td>
<td>21.7</td>
<td>29.385</td>
<td>24</td>
<td>6</td>
<td>11</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>PORSCHE</td>
<td>GERMANY</td>
<td>AUTOMOTIVE</td>
<td>20.9</td>
<td>10.353</td>
<td>−5</td>
<td>17</td>
<td>12</td>
<td>−10</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>12.2</td>
</tr>
<tr>
<td>3</td>
<td>IMPERIAL TOBACCO</td>
<td>UNITED KINGDOM</td>
<td>CONSUMER GOODS</td>
<td>20.0</td>
<td>14.321</td>
<td>−3</td>
<td>26</td>
<td>−5</td>
<td>−3</td>
<td>4</td>
<td>−3</td>
<td>0</td>
<td>16.3</td>
</tr>
<tr>
<td>4</td>
<td>CHRISTIAN DIOR</td>
<td>FRANCE</td>
<td>CONSUMER GOODS</td>
<td>18.4</td>
<td>11.010</td>
<td>−20</td>
<td>11</td>
<td>2</td>
<td>−15</td>
<td>3</td>
<td>0</td>
<td>17</td>
<td>7.3</td>
</tr>
<tr>
<td>5</td>
<td>PEUGEOT</td>
<td>FRANCE</td>
<td>AUTOMOTIVE</td>
<td>16.1</td>
<td>12.389</td>
<td>−2</td>
<td>10</td>
<td>−5</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>6</td>
<td>LVMH</td>
<td>FRANCE</td>
<td>CONSUMER GOODS</td>
<td>15.7</td>
<td>35.658</td>
<td>40</td>
<td>12</td>
<td>3</td>
<td>−2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>−0.1</td>
</tr>
<tr>
<td>7</td>
<td>BRIT. AMERICAN TOBACCO</td>
<td>UNITED KINGDOM</td>
<td>CONSUMER GOODS</td>
<td>15.4</td>
<td>28.677</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>−1</td>
<td>8</td>
<td>−6</td>
<td>−1</td>
<td>9.5</td>
</tr>
<tr>
<td>8</td>
<td>STMICROELECTRONICS</td>
<td>FRANCE</td>
<td>TECHNOLOGY</td>
<td>14.1</td>
<td>24.435</td>
<td>57</td>
<td>11</td>
<td>−2</td>
<td>5</td>
<td>0</td>
<td>−1</td>
<td>0</td>
<td>−33.7</td>
</tr>
<tr>
<td>9</td>
<td>CENTRICA</td>
<td>UNITED KINGDOM</td>
<td>UTILITIES</td>
<td>13.7</td>
<td>16.970</td>
<td>−15</td>
<td>18</td>
<td>5</td>
<td>−13</td>
<td>5</td>
<td>1</td>
<td>−1</td>
<td>18.9</td>
</tr>
<tr>
<td>10</td>
<td>SIEMENS</td>
<td>GERMANY</td>
<td>MULTIBUSINESS</td>
<td>13.5</td>
<td>71.692</td>
<td>24</td>
<td>4</td>
<td>−1</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>−2.1</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** $n = 81$ global companies with market valuation greater than $10$ billion.

1. Contribution of each factor is shown in percentage points of five-year average annual TSR.
4. Expectation premium as percentage of total 2003 market value.
5. Change in EBITDA multiple.

### AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>13.4</td>
</tr>
<tr>
<td>63</td>
<td>5.0</td>
</tr>
<tr>
<td>42</td>
<td>−3.0</td>
</tr>
<tr>
<td>21</td>
<td>−12.0</td>
</tr>
<tr>
<td>0</td>
<td>−30</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
VALUE CREATION AT TOP TEN VERSUS GLOBAL SAMPLE, 1999–2003 (I)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.

CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.
VALUE CREATION AT TOP TEN VERSUS REGIONAL SAMPLE, 1999–2003 (II)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Industry calculation based on aggregate of entire sample.

2 Share change and net debt change not shown.

3 Industry calculation based on sample average.
THE NORTH AMERICAN TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>Industry</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>QUALCOMM</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>53.0</td>
<td>43.148</td>
<td>50</td>
<td>4</td>
<td>32</td>
<td>18</td>
<td>0</td>
<td>-6</td>
<td>5</td>
<td>53.5</td>
</tr>
<tr>
<td>2</td>
<td>FOREST LABORATORIES</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>36.0</td>
<td>22.596</td>
<td>37</td>
<td>37</td>
<td>21</td>
<td>-10</td>
<td>0</td>
<td>-3</td>
<td>0</td>
<td>-24.2</td>
</tr>
<tr>
<td>3</td>
<td>EBAY</td>
<td>UNITED STATES</td>
<td>RETAIL</td>
<td>26.3</td>
<td>41.737</td>
<td>78</td>
<td>69</td>
<td>10</td>
<td>-48</td>
<td>0</td>
<td>-7</td>
<td>0</td>
<td>45.1</td>
</tr>
<tr>
<td>4</td>
<td>STRYKER</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>25.5</td>
<td>16.958</td>
<td>29</td>
<td>27</td>
<td>2</td>
<td>-7</td>
<td>0</td>
<td>-1</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>5</td>
<td>ANALOG DEVICES</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>23.8</td>
<td>16.973</td>
<td>69</td>
<td>11</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>-3</td>
<td>3</td>
<td>-15.6</td>
</tr>
<tr>
<td>6</td>
<td>SYSCO</td>
<td>UNITED STATES</td>
<td>CONSUMER GOODS</td>
<td>23.6</td>
<td>24.093</td>
<td>62</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-16.0</td>
</tr>
<tr>
<td>7</td>
<td>VERITAS SOFTWARE</td>
<td>UNITED STATES</td>
<td>TECHNOLOGY</td>
<td>22.7</td>
<td>15.829</td>
<td>61</td>
<td>47</td>
<td>3</td>
<td>-13</td>
<td>0</td>
<td>-14</td>
<td>1</td>
<td>-44.3</td>
</tr>
<tr>
<td>8</td>
<td>BOSTON SCIENTIFIC</td>
<td>UNITED STATES</td>
<td>PHARMACEUTICALS</td>
<td>22.4</td>
<td>30.112</td>
<td>65</td>
<td>10</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>-1</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>9</td>
<td>NEWMONT MINING</td>
<td>UNITED STATES</td>
<td>INDUSTRIAL GOODS</td>
<td>22.3</td>
<td>17.801</td>
<td>43</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>1</td>
<td>-18</td>
<td>7</td>
<td>-5.3</td>
</tr>
<tr>
<td>10</td>
<td>3M</td>
<td>UNITED STATES</td>
<td>MULTIBUSINESS</td>
<td>21.7</td>
<td>66.579</td>
<td>59</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>-5.6</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.

Note: n = 105 global companies with market valuation greater than $15 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.
3 As of December 31, 2003.
4 Expectation premium as percentage of total 2003 market value.
5 Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

Sources: Thomson Financial Datastream; BCG analysis.

Note: TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS REGIONAL SAMPLE, 1999–2003 (I)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS REGIONAL SAMPLE, 1999–2003 (II)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Industry calculation based on aggregate of entire sample.

2 Share change and net debt change not shown.

3 Industry calculation based on sample average.
The 2004 Industry Rankings
Automotive and Supply

THE AUTOMOTIVE TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DENWAY MOTORS</td>
<td>HONG KONG</td>
<td>87.8</td>
<td>3.728</td>
<td>84</td>
<td>20</td>
<td>–32</td>
<td>102</td>
<td>2</td>
<td>–19</td>
<td>15</td>
<td>–29.8</td>
</tr>
<tr>
<td>2</td>
<td>NOK</td>
<td>JAPAN</td>
<td>53.3</td>
<td>6.133</td>
<td>69</td>
<td>5</td>
<td>6</td>
<td>31</td>
<td>2</td>
<td>0</td>
<td>9</td>
<td>–7.9</td>
</tr>
<tr>
<td>3</td>
<td>STANLEY ELECTRIC</td>
<td>JAPAN</td>
<td>42.4</td>
<td>3.645</td>
<td>46</td>
<td>4</td>
<td>11</td>
<td>24</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>–25.5</td>
</tr>
<tr>
<td>4</td>
<td>TOYODA GOSEI</td>
<td>JAPAN</td>
<td>40.0</td>
<td>3.590</td>
<td>48</td>
<td>5</td>
<td>6</td>
<td>28</td>
<td>2</td>
<td>–3</td>
<td>2</td>
<td>–25.4</td>
</tr>
<tr>
<td>5</td>
<td>PACCAR</td>
<td>UNITED STATES</td>
<td>30.3</td>
<td>9.932</td>
<td>22</td>
<td>1</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>24.3</td>
</tr>
<tr>
<td>6</td>
<td>HYUNDAI MOTOR</td>
<td>SOUTH KOREA</td>
<td>30.3</td>
<td>10.503</td>
<td>–4</td>
<td>33</td>
<td>1</td>
<td>–2</td>
<td>2</td>
<td>–29</td>
<td>25</td>
<td>12.7</td>
</tr>
<tr>
<td>7</td>
<td>NISSAN MOTOR</td>
<td>JAPAN</td>
<td>29.8</td>
<td>51.632</td>
<td>20</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>–10</td>
<td>26</td>
<td>0.7</td>
</tr>
<tr>
<td>8</td>
<td>TATA MOTORS</td>
<td>INDIA</td>
<td>22.9</td>
<td>3.274</td>
<td>68</td>
<td>9</td>
<td>–1</td>
<td>11</td>
<td>2</td>
<td>–4</td>
<td>7</td>
<td>–7.0</td>
</tr>
<tr>
<td>9</td>
<td>PORSCHE</td>
<td>GERMANY</td>
<td>20.9</td>
<td>10.353</td>
<td>–5</td>
<td>17</td>
<td>12</td>
<td>–10</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>13.2</td>
</tr>
<tr>
<td>10</td>
<td>GENTEX</td>
<td>UNITED STATES</td>
<td>17.3</td>
<td>3.374</td>
<td>28</td>
<td>16</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>–1</td>
<td>1</td>
<td>–21.1</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 42 companies with market valuation greater than $3 billion.

1\ Contribution of each factor is shown in percentage points of five-year average annual TSR.
2\ Average annual total shareholder return, 1999–2003.
3\ As of December 31, 2003.
4\ Expectation premium as percentage of total 2003 market value.
5\ Change in EBITDA multiple.
6\ As of October 13, 2004.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

<table>
<thead>
<tr>
<th></th>
<th>Expectation premium</th>
<th>Fundamental value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total industry sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive top ten</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Worldscope; BCG analysis.
1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
**VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)**

- **Automotive top ten**
- **Total sample, n = 42**

**SOURCES:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Industry calculation based on aggregate of entire sample.
2. Share change and net debt change not shown.
3. Industry calculation based on sample average.

**COMPARATIVE MULTIPLE ANALYSIS, AUTOMOTIVE AND SUPPLY, 1999–2003**

- **Actual multiple**
- **Predicted multiple**

**Priority Drivers**
- 1. Gross margin 54%
- 2. Market cap > $400 million 28%
- 3. Operating expenses as % of revenue 11%
- 4. Debt-to-assets ratio 7%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. ($R^2$ = correlation coefficient.)

**Source:** BCG ValueScience Center.
THE CHEMICAL TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($Billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RELIANCE INDUSTRIES</td>
<td>INDIA</td>
<td>38.6</td>
<td>17.537</td>
<td>44</td>
<td>–6</td>
<td>9</td>
<td>–8</td>
<td>6</td>
<td>–8</td>
<td>–2.9</td>
<td>36.7</td>
</tr>
<tr>
<td>2</td>
<td>JSR</td>
<td>JAPAN</td>
<td>32.4</td>
<td>5.718</td>
<td>65</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>–28.1</td>
</tr>
<tr>
<td>3</td>
<td>FORMOSA CHEM. &amp; FIBRE</td>
<td>TAIWAN</td>
<td>26.6</td>
<td>7.580</td>
<td>48</td>
<td>21</td>
<td>3</td>
<td>–3</td>
<td>3</td>
<td>–1</td>
<td>4</td>
<td>–20.5</td>
</tr>
<tr>
<td>4</td>
<td>NITTO DENKO</td>
<td>JAPAN</td>
<td>25.7</td>
<td>9.242</td>
<td>65</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>–2</td>
<td>1</td>
<td>–12.2</td>
</tr>
<tr>
<td>5</td>
<td>JOHNSON MATTHEY</td>
<td>UNITED KINGDOM</td>
<td>22.2</td>
<td>3.921</td>
<td>33</td>
<td>7</td>
<td>1</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>–17.2</td>
</tr>
<tr>
<td>6</td>
<td>PRAXAIR</td>
<td>UNITED STATES</td>
<td>21.8</td>
<td>12.422</td>
<td>42</td>
<td>–1</td>
<td>8</td>
<td>2</td>
<td>–1</td>
<td>6</td>
<td>1</td>
<td>12.3</td>
</tr>
<tr>
<td>7</td>
<td>HITACHI CHEMICAL</td>
<td>JAPAN</td>
<td>17.1</td>
<td>3.481</td>
<td>35</td>
<td>–3</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>–8.8</td>
<td>9.2</td>
</tr>
<tr>
<td>8</td>
<td>SIGMA-ALDRICH</td>
<td>UNITED STATES</td>
<td>15.1</td>
<td>3.965</td>
<td>50</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>–1</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>9</td>
<td>NAN YA PLASTICS</td>
<td>TAIWAN</td>
<td>15.2</td>
<td>9.508</td>
<td>43</td>
<td>6</td>
<td>–3</td>
<td>7</td>
<td>3</td>
<td>–3</td>
<td>5</td>
<td>13.6</td>
</tr>
<tr>
<td>10</td>
<td>FORMOSA PLASTICS</td>
<td>TAIWAN</td>
<td>14.1</td>
<td>7.929</td>
<td>50</td>
<td>16</td>
<td>–4</td>
<td>2</td>
<td>2</td>
<td>–3</td>
<td>0</td>
<td>9.1</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.
Note: n = 36 companies with market valuation greater than $3 billion.

1. Contribution of each factor is shown in percentage points of five-year average annual TSR.
4. Expectation premium as percentage of total 2003 market value.
5. Change in EBITDA multiple.

AVG ARE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

Sources: Thomson Financial Datastream; BCG analysis.
Note: TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

SOURCES: Thomson Financial Worldscope; BCG analysis.

Market capitalization plus net debt, 1998 = 100.

Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, CHEMICALS, 1999–2003

\[ R^2 = 0.78 \]

Priority Drivers
1. Gross margin 65%
2. Quick ratio\(^1\) 12%
3. Asset growth 11%
4. Net-debt-to-market-cap ratio 7%
5. Operating expenses as % of revenue 5%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. \(R^2 = \text{correlation coefficient.}\)

\(^\text{1A company’s “quick ratio” is its ratio of current assets to current liabilities and is a measure of working capital.}\)
THE CONSUMER GOODS TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TIFFANY &amp; COMPANY</td>
<td>UNITED STATES</td>
<td>29.0</td>
<td>6.628</td>
<td>61</td>
<td>12</td>
<td>9</td>
<td>1</td>
<td>–1</td>
<td>0</td>
<td>–33.5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>KONICA MINOLTA</td>
<td>JAPAN</td>
<td>24.7</td>
<td>7.149</td>
<td>53</td>
<td>–1</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>11</td>
<td>5.2</td>
</tr>
<tr>
<td>3</td>
<td>SYSCO</td>
<td>UNITED STATES</td>
<td>23.6</td>
<td>24.953</td>
<td>62</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>–18.0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>FORTUNE BRANDS</td>
<td>UNITED STATES</td>
<td>20.8</td>
<td>10.428</td>
<td>38</td>
<td>5</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>5</td>
<td>IMPERIAL TOBACCO</td>
<td>UNITED KINGDOM</td>
<td>20.0</td>
<td>14.321</td>
<td>–3</td>
<td>26</td>
<td>–5</td>
<td>–3</td>
<td>4</td>
<td>–3</td>
<td>0</td>
<td>16.3</td>
</tr>
<tr>
<td>6</td>
<td>PERIOD-RICARD</td>
<td>FRANCE</td>
<td>18.8</td>
<td>7.837</td>
<td>17</td>
<td>2</td>
<td>13</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>–2</td>
<td>24.9</td>
</tr>
<tr>
<td>7</td>
<td>HERMES INTERNATIONAL</td>
<td>FRANCE</td>
<td>18.8</td>
<td>7.131</td>
<td>44</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2.1</td>
</tr>
<tr>
<td>8</td>
<td>CHRISTIAN DIOR</td>
<td>FRANCE</td>
<td>18.4</td>
<td>11.010</td>
<td>–20</td>
<td>11</td>
<td>2</td>
<td>–15</td>
<td>3</td>
<td>0</td>
<td>17</td>
<td>7.3</td>
</tr>
<tr>
<td>9</td>
<td>LVMH</td>
<td>FRANCE</td>
<td>15.7</td>
<td>35.658</td>
<td>40</td>
<td>12</td>
<td>3</td>
<td>–2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>–0.1</td>
</tr>
<tr>
<td>10</td>
<td>BRIT. AMERICAN TOBACCO</td>
<td>UNITED KINGDOM</td>
<td>15.4</td>
<td>28.677</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>–1</td>
<td>8</td>
<td>–6</td>
<td>–1</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.

Note: n = 68 companies with market valuation greater than $5 billion.

1Contribution of each factor is shown in percentage points of five-year average annual TSR.


3As of December 31, 2003.

4Expectation premium as percentage of total 2003 market value.

5Change in EBITDA multiple.


AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>17.1</td>
</tr>
<tr>
<td>51</td>
<td>6.4</td>
</tr>
<tr>
<td>34</td>
<td>2.3</td>
</tr>
<tr>
<td>17</td>
<td>–4.2</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.

Note: TSR derived from calendar year data.
### Change in Fundamental Value and Expectation Premiums, 1999–2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Value Index</th>
<th>Expectation Premium</th>
<th>Fundamental Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>100</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>'99</td>
<td>115</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>'00</td>
<td>120</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>'01</td>
<td>125</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>'02</td>
<td>130</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>'03</td>
<td>135</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>'04</td>
<td>140</td>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Worldscope; BCG analysis.

2. Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

### Value Creation at Top Ten versus Industry Sample, 1999–2003 (I)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Shareholder Return</th>
<th>Profitability</th>
<th>Cash Flow Margin</th>
<th>Investment Growth</th>
<th>Asset Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR Index (1998 = 100)</td>
<td>100</td>
<td>175</td>
<td>185</td>
<td>171</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>95</td>
<td>108</td>
<td>103</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>103</td>
<td>99</td>
<td>105</td>
<td>112</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>101</td>
<td>110</td>
<td>118</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>101</td>
<td>104</td>
<td>112</td>
<td>121</td>
<td>110</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

Total shareholder return

Sales growth

EBITDA margin

Simplified five-year TSR decomposition

Enterprise value/EBITDA (x)

Comparative Multiple Analysis, Consumer Goods, 1999–2003

Actual multiple

Predicted multiple

Source: BCG ValueScience Center.

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.

Next Frontier

The Next Frontier
# Industrial Goods, Engineering, and Raw Materials

## The Industrial Goods Top Ten, 1999–2003

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value (Billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 EMBRAER</td>
<td>BRAZIL</td>
<td>108.7</td>
<td>5.841</td>
<td>59</td>
<td>43</td>
<td>0</td>
<td>44</td>
<td>3</td>
<td>-4</td>
<td>22</td>
<td>-26.8</td>
</tr>
<tr>
<td>2 IMPALA PLATINUM</td>
<td>SOUTH AFRICA</td>
<td>56.4</td>
<td>5.786</td>
<td>35</td>
<td>31</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>-1</td>
<td>-1</td>
<td>-5.1</td>
</tr>
<tr>
<td>3 SIAM CEMENT</td>
<td>THAILAND</td>
<td>36.7</td>
<td>7.693</td>
<td>33</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>25</td>
<td>1.5</td>
</tr>
<tr>
<td>4 ANGLO AM. PLATINUM</td>
<td>SOUTH AFRICA</td>
<td>36.6</td>
<td>9.404</td>
<td>61</td>
<td>12</td>
<td>2</td>
<td>19</td>
<td>8</td>
<td>0</td>
<td>-4</td>
<td>-3.9</td>
</tr>
<tr>
<td>5 GOLD FIELDS</td>
<td>SOUTH AFRICA</td>
<td>36.0</td>
<td>7.024</td>
<td>52</td>
<td>37</td>
<td>42</td>
<td>-34</td>
<td>4</td>
<td>-14</td>
<td>1</td>
<td>-2.8</td>
</tr>
<tr>
<td>6 LENNAR CORPORATION</td>
<td>UNITED STATES</td>
<td>33.4</td>
<td>7.691</td>
<td>-18</td>
<td>30</td>
<td>2</td>
<td>-1</td>
<td>0</td>
<td>-4</td>
<td>5</td>
<td>-9.0</td>
</tr>
<tr>
<td>7 FREEPORT-MCMORAN</td>
<td>UNITED STATES</td>
<td>32.5</td>
<td>7.237</td>
<td>23</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>-2</td>
<td>20</td>
<td>-0.7</td>
</tr>
<tr>
<td>8 DR HORTON</td>
<td>UNITED STATES</td>
<td>29.1</td>
<td>6.815</td>
<td>5</td>
<td>31</td>
<td>7</td>
<td>-4</td>
<td>1</td>
<td>-8</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>9 INCO</td>
<td>CANADA</td>
<td>26.1</td>
<td>7.384</td>
<td>-4</td>
<td>7</td>
<td>22</td>
<td>-11</td>
<td>0</td>
<td>-2</td>
<td>10</td>
<td>-4.5</td>
</tr>
<tr>
<td>10 POSCO</td>
<td>SOUTH KOREA</td>
<td>24.1</td>
<td>12.171</td>
<td>-26</td>
<td>6</td>
<td>4</td>
<td>-3</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>13.4</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 67 companies with market valuation greater than $5 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.
2 Average annual total shareholder return, 1999-2003.
3 As of December 31, 2003.
4 Expectation premium as percentage of total 2003 market value.
5 Change in EBITDA multiple.

## Average Annual Total Shareholder Return by Quartile, 1999–2003

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>27.6</td>
</tr>
<tr>
<td>Second</td>
<td>13.5</td>
</tr>
<tr>
<td>Third</td>
<td>5.7</td>
</tr>
<tr>
<td>Fourth</td>
<td>-2.3</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

**Value Creation at Top Ten Versus Industry Sample, 1999–2003 (I)**

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.

---

** Sources:** Thomson Financial Worldscope; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.

2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, INDUSTRIAL GOODS, 1999–2003

*Priority Drivers*
1. Gross margin 37%
2. Asset growth 19%
3. Dividend payout 19%
4. Net-debt-to-market-cap ratio 13%
5. Operating expenses as % of revenue 12%

Each dot plots a company's actual multiple for a given year against the multiple predicted by the regression analysis. ($R^2 = \text{correlation coefficient}$)
## THE MEDIA AND ENTERTAINMENT TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($ billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ECHOSTAR</td>
<td>UNITED STATES</td>
<td>41.2</td>
<td>8.864</td>
<td>52</td>
<td>39</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>–6</td>
<td>8</td>
<td>–2.4</td>
</tr>
<tr>
<td>2</td>
<td>UNIVISION</td>
<td>UNITED STATES</td>
<td>17.1</td>
<td>10.066</td>
<td>43</td>
<td>17</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>–11</td>
<td>1</td>
<td>–22.2</td>
</tr>
<tr>
<td>3</td>
<td>TF1</td>
<td>FRANCE</td>
<td>15.6</td>
<td>7.505</td>
<td>98</td>
<td>11</td>
<td>–1</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>–2</td>
<td>–12.3</td>
</tr>
<tr>
<td>4</td>
<td>SCRIPPS</td>
<td>UNITED STATES</td>
<td>14.7</td>
<td>5.687</td>
<td>48</td>
<td>5</td>
<td>–2</td>
<td>9</td>
<td>0</td>
<td>–1</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>5</td>
<td>PUBL &amp; BROADCASTING</td>
<td>AUSTRALIA</td>
<td>14.1</td>
<td>6.224</td>
<td>37</td>
<td>17</td>
<td>–3</td>
<td>1</td>
<td>2</td>
<td>–5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>6</td>
<td>GRUPO TELÉVISA</td>
<td>MEXICO</td>
<td>12.5</td>
<td>9.611</td>
<td>53</td>
<td>0</td>
<td>7</td>
<td>–2</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>37.5</td>
</tr>
<tr>
<td>7</td>
<td>PUBLICIS GROUPE</td>
<td>FRANCE</td>
<td>12.3</td>
<td>6.333</td>
<td>13</td>
<td>37</td>
<td>–2</td>
<td>–1</td>
<td>1</td>
<td>–16</td>
<td>–8</td>
<td>–6.8</td>
</tr>
<tr>
<td>8</td>
<td>KNIGHT RIDDER</td>
<td>UNITED STATES</td>
<td>10.5</td>
<td>6.182</td>
<td>40</td>
<td>–1</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>–13.0</td>
</tr>
<tr>
<td>9</td>
<td>TRIBUNE COMPANY</td>
<td>UNITED STATES</td>
<td>10.5</td>
<td>16.112</td>
<td>27</td>
<td>13</td>
<td>–1</td>
<td>2</td>
<td>1</td>
<td>–6</td>
<td>2</td>
<td>–15.9</td>
</tr>
<tr>
<td>10</td>
<td>OMNICOM GROUP</td>
<td>UNITED STATES</td>
<td>9.6</td>
<td>16.593</td>
<td>43</td>
<td>15</td>
<td>0</td>
<td>–2</td>
<td>1</td>
<td>–1</td>
<td>–2</td>
<td>–15.4</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 39 companies with market valuation greater than $5 billion.

1. Contribution of each factor is shown in percentage points of five-year average annual TSR.
3. Expectation premium as percentage of total 2003 market value.
4. Change in EBITDA multiple.

## AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>First quartile</th>
<th>Second quartile</th>
<th>Third quartile</th>
<th>Fourth quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Worldscope; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.

2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, MEDIA AND ENTERTAINMENT, 1999–2003

R^2 = .65

Priority Drivers
1. EBITDA margin 35%
2. Market cap > $2 billion 20%
3. Capital expenditure as % of revenue 17%
4. Revenue growth 16%
5. Net-debt-to-market-cap ratio 12%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. (R^2 = correlation coefficient.)

SOURCE: BCG ValueScience Center.
### THE MULTIBUSINESS TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($Billions)</th>
<th>Expectation premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WIPRO</td>
<td>INDIA</td>
<td>36.8</td>
<td>8.860</td>
<td>83</td>
<td>25</td>
<td>22</td>
<td>–11</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>8.9</td>
</tr>
<tr>
<td>2</td>
<td>3M</td>
<td>UNITED STATES</td>
<td>21.7</td>
<td>66.579</td>
<td>59</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>–5.6</td>
</tr>
<tr>
<td>3</td>
<td>WESFARMERS</td>
<td>AUSTRALIA</td>
<td>19.7</td>
<td>7.512</td>
<td>43</td>
<td>21</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>–8</td>
<td>0</td>
<td>24.4</td>
</tr>
<tr>
<td>4</td>
<td>WHARF HOLDINGS</td>
<td>HONG KONG</td>
<td>18.6</td>
<td>6.778</td>
<td>–14</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>–1</td>
<td>10</td>
<td>22.0</td>
</tr>
<tr>
<td>5</td>
<td>ITT INDUSTRIES</td>
<td>UNITED STATES</td>
<td>14.9</td>
<td>6.847</td>
<td>41</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>–1</td>
<td>7.8</td>
</tr>
<tr>
<td>6</td>
<td>SIEMENS</td>
<td>GERMANY</td>
<td>13.5</td>
<td>71.092</td>
<td>24</td>
<td>4</td>
<td>–1</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>–2.1</td>
</tr>
<tr>
<td>7</td>
<td>MITSUBISHI</td>
<td>JAPAN</td>
<td>12.9</td>
<td>16.612</td>
<td>5</td>
<td>–3</td>
<td>11</td>
<td>–1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>10.5</td>
</tr>
<tr>
<td>8</td>
<td>BOUYGES</td>
<td>FRANCE</td>
<td>11.7</td>
<td>11.697</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>–4</td>
<td>2</td>
<td>–4</td>
<td>–1</td>
<td>15.3</td>
</tr>
<tr>
<td>9</td>
<td>ITOCHU</td>
<td>JAPAN</td>
<td>11.1</td>
<td>5.231</td>
<td>1</td>
<td>–8</td>
<td>22</td>
<td>–25</td>
<td>1</td>
<td>–2</td>
<td>24</td>
<td>37.9</td>
</tr>
<tr>
<td>10</td>
<td>CITIC PACIFIC</td>
<td>HONG KONG</td>
<td>9.7</td>
<td>5.581</td>
<td>7</td>
<td>13</td>
<td>–20</td>
<td>4</td>
<td>7</td>
<td>–1</td>
<td>6</td>
<td>7.9</td>
</tr>
</tbody>
</table>

**SOURCES:** Thomson Financial Datastream; BCG analysis.

**Note:** n = 26 companies with market valuation greater than $3 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.
3 As of December 31, 2003.
4 Expectation premium as percentage of total 2003 market value.
5 Change in EBITDA multiple.

### AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Number of companies</th>
<th>Median average annual TSR (%)</th>
<th>Average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quartile</td>
<td>28</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>Second quartile</td>
<td>21</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Third quartile</td>
<td>14</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Fourth quartile</td>
<td>7</td>
<td>–3.3</td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

**Total industry sample**

Value index

<table>
<thead>
<tr>
<th>Year</th>
<th>Expectation premium</th>
<th>Fundamental value</th>
</tr>
</thead>
<tbody>
<tr>
<td>'96</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'00</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'01</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'02</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'03</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'04</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Worldscope; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.

2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

**Multibusiness top ten**

Value index

<table>
<thead>
<tr>
<th>Year</th>
<th>Expectation premium</th>
<th>Fundamental value</th>
</tr>
</thead>
<tbody>
<tr>
<td>'96</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'00</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'01</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'02</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'03</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'04</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

**Total shareholder return**

TSR index (1998 = 100)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sample</th>
<th>Multibusiness top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'00</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'01</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'02</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'03</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'04</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Profitability**

CFROI (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sample</th>
<th>Multibusiness top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>6.8</td>
<td>6.6</td>
</tr>
<tr>
<td>'99</td>
<td>7.4</td>
<td>7.4</td>
</tr>
<tr>
<td>'00</td>
<td>7.4</td>
<td>7.4</td>
</tr>
<tr>
<td>'01</td>
<td>6.6</td>
<td>6.6</td>
</tr>
<tr>
<td>'02</td>
<td>6.7</td>
<td>6.7</td>
</tr>
<tr>
<td>'03</td>
<td>5.9</td>
<td>5.9</td>
</tr>
</tbody>
</table>

**Cash flow margin**

Cash flow/sales (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sample</th>
<th>Multibusiness top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>'99</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>'00</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>'01</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>'02</td>
<td>5.8</td>
<td>5.8</td>
</tr>
<tr>
<td>'03</td>
<td>5.1</td>
<td>5.1</td>
</tr>
</tbody>
</table>

**Investment growth**

Gross investment index (1998 = 100)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sample</th>
<th>Multibusiness top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>101</td>
<td>101</td>
</tr>
<tr>
<td>'00</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>'01</td>
<td>113</td>
<td>113</td>
</tr>
<tr>
<td>'02</td>
<td>106</td>
<td>106</td>
</tr>
<tr>
<td>'03</td>
<td>105</td>
<td>105</td>
</tr>
</tbody>
</table>

**Asset productivity**

Sales/gross investment

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sample</th>
<th>Multibusiness top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>'98</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>'99</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>'00</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>'01</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>'02</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>'03</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Industry calculation based on aggregate of entire sample.
2 Share change and net debt change not shown.
3 Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, MULTIBUSINESS, 1999–2003

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. ($R^2 =$ correlation coefficient.)
## The Pharmaceutical and Biotech Top Ten, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LABORATORY CORP</td>
<td>UNITED STATES</td>
<td>60.8</td>
<td>5.287</td>
<td>2</td>
<td>13</td>
<td>12</td>
<td>8</td>
<td>0</td>
<td>−19</td>
<td>47</td>
<td>16.2</td>
</tr>
<tr>
<td>2</td>
<td>GILEAD SCIENCES</td>
<td>UNITED STATES</td>
<td>41.5</td>
<td>11.802</td>
<td>80</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>−4</td>
<td>−2</td>
<td>30.0</td>
</tr>
<tr>
<td>3</td>
<td>BIOGEN IDEC</td>
<td>UNITED STATES</td>
<td>36.2</td>
<td>12.823</td>
<td>38</td>
<td>40</td>
<td>−40</td>
<td>68</td>
<td>0</td>
<td>−22</td>
<td>−2</td>
<td>64.2</td>
</tr>
<tr>
<td>4</td>
<td>FOREST LABORATORIES</td>
<td>UNITED STATES</td>
<td>36.0</td>
<td>22.596</td>
<td>37</td>
<td>37</td>
<td>21</td>
<td>−10</td>
<td>0</td>
<td>−3</td>
<td>0</td>
<td>−24.2</td>
</tr>
<tr>
<td>5</td>
<td>ST. JUDE MEDICAL</td>
<td>UNITED STATES</td>
<td>34.5</td>
<td>10.585</td>
<td>48</td>
<td>15</td>
<td>1</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>18.5</td>
</tr>
<tr>
<td>6</td>
<td>BARR PHARMACEUTICALS</td>
<td>UNITED STATES</td>
<td>29.3</td>
<td>5.172</td>
<td>20</td>
<td>19</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>−5</td>
<td>1</td>
<td>−26.8</td>
</tr>
<tr>
<td>7</td>
<td>STRYKER</td>
<td>UNITED STATES</td>
<td>25.5</td>
<td>16.958</td>
<td>29</td>
<td>27</td>
<td>2</td>
<td>−7</td>
<td>0</td>
<td>−1</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>8</td>
<td>MILLENNIUM PHARM.</td>
<td>UNITED STATES</td>
<td>23.6</td>
<td>5.619</td>
<td>59</td>
<td>35</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>−10</td>
<td>−1</td>
<td>−33.5</td>
</tr>
<tr>
<td>9</td>
<td>ALTANA</td>
<td>GERMANY</td>
<td>22.9</td>
<td>8.479</td>
<td>−26</td>
<td>13</td>
<td>9</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>−2</td>
<td>−0.5</td>
</tr>
<tr>
<td>10</td>
<td>BOSTON SCIENTIFIC</td>
<td>UNITED STATES</td>
<td>22.4</td>
<td>30.112</td>
<td>95</td>
<td>10</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>−1</td>
<td>3</td>
<td>2.6</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** \( n = 53 \) companies with market valuation greater than $5 billion.

1. Contribution of each factor is shown in percentage points of five-year average annual TSR.
4. Expectation premium as percentage of total 2003 market value.
5. Change in EBITDA multiple.

## Average Annual Total Shareholder Return by Quartile, 1999–2003

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quartile</td>
<td>25.5</td>
</tr>
<tr>
<td>Second quartile</td>
<td>11.6</td>
</tr>
<tr>
<td>Third quartile</td>
<td>1.7</td>
</tr>
<tr>
<td>Fourth quartile</td>
<td>−6.0</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Note:** TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Worldscope; BCG analysis.
1Market capitalization plus net debt, 1998 = 100.
2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.
1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

**Pharmaceutical and biotech top ten**

**Total, n = 53**

**Simplified five-year TSR decomposition**

- **TSR index (1998 = 100)**
  - 98: 100
  - 99: 124
  - 00: 210
  - 01: 228
  - 02: 222
  - 03: 325

**Sales growth**

- **Sales index (1998 = 100)**
  - 98: 100
  - 99: 124
  - 00: 148
  - 01: 161
  - 02: 177
  - 03: 187

**EBITDA margin**

- EBITDA/revenue (%)
  - 98: 18.8
  - 99: 20.0
  - 00: 20.0
  - 01: 20.0
  - 02: 20.0
  - 03: 20.0

**Dividend yield**

- Dividend/stock price (%)
  - 98: 1.0
  - 99: 0.8
  - 00: 0.8
  - 01: 0.7
  - 02: 0.7
  - 03: 0.2

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Industry calculation based on aggregate of entire sample.
2. Share change and net debt change not shown.
3. Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, PHARMACEUTICALS AND BIOTECH, 1999–2003

**Priority Drivers**

1. Gross margin 62%
2. Market cap > $1 billion 14%
3. R&D as % of revenue 11%
4. Net-debt-to-market-cap ratio 8%
5. Operating expense as % of revenue 5%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. ($R^2 = \text{correlation coefficient}$)

**Source:** BCG ValueScience Center.
THE PULP-AND-PAPER TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VOTORANTIM CELULOSE</td>
<td>BRAZIL</td>
<td>74.2</td>
<td>1.088</td>
<td>–16</td>
<td>38</td>
<td>14</td>
<td>12</td>
<td>4</td>
<td>–1</td>
<td>6</td>
<td>11.4</td>
</tr>
<tr>
<td>2</td>
<td>ARACRUZ CELULOSE</td>
<td>BRAZIL</td>
<td>69.6</td>
<td>3.133</td>
<td>35</td>
<td>52</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>–6.8</td>
</tr>
<tr>
<td>3</td>
<td>EMPRESAS CMPC</td>
<td>CHILE</td>
<td>35.0</td>
<td>4.000</td>
<td>–11</td>
<td>14</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>6.0</td>
</tr>
<tr>
<td>4</td>
<td>SAPPI</td>
<td>SOUTH AFRICA</td>
<td>34.7</td>
<td>3.259</td>
<td>–14</td>
<td>5</td>
<td>–2</td>
<td>9</td>
<td>3</td>
<td>–1</td>
<td>22</td>
<td>2.4</td>
</tr>
<tr>
<td>5</td>
<td>MAYR-MELNHOF KARTON</td>
<td>AUSTRIA</td>
<td>22.5</td>
<td>1.442</td>
<td>–5</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>21.7</td>
</tr>
<tr>
<td>6</td>
<td>HOLMEN</td>
<td>SWEDEN</td>
<td>22.3</td>
<td>2.800</td>
<td>–29</td>
<td>–7</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>2</td>
<td>0</td>
<td>2.4</td>
</tr>
<tr>
<td>7</td>
<td>NORBORD</td>
<td>CANADA</td>
<td>18.2</td>
<td>1.244</td>
<td>–19</td>
<td>3</td>
<td>7</td>
<td>–6</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>56.3</td>
</tr>
<tr>
<td>8</td>
<td>SVENSKA CELLULOSA</td>
<td>SWEDEN</td>
<td>15.9</td>
<td>9.488</td>
<td>–22</td>
<td>7</td>
<td>–1</td>
<td>3</td>
<td>4</td>
<td>–2</td>
<td>5</td>
<td>2.2</td>
</tr>
<tr>
<td>9</td>
<td>DOMTAR</td>
<td>CANADA</td>
<td>14.1</td>
<td>2.875</td>
<td>5</td>
<td>15</td>
<td>–7</td>
<td>7</td>
<td>1</td>
<td>–4</td>
<td>3</td>
<td>–2.6</td>
</tr>
<tr>
<td>10</td>
<td>RAYONIER</td>
<td>UNITED STATES</td>
<td>13.7</td>
<td>2.094</td>
<td>31</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.
Note: n = 29 companies with market valuation greater than $1 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.
3 As of December 31, 2003.
4 Expectation premium as percentage of total 2003 market value.
5 Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

Sources: Thomson Financial Datastream; BCG analysis.
Note: TSR derived from calendar year data.
CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003

Sources: Thomson Financial Worldscope; BCG analysis.

1Market capitalization plus net debt, 1998 = 100.

2Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

**SOURCES:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, 1999–2003

**R² = .73**

**Priority Drivers**
1. EBITDA margin 57%
2. Dividend payout 28%
3. Net-debt-to-market-cap ratio 15%

Each dot plots a company's actual multiple for a given year against the multiple predicted by the regression analysis. (R² = correlation coefficient.)

**Source:** BCG ValueScience Center.


**THE RETAIL TOP TEN, 1999–2003**

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EBAY</td>
<td>UNITED STATES</td>
<td>26.3</td>
<td>41.737</td>
<td>78</td>
<td>69</td>
<td>10</td>
<td>-48</td>
<td>0</td>
<td>-7</td>
<td>0</td>
<td>45.1</td>
</tr>
<tr>
<td>2</td>
<td>WAL-MART DE MEXICO</td>
<td>MEXICO</td>
<td>22.7</td>
<td>11.142</td>
<td>54</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>20.8</td>
</tr>
<tr>
<td>3</td>
<td>NEXT</td>
<td>UNITED KINGDOM</td>
<td>21.8</td>
<td>5.515</td>
<td>17</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>-3</td>
<td>53.0</td>
</tr>
<tr>
<td>4</td>
<td>AUTOZONE</td>
<td>UNITED STATES</td>
<td>28.9</td>
<td>7.436</td>
<td>12</td>
<td>11</td>
<td>5</td>
<td>-5</td>
<td>0</td>
<td>12</td>
<td>-2</td>
<td>-9.6</td>
</tr>
<tr>
<td>5</td>
<td>BEST BUY</td>
<td>UNITED STATES</td>
<td>20.7</td>
<td>16.861</td>
<td>34</td>
<td>20</td>
<td>15</td>
<td>-11</td>
<td>0</td>
<td>-4</td>
<td>1</td>
<td>6.3</td>
</tr>
<tr>
<td>6</td>
<td>BED BATH &amp; BEYOND</td>
<td>UNITED STATES</td>
<td>20.5</td>
<td>12.935</td>
<td>48</td>
<td>26</td>
<td>3</td>
<td>-9</td>
<td>0</td>
<td>-1</td>
<td>1</td>
<td>-9.6</td>
</tr>
<tr>
<td>7</td>
<td>WOOLWORTHS</td>
<td>AUSTRALIA</td>
<td>20.0</td>
<td>9.837</td>
<td>47</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>19.9</td>
</tr>
<tr>
<td>8</td>
<td>STARBUCKS</td>
<td>UNITED STATES</td>
<td>18.8</td>
<td>13.061</td>
<td>71</td>
<td>25</td>
<td>1</td>
<td>-5</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>44.2</td>
</tr>
<tr>
<td>9</td>
<td>LOWE’S</td>
<td>UNITED STATES</td>
<td>17.0</td>
<td>43.556</td>
<td>48</td>
<td>20</td>
<td>7</td>
<td>-6</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>-8.4</td>
</tr>
<tr>
<td>10</td>
<td>IAC/INTERACTIVECORP</td>
<td>UNITED STATES</td>
<td>15.4</td>
<td>22.438</td>
<td>38</td>
<td>18</td>
<td>-1</td>
<td>1</td>
<td>0</td>
<td>-15</td>
<td>12</td>
<td>-38.6</td>
</tr>
</tbody>
</table>

**Notes:** Thomson Financial Datastream; BCG analysis.

**Sources:** Thomson Financial Datastream; BCG analysis.

**Average annual total shareholder return by quartile, 1999–2003**

<table>
<thead>
<tr>
<th>Number of companies</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quartile</td>
<td></td>
</tr>
<tr>
<td>Second quartile</td>
<td></td>
</tr>
<tr>
<td>Third quartile</td>
<td></td>
</tr>
<tr>
<td>Fourth quartile</td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Datastream; BCG analysis.

**Notes:** TSR derived from calendar year data.
**CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003**

<table>
<thead>
<tr>
<th>Expectation premium</th>
<th>Fundamental value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total industry sample</td>
<td>Retail top ten</td>
</tr>
</tbody>
</table>

**Sources:** Thomson Financial Worldscope; BCG analysis.

1 Market capitalization plus net debt, 1998 = 100.
2 Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

**VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)**

| Total shareholder return | Profitability | Cash flow margin | Investment growth | Asset productivity |

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
The Next Frontier

VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.
2Share change and net debt change not shown.
3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, RETAIL, 1999–2003

R² = .77

Priority Drivers
1. Gross margin 82%
2. Market cap > $2 billion 8%
3. Revenue growth 6%
4. Net-debt-to-market-cap ratio 4%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. (R² = correlation coefficient.)

SOURCE: BCG ValueScience Center.
THE TECHNOLOGY TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value (Billions)</th>
<th>Expect. premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>QUALCOMM</td>
<td>UNITED STATES</td>
<td>53.0</td>
<td>43.148</td>
<td>50</td>
<td>4</td>
<td>32</td>
<td>10</td>
<td>0</td>
<td>–6</td>
<td>5</td>
<td>53.5</td>
</tr>
<tr>
<td>2</td>
<td>SYMANTEC</td>
<td>UNITED STATES</td>
<td>44.7</td>
<td>10.628</td>
<td>45</td>
<td>23</td>
<td>18</td>
<td>10</td>
<td>0</td>
<td>–5</td>
<td>–1</td>
<td>61.5</td>
</tr>
<tr>
<td>3</td>
<td>SAMSUNG ELECTRONICS</td>
<td>SOUTH KOREA</td>
<td>44.2</td>
<td>61.926</td>
<td>40</td>
<td>21</td>
<td>–3</td>
<td>10</td>
<td>3</td>
<td>–3</td>
<td>15</td>
<td>–0.1</td>
</tr>
<tr>
<td>4</td>
<td>SK TELECOM</td>
<td>SOUTH KOREA</td>
<td>28.2</td>
<td>13.742</td>
<td>18</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>–2</td>
<td>1</td>
<td>–8.0</td>
</tr>
<tr>
<td>5</td>
<td>ELECTRONIC ARTS</td>
<td>UNITED STATES</td>
<td>27.7</td>
<td>14.202</td>
<td>52</td>
<td>22</td>
<td>14</td>
<td>5</td>
<td>0</td>
<td>–4</td>
<td>0</td>
<td>–6.0</td>
</tr>
<tr>
<td>6</td>
<td>ANALOG DEVICES</td>
<td>UNITED STATES</td>
<td>23.8</td>
<td>16.973</td>
<td>69</td>
<td>11</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>–3</td>
<td>3</td>
<td>–15.6</td>
</tr>
<tr>
<td>7</td>
<td>VERITAS SOFTWARE</td>
<td>UNITED STATES</td>
<td>22.7</td>
<td>15.829</td>
<td>61</td>
<td>47</td>
<td>3</td>
<td>13</td>
<td>0</td>
<td>–14</td>
<td>1</td>
<td>–44.3</td>
</tr>
<tr>
<td>8</td>
<td>KLA-TENCOR</td>
<td>UNITED STATES</td>
<td>22.0</td>
<td>11.398</td>
<td>76</td>
<td>2</td>
<td>–5</td>
<td>26</td>
<td>0</td>
<td>–2</td>
<td>0</td>
<td>–29.2</td>
</tr>
<tr>
<td>9</td>
<td>NEXTEL COMMUNICATIONS</td>
<td>UNITED STATES</td>
<td>18.9</td>
<td>29.852</td>
<td>42</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>–17</td>
<td>8</td>
<td>–12.1</td>
</tr>
<tr>
<td>10</td>
<td>XILINX</td>
<td>UNITED STATES</td>
<td>18.9</td>
<td>13.225</td>
<td>76</td>
<td>13</td>
<td>–6</td>
<td>14</td>
<td>0</td>
<td>–3</td>
<td>1</td>
<td>–27.9</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.

Notes:
- n = 81 companies with market valuation greater than $10 billion.
- Contribution of each factor is shown in percentage points of five-year average annual TSR.
- Expectation premium as percentage of total 2003 market value.
- Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

Sources: Thomson Financial Datastream; BCG analysis.

Notes: TSR derived from calendar year data.
### Change in Fundamental Value and Expectation Premiums, 1999–2003

**Total Industry Sample**

- **Fundamental Value**:
  - 1998: 52%
  - 1999: 48%
  - 2000: 78%
  - 2001: 78%
  - 2002: 85%
  - 2003: 85%
  - 2004: 85%

- **Expectation Premium**:
  - 1998: 15%/year
  - 1999: 12%/year

**Technology Top Ten**

- **Fundamental Value**:
  - 1998: 37%
  - 1999: 63%
  - 2000: 52%
  - 2001: 56%
  - 2002: 63%
  - 2003: 56%
  - 2004: 56%

- **Expectation Premium**:
  - 1998: 19%/year
  - 1999: 27%/year

**Sources:** Thomson Financial Worldscope; BCG analysis.

2. Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

### Value Creation at Top Ten versus Industry Sample, 1999–2003 (I)

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

SOURCES: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Industry calculation based on aggregate of entire sample.

2 Share change and net debt change not shown.

3 Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, TECHNOLOGY, 1999–2003

R² = .72

Actual multiple

Predicted multiple

Priority Drivers
1. Gross margin 67%
2. Asset growth 13%
3. Net-debt-to-market-cap ratio 11%
4. Operating expense as % of revenue 9%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. (R² = correlation coefficient.)

SOURCE: BCG ValueScience Center.
THE TRAVEL TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR (%)</th>
<th>Market value ($Billions)</th>
<th>Expect, premium (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RYANAIR HOLDINGS</td>
<td>IRELAND</td>
<td>34.0</td>
<td>6.270</td>
<td>44</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>–3</td>
<td>0</td>
<td>–43.6</td>
<td>34.0</td>
</tr>
<tr>
<td>2</td>
<td>EXPEDITORS INTL</td>
<td>UNITED STATES</td>
<td>29.6</td>
<td>3.954</td>
<td>44</td>
<td>21</td>
<td>–1</td>
<td>10</td>
<td>0</td>
<td>–1</td>
<td>1</td>
<td>42.9</td>
</tr>
<tr>
<td>3</td>
<td>HARRAH’S ENTERTAINMENT</td>
<td>UNITED STATES</td>
<td>26.3</td>
<td>5.698</td>
<td>16</td>
<td>17</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>–2</td>
<td>6</td>
<td>11.9</td>
</tr>
<tr>
<td>4</td>
<td>MITSUI OSK LINES</td>
<td>JAPAN</td>
<td>26.0</td>
<td>5.883</td>
<td>24</td>
<td>2</td>
<td>–3</td>
<td>4</td>
<td>3</td>
<td>–2</td>
<td>22</td>
<td>33.0</td>
</tr>
<tr>
<td>5</td>
<td>CH ROBINSON</td>
<td>UNITED STATES</td>
<td>24.9</td>
<td>3.201</td>
<td>24</td>
<td>13</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>–1</td>
<td>–1</td>
<td>24.4</td>
</tr>
<tr>
<td>6</td>
<td>MGM MIRAGE</td>
<td>UNITED STATES</td>
<td>22.7</td>
<td>5.451</td>
<td>3</td>
<td>37</td>
<td>4</td>
<td>–3</td>
<td>0</td>
<td>–7</td>
<td>–8</td>
<td>37.3</td>
</tr>
<tr>
<td>7</td>
<td>CATHAY PACIFIC AIRWAYS</td>
<td>HONG KONG</td>
<td>17.2</td>
<td>6.352</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>–2</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>–7.0</td>
</tr>
<tr>
<td>8</td>
<td>CANADIAN NATL RAILWAY</td>
<td>CANADA</td>
<td>17.0</td>
<td>12.021</td>
<td>–15</td>
<td>9</td>
<td>4</td>
<td>–1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>15.5</td>
</tr>
<tr>
<td>9</td>
<td>GENETING</td>
<td>MALAYSIA</td>
<td>16.8</td>
<td>3.077</td>
<td>–36</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>–1</td>
<td>3.8</td>
</tr>
<tr>
<td>10</td>
<td>PIXAR</td>
<td>UNITED STATES</td>
<td>14.7</td>
<td>3.830</td>
<td>–9</td>
<td>60</td>
<td>10</td>
<td>–51</td>
<td>0</td>
<td>–5</td>
<td>1</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.
Note: n = 51 companies with market valuation greater than $3 billion.

1 Contribution of each factor is shown in percentage points of five-year average annual TSR.
3 As of December 31, 2003.
4 Expectation premium as percentage of total 2003 market value.
5 Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Number of companies</th>
<th>Median average annual TSR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quartile</td>
<td>52</td>
<td>19.9</td>
</tr>
<tr>
<td>Second quartile</td>
<td>38</td>
<td>9.3</td>
</tr>
<tr>
<td>Third quartile</td>
<td>26</td>
<td>2.4</td>
</tr>
<tr>
<td>Fourth quartile</td>
<td>13</td>
<td>–4.1</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.
Note: TSR derived from calendar year data.
**Change in Fundamental Value and Expectation Premiums, 1999–2003**

<table>
<thead>
<tr>
<th></th>
<th>Total industry sample</th>
<th>Travel top ten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value index</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>'98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>119</td>
<td>110%</td>
</tr>
<tr>
<td>'00</td>
<td>105</td>
<td>101%</td>
</tr>
<tr>
<td>'01</td>
<td>-5%</td>
<td>119%</td>
</tr>
<tr>
<td>'02</td>
<td>-1%</td>
<td>105%</td>
</tr>
<tr>
<td>'03</td>
<td>-16%</td>
<td></td>
</tr>
<tr>
<td>'04</td>
<td>-10%</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Worldscope; BCG analysis.

1 Market capitalization plus net debt, 1998 = 100.

2 Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

---

**Value Creation at Top Ten versus Industry Sample, 1999–2003 (I)**

<table>
<thead>
<tr>
<th></th>
<th>Travel top ten</th>
<th>Total sample, n = 51</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Shareholder Return</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSR index (1998 = 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>141</td>
<td>102</td>
</tr>
<tr>
<td>'00</td>
<td>164</td>
<td>104</td>
</tr>
<tr>
<td>'01</td>
<td>196</td>
<td>104</td>
</tr>
<tr>
<td>'02</td>
<td>204</td>
<td>114</td>
</tr>
<tr>
<td>'03</td>
<td>261</td>
<td></td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFROI (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>7.4</td>
<td>5.8</td>
</tr>
<tr>
<td>'99</td>
<td>7.9</td>
<td>5.7</td>
</tr>
<tr>
<td>'00</td>
<td>7.6</td>
<td>6.8</td>
</tr>
<tr>
<td>'01</td>
<td>7.8</td>
<td>6.1</td>
</tr>
<tr>
<td>'02</td>
<td>7.4</td>
<td>5.9</td>
</tr>
<tr>
<td>'03</td>
<td>5.8</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Cash Flow Margin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash flow/sales (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>11.6</td>
<td>11.6</td>
</tr>
<tr>
<td>'99</td>
<td>13.0</td>
<td>12.3</td>
</tr>
<tr>
<td>'00</td>
<td>15.2</td>
<td>12.2</td>
</tr>
<tr>
<td>'01</td>
<td>15.3</td>
<td>11.9</td>
</tr>
<tr>
<td>'02</td>
<td>15.1</td>
<td>11.9</td>
</tr>
<tr>
<td>'03</td>
<td>14.7</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>Cash Value-added</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>-2.0</td>
<td>-10.0</td>
</tr>
<tr>
<td>'99</td>
<td>-1.5</td>
<td>-10.0</td>
</tr>
<tr>
<td>'00</td>
<td>-1.0</td>
<td>-9.0</td>
</tr>
<tr>
<td>'01</td>
<td>-0.5</td>
<td>-8.0</td>
</tr>
<tr>
<td>'02</td>
<td>0.0</td>
<td>-7.0</td>
</tr>
<tr>
<td>'03</td>
<td>0.5</td>
<td>-6.0</td>
</tr>
<tr>
<td><strong>Investment Growth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross investment index (1998 = 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>'99</td>
<td>105</td>
<td>104</td>
</tr>
<tr>
<td>'00</td>
<td>130</td>
<td>104</td>
</tr>
<tr>
<td>'01</td>
<td>142</td>
<td>112</td>
</tr>
<tr>
<td>'02</td>
<td>146</td>
<td>118</td>
</tr>
<tr>
<td>'03</td>
<td>154</td>
<td>122</td>
</tr>
<tr>
<td><strong>Asset Productivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales/gross investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>'99</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>'00</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>'01</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>'02</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>'03</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datamonitor; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1 Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, TRAVEL, 1999–2003

Priority Drivers
1. EBIT margin 44%
2. Market cap > $2 billion 26%
3. Asset growth 18%
4. Debt-to-assets ratio 12%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. (R^2 = correlation coefficient.)

Source: BCG ValueScience Center.
THE UTILITIES TOP TEN, 1999–2003

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Country</th>
<th>TSR(^2) (%)</th>
<th>Market value(^3) ($Billions)</th>
<th>Expect, premium(^4) (%)</th>
<th>Sales growth (%)</th>
<th>Margin change (%)</th>
<th>Multiple change(^5) (%)</th>
<th>Dividend yield (%)</th>
<th>Share change (%)</th>
<th>Net debt change (%)</th>
<th>2004 TSR(^6) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SOUTHERN COMPANY</td>
<td>UNITED STATES</td>
<td>17.2</td>
<td>22.149</td>
<td>-11</td>
<td>0</td>
<td>-1</td>
<td>7</td>
<td>6</td>
<td>-1</td>
<td>7</td>
<td>4.6</td>
</tr>
<tr>
<td>2</td>
<td>ENTERGY CORP</td>
<td>UNITED STATES</td>
<td>17.0</td>
<td>12.899</td>
<td>-44</td>
<td>-4</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>12.7</td>
</tr>
<tr>
<td>3</td>
<td>HONG KONG &amp; CHINA GAS</td>
<td>HONG KONG</td>
<td>15.3</td>
<td>8.614</td>
<td>47</td>
<td>6</td>
<td>-2</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>-2</td>
<td>28.9</td>
</tr>
<tr>
<td>4</td>
<td>FORTUM</td>
<td>FINLAND</td>
<td>14.2</td>
<td>8.725</td>
<td>-40</td>
<td>6</td>
<td>7</td>
<td>-1</td>
<td>5</td>
<td>-2</td>
<td>-2</td>
<td>51.8</td>
</tr>
<tr>
<td>5</td>
<td>CENTRICA</td>
<td>UNITED KINGDOM</td>
<td>13.7</td>
<td>16.070</td>
<td>-15</td>
<td>18</td>
<td>5</td>
<td>-13</td>
<td>5</td>
<td>1</td>
<td>-1</td>
<td>18.9</td>
</tr>
<tr>
<td>6</td>
<td>PPL CORPORATION</td>
<td>UNITED STATES</td>
<td>13.5</td>
<td>7.758</td>
<td>-24</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>-2</td>
<td>-2</td>
<td>13.4</td>
</tr>
<tr>
<td>7</td>
<td>DOMINION RESOURCES</td>
<td>UNITED STATES</td>
<td>11.6</td>
<td>20.707</td>
<td>-7</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>-10</td>
<td>0</td>
<td>6.4</td>
</tr>
<tr>
<td>8</td>
<td>HONGKONG ELECTRIC</td>
<td>HONG KONG</td>
<td>10.8</td>
<td>8.440</td>
<td>-7</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>-1</td>
<td>1</td>
<td>19.2</td>
</tr>
<tr>
<td>9</td>
<td>KEYSSPAN</td>
<td>UNITED STATES</td>
<td>9.4</td>
<td>5.853</td>
<td>-11</td>
<td>29</td>
<td>9</td>
<td>-23</td>
<td>6</td>
<td>-2</td>
<td>-9</td>
<td>10.1</td>
</tr>
<tr>
<td>10</td>
<td>CLP HOLDINGS</td>
<td>HONG KONG</td>
<td>8.9</td>
<td>11.477</td>
<td>23</td>
<td>4</td>
<td>-1</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>-6</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Sources: Thomson Financial Datastream; BCG analysis.

Note: n = 48 companies with market valuation greater than $5 billion.

1Contribution of each factor is shown in percentage points of five-year average annual TSR.
2Average annual total shareholder return, 1999-2003.
3As of December 31, 2003.
4Expectation premium as percentage of total 2003 market value.
5Change in EBITDA multiple.

AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN BY QUARTILE, 1999–2003

Sources: Thomson Financial Datastream; BCG analysis.

Note: TSR derived from calendar year data.
**CHANGE IN FUNDAMENTAL VALUE AND EXPECTATION PREMIUMS, 1999–2003**

**Total industry sample**

- **Value index**: 175
  - 2004: 100%
  - 1998: 100%
- **Growth rate**: 7%/year

**Utilities top ten**

- **Value index**: 175
  - 2004: 113%
  - 1998: 100%
- **Growth rate**: 11%/year

**Sources:** Thomson Financial Worldscope; BCG analysis.

2. Market values as of October 13, 2004; fundamental value estimated using trailing 12-month average data.

---

**VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (I)**

**Utilities top ten**

- **Total shareholder return**
  - 2004: 187
  - 1998: 100
- **Profitability**
  - 2004: 6.8
  - 1998: 5.6
- **Cash flow margin**
  - 2004: 18.5
  - 1998: 16.6

**Total sample, n = 48**

- **Total shareholder return**
  - 2004: 154
  - 1998: 101
- **Profitability**
  - 2004: 7.0
  - 1998: 5.6
- **Cash flow margin**
  - 2004: 16.1
  - 1998: 16.0

**Sources:** Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1. Top-ten values (bars) correspond to left axis; industry sample values correspond to right axis.
VALUE CREATION AT TOP TEN VERSUS INDUSTRY SAMPLE, 1999–2003 (II)

Sources: Thomson Financial Datastream; Thomson Financial Worldscope; Bloomberg; BCG analysis.

1Industry calculation based on aggregate of entire sample.

2Share change and net debt change not shown.

3Industry calculation based on sample average.

COMPARATIVE MULTIPLE ANALYSIS, UTILITIES, 1999–2003

R² = .92

Priority Drivers
1. EBIT margin 47%
2. Revenue growth 37%
3. Net-debt-to-revenue ratio 16%

Each dot plots a company’s actual multiple for a given year against the multiple predicted by the regression analysis. (R² = correlation coefficient.)

Source: BCG ValueScience Center.
The Boston Consulting Group is a general management consulting firm that is a global leader in business strategy. BCG has helped companies in every major industry and market achieve a competitive advantage by developing and implementing winning strategies. Founded in 1963, the firm now operates 60 offices in 37 countries. For further information, please visit our Web site at www.bcg.com.

The Boston Consulting Group has other publications on corporate finance that may be of interest to senior executives. Recent examples include:

- “The Right Way to Divest” Opportunities for Action in Corporate Finance and Strategy, November 2004
- “New Rules for European Antitrust” Opportunities for Action in Corporate Finance and Strategy, May 2004
- “Thinking Differently About Dividends” BCG Perspectives, April 2003
- “Managing Through the Lean Years” BCG Perspectives, February 2003
- “Taking Deflation Seriously” BCG Perspectives, January 2003
- “New Directions in Value Management” BCG Perspectives, November 2002
- “Making Sure ‘Independent’ Doesn’t Mean ‘Ignorant’” BCG Perspectives, October 2002
- “Treating Investors Like Customers” BCG Perspectives, June 2002

Growing Through Acquisitions: The Successful Value Creation Record of Acquisition Growth Strategies
A report by The Boston Consulting Group, May 2004

A report by The Boston Consulting Group, December 2003

Winning Through Mergers in Lean Times: The Hidden Power of Mergers and Acquisitions in Periods of Below-Average Economic Growth
A report by The Boston Consulting Group, July 2003

Succeed in Uncertain Times: A Global Study of How Today’s Top Corporations Can Generate Value Tomorrow
A report by The Boston Consulting Group, November 2002

For a complete list of BCG publications and information about how to obtain copies, please visit our Web site at www.bcg.com.

To receive future publications in electronic form about this topic or others, please visit our subscription Web site at www.bcg.com/subscribe.
The Next Frontier
Building an Integrated Strategy for Value Creation
THE 2004 VALUE CREATORS REPORT