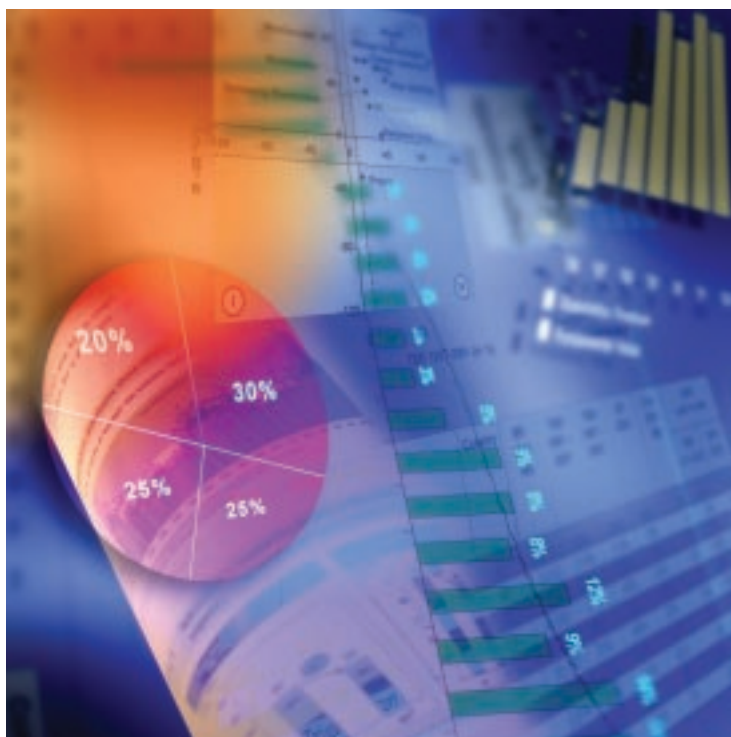


# THE BOSTON CONSULTING GROUP

Value Creators Report 2002

A global study of how today's top corporations  
can generate value tomorrow



Succeed  
in uncertain times

*The Boston Consulting Group is an international strategy and general management consulting firm whose mission is to help leading corporations create and sustain competitive advantage. As a truly international firm, our strong global presence offers clients and employees a wealth of cross-cultural experience.*

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# Succeed in uncertain times

## Contents

Acknowledgements	4
Overview	5
A perilous situation?	11
An agenda for improved, sustainable value creation	15
I. <i>Set a realistic, long-term value creation goal</i>	16
II. <i>Control your company with fundamental measures that strongly influence long-term TSR</i>	19
III. <i>Manage your business units as a portfolio of value creators and destroyers</i>	21
IV. <i>Concentrate on organic growth, but seize opportunities for acquisition growth during downturns</i>	23
V. <i>Manage your relative expectation premium</i>	25
VI. <i>Make your strategy appealing to your dominant investor segment</i>	29
Hope for the best, plan for the worst – and profit whatever happens	31
Appendix	
• <i>Study background</i>	35
• <i>Regional and industry rankings</i>	37
• <i>Technical notes</i>	75
Global contacts	78

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# Overview

*After last year's market correction, stock prices plunged heavily again in 2002 and, if you believe some commentators, deeper drops – and a deep recession – are possible.*

*What went wrong? More crucially, what can your company do to succeed in such a challenging and uncertain environment?*

*This report addresses these issues, based on a study of over 4,000 of the world's top corporations. It is the fourth annual report of a series started in 1999 when the first BCG Value Creators Report was published.*

These are difficult times. After the longest-running bull market in history, corporations are not only having to contend with a record drop in stock prices but also a highly fragile global economy. In the US alone around \$7 trillion has been wiped off the value of stocks since early 2000, equivalent to two-thirds of the nation's GDP. Add in lingering doubts about management credibility in the wake of recent scandals, not to mention current geo-political uncertainties, and it's not surprising many investors are feeling distinctly uneasy.

There's no doubt a stock market correction was long overdue. As we pointed out 2000 and 2001 in our previous two annual Value Creators reports, expectation premiums – the difference between market and fundamental values – had reached unsustainably high levels. Between 1993 and 2000 they soared to an unprecedented 80 percent on average, or more than forty percent of the value of the average stock price. By 2001 they had declined to a more 'modest' 27 percent and at the time of going to press they stood at 21 percent.

## Threat of a deeper drop

Which way will the markets go now? No one knows. However, historical precedents are not encouraging. Periods of high expectation premiums have previously been followed by prolonged periods of low expectation premiums: the markets tend to over-correct. More disturbingly, in view of the unprecedented scale of recent premiums, research has shown that the bigger the bubble, the larger the drop in total shareholder returns (TSR).

In fact, nearly half of the sectors analysed in this year's report already have negative expectation premiums. Several market indices, including the German DAX Index, have also slipped into the red. The larger US indices, notably the Dow Jones Industrial Index and S&P 400, however, still have positive premiums. Will these buck the historic long-term trend? We hope so. But it's worth noting that to justify its current expectation premium of 21 percent, the S&P 400 would have to increase its earnings before interest and tax (EBIT) by 4.8 percent a year for the next five years simply to sustain its value. But investors expect above-average TSR year on year. To achieve a 12 percent annual rise in TSR – the long-term market average – a 17.3 percent increase in EBIT would be

## Overview

needed.

Underlying economic indicators don't provide much ground for optimism either. Economic growth is faltering and severe corporate, consumer, and federal debts, coupled with interest rates that leave little room for further reductions, suggest the situation might get worse before it gets better. And what would be the impact on the global economy of a war with Iraq? Or another major terrorist incident?

Misguided 'bubble' practices have to change

What should management do in such a challenging and uncertain environment? Two major steps must be taken: First, many businesses need to radically re-think how they create and sustain shareholder value, including setting reasonable targets, the fundamental levers they need to pull to generate long-term value and how they deal with investors. Over the last decade, the bubble has engendered a number of highly corrosive 'norms' that have undermined long-term fundamental performances. This is evident from this year's study. Between 1995 and 2000, when stock prices were marching relentlessly upwards, the trend for the average fundamental performance for each TBR quartile was down. Today, it is steeply down, as is TSR. In the long run, fundamentals drive shareholder returns, not expectation premiums. The second key step is to prepare for a more severe economic downturn, which we discuss at the end of this overview.

Setting aside corporate governance for the moment, some of the misguided practices that have seeped into the corporate 'ecosystem' include:

- Inappropriate shareholder return targets: Many CEOs target double-digit annual earnings per share growth (EPS), sometimes as high as 15 percent, but the long-term actual average growth is nearer 7 to 8 percent. That's a big gap to sustain. In fact, only a small percentage of companies are able to beat their local market average for more than a few years running. More realistic goals stretched over longer periods, not year-on-year, are required. In addition, these targets need to be set relative to industry averages, not as 'limitless' absolute goals. Unfortunately, as EPS is shaped by factors unique to each firm, valid intercompany comparisons are not possible. This, together with the potential to manipulate EPS, for example by postponing long-term value creating investments to lift short-term earnings, casts doubt on its value as a shareholder return metric. Relative TSR is a more robust alternative.
- Unsuitable measures for controlling fundamental value: The earnings measure, EBITDA, is now commonly used by corporations to gauge and direct fundamental performance. But due to its omission of cash-consuming expenditures, such as interest and taxes, as well as cash required for reinvestment (not to mention its susceptibility to accounting distortions), it can lead to inefficient decisions that produce short-term gains at the expense of long-term fundamentals. A rising chorus of respected voices is now calling for it to be abandoned or used cautiously in limited situations<sup>1</sup>. A more

1. See John Percival (The Wharton School, University of Pennsylvania, Finance & Investment Faculty), 2002: "Is it time to get rid of EBITDA?"

suitable approach is to employ the 'cash value added' principles and, in particular, its two main components: cash flow return on investment (CFROI) and gross investment growth. Both of these measures have strong relationships with long-term shareholder returns, unlike EBITDA.

- Tolerance of unprofitable business units: Impressive lifts in profitability have been achieved recently. In the US, for example, profitability (measured by CFROI) has been around 11 percent over the last five years for the largest corporations, compared to the previous long-term average of around 7 percent, although cracks are appearing. High profitability is important, especially in downturns; as we show in this report – firms with the highest CFROI withstand these shocks more effectively. However, high corporate profitability coupled with inflated stock prices, encouraged many firms to tolerate low-CFROI business units. Without the protective cushion of expectation premiums, this complacency cannot continue. Strong fundamentals are more important than ever and all units will have to pull their weight to achieve reasonable shareholder returns. Those that cannot be turned around quickly should be divested and capital allocated to the others based on their value creation potential, not democratically.
- Pursuing the wrong type of growth at the wrong time: Partly fuelled by the use of inflated stock prices as an acquisition currency, the M&A bonanza of the 1990s was at this time a key contributor to excessive expectation premiums. However, new research from BCG's ValueScience Center shows that organic growth is the overwhelming driver of long-term shareholder returns, underlining the importance of innovation and asset productivity. This doesn't mean M&As should be ignored, but rather timed more carefully: a soon-to-be published BCG study demonstrates that M&As executed in downturns are substantially more likely to produce higher long-term value than those conducted in booms.
- Failure to monitor and manage relative expectation premiums: Left un-addressed, unrealistic expectation premiums are damaging, as many firms are now discovering. In downturns, high premiums can be punished with disproportionate drops in shareholder returns, while negative premiums can lead to all the problems associated with undervaluation, including difficulties raising capital. Although you cannot control absolute premiums, which are largely determined by macro-economic forces, you can quantify and manage your relative premium. This is fuelled by transparency, share liquidity, market leadership and other factors discussed in this report. New techniques for managing premiums for sustainable competitive advantage are emerging and should be applied. One approach is to use scenario-based forecasts of a company's results for the next three to five years, then compare this to the implied growth rate in today's stock price, and work steadily to resolve these disconnects.
- A disconnect between corporations and their dominant investor segments: Most corporations have little knowledge of the diverse aspirations of their

## Overview

investor base. Some shareholders, for example, may focus on free cash flow and intrinsic value, while others will seek aggressive growth or shades in between. Failure to align your strategy with your dominant investor segment's requirements is likely to have a detrimental impact on your stock price. A major expansion into a risky market, for instance, will produce a stock price discount if your dominant segment wants stable 'growth at a reasonable price'. In fact, BCG research, conducted jointly with Thomson Financial, has found that this mismatch between supply and demand can lead to substantial gaps between market and fundamental values, typically in the order of 30 to 50 percent and typically undervalued. To avoid this, corporations must develop a deeper understanding of their investor segments, supported by a more regular, direct dialogue with them.

Not all companies have stepped into these pitfalls. Many of the 4,000-plus businesses we studied for this year's Value Creators Report generated both impressive fundamental performances and admirable TSR, given today's environment. The details of these top performers and others can be found in this report's appendix at the back of this report. But the reality is that most corporations have fallen into at least one – and usually several – of these traps and their resultant low fundamental performance is now being felt in seriously depressed – and sometimes undervalued – stock prices. As Warren Buffet once said, "It's only when the tide goes out that you can see who's swimming naked."

This report provides a 'manifesto' for change to improve and *sustain* value creation – a set of recommendations that need to be implemented to shake off the excesses and damaging misconceptions that were cultivated during the boom.

### Dangers of the 'quarterly earnings game'

Why did so many corporations adopt such counter-productive practices over the last decade? Why were short-term shareholder return priorities allowed to preside over long-term fundamentals and long-term TSR?

There were various reasons. Stock options, the herd instinct, the notion that 'this time it is different', and many other factors all enter the frame. But the power and influence of investment analysts also played an important role. Our argument doesn't rest on the conflict of interest issue, although this has undoubtedly been damaging to both the capital markets and to corporations. It hinges rather on the mind-set and practices investment analysts have encouraged companies to adopt.

There are two main problems. First, many corporations now use analysts' 'gold standard' of value creation, EPS, and very simple accounting-based figures such as EBITDA. As we have briefly discussed, these measures have little relationship with long-term TSR and can be distorted – inadvertently, deliberately and even fraudulently. The absolute nature of EPS growth also raises the question, 'How far do you have to push it?' Without a relative benchmark, the answer has sometimes been 'as far as you can', leading to unsustainable goals and some questionable solutions.



Second, analysts' pressure on corporations to hit quarterly earnings forecasts has not only established a norm that it is short-term results that matter but also that consecutive quarter-on-quarter and year-on-year improvements in fundamentals and shareholder returns are sustainable. They rarely are.

Not all firms have agreed to play the earnings game. Porsche, for example, successfully refused to publish quarterly earnings, arguing that they increased stock price volatility and gave no insights into fundamental performance for such a mature industry as automotive. Such an extreme measure won't suit many companies. It's also important that steps like these do not compromise transparency. However, it does show that it is possible to refuse to play the analysts' game. A more generally valuable approach is to build a closer, direct, nondefensive relationship with investors in order to win trust and support for your long-term goals and value creation strategy. Truly independent analysts have an important role to play – and some 'boutique' research firms are emerging – but their role should be to analyse objectively, not to set the height of the value creation bar or direct managers how to manage.

Prepare contingency plans for a possible downturn

Earlier we said there were two steps corporations had to take to succeed both today and in the future. The first, already covered, is to sweep out value destroying and limiting practices. The second is to prepare contingency plans for a possible economic downturn.

During economic downturns two critical things happen: cash flow diminishes precipitously and decision-making times shrink dramatically. In the absence of a contingency plan, incorrect decisions often go unchallenged and become integrated into strategies, leading to their magnification over time. Like the proverbial butterfly that flaps its wings in one part of the world and creates a storm in another, this can have a devastating impact on already dwindling cash flow and a company's survival prospects.

The key to success is to have a plan that bullet-proofs your cash flow and enables you to use your superior cash flow to 'invest against the tide' and profit from your competitors' weaknesses. This will allow you to emerge in a stronger position after the 'storm'. Indeed the process of preparing a plan – including analysing and correcting the relative vulnerabilities of your business units' cash flows to different market scenarios – will benefit your business in a number of ways regardless of whether there is a downturn or not. It will identify fundamental weaknesses, foster a more risk-aware culture and focus managers' minds on operating in extreme conditions, often stimulating creative new ideas.

At the end of this report we explain how to prepare a 'crisis management' plan. This needs to be started now. Or, as a former US president said, "Yesterday is not ours to recover, but tomorrow is ours to win or lose."



# A perilous situation?

*In periods of uncertainty, it pays to plan for both positive and negative outcomes. And these are undoubtedly precarious times, both economically and geopolitically. This section takes an unashamedly downbeat view of what might happen to the global economy and capital markets, based on historical precedents.*

*The past, of course, isn't always a reliable indicator of the future. Our aim here is simply to underline the urgency for corporations to rethink how they create value and to plan for a downturn – just in case the glass turns out to be half empty, not half full.*

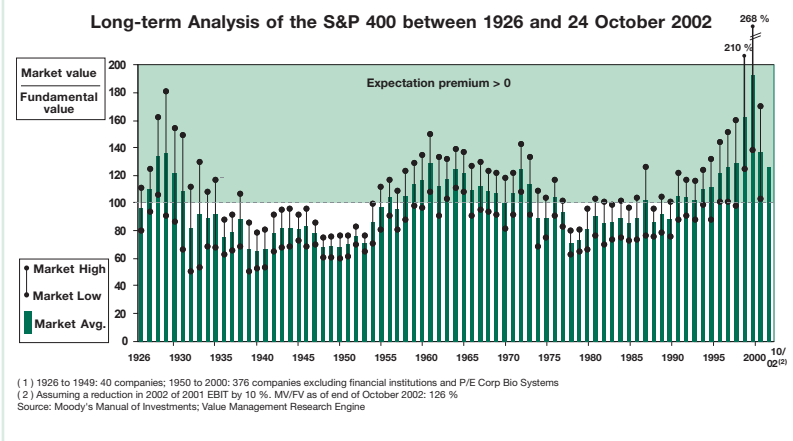
## The story so far – a steep fall in investor confidence

Expectation premiums – the difference between market and fundamental values – rose to historical highs over the last decade (Fig. 1). These premiums are essentially a measure of investor confidence. And since 2000, when expectation premiums accounted for two-thirds of the average company value of the S&P 400, this confidence has fallen dramatically.

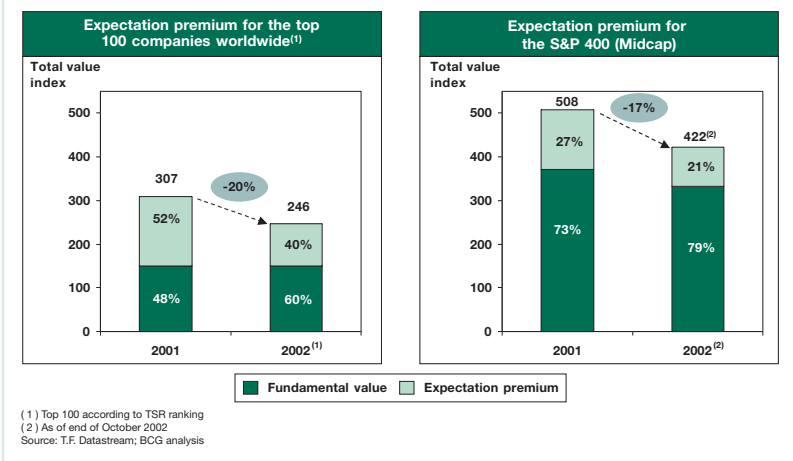
The fall in premiums for the world's top 100 corporations as measured by total shareholder returns (TSR), has been equally steep (Fig. 2). In 2001 expectation premiums had dropped to 52 percent on average and, by 31 October 2002, they had declined to 40 percent. In fact, expectation premiums have decreased in all industries, apart from utilities (Fig. 3). (Further details are available in the appendix.)

The decline in expectation premiums was predictable, although not necessarily the scale and speed of it. On average, market valuations were unjustified by fundamental performance. Simply to sustain the S&P's average market value in 2000 would have required 10 percent year-on-year growth in earnings before interest and tax. But investors expect growth in stock value (TSR). Just to achieve the long-term average market growth rate of 12 percent in TSR would have required a Herculean improvement in fundamentals. Today's average premiums for the S&P also seem on the ambitious side (see Overview).

**Fig. 1** Expectation premiums show strong oscillations over time



**Fig. 2** Although the market has declined in 2001 and 2002 expectation premiums remain very high



## A perilous situation?

### Historically, the markets have over-corrected high expectation premiums leading to periods of undervaluation

In the long term, expectation premiums tend towards zero, underlining the efficiency of capital markets. However, an analysis of expectation premiums between 1926 and 2002 reveals markets over-corrected unrealistically high premiums, producing periods of prolonged low expectation premiums, notably between 1932 and 1949 and between 1974 and 1990 (Fig. 1).

Moreover, a study of the sensitivity of premiums to market corrections shows that the highest premiums – and we have just had record premiums – tend to be punished with disproportionately large drops in TSR. Figure 4, based on 2001 data, shows how expectation premiums suffered their first major correction after the peak of 2000.

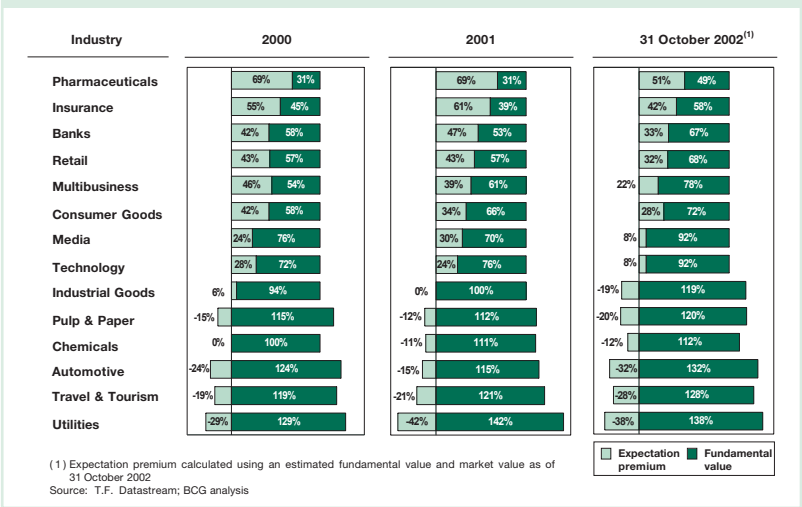
Does this mean the recent decline in expectation premiums is just the start of a deeper drop into negative premiums? Again, we don't know. And the capital markets appear equally uncertain, reflected in rising stock price volatility. But it is worth noting that six of the fourteen industries we studied already have negative premiums (Fig. 3). One of these recently moved into negative territory (industrial goods) and the position of three of the other six has deteriorated further this year.

Several market indices have also slipped into the red, including the German DAX (Fig. 5). The S&P 400 and the Dow Jones Industrial Index, however, still have positive expectation premiums.

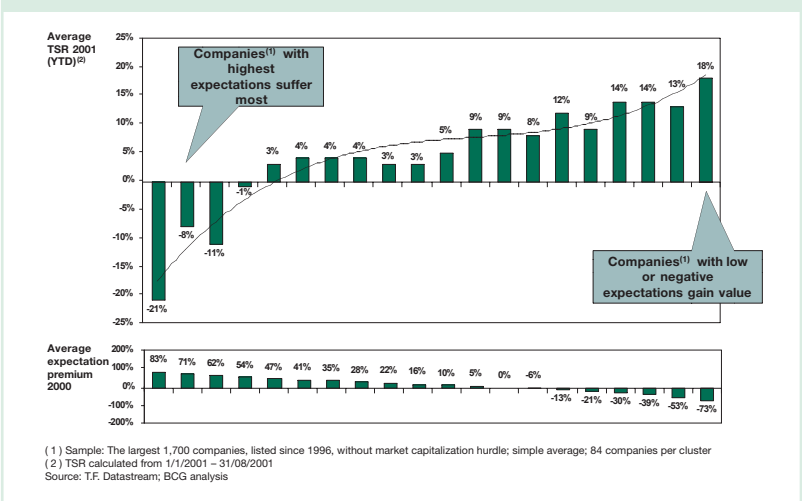
Possibilities that could push stock prices and premiums down further include a war with Iraq, another major terrorist incident, a debt-deflationary recession or revelations of more corporate accounting scandals. Looking further ahead, if stock markets generally have negative expectation premiums, one must consider the potential impact of the generation of 1950s 'baby boomers' withdrawing equity to fund retirement.

Will the capital markets buck the historical long-term trend? No one can say. But the current trend is similar to those experienced prior to the Great Depression and Japan's current deflationary period (Fig. 6).

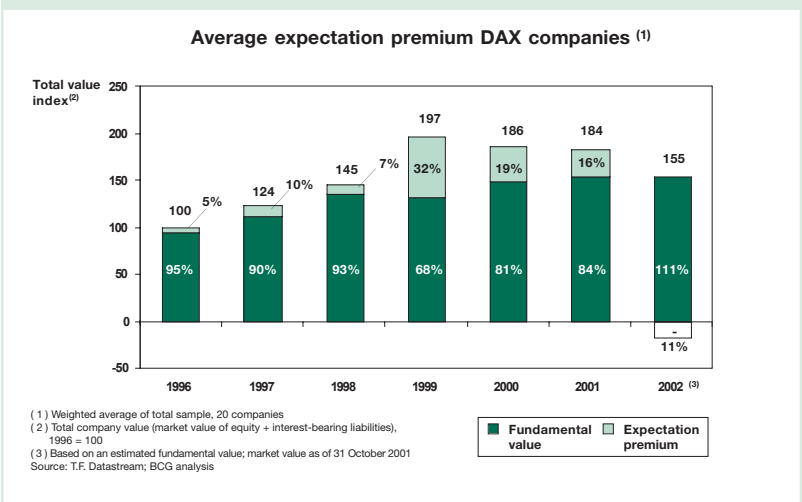
**Fig. 3 Expectation premiums by industry**



**Fig. 4 Relationship between size of expectation premium and TSR development**



**Fig. 5 German DAX index has slipped into the red**

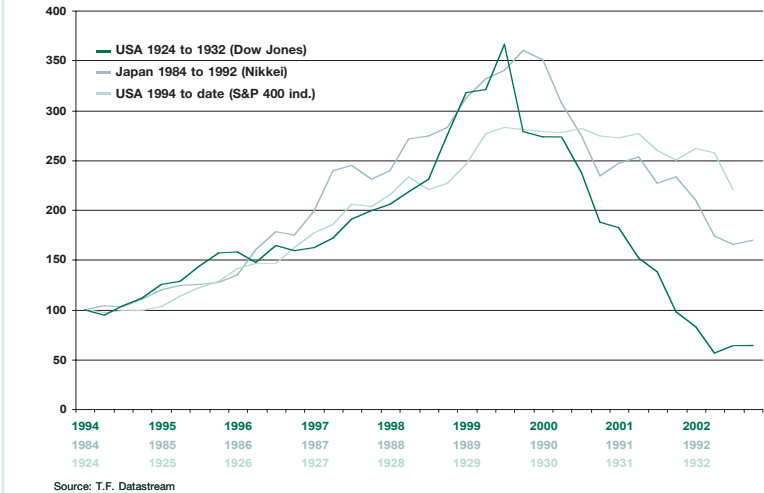


## A perilous situation?

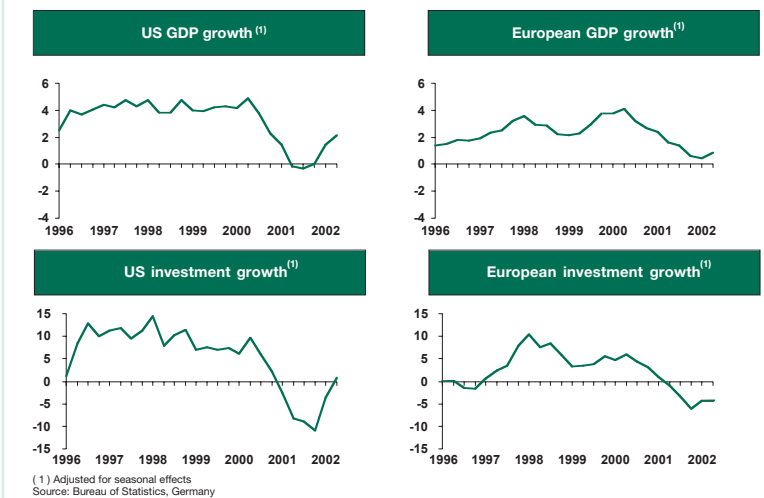
**The economic foundations for an imminent rebound look shaky. In fact, some of the trends show disturbing parallels with a less happy deflationary period of the past.**

- **Economic growth is slowing.** Since 2001 there has been a steep decline in investments and GDP growth (Fig. 7).
- **Deflationary tendencies exist.** In the third quarter of 2002, the GDP price index for the US – a closely watched measure of inflation – grew by just 0.8 percent year-on-year, the lowest rate since 1950.
- **Interest rates can't fall much lower.** Over the last five years interest rates have followed a similar trajectory to those that preceded the Great Depression (Fig. 8). What else can Central Banks and governments do to reboot the global economy?
- **Consumer consumption has reached record levels.** Today, US consumer consumption accounts for around 70 percent of GDP (Fig. 9).
- **Declining credit ratings are limiting financing options.** The number of credit rating downgrades has been rising in both the US and Europe, while upgrades have been declining (Fig. 10).
- **The world's largest economy has a massive current account trade deficit.** Since 1991 the US current account trade balance has plummeted from a small surplus to a US\$400 billion deficit (Fig. 9).

**Fig. 6 Stock Price Index development in the Great Depression, the Japan Crisis and today**



**Fig. 7 Economic growth is slowing down**

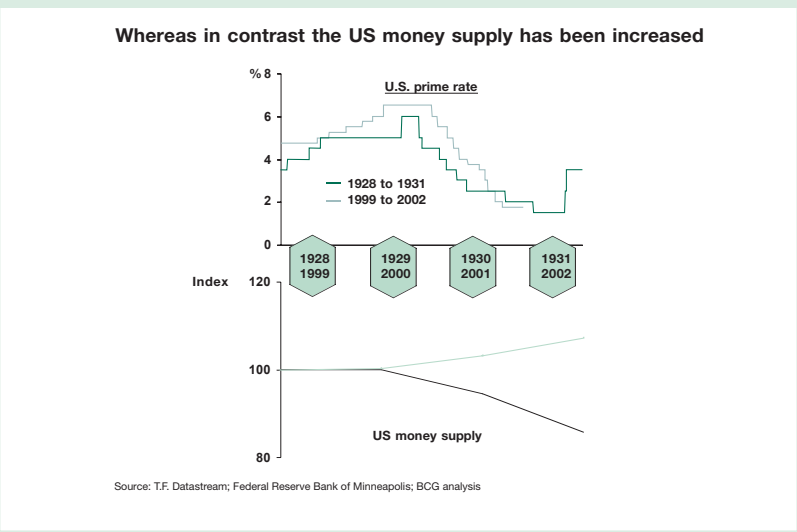


### Is a major recession – and possibly even deflation – on the cards?

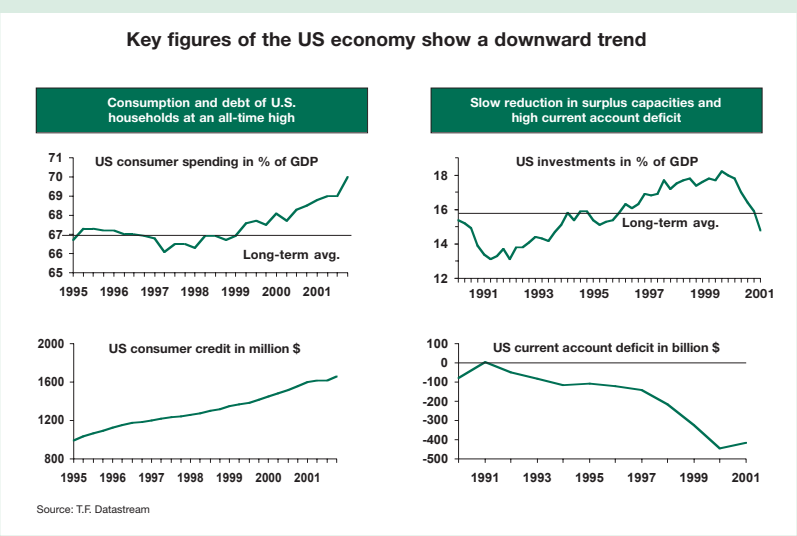
We'll have to wait and see. What we can say with certainty is that two major steps need to be taken. First, a new agenda for corporate value creation is required to shake off the misguided practices that have shaped many businesses' decisions and undermined long-term sustainable shareholder returns. Second, all corporations must prepare a contingency plan for a downturn. Both of these initiatives will improve your long-term fundamental performance regardless of how events unfold. The rest of this report deals with these two issues.

## A perilous situation?

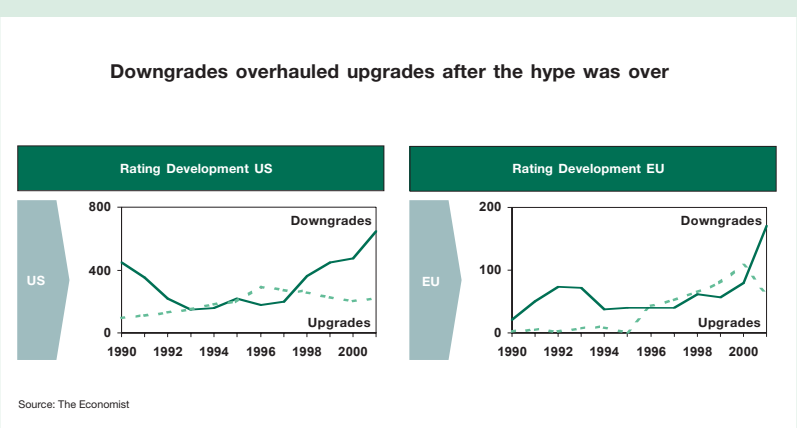
**Fig. 8 US Prime Rate shows parallels to the Great Depression**



**Fig. 9 The foundation for the next boom is shaky**



**Fig. 10 Is a credit crunch looming?**



# An agenda for improved, sustainable value creation

*Over the last decade many corporations adopted a number of counter-productive norms and practices, undermining their ability to create and sustain long-term value. Here we present an agenda for change. In the following we elaborate on these recommendations, supported by new research and case studies.*

- I. Set a realistic, long-term value creation goal
- II. Control your company with fundamental measures that strongly influence long-term TSR
- III. Manage your business units as a portfolio of value creators and destroyers
- IV. Concentrate on organic growth but seize opportunities for acquisition growth during downturns
- V. Manage your relative expectation premium
- VI. Make your strategy appealing to your dominant investor segment

## An agenda for improved, sustainable value creation

### I. Set a realistic, long-term value creation goal

*It is relative industry long-term shareholder returns that determine your target investors' allegiance to your stock. But very few businesses have been able to sustain superior returns for more than a few years in a row. Aspirations need to be revised downwards and reconfigured over longer time horizons.*

How corporations set their 'external' value creation goals – shareholder returns – is one of the most important decisions they will make. Everything else stems from it, including internal fundamental performance targets and business plans.

#### The importance of relative industry shareholder returns

The single-minded focus on absolute shareholder returns – such as ten percent earnings per share (EPS) growth – is both illogical and counter-productive. It is relative returns that count and that should shape your shareholder return target for two key reasons:

- Although absolute shareholder returns measure the total gain to shareholders, it is your relative industry return that primarily determines whether investors drawn to your industry place their money in your company or a competitor. To attract and retain these investors, you need to set a target relative to the industry performance that satisfies investors' aspirations.
- Without a relative benchmark how do you know how high to set your target? This was a question many corporations seemed unable to answer during the bull market, leading many to take their cues from analysts and to push for unsustainably high earnings goals. Often the only way to do this was to milk long-term fundamental performance for short-term gain. Or, in extreme cases, to resort to fraudulent practices.

#### Use a robust measure of shareholder returns – TSR

Total shareholder returns (TSR) – the change in

share price plus dividends – is a more objective measure of shareholder returns than EPS, the most commonly applied yardstick.

#### The advantages of TSR

- TSR is a true measure of what shareholders materially gain – the increase in share price plus dividends.
- It is an objective measure of a firm's 'external' value creation – it is not affected by a company's internal accounting methods.
- Like-for-like comparisons between companies' TSRs can be easily made (taking into account any currency differences in international stock comparisons) – it satisfies the need for a relative shareholder return measure.

#### The pitfalls of EPS

- EPS does not measure what shareholders materially receive, only the 'internal' fundamental value valuation (earnings) per share that a firm's accounting procedures claim the company has generated.
- EPS can be manipulated, painting a misleading picture of a firm's true fundamental potential in investors' eyes, a move that can rebound on a firm's stock price when the true story emerges. The exclusion of stock option expenses, which lift earnings, is one way this is frequently done. Postponing investments – in essence, sacrificing long-term fundamental performance for a short-term rise in earnings – is another. In extreme cases, earnings can also be distorted via unethical practices: Enron's use of off-balance sheet techniques was one of the most high-profile examples.



## An agenda for improved, sustainable value creation

- Equally significantly, it is not possible to make valid intercompany comparisons between firms' EPS growth rates due to the fact each company's EPS is shaped by factors unique to that business, such as its size, risk profile, number of shares, share buy-backs and leverage.

### Setting a realistic long-term RTSR target

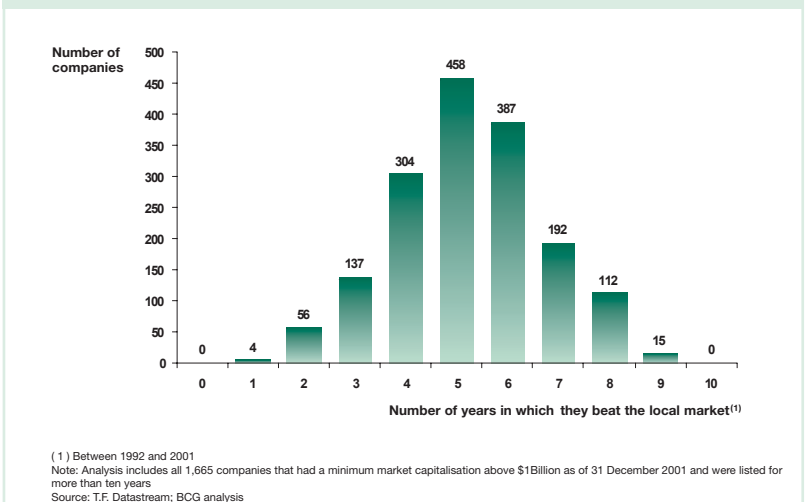
The pressure to hit analysts' quarterly forecasts has fostered the notion that relentless improvements in shareholder returns are feasible (see box, 'Beating the quarterly blues'). They are not, however – at least not on a year-on-year basis.

Over the last decade the majority of companies were only able to sustain above-average TSR relative to their local market indices for no longer than five years in a row. None of the 1,665 largest companies that BCG studied for this analysis managed this for ten consecutive years (Fig. 11). To achieve a year-on-year top quartile performance is even tougher. In the S&P 500 Index, where median TSR has hovered around 10 percent over the last thirty years, this would have required 21 percent annual TSR.

A more realistic approach is to aim for a long-term average TSR target relative to an appropriate index over a period of years. This not only acknowledges the fact that long-term fundamentals fuel shareholder returns (and the reality that all businesses are susceptible to occasional, short-term performance dips), it also lowers the TSR bar. To reach the top quartile in the S&P over a five-year period, for example, the compound TSR needed is 16 percent, compared to 21 percent year-on-year. To do this over ten years, it is 14 percent.

Equally crucially, companies need to revise their targets downwards. Many of the shareholder return goals set by corporations in the recent past – and today – are untenable. For example, CEOs still typically target double-digit year-on-year EPS growth in today's environment. Putting aside for the moment the downside of EPS and year-on-year growth, the long-term average for EPS growth is in the order of 7 to 8 percent.

**Fig. 11 Creating value year after year is a difficult task**



Inevitably there isn't a 'universally' realistic shareholder return target. Relative TSR targets will vary between different types of corporations, depending on their industry, geographic reach and – above all – your target or 'dominant investor segment's expectations, reflected in an appropriate index. Understanding this investor segment is an essential step, as we explain in the section 'Make your strategy appealing to your dominant investor segment'.

### A word on executive incentives to hit RTSR targets

Stock options undoubtedly encouraged senior executives in certain companies to take measures that generated short-term gains at the expense of their firms' long-term fundamental performance – either wittingly or, due to lack of understanding of the drivers of long-term value creation, unintentionally. These types of incentives, which are based on short-term absolute changes in stock prices, need to be reconsidered.

To ensure management's actions are aligned with shareholders' long-term interests, incentives should be linked to sustainable, long-term improvements in value creation. The 'relative' component is again key – this will mean that executives are compensated appropriately for their contribution to value creation, not for market- or industry-wide rises in stock prices.

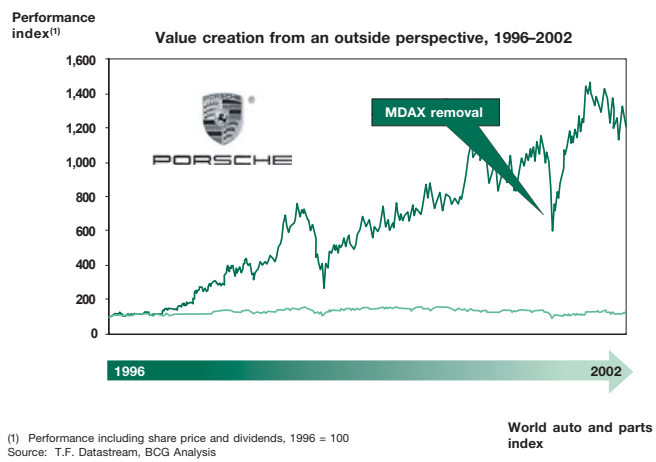
## An agenda for improved, sustainable value creation

### CASE STUDY: Beating the quarterly blues

Not all companies have bowed to the demands to play the quarterly earnings game. Porsche refused to publish quarterly earnings on the basis that these short-term snapshots added to stock price volatility in a mature industry like automotive and gave no true insights into long-term fundamentals. This decision led to its removal from the MDAX Index. Despite a short-term drop in its stock price, the long-term impact has been negligible. Its stock price has continued to rise, built on strong fundamentals.

Although we wouldn't recommend companies use Porsche's particular strategy, it does show it is possible to break away constructively from the short-term earnings fixation. As we discuss later (see 'Make your strategy appealing to your dominant investor segment'), a more suitable alternative is to develop a deeper, direct relationship with your core investors.

**Fig. 12 Porsche outperformed the automotive index**



An agenda for improved, sustainable value creation

## II. Control your company with fundamental measures that strongly influence long-term TSR

*The combination of cash flow return on investment (CFROI) and gross investment, producing cash value added (CVA), satisfies this criterion. EBITDA – a widely used control metric and analysts’ preferred measure for tracking business performance – has a weaker relationship with TSR, which can lead to inappropriate decisions that undermine long-term fundamental performance.*

As Figure 13 illustrates, long-term TSR is driven by fundamentals, measured by total business returns (TBR) – the percentage change in fundamental value and cash flow. Although TBR’s close correlation with TSR makes it a valuable tool for understanding the stretch in fundamental performance needed to hit current TSR (and, in reverse, for setting shareholder return targets), its computational complexity makes it impractical for day-to-day control of a business. The questions to pose are, ‘Which measures are suitable, practical proxies? Which levers do you need to pull to ensure your fundamental improvements translate into higher TSR?’

The least useful solution in many cases, is to use Earnings Before Interest, Tax and Depreciation (EBITDA), as many companies now do.

### Dangers of EBITDA

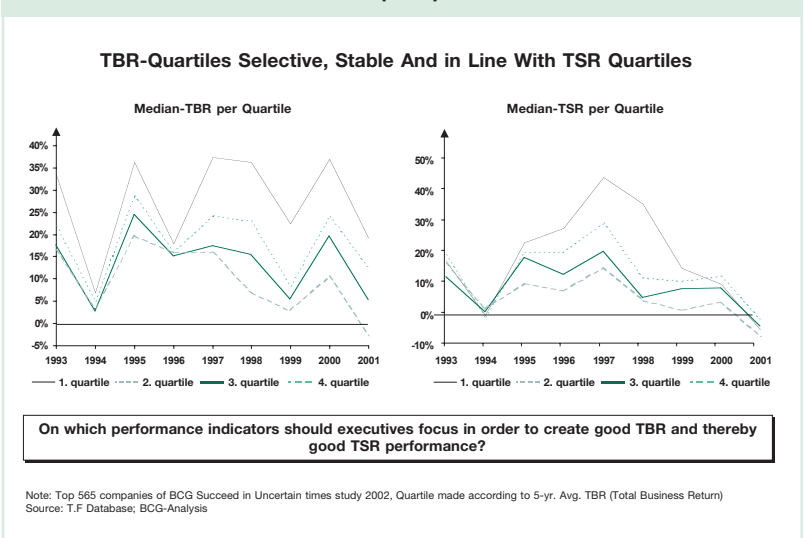
EBITDA originally came into vogue in the 1980s as a tool to identify leveraged buy-out candidates (LBOs): it was considered a good measure of a company’s ability to service its debts. Soon analysts and others became enamoured with this simple metric because its removal of ‘non-operating’ costs such as interest and depreciation would enable them to analyse and compare firms’ core operations more accurately. And as the influence of analysts grew, many companies fell into line and controlled their businesses with EBITDA.

However, this was often a misguided step, a view endorsed by a growing army of leading authorities

on accounting and value creation, including academics at Wharton, one of the leading US top business schools<sup>2</sup>. Some accounting standard setters are also now cautioning against using EBITDA as a performance measure.

The problem is that EBITDA excludes cash-consuming expenditures, notably interest and tax, as well as cash required for reinvestment. It gauges neither a firm’s net income, nor – due to its net income failings – free cash flow. It is especially short-sighted as a tool for capital-intensive industries, such as utilities, IT and telecommunications, to name just three, as it omits the reinvestment costs needed to sustain long-

**Fig. 13 BCG’s fundamental value (TBR) is a very good proxy for shareholder return (TSR)**



2. See John Percival (The Wharton School, University of Pennsylvania, Finance & Investment Faculty), 2002: “Is it time to get rid of EBITDA?”

## An agenda for improved, sustainable value creation

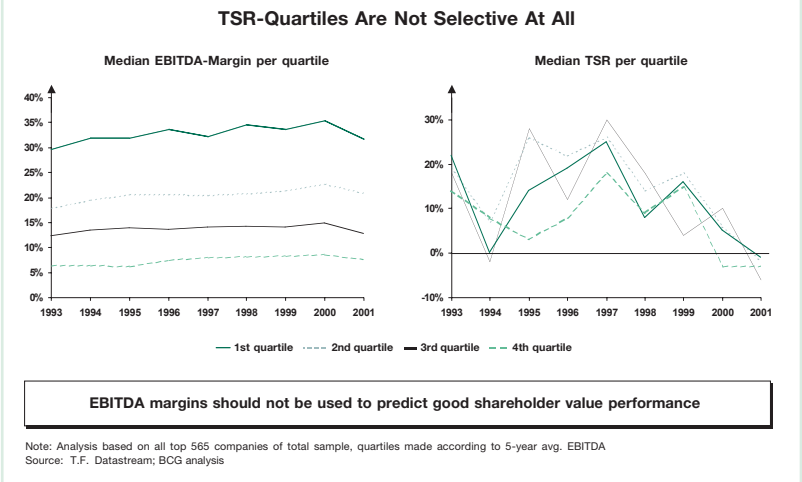
term value creation. In addition, these costs are liable to different accounting treatments – in some cases even ‘questionable’ practices.

Not surprisingly EBITDA has little relationship with long-term shareholder returns. This can be seen in Figure 14. In 1997, for example, top quartile EBITDA companies had the highest shareholder returns. By 2001, however, these firms had destroyed more value in four years than all the other quartiles.

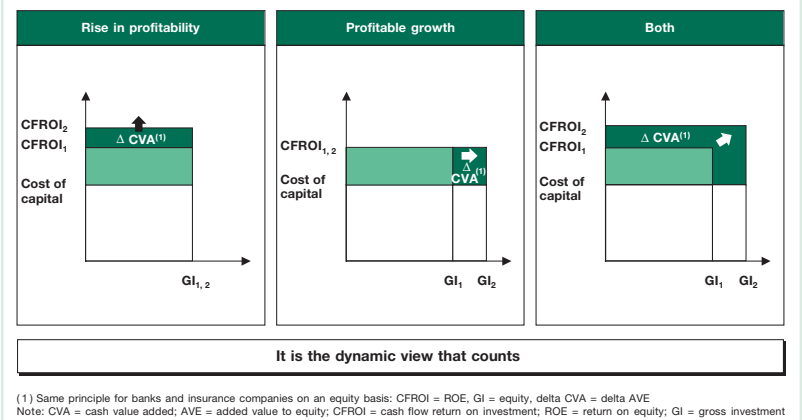
### A more robust approach: CFROI and gross investment

A more reliable solution for sustaining value creation is to concentrate on two main levers – CFROI and gross investment. Together, improvements in CFROI and gross investment generate ‘internal’ fundamental value expressed by the change in cash value added (delta CVA)<sup>3</sup>. This can be seen in Figure 15. More crucially, as Figure 16 demonstrates, both levers have a strong relationship with long-term shareholder returns (TSR). However, you have to pull these in the right order. CFROI has to be above the weighted average cost of capital first. Only then will gross investment create value; unprofitable growth will destroy value and shareholder return.

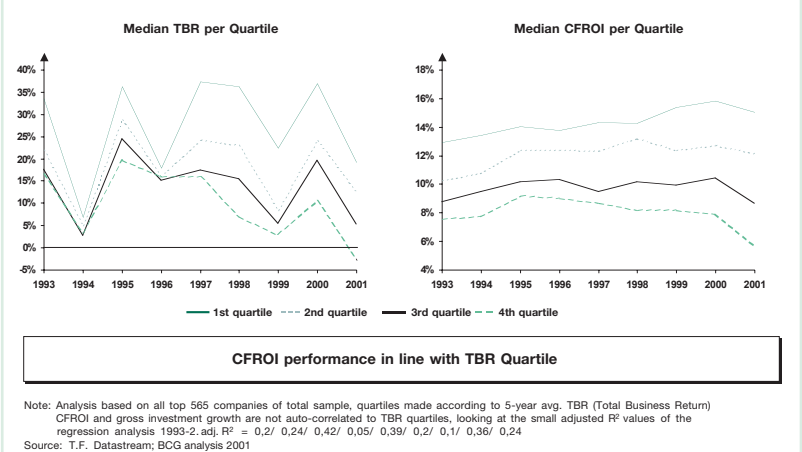
**Fig. 14 High EBITDA margins not sufficient for good shareholder performance**



**Fig. 15 How CVA is calculated and influenced by different levers**



**Fig. 16 Top CFROI preformers generate highest fundamental value**



- This produces a similar result to the Free Cash Flow (FCF) methodology now advocated by several people, including Warren Buffet. The difference and, in our view, the advantage of delta CVA over FCF is that it takes into account the gross investment required for long-term value creation.

An agenda for improved, sustainable value creation

### III. Manage your business units as a portfolio of value creators and destroyers

*Ensure all your businesses are profitable. Shed units that cannot be turned around and allocate capital to the fundamentally healthy units on the basis of their value creation potential.*

During the bull market, companies with weak fundamental performances were able to enjoy reasonable stock price growth – rising expectation premiums did most of the work for them. At one point you didn't even need a fundamental performance, just a dot-com suffix to your company's name. Today, the protective cushion of expectation premiums has largely been removed and a stronger fundamental performance will be required to generate shareholder value (TSR) – particularly if the economic climate darkens further.

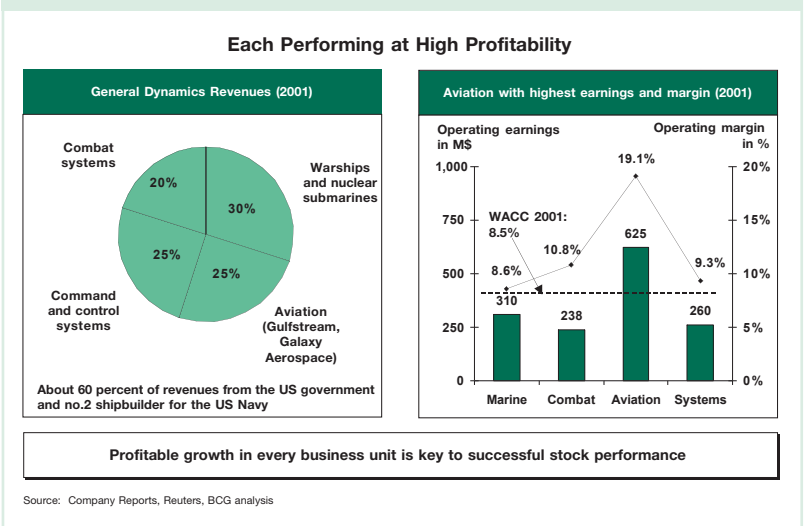
This cannot be achieved with the burden of unprofitable business units, nor with the all-too-common practice of allocating capital democratically between units, especially if any are unprofitable (CFROI below the weighted average cost of capital). Unprofitable growth, as we showed earlier, destroys value.

General Dynamics, a US defense contractor, demonstrates the value of ensuring that all units are profitable. All four of its businesses achieved CFROI above the weighted average cost of capital, enabling it to invest heavily and generate a steep increase in both fundamental value and, most crucially, shareholder value (Fig. 17). Since 1996 its fundamental value grew by 26 percent a year on average and its TSR by 20 percent.

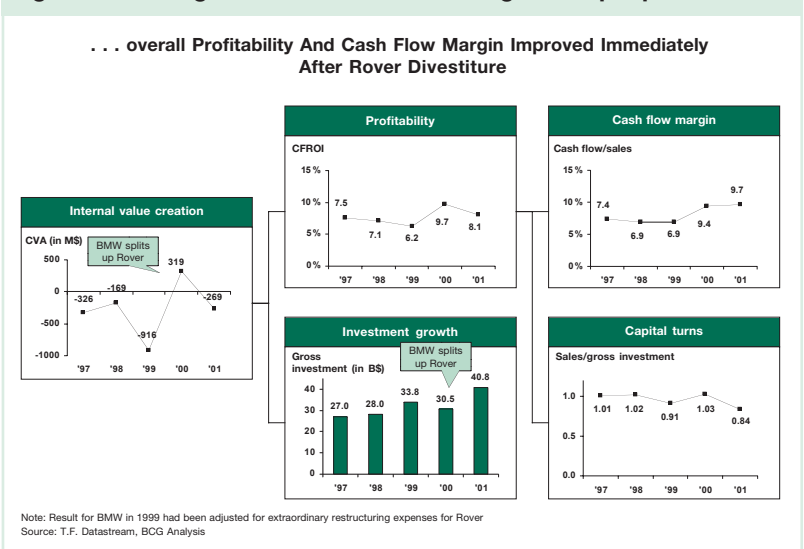
The company's growth in asset productivity is particularly noteworthy. As Figure 22 shows, top-quartile TSR firms have substantially higher asset productivity than the other three quartiles. They also increase their cash flow margins much more aggressively.

This rigorous approach to both profitability levers –

**Fig. 17 General Dynamics: four major business areas with comparable weight**



**Fig. 18 Although BMW'S CVA went through a deep dip . . .**



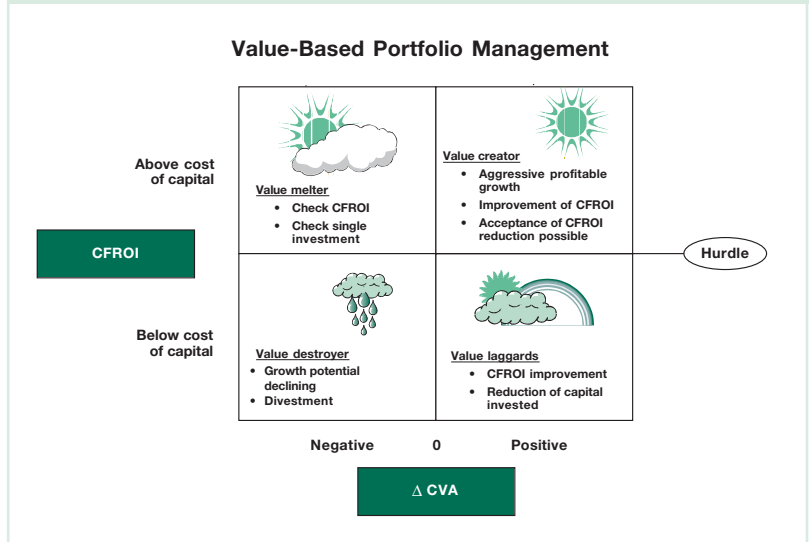
## An agenda for improved, sustainable value creation

asset productivity and cash flow margins – needs to be applied to all units, especially those with sub-optimal CFROI. And if they can't be turned around? Hard-nosed decisions have to be made. Although shedding an unprofitable business can be internally painful in the short run, the long-term benefits, both in terms of fundamentals and shareholder value, can be significant. BMW's divestiture of Rover is a case in point. Its profitability increased almost immediately and cash value added (CVA) moved up significantly, fuelling its stock price growth (Fig. 18).

More generally, corporations need to actively manage their portfolio of businesses, fixing or discarding the weak and investing in businesses proportionate to their value creation potential. To identify the strategic options available for each unit, you have to analyse their value creation plans relative to their current profitability. The matrix in Figure 19 provides a conceptual framework for dealing with this issue. Each quadrant has different strategic implications:

- **Value creators:** Invest in these units even if CFROI is declining. Provided CFROI remains above the weighted average cost of capital, long-term value will be created.
- **Value melters:** These are profitable but growth potential is declining. Look for niche growth markets and analyse individual investments.

**Fig. 19 Profitability and change in CVA (cash value added) must both be considered**



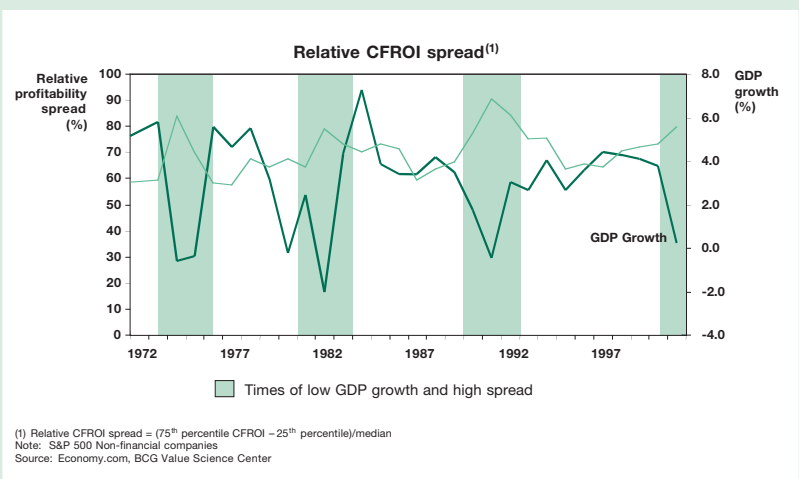
- **Value laggards:** These units are either in the start-up or turnaround phase. Analyse both their plans and progress carefully. Are their plans realistic? Is the anticipated rise in CFROI to be reinvested in value creation or stockpiled as cash? Are the units subject to cyclical factors? If so, how can these be reduced? How can they increase cash flow or reduce their investment base to push CFROI above the cost of capital?
- **Value destroyers:** Push for a miracle turnaround but plan to divest them.

### The value of high CFROI in a downturn

Companies with high profitability measured by CFROI are significantly less likely to suffer an erosion of profitability during a downturn, enabling them to maintain CFROI above the cost of capital and pursue fruitful acquisition growth in these periods (see below for the value creation potential of downturn M&As).

This is evident in Figure 20. In boom periods the spread between companies' profitability is quite small. However during a downturn it widens substantially, indicating that top CFROI is less sensitive to economic declines.

**Fig. 20 The performance gap opens in downturns**



An agenda for improved, sustainable value creation

## IV. Concentrate on organic growth but seize opportunities for acquisition growth during downturns

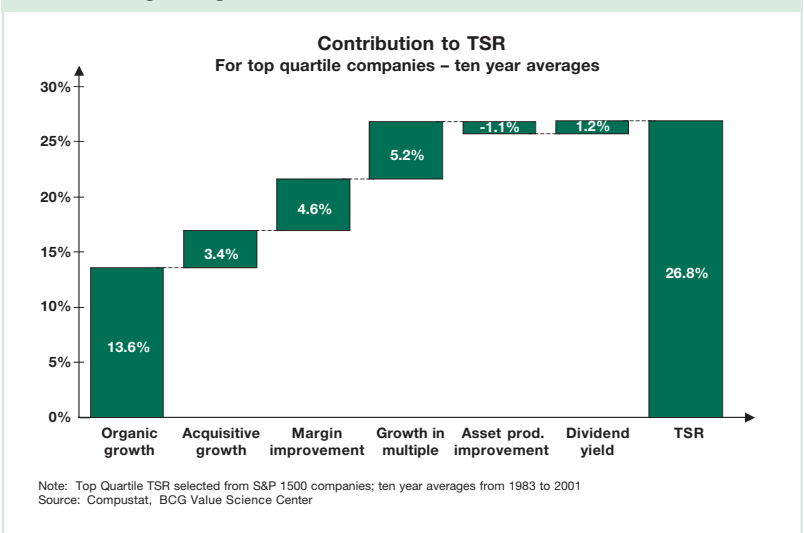
*Profitable growth is the strongest driver of shareholder returns, in both the short and long term. And organic rather than acquisition growth is generally the most important component. Innovation, coupled with superior asset productivity, is vital to achieve this. Don't ignore M&A possibilities, though, especially in downturns. These are ideal times to pursue M&As.*

In the drive to hit quarterly earnings forecasts over the last decade, many businesses have pursued the easiest options – improved cash flow through acquisition growth. Increasing sales through acquisitions are obviously easy to communicate to analysts, but the success rate of acquisitions has been historically low. However, new BCG research has not only found that organic growth is the overwhelming driver of long-term shareholder returns, but that the chances of success with M&As – measured by their long-term value creation – are substantially higher if they are executed during downturns.

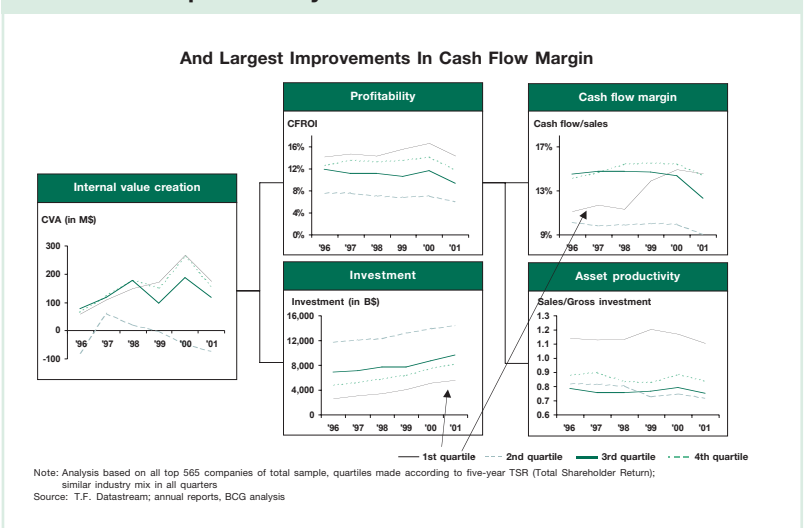
The importance of organic growth can be seen in Figure 21, based on a 30-year analysis of the S&P 1500. Over this period, organic growth is the dominant driver of TSR in both the short and long term. The impact of margins and asset productivity remains relatively stable. The comparatively low contribution of margins is understandable: there is a natural limit to how far these can be driven down. The small but negative influence of asset productivity is an anomaly in view of its importance for the top-quartile TSR businesses, indicating that it is an under-exploited source of value, on average.

Two key factors drive organic growth: asset productivity and innovation. As Figure 22 demonstrates, asset productivity is much higher among the top quartile TSR businesses. Although innovation is difficult to quantify, few would question the likelihood that it is also more pronounced in this group – it is the principal engine of organic growth and organic growth is the main driver of shareholder returns.

**Fig. 21** TSR for top quartile companies primarily driven by organic growth



**Fig. 22** Top TSR performer show significantly higher asset productivity



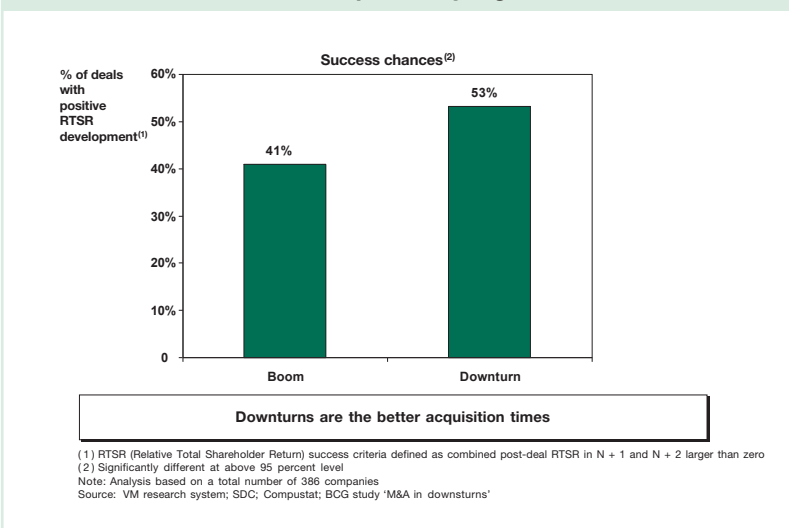
### An agenda for improved, sustainable value creation

This is most evident in the pharmaceutical industry, where innovation – or, more specifically, the promise of a firm's R&D pipeline – is the key distinguishing factor between businesses' performances. The German company Schering is one example. It recently launched major new products giving it footholds in new growth markets and has several highly promising drugs in clinical trials. Together, these innovations have helped lift its stock price significantly above the World Pharmaceutical Index.

Despite the importance of organic growth for long-term TSR, this doesn't mean that M&As should be written out of the equation. Historically, these have failed to deliver additional value for a variety of reasons, including inappropriate strategic alignment, poor post-merger integration (PMI) and, most commonly, overpriced deals. This was particularly the case in the 1990s when valuations were too optimistic and led to excessive expectation premiums. A deeper understanding of what drives these premiums (see below) would have prevented many companies overpaying.

More significantly, it would have been more fruitful in many cases to have waited until a downturn. A recent BCG study, soon to be published, has found that M&As executed during these periods have a much higher probability of generating long-term shareholder returns than those implemented in boom times (Fig. 23). On average, 53 percent of

**Fig. 23 Success chances for acquisitions made in a downturn are significantly higher**



downturn M&As produce long-term value measured by RTSR compared to 41 percent of boom-time M&As.

This isn't just because downturns tend to be buyers' markets. Lower expectation premiums, tighter due diligence in severe capital market conditions and lower resistance to PMI cost-cutting initiatives also help to make these periods favourable for M&As. Other key factors, which will be examined in BCG's forthcoming M&A report, are also critical.



An agenda for improved, sustainable value creation

## V. Manage your relative expectation premium

*Expectation premiums provide strategic opportunities to improve and sustain shareholder returns in both good and bad times. But they also present risks to value creation potential. Although you cannot influence absolute premiums, which are shaped by macroeconomic forces and other factors including ‘market sentiment’, you can control many of the drivers of your relative premium.*

### The strategic implications of relative expectation premiums

One of the common misconceptions about stock market cycles is that nearly all companies are in the same boat, apart from businesses that naturally benefit from particular points in the cycle. In boom times, the boat rises and in downturns it sinks. We’re generally all affected equally. There is an element of truth to this. Various macro-economic drivers and other forces tend to affect the absolute expectation premium (the difference between market and fundamental value) of most industries and companies relatively equally.

However, although the absolute rise and fall in stock prices is important to investors, it is the relative differences between companies’ expectation premiums that is key. And these always exist in all market conditions. Figure 24, which shows the relative expectation premiums for the top TSR corporations in the pharmaceuticals sector, illustrates how widely these can vary.

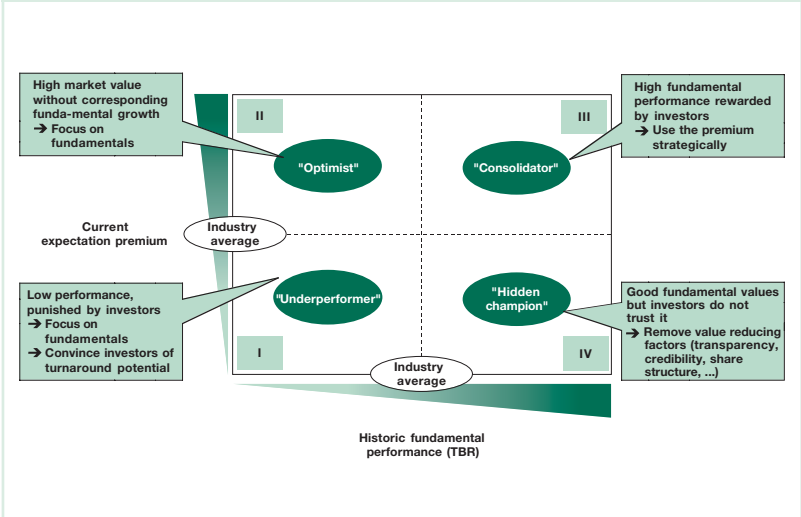
The reality is that companies are not in the same boat; they are all in very different vessels on the same tidal sea. And how businesses deal with their relative premiums can determine whether their boats sink, simply stay afloat, or rise.

Relative expectation premiums have several important implications for businesses’ fundamentals and long-term shareholder returns, depending on the scale and direction of their premiums. These potential threats and opportunities are reflected in the matrix in Figure 25. Each quadrant has different implications:

Fig. 24 Expectation premiums in the pharma industry



Fig. 25 Value Option Portfolio



## An agenda for improved, sustainable value creation

- **Quadrant 1, The Underperformer:** Any businesses in this position are relatively undervalued but justifiably so due to their comparatively poor fundamental performance. Unless investors can be convinced the business can be turned around – lifting its premium to at least the average – its situation is likely to deteriorate. Undervalued companies often find it difficult to raise investment capital.
- **Quadrant 2, The Optimist:** The company's fundamental performance does not justify its relatively high premium. A share price correction is imminent. And as we demonstrated, if this relative premium is positive and unjustifiably high, the business is likely to suffer a disproportionately large drop in RTSR during a market correction. To avoid this fate, the firm must improve its fundamentals or possibly acquire another business with strong fundamentals but a lower relative premium. Companies in Quadrant 4 (The Hidden Champions) are possible targets.
- **Quadrant 3, The Consolidator:** The ideal position to be in. The fundamentally strong Consolidator could use its relative premium advantage to acquire a Hidden Champion.
- **Quadrant 4, The Hidden Champion:** The robust fundamentals of the Hidden Champion have not been rewarded by investors. It must remove the factors that are suppressing its premium (see below, Managing the drivers of relative premiums), otherwise it could be vulnerable to a takeover by a Consolidator, or even an Optimist.

Figure 26 demonstrates how this approach can be applied in practice.

### Managing the drivers of relative expectation premiums

Two broad categories of drivers influence relative expectation premiums: value blockers and value creators. Both types of drivers can be controlled by corporations to establish sustainable improvements in their relative expectation

premiums (positive and negative) and, by implication, their stock price.

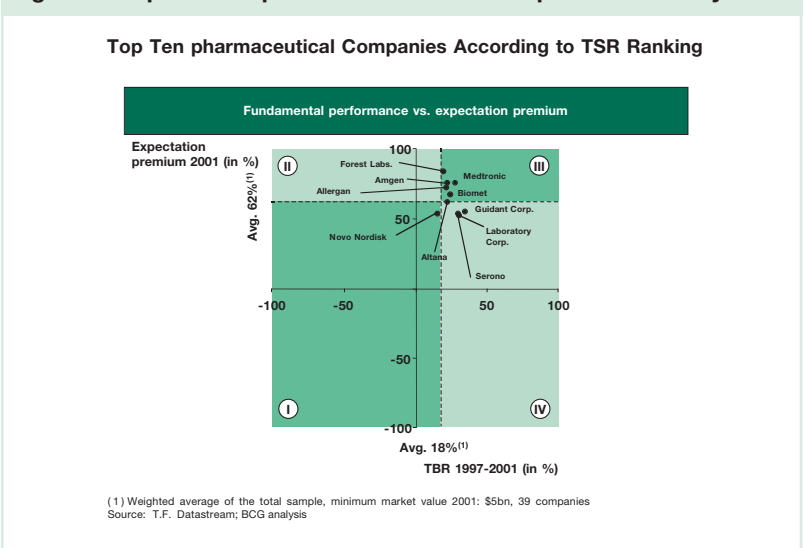
More importantly, it is possible to quantify the scale of these premiums and, using tools developed by BCG, to identify the principle drivers of relative expectation premiums and their relative contributions. Although it is currently not possible to explain the total relative difference in your premium, a high percentage can be explained.

### Removing value blockers

Value blockers increase investors' risks or the cost of equity, leading to stocks trading at a discount relative to their intrinsic value. There are various ways to reduce these obstacles:

- **Improve transparency:** How and what you communicate to shareholders is pivotal to your stock's brand identity. Handled correctly, it can reduce the cost of equity – and, consequently, increase your market capitalisation – by up to 20 percent (Fig. 27). There are two prerequisites. First, you need to provide full and open disclosure of information to instil trust. Second, you have to tailor your messages to core investor segments (see next section) to reassure them that your initiatives are in line with their aspirations.

**Fig. 26 Expectation premiums matrix of the pharma industry**



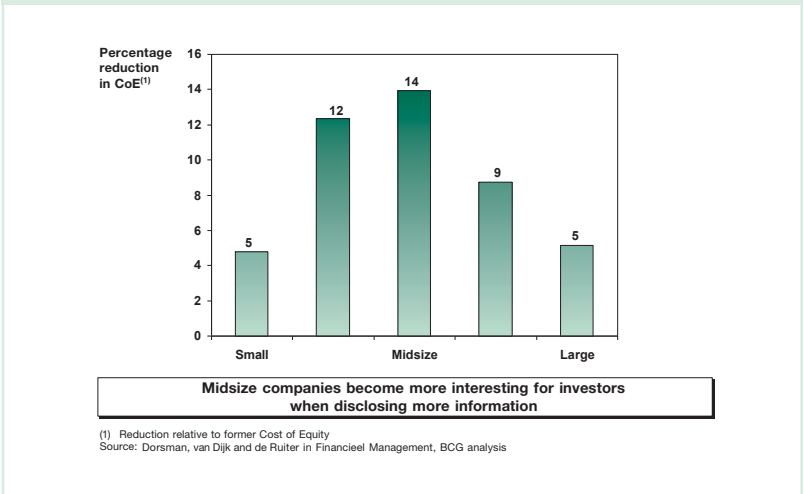
## An agenda for improved, sustainable value creation

- **Increase the liquidity of your stock:** The easier it is to buy and sell your stock, the lower the entry and exit costs, reducing investor risk. As Figure 28 illustrates, corporations with the most liquid shares (the lowest bid-offer spread) have at least a 10 percent share price premium over less liquid stocks. There are three main ways to increase liquidity:

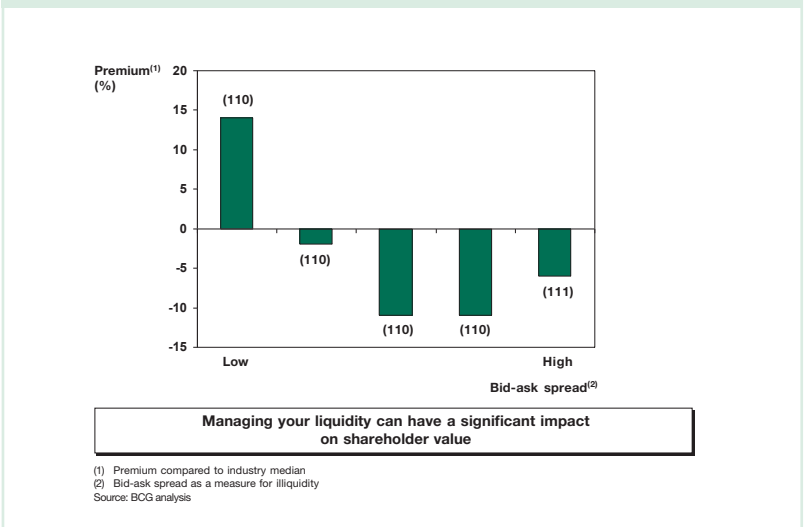
- Stock splits typically add 2 to 3 percent to a firm's stock price, irrespective of the number of splits.
- Overseas listings increase liquidity by widening the pool of shareholders. They also lower market risk. On average, non-US companies that have listed in the US have reduced their cost of equity (and increased their market capitalisation) by 1.3 percent on average, according to a recent study. UK companies achieved the biggest savings (2.65 percent), followed by Asian and Australian firms (2.07 percent and 1.23 percent respectively)<sup>4</sup>.
- Listings in major indices can also have a significant impact, as Shell recently experienced when it was excluded from the S&P Index, which is now focusing on US corporations. Shell's market value dropped by 7 percent. Although companies cannot elect to be part of a major index, firms that are included should strive to remain in these indices. This may rule out splitting a business, a tactic that could push it out of the index.

- **Manage your corporate reputation:** On average, firms with the best reputations enjoy around a 25 percent share price premium. In individual cases, the gap can be as high as 50 percent (Fig. 29). This isn't surprising. A company renowned as a first-class employer, for instance, is likely to attract higher-quality staff. Similarly a business with a high-calibre management team and a commitment to

**Fig. 27 Midsize companies benefit most from information disclosure by investor relations**



**Fig. 28 Premium is dependant on liquidity**



first-class standards is likely to encounter fewer product faults and other business risks.

There is also growing evidence that socially responsible corporations generate above-average shareholder returns. There are two possible reasons for this. First, responsibility equals predictability and consequently low risk, thereby increasing demand for the stock. Second, some investors might be drawn to these types of firms

4. See G.A. Karolyi (Financial Markets Institutions & Instruments: "Why do companies list shares abroad")

## An agenda for improved, sustainable value creation

for emotional not just financial reasons, just as some football fans invest in their clubs.

A strong corporate reputation, however, doesn't just reduce the cost of equity. Academic research has found that a strong reputation can limit the impact of an economic downturn on a firm's share price relative to businesses with weaker reputations.

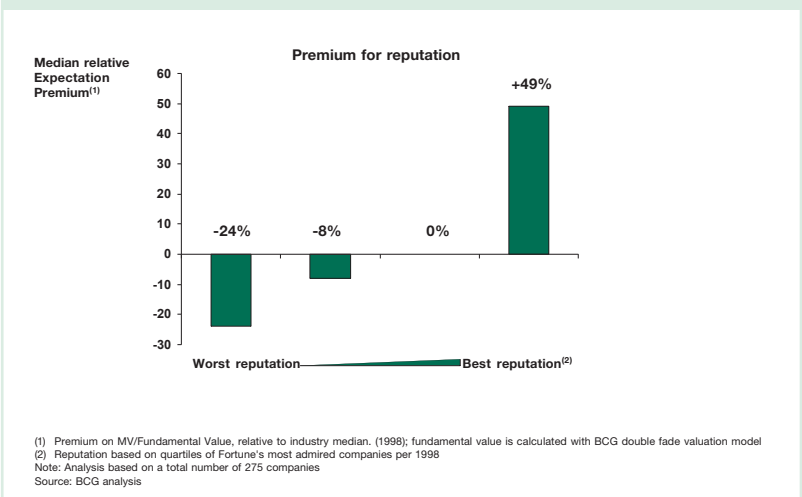
- **Enhance and promote your management credibility:** Investors will give businesses a premium – ‘a vote of confidence’ – if the management team has a track record of success. A close relationship with core investors will help them understand your team's potential, instilling greater trust.
- **Make your strategy appealing to your dominant investor segment:** This is a major issue worthy of a separate section. We explore this in more detail below.

### Exploiting value creators

Certain drivers of expectation premiums can give companies sustained positive premiums: they can prolong businesses' cash flow growth against competitive pressures. Below are several measures to generate these protective premiums:

- **Focus on innovative growth:** Premiums are strongly related to fundamental value creation. And, as we mentioned earlier, the most fruitful source of growth in terms of sustainable shareholder returns is organic growth. Innovation is an especially rich source of this, particularly when protected by patents and other intellectual property rights.
- **Aim for market leadership:** Market leaders are usually rewarded with the highest premiums. In 2001, for example, Pfizer's premium was 21 percent larger than Merck's (Fig. 30). BCG experience shows that market leaders have the highest consolidation potential within their industry. Furthermore, a downturn is a particularly good opportunity to capture the high ground via low-cost M&As as shown previously.

**Fig. 29 Companies with a top reputation have a valuation premium of 49 percent relative to their industry**



**Fig. 30 Market leadership and expectation premiums**

'Market leader'	Expectation premium 2001	'Peer'	Expectation premium 2001
Coca Cola	70%	Pepsi Cola	63%
Hennes & Mauritz	65%	GAP	-12%
Intel	61%	Motorola	59%
LVMH	32%	Richemont	1%
Pfizer	67%	Merck	46%
SAP	83%	Oracle	61%
Wal-Mart	62%	Target	43%

Source: T.F. Datastream; BCG analysis

- **Build strong brands:** Brands help cement customer loyalty, providing cross-selling opportunities and reducing the fade rate of your cash flow.

An agenda for improved, sustainable value creation

## VI. Make your strategy appealing to your dominant investor segment

*Different investors have different aspirations. Some, for example, want growth, others value. Corporations that harmonise their initiatives with their core investor segments' expectations are significantly less likely to have gaps between their market and fundamental values and all the difficulties this can create.*

Developing an effective customer-oriented strategy is a central pillar of good business practice but few companies apply this principle to their ultimate customers – investors.

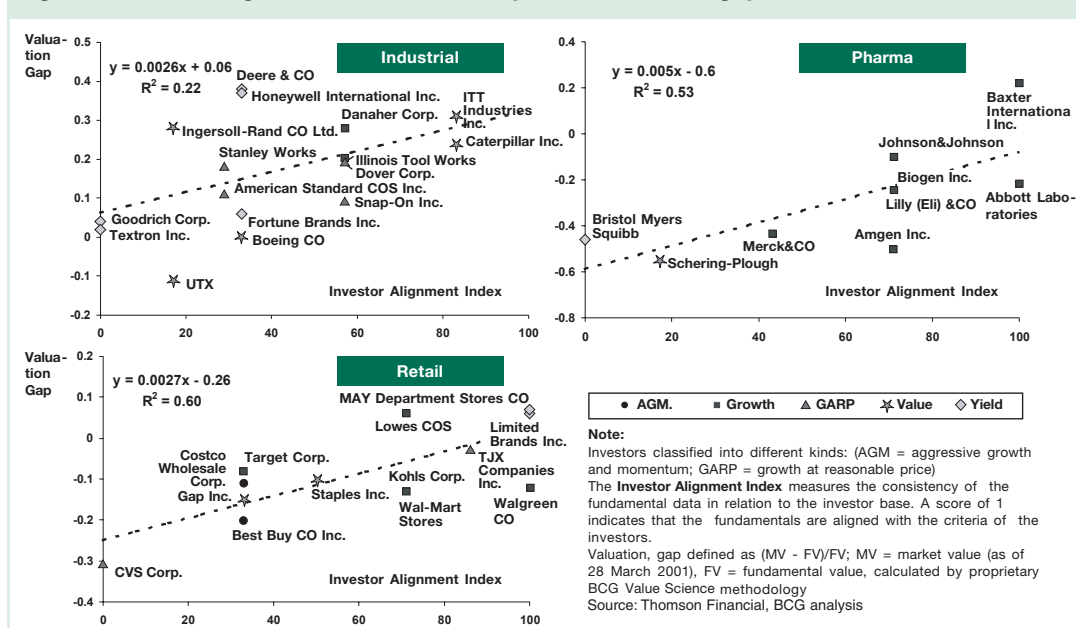
This is a dangerous oversight. Just as consumers of products and services have different needs, different investors have different appetites for growth, profitability, cash flow generation, and risk. Failure to align your strategy with your core investors' aspirations – to match supply with demand – can lead to a significant short- to medium-term gap – or expectation premium between your market and fundamental value. Typically, it means a negative expectation premium, a common complaint among CEOs, especially today.

Although fundamentals drive long-run shareholder

returns, in the short- to medium-term these premiums can have a significant impact on fundamental performance and, by implication, long-term TSR. Negative expectation premiums, for example, can make it harder to raise additional capital, distract management and reduce the effectiveness of stock-related incentives. In extreme cases it can lead to a takeover. High, positive expectation premiums are also risky. As we demonstrated earlier – and as many companies have recently experienced, unrealistically high premiums will be disproportionately punished by the capital markets (see above).

New research from BCG and Thomson Financial, however, shows that corporations that harmonise their strategies with their dominant investors' requirements, based on a BCG investor alignment

**Fig. 31 Investor alignment has material impact on valuation gap**



5. The investor alignment index measures the consistency of the fundamental data in relation to the investor base. A score of 1 indicates that the fundamentals are aligned with the investors' criteria.

## An agenda for improved, sustainable value creation

index<sup>5</sup> are less likely to experience these gaps. Figure 31 illustrates this. The closer the alignment, the lower the gap in general.

Investor alignment isn't a silver bullet. Other factors influence expectation premiums – some within your control, others not – and we address this in the next section. Nor does this strategy mean that corporations should slavishly follow investors' whims. However it can reduce your valuation gap and, equally crucially, illuminate how strategic decisions will be received by shareholders. Here we briefly outline the main steps required to harmonise your strategy with your core investors.

### Identify your dominant investor segment's style.

Most companies have a variety of investor segments, institutional and private, with varying aspirations such as yield, value and 'growth at a reasonable price' (GARP). These different styles of investors and the relative weightings they tend to ascribe to different performance measures of a business are summarised in Figure 32. The first important step is to identify your dominant investor style. To do this you need to conduct a detailed fact-based analysis of your investor base. For example, what are your major institutional shareholders' objectives and how do these fit your strategy and which peer groups, for instance, do they benchmark performances against? In collaboration with Thomson Financial, BCG has developed a number of tools to carry out this analysis to help you understand how different styles of investors will react to corporate initiatives.

Understanding your dominant investors' style, and particularly the importance these shareholders attach to quantitative and qualitative measures such as revenue growth and risk, is a vital step in formulating strategies that will be positively reflected in your stock price. One BCG client with a long history of delivering modest but profitable organic growth illustrates this point: several years ago the company's senior executives were considering a new acquisition and a major geographical expansion to justify the firm's positive expectation premium and close the gap between its market and fundamental value. But at the eleventh hour after discussions with their shareholders, they realised this was precisely what investors did not want. The company's dominant investor style was 'GARP' – shareholders were primarily interested in stability, not risky international expansion.

### Marry your strategy and internal processes with

**Fig. 32 Investors of the same style have similar philosophy and inclusion criteria**

Summary of Practical Experience					
	Yield	Value	GARP <sup>(1)</sup>	Growth	AGM <sup>(2)</sup>
Investment objective	Long-term yield	Value not fully recognized by the market	Capital gains and reasonable risk	High growth not fully valued by the market	High growth with minimal regard to fundamental risks
Dividend yield	> 2%	> 1.8%	–	–	–
EPS growth (projected)	–	7%-14%	> 12%	> 12%	> 15%
Sales growth	–	–	4%-10%	> 6%	> 10%
PEG ratio	–	< 2	< 2	–	–
Average EPS surprise	–	–	–	< 20%	< 20%
P/E ratio	< 20	10-20	< 20%	20-30	–

(1) Growth At Reasonable Price  
 (2) Aggressive Growth and Momentum  
 Source: Thomson Financial, BCG analysis

Primary importance

**their expectations.** It's not your aspirations, or for that matter investment analysts' forecasts, that should set the pace. It's what your dominant investor segment requires. The first part of call is to align your overarching RTSR goal with their desires. Next, you not only need to ensure your corporate and business unit plans are in tune with this goal, but that they reflect your dominant segment's particular appetite for growth, risk and other drivers. Staff incentives should also be in sync with these objectives. Equally crucially, you should develop internal control systems to capture and analyse data on how you are performing against these specific targets.

### Establish a close, direct dialogue with your core investor segment.

The best investor-oriented companies don't view communication with investors as simply a regulatory duty or an exercise in spinning a consistently positive story. Nor do they rely on analysts to filter and interpret their strategy and performance for the investment community. They engage directly, regularly and non-defensively with their core investors, usually face-to-face. Some corporations even rotate line managers through the investor relations (IR) function to help them think how to run their units in a more investor-focused manner.

Building a closer relationship with investors has several major advantages. For example, it gives firms a deeper understanding of the strategic trade-offs when taking particular actions. Investors can also provide valuable strategic insights and information based on their meetings with similar companies. More significantly, it helps cement trust and management credibility, one of the drivers of expectation premiums.

Hope for the best, plan for the worst

# Hope for the best, plan for the worst – and profit whatever happens

*We all hope the markets and economy will pick up. But you can't manage a company on hope. You not only need to plan for your expected outcome but also the best and worst scenarios. This process, detailed in this section, will improve your fundamentals and highlight competitive opportunities, regardless of which direction the economy takes.*

### Why contingency planning is essential

During a major economic downturn, companies rarely have time to think and plan properly. Decision-making times shrink substantially. Without a well-structured contingency plan, the danger is that incorrect decisions will remain unchallenged in this pressure-cooker environment and be amplified into a major financial crisis as their impact filters into other parts of the organisation. This is a well-documented problem in complex systems including corporations. The risk is even greater today as many managers will have to cope with the threat of a severe recession for the first time.

To avoid these hazards, it is essential to formulate systematic contingency plans for a range of possible scenarios – good, bad and expected. This involves three broad elements:

- Bullet-proofing your cash flow at both the corporate centre and business unit levels.
- Having plans to use your superior cash for each of your scenarios.
- Ensuring internal functions and systems are able to support these plans.

Even if a downturn never materialises, these processes will generate a number of competitive advantages. It will:

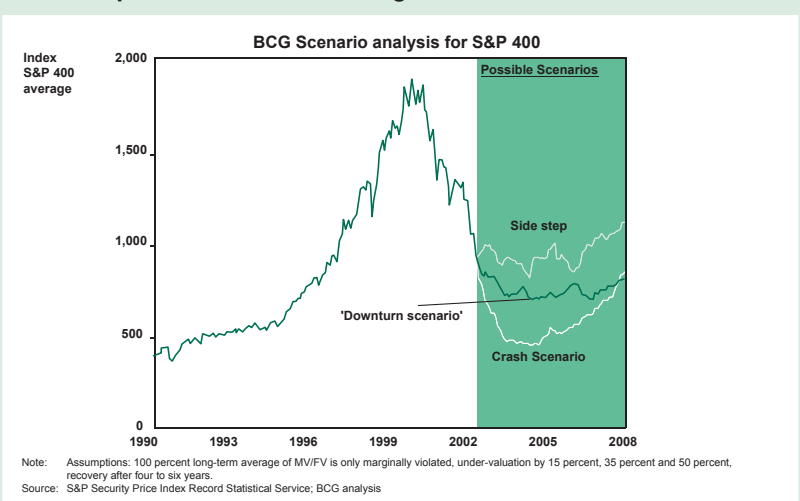
- Bolster your cash flow.

- Pinpoint your competitors' vulnerabilities and your relative strengths.
- Reduce the distraction of uncertainty.
- Increase risk awareness in your company.
- Spark creative ideas by encouraging managers how to succeed in extreme conditions.

### Establish likely scenarios

Different companies will have different economic outlooks, depending on the personal view of their boards, the countries in which they operate and their

**Fig. 33** Periods of overshooting always followed by periods of undershooting



## Hope for the best, plan for the worst

industries. To develop contingency plans, at least three scenarios need to be considered – the board's expected outcome and the best and worst scenarios. Globally, based on currently circulating views, there seem to be three possible scenarios: a slow recovery, stagnation or deep recession (Fig. 33).

### Appoint a crisis management team

A dedicated crisis management task force reporting directly to your executive board should be established with a mandate to perform three main functions:

- Conduct a recession check to establish the sensitivity of your company's cash flow to your scenarios and recommend remedial actions to correct weaknesses.
- Develop plans for each scenario that will enable your firm to use your superior cash flow to profit from competitors' vulnerabilities.
- Assist in operating the company, in conjunction with the board, if a crisis occurs.

The team should be composed of senior executives from all key business units and functions to ensure all perspectives and interactions of your business system are taken into account. Collectively, its members should embrace a broad cross section of professional, personal and intellectual skills, ranging from analytical and communication skills to 'big picture thinking' skills. Each individual should also have a clearly defined role.

### Conduct a three-stage recession health check

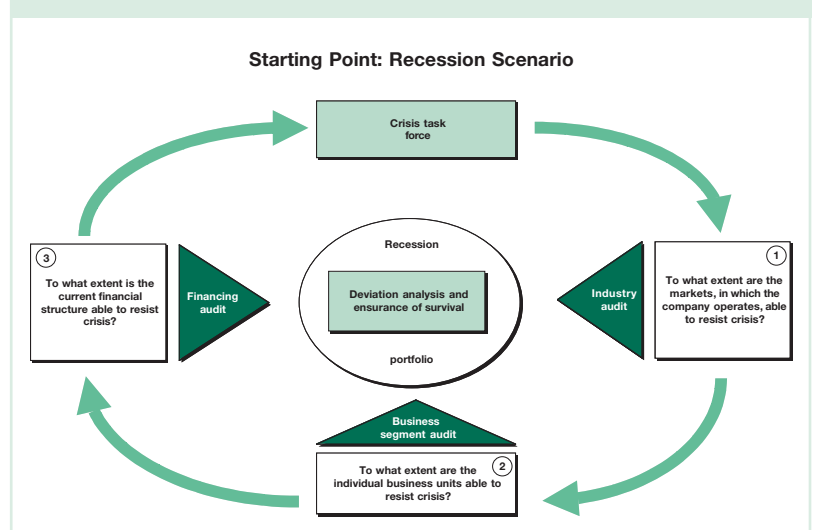
Even the most financially robust corporation will have weak points in its cash flow, sometimes in a strategically important business sometimes in peripheral units. In fact, experience has shown they tend to be found across all functions. Each of these Achilles heels must be addressed: collectively, they can severely undermine your cash flow in a downturn.

To identify these fault lines, you have to conduct a three-stage recession check, testing the resilience of your company's cash flow against different levels of severity of a downturn (Fig. 34). Each of these scenarios will indicate the type and urgency of different cash flow improvement measures that

need to be implemented if these scenarios occur. The most extreme will reveal hidden weaknesses that need to be corrected immediately.

- **Establish the vulnerability of key markets for each downturn scenario.** Analysing historic volatility of prices and volumes in core markets and industries will give an initial indication of each market's vulnerability to different conditions. To gain a deeper insight into these elasticities of demand, you will need to assess a number of product-, customer-, supplier- and customer-related factors. If there are a large number of competitors in a market, for example, volumes and prices are likely to be highly susceptible to a downturn, particularly if the products have long life cycles.
- **How would these market sensitivities affect your businesses' sales and cash flow during a recession?** Group your business units by high and low strategic priority. Assess the potential impact of different volumes, prices and costs on the cash flow of the individual units in each of these two groups based on their price-volume elasticities calculated earlier. This type of cash flow simulation can be done simply and quickly using a spreadsheet. Competitors' relative vulnerabilities should also be analysed in order to identify strategic opportunities to improve market share (see below).
- **Evaluate the impact on the company's**

Fig. 34 Three phase recession check





## Hope for the best, plan for the worst

**overall cash flow.** This should include projected cash flows during the crisis for three key areas: operating units, financial liabilities such as debt, and investments. Each of these three links in the cash flow chain (and their relevant subcomponents) should be clearly visible. This will enable you to identify relative weaknesses and take prioritised steps to correct cash flow weaknesses – such steps as cost reductions, debt rescheduling and consolidation of locations.

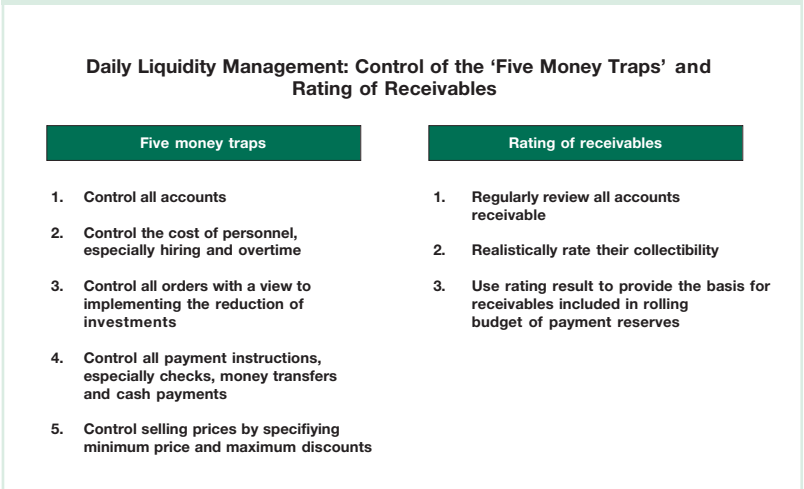
### Treat your cash flow weaknesses

- **Fixing cash flow weaknesses.** As Figure 35 illustrates, the relative sensitivity of each business unit to a crisis, coupled with the immediacy of the crisis, determines the measures that you need to take to plug cash flow holes. If a business is highly sensitive to a downturn and a crisis is imminent, for example, measures to strengthen it include reducing costs, increasing efficiency and, if it is a marginal activity, disposing of it.
- **Integrating crisis readiness into your organisation.** At a corporate level, create a more flexible organisational and cost structure in order to make it more responsive to time pressures during a downturn. In addition, hold management workshops to explain the plans and the strategic guardrails that need to be in place. You should also introduce systems to track early warning signs that a particular scenario is evolving.

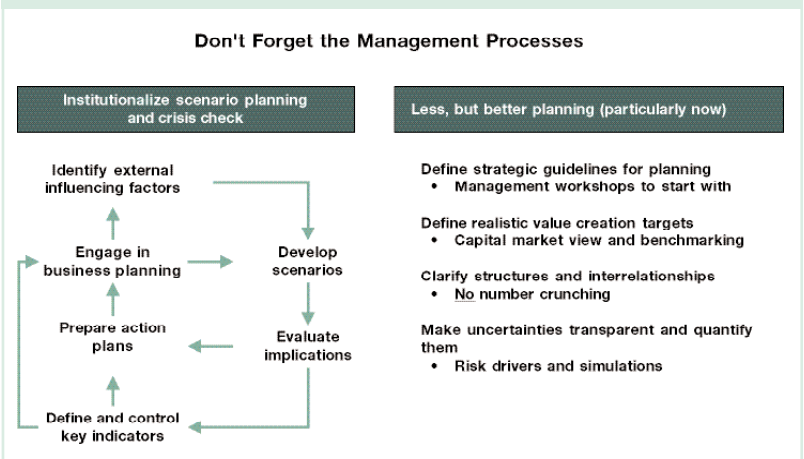
### Use your cash flow fitness to profit from a crisis

- **Increase market share through M&As.** Historically, many of the biggest shifts in market share have occurred during downturns, fuelled by M&As. One of the most dramatic was Rockefeller’s consolidation of the US network of thousands of small, mainly family-run oil businesses, to create Standard Oil. To exploit this opportunity, develop a target list of prospective M&A candidates, taking into account their relative fundamental performances and expectation premiums.
- **Invest against the tide.** One of the biggest

**Fig. 35 Crisis management (I):**



**Fig. 36 Crisis management (II):**



**Fig. 37 Crisis management (III):**



### Hope for the best, plan for the worst

mistakes that companies make in economic downturns is to retreat into their shells and cut investments such as marketing and R&D that don't deliver immediate cash flow. The reality is that this is precisely the time to step up these activities, using your superior cash flow or existing reserves. With these strengths you will be able to capitalise on your competitors' weaknesses and improve market share, a key driver of sustainable positive expectation premiums (see above). The earlier analysis of your competitors' relative vulnerabilities to a crisis will pinpoint where to most fruitfully make many of your investments.

Different investment plans should be created for each of your scenarios. Areas to consider include:

#### Sales and marketing

- Strengthen any brands by increasing advertising expenditures.
- Focus price offensives and geographic expansion on competitors' strongholds.

#### R&D

- Increase research expenditure to gain or extend the technological lead.
- Innovate through new products and services.

#### Production and logistics

- Expand low-cost leadership by investing in your production platform.
- Establish new logistics models to increase speed and reliability of delivery and reduce storage costs.

#### Personnel and training

- Improve competencies by poaching senior managers from competitors.
- Increase employee satisfaction by intensifying training initiatives.

# Study background

The study is based on the annual returns of 4,000 companies in Datastream's global market indices for the period 1997 to 2001. Collectively, they represent around 70 percent of the world's total market capitalisation.

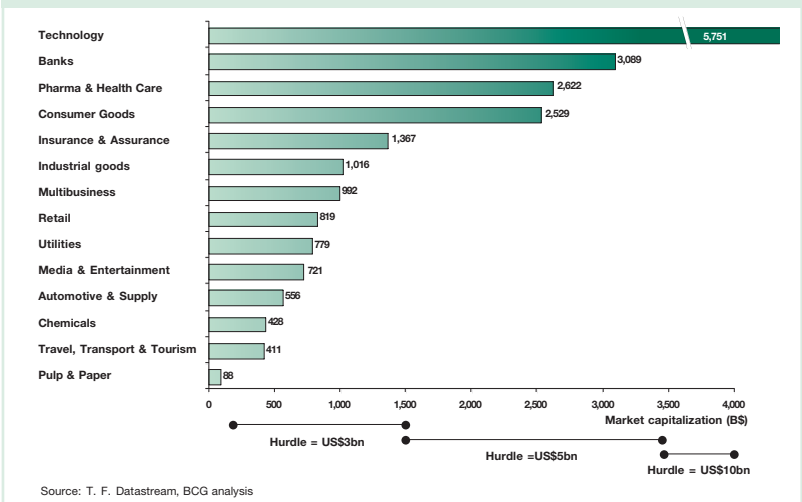
Businesses were selected from Datastream's database using three main criteria:

- Listed for at least five years.
- Satisfied minimum market capitalisation hurdles: different capitalisation hurdles were set for each country and sector to reflect their relative economic weight (see Figures A1 and A2).
- Could be classified into one of fourteen industrial sectors.

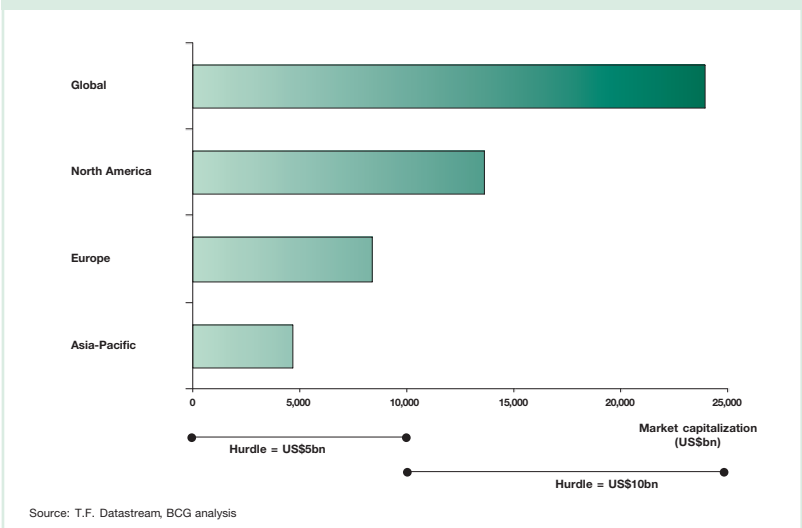
Several companies that met these criteria were excluded from the final sample as they had been involved in major mergers or acquisitions over the study period (1997 to 2001) and were believed to distort the study.

All financial figures were converted into dollars, using the exchange rate as of 31 December 2001.

**Fig. A1 Market capitalisation hurdles for each industry**



**Fig. A2 Market capitalisation hurdles for each region**

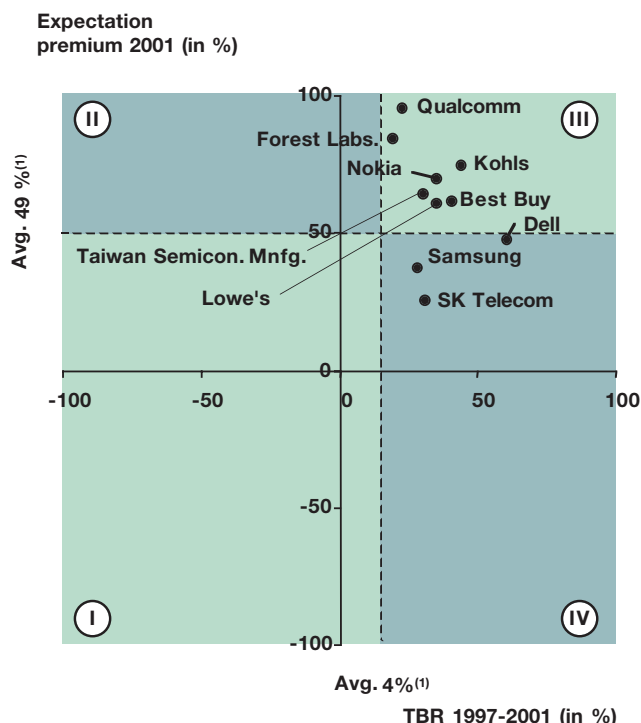




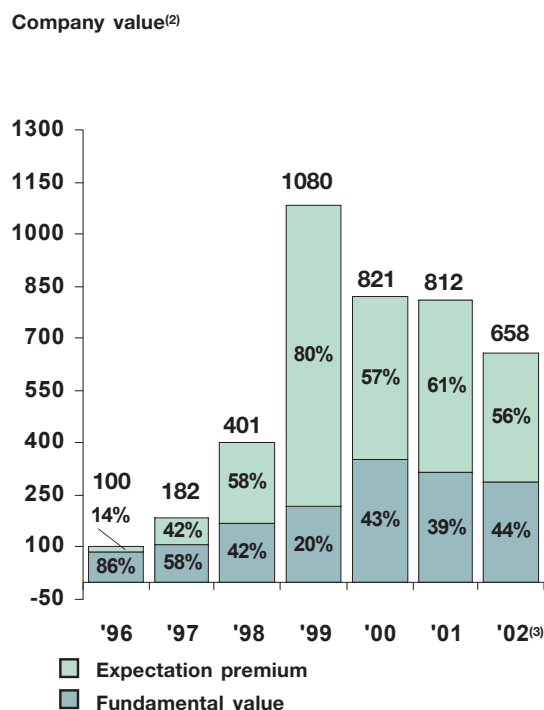
# Regional and industry rankings

WORLD

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997-2001	TSR 1997-2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
2	Nokia	FN	122,061	35%	61%	69%	2,371	-40%	54%
3	Qualcomm	US	38,603	23%	60%	95%	-422	-32%	93%
4	Forest Labs.	US	14,584	19%	59%	84%	123	20%	86%
5	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
6	Taiwan Semicon Mnfg.	TA	42,093	31%	49%	64%	-207	-42%	46%
7	Samsung Electronics	KO	32,144	29%	49%	37%	931	24%	51%
8	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
9	SK Telecom	KO	18,190	31%	48%	26%	582	-16%	23%
10	Lowe's	US	35,936	35%	40%	60%	455	-10%	56%

Glossary

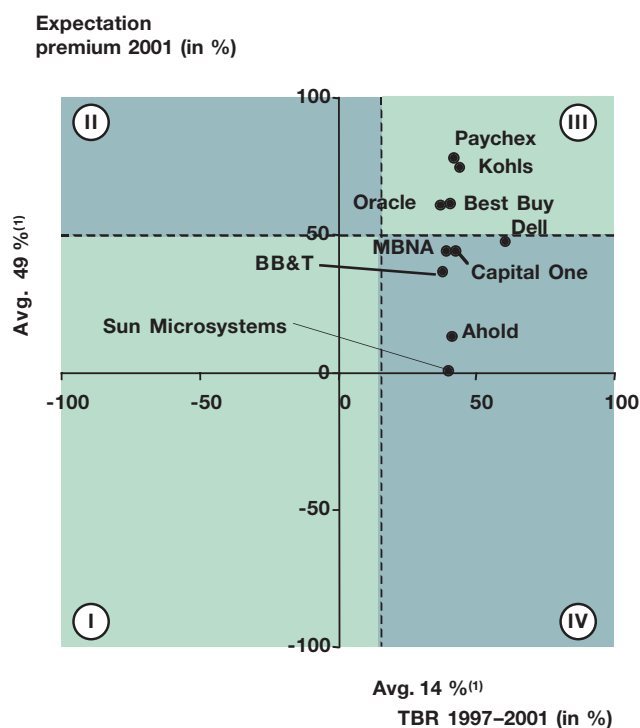
- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Notes

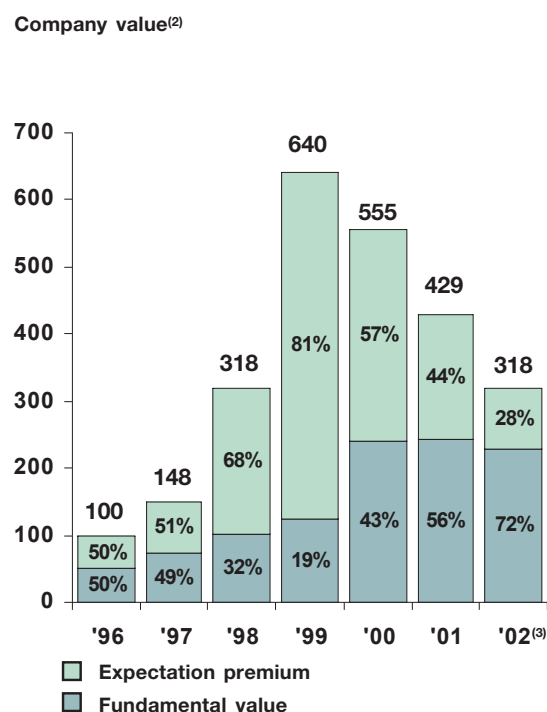
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 138 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
2	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
3	Capital One	US	11,592	43%	36%	44%	319	-43%	-1%
4	Paychex	US	13,060	42%	29%	78%	179	-16%	76%
5	Ahold Kon.	NL	26,753	41%	17%	13%	793	-60%	-48%
6	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
7	Sun Microsystems	US	39,872	40%	31%	0%	1,614	-76%	-242%
8	MBNA	US	29,983	40%	25%	44%	937	-13%	32%
9	Oracle	US	75,916	38%	24%	61%	2,249	-26%	52%
10	BB & T	US	16,360	38%	18%	38%	377	4%	38%

## Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
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 TSR = Total Shareholder Return (market performance)

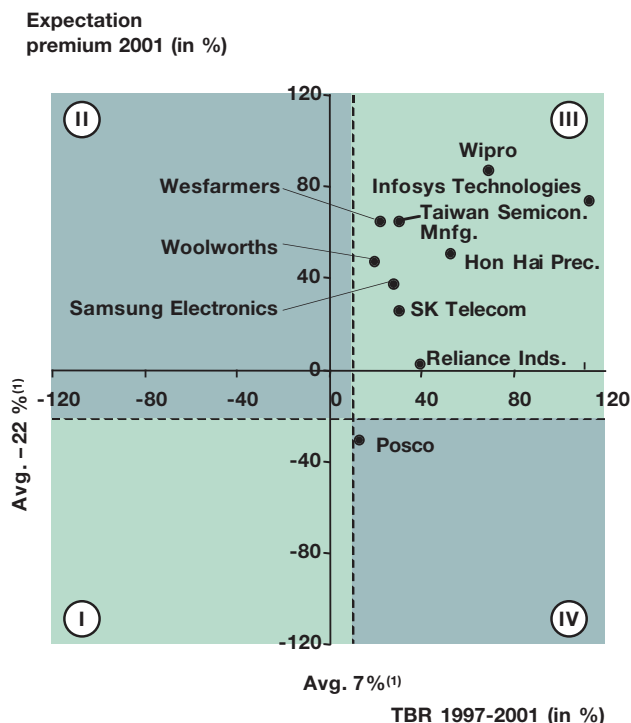
Source: T.F. Datastream; BCG analysis

## Notes

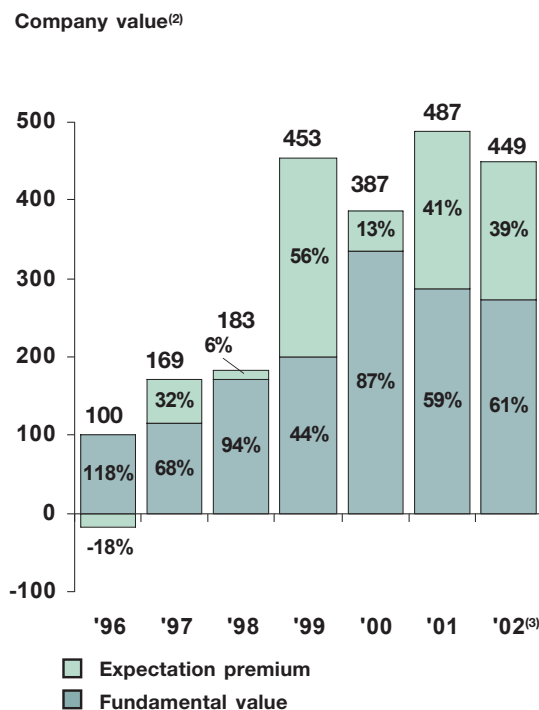
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 139 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

ASIA

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Wipro	IN	7,616	69%	136%	86%	62	-14%	84%
2	Infosys Technologies	IN	5,412	114%	113%	73%	74	-5%	74%
3	Hon Hai Precision	TA	8,088	53%	53%	50%	152	-9%	51%
4	Taiwan Semicon Mnfg .	TA	42,093	31%	49%	64%	-207	-42%	46%
5	Samsung Electronics	KO	32,144	29%	49%	37%	931	24%	51%
6	SK Telecom	KO	18,190	31%	48%	26%	582	-16%	23%
7	Woolworths	AU	5,978	20%	35%	47%	208	13%	52%
8	Wesfarmers	AU	5,874	23%	35%	65%	54	-13%	57%
9	Posco	KO	8,693	13%	31%	-32%	-1,254	-6%	-44%
10	Reliance Inds .	IN	6,011	40%	26%	2%	-40	-13%	15%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (Fundamental performance)
- TSR = Total Shareholder Return (Market performance)

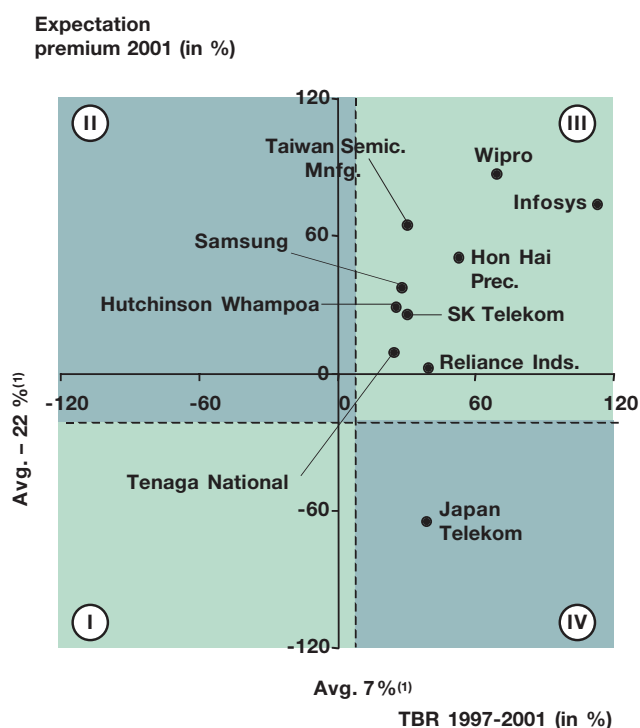
Source: T.F. Datastream; BCG analysis

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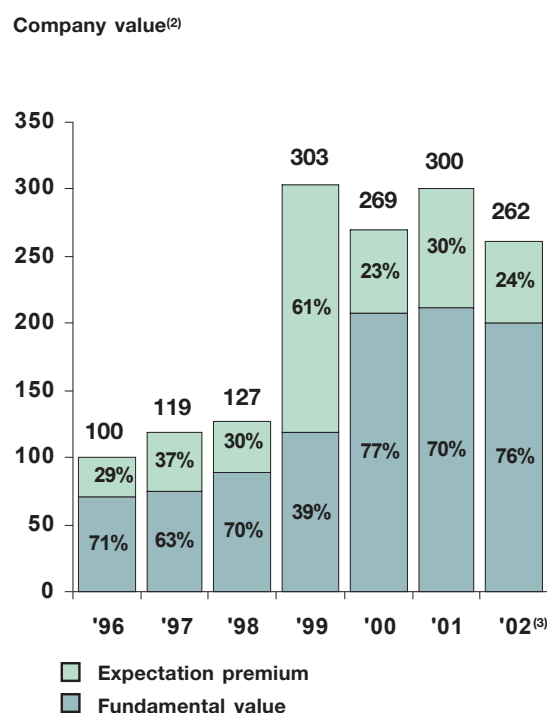
- (1) Weighted average of the total sample, minimum market value 2001: \$5B, 89 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002



Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Infosys Technologies	IN	5,412	114%	113%	73%	74	-5%	74%
2	Wipro	IN	7,616	69%	136%	86%	62	-14%	84%
3	Hon Hai Precision	TA	8,088	53%	53%	50%	152	-9%	51%
4	Reliance Inds.	IN	6,011	40%	26%	2%	-40	-13%	15%
5	Japan Telecom	JP	9,581	39%	-5%	-65%	1,024	-18%	-62%
6	SK Telecom	KO	18,190	31%	48%	26%	582	-16%	23%
7	Taiwan S emicon Mnfg.	TA	42,093	31%	49%	64%	-207	-42%	46%
8	Samsung Electronics	KO	32,144	29%	49%	37%	931	24%	51%
9	Hutchinson Whampoa	HK	41,142	26%	9%	28%	-1,755	-34%	0%
10	Tenaga National	MY	8,748	25%	-2%	9%	-382	-16%	10%

Glossary

- CVA = Cash Value Added
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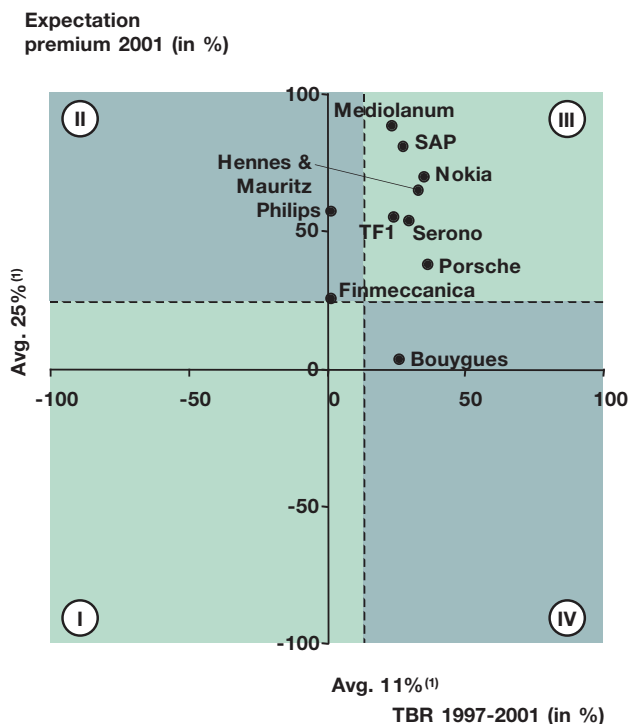
Source: T.F. Datastream; BCG analysis

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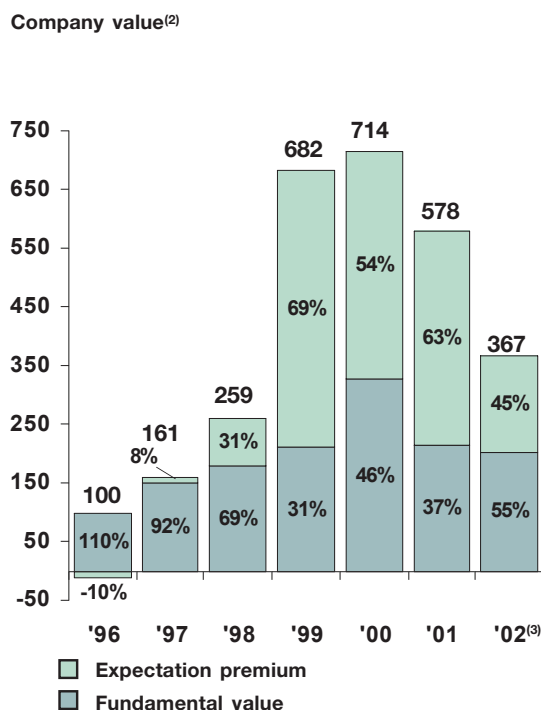
- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 89 companies
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- (3) Estimated Fundamental value; market value as of 31Oct 2002

EUROPE

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Nokia	FN	122,061	35%	61%	69%	2,371	-40%	54%
2	Mediolanum	IT	6,533	23%	48%	89%	47	-44%	78%
3	Porsche	BD	6,685	37%	45%	38%	158	13%	39%
4	Bouygues	FR	10,887	27%	38%	3%	148	-27%	-27%
5	Hennes & Mauritz	SD	15,108	33%	37%	65%	337	-17%	57%
6	Serono	SW	10,180	30%	36%	53%	161	-43%	15%
7	Finmeccanica	IT	7,275	1%	35%	26%	-174	-42%	-19%
8	Philips	NL	39,115	2%	34%	57%	-2,261	-45%	38%
9	TF1	FR	5,359	24%	34%	55%	212	-6%	46%
10	SAP	BD	41,387	27%	33%	83%	420	-47%	72%

Glossary

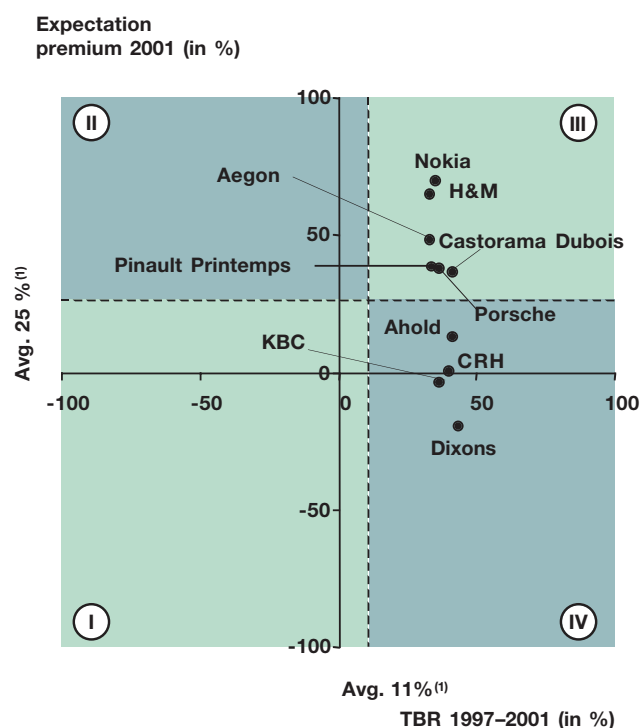
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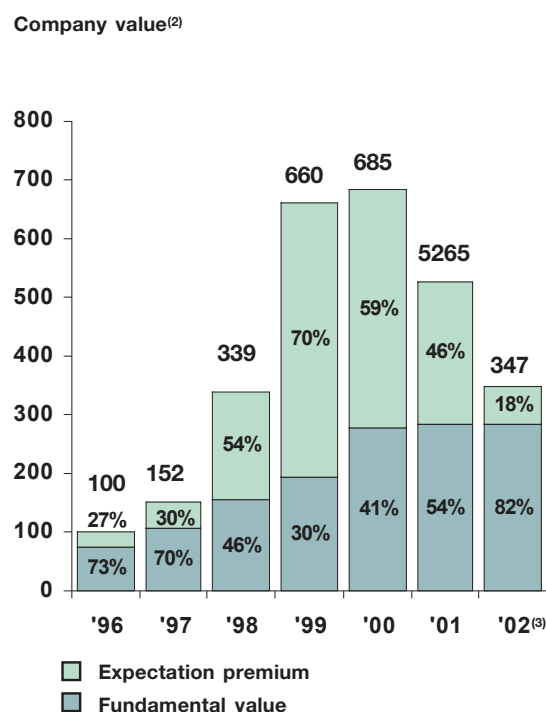
- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 116 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Dixons Gp.	UK	6,554	43%	14%	-19%	501	-16%	-41%
2	Ahold Kon.	NL	26,753	41%	17%	13%	793	-60%	-48%
3	CRH	IR	9,202	40%	25%	0%	358	-35%	-43%
4	Castorama Dubois	FR	8,088	40%	13%	36%	267	18%	44%
5	KBC	BG	10,047	37%	10%	-4%	364	-13%	-24%
6	Porsche	BD	6,685	37%	45%	38%	158	13%	39%
7	Nokia	FN	122,061	35%	61%	69%	2,371	-40%	54%
8	Pinault Printemps	FR	15,758	34%	20%	39%	-95	-43%	21%
9	Aegon	NL	38,497	34%	22%	48%	756	-53%	-21%
10	Hennes & Mauritz	SD	15,108	33%	37%	65%	337	-17%	57%

## Glossary

CVA = Cash Value Added  
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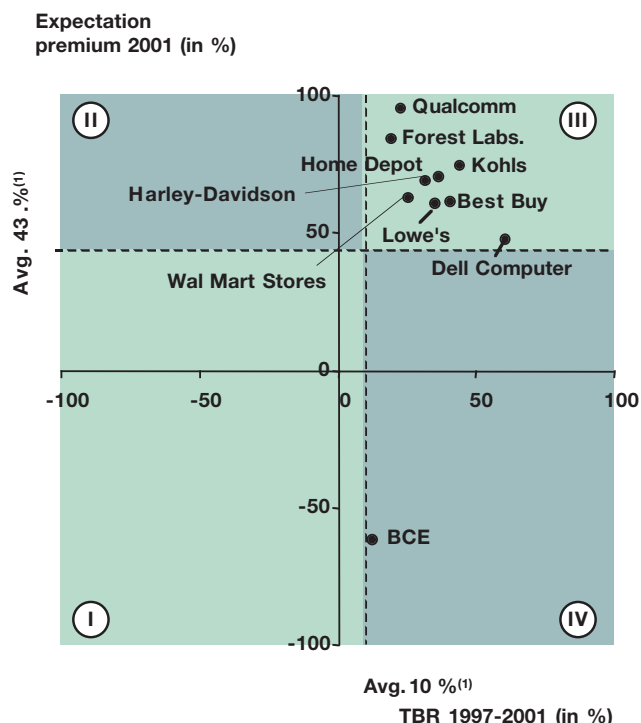
Source: T.F. Datastream; BCG analysis

## Notes

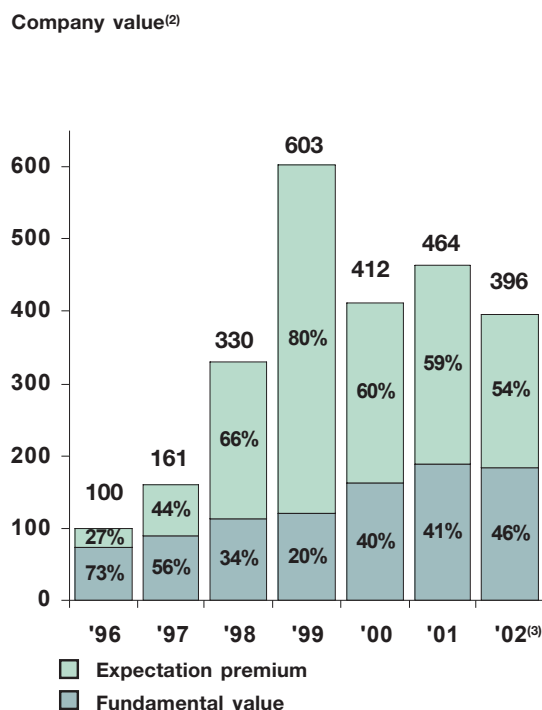
- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 116 companies
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## NORTH-AMERICA

### Fundamental performance vs. expectation premium



### Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
2	Qualcomm	US	38,603	23%	60%	95%	-422	-32%	93%
3	Forest Labs.	US	14,584	19%	59%	84%	123	20%	86%
4	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
5	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
6	Lowe's	US	35,936	35%	40%	60%	455	-10%	56%
7	Wal Mart Stores	US	256,505	26%	39%	62%	5,422	-7%	60%
8	BCE	CN	18,165	13%	38%	-62%	820	-23%	-62%
9	Harley-Davidson	US	16,441	32%	36%	69%	304	-4%	64%
10	Home Depot	US	119,199	37%	36%	70%	1,639	-43%	48%

#### Glossary

CVA = Cash Value Added  
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 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
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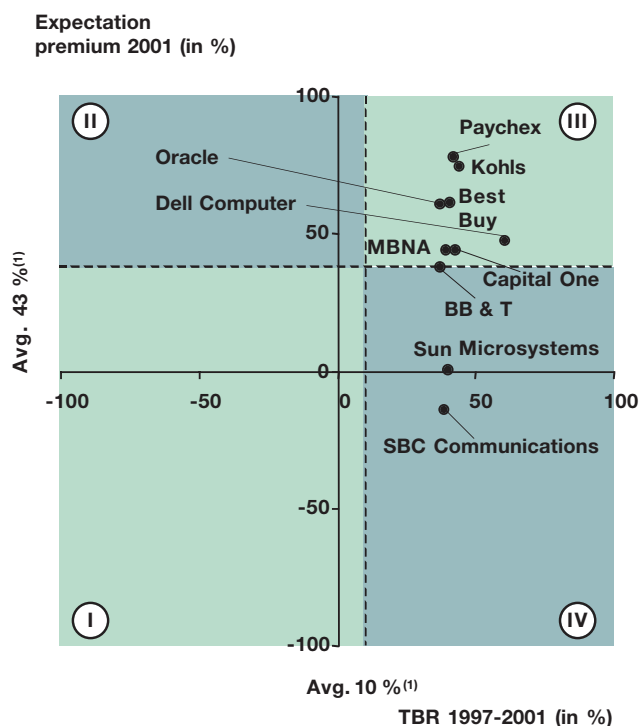
Source: T.F. Datastream; BCG analysis

#### Notes

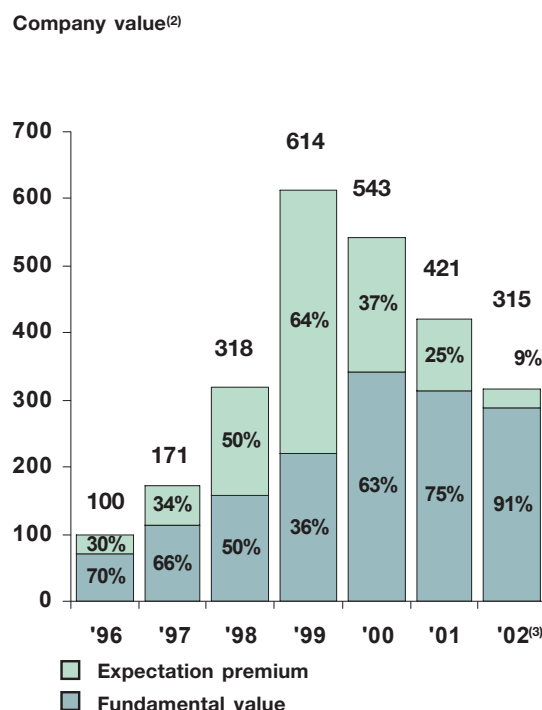
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 140 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

**NORTH-AMERICA**

**Fundamental performance vs. expectation premium**



**Avg. expectation premium top 10 companies**



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
2	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
3	Capital One	US	11,592	43%	36%	44%	319	-43%	-1%
4	Paychex	US	13,060	42%	29%	78%	179	-16%	76%
5	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
6	Sun Microsystems	US	39,872	40%	31%	0%	1,614	-76%	-242%
7	MBNA	US	29,983	40%	25%	44%	937	-13%	32%
8	SBC Communications	US	131,672	39%	11%	-14%	3,182	-32%	-42%
9	Oracle	US	75,916	38%	24%	61%	2,249	-26%	52%
10	BB & T	US	16,360	38%	18%	38%	377	4%	38%

**Glossary**

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

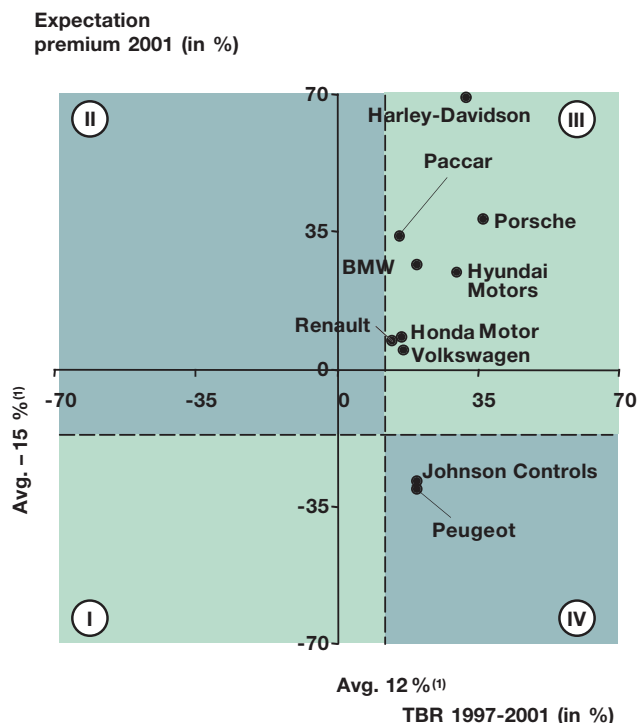
Source: T.F. Datastream; BCG analysis

**Notes**

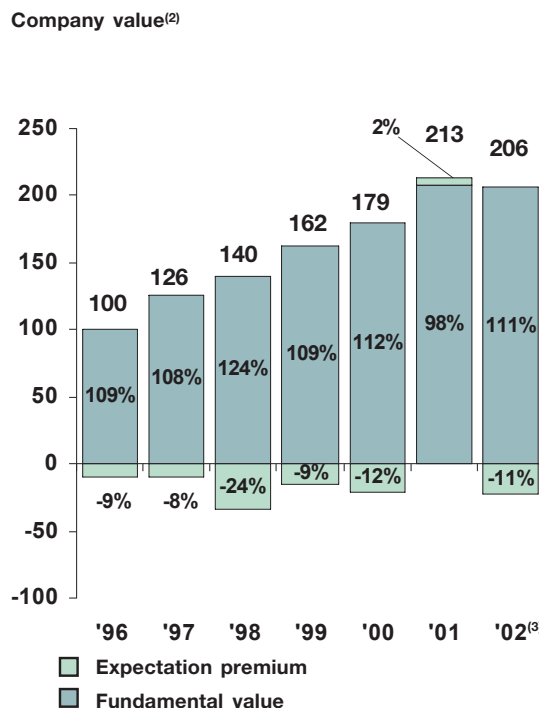
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 140 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Automotive

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Porsche	BD	6,685	37%	45%	38%	158	13%	39%
2	Harley-Davidson	US	16,441	32%	36%	69%	304	-4%	64%
3	Peugeot	FR	11,016	20%	28%	-31%	-873	-8%	-49%
4	Renault	FR	8,542	14%	21%	7%	-476	23%	9%
5	BMW	BD	23,009	19%	20%	20%	-269	-8%	9%
6	Paccar	US	5,036	16%	19%	34%	107	2%	28%
7	Hyundai Motor	KO	4,487	30%	17%	24%	-288	15%	20%
8	Johnson Controls	US	7,078	20%	16%	-29%	545	-2%	-44%
9	Volkswagen	BD	18,428	16%	12%	6%	-1,628	-25%	-10%
10	Honda Motor	JP	38,884	16%	10%	8%	1,360	-16%	-16%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

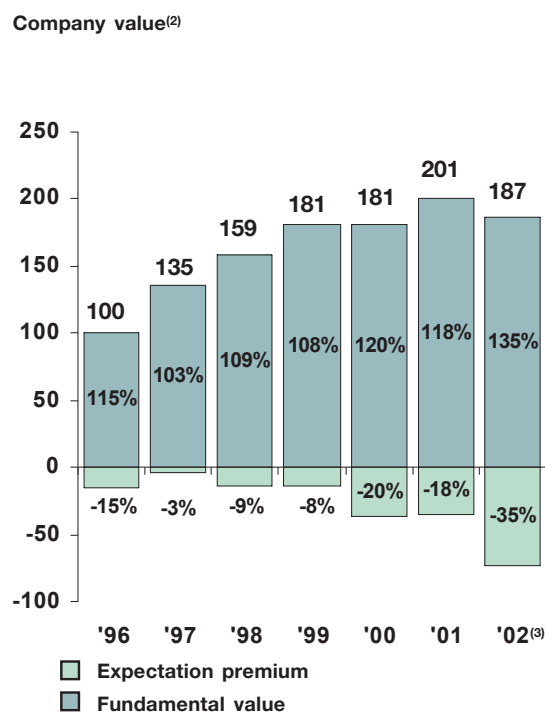
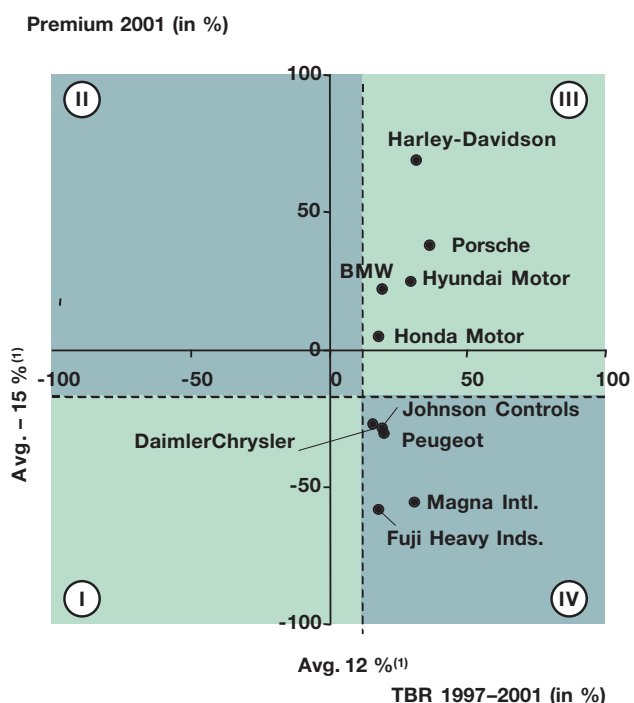
Source: T.F. Datastream; BCG analysis

Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 30 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Porsche	BD	6,685	37%	45%	38%	158	13%	39%
2	Harley-Davidson	US	16,441	32%	36%	69%	304	-4%	64%
3	Magna Intl.	CN	4,904	32%	8%	-55%	267	-15%	-65%
4	Hyundai Motor	KO	4,487	30%	17%	24%	-288	15%	20%
5	Peugeot	FR	11,016	20%	28%	-31%	-873	-8%	-49%
6	Johnson Controls	US	7,078	20%	16%	-29%	545	-2%	-44%
7	BMW	BD	23,009	19%	20%	20%	-269	-8%	9%
8	Fuji Heavy Inds.	JP	3,201	18%	5%	-58%	130	-32%	-108%
9	DaimlerChrysler	BD	43,634	18%	1%	-21%	-7,864	-26%	-49%
10	Honda Motor	JP	38,884	16%	10%	8%	1,360	-16%	-16%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

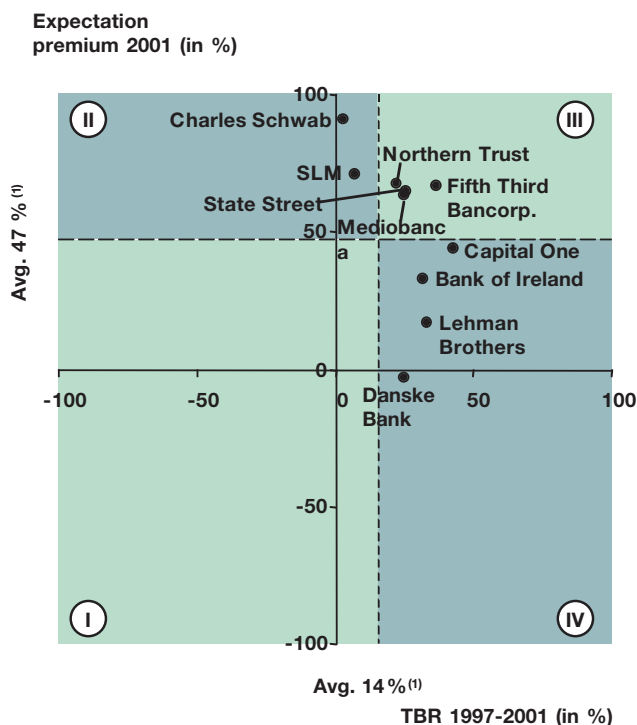
Source: T.F. Datastream; BCG analysis

Notes

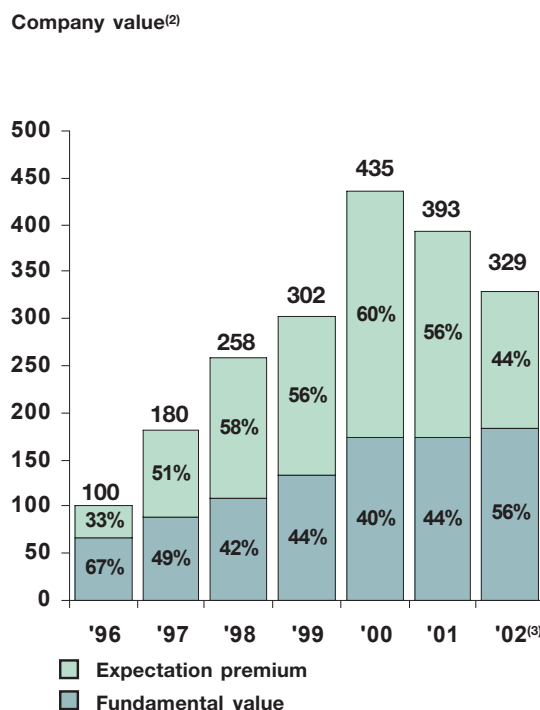
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 30 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

**BANKS**

**Fundamental performance vs. expectation premium**



**Avg. expectation premium top 10 companies**



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	AVE 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Capital One	US	11,592	43%	36%	44%	319	-43%	-1%
2	Lehman Brothers	US	15,919	33%	34%	17%	421	-20%	-7%
3	Mediobanca	IT	8,720	25%	30%	63%	-124	-40%	36%
4	Bank of Ireland	IR	9,341	32%	29%	33%	379	11%	35%
5	Fifth Third Bancorp.	US	35,437	37%	29%	67%	361	5%	67%
6	Northern Trust	US	13,376	22%	29%	68%	218	-42%	41%
7	SLM	US	13,172	7%	28%	71%	232	23%	74%
8	State Street	US	17,000	26%	28%	65%	255	-20%	53%
9	Charles Schwab	US	21,142	3%	27%	91%	-326	-41%	84%
10	Danske Bank	DK	11,839	25%	27%	-3%	526	-8%	-23%

**Glossary**

- AVE = Added Value to Equity
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

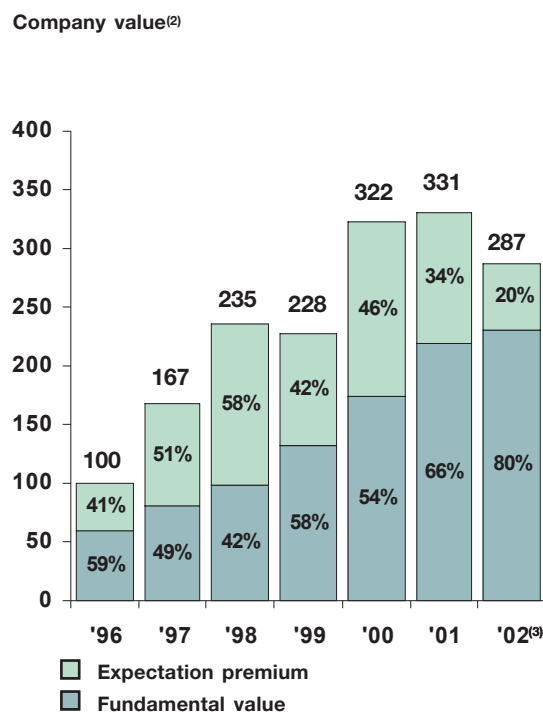
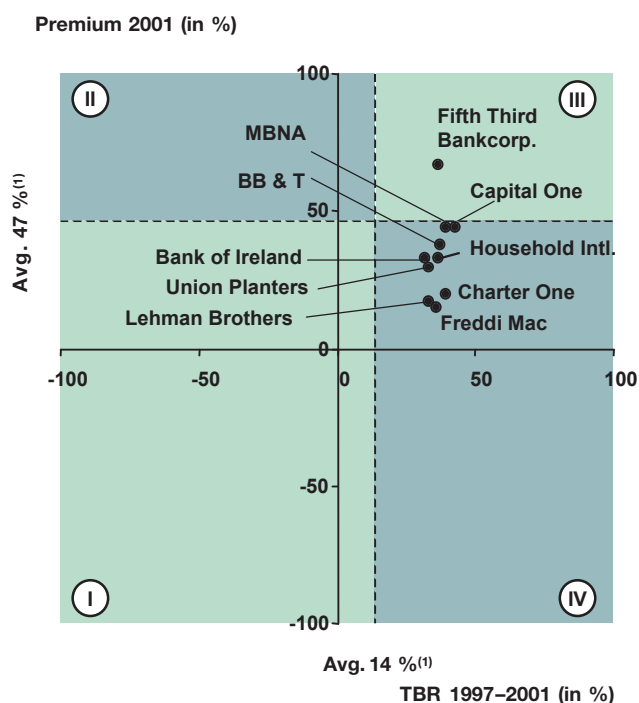
**Notes**

- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 62 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002



**Fundamental performance vs. expectation premium**

**Avg. expectation premium top 10 companies**



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	AVE 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Capital One	US	11,592	43%	36%	44%	319	-43%	-1%
2	Charter One	US	6,102	40%	13%	20%	216	20%	26%
3	MBNA	US	29,983	40%	25%	44%	937	-13%	32%
4	BB & T	US	16,360	38%	18%	38%	377	4%	38%
5	Household Intl.	US	26,520	37%	15%	33%	988	-58%	-73%
6	Fifth Third Bancorp.	US	35,437	37%	29%	67%	361	5%	67%
7	Freddie Mac	US	45,561	36%	20%	15%	2880	-5%	5%
8	Union Planters	US	6,200	33%	7%	29%	131	-2%	18%
9	Lehman Brothers	US	15,919	33%	34%	17%	421	-20%	-7%
10	Bank of Ireland	IR	9,341	32%	29%	33%	379	11%	35%

**Glossary**

AVE = Added Value to Equity  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (Fundamental performance)  
 TSR = Total Shareholder Return (Market performance)

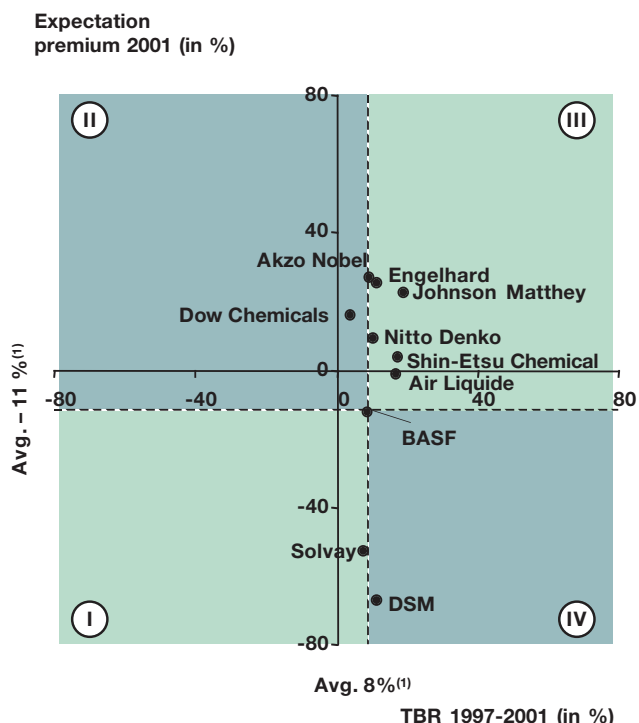
**Notes**

- (1) Weighted average of the total sample, minimum market value 2001: \$5B, 62 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

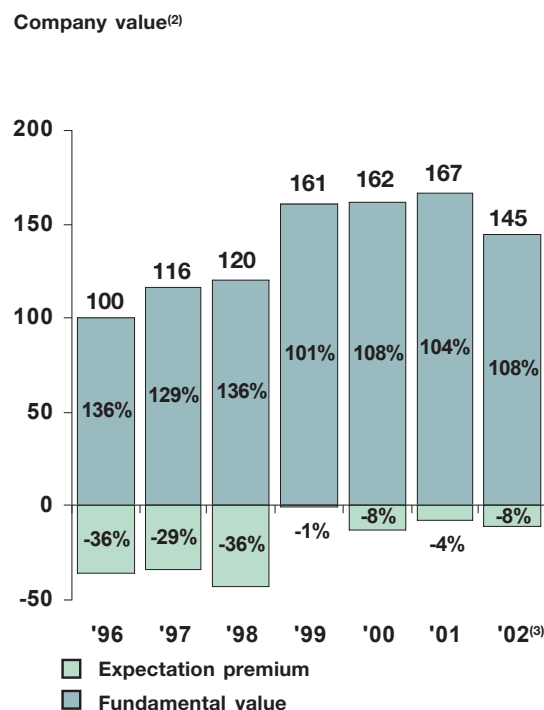
Source: T.F. Datastream; BCG analysis

# CHEMICALS

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Shin- Etsu Chemical	JP	15,186	18%	18%	4%	476	-20%	-5%
2	Akzo Nobel	NL	12,771	9%	16%	27%	280	-38%	8%
3	Johnson Matthey	UK	3,032	19%	15%	22%	100	-8%	24%
4	DSM	NL	4,169	12%	15%	-67%	-205	8%	-48%
5	Nitto Denko	JP	4,017	11%	13%	9%	62	7%	23%
6	Air Liquide	FR	12,728	17%	12%	-1%	-45	-5%	2%
7	Solvay	BG	5,079	8%	10%	-53%	-138	-8%	-48%
8	Engelhard	US	3,593	12%	10%	25%	116	-19%	18%
9	BASF	BD	22,886	8%	10%	-11%	-2,236	-8%	-7%
10	Dow Chemicals	US	30,466	4%	9%	16%	-1,947	-21%	10%

### Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

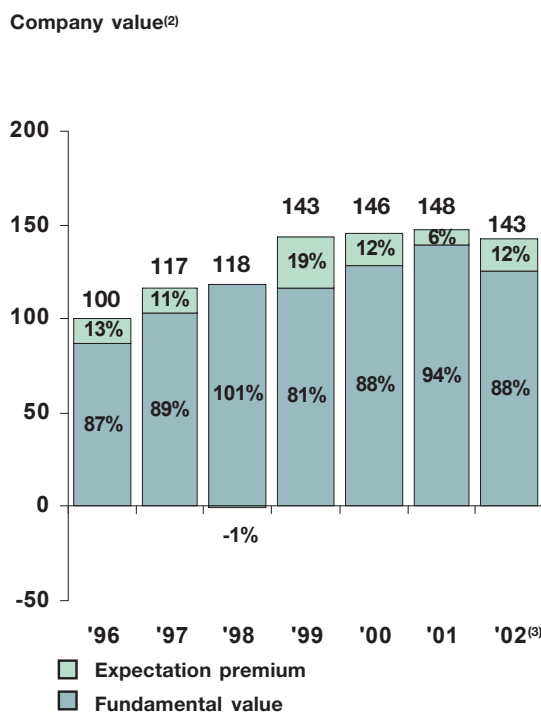
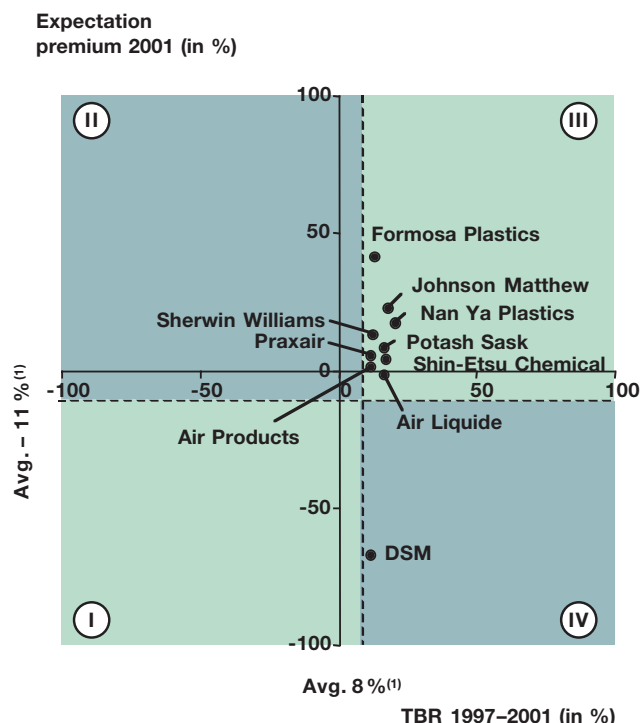
Source: T.F. Datastream; BCG analysis

### Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 27 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Nan Ya Plastics	TA	4,448	21%	-5%	17%	-935	22%	32%
2	Johnson Matthey	UK	3,032	19%	15%	22%	100	-8%	24%
3	Shin-Etsu Chemical	JP	15,186	18%	18%	4%	476	-20%	-5%
4	Potash Sask	CN	3,178	17%	-2%	8%	-142	9%	21%
5	Air Liquide	FR	12,728	17%	12%	-1%	-45	-5%	2%
6	Formosa Plastics	TA	3,888	14%	-4%	41%	-493	29%	55%
7	Sherwin-Williams	US	4,247	13%	2%	13%	201	2%	20%
8	PraxAir	US	8,887	12%	5%	5%	101	0%	14%
9	Air Products	US	10,658	12%	8%	1%	169	-5%	6%
10	DSM	NL	4,169	12%	15%	-67%	-205	8%	-48%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

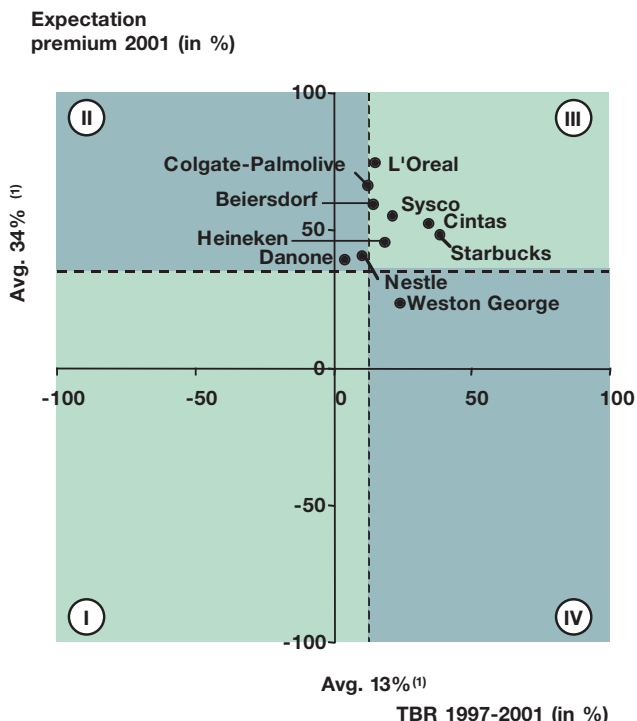
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 27 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

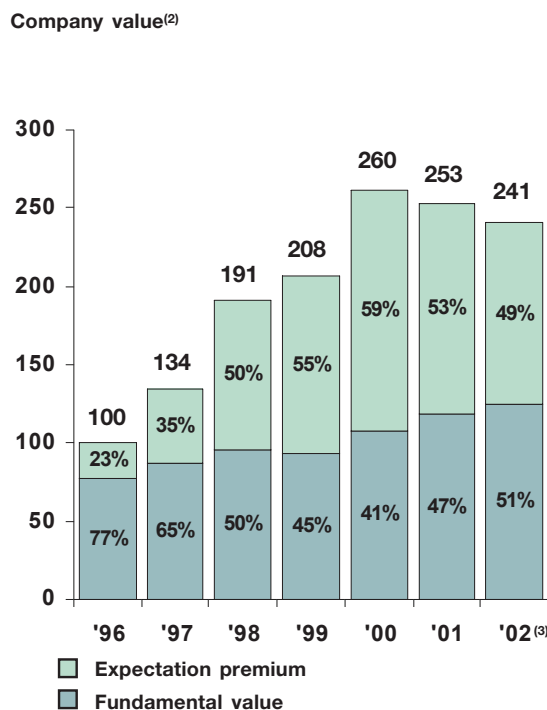
Source: T.F. Datastream; BCG analysis

# CONSUMER GOODS

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Weston George	CN	8,516	24%	37%	23%	97	-5%	17%
2	Sysco	US	17,476	21%	28%	55%	498	22%	61%
3	Beiersdorf	BD	9,454	15%	28%	59%	109	-12%	51%
4	L'Oreal	FR	48,699	16%	23%	75%	463	-6%	72%
5	Danone	FR	18,238	5%	22%	39%	-342	-2%	30%
6	Colgate-Palmolive	US	31,862	13%	22%	66%	1,018	-4%	62%
7	Starbucks	US	7,244	39%	22%	48%	173	25%	57%
8	Nestle	SW	84,426	10%	21%	41%	3,038	-9%	32%
9	Cintas	US	8,149	35%	20%	52%	210	-1%	49%
10	Heineken	NL	20,166	19%	20%	45%	330	-4%	39%

### Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

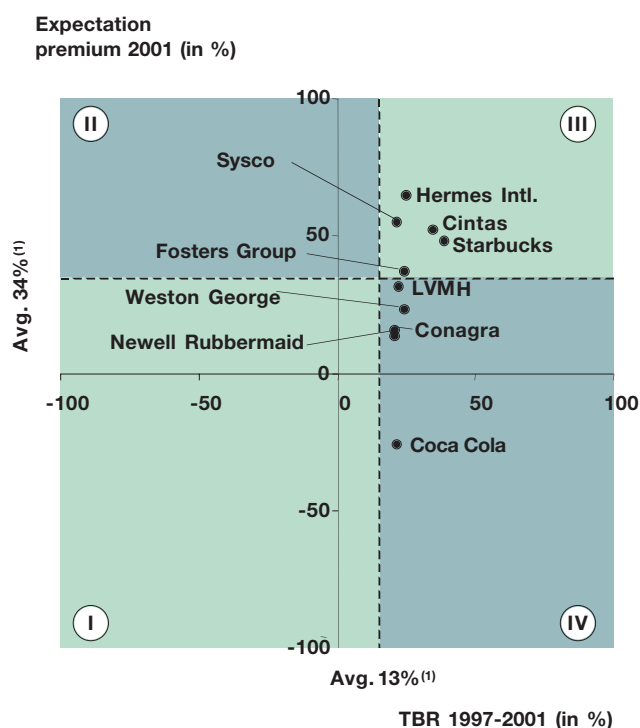
Source: T.F. Datastream; BCG analysis

### Notes

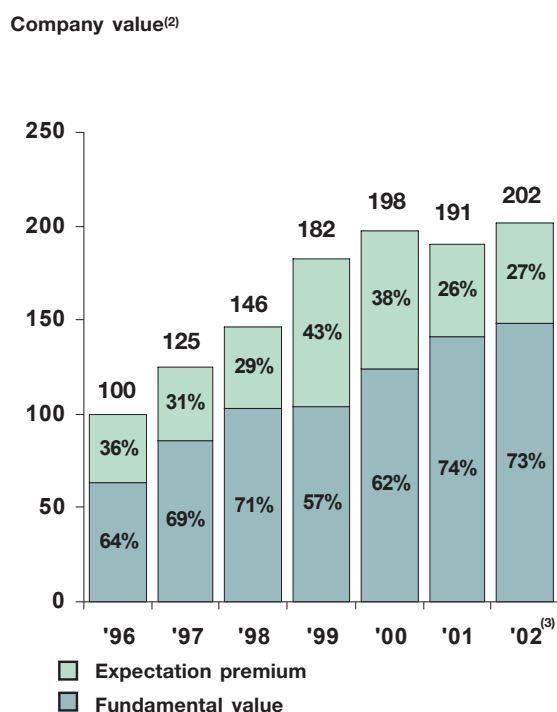
- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 56 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

## CONSUMER GOODS

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Starbucks	US	7,244	39%	22%	48%	173	25%	57%
2	Cintas	US	8,149	35%	20%	52%	210	-1%	49%
3	Hermes Intl.	FR	5,671	25%	20%	65%	119	-12%	58%
4	Weston George	CN	8,516	24%	37%	23%	97	-5%	17%
5	Fosters Group	AU	5,070	24%	17%	37%	-54	1%	33%
6	LVMH	FR	19,934	22%	5%	32%	462	1%	28%
7	Coca Cola Ents .	US	8,423	22%	4%	-26%	148	27%	-19%
8	Sysco	US	17,476	21%	28%	55%	498	22%	61%
9	Newell Rubbermaid	US	7,352	21%	0%	13%	203	20%	20%
10	Conagra	US	12,769	21%	2%	15%	608	6%	12%

## Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

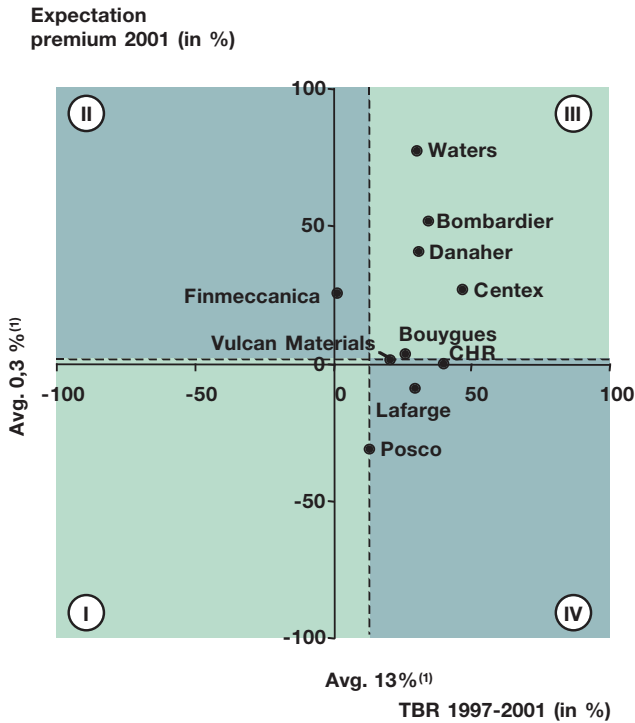
Source: T.F. Datastream; BCG analysis

## Notes

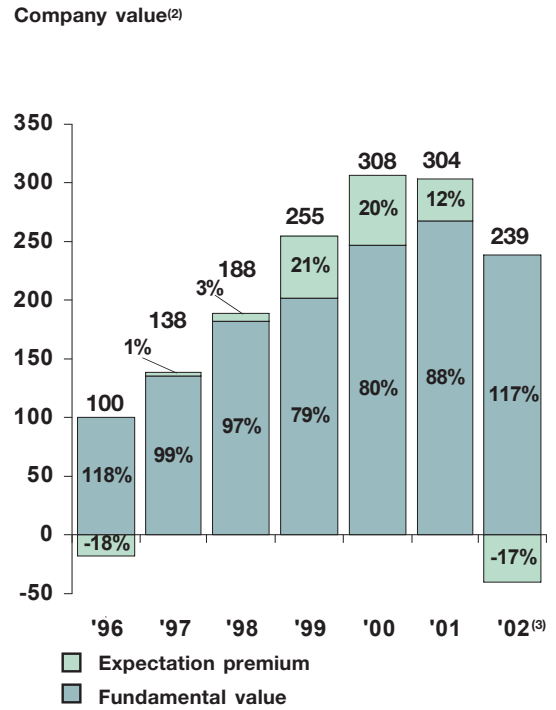
- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 56 companies  
 (2) Market value of equity plus debt, 1996 = 100  
 (3) Estimated Fundamental value; market value as of 31Oct 2002

# INDUSTRIAL GOODS

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Waters	US	5,069	31%	39%	77%	69	-35%	63%
2	Bouygues	FR	10,887	27%	38%	3%	148	-27%	-27%
3	Finmeccanica	IT	7,275	1%	35%	26%	-174	-42%	-19%
4	Posco	KO	8,693	13%	31%	-32%	-1,254	-6%	-44%
5	Centex	US	3,469	47%	25%	27%	114	-20%	14%
6	CRH	IR	9,202	40%	25%	0%	358	-35%	-43%
7	Bombardier	CN	14,191	35%	22%	52%	180	-68%	-1%
8	Lafarge	FR	12,144	30%	22%	-10%	-706	-21%	-29%
9	Vulcan Materials	US	4,856	21%	21%	1%	90	-29%	-38%
10	Danaher	US	8,620	31%	21%	41%	173	-4%	38%

### Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

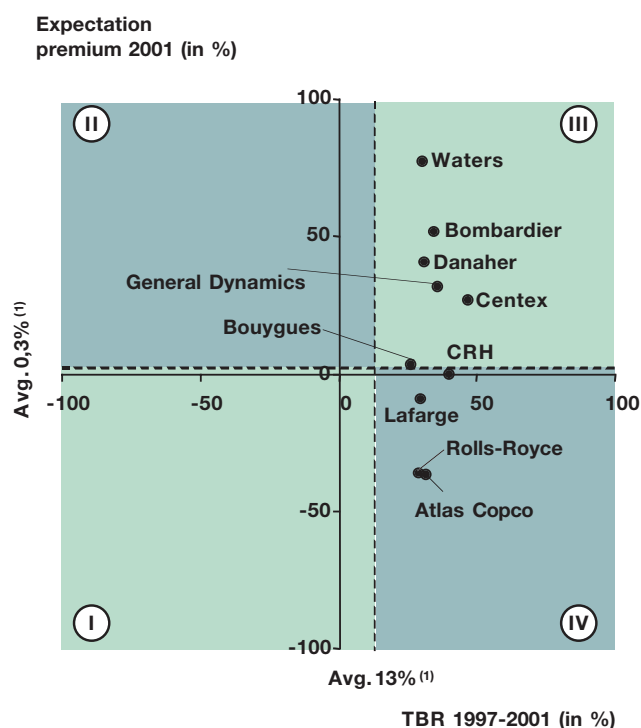
Source: T.F. Datastream; BCG analysis

### Notes

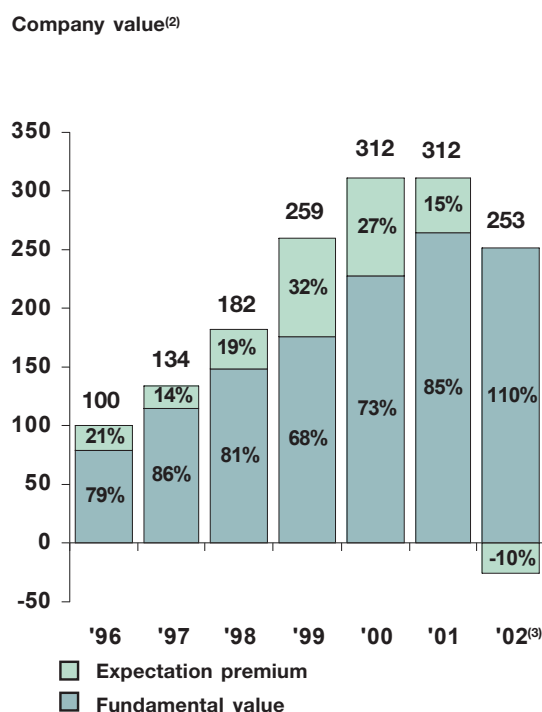
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 46 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

## INDUSTRIAL GOODS

### Fundamental performance vs. expectation premium



### Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Centex	US	3,469	47%	25%	27%	114	-20%	14%
2	CRH	IR	9,202	40%	25%	0%	358	-35%	-43%
3	General Dynamics	US	16,070	36%	20%	31%	608	1%	27%
4	Bombardier	CN	14,191	35%	22%	52%	180	-68%	-1%
5	Atlas Copco	SD	4,593	32%	10%	-37%	417	-16%	-65%
6	Danaher	US	8,620	31%	21%	41%	173	-4%	38%
7	Waters	US	5,069	31%	39%	77%	69	-35%	63%
8	Lafarge	FR	12,144	30%	22%	-10%	-706	-21%	-29%
9	Rolls-Royce	UK	3,878	29%	-5%	-36%	59	-33%	-88%
10	Bouygues	FR	10,887	27%	38%	3%	148	-27%	-27%

#### Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

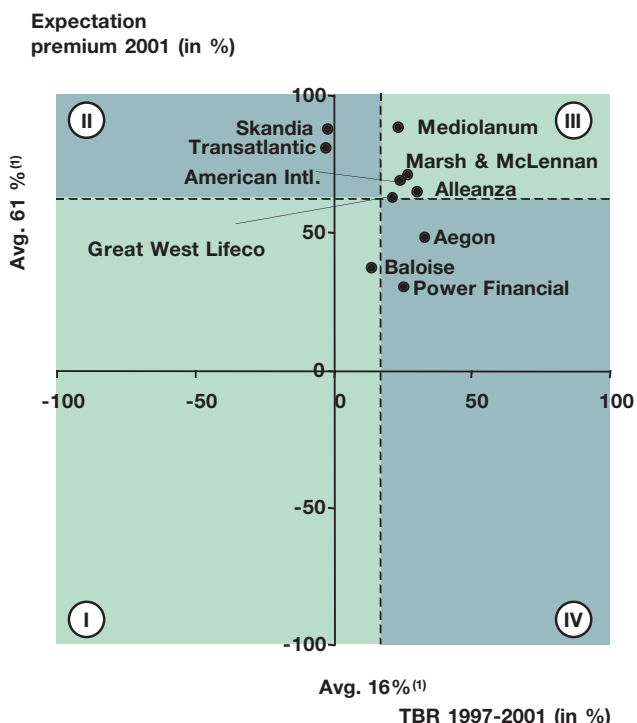
Source: T.F. Datastream; BCG analysis

#### Notes

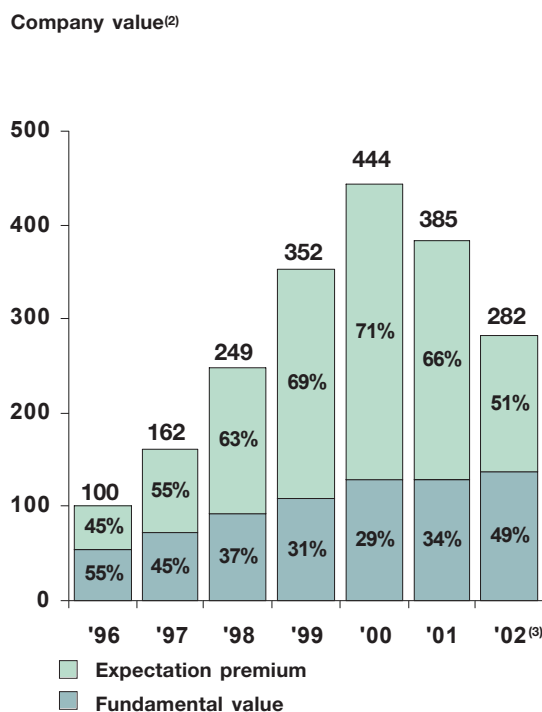
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 46 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

# INSURANCE

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	AVE 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP(3) 31 Oct
1	Mediolanum	IT	6,533	23%	48%	89%	47	-44%	78%
2	Skandia	SD	7,416	-2%	32%	88%	-166	-72%	54%
3	Baloise	SW	5,097	14%	30%	37%	-10	-61%	-72%
4	Great West Lifeco	CN	7,942	22%	29%	63%	83	4%	62%
5	Power Financial	CN	8,273	26%	29%	30%	-181	-8%	18%
6	Marsh & McLennan	US	29,539	27%	28%	71%	472	-11%	64%
7	American Intl.	US	208,122	24%	26%	69%	523	-21%	58%
8	Aegon	NL	38,497	34%	22%	48%	756	-53%	-21%
9	Transatlantic	US	4,752	-2%	21%	81%	-153	-31%	70%
10	Alleanza	IT	7,859	30%	21%	65%	101	-40%	47%

### Glossary

- AVE = Added value to Equity
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

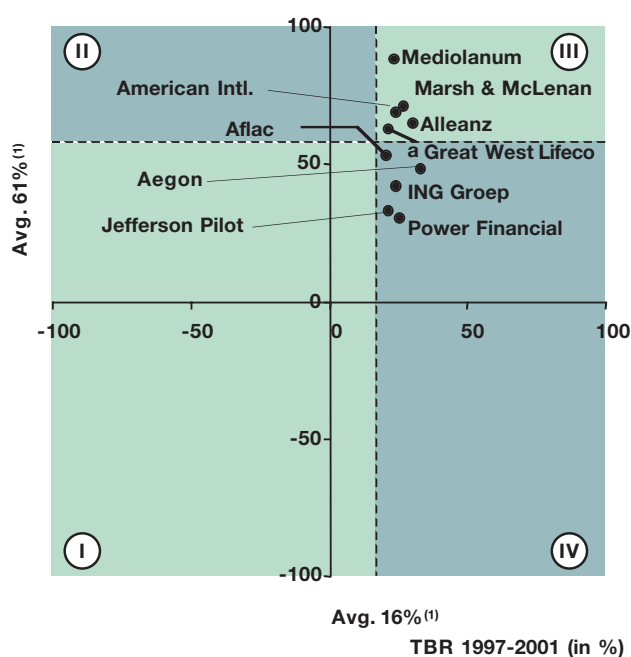
### Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 32 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

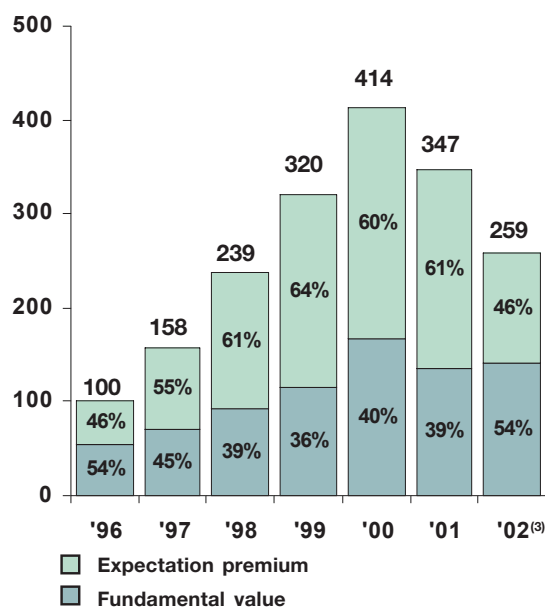


## Fundamental performance vs. expectation premium

Expectation premium 2001 (in %)



## Avg. expectation premium top 10 companies

Company value<sup>(2)</sup>

Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	AVE 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Aegon	NL	38,497	34%	22%	48%	756	-53%	-21%
2	Alleanza	IT	7,859	30%	21%	65%	101	-40%	47%
3	Marsh & McLennan	US	29,539	27%	28%	71%	472	-11%	64%
4	Power Financial	CN	8,273	26%	29%	30%	-181	-8%	18%
5	American Intl.	US	208,122	24%	26%	69%	523	-21%	58%
6	ING Groep	NL	50,529	24%	18%	42%	2,599	-39%	-2%
7	Mediolanum	IT	6,533	23%	48%	89%	47	-44%	78%
8	Great West Lifeco	CN	7,942	22%	29%	63%	83	4%	62%
9	Jefferson Pilot	US	6,961	22%	15%	33%	220	-12%	17%
10	Aflac	US	12,825	21%	19%	53%	343	25%	60%

## Glossary

AVE = Added Value to Equity  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

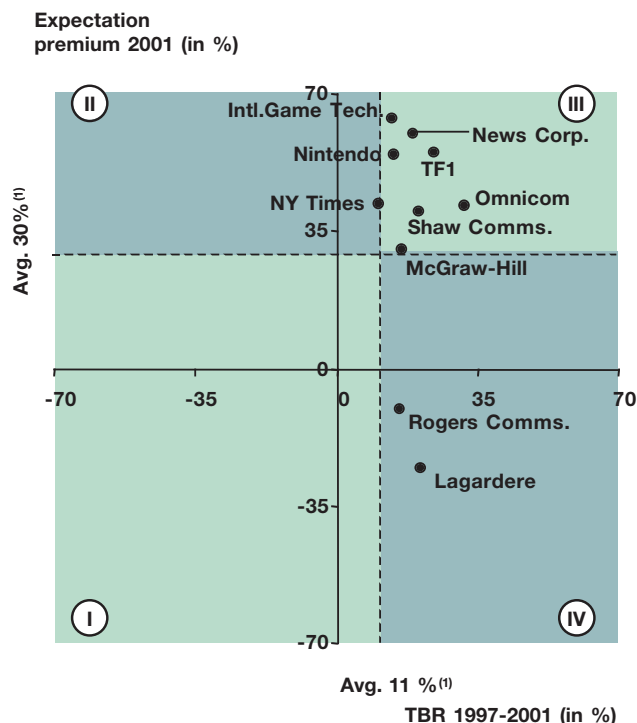
Source: T.F. Datastream; BCG analysis

## Notes

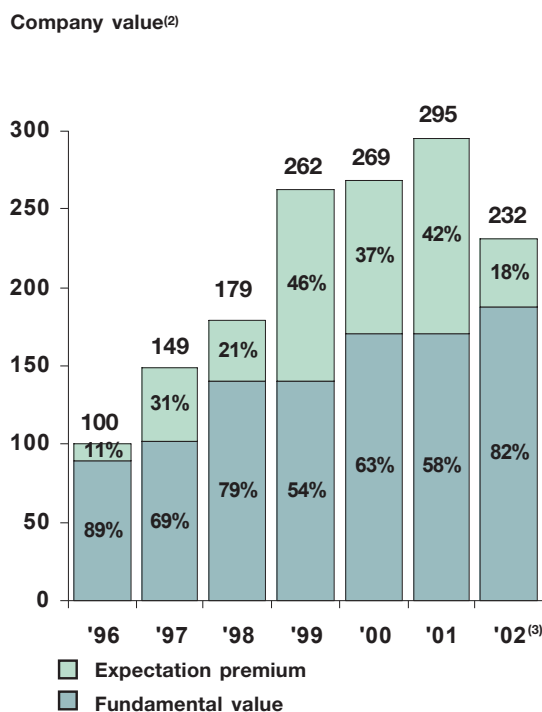
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 32 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

**MEDIA**

**Fundamental performance vs. expectation premium**



**Avg. expectation premium top 10 companies**



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Shaw Comms .	CN	5,044	21%	55%	40%	-226	-55%	-10%
2	TF1	FR	5,359	24%	34%	55%	212	-6%	46%
3	Omnicom	US	16,606	32%	33%	41%	546	-35%	6%
4	Intl. Game Tech.	US	4,977	14%	31%	64%	74	10%	68%
5	McGraw-Hill	US	11,787	16%	24%	31%	842	7%	27%
6	Nintendo	JP	24,538	15%	23%	54%	527	-48%	3%
7	Rogers Comms .	CN	3,590	16%	22%	-11%	-36	-53%	-68%
8	Lagardere	FR	5,775	21%	20%	-25%	-49	-3%	-42%
9	NY Times	US	6,520	11%	19%	42%	91	13%	42%
10	News Corporation	AU	37,326	19%	19%	60%	-2,850	-32%	42%

**Glossary**

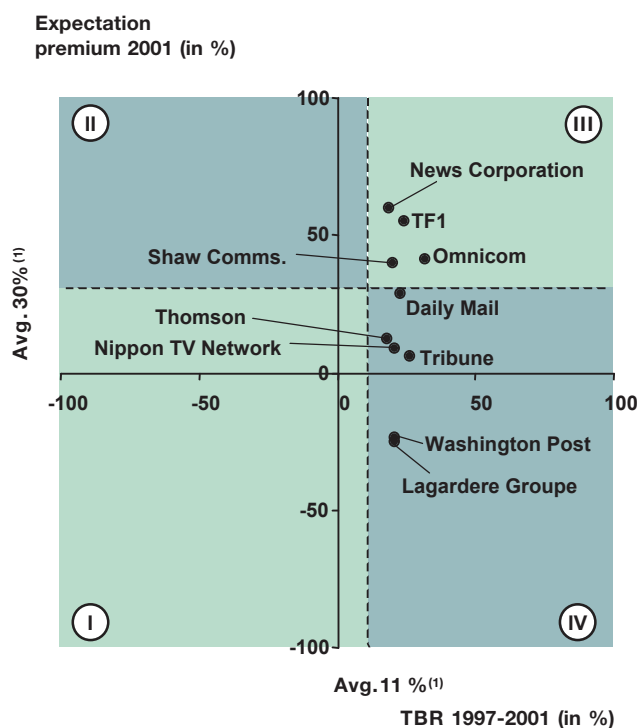
- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

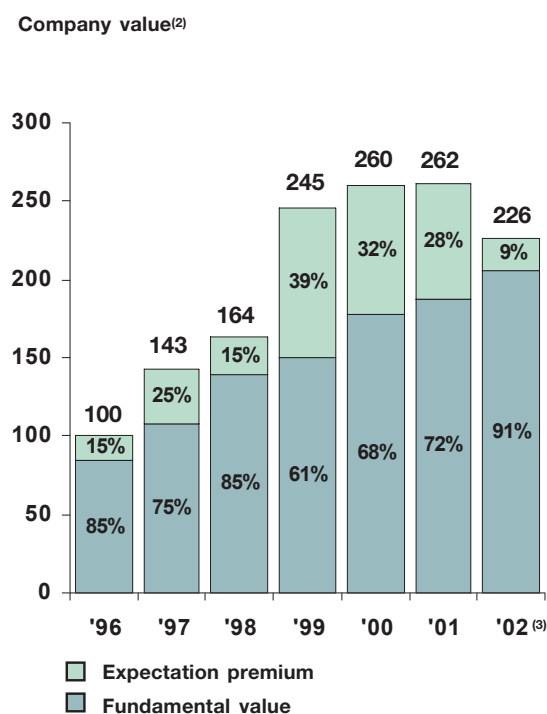
**Notes**

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 31 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Omnicom	US	16,606	32%	33%	41%	546	-35%	6%
2	Tribune	US	11,150	26%	15%	6%	-172	29%	15%
3	TF1	FR	5,359	24%	34%	55%	212	-6%	46%
4	Daily Mail	UK	3,594	23%	16%	29%	108	-13%	14%
5	Nippon TV Network	JP	5,402	21%	10%	9%	208	-28%	-40%
6	Lagadere	FR	5,775	21%	20%	-25%	-49	-3%	-42%
7	Washington Post	US	4,118	21%	11%	-24%	281	39%	-5%
8	Shaw Comms.	CN	5,044	21%	55%	40%	-226	-55%	-10%
9	News Corporation	AU	37,326	19%	19%	60%	-2,850	-32%	42%
10	Thomson	CN	19,062	18%	12%	12%	619	-9%	-3%

## Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

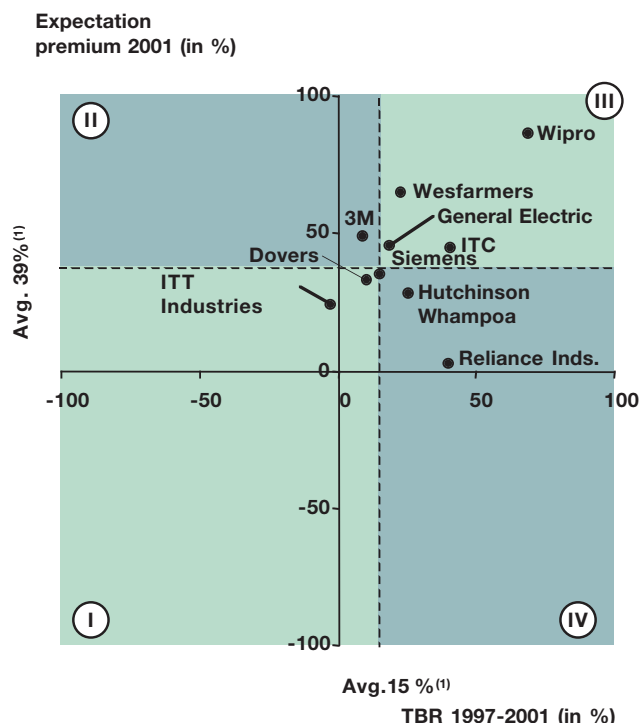
Source: T.F. Datastream; BCG analysis

## Notes

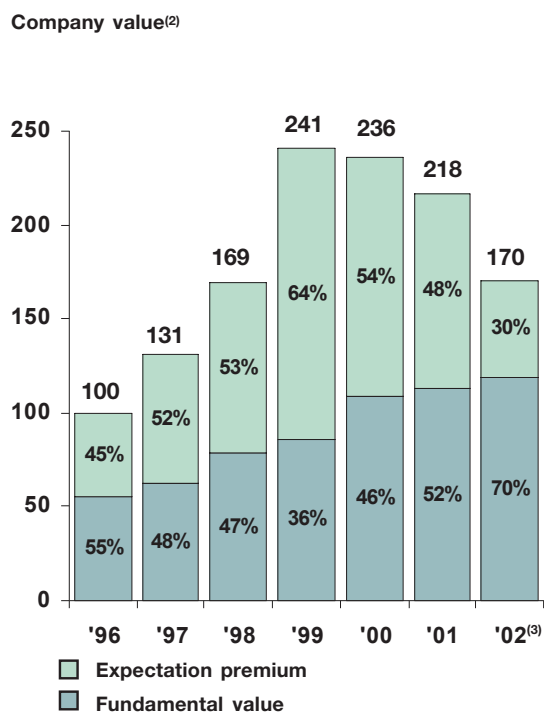
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 31 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

## MULTIBUSINESS

### Fundamental performance vs. expectation premium



### Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Wipro	IN	7,616	69%	136%	86%	62	-14%	84%
2	Wesfarmers	AU	5,874	23%	35%	65%	54	-13%	57%
3	Siemens	BD	59,467	15%	27%	37%	-1,367	-36%	11%
4	Reliance Inds .	IN	6,011	40%	26%	2%	-40	-13%	15%
5	General Electric	US	397,889	19%	21%	45%	784	-36%	26%
6	ITT Industries	US	4,464	-2%	18%	24%	200	30%	36%
7	ITC	IN	3,445	41%	15%	45%	131	-8%	36%
8	3M	US	46,348	9%	10%	49%	1,126	9%	50%
9	Dover	US	7,504	11%	9%	33%	93	-32%	2%
10	Hutchison Whampoa	HK	41,142	26%	9%	28%	-1,755	-34%	0%

#### Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

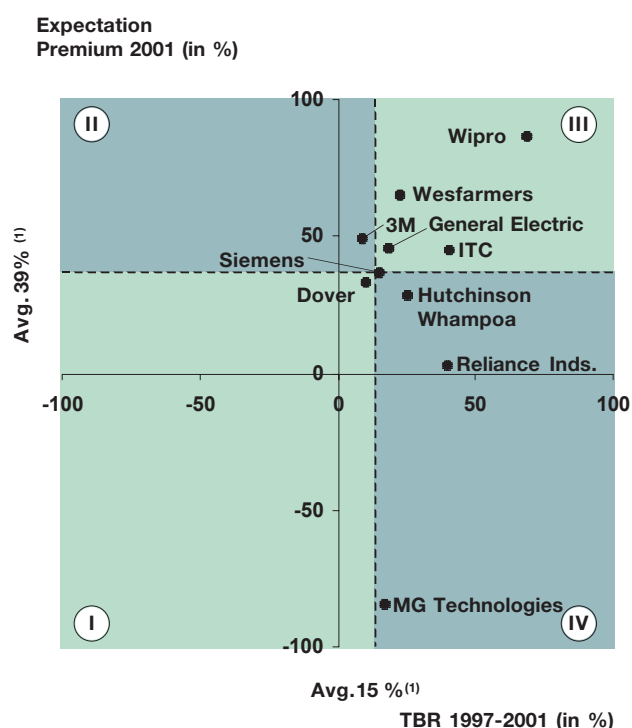
Source: T.F. Datastream; BCG analysis

#### Notes

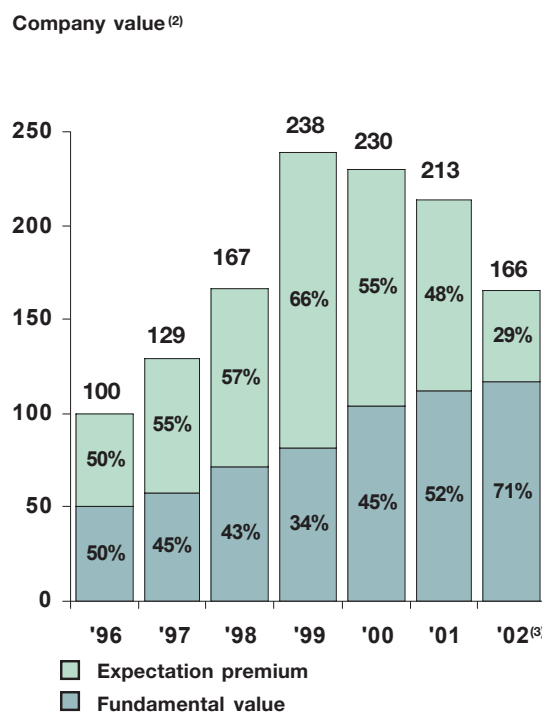
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 21 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

# MUTIBUSINESS

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Wipro	IN	7,616	69%	136%	86%	62	-14%	84%
2	ITC	IN	3,445	41%	15%	45%	131	-8%	36%
3	Reliance Inds.	IN	6,011	40%	26%	2%	-40	-13%	15%
4	Hutchison Whampoa	HK	41,142	26%	9%	28%	-1,755	-34%	0%
5	Wesfarmers	AU	5,874	23%	35%	65%	54	-13%	57%
6	General Electric	US	397,889	19%	21%	45%	784	-36%	26%
7	MG Technologies	BD	1,634	17%	-9%	-85%	-18	-31%	-129%
8	Siemens	BD	59,467	15%	27%	37%	-1,367	-36%	11%
9	Dover	US	7,504	11%	9%	33%	93	-32%	2%
10	3M	US	46,348	9%	10%	49%	1,126	9%	50%

### Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

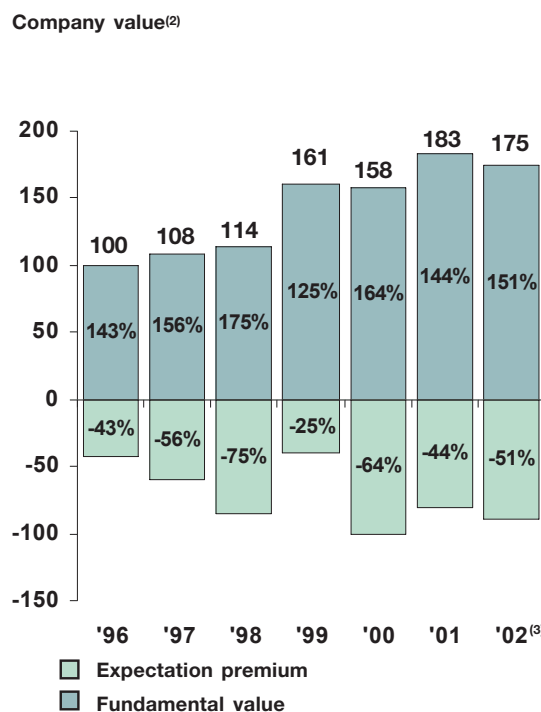
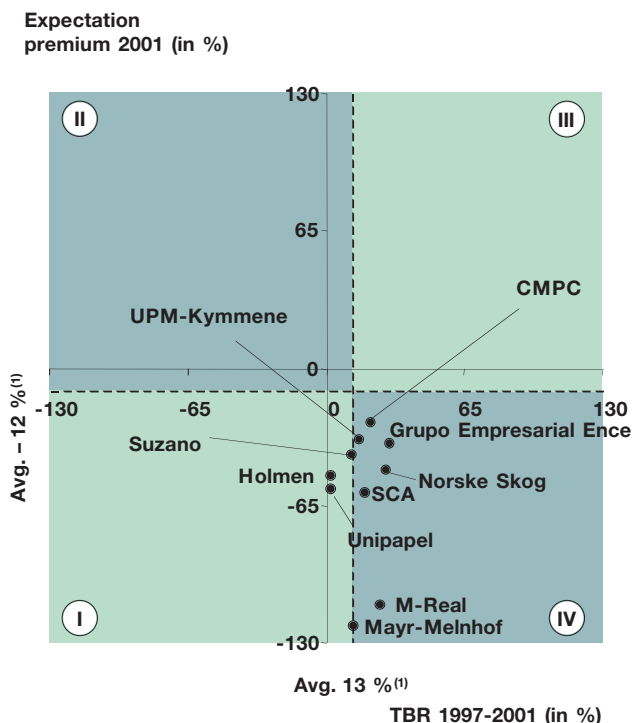
### Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 21 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

PAPER

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	UPM- Kymmene	FN	8,121	16%	22%	-34%	-52	-9%	-41%
2	SCA	SD	6,327	19%	21%	-59%	380	0%	-62%
3	Holmen	SD	1,815	2%	18%	-51%	42	-1%	-55%
4	Unipapel	ES	69	1%	18%	-58%	-4	46%	-20%
5	Norske Skog	NW	2,501	28%	18%	-48%	146	-40%	-83%
6	Suzano	BR	306	12%	17%	-41%	-112	-10%	-41%
7	Grupo Empresarial Ence	ES	323	30%	16%	-35%	-10	1%	-36%
8	Mayr- Melhof Karton	OE	568	13%	10%	-122%	31	28%	-87%
9	CMPC	CL	1,830	21%	10%	-26%	-328	2%	-26%
10	M-Real	FN	1,106	26%	9%	-112%	-5	15%	-108%

Glossary

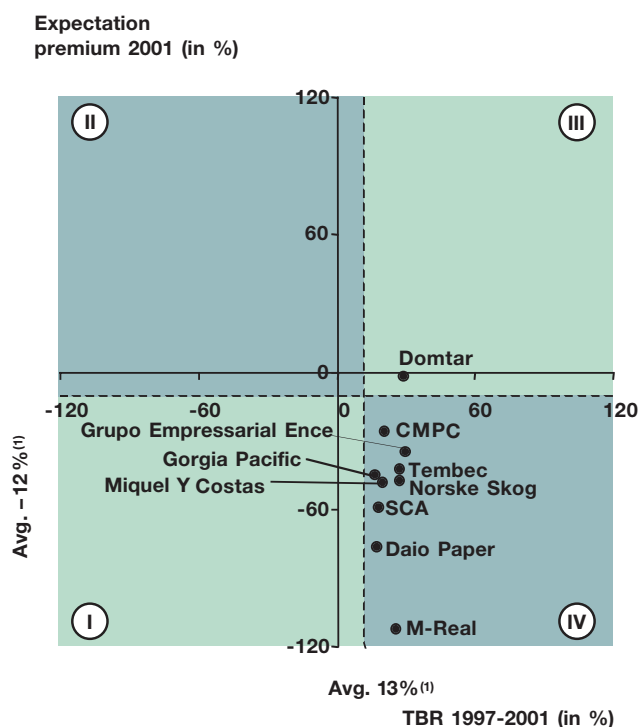
- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Notes

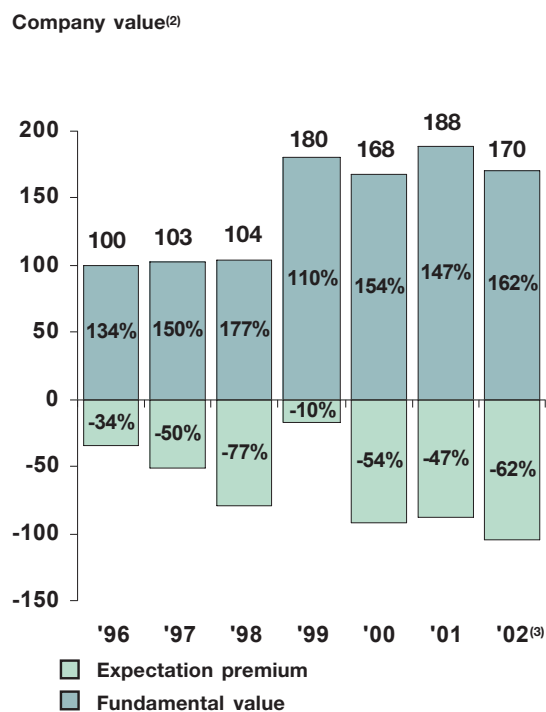
- (1) Weighted average of the total sample, no minimum market value 2001: 34 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

## Fundamental performance vs. expectation premium



## Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Grupo Empresarial	ES	323	30%	16%	-35%	-10	1%	-36%
2	Domtar	CN	2,268	29%	8%	-2%	-203	-8%	-6%
3	Norske Skog	NW	2,501	28%	18%	-48%	146	-40%	-83%
4	Tembec	CN	686	28%	7%	-43%	-64	-19%	-53%
5	M-Real	FN	1,106	26%	9%	-112%	-5	15%	-108%
6	CMPC	CL	1,830	21%	10%	-26%	-328	2%	-26%
7	Miquel Y Costas	ES	122	20%	9%	-49%	8	26%	-35%
8	SCA	SD	6,327	19%	21%	-59%	380	0%	-62%
9	Daio Paper	JP	769	17%	-1%	-77%	7	7%	-75%
10	Georgia Pacific	US	6,344	16%	3%	-46%	-413	-55%	-78%

## Glossary

CVA = Cash Value Added  
 EP = Expectation Premium  
 MV = Market value (equity)  
 TBR = Total Business Return (fundamental performance)  
 TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

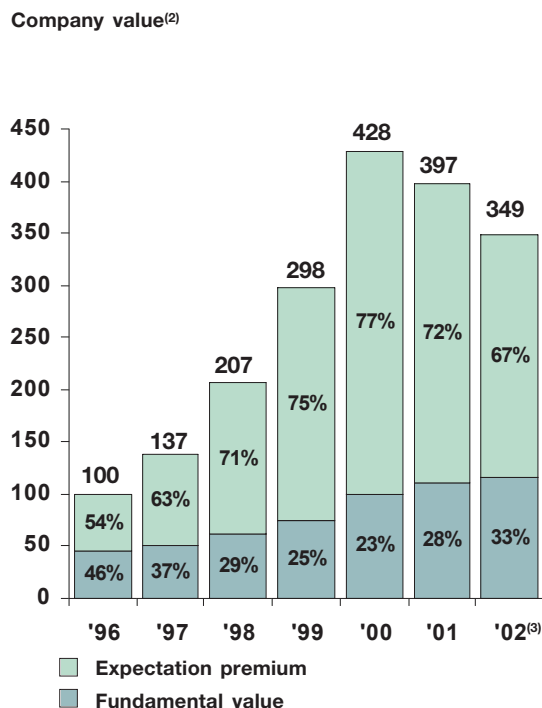
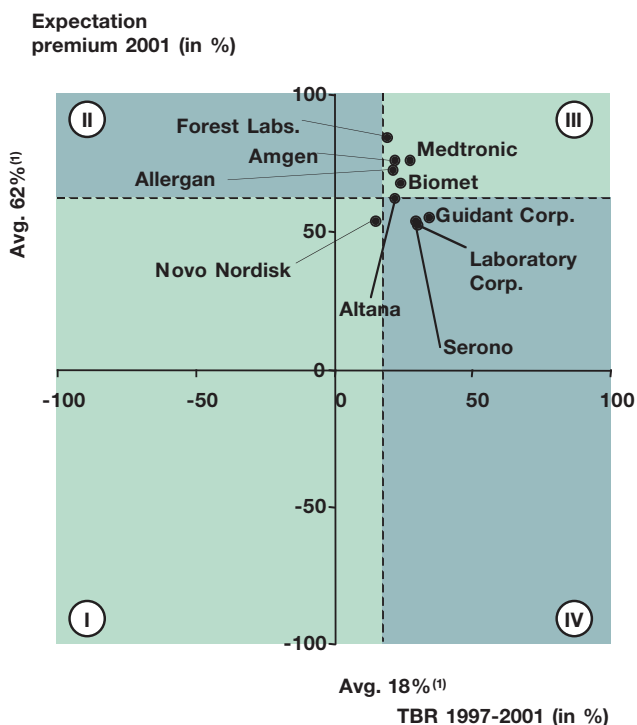
## Notes

- (1) Weighted average of the total sample, no minimum market value 2001: 34 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

PHARMA

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Forest Labs.	US	14,584	19%	59%	84%	123	20%	86%
2	Laboratory Corp.	US	5,686	31%	41%	52%	161	-40%	24%
3	Biomet	US	8,344	24%	36%	68%	135	-4%	64%
4	Serono	SW	10,180	30%	36%	53%	161	-43%	15%
5	Allergan	US	9,845	22%	35%	72%	162	-24%	61%
6	Amgen	US	59,009	22%	33%	76%	776	-18%	75%
7	Altana	BD	6,988	22%	29%	62%	127	-12%	54%
8	Guidant Corp.	US	15,156	35%	28%	55%	408	-41%	23%
9	Novo Nordisk	DK	12,214	16%	28%	54%	370	-38%	21%
10	Medtronic	US	61,996	28%	25%	76%	713	-12%	71%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

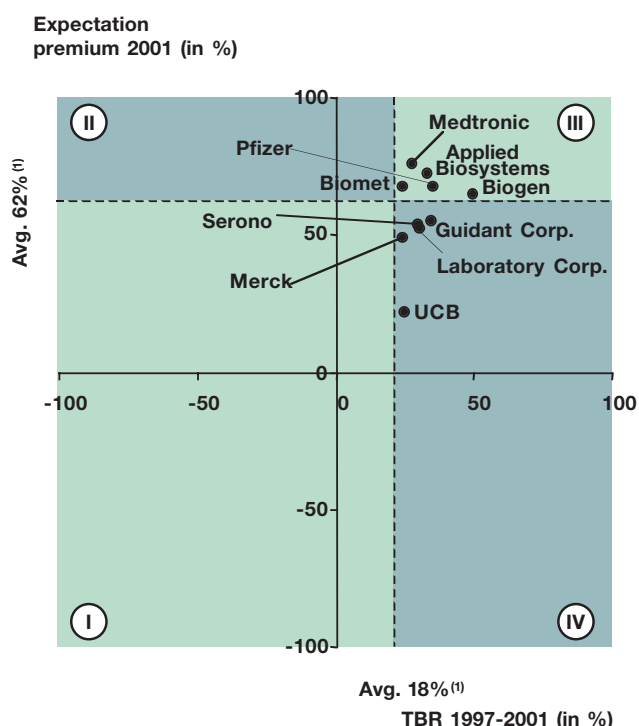
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 39 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

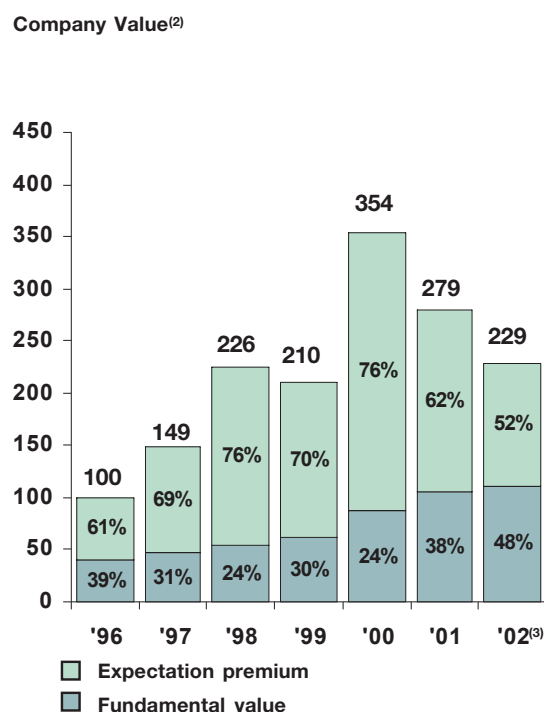
Source: T.F. Datastream; BCG analysis



Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Biogen	US	8,482	50%	24%	65%	149	-36%	43%
2	Pfizer	US	248,852	36%	25%	67%	5,247	-19%	57%
3	Guidant Corp.	US	15,156	35%	28%	55%	408	-41%	23%
4	Applied Biosystems	US	8,323	33%	25%	73%	143	-48%	45%
5	Laboratory Corp.	US	5,686	31%	41%	52%	161	-40%	24%
6	Serono	SW	10,180	30%	36%	53%	161	-43%	15%
7	Medtronic	US	61,996	28%	25%	76%	713	-12%	71%
8	UCB	BG	5,908	25%	18%	22%	332	-45%	-44%
9	Biomet	US	8,344	24%	36%	68%	135	-4%	64%
10	Merck	US	133,753	23%	10%	46%	5,129	-6%	39%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

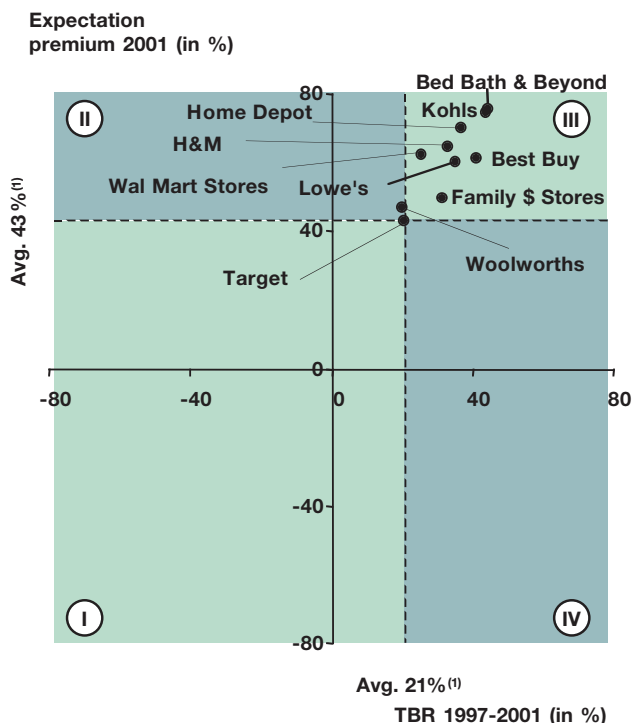
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$5bn, 39 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

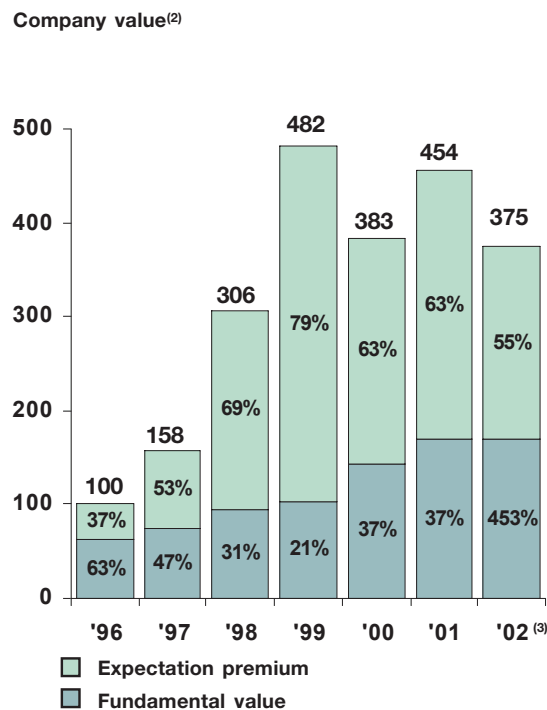
Source: T.F. Datastream; BCG analysis

RETAIL

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
2	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
3	Bed Bath & Beyond	US	9,845	44%	41%	76%	139	5%	77%
4	Lowe's	US	35,936	35%	40%	60%	455	-10%	56%
5	Wal Mart Stores	US	256,505	26%	39%	62%	5,422	-7%	60%
6	Hennes & Mauritz	SD	15,108	33%	37%	65%	337	-17%	57%
7	Family \$ Stores	US	5,169	32%	36%	50%	144	3%	51%
8	Home Depot	US	119,199	37%	36%	70%	1,639	-43%	48%
9	Woolworths	AU	5,978	20%	35%	47%	208	13%	52%
10	Target	US	37,059	21%	34%	43%	1,009	-26%	27%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

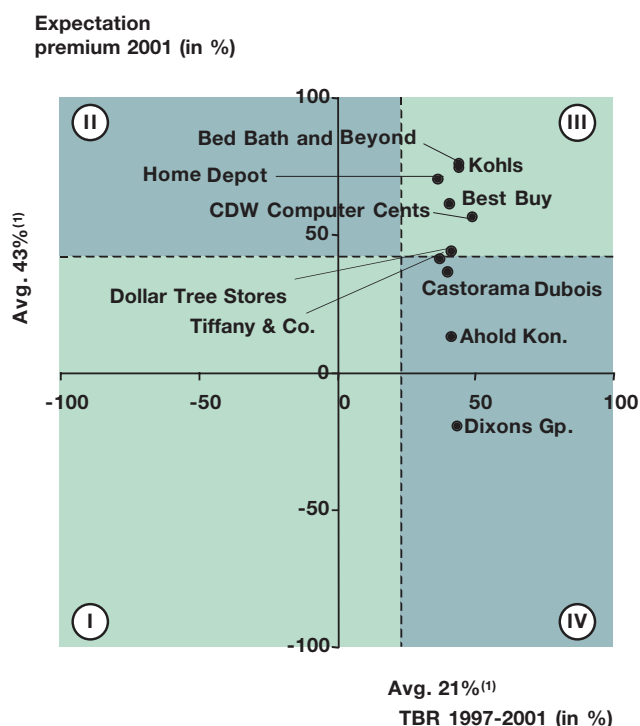
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 56 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

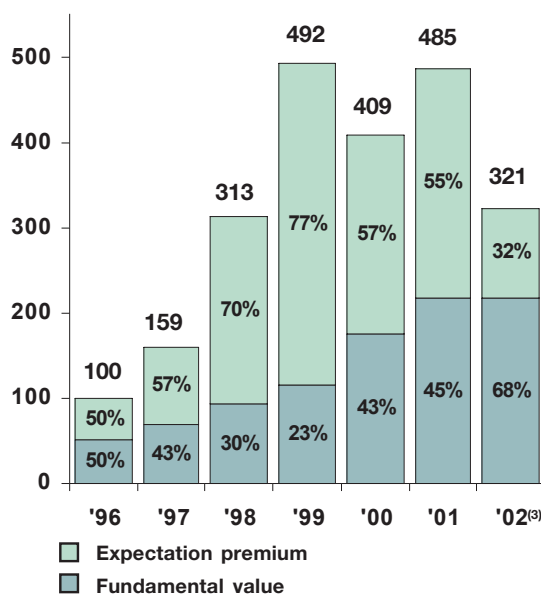
Source: T.F. Datastream; BCG analysis

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Company value (2)



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP(3) 31 Oct
1	CDW Computer Cents.	US	4,741	49%	29%	57%	122	-1%	54%
2	Bed Bath & Beyond	US	9,845	44%	41%	76%	139	5%	77%
3	Kohls	US	23,594	44%	48%	74%	246	-17%	70%
4	Dixons Gp.	UK	6,554	43%	14%	-19%	501	-16%	-41%
5	Dollar Tree Stores	US	3,470	42%	22%	44%	110	-15%	35%
6	Ahold Kon.	NL	26,753	41%	17%	13%	793	-60%	-48%
7	Best Buy	US	15,765	41%	95%	61%	350	-59%	8%
8	Castorama Dubois	FR	8,088	40%	13%	36%	267	18%	44%
9	Tiffany & Co	US	4,560	38%	29%	42%	137	-17%	31%
10	Home Depot	US	119,199	37%	36%	70%	1,639	-43%	48%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

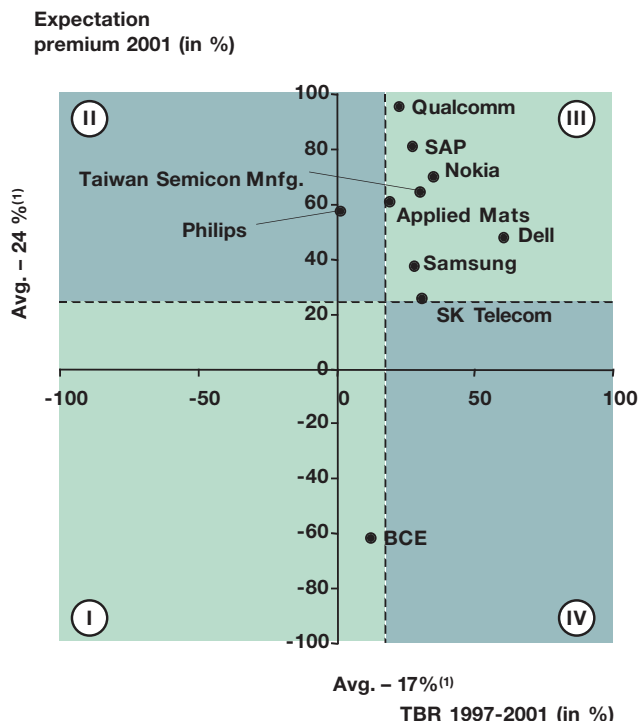
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 56 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

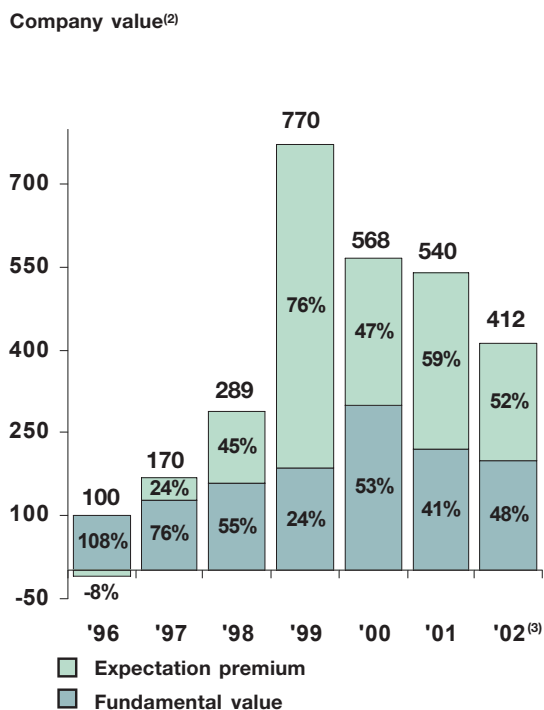
Source: T.F. Datastream; BCG analysis

TECHNOLOGY

Fundamental performance vs. expectation premium



Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Nokia	FN	122,061	35%	61%	69%	2,371	-40%	54%
2	Qualcomm	US	38,603	23%	60%	95%	-422	-32%	93%
3	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
4	Taiwan Semicon . Mnfg .	TA	42,093	31%	49%	64%	-207	-42%	46%
5	Samsung Electronics	KO	32,144	29%	49%	37%	931	24%	51%
6	SK Telecom	KO	18,190	31%	48%	26%	582	-16%	23%
7	BCE	CN	18,165	13%	38%	-62%	820	-23%	-62%
8	Applied Mats.	US	32,842	19%	35%	60%	295	-25%	53%
9	Philips	NL	39,115	2%	34%	57%	-2,261	-45%	38%
10	SAP	BD	41,387	27%	33%	83%	420	-47%	72%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Notes

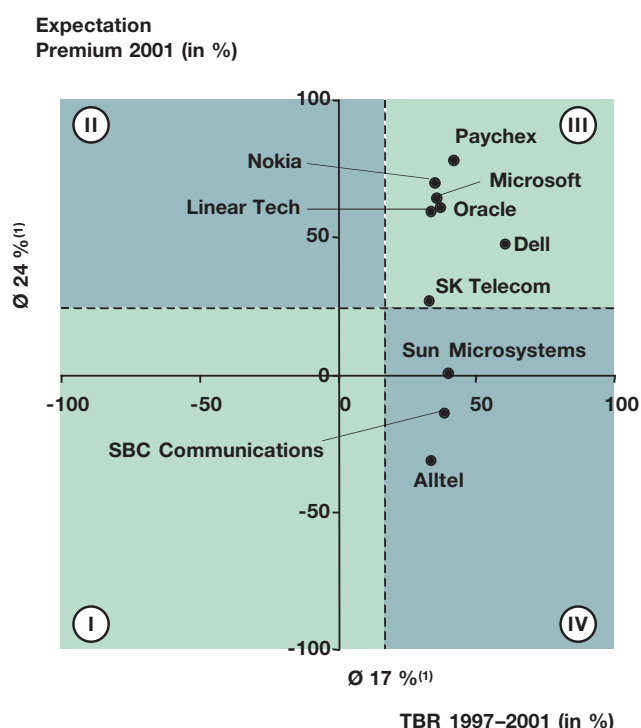
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 48 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

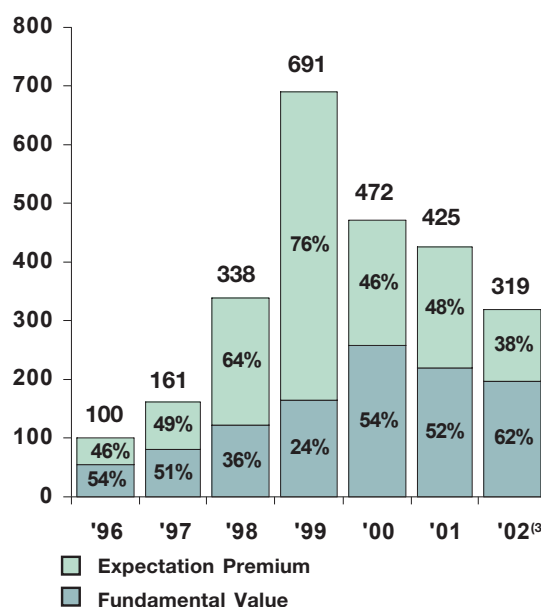
TECHNOLOGY

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Company Value<sup>(2)</sup>



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1/1-10/31	EP <sup>(3)</sup> 10/31
1	Dell Computer	US	70,858	61%	52%	48%	1,649	5%	55%
2	Paychex	US	13,060	42%	29%	78%	179	-16%	76%
3	Sun Microsystems	US	39,872	40%	31%	0%	1,614	-76%	-242%
4	SBC Communications	US	131,672	39%	11%	-14%	3,182	-32%	-42%
5	Oracle	US	75,916	38%	24%	61%	2,249	-26%	52%
6	Microsoft	US	356,806	36%	26%	64%	4,447	-19%	60%
7	Nokia	FN	122,061	35%	61%	69%	2,371	-40%	54%
8	Linear Tech.	US	12,359	34%	29%	59%	252	-29%	48%
9	Alltel	US	19,162	34%	17%	-32%	1,206	-18%	-41%
10	SK Telecom	KO	18,190	31%	48%	26%	582	-16%	23%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

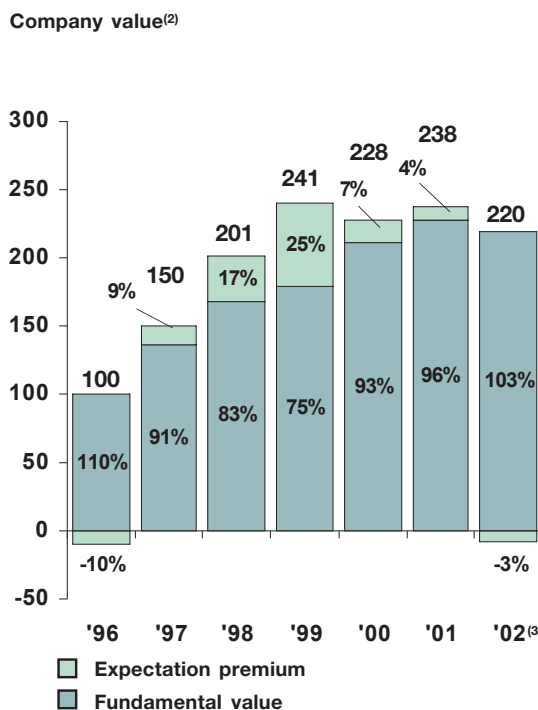
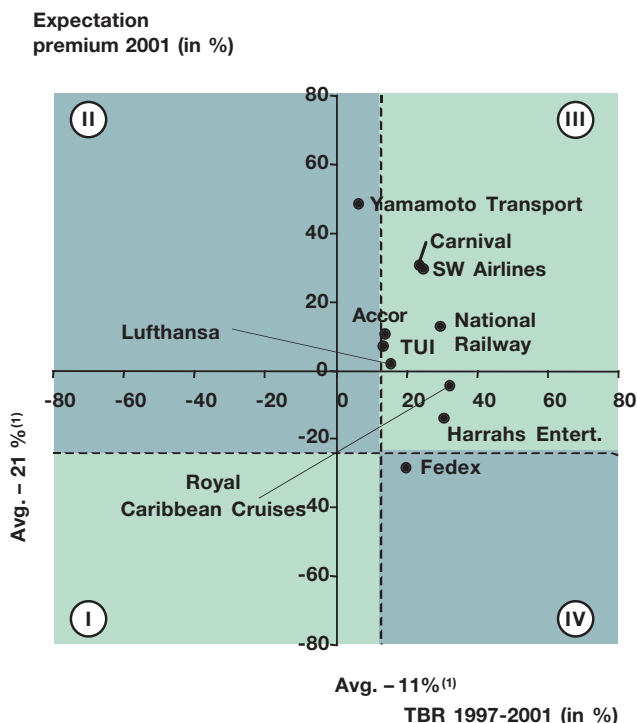
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 48 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

TRAVEL

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	SW Airlines	US	14,170	25%	34%	29%	172	-21%	14%
2	National Railway	CN	9,252	30%	26%	12%	-578	-13%	6%
3	Accor	FR	7,210	14%	19%	10%	44	-9%	3%
4	Fedex	US	15,478	20%	18%	-29%	425	3%	-26%
5	Yamato Transport	JP	8,694	7%	16%	48%	-96	-29%	31%
6	Harrahs Entertainment	US	4,153	31%	13%	-14%	156	14%	-7%
7	Carnival	US	16,459	24%	13%	30%	73	-6%	26%
8	TUI	BD	4,733	14%	12%	4%	-66	-31%	-9%
9	Lufthansa	BD	5,131	15%	10%	2%	-882	-23%	-7%
10	Royal Caribbean Cruises	US	3,114	33%	9%	-5%	-271	16%	0%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

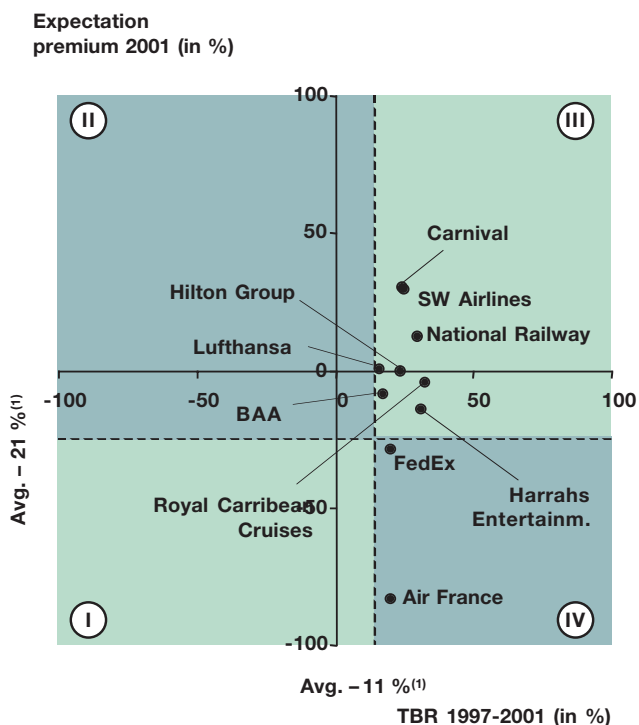
Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 30 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

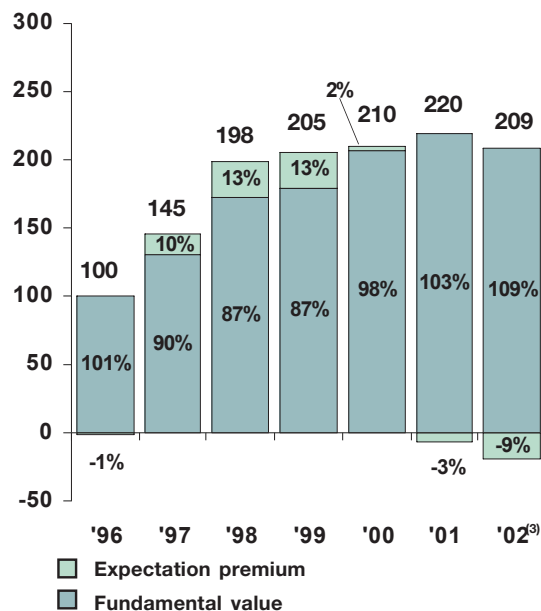
Source: T.F. Datastream; BCG analysis

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Company Value<sup>(2)</sup>



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	Royal Caribbean Cruises	US	3,114	33%	9%	-5%	-271	16%	0%
2	Harrahs Entertainment	US	4,153	31%	13%	-14%	156	14%	-7%
3	National Railway	CN	9,252	30%	26%	12%	-578	-13%	6%
4	Sw Airlines	US	14,170	25%	34%	29%	172	-21%	14%
5	Carnival	US	16,459	24%	13%	30%	73	-6%	26%
6	Hilton Group	UK	4,864	24%	2%	0%	-42	-14%	-14%
7	Air France	FR	3,217	20%	5%	-84%	10	-27%	-111%
8	Fedex	US	15,478	20%	18%	-29%	425	3%	-26%
9	BAA	UK	8,520	18%	6%	-9%	12	6%	-6%
10	Lufthansa	BD	5,131	15%	10%	2%	-882	-23%	-7%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Notes

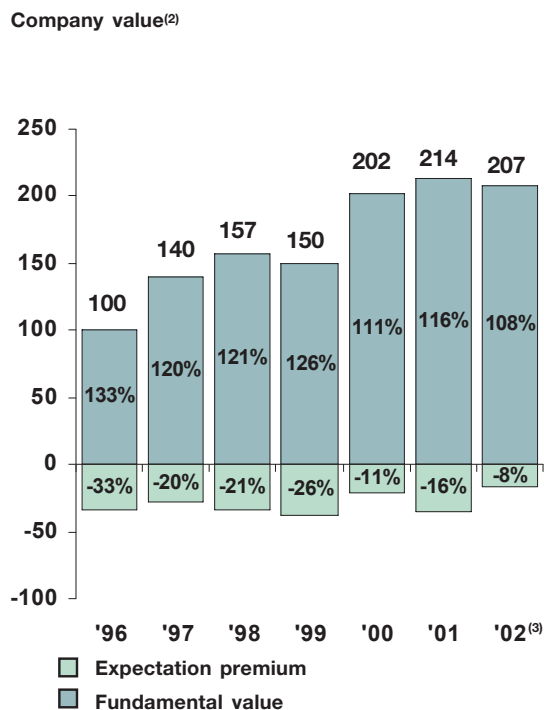
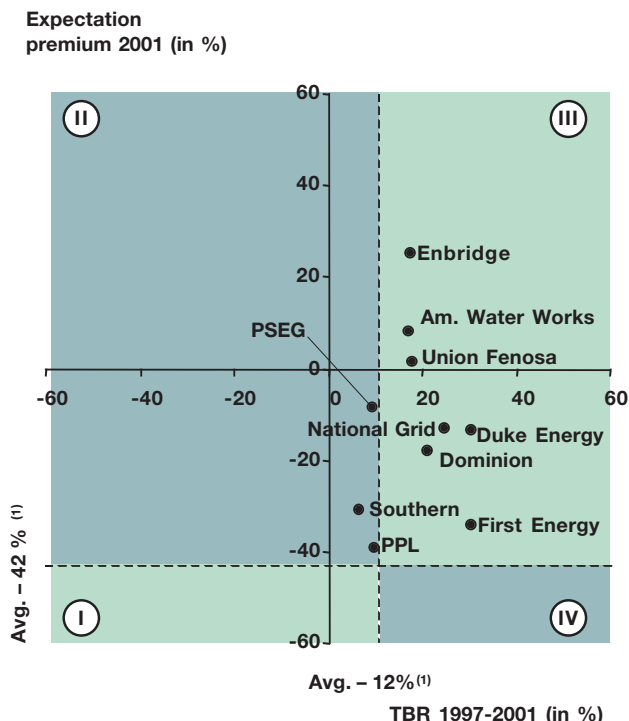
- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 30 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

UTILITIES

Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Rank	Company name	Country	MV 2001 M\$	TBR 1997 - 2001	TSR 1997 - 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP(3) 31 Oct
1	National Grid	UK	9,263	25%	21%	-13%	128	9%	41%
2	Enbridge	CN	4,428	18%	21%	25%	-134	4%	33%
3	Union Fenosa	ES	4,932	18%	19%	2%	-661	-40%	-7%
4	Southern	US	17,622	6%	19%	-31%	-484	23%	-6%
5	American Water Works	US	4,174	17%	19%	8%	-86	10%	21%
6	PSEG	US	8,753	10%	16%	-9%	-420	-29%	-13%
7	Dominion	US	15,759	21%	16%	-18%	-991	-18%	-15%
8	Duke Energy	US	30,471	30%	15%	-14%	-1	-47%	-46%
9	First Energy	US	10,412	31%	15%	-34%	-1,293	-4%	-25%
10	PPL	US	5,104	10%	14%	-39%	-430	3%	-25%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Notes

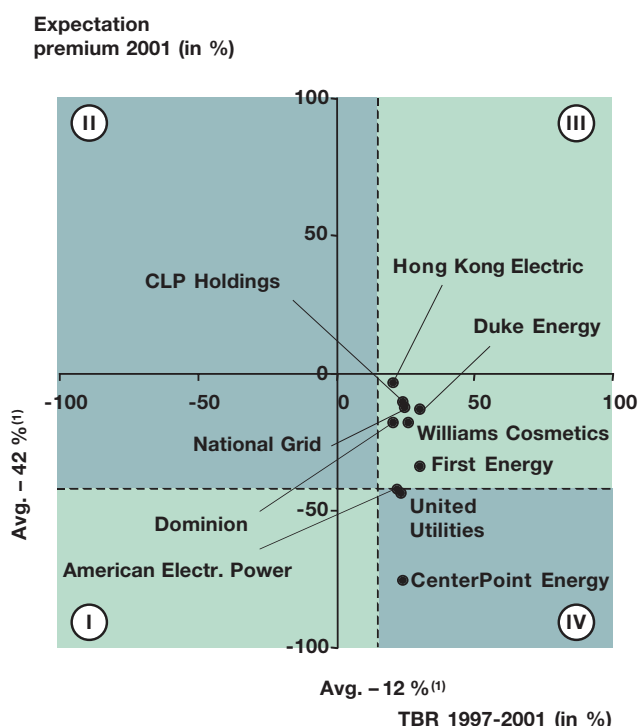
- (1) Weighted average of the total sample, minimum market value 2001: \$10bn, 139 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002

Source: T.F. Datastream; BCG analysis

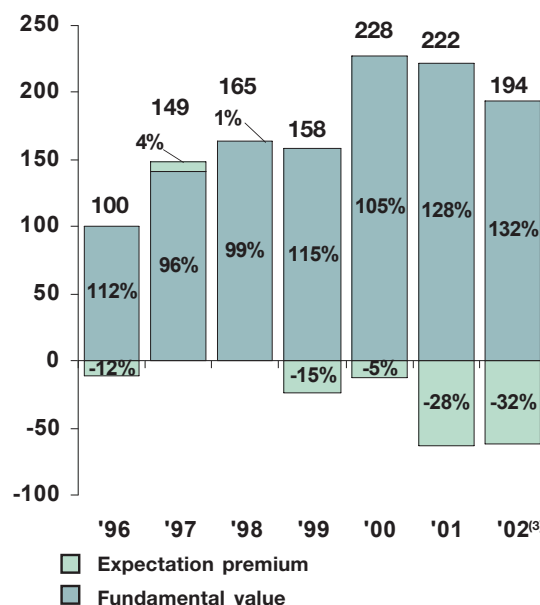


Fundamental performance vs. expectation premium

Avg. expectation premium top 10 companies



Company Value<sup>(2)</sup>



Rank	Company name	Country	MV 2001 M\$	TBR 1997 – 2001	TSR 1997 – 2001	EP 2001	CVA 2001 M\$	2002 year to date	
								TSR 1 Jan-31 Oct	EP <sup>(3)</sup> 31 Oct
1	First Energy	US	10,412	31%	15%	-34%	-1,293	-4%	-25%
2	Duke Energy	US	30,471	30%	15%	-14%	-1	-47%	-46%
3	Williams Cos.	US	13,152	26%	10%	-18%	-421	-92%	-106%
4	National Grid	UK	9,263	25%	21%	-13%	128	9%	41%
5	CenterPoint Energy	US	7,907	24%	9%	-75%	209	-68%	-130%
6	CLP Holdings	HK	9,238	24%	6%	-10%	602	13%	6%
7	United Utilities	UK	4,955	24%	7%	-44%	139	1%	-32%
8	American Electric Power	US	14,027	22%	7%	-42%	-761	-38%	-57%
9	Dominion	US	15,759	21%	16%	-18%	-991	-18%	-15%
10	Hong Kong Electric	HK	7,937	21%	7%	-3%	255	15%	13%

Glossary

- CVA = Cash Value Added
- EP = Expectation Premium
- MV = Market value (equity)
- TBR = Total Business Return (fundamental performance)
- TSR = Total Shareholder Return (market performance)

Source: T.F. Datastream; BCG analysis

Notes

- (1) Weighted average of the total sample, minimum market value 2001: \$3bn, 48 companies
- (2) Market value of equity plus debt, 1996 = 100
- (3) Estimated Fundamental value; market value as of 31Oct 2002



# Technical notes

## 1. Calculating expectation premiums

A company's expectation premium is the difference between its market value plus debt and its fundamental value. The scale of the premium depends on three main factors:

- **The market value of the company measured by its market capitalisation plus debt.** BCG used calendar year data for this (Fig. A3).
- **Robustness of the valuation model.** Fig. A4 demonstrates that over the five-year period from 1997 to 2001 the difference between the annual market performance and the annual fundamental performance was between +/- 15 percent for almost three quarters of the companies in the sample.
- **The assumptions used to calculate the company's fundamental value.** BCG used standard cash flow projections based on the business's current profitability and historical growth. We assumed that profitability would fade by 10 percent per annum to the weighted average cost of capital over 40 years due to competitive pressure and other factors. In addition, it was assumed that growth would fade by 20 percent per annum to an average economic growth rate of 1.5 percent over the same period (Fig. A5).
- **The data used to calculate the company's fundamental value.** BCG used fiscal data for this.

## 2. Different ways to measure value creation

To effectively manage value creation, companies require multiple measures to be used in different applications and at different levels of the organisation. Figure A6 depicts the range of measures our clients have found most useful for managing value creation at different levels in the organisation.

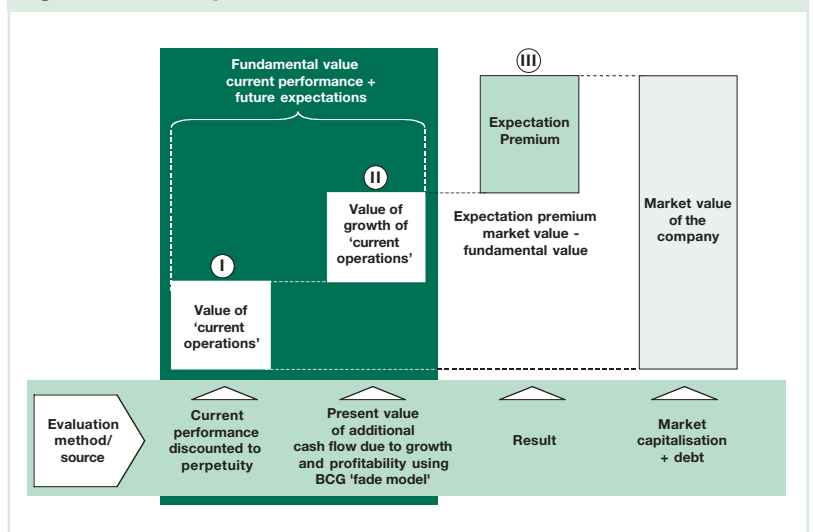
### Setting explicit external aspirations: TSR

Beginning at the corporate level, executives must

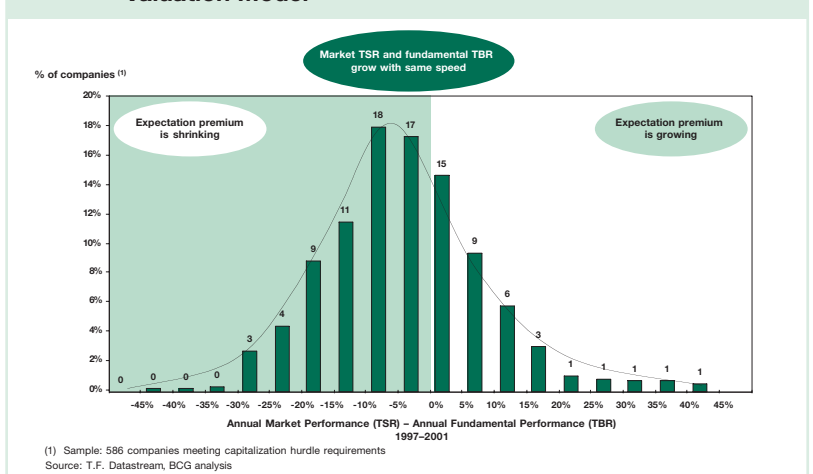
set an explicit value creation aspiration that will energise their organisations, drive stretch thinking or performance, and focus the agenda on programmes that must be implemented.

We believe the most appropriate measure for aspiration setting is total shareholder return (TSR) relative to a local market index or industry peer group. Achievement of this external value creation aspiration should be embedded in the incentive plans for corporate executives and key business unit leaders.

**Fig. A3 How Expectation Premiums are calculated**



**Fig. A4 Normal distribution demonstrates robustness of Valuation Model**



## Appendix

### Aligning internal aspirations and plans : TBR

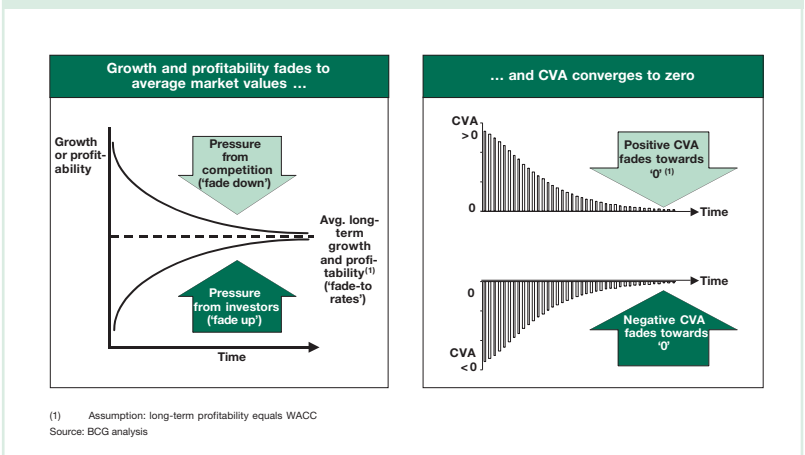
The next requirement is to cascade down the overall TSR value creation aspiration into internal corporate and business unit goals and targets and assess the gap between plans and aspirations at all levels.

The Total Business Return (TBR) measure is an accurate and useful measure for this purpose (Fig. A7). The TBR measure is an internal mirror of actual external TSR. It represents the ‘intrinsic’ capital gain and dividend yield from a business plan – either at the corporate or business unit level.

Many of our clients have found the TBR measure to be a powerful tool for converting TSR aspirations into performance goals at the business unit level and to drive a portion of long term incentives for business unit management accordingly. In that context, TBR can also be used as a rich planning tool to assess the value creation potential of business plans and help managers close the gap between aspirations and performance.

TBR is an important high level tool to assess the relative performance of a corporation or a business unit and to set future targets. It also

**Fig. A5 Fade Rate Assumptions**

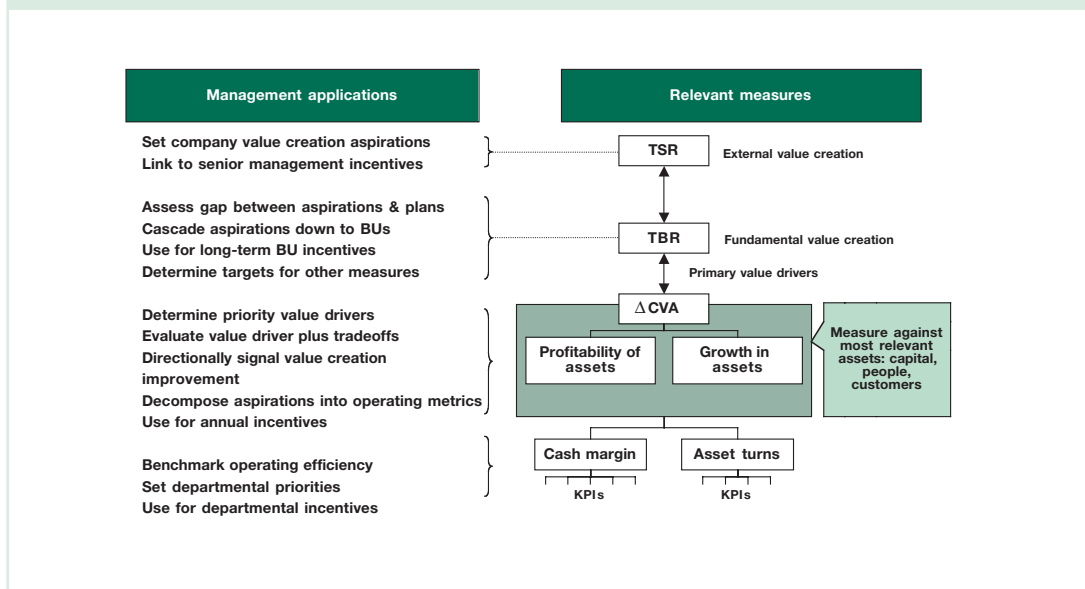


provides a way to link other measures used for detailed value driver analysis or for setting operational targets back to the TSR aspiration.

### Measuring and setting targets for the internal value creation drivers: CVA

Cash value added, CVA (or its financial services equivalent, AVE, Added Value to Equity), is an absolute measure of operating performance

**Fig. A6 Framework of Value Measures**



contribution to value creation. It provides a strong directional indication of when and how value creation is being improved. The CVA measure reflects operating cash flow minus a cost of capital charge against gross operating assets employed. The CVA measure is a very powerful tool to help managers pull the appropriate levers to create value. It can accurately assess the contribution of the economic assets that actually drive a business. In some cases they are tangible assets, in others they are either people or customers.

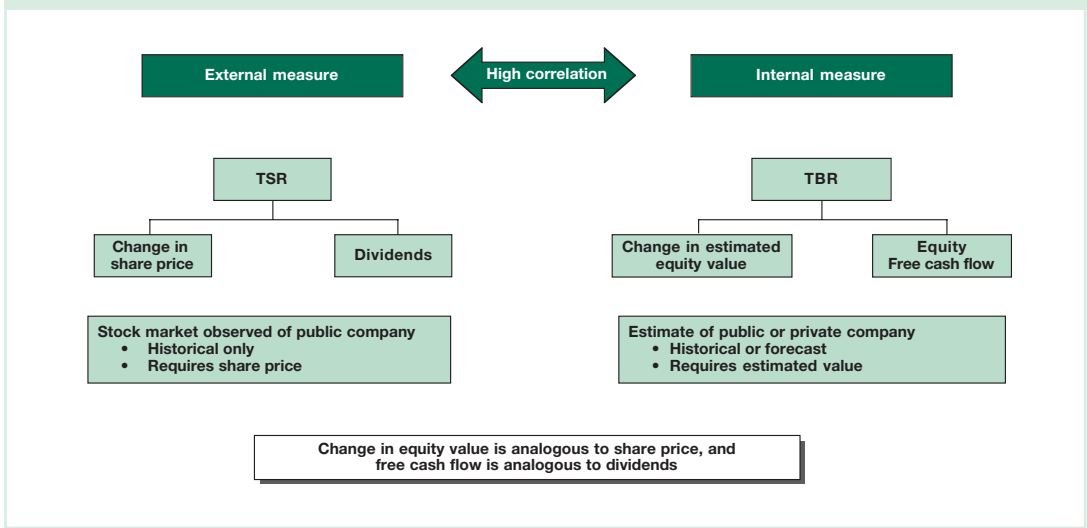
The CVA measure is an accurate tool for determining priority value drivers and assessing value driver trade-offs. In particular, it is a useful strategic indicator that allows managers to balance the high level trade-offs between improving profitability versus growing the business. Because its measurement is based on cash flow and original cash investment, it avoids

the key accounting distortions that can cause measures such as EVA™ to give misleading trends in capital intensive businesses.

Many clients have also found CVA to be an effective measure for annual incentives at the business unit and operational levels. Moreover, CVA can easily be broken down further into the key performance indicators (KPIs) that are relevant to each management area. KPIs form the basis for internal and external performance benchmarking and for establishing annual incentive targets.

This brief description of value creation measurement tools does not address the many nuances of applying them effectively. Further information on how to quantify aspirations, tailor the measure to fit your type of business, or identify the highest priority KPIs, can be provided upon request.

**Fig. A7 TBR is the internal analog to TSR**



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